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Poster Proceedings

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Saturday, May 18, 2019

Poster Session 1

No. 1

Lithium and a Long-Acting Injectable Antipsychotic as a Risk Factor for Neuroleptic Malignant Syndrome

Poster Presenter: Parostu Rohanni, M.D.
Co-Authors: Jesse Kyle Smith, M.D., Phebe Mary Tucker, M.D.

SUMMARY:
Introduction: Neuroleptic malignant syndrome (NMS) is a life-threatening complication of antipsychotics associated with rigidity, fever, altered mental status, and autonomic instability. There is a risk of developing NMS with any neuroleptic drug; however, the risk is heightened in the setting of agitation, dehydration, and iron deficiency. Case reports suggest that lithium may also be a risk factor for NMS in the setting of antipsychotic use. In this poster, we report a case of a patient treated with lithium and paliperidone palmitate who developed NMS. We discuss the challenges of treating NMS in the setting of a long acting antipsychotic and review lithium as a possible risk factor. Case Summary: A 75 year old male with schizoaffective disorder presents from a nursing home with a one week history of altered mental status. His medications were monthly paliperidone palmitate 156mg injection and twice daily lithium 300mg. He has a history of psychiatric hospitalizations for schizoaffective disorder in the setting of poor medication compliance. He had been doing well on this regimen for one year prior to presentation and last injection was 16 days ago. Upon presentation, the patient was awake but progressively became lethargic and unresponsive. Exam was remarkable for tremor, rigidity, fever, tachycardia, tachypnea, and hypertension. He was admitted to the medical intensive care unit where a broad differential diagnosis was considered: medication side effects, lithium toxicity, neuroleptic malignant syndrome, neurologic causes such as stroke, and infectious causes such as meningitis. Laboratory studies were remarkable for normal lithium level, elevated creatine kinase (2096), low iron, and elevated creatinine. CT head was unremarkable. Cerebrospinal fluid studies were also unremarkable. Blood, urine, and CSF cultures revealed no growth. EKG revealed sinus tachycardia with prolonged QTc (517). Management in the ICU was supportive. Lithium was discontinued. Despite supportive treatment, the patient's condition worsened. On the second day of hospitalization the patient became bradycardic, developed hypoxemia, and lost pulse quickly thereafter. Discussion: The patient had an unfortunate outcome given that a long acting antipsychotic is irreversible. Toxic levels may have accumulated despite supportive measures. The patient had several risk factors for developing NMS. Advanced age increased his susceptibility to infection, dehydration and renal failure. He was also on lithium which is known to have renal and neurologic side effects. Furthermore, there is a black box warning for use of atypical antipsychotics in elderly patients. Prior case reports have suggested concomitant use of lithium with antipsychotics may be a risk factor in developing NMS, but this has not been substantiated by larger studies. Clinicians should be aware of these possible risk factors when prescribing a combination of lithium and antipsychotics especially in a depot formulation.

No. 2

Atypical NMS on Clozapine and Mood Stabilizers

Poster Presenter: Emily Amador
Co-Authors: Areef S. Kassam, M.D., Elizabeth Cunningham

SUMMARY:
Neuroleptic malignant syndrome (NMS) is a rare and life-threatening adverse effect of antipsychotic medications characterized by fever, muscular rigidity, altered mental status, and autonomic dysfunction. While the concept of NMS and its diagnostic criteria are well established, there is a similar clinical presentation known as atypical NMS whose definition and diagnosis are less clear. These atypical cases occur particularly with atypical antipsychotics and the potential mechanisms behind their formation have not been established. There have also been several reports of atypical NMS in patients taking mood stabilizers with antipsychotic medications, bringing up the question regarding the extent to which this addition may contribute to developing NMS. The presentation of atypical NMS in a patient taking a combination of antipsychotics

and mood stabilizers will be described in this case report. This is a case of a 36-year-old male with schizoaffective disorder who was inadequately controlled on aripiprazole injections and depakote. During his inpatient stay, clozapine and lithium were added to his medical regime to better control persistent auditory hallucinations, labile affect, and intractable suicidality. He showed gradual psychiatric improvement with the addition of these medications, however, he soon developed fever, altered mental status, and autonomic dysfunction that required admission to the ICU. Extensive testing was done to rule out potential causes of his presentation and although he had no rigidity or increase in creatine kinase, it was determined that he likely had an atypical presentation of NMS. After stabilization, he fully recovered physically and improved psychiatrically on depakote and quetiapine. The purpose of this case report is to explore the current literature on atypical NMS and the potential risks of its development with clozapine and/or mood stabilizers. Additionally, the presentation and differential diagnosis of atypical NMS as well as its diagnostic acceptance will be discussed.

No. 3

Stimulant Formulations for the Treatment of ADHD

Poster Presenter: Mohan Gautam, D.O., M.S.

SUMMARY: Objective: Clinicians have access to a variety of formulations of methylphenidate and amphetamine to treat attention-deficit hyperactivity disorder (ADHD). However, due to new emerging formulations clinicians may lack up-to-date knowledge about all available stimulant formulations. We present a comprehensive guide of 13 formulations of methylphenidate and 10 formulations of amphetamine that have U.S. Food and Drug Administration (FDA) approval to treat ADHD. Methods: A systematic review was completed through PUBMED using the following MeSH terms: “attention-deficit hyperactivity disorder”, “ADHD”, “stimulant”, “amphetamine”, and “methylphenidate”. Conclusions: Each formulation has a unique pharmacokinetic profile. Clinically, one formulation may not be suitable for all patients. This review should provide clinical guidance to help clinicians prescribe the most suitable treatment for an individual. Key words: stimulants, methylphenidate, amphetamine, formulations, ADHD, review ADHD = attention-deficit hyperactivity disorder; FDA = Food and drug administration

No. 4

Symbiotic Synergism of Lithium and Haloperidol Adverse Reactions in Young Adult With Schizoaffective Disorder: Case Report

Poster Presenter: Monika Gashi, M.D.
Co-Author: Ramon Antonio Pineyro Poueriet

SUMMARY:

OBJECTIVE: Treatment of Schizoaffective disorder in young adults usually involves polypharmacy, while targeting symptoms of psychosis and mood disorders simultaneously. (1) The purpose of this poster is to present a case that illustrates the adverse reactions due to synergism of high potency neuroleptic haloperidol with a mood stabilizer lithium. Resulting in severe extrapyramidal symptoms (EPS) and neurotoxicity (2), respectively, in young adult with Schizoaffective disorder. METHOD: search engines used were PubMed; NCBI websites and various psychiatric journals with key word of “Haldol and Lithium toxicity”. RESULTS: Mr. RX is a 24 year old male brought to CPEP handcuffed for disorganized behavior. He presented with paranoia, isolative, hyperactive with flights of ideas. It has been reported that he flooded his apartment, walking aimlessly 10 miles daily, affecting his and his family’s daily activities. Patient was started on Haloperidol 10milligrams oral twice daily and Lithium 450 milligrams twice daily. Due to noncompliance Haloperidol Decanoate 100mg IM was offered and patient accepted and lithium (Li) was also increased to 600milligrams twice daily as serum Li (s.Li) levels were nontherapeutic at 0.2mEq/L. Shortly after patient was observed to have change in mentation and was ataxic. Physical evaluation was significant for: dystonia of the neck, cogwheel rigidity of upper extremities with hyperreflexia and myoclonus of the lower extremities. Laboratory analysis was significant for s. Li level of 0.5 and 0.6mEq/L (within range/24h), while all other labs including WBC, CPK, and LFTs, were within normal limits. Computed tomography of the brain without contrast was within normal limits. Patient was transferred to medical floor for further

stabilization after haloperidol and lithium were discontinued. Within 72 hours patient was observed to have improvement in mentation, and dissipation of the neurotoxic and EPS symptoms noted. Patient was started on paliperidone oral followed by long acting injectable along with oral valproic acid. Improvements were noted in patient's odd and illogical behavior, decrease in flights of ideas, more social with other peers, and improved insight and judgment. GeneSight testing for psychotropic medications was done, showing homozygosity for short promoter polymorphism of the serotonin transporter gene. While lithium currently has no known marker for genetic testing. Patient was discharged with follow up in outpatient clinic. CONCLUSIONS: The symbiotic synergism of adverse reactions between haloperidol and lithium remains idiopathic. While the lithium-neuroleptic toxicity was mostly published in mid 1970's and 1990's, many providers today, may not be aware. (3) Thus appreciation and awareness of medication interactions and early detection even at subtherapeutic levels, is imperative for the wellbeing of the patient and can be treated effectively without any lasting sequalae.

No. 5

A Case of Idiosyncratic Reaction: Fulminant Hepatic Failure With Depakote After Clozapine Augmentation

Poster Presenter: Arifa Uddin, M.D.

SUMMARY:

Mr. G is a 73 year old male nursing home resident with a medical and psychiatric history significant for Bipolar disorder type I most recent episode depressed, remote history of cannabis and alcohol use disorder, Type II Diabetes, hypertension, Hyperlipidemia, pulmonary embolism, myocardial infarction, atrial fibrillation, chronic kidney disease stage 4, anemia, thrombocytopenia, GERD, paravertebral mass that has been stable. The patient had been medically stable over the preceding year. Psychiatrically, he demonstrated increased irritability as well as physical and verbal aggression towards staff secondary to his paranoia. Optimizing symptom control with ECT and pharmacological agents had been unsuccessful. The patient met the criteria for Clozapine. At the time of initiation of treatment with Clozapine, the patient was on Depakote 250mg QAM, 2250mg QHS for more than a year and a half, Trazodone 50mg QHS, Haloperidol 15 mg twice daily with another 5mg Q6hrs as needed for agitation. His other medications included Simethicone MiraLAX, Docusate, Metoprolol, Atorvastatin, Vitamin D 800 IU, Furosemide, Nifedipine, Pantoprazole, isosorbide mononitrate and Warfarin, Nitroglycerine, Sennoside, Tamsulosin, Tramadol, Acetaminophen and Albuterol inhale, Nicotine patch, Nicotine lozeng. His baseline CBC, LFTS and lipid panel were normal. Baseline Chem 7 was normal except for increased Creatinine and BUN. Depakote levels were within the therapeutic range The patient was treated with Clozapine 25mg which was titrated up to 25mg twice daily. The patient's CBC thrice weekly due to concerns for mild neutropenia which did not warrant discontinuation of Clozapine. Chem 7 was monitored weekly. The LFTs were not repeated until 2 weeks after starting Clozapine which were also normal. The patient was found to have altered mental status at week 6 which prompted transfer to the medical floor. The patient's liver enzymes including GGT were markedly elevated with increased Lipase and lactate and normal Amylase and Ammonia levels. He was diagnosed with hepatic encephalopathy likely due to polypharmacy and medication side effect. Clozapine was discontinued as it was the most recent change in the pharmacological regimen which could have caused the rise in LFTs which had been stable for more than a year previously. Later, Depakote and haloperidol were also discontinued. The patient developed fulminant hepatic failure passed away due to DIC and multiorgan failure. His death was attributed to acute hepatotoxicity with chronic hepatic steatosis caused by psychotropic medications potentially Depakote. This poster is focused to highlight the potential of fulminant hepatic failure associated with combination therapy with Depakote and Clozapine. Additionally, the aim of this case report is to emphasize the need for more frequent monitoring of LFTs in such cases as well as in patients with polypharmacy issues to avoid serious complications such as in the case discussed above.

No. 6

Challenges in the Management of Schizoaffective Disorder in a Patient With Total Bilateral Blindness

Poster Presenter: Kanksha Peddi

SUMMARY:

Ms. S is a 29-year-old African-American female with a past psychiatric history of schizoaffective disorder (depressed type), Mild Intellectual Disability and Phencyclidine abuse who presents to the inpatient psychiatric service with chronic command hallucinations, responses to internal stimuli, somatic and paranoid delusions. She was originally admitted to the inpatient service at the age of 13 and has since been hospitalized numerous times. She has a history of both physical and sexual abuse by her biological mother and has been adopted by her great-aunt at a very young age. According to records, she has also suffered peri-natal neurologic insults which were related to exposure to drugs in-utero. Prior to her current admission, Ms. S has been living in a group home and has failed to thrive there. She engages in threatening and assaulting others as well as banging her head when anxious or upset. She is difficult to redirect as her total blindness impairs her ability to function like her peers. She exhibits frequent psychomotor agitation that is directly linked to her disability as she becomes increasingly anxious about not being able to see her surroundings. In response to these frustrations, she begins to bite, punch and scratch indiscriminately. The patient's condition continues to worsen as the medical and psychiatric team is unable to meet the challenges that come with dealing with a totally blind schizoaffective patient. This has led to the concern of suboptimal management for this patient and possible lack of housing options to accommodate for the combination of mental health care in conjunction with a physical disability. When discussed with the psychiatric health team, no solution has been reached. Ms. S continues to decompensate due to a lack of critical care that is necessary for her special needs. It is very unfortunate that there does not exist an establishment or facility within the area that encompasses these core needs and targets these fundamental health disparities. In this poster, we discuss the challenges in dealing with patients with visual impairments and mental health issues. We demonstrate the overarching need for the establishment of nationwide specialized facilities to approach this problem in order to provide the best care for these patients. We must eliminate these avoidable health inequities in order to provide patients with a fair chance to lead a healthy life.

No. 7

How Slow Should We Go? Discontinuing Benzodiazepines in Patients With Intellectual Disability Case Report and Literature Review

Poster Presenter: Ahmed Fayed, M.D.
Co-Author: Murat I. Altinay, M.D.

SUMMARY:

Background: Benzodiazepine withdrawal seizures is a well-documented risk upon medication discontinuation. Slow tapering through gradual dose decrease is recommended to reduce the risk of seizures and other withdrawal symptoms. Regimens for tapering different benzodiazepines have been recommended in the literature but such information is lacking for patients with intellectual disability. Case report: In this poster, we report the case of a clonazepam withdrawal seizure in a 37 year old male with history of severe intellectual disability, obsessive compulsive disorder and aggressive behavior. Several antidepressant and antipsychotic medications were tried with variable response. At the time of introducing clonazepam, patient was on fluoxetine 40 mg. An initial improvement was reported by caregivers on clonazepam followed by psychomotor agitation. An unfortunate tonic-clonic seizure event occurred despite decreasing dose of clonazepam with the recommended rate of 0.25 mg per week Methods: Using OVID database (including MEDLINE, PsycINFO and Embase) we used the terms (benzodiazepines, clonazepam, intellectual disability, mental retardation, withdrawal seizures, discontinuation seizure, tapering) to search for English-language publications from database inception until August 30, 2018. We included studies which addressed benzodiazepines use in intellectual disability, and studies containing recommendations for benzodiazepines tapering. References and related articles were also searched for relevant studies. A total of 16 studies were included in this review. Results: In our database review, we didn't find specific tapering recommendations for patients with intellectual disability. In this poster we will summarize the different approaches which are suggested to taper benzodiazepines in different

clinical settings and patient populations, and how they can be applied to patients with intellectual disabilities. Conclusions: We suggest that a slower than average benzodiazepines taper might be recommended in patients with intellectual disability due to possible structural brain vulnerability. Switching to a longer acting medication or using adjunctive agents should be considered.

No. 8

Improvement in Memory Deficits With Memantine in Mania Secondary to Traumatic Brain Injury and Preexisting Perinatal Birth Injury: A Case Report

Poster Presenter: Aparna Das, M.D.
Co-Authors: Caiti Maskrey, Samuel Jordan Olson, D.O., Stephen Joseph Brasseux, M.D., Lewis P. Krain, M.D.

SUMMARY:

Improvement in memory deficits with memantine in mania secondary to traumatic brain injury and pre-existing perinatal birth injury: A case report Mr. K, 23 year old Caucasian male, with past history of unspecified learning disability and congenital unilateral hearing loss presented to our hospital from a detention center. He had loss of consciousness following head trauma with right-sided zygomatic bone compression fracture for which he was treated at a local emergency room. Around 1 week after head trauma he was noticed to have symptoms suggestive of mania. He was stabilized on oral medications, including divalproex, carbamazepine, quetiapine, melatonin, and propranolol. However, after recovery from acute psychiatric illness he was noted to have cognitive deficits in the form of inability to remember declarative facts. He was unable to pass evaluation for competency to stand trial. The competency evaluation included a set of questions asked which are used to assess if the patient has understanding of his charges, court-related procedures and is able to defend self and knows the consequences of his actions. He was enrolled in a developmental disability group for simpler explanation of court related questions. Although he participated in the group regularly, yet he still scored only 1 or 2 out of 15 on competency questions. After around 2 weeks of repeated coaching we added modafinil 100 mg to help improve his concentration. Due to a lack of improvement, it was discontinued after a 2 week trial. Memantine 5 mg was then started for improving memory and concentration and the patient started showing improvement in competency test scores. Memantine was subsequently increased to 10 mg and further improvement was noted. By week 4 patient was able to answer all but one question on the competency evaluation correctly and was eventually able to pass the formal competency test. In this poster we discuss the evidence and literature supporting the use of NMDA antagonist in traumatic brain injury and other psychiatric illness. There is dearth of literature and more research is needed to explore the potential use of NMDA antagonists in the management of cognitive deficits in conditions other than Alzheimer's disease.

No. 9

Lamotrigine Associated Hemophagocytic Lymphohistiocytosis (HLH): A Review of the Literature

Poster Presenter: Senthil Vel Rajan Rajaram Manoharan, M.D.
Co-Author: Rashi Aggarwal, M.D.

SUMMARY:

Background: Lamotrigine is being used for the treatment of Bipolar disorder and seizure disorders. Lamotrigine is FDA approved for these conditions and has been in the market for about 24 years. Recently in April 2018, Food and Drug Administration (FDA) has issued a safety alert regarding the use of lamotrigine and the possibility of Hemophagocytic LymphoHistiocytosis (HLH). It is a rare but serious immunological reaction that can lead to hospitalization and death if not diagnosed and treated promptly. Methods: We reviewed the FDA drug safety communication and performed a literature search using Pubmed database. The MeSH terms used were 'Lamotrigine' AND 'Hemophagocytic Lymphohistiocytosis'. We also reviewed the criteria for diagnosis of HLH using terms such as ''Hemophagocytic Lymphohistiocytosis' AND 'diagnostic criteria'. Results of Literature Review: Since 1994 when lamotrigine was approved, 8 cases of confirmed or suspected HLH associated with lamotrigine have been reported worldwide. Two cases have been

reported in the US alone. The reported onset of symptoms in these cases is between 8 to 24 days after starting treatment with lamotrigine. The dose of lamotrigine associated with HLD ranged from 25mg every other day to 250mg once daily in six of these cases. Improvement was reported in only one of these cases after discontinuation of lamotrigine and treatment with steroids, IV immunoglobulins, blood products and chemotherapy. HLH typically presents as a persistent fever, usually greater than 101°F, and can affect the blood cells and multiple organs throughout the body such as the liver, kidneys, and lungs. Other, less common, initial clinical findings include lymphadenopathy, skin rash, jaundice, and edema. HLH can also be confused with other serious immune-related adverse reactions such as Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS). According to the diagnostic criteria by Henter et al, HLH can be diagnosed if a patient has 5 or more of the following symptoms: Fever and rash, Splenomegaly, Cytopenias affecting 2 or more of the 3 lineages in the peripheral blood (hemoglobin <90g/L; platelets <100 x 109/L; neutrophils <1.0 x 109/L), Hypertriglyceridemia (fasting triglycerides >265mg/dL) and/or hypofibrinogenemia (<1.5g/L), High levels of blood ferritin (>500µg/L), Hemophagocytosis identified through bone marrow, spleen, or lymph node biopsy, No evidence of malignancy, Decreased or absent Natural Killer Cell activity, Elevated blood levels of CD25 showing prolonged immune cell activation (>2400 U/mL). Conclusion: Prompt recognition of HLH is important as severe inflammation can lead to multi-organ failure resulting in hospitalization and death. Patients should be counseled on the symptoms associated with HLH and should be encouraged to seek immediate medical attention if they experience these symptoms while on lamotrigine therapy.

No. 10

Valbenazine for Tardive Dyskinesia in the Inpatient Setting: A Case Report

Poster Presenter: Trevor Scudamore, M.D.
Co-Authors: Lioubov Leontieva, M.D., Ph.D., Eric Zabriskie

SUMMARY:

Background: Valbenazine, a selective VMAT2 inhibitor, was approved by the FDA in 2017 for the specific treatment of TD. Valbenazine acts to decrease dopamine release, reducing excessive involuntary movements found in TD. Starting with a group AIMS average of 10 (n=205), the KINECT 3, phase 3 clinical trial, observed a mean change of -3.2 from baseline after 6 weeks of valbenazine, 80 mg/day (2). There is limited literature describing TD treated in an inpatient setting. Method: We describe the case of a 59-year-old woman who was diagnosed with Schizoaffective Disorder in her 20s and treated with perphenazine and olanzapine for several decades. She has a long history of TD with prominent grimacing, lip puckering, lateral jaw movement and jaw clenching, as well as spontaneous, irregular, pincer grasp hand twitching. These symptoms persisted after 1 year of discontinuing all antipsychotics. The patient reported a high level of self-consciousness due to her TD symptoms which interfered with her social functioning and therapeutic adherence. During a recent acute inpatient stay she was started on 40 mg oral valbenazine for 1 week, with subsequent 80 mg orally daily thereafter. AIMS scoring was conducted daily to assess her progress. Results: She had a dramatic reduction in her TD symptoms within the first two weeks of treatment. The AIMS score decreased from 12 to 1 during a 2 week period, with minor puckering during the latter half of the activation portion of AIMS testing. This improvement was also correlated subjectively by the patient, who at initiation, reported omnipresent awareness of her TD symptoms, despite a significant proponent of the literature suggesting poor insight regarding symptoms in TD patients. With the course of treatment the patient's moderate distress was changed to not noticing any symptoms of involuntary movements after two weeks, which correlated with AIMS scoring. No side effects from valbenazine were reported during her treatment course. Overall the patient reported less anxiety in social situations and had improved attendance in group therapy sessions during her inpatient stay. She also endorsed improved initiation of sleep, which may have had an impact on her energy levels and mood. These symptoms improved with the course of treatment, without adjustment of her other psychotropic medications (sertaline 100 mg qd and

olanzapine 5 mg qhs, trazodone 50 mg qhs, and benztropine 0.5 mg bid). Conclusion: Initiation of valbenazine (80 mg) was effective and safe in our patient with a dramatic reduction in AIMS score which outpaced KINECT 3 trial both in duration and symptom reduction (6 weeks vs 2 weeks,-3.2 vs -11) (2). Additionally, our patient had improved treatment adherence, including increased group participation alongside her symptom reduction, which began within a few days of treatment, indicating there may be benefit to initiating valbenazine during an acute inpatient stay.

No. 11

Lithium Neurotoxicity in Association With the Concomitant Use of an Antipsychotic

Poster Presenter: Zaki Ahmad, M.D.
Co-Author: Vijay Chandran, M.D., M.B.A.

SUMMARY:

Background: Lithium is a first-line agent for the treatment of Bipolar disorder, but has a very narrow therapeutic window. When given in combination with an antipsychotic, the chances of neurotoxicity increase even with low doses and therapeutic blood levels of Lithium. Lithium neurotoxicity can be reversible and irreversible and can occur with both typical and atypical antipsychotics (1). The reversible Lithium neurotoxicity usually present as ataxia, myoclonus, tremor, hyperreflexia, convulsions, and dysarthria (1). The review of 52 cases of reversible Lithium neurotoxicity showed that Lithium neurotoxcity was seen mostly when Lithium dose was in the therapeutic range of less than 2000 mg per day and serum Lithium levels were less than 1.5 mEq/L (1). Rarely, Lithium neurotoxicity can present as serotonin-like syndrome, Creutzfeldt-Jacob-like syndrome, neuroleptic malignant-like syndrome, or as pseudotumor cerbri (1). Case: Patient is a 24 year old, single, unemployed, Hispanic man, with a past psychiatric history of Schizophrenia and no significant past medical history, who was admitted for acute psychotic decompensation. Patient was prescribed Lithium 600 mg PO BID and Haldol 10 mg PO BID and also received Haldol decanoate 100 mg intramuscular injection. After a few days, the patient developed sudden onset stiffness in all limbs with cogwheel rigidity. On physical exam, bilateral myoclonus was elicited in both legs, more pronounced on the left side. He was seen walking in a robotic style. Both Lithium and Haldol were discontinued immediately and the patient was transferred to the medical ER. His Serum Lithium level was 0.2 a few days after the initiation of Lithium and 0.6 at the time of developing the neuromuscular symptoms. The CPK level was 126. Patient was then started on Depakote 500 mg BID and Invega 3 mg PO after he was medically stabilized. Discussion: Case reports have shown that the likelihood of developing Lithium-induced neurotoxicity increases when Lithium is administered concomitantly with antipsychotics especially, compared to when it is given without them (1). Conclusion: The simultaneous use of Lithium with antipsychotics, especially the high potency ones like Haloperidol, should be either avoided or monitored very cautiously. Blood levels of both Lithium and the antipsychotic must be checked regularly and any potential symptoms or signs of neurotoxicity should be looked for carefully.
1) Netto, I., & Phutane, V. H. (2012). Reversible lithium neurotoxicity: review of the literature. The primary care companion for CNS disorders, 14(1).

No. 12

A Case of Clozapine-Induced Cardiomyopathy Successfully Treated With Cardiac Transplant

Poster Presenter: Adam Shapiro, M.D.

SUMMARY:

Abstract Clozapine is an effective antipsychotic medication though its use is reserved for treatment-refractory patients that have failed other medication trials due to its significant risk profile. Among the complications that can occur with the use of clozapine are cardiac conditions such as myocarditis, pericarditis and cardiomyopathy. These conditions themselves are often difficult to treat and potentially fatal. Presented here is the case of a 41 year old Caucasian male that survived cardiac transplantation following an episode of clozapine-induced dilated cardiomyopathy. Introduction Clozapine is the most effective drug for individuals with a poor symptom response to previous antipsychotic drug trials, although its use is associated with the potential for significant adverse effects *1. Myocarditis is a known though rare *2 potential complication of treatment with Clozapine that can result in serious

complications *3 and death *4. Although treatment of clozapine-induced cardiomyopathy with cardiac transplantation has been discussed in the literature #5, our search of the literature did not result in any specific cases being discussed in detail. Here we present a case of clozapine-induced myocarditis that resulted in cardiac transplantation in a 41yo Caucasian male.

No. 13

Tardive Dyskinesia: Risk Factors, Prevention, and Treatment

Poster Presenter: Michael Spatcher, M.D.
Co-Author: Subramoniam Madhusoodanan, M.D.

SUMMARY:

Background: Tardive dyskinesia is a complication of antipsychotic treatment characterized by chorieform involuntary movements affecting commonly the orofacial and buccolingual regions, but also trunk and extremities. Even though the exact etiology is not clearly understood, it is believed that upregulation of postsynaptic dopamine receptors after chronic dopamine blockade and neuronal oxidative damage may be implicated. The symptoms may be lifelong in some patients. Risk factors include advanced age, female sex, type of antipsychotic agents and routes of administration, pre existing movement disorders and general health of the patient. Multiple agents including vitamin B6, branched-chain amino acids, Ginko biloba, medications including beta blockers, ondansetron and benzodiazapines have been tried in the treatment of tardive dyskinesia without much success. The newly approved medications valbenazine and deutetrabenazine offer hope to these patients who otherwise had to live with this socially and functionally disabling disorder. Methods: Literature review was conducted using keywords tardive dyskinesia, risk factors, pathophysiology, treatment, Valbenazine, and deutetrabenazine. Search engines used include Pubmed, Cochrane Review, PsycINFO, and Psychiatry Online. Results: We have summarized the history, pathophysiology, risk factors, and management of TD including the recently approved medications. Conclusion: Tardive dyskinesia is a disabling, long term side effect of antipsychotic use. Many risks factors predispose patients to the development of symptoms. Until recently, there were no FDA approved treatments. The newly approved medications valbenazine and tetrabenazine have shown promising results for the treatment of tardive dyskinesia.

No. 14

Understanding the Role of Peer Mentor Support for United States Medical Students

Poster Presenter: Shreya Aiyar
Co-Authors: Anju Hurria, Rimal B. Bera, M.D.

SUMMARY:

Background: Coping with mental health issues presents a unique challenge for the physician, who has spent his or her entire training and practice learning to be the healer but not one who receives help. Competitive medical training requires from physicians and physicians-in-training a certain toughness and resilience – traits that certainly impart providers with the strength to help their patients. However, these traits can cause physicians and other providers to hold themselves to a standard of constant well-being, in which holding in their feelings often places them at risk for depression and burnout. As a result, physicians and physicians-in-training are more likely to channel negative emotions into harmful and risky behaviors, such as alcohol or substance abuse, or even self-harm and suicide. Here, we review the usage of a formal peer mentor program at a United States medical school, in which medical students act as mental health advocates and confidants for their classmates. To the best of our understanding, no medical school in the United States has quantified the data from their respective medical school peer mentor programs. Methods: Peer mentors met and spoke informally with medical students about the students' concerns on an as-needed basis. Every two months, so as to protect student privacy, peer mentors aggregated into a survey the number of student interactions and the type of concern for which students requested help. Results: During the months of August and September 2018, 19 individual students out of a pool of 414 total students interacted with peer mentors, with 22 total peer mentors recording 55 total interactions through email, text message, phone call, and in person. As reported by the peer mentors, the leading reasons students requested peer mentor services were for

academic or class issues (41.7%), USMLE advice (33.3%), loneliness (5.6%), romantic relationship issues (5.6%), suicidality and/or self-harm (5.6%), and depression and/or anxiety (2.8%). Other reasons not listed comprised 5.6%. The most utilized modes of initiating contact with a peer mentor were text message (35.9%), email (33.3%), and in person (30.8%). Data will continue to be collected for the remainder of the 2018-2019 academic year. Conclusions: A formal peer mentor program, in which medical students have the opportunity to discuss their concerns with a fellow student, is an important first step in better understanding the emotional, academic and personal challenges that students may be experiencing. Our findings will better help medical schools understand how best to train peer mentors in approaching concerns that are brought to them by fellow classmates and, most importantly, help medical schools understand the issues that their students are experiencing during their training. It is our hope that this information will then in turn be utilized to best address medical student well-being.

No. 15

Neuroleptic Malignant Syndrome Associated With the Use of LAI Antipsychotics: How to Avoid?

Poster Presenter: Maria Olivia Pozzolo
Co-Author: Natalia Santos

SUMMARY:

Neuroleptic malignant syndrome (NMS) is an uncommon but severe adverse effect on antipsychotic treatment, with the four main symptoms being hyperthermia, muscle stiffness, autonomic dysfunction and altered level of consciousness. Also, less frequently, rhabdomyolysis and leukocytosis. NMS is difficult to diagnose and often relies on time-cause relationships and careful assessment of antipsychotic load. While NMS and its risk factors are poorly understood, it is certain that careful monitoring when initiating or changing antipsychotic regimens can prevent or mitigate adverse effects. Rapid alteration and a particular escalation of antipsychotic dose has emerged as an important risk factor for development of NMS, with most cases occurring shortly after initial exposure. NMS is less likely to occur in patients who have been stable on their dose of antipsychotic medication for a long time or who have a long-term compliance. Antipsychotic polypharmacy, concomitant use of medications which predisposes to NMS and the use of intramuscular medication all increase the risk of NMS. Rate of dose escalation of antipsychotic medication has been recognized as a risk fator for NMS. The present study aims to report a case of a patient, diagnosed by DMS-V, with schizoaffective disorder, who presented NMS after the use of paliperidone depot, an incidence not mentioned in the literature. Pointing that out, a few issues emerged: how can LAI antipsychotics induce or exacerbate NMS symptoms? Are the side effects worse than those observed in regular oral administration antipsychotics and is there any way to prevent NMS occurrence ensuring safety of its use?

No. 16

A Review of the Anesthetic Agents to Consider for Patients With Elevated Seizure Threshold When Conducting ECT Type of Submission

Poster Presenter: Henry St. George Teaford, M.D.
Co-Author: Brent R. Carr, M.D.

SUMMARY:

Methohexital is the anesthetic agent that has long been considered to be the gold standard for inducing anesthesia prior to conducting electroconvulsive therapy (ECT). However, because of its mild anticonvulsant properties, patients with a high seizure threshold may be unable to achieve a seizure from ECT when this agent is used. For this reason, alternative agents such as ketamine and etomidate, both known to lower the seizure threshold; ketamine more than etomidate, may be used prior to ECT instead. This poster serves as a review of the latest literature available on these two agents for the use of ECT, and will compare and contrast the utility of each when considering other clinical variables. Regarding pharmacokinetics, both agents have a fairly quick onset of action (i.e., 30 seconds (secs), and 30 to 60 secs for ketamine and etomidate, respectively) and brief effect duration (5-10 minutes (mins), and 2-5mins for ketamine and etomidate, respectively), when administered intramuscularly. Etomidate is the preferred agent for patients with numerous cardiac comorbidities, givens its minimal effect on hemodynamic stability;

contrasted by ketamine, which increases the release and decreases uptake of catecholamines, resulting in hypertension and tachycardia. Both ketamine and etomidate have been shown to cause nausea and vomiting during the emergence from anesthesia in more than 10% of patients, giving reason to avoid their use in patients with a history of post-ECT nausea. Despite ketamine having demonstrated short-term antidepressant effects in a number of clinical trials, there is currently a lack of concrete evidence that it can synergistically enhance the effects of ECT. Because etomidate can cause primary adrenal suppression through reversible inhibition of 1-ß-hydroxylase, it is currently recommended that this agent not be used for patients who will be undergoing multiple ECT treatments; however, there have not been any documented cases of this adverse effect with patients undergoing ECT. As one can see, there are a wide range of factors one must consider when deciding between ketamine and etomidate, for patients whose past ECT sessions have failed to achieve a seizure. In addition, the literature cited above reveals that a number of unanswered clinical questions still remain, when considering how these agents affect patients receiving ECT.

No. 17

Naltrexone-Induced Dysphoria

Poster Presenter: Lindsay L. O'Brien, D.O.
Co-Authors: Adele C. Viguera, M.D., M.P.H., Christopher Sola, D.O.

SUMMARY:

Naltrexone XR is a long-acting, monthly injection FDA-approved for opioid dependence. It works as a competitive antagonist with highest affinity for mu opioid receptors, blocking the euphoric effects of exogenous opioids, thus decreasing addiction behaviors. Few case studies and small randomized trials exist addressing the possibility of naltrexone inducing a dysphoric state, but results are inconclusive. Furthermore, extant literature on the long-acting injectable preparation is lacking, focusing solely on the oral formulation. A 36-year-old woman with a history of congenital Horner syndrome, sick sinus syndrome status post pacemaker implantation, and opioid dependence presented with acute anxiety, dysphoria, and suicidal ideation after receiving her first naltrexone XR injection. She had attended multiple rehabilitation centers in the past, but denied seeing a psychiatrist or having prior psychiatric hospitalizations or suicide attempts. Her daily buprenorphine/naloxone had been tapered over the prior month in preparation for the naltrexone XR injection. Serial urinalyses for opioids were negative at the time of her injection, yet she denied ever receiving an oral test dose of naltrexone. Two days later, she was assessed by the consulting psychiatry team. She described acute anxiety, agitation, and "panic" within three hours of receiving the injection, with further precipitous escalation in depression and suicidal thoughts with plan to overdose on heroin on the second day. She described her current state as different from prior opioid withdrawal symptoms and she denied physical symptoms of withdrawal. Due to imminent risk, she was admitted to an inpatient psychiatric unit and was started on fluoxetine and doxepin for sleep. She returned briskly to her baseline and was discharged three days later. Previous research has investigated opioids as antidepressants, since endogenous opioid peptides are co-expressed in brain areas known to play a major role in affective disorders. Certain antidepressants (tricyclics, ketamine) can also modulate the opioid pathway. In this case, our patient described an immediate, severe dysphoric reaction leading to suicidal ideation with intent and plan after receiving a naltrexone XR injection. Interestingly, the long-acting injectable form of naltrexone has a biphasic time to peak serum concentration, with an initial peak of two hours – coinciding with our patient's initial anxiety and agitation – and a second peak at two to three days, corresponding to her worsened dysphoria and new suicidal ideation. In this era of the opioid epidemic, the use of naltrexone XR will only increase given its success in assisting with abstinence from opioids. Clinicians should be aware of the need to administer an oral test dose, as well as educate and be vigilant of the existence and time course of potential adverse reactions, including dysphoria and even suicidal ideation.

No. 18

Hypothermia Associated With Paliperidone Depot Injection: A Case Reports and Review of Current Literature

Poster Presenter: Ketan A. Hirapara, M.B.B.S.

Co-Authors: Aitzaz Munir, M.B.B.S., Rashi Aggarwal, M.D., Faraz Gohar

SUMMARY:
Hypothermia in patients using antipsychotics is a serious and unpredictable adverse even that may result in hospitalization and possibly death. The risk of hypothermia may be increased in the first few days following the initiation or dose increase of an antipsychotic drug.There have been only a few case reports describing hypothermia in patients treated with atypical antipsychotics such as olanzapine and risperidone. We did not find any reports of hypothermia associated with paliperidone use.We report a patient who developed hypothermia after being started on Paliperidone Palmitate 234mg IM once a month. Case report: Mr. A , a 68-year-old male with history of Schizophrenia, CKD, HTN and HLD, was transferred to the ED from a nursing home due to drowsiness. At admission, Mr. A was on Paliperidone Palmitate 234mg IM x28 days (was given a day before this admission), Depakote 500mg qam & 1000 mg qhs, Cogentin 1mg daily and Atorvastatin 20 mg. In the ED, his body temperature was 91.8oF, BP 135/73 mmHg, HR 58 and RR 15. His initial laboratory work up was normal except, elevated BUN level (39 mg/dl) and serum creatinine level of 2.1. EKG revealed sinus bradycardia with QTc 562. Upon admission, Patient was treated with bair hugger and IV fluid in the ICU. On 2nd day of his ICU admission, patient was intubated due to impending respiratory failure. With improvement in his medical condition, he was extubated with resolution of his hypothermia (temp 99oF). He was transferred to inpatient psychiatric ward. His mental status revealed no evidences of psychosis. There was no evidence of hallucinations or delusions. He was started on Haldol 5mg daily at bedtime after he became more medically stable. There were no further episodes of hypothermia. Patient had similar episode of hypothermia with cardiac arrest requiring CPR about a month ago following similar injection and was admitted to another hospital. Discussion: The exact mechanisms of anti-psychotic induced hypothermia are unknown, several possible causes are speculated. Paliperidone-induced hypothermia could be mediated through its effects on the dopamine system, specifically by its antagonism of the D2 receptor. Antipsychotic drugs with strong serotonin (5-HT2A) antagonism seem to be more frequently associated with hypothermia due to the association of the 5-HT2A receptor with the thermoregulation.Paliperidone has thehighest affinity for 5-HT2A receptors when compared with other families of receptors (H1, A1, A2, D2-4, 5HT2C, 5HT7) which increases the risk for hypothermia. Paliperidone also blocks a2 adrenergic receptors, involved in thermoregulation, by inducing response to cooling (vasoconstriction, shivering) further increasing the risk of hypothermia. As Paliperidone in depot formulation is gaining popularity due to given benefits of improved patient medication compliance, high tolerability and good efficacy. Clinicians should be mindful of this serious side effect and need for careful monitoring.

No. 19

Hypothermia, Bradycardia, and Pancytopenia in a Schizophrenic Patient Being Treated With Olanzapine

Poster Presenter: Peter Tu Nguyen, D.O.

SUMMARY:
Antipsychotics have been associated with numerous side effects due to their non-specific effect on an array of biological receptors. Many of these side effects are thoroughly documented but there are others that are not as well elucidated. This report describes a case of a schizophrenic patient with seizure disorder being treated with Olanzapine and Levetiracetam in whom was found to be pancytopenic, bradycardic, and hypothermic with associated ECG changes. Withdrawal of olanzapine led to the gradual resolution of some of the aforementioned symptoms. This case highlights the clinical significance of these side effects in the management of a patient with schizophrenia.

No. 20

When EPS Strikes: Characteristics of Patients Experiencing Extrapyramidal Symptoms Related to Antipsychotic Therapy

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

SUMMARY:
Background: Antipsychotic medications are widely used to treat a growing number of mental health

disorders. However, their utility may be limited by the potential to cause serious movement adverse reactions. Akathisia, dystonia, Parkinsonism, and tardive dyskinesia (collectively known as extrapyramidal symptoms or EPS) are associated with reduced social and occupational functioning, negative patient attitudes toward treatment, and non-adherence to pharmacotherapy. The aim of this study is to profile patients who have developed antipsychotic-related extrapyramidal symptoms and identify characteristics significantly associated with each type of EPS. Methods: A report of all potential antipsychotic-related EPS occurrences within a large community hospital network was generated using International Classification of Diseases (ICD) 9 and 10 billing codes. Each patient encounter was manually reviewed to confirm that a documented case of antipsychotic-related EPS had occurred. Results: The resultant cohort of patients experiencing 158 unique antipsychotic-related EPS events was analyzed. The average patient was female, middle-aged, and overweight. It was discovered that age was significantly associated with each type of EPS, such that those patients with akathisia (OR = 0.95, p = 0.00) and dystonia (OR = 0.96, p = 0.00) tended to be younger, while those with Parkinsonism (OR = 1.02, p = 0.04) and tardive dyskinesia (OR = 1.07, p = 0.02) tended to be older. Additionally, it was observed that those with tardive dyskinesia had a greater average BMI (OR = 1.04, p = 0.00) and were more likely to be female (OR = 2.33, p = 0.047), which reflects patterns previously described in the literature. Conclusion: To our knowledge, this is the first study to describe an association between age and the risk of akathisia with the use of antipsychotics. Other correlations observed with age and BMI in patients developing antipsychotic-related EPS support previously-reported findings. Expanding the knowledgebase of individual characteristics associated with different types of EPS can help providers and patients anticipate and attempt to mitigate these reactions, and may ultimately improve adherence to antipsychotic therapy.

No. 21

Slow Your Role: How Slowing Clozaril Titration Can Prevent Recurrent NMS

Poster Presenter: Areef S. Kassam, M.D.

Co-Authors: David William Pison, D.O., Dennis L. Anderson, M.D.

SUMMARY:

Ms. D. was a 57-year-old Caucasian female with a past psychiatric history of schizoaffective disorder bipolar type and unspecified anxiety disorder. She presented to the psychiatric unit with cognitive blunting, poverty of thought content, looseness of associations, and inability to respond to questions with meaningful responses. In addition, patient presented with medical symptoms including rigidity, acute rhabdomyolysis, and elevated LFTs. She was transferred to the inpatient medical unit for stabilization. After acute stabilization, she was transferred back to the psychiatric unit for treatment. A thorough review of the patient's history revealed the patient had prior episodes of atypical NMS with trials of multiple typical and atypical antipsychotics at therapeutic doses and with clinically appropriate titration schedules, including trials of clozapine, known to have decreased likelihood of NMS symptoms. The patient was stabilized during admission, but she later decompensated requiring re-admission in the months following. At that time, clozapine was reinstituted at very low doses and with a slower titration schedule. This approach was successful in ameliorating the patient's symptoms and without recurrence of NMS. In this poster, we discuss the importance of identifying atypical NMS in patients treated with typical and atypical antipsychotics, and propose that successful treatment of these patients may be possible with slower and gradual titration of clozapine.

No. 22

The Increasingly Recognized Challenges of Herb-Drug Interactions in Managing a Patient With Major Depressive Disorder

Poster Presenter: Phillip M. Orlando, D.O.
Co-Author: Carolina I. Retamero, M.D.

SUMMARY:

Ms. S., a 48-year-old Urdu speaking Pakistani American female refugee with a past psychiatric history of depression and medical history of hypertension, diabetes and fibromyalgia, presents to the outpatient community clinic for psychiatric

consult regarding worsening depression. 5 years prior, the patient fled from Pakistan due to religious persecution and death threats against her and her children. She lived with her family in a small cottage in the lowland rain forest of Sri Lanka, where she had additional challenges of feeding her family while surviving the constant threat of dangerous wild animals. Upon receiving refugee status, she moved to the US, where she later began treatment for depression with Sertraline by her primary care doctor. 1 year later, she had made no improvements in her symptoms, and began to describe additional symptoms of PTSD. Following further questioning during psychiatry consultation, it came to light that the patient practiced a holistic alternative medicine Ayurveda and was taking an herbal supplement Arthritis-QR for chronic pain. This led to a concern that the supplement may be interacting with her antidepressant. An additional case from 2009 reported similar results, with researchers theorizing hepatic metabolism playing an important role. Upon discontinuation of her herbal supplement, she had a noted improvement in her depressive and PTSD symptoms. In this poster, we discuss some of the unique challenges in treating refugee patients, the importance of a full medication history including herbal supplements and a review of significant herb-drug interactions in psychiatry.

No. 23

Second-Generation Antipsychotics and Drug-Induced Thrombocytopenia

Poster Presenter: Kelsey Wong
Co-Author: Niyati Mamtora

SUMMARY:

Thrombocytopenia is an uncommon side effect of antipsychotics that can complicate medication management of patients with treatment-resistant schizophrenia. While the mechanism is not clearly understood, review of current literature demonstrates that drug-induced thrombocytopenia is a known side effect of multiple antipsychotic agents. Case studies have been published for individual medications, such as clozapine, risperidone, olanzapine, quietapine, and lurasidone. However there has not been a formal literature review published that synthesizes the data from these studies on different medications.

No. 24

Hallucinating on Pregabalin

Poster Presenter: Apurva Bhatt, M.D.

SUMMARY:

Pregabalin has been widely prescribed during the past decade for diabetic peripheral neuropathy. The drug's most common side effects leading to patients in this population stopping the medication include dizziness and somnolence (1). Symptoms of psychosis including delusions and hallucinations associated with pregabalin use have not been well described in the literature. We present a patient who, after appropriate up-titration of pregabalin in a hospital setting, experienced visual hallucinations which resolved after prompt discontinuation of pregabalin. The patient in this case report experienced visual hallucinations twelve days after pregabalin was initiated and dose titrated up appropriately and gradually in a hospital setting. The patient's visual hallucinations resolved three days after discontinuation of the drug. Due to the temporal relationship seen with cessation of pregabalin and resolution of his symptoms, and lack of other physical exam or lab findings suggesting an alternative diagnosis, we believe that this patient may have experienced an unlisted adverse side effect secondary to pregabalin use. This case report highlights an unusual possible side effect associated with normally dosed pregabalin in a patient with diabetic peripheral neuropathy.

No. 25

A Retrospective Analysis of Genetic Testing in Patients With Treatment-Resistant Schizophrenia and Other Psychotic Disorders at BCHS Inpatient Unit

Poster Presenter: Maria Teresa Carvajal, M.D.
Co-Authors: Charles Rodolphe Odom, M.D., Felix Oscar Priamo Matos Padilla, M.D., Darmant Bhullar, M.D., Alaaddin Sharha, M.D., Ingrid Haza, Joseph Sokpagna Soeung, M.D., Mihir Ashok Upadhyaya, M.D., Ph.D., M.P.H., Ramon Antonio Pineyro Poueriet, Mohamed H. Eldefrawi, M.D.

SUMMARY:

Pharmacogenetics is an emerging field that holds the potential to facilitate personalized selection of

medication for patients, based on his or her genetic information (1). These interindividual differences in drug response present a challenge for the clinician, who must select the best drug to prescribe for a particular patient and is a primary cause of noncompliance among patients with mental illness. For many drugs, treatment selection remains a "trial-and-error" process, with multiple failed trials required before achieving an acceptable balance between response to therapy and side effects (1). Pharmacogenetics provides an important tool to assess causes that may have contributed to adverse events during psychiatric therapy (2). This study aims to assess the use of this available test in our inpatient unit, with the purpose to identify the physician's adherence to the pharmacogenetic testing recommendation, the compliance of the patients following this personalized guided treatment, and the impact in their treatment measured as a readmission rate. We conducted a retrospective chart review and compared patients who were admitted to our psychiatrist inpatient units that had and did not have genetic testing during the course of their admission. We then reviewed clinical characteristics, medication choices, metabolic findings, length of stay, readmission rate, and after care of these of these patients. While there is a literature that support the patient's clinical improvement, time, and cost saving benefit when choosing an antipsychotic based on the patient's pharmacogeneteics, the studies are limited. We aim to add to the current research in this emerging treatment strategy.

No. 26

Aripiprazole-Induced Sialorrhea in First-Episode Psychosis: Case Report and Treatment Review

Poster Presenter: Ahmad Umair Janjua
Co-Authors: Ayesha Khan, Robert Osterman Cotes, M.D.

SUMMARY:
Background: Sialorrhea is an adverse effect of treatment with antipsychotics, especially clozapine. There are few cases that report sialorrhea as an adverse effect of taking aripiprazole. We describe a case of aripiprazole-induced sialorrhea in a 20-year-old Indian male patient with schizophreniform disorder who was discharged on aripiprazole 15 mg daily after a first episode of psychosis Method: A case report is described on aripiprazole-induced sialorrhea that resolved after discontinuation of the medication. We also present a literature review on this topic. Results: After readmission due to worsening psychosis, the patient endorsed sialorrhea. Aripiprazole was discontinued on Day 2 of inpatient hospitalization and symptoms resolved by Day 4. The patient was subsequently discharged on olanzapine with recommendations for outpatient follow-up. Conclusion: Aripiprazole-induced sialorrhea is an uncommon adverse effect of aripiprazole but can cause great distress. The mechanism of aripiprazole includes a potent partial agonist at D2, D3, 5-HT, and 5-HT1A receptors and antagonist at 5-HT2A and adrenergic receptors, with no clinically significant effect on muscarinic receptors . Clozapine-induced sialorrhea is thought to be secondary to agonist activity at the muscarinic M4 receptor. Salivary flow can be enhanced by sympathetic adrenergic stimulation, causing increased contraction of muscle fibers around salivary ducts . An increase in cholinergic muscarinic activity or reduction in adrenergic tone can cause hypersalivation. In this case, the most likely mechanism for aripiprazole-induced sialorrhea is through central a2-adrenergic antagonism . Anticholinergic medications (i.e., benztropine, glycopyrrolate, trihexyphenidyl, and amitriptyline) and a2-adrenergic receptor agonists (clonidine, guanfacine, and terazosin) are known treatments of antipsychotic-induced sialorrhea. Diphenhydramine, a central acting H1 histamine receptor antagonist, is also reported as a treatment alternative . Non-systemic options include non-selective, muscarinic receptor antagonists such as atropine sulfate and ipratropium bromide, which both can be administered sublingually and decrease systemic side effect profiles. It is important for clinicians to be aware of this possible adverse effect when starting treatment with aripiprazole and to monitor appropriately.

No. 27

Different Patterns of Initation of Monthly Paliperidone in Acute Inpatients

Poster Presenter: Santiago Ovejero Garcia
Co-Authors: Raquel Alvarez, Laura Mata Iturralde, Sergio Sanchez Alonso

SUMMARY: Objectives: Paliperidone palmitate begins with doses of 150 and 100 mg on days 1 and 8 (± 4 days) intramuscularly. In clinical practice, different patterns of monthly paliperidone (MP) initiation have been observed. The objective of this study is to analyze the different patterns of initiation of MP in in acute psychotic patients admitted to a psychiatric hospitalization unit. Methods: Of 259 patients who start MP in the hospitalization unit, in 42 of them (16.2%) a pattern of atypical onset is made. A naturalistic study is carried out with a retrospective analysis of the different observed patterns of MP initiation. The patterns of initiation of the MP, the diagnosis of the inpatients, the MP dose at discharge and the antipsychotic monotherapy rate at discharge were analyzed. Results: The sample presents 42 patients (24 men, 18 women) that represents 16.2% of a global sample2, with an average age of 46.8 years (men 41 years vs. women 54.6 years; t Student, p = 0.006). MP has been administered to patients with various pathologies: schizophrenia 18 (42.9%), delusional disorder 9 (21.4%), schizoaffective disorder 4 (9.5%), bipolar disorder 4 (9.5%)), not otherwise specified psychosis 3 (7.1%), paraphrenia 2 (4.8%), obsessive compulsive disorder 1 (2.4%) and mental retardation 1 (2.4%). There are 9 different patterns of onset than usual, with the following dose: 150-150 mg (7, the only one with higher than usual doses), 150-75 mg (5), 100-150 mg (2), 100- 100 mg (5), 100-75 mg (18, the most frequent), 100-50 mg (2), 75-150 mg (1), 75-100 mg (1) and 75-75 mg (1). The two doses of MP have been administered with a difference of 5.3 days between them. The average hospital stay is 16.1 days. The dose at discharge of MP is 95.2 mg/month, with the dose of 75 mg/month being the most frequent (42.9%). Antipsychotic monotherapy at discharge is 76% (94.4% for patients with 75 mg/month and 100% for patients with 50 mg/month). No side effects have been observed during treatment with MP during the period of hodpitalization. Conclusions: The pattern of atypical onset of MP that has been most used in this sample is 100-75 mg. In delusional disorder (20.5% of all patients in the overall sample, in which it has a prevalence of 12.7%), an atypical onset pattern of MP has been frequently used, especially that of 100-75 mg. Different patterns of onset of MP in acute patients have shown similar parameters to those found for the usual pattern of onset, except for a lower dose of MP at discharge and higher rate of antipsychotic monotherapy at discharge. More studies are needed to confirm these results.

No. 28

Positive Psychiatry in the Adolescent Population

Poster Presenter: Kailee Marin
Co-Authors: Nadeem Albadawi, Nicole Christina Rouse, D.O., Maher Kozman

SUMMARY:

Background: Positive Psychiatry (PP) is a branch of medicine that highlights the importance of wellbeing and health. Psychological factors that play an essential role in PP include resilience, optimism, hope, wisdom, post-traumatic growth, and social engagement. The objective of this abstract is to highlight the role PP can provide in attaining beneficial clinical outcomes in inpatient adolescent populations. With the reported effectiveness of PP in adult inpatient and outpatient settings, the need for further research and implementation of similar models in adolescence becomes integral. Methods: A retrospective literature search was conducted to assess the effectiveness of PP. Based on this review, resources that were reportedly effective were collected to create a succinct intervention that we propose for utilization on inpatient adolescent units. Results: There is significant evidence indicating the role of PP in having measured positive clinical benefits. In their meta-analysis of 51 interventions with 4,266 individuals, Sin et al reported that PP enhanced well-being and alleviated depression. As such, they recommended clinicians to utilize PP for adult patients with depression who were highly motivated to improve. Sidway further described the importance of PP in treating depression, however stressed the importance of early intervention and instilling resilience to prevent distancing oneself from higher levels of well-being. Jeste et al further attest to the clinical benefit of PP and demonstrate its feasibility. Huffman et al examined the use of PP in suicidal patients and reported that PP exercises were associated with self-rated improvements. Specifically, they recognized exercises highlighting personal strengths and gratitude as having the most influential and significant outcomes. Conclusion:

Positive Psychiatry has been proven essential in providing desirable treatment outcomes in patient populations suffering from a variety of mental illnesses, such as depression and suicidal ideation. By focusing on such psychological factors, it is possible to achieve a breakthrough in improving adolescent mental health by incorporating PP strategies that instill resilience and prevent further pathology development.

No. 29

A Case of Clozapine-Induced Myocarditis: Diagnostic and Management Considerations

Poster Presenter: Olalekan Olaolu, M.B.B.S., M.P.H.
Co-Authors: Peterson Rabel, M.D., Inderpreet Singh Virk, M.D., Oluwole Jegede, M.D., Patrice Ananie Fouron, D.O., Jason E. Hershberger, M.D., Tolulope A. Olupona, M.D., Kodjovi Kodjo, M.D.

SUMMARY:
Introduction: Approximately 40% of patients placed on clozapine engage in productive activities such as school or work and it is also associated with a substantial reduction in suicide rates among schizophrenic patients. However, clozapine like many other medications can have substantial side effects including myocarditis which has a fatality rate between 10% and 46%. Considering the importance of clozapine, more attention should be paid to this lethal side effect. Case Presentation: We present a 21 year old male with a history of early onset schizophrenia (age 13 years) who presented to the emergency department with auditory hallucinations, mutism, and catatonic symptoms. Management was commenced for acute psychosis in the context of non-compliance and treatment resistance. Patient was started on Haldol 10 mg PO BID, Ativan 1 mg BID PO 2 mg QHS, Lithium 300 mg PO BID, and Docusate 100 mg PO BID. On admission Day 3, admitting symptoms became worse, clozapine was commenced at 25mg PO QD, Haldol tapering began, and was eventually discontinued on Day 14. Meanwhile, clozapine was gradually titrated up to 25 mg PO BID on Day 7 and 150 mg PO BID by Day 14. On Day 17, patient developed persistent tachycardia (115 bpm), fever (102.4F), eosinophilia, and slight leukocytosis (11,200/ml), clozapine was discontinued, and patient was transferred to telemetry. On Day 18, Troponin, CK-MB, ESR, CRP, and D-Dimer were elevated. Echocardiogram on the same day revealed mild left ventricular systolic dysfunction with apex hypokinesis, EF:45%. Subsequently, CAT scans of the head, chest, and abdomen, Cardiac catheterization, lower extremities venous duplex scan, lung VQ scan, and blood culture returned without findings. From Day 17 to Day 28, patient was managed with broad spectrum antibiotics and supportive care. Echocardiogram on Day 24 showed normal left ventricular systolic function, EF: 65%. By Day 28, patient was back to his pre-Day 17 condition. Discussion: Clozapine associated Myocarditis has been reported for decades but remains understudied. Also, monitoring and diagnosis of this condition is difficult because of the undefined signs, symptoms, and course of the disease. We present a timeline of events from beginning to resolution to augment this developing science and we recommend a high index of suspicion with immediate institution of multi-specialty management in new patients on clozapine who develop fever and/or tachycardia.

No. 30

Does High Dose of Clozapine Induce Seizures?

Poster Presenter: Rachel Kossack, M.D.
Co-Authors: Ahmad Jilani, Asghar Hossain, M.D.

SUMMARY:
Clozapine is an atypical antipsychotic that exerts its effect by acting as an antagonist at 5-HT2A, D1, D3, D4, and a (especially a1) receptors. It is mainly used in treatment of resistant schizophrenia. Relatively rare adverse effect of agranulocytosis limits the use of clozapine despite its effectiveness in controlling the symptoms of schizophrenia [1]. Clozapine has been documented to have induced seizures in some patients which may further complicate management of these individuals. We conducted a review of literature to find out if the occurrence of seizures is related to the dose and whether it is possible to further continue such patients on clozapine.

No. 31

The Effects of Cigarette Smoking on the Effectiveness of Clozapine in Schizophrenics

Poster Presenter: Rachel Kossack, M.D.
Lead Author: Rachel Kossack, M.D.
Co-Authors: Asghar Hossain, M.D., Farhan Husain

SUMMARY:

Clozapine is considered the gold standard for treatment of schizophrenia; it carries the highest efficacy among second generation antipsychotics in its relief of both negative and positive symptoms. Clozapine has a known association with cigarette use and smoking, which is theorized to alter the serum levels of clozapine. However, statistically schizophrenic patients also have a higher prevalence of being cigarette smokers. In this case report, we discuss a patient who after being stabilized on Clozapine inpatient, decompensated after discharge when he started cigarette smoking. After readmission and without a change in his medication regimen, he had a resolution of his psychosis when placed on a nicotine patch instead. We will review the effect of smoking on clozapine, the connection of smoking to schizophrenia, and effective measures to decrease cigarette use in these patients.

No. 32

Catatonia Due to Benzodiazepine Withdrawal: A Rare but Serious Complication

Poster Presenter: Geetha Chandrashekar, M.D.
Co-Authors: Meelie Bordoloi, M.D., Muaid Hilmi Ithman, M.D., Kimberly Brandt, D.O.

SUMMARY:

Withdrawal from benzodiazepines typically includes rebound anxiety and insomnia, and can be complicated by seizures, hallucinations or delirium. Another rare and less discussed complication includes catatonia which tends to occur 3-7 days following abrupt discontinuation(1). In this poster, we discuss a case of 52yo male who was admitted to the inpatient unit following a suicide attempt by laceration to left forearm. His history included recurrent major depression and generalized anxiety disorder. At the time of admission, PHQ-9 was completed which revealed a score of 27 indicating severe depression. His home medications included Venlafaxine XR 225mg daily and Clonazepam 2mg at bedtime. In first week, Venlafaxine was switched to Escitalopram and dose titrated up to 20mg. Bupropion XL 150mg daily was added. Qutiapine was initiated for augmentation and to help with sleep and dose titrated up to 150mg at bedtime. Clonazepam was continued at 2mg at bedtime. In the next few weeks that followed, Bupropion XL was further optimized. Despite the aggressive treatment, patient showed no improvement. ECT was discussed as an option for refractory depression. Clonazepam was tapered off in preparation for ECT and temazepam initiated. Patient developed worsening anxiety and insomnia immediately following Clonazepam taper. By day 2 of discontinuation, he developed catatonic features including fixed posture, limited facial expression, and significant speech and motor delays. Lorazepam 2mg IM was given for suspected catatonia and patient showed symptomatic improvement. Additional 2mg IM Lorazepam was given to facilitate further recovery. Temazepam was switched back to Clonazepam and dose titrated up to a total daily dose of 3mg. No further catatonic symptoms were observed. Studies suggest that withdrawal catatonia typically occurs following chronic use of benzodiazepines. Benzodiazepine use in these people have ranged from 34days to 40years(2,3). Older individuals seem to be more susceptible to this side-effect. GABA hypoactivity has been implicated in the pathophysiology of catatonia. Benzodiazepines are allosteric agonists at GABAA receptors which acts by amplifying the effect of GABA on the GABAA receptor. However, chronic potentiation of GABA activity at GABAA receptors results in down-regulation of GABAA receptors a phenomena known as receptor adaptation. When the benzodiazepine is abruptly discontinued, a GABA-deficient state could result which predisposes an individual to develop catatonia(3). Lorazepam is the first-line treatment for catatonia. The time to response may range from 15min to 4h. If lorazepam is not effective ECT should be considered. Conservative measures includes ensuring adequate hydration and enforcing fall precautions(3,4). Memantine, topirimate and amantadine have been suggested in treatment of catatonia in older adults, however , these have not been studied in the management of benzodiazepine withdrawal catatonia(5).

No. 33

Making a Diagnosis of Complex Regional Pain Syndrome and Its Treatment: A Case Report

Poster Presenter: Soroush Pakniyat Jahromi
Lead Author: Juan Sebastian Pimentel, M.D.

Co-Authors: Shahan Sibtain, M.D., Maria Elena Saiz, M.D., Asghar Hossain, M.D.

SUMMARY:
Complex regional pain syndrome (CRPS) is a disabling neurovascular condition in the limbs that could occur following trauma or surgery. It is believed that a factor such as trauma disrupts the functionality of somatosensory, sympathetic, and somatomotor systems, resulting in excruciating pain, hypersensitivity, vasomotor skin changes, and disability. This is a case report of a 49-year-old female who developed CRPS type 1 following a surgery on her right foot due to fracture. She also started having depressive and anxiety symptoms with occasional passive suicidal ideation. In this report different approaches and studies for diagnosis and management of CRPS has also been reviewed. An early interdisciplinary approach consisting of medical pain management therapies, education, functional rehabilitation, and cognitive behavioral therapy is necessary in order to achieve better results when dealing with CRPS patients. Such case reports and more studies could narrow the wide range of treatment options currently available and improve the quality of life for CRPS patients.

No. 34

Worsening Neutropenia While on Methylphenidate

Poster Presenter: Navmoon Singh Mann, M.D.

SUMMARY:
Background: Attention Deficit Hyperactivity Disorder (ADHD) is a neuropsychiatric disorder characterized by diminished sustained attention, increased hyperactivity or impulsivity. The combination of pharmacotherapy and psychosocial interventions is known to give a better outcome compared to either treatment modality alone. Pharmacotherapy is the first line of treatment, which includes stimulant and non-stimulant medications. Unless contraindicated, stimulants are the first choice for pharmacological intervention. Case description: The patient was a 13 year old African American female with a history of ADHD, chronic benign neutropenia and asthma. Neutropenia was first noticed at age one-year and on several other occasions. Growth and development were normal, however her medical history was significant for a bout of pneumonia, cellulitis and several episodes of otitis media; IV antibiotics were never needed. She was diagnosed with ADHD at eight years of age and started on methylphenidate ER daily and biweekly psychotherapy. At 10 years old, the patient was referred to hematology/oncology for evaluation of persistent neutropenia. Considering her history and negative genetic testing for the ELA-2 gene and anti-neutrophil antibodies, severe congenital neutropenia and cyclic neutropenia were ruled out. Possible causes of neutropenia considered were genetically predetermined chronic neutropenia seen in 3-5% of African Americans or association of neutropenia with methylphenidate. From age one to five years, the patient's neutropenia ranged from mild to severe. While she was on methylphenidate, neutropenia was consistently within moderate to severe range. Due to worsened neutropenia with methylphenidate, medication was stopped and guanfacine was started. While off methylphenidate, the patient's absolute neutrophil count consistently remained within normal range during two follow-up visits over a period of six months. Discussion: The potential side effects of methylphenidate including headache, stomachache, nausea, insomnia, worsening of motor tics, rebound effects, growth suppression and appetite suppression are well known. There is limited literature on neutropenia or worsening of preexisting neutropenia with methylphenidate. This case report highlights the importance of considering neutropenia as a possible side effect of methylphenidate. Conclusions: Patients with a history of neutropenia may develop persistent neutropenia after initiating treatment with methylphenidate, which may require termination of the offending agent. Objectives: 1. To explore the possible association between methylphenidate and neutropenia. 2. To educate mental health providers on the importance of considering neutropenia as a potential side effect of methylphenidate.

No. 35

Antipsychotic Selection in a Patient With a History of Breast Cancer

Poster Presenter: Kimberly Grayson, M.D.
Co-Authors: Andrew Davidson Stubbs, M.D., Jonathan Findley

SUMMARY:

Background: It is well documented that antipsychotics increase prolactin levels through dopamine blockade in the tuberoinfundibular pathway. Elevated prolactin levels have been correlated with a higher risk of developing breast cancers in humans, and have been observed to lead to an increase in mammary neoplasms in rodents. This is thought to be due to the overexpression of the prolactin receptor in the cancerous cells of both ER-positive and ER-negative breast cancers. We report a case of a patient with a history of breast cancer who presented with psychiatric symptoms requiring treatment with an antipsychotic. Case Report: Mrs. S is a 44 year old Hispanic woman who was admitted to an inpatient psychiatric unit for acute mania and psychosis with paranoid and grandiose delusions, hyper-religiosity, self-talk, increasingly bizarre behavior, mood lability, and poor sleep for the past month. On exam, she exhibited rapid speech with illogical and disorganized thought process, loosening of associations and flight of ideas. Her psychiatric history was significant for a previous diagnosis of major depressive disorder, for which she was treated with citalopram 20mg for the past year. She had also received alprazolam for anxiety in the past, but had no other exposure to psychotropic medications, no previous inpatient psychiatric admissions and no history of substance abuse. Her medical history was significant for invasive ductal carcinoma, ER/PR+, HER2 negative, diagnosed 3 years prior. She had undergone lumpectomy, chemotherapy with adriamycin and cytoxan, and paclitaxel and had undergone radiation therapy in the 2-3 years prior to this presentation. At the time of this admission, her cancer was in remission with a current regimen of anastrozole and leuprolide. She was started on aripiprazole for acute mania and psychosis. The dose was titrated to 10mg/day with gradual improvement in her symptoms and functioning, and she was discharged on hospital day 6. Discussion: Mrs. S had such impaired functioning that it was necessary to treat her acute psychosis, however her history of breast cancer was a reason for concern when deciding treatment. Antipsychotics do not equally increase prolactin levels, so for patients with comorbid psychosis and breast cancer, of which >95% overexpress prolactin receptors, careful selection of antipsychotic regimen is critical to prevent progression of malignant processes secondary to hyperprolactinemia. In our case, the decision was made to treat this patient with aripiprazole for its lower effect on prolactin, and since it is a partial agonist on the dopamine receptor, it may even lower prolactin levels. Conclusion: Dopaminergic effects of antipsychotics and subsequent hyperprolactinemia must be taken into consideration for patients with prior or current history of breast cancer.

No. 36

The Paradoxical Effect of Low-Dose Quetiapine on Affective and Psychotic Symptoms

Poster Presenter: Razieh Adabimohazab, M.D.

SUMMARY:

We present the case of a 28 years old female with long standing diagnosis of schizoaffective disorder and post-partum psychosis. Despite multiple hospitalizations during the first few years after diagnosis, she was stabilized on a regimen consisted of two anti-psychotic medications for almost 4 years. In 2017 prior to pregnancy, neuroleptic medications were discontinued which led to three hospitalizations secondary to irritability, auditory hallucination and paranoid ideation. After delivery patient was started back on the same medication regimen which controlled her symptoms for 4 years prior to pregnancy, however it failed to control her affective and psychotic symptoms at this time. Subsequently patient was admitted during the 4th month of post- partum and was started on mood stabilizers along with previous regimen. Having had residual symptoms after admission to the outpatient clinic we started her on the low dose of Quetiapine (50mg and then 100mg) with the purpose of titrating it up to the therapeutic dose. One week later she presented with extreme irritability, paranoid ideation and aggressive behavior which required inpatient admission. Previous studies (Millard et al. 2015 and Gnanavel, 2013) demonstrated that low dose Quetiapine could induce or worsen mania in Bipolar 1 disorder in the context of possible under treatment or paradoxical effect. One supporting hypothesis is that at low doses Quetiapine worsens these some symptoms via the ratio of 5HT2A/D2 receptor antagonism. Quetiapine at lower doses

favors greater 5HT2A receptor blockade and subsequently increases dopamine concentrations. In this poster we explore multiple factors that led to patient's exacerbation of symptoms, with special emphasize on the role of low dose Quetiapine.

No. 37
WITHDRAWN

No. 38
Predisposition to the Development of Serotonin Syndrome in Cerebral Palsy
Poster Presenter: Adam Hubert Schindzielorz, M.D.
Co-Author: Oluwadamilare Ajayi, M.D.

SUMMARY:
Serotonin syndrome is characterized by its primary symptoms of neuromuscular excitation, autonomic excitation and altered mental status. It is primarily drug induced with antidepressants being the main precipitants. However, other classes have been implicated as well including antipsychotics, some antiemetics, pain medications and lithium. The syndrome is typically induced by the combination of two or more serotonergic agents, however there have been instances of serotonin syndrome being produced while a patient is on a single medication. Currently the literature is limited in regard to the study of risk factors associated with the production of serotonin syndrome while on relatively low doses of a single agent. One such risk factor may be underlying cerebral pathology. We present two such cases that shared Cerebral Palsy as a common underlying disease. Our first case involved an 18-year-old female with cerebral palsy who developed serotonin syndrome that required hospitalization on two separate occasions, each after a two to three-week, monotherapy trial of low dose fluoxetine and sertraline. Each instance required hospitalization and management with valium and cyproheptadine due to the severity of her symptoms. Our second case involved a 42-year-old female with cerebral palsy who was admitted to a state psychiatric facility and treated with a combination of olanzapine, aripiprazole and lithium. During her treatment she developed acute respiratory failure and was transported to a local hospital where she was diagnosed with serotonin syndrome which was presumed to have been induced by her lithium. The diagnosis was confirmed by rapid response to cyproheptadine and reemergence of symptoms upon its discontinuation which required her to be discharged on and slowly tapered from the medication. Cerebral palsy, though being a well-recognized ailment is not frequently associated with hypersensitivity to serotonin. In fact, this is the first case series to our knowledge reporting two separate cases of serotonin syndrome being induced in patients with cerebral palsy who had limited exposure to serotonergic agents. Both cases thereby add to the literature by providing two instances of atypical induction of serotonin syndrome with a common underlying medical illness.

No. 39
Treatment of Tardive Dyskinesia With B6 Complicated by Affective Disturbance and Nonresponse
Poster Presenter: Adam Hubert Schindzielorz, M.D.

SUMMARY:
Tardive Dyskinesia is a severe, delayed-onset iatrogenic movement disorder often involving the mouth, tongue, jaw, trunk and extremities. It is most commonly caused by dopamine receptor blocking medications but has been associated with other agents as well. With a typical onset of 1-2 years after continuous exposure to an offending medication tardive dyskinesia carries a prevalence of roughly 20% and appears to increase with age. Various treatments have been proposed including switching the primary agent to a low-potency atypical antipsychotic (clozapine or quetiapine) or through the use of dopamine-depleting agents, such as VMAT2 inhibitors. Recently, pyridoxine has been studied as a treatment for tardive dyskinesia. Pyridoxine, is metabolized to Pyridoxyl-5-PO4 which is a coenzyme that participates in the process of synthesizing dopamine, epinephrine, norepinephrine, serotonin, melatonin and GABA. It is also thought to be an antioxidant with free-radical scavenging activity. Literature supports the use of pyridoxine for the treatment of tardive dyskinesia in dose ranges of 300-1200mg per day, with some research demonstrating upwards of 60-80% reduction of symptoms after only 4 weeks. In some studies, sustained benefit upwards of 18 months has been achieved even after discontinuation. However,

despite its reported benefits the coenzyme carries a risk of permanent peripheral neuropathy and thereby its benefits must be weighed against its risk. As such, the possibility of non-response must be considered, however research is limited in addressing the evaluation of factors that may contribute to this outcome. We present a case of a 66-year-old male who developed tardive dyskinesia after roughly one year of treatment with quetiapine 200mg daily. During treatment the patient scored 14 on the AIMs and was trialed on B6 at a dose of 1200mg. After treatment for two months no benefit was achieved. Also during this time the patient developed acute depressive symptoms including significantly lowered mood, fatigue, anhedonia and hypersomnia. Following discontinuation of B6, and the patient's affect returned to baseline without any additional pharmacologic management. Ultimately, he was approved for valbenazine and was successfully managed with 40mg daily with a near 50% reduction in his AIMS score. Though vitamin supplementation is often thought to be relatively benign, it can carry risks when above the typical requirements of the body. Our case demonstrates that not all populations will respond to B6 supplementation and may in fact suffer from concurrent worsening of affective symptoms, a treatment emergent effect that has not been previously attributed to the vitamin's use. Our case also contributes to current research by illuminating the need for further study into factors that may predict response or non-response to B6 to avoid use in potential non-responders or those who are more likely to suffer from adverse events.

No. 40

Aripiprazole Long-Acting Injection in a Psychiatric Unit

Poster Presenter: Lara Rodriguez Andrés

SUMMARY:

OBJECTIVES Aripiprazole is an atypical antipsychotic drug that acts via partial agonism of dopamine D2 receptors. Trials with oral aripiprazole have shown that is associated with fewer metabolic disturbances compared to some other atypical antipsychotics. In addition, aripiprazole has a more favourable cardiovascular tolerance profile. An intramuscular long-acting injection (LAI) formulation of aripiprazole (aripiprazole LAI) has been approved for use as a treatment for schizophrenia in adults. However, clinical trials have shown aripiprazole to be effective and a well tolerated treatment for agitation associated with schizophrenia, schizoaffective disorder, schizophreniform disorder or bipolar I disorder. In this study we describe the use of aripiprazole LAI as a treatment in adults at clinical practice in a Psychiatry Unit during an 8 months period. METHODS Every individual admitted to our Adult Inpatient Psychiatry Unit who recieved treatment with an aripiprazole LAI between January 2018 and August 2018 were reviewed. A retrospective analysis of medical records was conducted and clinical diagnoses were established using the DSM-5 criteria. RESULTS Twenty two individuals (38.0% male, 68% female) patients were part of this study. The mean age was 47,5 years (SD?=?15,46; range: 20-83).The main diagnoses were schizophrenia (45,4%) and unspecified Schizophrenia Spectrum and Other Psychotic Disorders (40%). Aripiprazole LAI was used as monotherapy in 71% cases and associated with other typical antipsychotic drugs in 29%. One patient from the cohort required an admission in hospital in the next 8 months due to treatment abandonment. None of them was removed due to side effects to this drug. CONCLUSIONS In our sample of patients with psychotic and bipolar disorders showed good tolerance and response to treatment with aripiprazole LAI. Patients did not have to be removed from the treatment due to inefficacy or side effects of any case.

No. 41

A Mixed Picture of NMS and Malignant Catatonia Following Long-Acting Antipsychotic Depot Injection

Poster Presenter: Acacia Michelle Hori
Co-Authors: Katherine Elise Camfield, M.D., M.P.H., Susie Lisa Morris, M.D., M.A.

SUMMARY:

Introduction: Differentiating neuroleptic malignant syndrome (NMS) from malignant catatonia can be challenging due to symptom overlap, including altered mental status, mutism, akinesia, rigidity, autonomic instability, leukocytosis and creatinine kinase (CK) elevation. We discuss a patient exhibiting

mixed features of NMS and malignant catatonia after long-acting aripiprazole injection. Case Description: A 56 year-old female with Bipolar I Disorder with psychotic features presented to her outpatient psychiatrist with paranoid delusions after 15 years of stability on aripiprazole, paroxetine, and diphenhydramine. Her psychosis worsened after home aripiprazole dose was increased, and she was admitted to an outside psychiatric hospital (OSH). She became agitated with auditory hallucinations and severe thought disorganization. Per OSH records, a long-acting injectable form of aripiprazole 400mg/2mL was ordered, though administration was not clearly documented. The patient suffered an acute deterioration of mental status, onset of fever, and muscular rigidity. Upon transfer to our hospital, she was mute, agitated, febrile, tachycardic, hyperglycemic, acidotic and hypernatremic, and exhibited abnormal posturing. Acute encephalopathy workup revealed leukocytosis and elevated CK with negative blood cultures, urine drug screen, urinalysis, and head imaging. Her fever continued to rise despite empiric intravenous antibiotic administration. Although the degree of creatinine kinase elevation, normotension, psychotic prodrome, abnormal posturing and catalepsy were suggestive of malignant catatonia, her altered mental status, muscular rigidity, hyperthermia (Tmax 40.3°C), diaphoresis, and tachypnea in the setting of possible recent administration of a long-acting antipsychotic indicated a diagnosis of NMS. The patient was transferred to the ICU for dantrolene therapy. Her autonomic symptoms stabilized. She was then transferred to the inpatient floor with supportive care for continued rigidity, negativism, and altered mental status. Her speech and musculoskeletal symptoms slowly improved, enabling her to express paranoid delusions and endorse hallucinations and suicidal thoughts. At this time, long-acting injectable aripiprazole administration prior to symptom onset was confirmed. Lorazepam was added to her regimen, followed by dramatic improvement in movement, speech, and mental status. Delusions and hallucinations resolved with risperidone, with no adverse reactions observed. Discussion: This patient met criteria for both NMS and malignant catatonia, and symptom resolution was achieved with a combination of dantrolene and lorazepam therapy. In this case, we observed that long-term stability on an oral antipsychotic agent does not preclude adverse reactions to injectable formulations. In addition, our management was guided by concern for a serious adverse drug reaction, emphasizing the importance of reliable documentation of medication administration.

No. 42

Correlating Plasma Levels of Clozapine With the Risk of Developing Obsessive-Compulsive Symptoms

Poster Presenter: Maria Roldan Berengue, M.D.
Co-Author: Maria Martinez Ramirez

SUMMARY:
INTRODUCTION The prevalence of obsessive-compulsive symptoms (OCS) in schizophrenic and schizoaffective patients is higher than in general population (1),(2). There is higher frequency and greater severity of OCS in patients treated with antipsychotics with predominant anti-serotonergic profile. Clozapine (CLZ) is the medication more frequently associated with the second-onset OCS (3),(4). OBJECTIVES To describe the correlation between plasma levels of clozapine (Cpl) and the presence of OCS in a sample of schizophrenic and schizoaffective patients. METHODS The electronic records of a sample of 45 schizophrenic and schizoaffective patients treated with CLZ and followed in two outpatient clinics in Catalonia were selected. A retrospective descriptive study of the database was performed. RESULTS 45 patients were selected, 10 (22.2%) had OCS. The majority of the patients were males (80.0%) and Spanish (95.5%). The mean age was 41.5 years. The Cpl were higher in patients with OCS than in those without (470.6 +/- 180.5 vs 381.4 +/- 207.3) even though the dose of CLZ was similar among both groups (343.7 +/- 227.4 in OCS patients vs 340.4 +/-161.2 in non-OCS patients). Noteworthy, the p-value shows no significance (p>0.05). DISCUSSION We couldn't find any significant difference in Cpl between both groups, this could be due to the small size of our sample. Comparing our results to the literature, we found heterogenous results: some studies support a positive correlation between Cpl and the presence and severity of OCS (4) and others don't (2). We think that having a laboratory threshold that warn

the clinician about the possibility of developing OCS could be very useful. Adequate recognition of OCS in schizophrenia could avoid additional suffering as it may respond well to treatment. Further research is needed to understand the correlation, the mechanism and the pathophysiology underlying this co-morbidity. Acknowledgments No conflicts of interest were reported.

No. 43

Clozapine in Catatonia: A Case Report and Literature Review

Poster Presenter: Silpa Balachandran, M.D.
Co-Authors: Akhil Anand, M.D., Ngu Wah Aung, M.D., Rajesh Rajesh

SUMMARY:

Background: Catatonia is a complex neurobiological condition. Traditionally catatonia has been treated with benzodiazepines and ECT. Alternative treatments have been described for patients who do not respond to traditional treatments. While antipsychotics (APs) have not been shown to be helpful in patients presenting with catatonia- as APs increase parkinsonism, leading to a potential aggravation of catatonia and an increase in the risk of neuroleptic malignant syndrome (NMS)- clozapine can be considered for catatonia that is not responding to conventional treatment protocols. Method: Hereby we discuss the case of a 55-year-old male with psychiatric history significant for schizophrenia who presented with recurrent falls and decline in ADL's from baseline. Additionally, he exhibited bizarre staring and limited speech. The psychiatry service was consulted on day two of admission by the medicine service to assess for decompensated schizophrenia vs. catatonia. During his assessment, he was intermittently alert and oriented. His mentation was confused with waxing and waning of attention. He was significantly withdrawn and demonstrated mild rigidity and increased latency of speech. Medical work-up was non-revelatory. Delirium being the principal differential diagnosis, his home psychotropic medications- Fluphenazine, Valproate, and Benztropine were discontinued. Olanzapine 2.5mg was started to treat delirium. After the initiation of olanzapine, the patient experienced worsening confusion, rigidity, catalepsy, increased withdrawal, verbigeration, and posturing. The patients Bush-Francis Catatonia Rating Scale (BFRS) score was found to be 22, and so catatonia secondary to schizophrenia was suspected. Olanzapine was discontinued. Minimal improvement was noted on lorazepam challenge, but no improvement was seen on further up titration to 8mg IV lorazepam per day. The BFRS remained between 20 and 22. At this juncture, clozapine 25mg was initiated and titrated over a week to a dose of 100 mg BID. BFRS score decreased from 21 to 9 by the sixth day of clozapine administration. Lorazepam was tapered down to 4mg daily given clinical improvement on clozapine. Result: A literature review was done looking into the use of clozapine for treating catatonia. A retrospective chart review1, one case series2 and two case reports3,4 were found based on this search criteria. Clozapine was found to helpful in the cases described in these studies when traditional treatments failed. Conclusion: There are no randomized control trials to establish the usefulness of clozapine in catatonia. Case reports and case series suggest that clozapine may be used as an option for the treatment of catatonia not responding to benzodiazepines. Higher quality evidence is needed to establish a benefit for clozapine in catatonia.

No. 44

A Case of SILENT Syndrome (Irreversible Lithium-Effectuated Neurotoxicity)

Poster Presenter: Jonathan Matthew Parker, M.D.
Co-Authors: Dante Martin Durand, M.D., Mousa Botros, M.D.

SUMMARY:

A 55-year-old male with history of Bipolar disorder and treatment with lithium since adolescence presented with lithium toxicity after switching antihypertensive medication Hydrochlorothiazide to Enalapril. The patient initially presented to the emergency department with symptoms including altered mental status, elevated lithium level of 3mmol/L, acute kidney injury, diarrhea, vomiting, and tremors. During the patient's prolonged hospitalization, his medical problems mostly resolved, but was left weak with a persistent ataxia and a dysarthria. Despite attending a long-term physical rehabilitation program, the patient

afterwards required use of a walker to ambulate and progressively became wheelchair bound.

No. 45

Association Between Benzodiazepines and Acute Angle-Closure Glaucoma: A Nationwide Case-Crossover Study

Poster Presenter: Woo Jung Kim, M.D.
Lead Author: Ju-Young Shin

SUMMARY:

Background: Since benzodiazepines (BZDs) might affect the iris sphincter muscles, the use of BZDs could be a risk factor for acute angle-closure glaucoma (AACG), an ophthalmic emergency even causing blindness. However, there has been a few research evidences for the association between BZDs and AACG. We aimed to assess the risk of AACG associated with BZD use. Methods: We performed a case-crossover study using a nationwide claims database of the National Health Insurance Service (2012–2016) in Korea. The case-crossover design is a variant of case-control study, often used to examine an effect of short-term exposure on acute outcome. Cases serve as their own controls by assessing exposure at different time intervals. Our study subjects consisted of patients who had newly diagnosed AACG with at least one BZD prescription prior to the AACG diagnosis during the study period. The index date was the date of the diagnosis of AACG. Exposure to BZDs was assessed during 30-days case period prior to each patient's AACG and three pre-consecutive control periods. We used conditional logistic regression adjusting for concomitant medications to determine the odds ratio for BZD exposure in the case periods compared with the control periods. Results: From the 11,093 incident patients with AACG, we finally included 6,709 patients with a prior prescription of BZDs. Overall, BZD exposure was positively associated with increased risk of AACG (adjusted OR = 1.40, 95% CI = 1.27–1.54). The results of the stratified and sensitivity analyses confirmed those from the primary analyses. Conclusion: We found that BZDs increase the risk of AACG in the Korean population. Clinicians should pay more attention to the monitoring of visual disturbance after BZD prescription. The knowledge of the potentially harmful effects of BZDs and their rational use can improve the quality of life of many patients. This study was supported by grants from the Haesong Geriatric Psychiatry Research Fund of the Korean Mental Health Foundation, Seoul, Republic of Korea.

No. 46

Valproate-Induced Parkinsonism: A Literature Review and Case Series

Poster Presenter: Andrea Chapman Bennett, M.D.
Co-Author: Jordan Harrison Rosen, M.D.

SUMMARY:

Background: Valproate is a commonly utilized agent in the treatment of bipolar disorder for anti-manic, antidepressant, and maintenance purposes. Valproate's more well-known and oft considered side effects include sedation, headache, dizziness, tremor, nausea, vomiting, abdominal pain, diarrhea, constipation, weight gain, and alopecia. More serious concerns include pancreatitis, hepatotoxicity, thrombocytopenia, and drug reaction with eosinophilia (DRESS). A lesser known but debilitating adverse effect associated with Valproate is Parkinsonism. We discuss two cases of apparent valproate-induced parkinsonism and discuss considerations to keep in mind when there is concern for this side effect. Case 1: Ms. M is 60 year old female with a history of bipolar I disorder with catatonic features, cluster b traits, and HTN. She presented to the inpatient unit with symptoms of mania. She had been in the midst of an antipsychotic cross-taper as an outpatient. During admission, the cross-taper was completed, and Valproate was started. Prior to discharge, she was noted to have a new stooped posture and shuffling gait. This was attributed to her antipsychotic regimen but did not resolve as this agent was removed. Valproate was tapered and the patient's Parkinsonian symptoms resolved. Case 2: Ms. S is an 82 year old female with a history of MDD, COPD, HTN, HLD, Temporal Arteritis, chronic UTI's, hemorrhagic cerebellar stroke in 2010 and six months of Parkinsonian symptoms associated with a reported sharp decline in cognition who presented to the outpatient clinic for management of depression and neurocognitive disorder with behavioral disturbance. Onset of many neurocognitive and Parkinsonian symptoms corresponded chronologically with Valproate therapy. After discontinuation of Valproate, these

symptoms improved. Discussion: Literature review indicates that Parkinsonism associated with Valproate therapy may occur as an isolated drug-induced phenomena or an unmasking of an underlying illness. The elderly may be more predisposed to this effect. Conclusion: In patients taking Valproate with new or acutely worsened Parkinsonian symptoms, Valproate should be considered as an inciting agent. Taper and/or replacement with another agent should be considered in order to maximize quality of life and minimize morbidity.

No. 47

Worsening of Panic Syndrome After Bariatric Surgery With Roux-En-Y Technique, a Case Report: What Do We Know About Drugs Absorption?

Poster Presenter: André Franklin
Co-Authors: Tomaz Eugenio Abreu Silva, Thiago Brandão, Leonardo De Jesus

SUMMARY:
Obesity is an important health problem affecting the world population and has serious repercussions on the lifestyle of individuals, compromising not only the biological factor but also the psychosocial. Its prevalence is estimated at 10% in the world and 18,9% in Brazil. Bariatric surgery is indicated in cases of morbid obesity with a body mass index (BMI) greater than 40 or greater than 35 with associated clinical conditions. Currently the most practiced technique in Brazil and in the world is the Roux-en-Y. Patients with morbid obesity often have psychiatric disorders associated. Studies have shown that after the surgical procedure many of these patients present worsening or recurrence of these disorders, often requiring optimization of pharmacological treatment. The reported case shows the worsening of a panic syndrome in a patient after bariatric surgery with Roux-en-Y technique. During the evolution, there was a need to increase the dose of medications and associate other drugs, as well as greater psychotherapeutic support, especially in the first six months postoperatively. Keywords: bariatric surgery; Roux-en-Y gastric bypass; panic syndrome.

No. 48

New-Onset Parasomnia After Initiating Trazodone in an Elderly Patient With Schizophrenia: A Case Report

Poster Presenter: Connie Chen

SUMMARY:
Polypharmacy is an ongoing complication with the elderly patient population, especially in patients with psychiatric comorbidities. Psychosis and affective symptoms tend to co-occur given the psychosocial stress patients experience in their lives. Often, we see patients on medications that treat individual symptoms rather than the cause, thus complicating the clinical picture with medication interactions. Here, we present a case where our patient, a 71-year-old male with a past psychiatric history of schizophrenia, well-controlled for years on clozapine and lithium, was admitted to the inpatient geriatric psychiatry service for insomnia and nocturnal episodes of bizarre, disorganized behavior and agitation. In addition to medical management for physical disorders, he was being treated for schizophrenia with clozapine, mood lability with lithium and mirtazapine, anxiety with clonazepam, and insomnia with trazodone. Nonetheless, the patient self-reported symptoms of restlessness and continued insomnia at home. Upon admission to the inpatient psychiatry unit, the patient was observed over multiple nights to not sleep at all, and exhibit disorganized behavior consisting of disrobing in the hallway and climbing into other patients' beds. The next morning, the patient had no recollection of the previous night's events and reported feeling well rested. Collateral from the patient's family members confirmed that the patient had similar sleep disturbances in the past month. Medication reconciliation and chart review revealed that trazodone 100mg had been initiated by the patient's outpatient psychiatrist two months prior, consistent with the period in which the patient's sleep disturbances first appeared. Trazodone, mirtazapine, and clonazepam were tapered off and discontinued by the inpatient treatment team. Patient then exhibited depressed mood, so mirtazapine was slowly reintroduced and titrated up to a therapeutic dose. Shortly after, patient no longer exhibited nocturnal disorganized behavior and sleep improved. Our differential diagnosis for this presentation included NREM sleep arousal disorder,

REM sleep behavior disorder, benzodiazepine withdrawal, and delirium. However, we suspect medication-induced parasomnia specifically from trazodone as the primary cause, due to the timing of symptoms coinciding with initiation of trazodone, as well as lack of recurrence when we re-introduced mirtazapine. We also suspect medication interactions may have contributed to the presentation, given this patient's complex medication regimen. Although prior research suggests clonazepam is effective in treating REM sleep behavior disorder, a literature review revealed no case reports of parasomnia with complex motor behaviors occurring with trazodone. Further research is warranted to clarify if and how parasomnia can occur as a side effect of trazodone in elderly patients with schizophrenia.

No. 49

Dextromethorphan/Fluoxetine as Bridging Therapy for Patients With Major Depressive Disorder (MDD) and Successful Treatment With Ketamine: Case Report

Poster Presenter: Sibin Nair
Co-Author: Steven F. Kendell, M.D.

SUMMARY:

Background: Monoamine targeting antidepressants have been the mainstay of unipolar mood disorder treatment for more than half a century yet, despite multiple and varied combinations of these agents, approximately one third of patients with major depressive disorder (MDD) remain refractory to treatment; such limitations in response mandate the exploration of new targets for treatment resistant depression (TRD). As a heterogeneous state, aberrations in multiple pathways have been implicated in the etiology of MDD. A steadily accruing body of research into the neurobiology of depression suggests, beyond monoamines, pathophysiological mechanisms concern stress, the immune system, inflammatory pathways and the glutamate system. Glutamate is the principal excitatory neurotransmitter in the mammalian brain. Overflow glutamate is neurotoxic as it activates extrasynaptic NMDA receptors impairing BDNF formation and synaptogenesis. Targeting excitotoxicity, the NMDA antagonist ketamine facilitates glutamate balance, subsequent BDNF formation and synaptogenesis. Despite ketamine's rapid action and favorable safety profile the social stigma associated with "special K" has largely limited its availability to I.V. ketamine clinics in large metropolitan areas. As a means to offer patients with TRD the advantages of an NMDA antagonist while recognizing the limitations of rural psychiatry we herein discuss the use of dextromethorphan, a ketamine analog, as a bridging molecule for TRD in a patient who previously experienced a positive response to ketamine. Case Presentation: 56 y/o white female with TRD admitted via EMS after patient's sister called reporting severe agitation and disruptive behavior triggered by recent divorce. Upon arrival of EMS patient received IM ketamine that resulted in a rapid resolution of agitation and disruptive behavior. In turn, the patient's sister noted that the patient –after receiving ketamine- experienced a quick, clear and substantial improvement in her TRD. Despite the patient's improvements, however, approximately one week after receiving IM ketamine the patient's depression returned necessitating inpatient hospitalization. In consideration of her substantiated TRD and notable response to ketamine the patient was started on a combination 20mg fluoxetine (a robust cyp2D6 inhibitor) and x mg of dextromethorphan (DXM). With titration of the DXM/SSRI combination the patient exhibited a slow but steady improvement in mood and affect with final doses of DXM x mg and fluoxetine x mg upon discharge. Conclusion: As an analog of ketamine, DXM proved to be an effective agent for TRD in this patient with a previously favorable response to an NMDA antagonist. In turn, the medication combination was well tolerated. Although no definitive literature –to date- has quantified milligram equivalents as clinical dosing targets for the use of NMDA antagonists in TRD, additional case studies and controlled trials may produce such a tool.

No. 50

When Less Is More: Withholding an Antipsychotic Leads to Improvement in Symptoms of Schizophrenia

Poster Presenter: Khalid Salim Khan, M.D.
Co-Author: Davin A. Agustines, D.O.

SUMMARY:

Background: Dopamine partial agonists are a relatively newer class of antipsychotics, sometimes referred to as “third generation” antipsychotics. As a partial agonist to the dopamine receptors, these agents act as either functional dopaminergic agonists or antagonists depending on overall neurotransmitter activity. Aripiprazole, FDA approved in 2002, is a testament to the clinical utility of partial dopamine agonists given its clinical efficacy and relatively lower incidence of EPS. Cariprazine, also a partial dopamine agonist, was FDA approved for the treatment of Schizophrenia and Bipolar disorder in 2015. Both aripiprazole and cariprazine share the property of having very high affinity of dopamine receptors. Aripiprazole has high affinity for the D2 receptor, whereas cariprazine has high affinity for both the D2 and D3 receptors (D3 being the higher of the two). Understanding the binding kinetics when prescribing multiple antipsychotics is important for avoiding unintended adverse drug interactions. Clinical Case We report on a case of 29 year-old male diagnosed with schizophrenia who was hospitalized after experiencing acute psychotic decompensation in the context of the addition of Cariprazine to his medication regimen. The patient had been hospitalized earlier in the year, and had stabilized on the long acting antipsychotic injection paliperidone palmitate, which he had maintained full compliance to including during this hospitalization. During the period of his initial evaluation, collateral information had revealed that the patient was prescribed cariprazine within the 2 weeks prior to his current admission, after which he experienced a rapid decompensation of his clinical state. He began refusing to eat food or drink water due to auditory hallucinations that were commanding him to fast. The cariprazine was held on admission due to concern that the medication’s high affinity for the D2 and D3 receptors was competitively inhibiting the effect of paliperidone palmitate, despite the patient requesting to resume cariprazine due to subjectively feeling less sedated while taking it. After withholding the cariprazine, the patient demonstrated progressive improvement and decrease in psychotic symptoms while on the inpatient unit. After 6 days (with the half life of cariprazine being 2-5 days). he improved enough towards his psychiatric baseline for his parents to accept him home, along with a follow-up appointment with his outpatient psychiatrist. In this case, we highlight the importance of awareness towards adverse drug-drug interactions, especially as it relates to binding kinetics.

No. 51

Gabapentin-Induced Cutaneous Vasculitis

Poster Presenter: Garima Garg, M.D.
Co-Author: Ngu Aung, M.D.

SUMMARY:

Background: Gabapentin is a medication that is used to treat partial seizure, neuropathic pain and restless leg syndrome . It works by binding to the alpha 2-delta subunit of voltage-sensitive calcium channels, diminishes neuronal activity and neurotransmitter release. It is reported to have a good safety and tolerability profile with minimal and tolerable adverse effects. We present an uncommon adverse effect of a skin rash caused by Gabapentin; that have been reported in few case reviews. Design: Case Report Case Presentation: 67 years old Caucasian female with past medical history of morbid obesity, OSA non compliant with CPAP, Afib on Xarelto, HTN, Hyperlipidemia, Diastolic HF, Restrictive Lung Disease, DM II, Venous stasis and past psychiatric history of bipolar disorder type II on Lamotrigine 150 mg HS and Escitalopram 20 mg QD, was admitted with palpable purpura and new neuropathic pain. The rash started 5 days prior to admission after taking Gabapentin for neuropathic pain and paresthesias for 2 days. The rash was non-pruritic or painful; which started on her bilateral forearms that spread over body sparing her face. All medications were discontinued (Lamotrigine and Gabapentin) except for Labetalol Additional studies for vasculitis were negative including ANA, ENA, ANCAs, viral infection- Hep B and C and HIV. Urine microscopy showed hematuria and proteinuria. Skin biopsy was consistent with small vessel neutrophilic vasculitis. Urine electrophoresis showed minimal proteinuria, no Bence Jones proteins or hematuria. it was positive for slight polyclonal gammopathy, which was consistent with chronic inflammation. Serum electrophoresis was negative for paraproteins. Results for Cryoglobulins and GBM antibodies were also negative. Systemic involvement due to vasculitis was ruled out by imagHing studies including sonography of the kidney, liver and

echocardiography. Patient was admitted for 7 days. Psychiatry recommended switching her mood stabilizer to Lurasidone 20 mg HS and decreased Escitalopram to 10 mg daily. Prednisone taper was initiated that dramatically improved presentation. Proteinuria resolved on repeat urine microscopy Patient was discharged to a SNF. Discussion: Overall, Gabapentin has been shown to be well tolerated with minimal side effects. The most commonly known adverse effects are fatigue, sedation, dizziness, ataxia and headaches. Rash is an uncommon adverse effect of gabapentin administration (1-10%). In our patient, Gabapentin was recently introduced and rash resolved following discontinuation. Drug induced vasculitis, also most common type of vasculitis, is an inflammation of blood vessels due to an offending drug. Some offending medications are Hydralazine, D-Penicillamine, Allopurinol, Sulfasalazine etc. Conclusion: Gabapentin was implicated to trigger vasculitis in patient. There have been few case reports with cutaneous hypersensitivity syndrome and leucocytoclastic vasculitis but more strong evidence is needed.

No. 52

Lurasidone: Dosing Dilemma in Patients With Bipolar Disorder

Poster Presenter: Pravesh P. Deotale, M.D.
Co-Authors: Assad Mukhtar, M.B.B.S., Chaitanya Ravi, M.D., Saif-ur-Rahman Paracha, M.D.

SUMMARY:

Our case series includes 4 patients who developed manic features on lurasidone. Case A is 16 years old female who was started on lurasidone 20 mg once daily. Two days after starting the dose she had hypersexual behavior, euphoric mood, agitation and decreased need for sleep. Her symptoms subsided over a period of 4 days after the lurasidone was discontinued. Case B is a 23-year-old woman with a history of bipolar I disorder who presented to her outpatient with a 1-month history of depressed mood, anhedonia, lack of energy and poor sleep. Lurasidone 40 mg daily was initiated to target bipolar depression. After 7 days of outpatient treatment, she presented to clinic with dysphoric mood, psychotic agitation, and pressure of speech. She wanted to stop lurasionde as she did not like the way it made her feel. Case C is a 60-year-old woman with a history of schizoaffective disorder, bipolar type who presented to the outpatient clinic with increased agitation, labile mood, increased activity and racing thoughts after reducing her dose of lurasionde from 80 mg to 40 mg. She had complete symptom resolution after her dose was increased back to 80 mg. Case D is a 15-year-old female with diagnosis of bipolar 1 disorder and eating disorder who was well maintained on 60 mg of lurasionde per day. She became symptomatic with her eating disorder and reduced her caloric intake. Within 2 days after reduce caloric intake she presented with grandiosity, euphoric mood, flights of ideas and disinhibited behavior. After restoring her caloric intake and continuing her lurasionde at 60 mg her behavior improved. Lurasidone is a drug in the benzisothiazole class approved by the US Food and Drug Administration in June 2013 for the acute treatment of bipolar depression. The lurasidone's antidepressant effect is derived from 5HT1A partial agonism which may increase DA and norepinephrine in the prefrontal cortex (Stahl, 2013). Lurasidone is a full antagonist at 5-HT2A and 5-HT7 receptors and partial agonist at 5-HT1A receptor, which appears to be the reason behind its antidepressant effects (Franklin, 2015). The chemical cascades of similar receptor activity from other atypical antipsychotics have been implicated to induce acute mania (Michalopoulou, 2006). Despite its full D2 receptor antagonist properties, lurasidone doses less than 40 mg do not appear to exert antipsychotic effects (Franklin, 2015). The bioavailability is also highly affected by caloric intake (Preskorn, 2013). The onset of acute mania in our 4 cases appeared to be in response to initiation, dose changes, or fluctuations in bioavailability of lurasidone. Our reported cases and the discussed pharmacokinetics/pharmacodynamics, lead to the hypothesis that the efficacy of lurasidone in the treatment of bipolar depression appears to be dose-dependent. Further research is needed to address this dosing dilemma and formulate dosing protocols. Patients should be closely monitored when being treated with lurasidone.

No. 53

Insurance Challenges Adherence in a Patient Receiving Three-Month Paliperidone Palmitate (PP3M): A Case Report

Poster Presenter: Mohammed Osman Sheikh, M.D.
Lead Author: Venkatesh Sreeram, M.D.
Co-Authors: Adelaide Oppong-Dwamena, M.D., Charles Afful, M.D., Romi Grover Shah, M.D., Tresha A. Gibbs, M.D.

SUMMARY: Objective: Paliperidone Palmitate (PP3M), once every three month injection is a depot formulation developed to control the relapse rates and hospitalizations for individuals with psychiatric illness, particularly schizoaffective disorder. Our aim is to inform how the insurance coverage limitations are affecting adherence of long acting injection through the lens of a middle aged man who decompensated. Design: Case report. Case presentation: A 41- year old heavy built, African American male with past psychiatric history of schizoaffective disorder, multiple psychiatric hospitalizations, admitted for aggressive behavior and poor impulse control in the context of medication non-compliance. Patient had received 819 mg of PP3M on 05/03/18. However, patient was assessed to have decompensated within the three month period given history of assault towards staff at his residence, disorganized speech, and loose associations in thought process. The treatment team believed giving the next dose of PP3M by a week early would benefit the patient given his non-compliance history. However due to insurance coverage limitations, treatment team had no option other than giving a dose of Paliperidone Palmitate once monthly (PP1M) 234 mg IM on 07/27/18 instead. Labs and vital signs were monitored before and after receiving the injection. They were compared without any remarkable changes. Patient length of stay was 22 days. The treatment team had difficulties in getting the injection through preauthorization before discharge for safe disposition. However, patient was able to receive his next dose of PP3M 819 mg a day prior to discharge. Discussion: Treatment non-adherence is a common problem the treatment providers' encounter. Patients' often feel unnecessary or burden to take their daily oral antipsychotics. To overcome such issues long acting injections (LAIs) were formulated for improved adherence and to decrease relapse rates. Paliperidone palmitate is one such formulation that was approved by the food and drug administration (FDA), as a three month depot formulation. Earlier studies reported that PP3M injection can be given two weeks before or after the scheduled dose. Studies also mention adjusting the dose when changing from PP1M to PP3M. However no such literature was available illustrating patients with insurance coverage limitations or further management to prevent decompensation, if such issues arise. While public hospitals often are successful in receiving preauthorization coverage for the medication while hospitalized; it is cumbersome to get the coverage in the outpatient setting. We conclude that if medication was more affordable and easily available, it would lead to overall decline in number of decompensations, less hospitalizations, less outpatient follow up appointments and overall decrease in burden on healthcare, which could lead to resources better focused on more important areas.

No. 54

Managing Agitation in a Demented Non-ICU Patient With a Prolonged QTc

Poster Presenter: Dorothy Bourdet, M.D.

SUMMARY:
Mr. S, a 93-year-old African-American male with past psychiatric history of depression and PTSD presented with altered mental status and agitation, and was admitted to the inpatient medicine service. His medical team initially considered a differential of infectious, metabolic, and traumatic causes for the patient's change in mental status, however, work-up for these showed no clear etiology. Collateral from his wife revealed the patient was unable to care for himself and perform activities of daily living. The psychiatric consult-liaison service was consulted for assessment of possible dementia and management of agitation, which worsened in the nighttime. The patient's performance on the Mini-Cog was suggestive of dementia and a subsequent MOCA revealed a score of 8/30, which further supported a diagnosis of neurocognitive impairment. A complication in the patient's management of persistent agitation (pulling out lines, attempting to leave the hospital, wandering the halls) was a prolonged QTc of 556. Agitation is a common reason

Consult-Liaison Psychiatry is approached for recommendations and many of the pharmacological treatments used to manage it can prolong the QTc, increasing the risk of cardiac arrhythmias. In this poster, we will review dementia differential and work-up, and discuss the challenge of managing agitation and behavioral issues in a frail and elderly demented patient in the setting of a prolonged QTc on the general medical floors.

No. 55

A Case of Oral Cenesthopathy Successfully Treated With Oral Aripiparizole

Poster Presenter: Purva Amar, M.D.
Co-Author: Mudhasir Bashir, M.B.B.S.

SUMMARY:

Oral cenesthopathy is an abnormal oral feeling or sensation without an organic cause. There have been scant case reports of aripiprazole being useful in these somatic oral delusions. Ms. H, a 58yo woman first presented to the inpatient psychiatric unit with chief complaint of burning in her mouth and a feeling that her saliva was sticky and soapy. She had to constantly spit out saliva or wipe her mouth, and she had difficulty eating due to the sensation. Patient had had these symptoms for 4 years and had had extensive work-up including Anti SS LA, SS Ro, ANA, RF, iron studies, LFTs, nuclear salivary gland scan, ESR, CRP, and head CT; all of these were within normal limits. Given this, along with her perseveration on talking about her saliva, patient was determined to have a delusional disorder. She was initiated on Haldol and transitioned to Haldol deconoate injections. Patient's delusion did not improve and she continued to perseverate on it but she was noted to be spitting and wiping less so she was discharged home. She re-presented several months later with cogwheel rigidity concerning for neuroleptic induced parkinsonism. She was treated with Cogentin with good effect. During this time she was noted to have continued delusion about her saliva, continued to perseverate on it to the point of inability to discuss other topics, and had returned to spitting and wiping her mouth constantly. Once haldol had cleared, patient was started on low dose oral abilify which was slowly titrated up to 10mg. One week into treatment patient was only very infrequently wiping her mouth and had stopped spitting. Although her delusion remained, she no longer brought it up or seemed bothered by it unless asked directly, and her affect had significantly brightened. This case further illustrates that aripiprazole may be effective for the treatment of oral somatic delusions, though head to head comparison studies would be needed to see if it is superior to other antipsychotics.

No. 56

Lithium Nephrotoxicity: A Literature Review

Poster Presenter: Avaas Sharif, M.D.
Co-Authors: Zargham Abbass, Asghar Hossain, M.D.

SUMMARY:

The effectiveness of lithium for mania and for prophylaxis against manic depressive disorders was established as early as 1960s. It was approved by Food and Drug Administration (FDA) for treatment of mania in 1970 and for maintenance therapy in patients with a history of mania in 19741. Kidney related adverse effects of long term lithium use include nephrogenic diabetes insipidus, nephrotic syndrome, and renal tubular acidosis. A rare but serious renal adverse effect associated with continuous lithium administration for 10 years or more is the appearance of nonspecific interstitial fibrosis with gradual reduction of glomerular filtration rate (GFR).1, 2 Some research suggests the nephrotoxic effect of lithium may correlate more with the duration of exposure than the concentration of drug, as evidenced by lower incidence of adverse effects seen in patients taking single daily dose when compared to those taking multiple daily doses.3

No. 57

Narcan-Induced Pulmonary Hemmorhage

Poster Presenter: Avaas Sharif, M.D.

SUMMARY:

As the Opioid Epidemic continues to grow, the nation is in a quandary to find a solution to the problem. Until we are able to seek long term resolution to opioid addiction, the surgeon general has issued a statement urging pedestrians to carry Narcan in hopes to help minimize opioid related deaths. As legislature continues to evolve around this topic, there is ongoing debate whether medical

treatment and follow-up after administration of Narcan should be mandated. In this particular case, we will take an in depth look at a 33 year Caucasian male who suffered acute complications of acute pulmonary edema and pulmonary hemorrhage following the administration of Narcan in the field. This case serves as an important indicator on the importance of follow up with emergency medical services to minimize the risk of complications and enhance care.

No. 58

The Correlation and Management of Psychiatric Symptoms as a Result of Both Primary and Secondary Brain Tumors

Poster Presenter: Avaas Sharif, M.D.
Co-Author: Asghar Hossain, M.D.

SUMMARY:

We report a case of an elderly male who developed a fairly abrupt onset of cognitive and functional deterioration with a sudden episode of aggressive and dangerous behavior. Evidence of brain metastases was found on CT scan without contrast, with CT of chest confirming the presence of a primary lung tumor as the source of spread. With a diagnosis of brain metastases in hand, we discuss the expected symptomatology of patients with a primary or secondary brain tumor, which commonly manifests as focal neurological deficits, features of raised intracranial pressure, or even disturbances to vision or speech. In certain instances, such as the presenting case, patients may demonstrate psychiatric features, including mood disturbances, personality changes, or psychosis. We then investigate the association of specific psychiatric symptoms based upon the location of the brain tumor. This report yields findings from existing literature and case studies in an attempt to further recognize how lesions of specific areas of brain matter can manifest in unique ways, with the emphasis on immediate workup and intervention after the development of new-onset psychosis or behavioral changes.

No. 59

Benzodiazepine Use and the Risk for Dementia

Poster Presenter: Juan Joseph Young, M.D.
Lead Author: Rajesh R. Tampi, M.D., M.S.

SUMMARY:

Introduction: Benzodiazepines are commonly prescribed to treat various conditions including anxiety, insomnia, agitation, alcohol withdrawal, and seizures. However, a significant percentage (around 44%) of benzodiazepine prescriptions among the elderly are considered potentially inappropriate, especially as emerging evidence indicates that the use of benzodiazepines among older adults may lead to worsening cognitive impairment. The purpose of this review is to identify studies indicating whether or not benzodiazepines are associated with increased risk of developing dementia. Methods: A literature search of PubMed, MEDLINE, EMBASE, PsychINFO, and Cochrane collaboration databases was done using the following key words: benzodiazepines and dementia. The search was restricted to published English-language studies conducted in human subjects. References of full text articles that were included in this review were searched for additional studies. All the authors reviewed the abstracts and full text articles from the citations obtained via the search of the databases. The authors determined which studies were to be included or excluded from the final analysis after a review of the full text articles. Disagreements between the authors were resolved by a consensus. Results: A review of the literature identified 13 studies investigating a link between benzodiazepines and an increased risk of dementia. Eight studies found a positive association between the use of benzodiazepines and development of dementia. Two studies found no such association, two had mixed results, and one study found that benzodiazepine use reduced the incidence of dementia. Conclusion: A review of available studies indicates an association between benzodiazepines and the development of dementia. As none of these studies were controlled prospective studies, causality could not be ascertained. The association identified between the use of benzodiazepines and the development of dementia is a cause for concern among older adults.

No. 60

A Systematic Review of Barriers to Geriatric Mental Health Care

Poster Presenter: Richa Lavingia
Co-Authors: Kristin Jones, Ali Asghar-Ali

SUMMARY:
Background: Older adults in the United States suffer from high rates of depressive symptoms and mental distress but have lower rates of mental healthcare utilization than young adults. In order to better understand the primary barriers to care and the factors shaping these barriers, we performed a systematic literature review of barriers preventing older adults from seeking and accessing treatment. Methods: A systematic literature search was conducted using PubMed, PsycINFO, and Clinical Key. Studies that focused on barriers to mental health treatment in the American older adult population (50+) were included in the review. Results: Intrinsic barriers, including negative personal attitudes towards mental health care, poor knowledge of available mental health resources, and a lack of perceived need for treatment, are the most commonly cited factors that prevent care-seeking. Other barriers include cost and transportation, medical comorbidities, and a shortage of geriatric providers. Qualitative studies of elderly minorities note high levels of community stigma and a lack of bilingual providers. Policies that set low Medicare and Medicaid reimbursements for psychiatric services and do not incentivize repeat psychiatric screening for home health patients contribute to these barriers. Interventions shown to widen access to geriatric psychiatric services include community-based care and integrated primary and psychiatric care. These programs can be particularly difficult to implement in low-resource settings. Conclusion: Older adults face several barriers that prevent care-seeking behavior and limit access to psychiatric services. Policy reform, along with geriatric community-based and integrated care programs, can help address these barriers. More research is needed to determine which interventions and policies are most effective at targeting particular barriers.

No. 61

Treatment of Substance Use Disorders in the Elderly: A Systematic Review

Poster Presenter: Kripa Balaram, M.D.
Co-Authors: Arjun Nanda, Ricardo Escobar, Joel Dey, Hajra Ahmad, Thejasvi Lingamchetty, Aarti Govind Chhatlani, Rajesh R. Tampi, M.D., M.S.

SUMMARY:
Background: Substance use disorders are a growing problem in the elderly that is largely unexplored and unaddressed thus far. Acamprosate, disulfiram, and naltrexone are FDA approved for the treatment of alcohol use disorder in the US and buprenorphine is approved for the treatment of opiate use disorders. There is very limited data on the use of these treatments in elderly. The purpose of this review is to systematically review the literature on efficacy of these modalities in the treatment of substance use disorders in the elderly. Methods: We performed a literature search of PubMed, MEDLINE, Cochrane, and Google Scholar. The search was restricted by age. Double-blinded, randomized control trials published in English were included. Results: Two articles that evaluated the use of pharmacologic treatment of substance use disorders in the elderly were identified. One trial evaluated the use of naltrexone vs placebo in the treatment of alcohol use disorder in those age 55 and above. One trial evaluated the use of naltrexone vs placebo in adjunct with sertraline in the treatment of alcohol use disorder in those age 55 and above. Both indicated that the use of naltrexone had efficacy in reducing rates of relapse in populations diagnosed with alcohol use disorder. There were no randomized controlled trials studying the use of buprenorphine, acamprosate, or disulfiram for substance use disorders in the elderly that were found for this systematic review. Conclusions: This review indicated that naltrexone is effective in the treatment of alcohol use disorders in the elderly. It also indicates that there is very limited data on substance use disorders in this particular population. Given the substantial and ever-growing population of those over the age of 60 in the US, more extensive clinical trials and other research are indicated and required. Keywords: “elderly”, “substance abuse”, “naltrexone”, “acamprosate”, “disulfiram”, and “buprenorphine”

No. 62

“Choir-Like Musical” Auditory Hallucinations, Charles Bonnet Syndrome Plus: A Case Report

Poster Presenter: Sindhura Kompella, M.D.
Co-Authors: Joseph C. Ikekwere, M.D., M.P.H., Clara L. Alvarez Villalba, M.D.

SUMMARY:
Charles Bonnet Syndrome (CBS) is defined by the presence of hallucinations in patients with visual deficits associated with diabetic retinopathy, cataracts. The atypical Charles Bonnet syndrome or Charles Bonnet plus is a variant of CBS which is very rare. Our case is unique since the patient presented with "musical" hallucinations in association with mild neurocognitive impairment and major depression disorder. A 67-year-old white male military veteran presented with a new onset hallucinations described as "I can only hear this unknown person or group of choir members singing songs that are especially bothersome at night. I sometimes see people in the room." PMH is significant for diabetic retinopathy, difficulty hearing (bilateral sensorineural hearing loss), hypertension, hyperlipidemia, major depression and neurogenic bladder. His wife reported that he was too "isolated and does not see himself as a useful human being capable of doing things that matter." On review of symptoms, he reported being "little depressed" but anxiety, PTSD, OCD, paranoia or other symptoms suggestive of thought disorders were not noted. He is recently placed on celexa for depression and donepezil for memory problems. On mental status exam the patient appears alert and oriented with flat affect and has poor insight and judgment. He does not appear to respond to internal stimuli, denies any suicidal or homicidal ideation and does not show any symptoms of delusions or paranoia. His past psychiatric history is not significant. Vitals and labs were unremarkable except for BP 131/70, HbA1C 7.2 and BMI 39. Non-contrast CT head was unremarkable with diffuse mild atrophy. Upon neuropsychiatric testing there is severe impairment in Rey Auditory Verbal Learning test and Trial Making test. Results are consistent with mild neurocognitive impairment and major depression disorder. He did not improve even after antipsychotic use, however, his insight improved with reassurance. This case presents with most of the symptoms of CBS plus which typically includes vision impairment, severe hypoacusis, dementia and major depression disorder in association with auditory "music-like" hallucinations. Treating the underlying causes and re-assurance are some of the treatment options that can be considered for patients with CBS plus. Since this illness can occur in association with other psychiatric illnesses such as dementia and major depressive disorder, it is important to be vigilant not to misdiagnose these patients especially since benefit with psycho-pharmacotherapy/antipsychotics is limited.

No. 63
Evaluation of the Psychosocial Profile of Mexican Elders Hospitalized for Fall-Related Hip Fracture
Poster Presenter: Manuel Gardea

SUMMARY: Objective To describe the psychosocial features of patients aged 65 years or older hospitalized for fall-related hip fracture in a Northeastern Mexican hospital. Design Cross sectional study Setting A large tertiary academic hospital in Monterrey, Mexico. Background and aims Falls in the elderly are an important cause of disability, having the potential to cause medical complications such as hip fracture, the main cause of admission of geriatric patients to an orthopedic ward. The occurrence of fall-related hip fractures increases the risk of loss of autonomy, delirium and caregiver burden. Understanding the psychosocial characteristics of Mexican elders with fall-related hip fractures can help reduce the public health burden caused by this injury and develop preventive strategies and personalized approaches that favor recovery in this patients. Therefore, we aim to contribute with data for fall injury prevention and post-hip fracture recovery strategies. Material and methods Patients aged 65 years or older hospitalized for fall-related hip fracture were recruited from March 1, 2017 to February 28, 2018. Those meeting inclusion/exclusion criteria and accepted to participate answered a socio-demographic questionnaire, the Barthel Index for Activities of Daily Living, the Downton fall risk assessment scale applied by (…) and those without sensorial, mental or language impairments where invited to answer the Ryff's Psychological Well-being Scales (RPW scales). Results Of 55 subjects who met inclusion criteria, 69.1% were unemployed, 56.4% earned a minimum wage and 41.8% had the state welfare programs as their main income source. 34 subjects (61.8%) had elementary studies and 16 (29-1%) had no studies. Although 32 subjects (58.2%) were widowed, 6 (10.9%) single and 3 (5.5%) separated,

only 16.4% lived alone. Active social engagement and religious practice prevailed among the subjects. Adequate housing was present in the majority of patients. Prior to hip fracture, 67.3% of the subjects had a partial or complete loss of autonomy and 80% were at high risk for falls. Mental state, visual impairment and functional illiteracy made it impossible for 50 subjects to answer the RPW scales. Discussion Concordant with findings in previous studies, hip fractures were more prevalent among non-married, unemployed individuals with low income and high risk of falls and limitation in daily life activities. Further studies comparing these patients with healthy controls should be done in our population to determine the impact that marital and social status, employment, income, type of housing and family support may have as risk factors for falls and fractures. Conclusions Knowing the psychosocial profile of Mexican elders can contribute to the development of specific and viable preventive and recovery strategies.

No. 64

The Case of Worsening Obsessive-Compulsive Disorder in the Context of Cardiac Disease in a Geriatric Patient

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

SUMMARY:

Introduction: Obsessive Compulsive disorder (OCD) generally worsens with age. When psychiatric symptoms worsen, the etiology may be primary or secondary to medical conditions. The Case: The patient is a 70 year old, married, retired female who was being treated for an acute worsening of chronic OCD, and major depressive disorder. In addition to a host of rituals, her OCD symptoms largely involved religious preoccupations, with intrusive thoughts of profane words while trying to pray. Her antidepressant medications increased from sertraline 100 mg to 200 mg, and she started on trazodone 25 mg and titrated to 100 mg in the 6 months prior due to worsening symptoms. As the patient appeared to have no significant social stressors, her medical conditions were reviewed. Due to comorbidities of diabetes mellitus II, hypertension, and previous cauterization for atrial fibrillation, and suspicion that some of her psychiatric symptoms overlapped with congestive heart failure, the patient was referred to cardiology. The patient had multi-vessel disease and required triple bypass surgery. At her follow-up appointment, approximately ten weeks following her surgery, she reported that her OCD and depression symptoms had remitted. Medications were reduced to sertraline 25 mg, and trazodone 25 mg, and the patient's symptoms remain in remission. Conclusions: Multiple investigations have demonstrated a clear relationship between mental health and cardiovascular diseases. Since approximately half of patients with acute myocardial infarction present dead, the data regarding symptoms prior to an acute coronary event is limited to the 50% who survive. Worsening psychiatric symptoms in the context of worsening heart disease may account for more than what is currently appreciated. As geriatric patients are at greater risk for medical comorbidities, it is important to rule out medical causes for pathology beyond the routine labs and tests when evaluating the geriatric patient.

No. 65

Morphologic Alterations in Amygdala Subregions of Patients With Bipolar Disorder

Poster Presenter: Hyun Jae Lee
Co-Authors: Byung-Joo Ham, Kyu-Man Han

SUMMARY:

Background: The amygdala, which has a pivotal role in emotion-processing, is composed of multiple subregions which are distinct in their neurobiological features, morphology, and connection to other parts of the brain. Previous studies have revealed smaller amygdala volume in patients with bipolar disorder (BD) patients than healthy adults. However, volumetric studies on amygdala subregions in BD patients was rare hitherto. We aimed to investigate volume changes in each amygdala subregion and their association with subtypes of bipolar disorder, lithium use and clinical status of BD. Methods: A total of 55 patients with BD and 55 healthy controls (HC) underwent T1-weighted structural magnetic resonance imaging. We analyzed volumes of the whole amygdala and each amygdala subregion, including anterior amygdaloid, corticoamygdaloid transition area, basal, lateral, accessory basal,

central, cortical, medial and paralaminar nuclei using the automatic segmentation by Saygin et al. implemented in the FreeSurfer. The volume difference was analyzed using a one-way analysis of covariance with individual volumes as dependent variables, and age, sex, and total intracranial volume as covariates. Results: The whole right amygdala volume (P = 2.60 x 10-4) and subregions including basal nucleus (P = 6.83 x 10-5), accessory basal nucleus(P = 1.70 x 10-5), anterior amygdaloid area(P = 2.32 x 10-5), and cortico-amygdaloid transition area (P = 7.86 x 10-5) in the right amygdala of BD patients was significantly smaller for the HC group. There was a significant volume difference in right paralaminar nucleus between bipolar I disorder and bipolar II disorder, but it was not significant after Bonferroni correction. There was a trend of larger volume in medial nucleus with lithium treatment, but it was not significant after Bonferroni correction. No significant correlation between illness duration and amygdala volume, and nonsignificant negative correlation was found between right central nucleus volume and depression severity. Conclusion: These results support previous reports of smaller amygdala volume in BD patients and map the location of abnormality to specific amygdala subregions. Further researches are needed to validate the association between the functional alterations of corresponding nuclei to pathophysiology of BD.

No. 66

Spontaneous Catatonia in a Geriatric Patient With Remote History of Alcohol Use and Brain Injury

Poster Presenter: Umang Shah, M.D., M.P.H.
Co-Authors: Abdullah Bin Mahfodh, M.D., Waquar Siddiqui, M.D.

SUMMARY:

Catatonia is a neuropsychiatric syndrome of disturbed motor functions, first described by a German psychiatrist, Karl Kahlbaum, in 1874. A broad variety of infectious, metabolic, neurologic, drug-induced and psychiatric causes of catatonia have been identified. We report a unique presentation of late onset catatonia in a 75 years old Caucasian male, brought by family members for being unresponsive, not moving limbs and maintaining a posture for two days. Patient has a past medical history significant of alcohol abuse for 25 years with sustained remission for 7 years and brain surgery to remove subdural hematoma after a fall, 16 years ago. He has no known past psychiatric history and has not been on any prescribed medications. Per family member, patient was found to be holding an empty fork and staring at the wall without communicating since dinner time, two days prior. His extensive laboratory work was negative. CT scan of head, MRI brain & spine failed to reveal any acute infarct, hemorrhage or infection but did show old infarcts and injuries. EEG was normal and psychiatry has been consulted for further recommendations. Patient received a trial of lorazepam, a standard treatment for catatonia with improvement in cognition and motor disturbances. His evaluation was negative for any underlying mood or thought disorder. His cognition started to wax and wane over next few days, and as there were no other identifiable causes for his catatonia, a decision was made to discontinue lorazepam and start him on haloperidol for possible hypoactive form of delirium. He became progressively unresponsive and exhibited signs of immobility, mutism, stupor, negativism, posturing and staring. Haloperidol was discontinued and patient was started on scheduled lorazepam with significant clinical improvement. Patient was able to perform activities of daily living over few days independently and was discharged on scheduled lorazepam with a provisional diagnosis of catatonia secondary to traumatic brain injury. There have been reports about catatonia during and shortly after brain injury as well as during acute withdrawals from alcohol. However our literature search has failed to reveal any such case with spontaneous catatonia in an elderly, otherwise healthy patient with remote history of brain injury or alcohol use. This report necessitates further research to better understand plausible neurobiology of this condition for development of novel therapeutic agents, and to limit chronic use of benzodiazepines in elderly patients, in whom ECT is not feasible.

No. 67

“Someday My Prince Will Come”: Management of Elderly Patients Who Have Been Victimized by Online and Telephone Scams

Poster Presenter: Geraldine McWilliams, M.D.
Co-Authors: Anne Felde, M.D., James K. Rustad, M.D.

SUMMARY:
The lay media has generously published stories of online and telephone scams, sometimes referred to as 419 Fraud or Advance-fee scams. This type of exploitation often targets the elderly and is particularly detrimental to this population as many individuals live on fixed incomes. Scams of this nature lead to both financial and psychological abuse. There is a growing body of literature on scams and the role of health care providers in protecting at risk individuals. Psychiatrists frequently assess a patient's capacity to make decisions and manage their instrumental activities of daily living. In times of crisis, providers support those with major psychosocial challenges and may be called upon to advise victims and their family members. We present the case of Mr. B, a 68 year old Caucasian male veteran with a past psychiatric history of Traumatic Brain Injury due to a motor vehicle crash, Hoarding Disorder, Alcohol Use Disorder, Depression, and Anxiety, who presented to his primary care provider for support after losing thousands of dollars. The patient's sister requested support after Mr. B had been repeatedly victimized by email and telephone scams over a period of years. We utilized a multi-disciplinary approach by collaborating with primary care, social work, and case management in an outpatient, community-based setting to assist Mr. B and his family. In this poster, we demonstrated our approach to elderly patients with dementia and impaired decision-making who have fallen victim to online financial exploitation. We conducted a literature review and presented the interventions used to help support Mr. B. We categorized the types of scams that he fell victim to over the course of the last several years. We discussed the presentation and management of financially victimized elderly patients. We sought to identify the available resources for supporting older patients who have fallen victim to these types of scams.

No. 68
Lithum Use in Late Life Bipolar Disorder
Poster Presenter: Thu Anh Tran, M.D.
Co-Author: Alexandria Harrison

SUMMARY:
This poster is a joint effort by two residents to discuss two cases of Lithium toxicity in the geriatric population. Both cases were seen in our geriatric clinic and showcases the subtlety of toxicity seen in this population. This topic was discussed in order to discuss the safety of using Lithium while also considering the special considerations and risks specific to its use in this setting.

No. 69
Grandparents Caring for Their Grandchildren: Effects on Depression and Suicidal Ideation
Poster Presenter: Il Hoon Lee
Co-Authors: Jung Han Yong, Soyoung Lee, Shin Gyeom Kim, Jeewon Lee, Yeon Jung Lee, Sang Woo Hahn, Sung Il Woo, Sehoon Shim, Yeongsuk Lee, M.D., Mingyu Hwang

SUMMARY: Objectives: The purpose of the present study was to examine the severity of depression and suicidal ideation of the grandparents according to the amount of involvement in grandchild care. Method: Data for this research were drawn from a cross-sectional study conducted on community-dwelling adults aged 65 years or older. Participants were asked about their amount of involvement in grandchild care. Short form of Geriatric Depression Scale(SGDS) and Scale for Suicidal ideation (SSI) were used to evaluate their level of depression and suicidal ideation. Results: Among the 922 participants who had grandchildren, 30.9% had cared for their grandchildren, in which 18.5% had provided daily care and 12.4% had provided occasional care. After adjusting for sociodemographic variables, the ANCOVA analysis showed that the scores for depression were significantly lower in the group which had provided occasional care compared to that of the other two groups which provided daily care or no care. The scores for suicidal ideation were significantly higher in the group which had provided no care compared to that of the other two groups which had provided daily or occasional care. Conclusion: Current study demonstrates a positive impact of grandparenting on depression and suicidal ideation of the older adults. However, the extensive involvement in grandchild care could become demanding and may counteract the benefits. Balance may be needed to achieve optimal outcomes for the mental health of the elderly. Keywords: grandparenting; grandchild care; depression; suicidal ideation; older adults

No. 70

Case Report of an Elderly Traveller With Psychosis: Challenges of Psychiatric Management in an Age of Global Air Travel

Poster Presenter: Lin Feng Hong
Co-Authors: Ng Li-Ling, M.B.B.S., Lay Ling Tan

SUMMARY:

Mr. R, a 66-year-old Australian Caucasian male with a past medical history of Parkinson Disease, was transiting alone through Singapore Changi Airport on the way back from a 2-week trip in Europe to Australia when he complained of chest pain and shortness of breath after consumption of a drink. He received prompt medical attention in the airport transit facility and was subsequently transferred to the nearest General Hospital for further treatment. His symptoms evolved during the admission, resulting in an initial diagnosis of Delirium and later on, Psychotic Disorder secondary to Parkinson's disease due to persistent psychotic symptoms. Due to his older age and multiple medical comorbidities, his care required a multi-disciplinary team approach across different specialties. We also had to liaise with various external parties during his care. These included his primary physician in Australia to corroborate his medical status, his sister to understand his social background, the local Australian Embassy and the Insurance Company to make arrangements for him to be repatriated back to Australia and also to settle patient's concerns in regards to the hospitalization bill. Another unique consideration is also the differing clinical practices and the cultural beliefs across countries that unduly had an impact on his management, in terms of the biological, psychological and social aspects. In this case report, we will discuss about this phenomenon of increasing affluence in the global population as a result of which brings about a growth in overseas travel and with rising longevity, the older population is also fast becoming part of this trend. This may also mean that older population with multiple chronic medical conditions, albeit with certain degree of control, would be travelling. As this case report illustrates, when thing goes wrong for them, the situation can become rather complex in terms of retrieval of pertinent information and the various considerations in management due to care being delivered across countries. This leads to the question of whether other countries, including airport facilities, may need to be better aware of a traveler's health issues, even more so in an elderly person with complex medical history. Similarly, when medical and psychiatric help is sought away from one's home country, the case also demonstrates potential delays and issues that arise from the complicated technicalities in the coordination of care. Hence the question arises if we would benefit from a system whereby one's medical information could be assessed globally. If world experience can be progressively shared and connected by air travel, we wonder if one's medical information could parallel that as well.

No. 71

Seeing but Not Believing: A Case Study of Charles Bonnet Syndrome

Poster Presenter: Pooja Raha Sarkar
Co-Author: Sashi Makam

SUMMARY:

The presentation of visual hallucinations in an outpatient setting carries a broad differential diagnosis. These symptoms usually prompt exhaustive evaluation and neuroimaging to decipher the underlying etiology. Charles Bonnet syndrome is a rare condition that causes visual hallucinations in patients without mental illness. First described by Swiss philosopher Charles Bonnet in 1760, the etiology of Charles Bonnet Syndrome is not clearly known. Here we present the case of a 96 year old woman presented to the clinic with a chief complaint of intermittent visual hallucinations. Per her daughter, she had been "seeing things" for the past several weeks. The hallucinations were episodic and binocular. The hallucinations occurred repeatedly, and were often of unknown people. These visions occurred mainly in the late evening, as the patient lay in bed. They predominantly presented on the patient's right side of the visual field. The patient was unable to identify triggers for these hallucinations, nor could she pinpoint any factors that led to their resolution. The patient had no change in mental status and maintained full insight and awareness while experiencing these hallucinations. She denied other visual disturbances such as scotomata. She also furthermore denied

auditory or other sensory hallucinations. There was no history of drug or alcohol abuse. Her surgical history was relevant for bilateral cataract surgeries with interocular lens replacement. She denied any psychiatric history. The patient was furthermore followed by an ophthalmologist who saw her regularly for open angle glaucoma controlled with timolol drops as well as age-related senile cataracts. Other than these conditions, no other abnormalities were noted. Following an unremarkable diagnostic CT exam, and based on clinical history, as well as normal physical findings, a diagnosis of Charles Bonnet syndrome was made. The patient and her daughter were provided with reassurance that her condition was benign, though no treatment was yet available. The patient, now equipped with a better understanding of her condition, is not alarmed and has learned to live with her intermittent hallucinations. They do not adversely affect her daily living and she continues to live her life with the full awareness that her hallucinations are not real or rooted in psychiatric cause. As patient populations age and live longer lives, there will be an increase in age-related vision loss. Therefore, it can be reasonably expected that incidence of Charles Bonnet Syndrome will increase in the coming years. While awareness of the condition is also rising in medical literature, Charles Bonnet Syndrome remains elusive and poorly understood. Recognizing the symptoms of Charles Bonnet Syndrome early on allows for medical providers to not only share accurate information with patients but also avoid misdiagnosis and further unnecessary psychiatric workup.

No. 72

Obsessive-Compulsive Disorder in Geriatrics

Poster Presenter: Linda Okoro
Co-Author: Asghar Hossain, M.D.

SUMMARY:

Obsessive Compulsive Disorder (OCD) is a Psychiatric disorder characterized by recurrent and persistent thoughts that are experienced as intrusive and inappropriate, causing marked anxiety and distress. In an attempt to suppress or neutralize such thoughts with other thoughts or action, Patients perform repetitive behaviors to respond to obsession. The average age of onset for OCD is between 20-25 years old. After age 40 only 8.6% of OCD has been noted. OCD is a highly disabling condition with frequent early onset. Adult/Adolescent OCD has been extensively investigated. However little is known about geriatric patients with OCD. It has been suggested that OCD is more among women than men, especially among elderly. OCD shows a later age at onset in the geriatric population compared with younger patients. OCD has also been noted to coexist with other psychiatric disorders such as depression in the elderly. Older adults are more likely to experience memory and other cognitive symptoms. It is still not clear whether memory problems results in checking behavior or checking behavior leads to poor confidence in memory. This case review aimed to assess OCD in a geriatric patient with depression, by evaluating her sex, age, social and mental functioning, socio-demographic and clinical presentation during multiple hospitalizations. Literature on OCD with onset after the age of 50 is scarce and they should be investigated for any possible organic cause. The exact etiology of OCD is still uncertain but a few theoretical models of have been proposed. Neurotransmission abnormality in the brain, notably serotonin, is a widely accepted model and is supported by the symptoms improvement with serotonin reuptake inhibitors. Genetic predisposition is another important model, in which 45–65% heritability in children has been reported. Both early and late onsets OCD shared similar clinical characteristics but later showed better response to CBT. Lomax et al. had suggested that early onset OCD requires more treatment sessions. Unfortunately, this patient showed minimal improve-ment to CBT. Psychotherapy should be preferred over pharmacotherapy in this patient in view of her age, polypharmacy , other psychiatric and possible, medical comorbidities and concerns over medication side effects and drug–drug interaction. In conclusion, this case report highlights the uncommon occurrence of OCD at a very late age in life and its possible link to underlying OCPD, and structural or biochemical changes in the brain. Treatment can be a challenge in the presence of other medical co morbidities and polypharmacy. OCD is A clinically significant phenomenon and a powerful predictor of reduced quality of well-being in elderly Patients (Wetherell et al., 2003).

Identification of this potentially treatable condition is imperative to provide adequate care of elderly patients.

No. 73

Cultural Aspect of Behavior

Poster Presenter: Linda Okoro
Co-Author: Asghar Hossain, M.D.

SUMMARY:

Culture has a significant influence on how we see and interact with the World. Culture also plays a significant part on how we are perceived by the public and more especially by healthcare professionals. It has a lot to do with how we take care of ourselves, including our health seeking behavior such as getting medical care when ill, and how we maintain wellness. The culture of an individual can play a crucial role in how they engage in medical treatment, and their compliance with prescribed treatment regimen. This study investigated the barriers and facilitators for psychiatrists in managing patients from different cultural background. The following areas were explored:The effect of an individual's cultural background on their behavior as related to what the society consider/ deem to be normal behavior. How the Cultural background of Healthcare Professionals/Clinicians and treatment team influence our decision making in the diagnosis and treatment of Mental illness, and how Culture plays a role in an individual's Health Seeking behavior/Continuum of care.Providing culturally authentic healthcare requires the Psychiatrist/Mental health professionals to familiarize themselves with culture specific syndromes, beliefs and practices, among diverse cultural groups that they serve. Psychiatrist/ Healthcare professionals should also be aware of their own cultural background and how it differs from the culture of their patients. In addition to this, Psychiatrist/mental health professionals should understand the worldview of life, health, illness, psychiatric conditions, and help seeking behavior as culturally interpreted by their patient's culture to prevent having a constricted/perspective view of patient's behavior resulting in less than optimal care. Many Studies have implicated insufficient public awareness and negative attitudes towards mental illness and its treatment in many cultural groups. Financial cost, lack of insurance coverage, nonadherance to medications, dropping out of treatment and frequent involuntary admissions all has contributed to top barriers to proper mental healthcare delivery. In Efforts to maintain best practice standards, it is imperative that psychiatrist and health care professionals working with culturally diverse populations are able to differentiate between, culture-bound behaviors and psychiatric/mental health problems. Identifying and respecting the patient's cultural behavior perspective and suspending judgments , can help improve the patient and mental healthcare provider relationship, promote compliance and achieve better measurable treatment outcomes, and Overall Patient satisfaction.

No. 74

Patient Preference Versus Caregiver Competency: Case Comparison About Factors Contributing to Institutionalization of Neurocognitive Disorder Patients

Poster Presenter: Kelvin Thai Tran, M.D.
Co-Authors: Justin B. Wenger, M.D., Uma Suryadevara, M.D.

SUMMARY:

With the increase in geriatric population, the need for caregivers to support these patients with functional impairment also increases. A caregiver is a person who provides care for someone who is often a family member and is typically unpaid. The current health system is invested in supporting informal caregivers as a cost-saving measure while supporting patient's autonomy to stay at home versus institutionalization. However, the rights of the patient are counterbalanced by the health and well-being of the caregiver, who has varying perceptions of caregiver's burden and capacity to accommodate the burden. Several studies have examined the role of patient's burden on the caregiver leading to caregiver's burnout. Still, there is limited knowledge about comprehensive factors contributing to caregiver's burden leading to institutionalization neurocognitive disorder patients. This case report explores caregiver's perceived burden in two cases involving neurocognitive disorder patients encountered on a geriatric psychiatry inpatient unit

that further examine unique factors contributing to caregiver's competency and burnout. The first case involves a patient who is an 87-year-old Caucasian male with mild neurocognitive disorder and his wife, who was the patient's primary caregiver and also a professional caregiver. Although the patient did not have significant behavioral issues and was able to perform his activities of daily living, his wife perceived the burden of caregiving to be greater than she could undertake and was insistent on long-term placement in a locked memory care facility. The second case involves a patient who is a 75-year-old Caucasian male with Parkinson disease and associated neurocognitive disorder whose primary caregivers are his wife and adult son. This patient had significant behavioral issues including verbal aggression, was tough to redirect, and unable to perform his activities of daily living independently. However, his wife and adult son displayed great resilience prior to the patient's residence in a community living center. These two unique cases exhibit the significance of family dynamics, societal culture, caregiver's schedule, and early education about patient's disorder with respect to caregiver's competency and resilience. This case comparison also brings to the forefront some unique factors determining caregiver's burden, including the nature of the neurocognitive disorder, degree of disability, age and sex of the caregiver, relationship of the patient to the caregiver, and perceived freedom of choice of caregiver and patient. Still, behavioral problem, a major contributing factor to caregiver's burden noted in literature, was appreciated with contrary findings in these two cases. Further understanding of this topic requires exploring how to strengthen both sides of the equilibrium, patient's preference versus caregiver's competency, so that the unified choice is made regarding patient's placement.

No. 75

Association of Exercise and Decreased Rate of Late Life Depression: A Literature Review

Poster Presenter: Syed Salehuddin, M.D.
Co-Authors: Fauzia Zubair Arain, Asghar Hossain, M.D.

SUMMARY:

Globally, the world's population over 60 years is aging rapidly and will nearly double, from 12% to 22% between 2015 and 2050. Older people experience more risk factors for depression with decline in functional abilities, reduced mobility, chronic pain, and health problems.2 The estimated prevalence of late life depression in older adults ranges from 4.6-9.3 %.2, 3 The increased health care cost, risk of morbidity and suicide, disability and mortality4 due to impairment in physical activity and cognitive functioning has made it an important heath care issue. 2, 4 Recent meta-analyses have shown that in previous research, the range in effect size of exercise on depression, is influenced by inclusion criteria, heterogeneity, and extent of exercise. Researchers also claim that previous meta-analysis may have underestimated the role and benefits of exercise as an intervention in reducing symptoms Major Depressive Disorder (MDD) in elderly persons due to publication bias.5 Recently, most research has shown that larger and significant antidepressant effects were found in MDD, utilizing aerobic exercise at moderate intensity, and intervention supervised by exercise professionals.14 A large study funded by National Institute of health has shown that exercise interventions targeted at the fittest, least cognitively impaired care-home residents with depression could be effective in reducing symptoms of depression,6, 7, 8, 9, 10. Whereas, older participants with poor physical health, particularly those with depression, attended fewer sessions of ambulatory and moderately intense exercise intervention and showed no positive effect on their depressing symptoms.2 To see the extent to which exercise training may reduce depressive symptoms in older patients with MDD, effectiveness of an aerobic exercise program was compared with standard antidepressant medications.11 This 16 week trial has shown that although antidepressants may show a more rapid initial therapeutic response, exercise was equally effective in reducing burden of depressive symptoms after 16 weeks of treatment in older patients with MDD.11Although in 2000, a systematic review of randomized controlled trials concluded that effectiveness of exercise as an intervention in the management of depression can not be determined because of a lack of good quality research on clinical population with adequate follow up.12 Recent meta-

analysis reviewing studies of high methodologic quality, has shown that any level of physical activity, including low levels (e.g., walking < 150 min/week) is valuable in reducing the risk of developing depression.13

No. 76

Delirium Misdiagnosed as Lewy Body Dementia- Case Presentation and Review of Literature

Poster Presenter: Clare Gallego Bajamundi, D.O.
Co-Author: Mallory Morris, M.D.

SUMMARY:

Delirium is one of the most commonly encountered mental disorders, but it can at times paint a confusing picture of patient presentation. Some typical features of delirium include acute to subacute presentation, disorientation, change in cognition, hallucinations, waxing and waning features, and psychomotor changes. It is easy to see how delirium might be confused with Lewy Body Dementia (LBD) which can also include hallucinations, cognitive changes, waxing and waning features, and parkinsonian symptoms. This is a case study of a 59 year old patient who had a long history of Bipolar I disorder with both manic and depressive features who experienced gradual cognitive decline that began worsening more quickly over the course of a few months.

Neuropsychological evaluation diagnosed probable LBD due to prominent cognitive dysfunction which featured executive and visuospatial impairment combined with parkinsonian symptoms such as tremor. Notably, the patient did not have the visual hallucinations that are often found in LBD. The patient was seen as a new referral in a psychiatric outpatient clinic where the diagnosis of LBD was questioned due to a lengthy list of medications known to increase risk for delirium (opiate pain medications and benzodiazepines) as well as a lack of visual hallucinations. Reducing and eliminating these medications resulted in normalization of the patient's cognitive function and memory, as well as an improvement of mood. A diagnosis of delirium due to polypharmacy was made. Given the increased recognition and publicity of LBD recently, and the overlap of symptoms of both delirium and LBD, it is likely that delirium is not uncommonly mistaken as LBD. This has serious ramifications for patients, as delirium is potentially treatable whereas LBD is not. This case highlights that diagnoses of LBD need to be made cautiously and carefully, and only when delirium has been carefully considered and fully ruled out. In this case study we will also review the most current literature regarding the diagnosis of LBD. We will also highlight the most recent consensus statements on management of delirium.

No. 77

Differential Diagnosis of a Geriatric Patient With Bipolar Disorder Presenting With Symptoms of Depersonalization

Poster Presenter: Lara Addesso, M.D.
Co-Authors: Asghar Hossain, M.D., Fauzia Zubair Arain

SUMMARY: Objectives: Review of literature to investigate differential diagnosis of an elderly patient with previous diagnosis of bipolar disorder who presented with symptoms of depersonalization. Case Report: We report a case of a 79 year old female with history of one prior psychiatric hospitalization (3 years prior) and diagnosis of Bipolar disorder, who presented to NBMC ED, with worsening of psychotic symptoms of disorganized speech and bizarre behavior for the past 3 weeks, following her husband's hospitalization for medical complications secondary to Parkinson's disease. Patient was in recent car accident after driving on wrong side of the road. Prior to emergency department arrival patient was exhibiting erratic behavioral symptoms, i.e., she grabbed her granddaughter so tightly and hurt her, stating, "They are going to have to take me out of here physically, I won't leave!" Patient's friends provided collateral information of patient's strange behavior such as giving away money and possessions to others frivolously. Patient has only one previous inpatient psychiatric hospitalization 3 years back when she was originally admitted with UTI, tooth infection and hyponatremia. On examination, patient looked very perplexed and lacked insight, difficult to follow in conversation and redirect. She had no memory of her car accident and giving away her possessions. Vitals and physical/neurological examination were within normal limits. MMSE was 29/30 on evaluation. Lab tests and CT headwas within normal limits. Patient was admitted involuntarily for safety

and evaluation and prescribed antipsychotics for stabilization. Conclusion: 1, 2 The diagnosis of bipolar disorder is not very rare, however, difficult in the case of this patient, because it was difficult to discern her manic state due to her psychotic symptoms. All organic diseases causing delirium, i.e., metabolic disorders, encephalitis, infections, epilepsy, and nonorganic transient psychotic disorders or dementia must be ruled out. Her complaint of feeling of subjective emotional numbing2 and sense of unreality are indicative of depersonalization,3, 4 which is seen in many different psychiatric illnesses, e.g., posttraumatic stress disorder, panic, and unipolar depressive disorder.5 Certain studies have suggested that dissociative studies, including depersonalization and derealization are associated with bipolar disorder.6, 7, 8, 9, 10

No. 78

Is Laughter Really the Best Medicine? A Literature Review

Poster Presenter: Lara Addesso, M.D.
Co-Author: Saba Mughal

SUMMARY:

Primary objective: Develop a further understanding of the positive affects laughter has on mental health and its neuropsychophysiological effects Abstract: Humor has a broad range of effects on mood, judgments, impressions and sentiments, which may intercede directly or indirectly to aid the physical and psychological state. Humor or laughter is an, inexpensive, easy-to-use, natural therapeutic modality that could be used within different therapeutic setting. It is a multidimensional domain that seems to be closely related to quality of life (1). Humor therapy and the associated mirthful laughter are suggested to have preventive and healing effects. These effects may be mediated by neuroendocrine/neuroimmune modulation. Laughter may reduce stress and improve NK cell activity. As low NK cell activity is linked to decreased disease resistance and increased morbidity in persons with cancer and HIV disease There are several beneficial efforts attributed to humor and laughter, including improved immune function, increased pain tolerance, and decreased stress response. (2) Modulation of neuroimmune parameters during and following the humor-associated eustress of laughter may provide beneficial health effects for wellness and a complementary adjunct to whole-person integrative medicine therapies. Immune function is improved by increase in NK cell activity and increase in immunoglobulin G and M. Laughter can be used as a a useful cognitive-behavioral intervention. In this age of evidence-based medicine, it would be appropriate for humor to be used as a complementary/alternative medicine in the prevention and treatment of illnesses, although further well-designed research is warranted.

No. 79

Serotonin and Agitation: The Role of Antidepressants in the Treatment of Agitation in the Elderly With Dementia

Poster Presenter: Muniza A. Majoka, M.B.B.S.

SUMMARY:

Background: Up to 14 % of the geriatric population above the age of 71 is estimated to have dementia [1] Agitation is an important part of the behavioral and psychological symptoms of Dementia (BPSD) & the prevalence of agitation in the elderly is found to occur in up to 55% of the residents of care facilities [2]. The treatment for agitation is diverse and includes non-pharmacologic & pharmacologic means including SSRIs. The serotonergic system is hypothesized to regulates aggressive, mood, feeding, sleep, motor activity. The disruption in this system leads to behavioural changes in other neuropsychiatric disorders. There is evidence of some deficits in the Serotonergic System in Alzheimer's disease by the presence of decreased 5-HT and its major metabolites in the CNS and CSF. There is also evidence for SSRIs leading to improved irritability, anxiety, fear/panic, mood, and restlessness(3)Method: A comprehensive search was carried out using Pubmed, Google scholar and other databases using multiple word combinations. Result: At the end of the literature review, a total of 19 studies on the use of antidepressants for the treatment of agitation in the geriatric population were identified. Citalopram had 8 trials with, 3 RCTs with adequate power showing a very significant improvement in agitation while on Citalopram [4,5,6]. Two studies with smaller sample sizes and

another focusing on emotional disturbances also showed the efficacy of Citalopram [7,8,9]. The retrospective study of the CATIE-AD trial was unequivocal and another study showed the inefficacy of Citalopram in treating agitation in Lewy Body Dementia (DLB) [10,11]. Escitalopram was effective in one large RCT, however, these findings could not be replicated in another low power study [12,13]. Sertraline showed positive results in one trial but no statistically significant results in another [14,15]. Trazodone proved to be ineffective in two trials [16,17] and fluoxetine was also ineffective in on study [18]. Fluvoxamine results were also unequivocal [19,20]. Discussion: There is an overall dearth of literature dealing with the effects of antidepressants in treating agitation in elderly patients with dementia. Further research is warranted given the promising results on this use of SSRIs. There is also a nee for further studies on the impact of the serotonergic system on agitation as well as other areas of BPSD in older patients with dementia.

No. 80

Delirium: A Missed Diagnosis in Elderly With Comorbid Psychiatric Illness

Poster Presenter: Sumana Goddu, M.D., M.P.H.

SUMMARY:

Background: Delirium is a syndrome with altered consciousness & cognition, disorientation, attention deficits, an acute onset, and a fluctuating course. While delirium is often unrecognized or misdiagnosed in elderly, it is even easier to miss in patients with psychiatric illness. We report a case of an elderly female with Bipolar Disorder admitted for mania who later developed delirium due to infection, with rapid decline in mentation and respiratory status within 24 hours. Method (Case Report): A 69-year-old female with a history of Hypertension and Bipolar 1 Disorder was transferred from an outside hospital to inpatient psychiatric hospital due to mania and psychosis. Patient was initially admitted to the outside hospital for pneumonia and needed to be intubated in MICU. She was also incidentally noted to have a 6-week-old right humeral fracture s/p fall. After recovering from MICU, she was noted to be manic and was managed on Carbamazepine, Chlorpromazine and Risperidone. She was then transferred to the inpatient psychiatric hospital on an involuntary basis. By hospital day (HD) 9 she developed Oxcarbazepine induced SIADH. Subsequently she was stabilized on Haloperidol 5 mg BID, Diphenhydramine 25 mg BID, Divalproex 500 mg BID, Metoprolol 12.5 mg BID, Gabapentin 300 mg TID and Tramadol PRN. On the morning of HD 42, patient was noted to be lethargic and less active. Due to decline in mobility and change in mentation, internist was consulted and repeat labs ordered. Vitals were normal in the morning but vitals done in evening showed decrease in Temperature to 89.5 F, BP 137/80, PR 71 and RR 20. She only ate 20% dinner and dropped rest of the tray. On assessment in the evening, patient was noted to be drowsy, disoriented to time & place with disorganized speech. On exam she was noted to have pedal edema and limited mobility in all extremities. Her presentation was consistent with hypoactive delirium. She was immediately sent to the ER where she was intubated upon arrival and placed in MICU for pneumonia. She recovered completely and subsequently stabilized on Divalproex. Discussion: Delirium superimposed on psychiatric symptoms (mania, psychosis, depression) is easy to miss in elderly. As seen in this patient, the mental status changes of delirium can be subtle in elderly and can be confused with ongoing psychiatric symptoms. Predisposing risk factors in our patient included age, prior infection, fracture, limited mobility, prolonged hospitalization, anticholinergics & anemia. Baseline mental status exam and frequent re-assessment by both physicians & nurses is crucial for pre-emptive diagnosis of delirium. Conclusion: Early detection of delirium in elderly is important to prevent adverse outcomes such as frequent hospitalizations, readmissions, falls, accelerated & long-term cognitive and functional decline and increased mortality. Elderly can decline rapidly and hence a high index of suspicion is needed for early diagnosis.

No. 81

Efficacy of Selective Serotonin Reuptake Inhibitors in the Setting of Dementia

Poster Presenter: Tamera Kim Meyer, M.D.
Co-Author: Abner Rayapati, M.D., M.P.H.

SUMMARY:

Neuropsychiatric symptoms of dementia present a common dilemma for providers caring for these patients. As the lifespan of our population increases prevention and optimizing quality of life for patients and their caregivers is becoming a more important topic. There has been increasing research over the past decade in an effort to develop methods to prevent disease, optimize cognitive function in the setting of disease, and minimize behavioral dysfunction that could impact patient safety and psychosocial support. We present a case report on the use of SSRI's to treat behavioral disturbance in the setting of dementia. We will discuss methods of treatment organized by neurotransmitter and neuroanatomical targets and review the literature to date on this topic. Finally, we draw conclusions on recommendations for practice and future areas of needed research.

No. 82

The Sound of Music: A Rare Case of Auditory Charles Bonnet Syndrome in an Elderly Male

Poster Presenter: Alok K. Singh, M.D., M.B.A.
Co-Authors: Jamie Karasin, Subramoniam Madhusoodanan, M.D.

SUMMARY:

Background: Auditory Charles Bonnet syndrome (a variant of Charles Bonnet syndrome) or Musical Ear Syndrome(MES), also termed musical hallucinosis, describes a rare condition that presents with sensorineural hearing loss which can result in musical hallucinations. The onset is insidious and patients often describe their symptoms as worrisome, invasive, and impairing their daily functioning. Methods: 78-year-old Hispanic male with no previous psychiatric history was evaluated at our clinic with complaint of hearing voices and music. The patient was noted to have cochlear implantation in his right ear done in 2013, due to bilateral sensorineural hearing loss. He had auditometric testing completed in 2013 following the onset of hallucinations. We also searched the National Library of Medicine for original studies and review articles with the keywords: Auditory Charles Bonnet syndrome, musical hallucinosis, cochlear implantation, tinnitus, hearing loss, and deafness. Results: Routine laboratory workup was unremarkable. Computed tomography of the brain (4/4/18) revealed mucosal thickening in the left maxillary sinus and mild generalized cerebral atrophy. Over the course of four months, pharmacologic treatment with donepezil led to improvement in symptomatology. The Brief Psychiatric Rating Scale score decreased substantially from 15 to 6 over an 8 week period. The Clinical Global Impression Scale(severity) decreased from 4 to 2 and (improvement) increased from 0 to 1 over the same period. Conclusion: Auditory Charles Bonnet syndrome should be considered in patients endorsing auditory hallucinations with hearing loss and where the etiology is not clearly due to a psychiatric condition. The role of acetylcholine requires further elucidation, however donepezil demonstrated efficacy in the treatment of musical hallucinations in our patient.

No. 83

End of Life Care in the Psychotic Patient

Poster Presenter: Carey J. Myers, M.D., Ph.D.

SUMMARY:

A 65 year old African American female with a psychiatric history of schizophrenia presented from her LTSR for evaluation of worsening psychotic symptoms. During her admission she was found to have recurrent breast cancer. This finding was made during a workup for observed weight loss, as the patient did not complain of any symptoms. CT revealed changes concerning for bone, liver, and pulmonary metastases. Oncology was consulted and determined that she was not a candidate for further treatment due to her lack of insight into her disease. Psychotic patients have notoriously high pain tolerances, which often leads to a delay in diagnosis and can result in disease that is advanced past the point at which it is curable. Once this determination has been made, it falls to the clinical team to decide if the patient is capable of making decisions regarding end of life care and, if not, who will make those decisions. Palliative and hospice care teams must be aware of the special requirements of this population, especially the typically noted increased pain tolerance, and ensure that appropriate and adequate care is being provided.

No. 84

A Case of Rapid Liver Enzyme Elevation With Olanzapine

Poster Presenter: Carey J. Myers, M.D., Ph.D.

SUMMARY:

A 24 year old African American male (SM) with no psychiatric history presented for evaluation of "drastic personality shifts," assaulting his mother, and threatening to kill his family, in addition to decreased sleep, worsening ADLs, and weight loss. He was diagnosed with first break schizophrenia and started on olanzapine, with slow improvement of symptoms. When his symptoms had improved enough for discharge, repeat lab work showed drastically elevated liver enzyme levels in comparison with his initial labs, far above what was expected at this time after initiation of treatment. He was switched to Haldol and, as he had had a mildly elevated AST at time of presentation without a history of alcohol use, hepatology was consulted for a complete workup, which revealed no organic cause. He was discharged on Haldol with hepatology follow up after repeat labs showed downtrending AST and ALT. Olanzapine (Zyprexa) is an atypical antipsychotic used in the treatment of psychosis which is less likely to cause EPS, but may cause an asymptomatic elevation in liver enzymes. While these increases are rare, they can be very serious. AST and ALT must be monitored over the course of treatment to ensure safety, and rapid increases in AST and ALT warrant careful and thorough workup to ensure patient safety.

No. 85

Noninvasive Brain Stimulation (NIBS) in Palliative Care

Poster Presenter: Renee Ravinder Maan, M.D.

SUMMARY:

Introduction: The Neuromatrix of Pain is an empirically upheld model supporting the following notions: 1) The perception of pain is produced by the brain and spinal cord, not by tissue damage; and 2) network activity between various regions in the CNS simulates this perception of pain (Iannetti & Mouraux, 2010). These regions are numerous and include the thalamus, amygdala, somatosensory cortex, and prefrontal cortices; and due to their significant overlap with multiple brain networks (default mode networks, attention networks, perception networks, etc.), the emotional processing of pain, spatial processing and location of pain, and the integration of pain into consciousness have been consistently associated - respectively - with limbic and insular systems, somatosensory networks, and prefrontal cortices (Derbyshire, 2000). TMS (Galhardoni et al., 2015) and tDCS (Ouellette et al., 2017) applications have previously been explored in this space, so we surveyed the literature to understand the scope and progress of these endeavors. Methods: PubMed was searched with the following terms: (pain OR palliative) AND Randomized Controlled Trial[ptyp]) AND (transcranial magnetic stimulation OR transcranial direct current stimulation) AND Randomized Controlled Trial[ptyp]). The filters "Randomized controlled trials" and "5 years" were applied. Results: 70 RCT/SCTs were identified from a total of 85 entries in the initial search result. N = 2668 total subjects were cumulatively enrolled in the studies, while the subject populations consisted of various pain etiologies including but not limited to fibromyalgia (n = 8), myofascial pain syndrome (5) (MPS), osteoarthritis (3), headache (8), back pain (4), trigeminal neuralgia (1), vestibulodynia (1). Conclusion: A multitude of studies support the efficacy of NIBS in the treatment of pain, and the evidence appears to be consistent with the Neuromatrix model of pain (Khalsa, 2004). Strategies to enhance the likelihood of positive outcomes include stimulation paradigms incorporating longer treatment protocols (several sessions vs. one), neuro-navigated stimulation to specifically target brain regions (Nurmikko et al., 2016), and longitudinal follow-up to establish the long term effects (or lack thereof) of NIBS. Because many chronic diseases are accompanied by pain (7 out of 10 deaths among Americans each year are due to chronic diseases), NIBS presents as a side-effect free and effective treatment modality to address these conditions; especially given that the elderly population is expected grow substantially (Teitelbaum et al., 2013). These treatments also led to beneficial changes in mood, cognition, and quality of life in many instances; therefore utilization of NIBS in palliative care is likely to improve QOL for patients via engagement of neural substrates and

networks subserving cognitive and emotional appraisals of pain.

No. 86

Effect of Borderline Personality Disorder Severity on Depression Severity in Patients Being Treated With ECT

Poster Presenter: Rameez Siddiqui

SUMMARY:

Background: Electroconvulsive therapy (ECT) has proven to be effective for depression refractory to conventional treatment. Although the exact therapeutic mechanism is unclear, there is variability in responsiveness to ECT therapy. It remains unclear whether this variability is partly related to the presence of comorbid personality disorders, which may be Objective: To observe the influence of borderline personality disorder severity on depression severity in patients being treated with ECT. Methods: Data were retrospectively analyzed for 12,302 patients who were assessed at various points in the course of ECT treatment. Outcome measures included the McLean Screening Instrument for Borderline Personality Disorder (MSI-BPD) and the Quick Inventory of Depressive Symptoms Self-Report (QIDS-SR The influence of borderline personality on treatment response was investigated using a repeated-measures analysis of covariance. In this model, predictors included baseline MSI-BPD score and number of treatments administered, while the outcome of interest was QIDS score. Results: BPD scores ranged between 0 and 9, while QIDS scores ranged between 0 and 27. As a continuous variable, severity of BPD was inversely related to treatment response trajectory ($r = 0.11$, $p < 0.0001$), demonstrating that patients with more severe borderline personality traits were less likely to respond to ECT. When treating BPD score as a categorical variable, post-treatment QIDS score was significantly lower in patients with a BPD score of 0 ($p < 0.0001$), 1 ($p = 0.001$), or 2 ($p = 0.01$). Post-treatment QIDS score was significantly higher in patients with a BPD score of 7 ($p < 0.01$) or 9 ($p < 0.001$). There was no significant treatment*BPD interaction in either a categorical or continuous model ($p = 0.10$), suggesting that ECT was still mildly effective in patients with comorbid BPD. Conclusion: Borderline personality traits appear to be associated with decreased responsiveness to ECT treatment, although there was still mild efficacy in this patient population. Future research should investigate whether this effect is related to other variables such as gender or other comorbidities.

No. 87

Cortical Thickness and Resting State Connectivity in the Group of Subclinical Geriatric Depression

Poster Presenter: Siekyeong Kim

SUMMARY:

Background: The aim of this study was to identify the valid biological markers for group with subclinical depression in the elderly and to understand the pathogenesis of geriatric depression by structural and functional brain imaging data such as cerebral cortical thickness, subcortical volume, and resting state functional connectivity. Methods: This study was conducted with elderly people aged 65 years or older who participated in activities for seniors at a senior welfare center located in Cheongju, South Korea. The assessment of their cognitive function by the mini-mental status examination of the Korean version of the CERAD assessment packet showed that the scores of all the participants were within the normal range. The participants were classified into the depression group and the control group by the Korean version of short geriatric depression scale with the cut-off value of 8 points. Finally, twenty-one participants of depression group and nineteen participants of control group were included. The T1-weighted magnetic resonance (MR) images and resting state functional MR images were obtained using a 3T Philips Achieva scanner. The cortical thickness, the volumes of subcortical structures were determined by the FreeSufer (version 5.3.0). Also, the resting state functional connectivity of the default mode network, dorsal attention network, cognitive control network, salience network and sensory motor network (SMN) were determined from resting state fMRI scans. Results: The volumes of subcortical structures in the depression group were smaller than those of the control group, but there were no significant group differences of cortical thickness over the entire cortex. However, although significances were disappeared after control for multiple comparisons (false discovery rate < .05), visualization by vertex-wise analysis

revealed that the left paracentral cortex was thicker (p=10e-3.10) and the right insular cortex was thinner (p=10e-4.06) in the depression group. Likewise, there were no networks showing group differences in resting state connectivity, but the tendency of group difference in SMN were suggested (p=.08). Conclusion: Contrary to subcortical structure like hippocampus, the cortical structures may not be clear biomarkers in subclinical geriatric depression. But specific areas such as insula or paracentral cortex can be considered as vulnerable areas for this condition. Meanwhile, group differences of functional connectivity in SMN can be explained with compensatory mechanisms for subtle cognitive decline in such populations. With our previous report showing group differences of hippocampal subfield volumes, these findings can provide rational biological basis for understanding the pathogenesis of subclinical geriatric depression. Further research of the structural and functional characteristics of the regions associated with the clinical findings of subclinical geriatric depression is required.

No. 88

Utility of Neuroimaging in Psychiatric and Neurodegenerative Disease: A Primer With Attention to Structural Imaging Findings

Poster Presenter: Shveta Kansal
Co-Authors: Nitin Pothen, Alex Soloway, Andrew Spaedy, Neil Anand, Stacy Doumas

SUMMARY:

Background Information/Purpose Psychoradiology is an emerging field that applies medical imaging technologies to the analysis of mental health, neurophysiology, and psychiatric conditions. Since CT of patients with schizophrenia identified bilateral ventricular enlargement in 1976, the volume of descriptions of structural abnormalities in mental illness has increased. The purpose of this exhibit is to make psychiatrists and clinicians aware of the different imaging findings of various psychiatric and neurodegenerative diseases. Educational Goals/Teaching Points While psychoradiology predominantly relies on imaging data analysis, we aim to discuss structural imaging findings and visual inspection of images. We aim to educate psychiatrists and clinicians regarding the normal anatomy, clinical presentation, and imaging findings of selected psychiatric and neurodegenerative diseases. Knowledge of the different anatomic structures, as well their associated pathologic imaging findings, can help Psychiatrists arrive at a diagnosis which may not be perceived without this knowledge. Topics for discussion and review of original images include, but are not limited to: • Normal anatomy • Clinical Presentation • Imaging findings • Treatment and prognosis • Conclusions Specific topics (many with original images from our institution) include, but are not limited to: • Dementia/Neurodegenerative: Vascular, Alzheimer's, Frontotemporal, Lewy Body, HIV Dementia, Huntington's • Metabolic: Fahr's Disease • Infectious: Creutzfeldt-Jakob Disease • Autoimmune: Limbic Encephalitis • Toxic: Heroine Toxicity, Wernicke's encephalopathy • Genetic: CADASIL, Tuberous Sclerosis • Psychiatric: Anxiety, Depression, Bipolar, Post Traumatic Stress Disorder, Schizophrenia, Attention Deficit Hyperactive Disorder, Major Depressive Disorder, Autism, Frontal Lobe Syndrome • Other: Normal Pressure Hydrocephalus Conclusion To conclude, we aim to educate psychiatrists and clinicians regarding the normal anatomy, clinical presentation, and imaging findings of selected psychiatric and neurodegenerative diseases. Knowledge of the different anatomic structures, as well their associated pathological imaging findings, can help psychiatrists arrive at an accurate diagnosis. An intuitive understanding of the most common imaging findings associated with various psychiatric diseases will help direct early imaging evaluation. The psychiatrist's role as a consultant also necessitates that imaging findings be communicated in the most clinically relevant way to ensure effective early evaluation.

No. 89

Central Nervous System Disorders Attributable to Alcohol Abuse: An Imaging Review of Recognizable Patterns of Disease

Poster Presenter: Shveta Kansal
Co-Authors: Nitin Pothen, Alex Soloway, Andrew Spaedy, Neil Anand, Ramon Solhkhah

SUMMARY:

Background Information/Purpose Alcohol related disease has been implicated in a significant amount

of inpatient psychiatric hospitalizations. We aim to educate psychiatrists regarding the imaging findings of various alcohol related diseases. We would like our psychiatric colleagues to be able to recognize a wide spectrum of alcoholic related imaging findings by reviewing recognizable patterns of involvement. Educational Goals/Teaching Points While psychoradiology predominantly relies on imaging data analysis, we aim to discuss imaging findings and visual inspection of images. We aim to educate psychiatrists and clinicians regarding the normal anatomy, clinical presentation, and imaging findings of selected alcohol related diseases. Knowledge of the different anatomic structures, as well their associated pathological imaging findings, can help psychiatrists arrive at a diagnosis which may not be perceived without this knowledge. Topics for discussion and review of original images include, but are not limited to: • Normal anatomy • Clinical Presentation • Imaging findings • Treatment and prognosis • Conclusions Specific topics (many with original images from our institution) include, but are not limited to: • Marchiafava Bignami Disease • Atrophy • Fetal Alcohol Syndrome • Hepatic Encephalopathy • Central Pontine Myelinolysis • Wernicke Encephalopathy Conclusion To conclude, we aim to educate psychiatrists and clinicians regarding the normal anatomy, clinical presentation, and imaging findings of selected alcohol related diseases. Knowledge of the different anatomic structures, as well their associated pathological imaging findings, can help psychiatrists arrive at an accurate diagnosis. An intuitive understanding of the most common imaging findings associated with various alcohol related diseases will help direct early imaging evaluation. The psychiatrists role as a consultant also necessitates that imaging findings be communicated in the most clinically relevant way to ensure effective early evaluation.

No. 90

Youth Violence and the Brain: An fMRI Study of the Effects of Exposure to Violence on Executive Functions

Poster Presenter: Valentina Metsavaht Cara, M.D.
Co-Authors: Nathalia Esper, Lucas Azeredo, Victoria Iochpe, Thalia Nunes dos Santos, Alexandre Franco, Augusto Buchweitz

SUMMARY:
Background: Human brain development is dynamic and continuous. New experiences, learning, and the environment influence brain function and development from early childhood. Positive environmental factors such as good parenting skills, higher socioeconomic status and supportive education, as well as negative factors, such as violence, drug and alcohol abuse, affect the achievement of one's cognitive potential. The effects of violence on brain development and function are likely underestimated, and poorly understood. This study investigates the effects of preadolescent exposure to violence on brain function using functional magnetic resonance imaging (fMRI) and a task that tests executive functions (EF). EF are impaired in different disorders, and also as a result of adverse life conditions such as stress and abuse. We hypothesized that exposure to violence would impact EF and their neurobiological correlates. The study was carried out in Latin America, in one of the most violent regions of the world, and yet one that is underrepresented in neurocognitive studies of the effects of violence. Methods: 42 preadolescents (ages 10-14) participated on the study. Exposure to violence was assessed by the Juvenile Victimization Questionnaire 2nd revision (JVQ-R2). Brain function was investigated using a sustained attention and inhibitory control paradigm in fMRI, the Change task. Results: The majority of preadolescents (n=36, 85.7%) had experienced at least one form of victimization over the life span (JVQ Lifetime), and 31 (73.8%) reported being exposed to violence over the last year (JVQ last year). Results show that exposure to violence was associated with deactivation of a frontal-parietal-insular network of areas. Higher JVQ Lifetime scores correlated negatively with activation of a bilateral network of areas that included the insula, parietal cortex, and right superior frontal cortex. The correlation with JVQ Last Year scores showed deactivation of frontal, parietal and temporal areas. Conclusion: The higher the indices that reflect lifetime exposure to violence, the more the deactivation on areas associated with inhibitory control, specifically, the bilateral insula and inferior frontal gyrus (pars opercularis), typically activated in EF tasks. The effect on the insular cortex was only due to the chronic, lifetime exposure to violence. In contrast, recent victimization was

associated with deactivation in the anterior and posterior cingulate cortex and in a bilateral temporal-parietal network. Deactivation on bilateral superior frontal cortex was identified in both correlations and this area is also associated with cognitive control, behavioral flexibility, emotional regulation and working memory. Our findings provide evidence that youth victimization and exposure to violence alters the neural patterns underlying executive functioning, indicating possible targets to preventive interventions.

No. 91

A 76-Year-Old Male With Worsening Psychotic Symptoms: A Case Report Highlighting the Challenges of Antipsychotic Use in Dementia With Lewy Bodies

Poster Presenter: Mohammed Tashfiqul Islam, M.D.
Co-Authors: Asghar Hossain, M.D., Sukaina Rizvi, M.D.

SUMMARY:

Parkinson's disease is a chronic debilitating synucleinopathy with expanding incidence in elderly population. Dementia with Lewy Bodies shares much of the pathology, but has different presenting features compared to Parkinson's Disease- for example the latter is distinguished from the former by the presentation of motor symptoms for more than year before the onset of cognitive decline (1). For both conditions, low doses of atypical antipsychotics are typically used to treat psychosis, including newer agents such as pimavanserin, which recently was given FDA approval for treatment of psychosis in Parkinson's disease (2). Despite a FDA boxed warning for increased risk of death when these medications are used, there has been extensive off label use, especially after consideration of increasing number of Americans with dementia and its related symptoms (3). While nonpharmacologic interventions may be a prudent approach, lack of symptom improvement may necessitate use of antipsychotics. Many clinicians use clozapine and quetiapine for the management of psychosis in Parkinson's and Dementia with Lewy bodies, but each medication has its drawbacks- newer agents such as pimavanserin have different mechanisms of action and exert its therapeutic effect by strong predilection for serotonin receptors through selective inverse agonism at 5-HT2a receptors and antagonism at 5-HT2c receptors versus D2 blockade from second generation antipsychotics (3). Real world applications of medications often differ from literature and present additional challenges in practice. We recently treated a 76 yr old man who had presented with worsening cognitive decline for 1 year before developing a resting tremor in the right lower extremity 4 months before presentation with psychotic symptoms characterized by visual hallucinations and worsening paranoid persecutory delusions and aggressive/assaultive behavior towards his family. Our patient had originally been diagnosed with Parkinson's disease and started on pimavanserin- collateral information obtained from family and his neurologist indicated that the diagnosis was Lewy Body Dementia. He had a complicated course at our facility, including a transfer to the ICU for elevated cardiac enzymes and various changes in medication regimen. Cases like these highlight the challenges associated with treatment of Dementia with Lewy Bodies.

No. 92

The Use of Blister Packs in Packaging Psychiatric Medications: A Way to Reduce Suicide Attempts and Increase Treatment Adherence

Poster Presenter: Mohammed Tashfiqul Islam, M.D.
Co-Authors: Bennett Silver, M.D., Sukaina Rizvi, M.D.

SUMMARY:

Despite various advances in the field of psychiatry, suicide remains a difficult subject to address, mainly due to various factors involved. For example, prevention strategies are contingent upon education of both physicians and patient populations, as well as restriction of tools involved in the attempts themselves (1). While some suicide attempts are cries for help, other can be more serious reflections of the psychiatric pathologies involved. The means by which individuals attempt suicide can dictate the severity of the attempt, and clinicians can gauge its likelihood of rescue probability. In the United States, suicide involving firearms remains the top cause of death in suicides. While restriction of firearms is a complicated topic that will require considerable application of resources to resolve, we can look towards other means utilized in attempts. Poisoning

via medications is a relatively common occurrence and there has been literature to suggest that repackaging of medications into blister-packs reduces the rate of attempted suicides. One such study from Oxford university reported a reduction of suicides by approximately 43% in the United Kingdom after over the counter medications such as paracetamol were repackaged into blister packs with legislation limiting the quantities sold per packet was passed (3). While some may argue that restricting a means of suicide attempts will result in an increase in suicides via other lethal means, the evidence suggests this approach has good success rates. Suicide via poisoning on psychiatric medications remains a challenge namely because of the potential medical complications involved. Lithium and various antipsychotics come to mind namely due to their systemic effects. Some argue that the re-packaging of these medications would improve treatment adherence, namely due to visual cues to help remind patients about doses they may have missed/already taken (2). In a community hospital setting, prevention of suicides requires coordination of various disciplines. Along with educating patients and their family members, pharmacies can play a crucial role in reducing the risks associated with suicides. We propose a quality improvement project which will consist of the use of blister packs in discharge medications (namely antipsychotics) provided to patients from the hospital pharmacy and follow up in the clinic to determine treatment adherence and response-with the goal being to increase adherence and decrease suicide rates. The use of suicide risk assessments at regular intervals should be conducted at regular intervals and screening medical units for cases of overdose. Based on the response (with comparison to those not given blister packs), the prudent approach would be to expand the project to ultimately include all medications even over the counter medications (such as acetaminophen, salicylates, antihistamines) dispensed by the pharmacy.

No. 93

Suicide Attempt by Swallowing Glasses: A Case Report

Poster Presenter: Lauren Solometo, D.O.
Co-Authors: Anita Louise Hammer Clayton, M.D., Cashel Ahrens

SUMMARY:
The rate of inpatient suicide ranges from 100 to 400 per 100,000 psychiatric admissions. About 1500 inpatient suicides occur annually in the United States, one-third of them on 15-minute checks. The physical environment of the patient is thought to play a role in over 80% of reported inpatient suicides. Ideally, patients at elevated acute risk are placed under high surveillance and in an environment free of potentially hazardous objects. The latter remains challenging to achieve, particularly in cases of bizarre suicide attempts such as the one discussed here. The patient is a 62 y/o woman with stage IV pancreatic cancer admitted for psychosis and suicidal ideation who swallowed pieces of her glasses in a suicide attempt between nursing checks. Her presentation was significant for severe anxiety and agitation, requiring several doses of behavioral emergency medications and physical restraints. Chest radiograph showed 14 cm metallic foreign body in the mid-thoracic esophagus. Patient underwent upper endoscopy and foreign body removal without complication. Despite stringent suicide precautions, suicidal behavior remains difficult to predict. In this case, the astuteness of nursing staff led to early recognition and a favorable outcome.

No. 94

Using Cytochrome P-450 2D6 (CYP2D6) Phenotype to Predict Nortriptyline Serum Concentrations: A Retrospective Chart Review

Poster Presenter: James Hyun Lee
Co-Author: Simon Kung, M.D.

SUMMARY:
Background: Nortriptyline is a tricyclic antidepressant with a steady state therapeutic serum concentration between 70-170 ng/mL. Rapid dose titration might overshoot the desired serum concentration, which can result in increased adverse effects or toxicity. Nortriptyline is primarily metabolized by the cytochrome P450 2D6 (CYP2D6) enzyme, of which 10% of patients might be poor metabolizers (thus needing a smaller dose) and up to 20% might be ultrarapid metabolizers (thus needing a larger dose). Being able to predict the optimal dose using the patient's CYP2D6 phenotype could allow

rapid dose adjustment to a therapeutic level. This study investigates the association of 2D6 phenotype, nortriptyline dose, and nortriptyline serum concentrations. Methods: A retrospective chart review of patients at Mayo Clinic with nortriptyline serum concentrations, nortriptyline dosing information, and CYP2D6 genotype and phenotype between 7/1/1997 through 10/1/2018 was performed. Based on genotype, patients were grouped into CYP2D6 phenotype categories of Poor, Intermediate, Extensive (Normal), and Ultrarapid. Linear regression of serum concentration and nortriptyline dose was used to calculate the best fit for each of the four phenotype categories. The estimated dose to achieve a serum concentration of 100 ng/mL was calculated and compared for each category. Results: A total of 169 serum values with corresponding doses of nortriptyline were collected from 104 unique patients. The linear fit equation for the CYP2D6 Poor, Intermediate, Extensive, and Ultrarapid categories were: Serum = 30.43+1.27*Dose ($F(1,10) = 6.14$, $p=0.04$); Serum = -25.48+2.02*Dose ($F(1,14) = 15.92$, $p<0.01$); Serum = 13.14+0.91*Dose ($F(1,124) = 79.43$, $p<0.01$); and Serum = 40.46+0.41*Dose ($F(1,14) = 2.32$, $p=0.15$), respectively. Using these regressions, to achieve a serum level of 100 ng/mL, the dose estimates would be 55 mg (Poor), 60 mg (Intermediate), 95 mg (Extensive), and 145 mg (Ultrarapid). Conclusion: Our data supports that CYP2D6 phenotype contributes significantly to the metabolism of nortriptyline and can guide dosing to achieve a steady-state plasma concentration. Poor metabolizers require approximately 50%, and ultrarapid metabolizers require approximately 150%, of the dose needed by a normal metabolizer. These findings align with the Clinical Pharmacogenetics Implementation Consortium (CPIC) recommendations for nortriptyline dosing1 and have immediate clinical relevance. Future studies can assess how knowledge of serum concentration and dose might predict CYP2D6 phenotype.

No. 95

How Psychiatric Hospitalization May Lead to Iatrogenic Harm: The Case of a Suicide Pact

Poster Presenter: Catherine Rutledge, M.D.
Lead Author: Juan Francisco Tellez, D.O.
Co-Author: Alexander Kaplan, M.D.

SUMMARY:

Two women, Ms. F and Ms. Y, 20 years and 23 years old respectively, were each admitted for suicidality to an inpatient psychiatric ward at a training hospital. They formed a friendship while hospitalized and had maintained frequent contact after discharge. Ms. F had post-traumatic stress disorder (PTSD) and major depressive disorder (MDD), complicated by the suicide of her husband just 2 months prior. Ms. Y had PTSD, MDD, and borderline personality disorder. Ms. F and Ms. Y had made a suicide pact which they planned to fatally overdose on prescription medications on a specific date shortly following their discharge. When the date arrived, both patients met; Ms. F declined to overdose but Ms. Y did follow through and overdosed in the presence of Ms. F. Ms. Y later informed her outpatient psychiatrist and was re-hospitalized at the psychiatric inpatient unit; she continued to be engaged in outpatient care upon discharge. Ms. F's clinical course, to include suicidal ideations, continued to stagnate despite weekly psychotherapy and trials of antidepressants. Ms. Y also had been in weekly psychotherapy and hospitalized multiple times after for further suicide attempts. In this poster, we elaborate on the challenges suicide pacts pose, especially in a population often lacking in social support, and the importance of inquiring about connections made between patients who met on psychiatric wards. Careful attention to the risk of psychiatric hospitalization must be maintained given the possible iatrogenic harms imparted by the decision to admit. Universality, the oft-touted therapeutic factor in group settings, may not naturally be a force working toward psychological healing.

No. 96

A Mind Turned in on Itself: A Case of Suicidal Obsessions in a Young Outpatient

Poster Presenter: Natalia Grekova, M.D.
Co-Author: Lauren Marie Pengrin

SUMMARY:

Obsessions are often a very difficult symptoms to manage in our patients, let alone when those obsessions relate to suicidal ideation. According to the Centers for Disease Control and Prevention,

suicide rates have been rising in nearly every state. In 2016, nearly 45,000 Americans age 10 or older died by suicide. As psychiatrists, we have a duty to identify at-risk patients and to provide adequate treatment to prevent such disastrous outcomes. In this presentation, I would like to highlight a case of suicidal obsessions seen in a patient in a female student in her early 20s. The patient was seen in an outpatient clinic after a recent 3-day inpatient hospitalization due to suicidal ideation. She described the thoughts saying, "I keep thinking about all the various ways I can kill myself so it would look like an accident and my family would not know that it was suicide". Despite these serious ideations, she did not have any history of previous suicide attempts nor any history of self-injurious behavior. The patient reiterated that she did not actually want to kill herself, however, the thoughts were impossible to get rid of, and she felt the need to escape them. The patient reported associated low mood, frequent crying due to disturbing suicidal thoughts and suicidal ideations, but denied changes in energy, interest or appetite. She was resistant to tell her conservative parents about her problem until the thoughts became so destructive that she could no longer function. The patient was started on escitalopram to address these mood and obsessional symptoms. After titrating the dose to 20mg escitalopram, her suicidal thoughts became less severe after 3 weeks of treatment. Currently, the patient is now obsessing about potential locations in which she could cut herself so that it would be undetectable to others. Again, the patient has no desire to self-mutilate, but describes these thoughts as obsessional in nature; unrelenting and anxiety provoking. Understandably, this causes significant distress and functional impairment to the patient. Though we have reduced the potential lethality of her obsessions, ultimately these obsessions regarding self-harm remain. How can we better understand obsessional thoughts of self harm and what options are available to patients suffering symptoms such as these? In presenting this case I would like to more fully explore these questions and start a dialogue with peers about managing these difficult scenarios.

No. 97

Effects of Chronic Physical Disease and Systemic Inflammation on Suicide Risk in Patients With Depression: A Hospital-Based Case-Control Study

Poster Presenter: Kyu Young Oh
Co-Author: James W. Murrough, M.D.

SUMMARY:

Background: Suicide is one of the leading causes of death worldwide, and over 50 percent of all people who die by suicide suffer from major depression. Chronic physical diseases are known to be important contributors to suicide risk. Additionally, pro-inflammatory states demonstrated by elevated C-Reactive Protein (CRP) and cytokines such as interleukin-6 and tumor necrosis factor-a, have been associated with increased suicide risk. Few studies have examined the concurrent effects of physical disease and systemic inflammation on suicide risk in patients with depression. The authors investigated the independent contributions of chronic physical disease and systemic inflammation as indexed by CRP, on the risk of suicide attempt. Methods: In this case-control study, 1,468 cases of suicide attempters and 14,373 controls, both aged 18-65 years with a diagnosis of depression during 2011-2015, were identified from the hospital-wide database. Regression models were implemented to identify separate effects of physical diseases and systemic inflammation indexed by CRP, on the risk of suicide attempt. Models were adjusted for sex, age, race/ethnicity, type and number of chronic physical diseases (neoplasm, diabetes, chronic lung disease, chronic heart disease, arthritis, stroke), in a stepwise manner. Results: Compared to having no physical disease, having one, two, and three or more physical diseases was associated with a 3.6-, 6.4-, and 14.9-fold increase in odds of making a suicide attempt, respectively, after adjusting for age, sex, and race/ethnicity. In a sub-sample of cases and controls with available CRP values, patients with high CRP (>3mg/L) had 1.9 times the odds of suicide attempt compared to patients with low CRP (<1mg/L). This association was no longer significant when controlling for the effect of physical disease. Conclusions: Presence of physical disease is an important risk factor for suicide attempt among patients with depression. Systemic inflammation is likewise associated with an increased risk for suicide attempt; however, this association appears to be

accounted for by the presence of physical disease among patients receiving care in a medical center setting. The results emphasize the importance of assessing the risk of suicide attempt in depressed patients burdened with multiple physical comorbidities.

No. 98

Multispecialty Care of a Psychiatric Inpatient After Intentional Ingestion of Elemental Mercury

Poster Presenter: Marshall Steele, M.D.
Co-Author: Laura Francesca Marrone, M.D.

SUMMARY:

The acute care of a patient after a suicide attempt often involves providers from multiple specialties, especially in the context of an intentional poisoning or overdose. In this case, a 22 year old male active duty service member was admitted to the inpatient psychiatric service after reporting three unique suicide attempts by different methods on three consecutive days. The first of these attempts involved ingesting a teaspoon of elemental mercury, which prompted engagement of several different medical consultants, both within and outside of the hospital. From a psychiatric perspective, the case was complex due to diagnostic uncertainty and the bizarre nature of his multiple consecutive non-lethal self-poisoning attempts. Psychiatric management involved initiation of antidepressant medication and ward-based therapy modalities. From a medical perspective, the reported mercury ingestion required immediate consultation of Poison Control, who recommended further radiologic and laboratory investigation. X-rays of the abdomen and chest revealed accumulation of high density material in the large bowel, appendix, and lower lung fields, consistent with ingestion and aspiration of mercury. These findings prompted coordination with consultants from Internal Medicine, Gastroenterology, and Pulmonology. Ultimately, medical management on the inpatient psychiatry ward involved mild bowel irrigation and careful observation, while further invasive interventions, such as bronchoalveolar lavage or chelation therapy, was deferred after careful risk-benefit analysis. During his hospitalization, the patient never displayed physiologic symptoms of mercury toxicity and he was discharged from the hospital in stable condition after his suicidal ideations resolved. This poster will examine the specific psychiatric and medical complexities in this case and will underscore the importance of multidisciplinary coordination and communication after a suicide attempt.

No. 99

A Prospective Study of Suicide Attempts Focused on Lethality and Risk Factors

Poster Presenter: Leonardo Hess
Co-Authors: Jaime Mario Kuvischansky, M.D., Manuel Francescutti, M.D., Julia Javkin, M.D., Romina Martinangeli, M.D., Ezequiel Rodenas, M.D., Carla Graziadei, M.D., Pablo Bassanese, M.D., Javier Monaco, M.D., Martín Salomon, Julieta Agraso, Alejandro Parolin, Sofía Leardi, Maria Virginia Tosetti Sanz, Nicolás Salgueiro, Martina Valdelomar, Lucila Nadia Ineichen

SUMMARY:

Introduction: 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. The severity and characteristics of injuries vary by the intentionality and mechanism of injury; therefore, there is a need to create a scale of severity to estimate the lethality of injuries. In light of the increased suicide rate, it has become important for researchers to examine the multiples factors associated with it. We investigated certain demographic factors that are associated with the choice of suicide method for evaluate their lethality and risk score. Material and methods: This is a prospective, descriptive and observational study based on 113 patients admitted in the Emergency department of “Sanatorio Parque”, Rosario, Santa Fe. The data was collected in a period of 30 months (January 2016- June 2018). We designed a questionnaire to administrate to each patient with suicide- behavior to define risk assessment. There are many factors that can be taken into consideration to define the risk of a suicide attempt; we estimated the lethality making a scale by evaluating 4 items “the patient was alone at the moment”, “regret”, “planning”, and “subsequent notice”. Results: It was found that male patients over 40 years old (2.8) and female over 40 years old (1.5), had higher lethality in their attempts. On the

other hand the lowest lethality was found in the group between 30-45years old (0.8) in both genders.

No. 100

Antidepressants, Suicide, and Adolescence: A Systematic Review

Poster Presenter: Lorenna Santos
Co-Authors: Anderson Silva, Wélissa Moura, Isabela Tavares, Joston Sousa, João D'osualdo, Amanda Nadur

SUMMARY:

Background: There was a drastic change in the prescription of antidepressants(AD) after the black box warnings issued by FDA (Food and Drugs Administration) in 2004 and 2007. The FDA analysis leading to the warnings in 2004 showed a relative risk of suicidal behavior or ideation of 1.95 for young people treated with antidepressants compared with those given placebo. In May 2007 the warnings about increased risk for suicidality were extended to young adults from 18 to 24 years old. Following the warnings by both the FDA and European regulators, between 2003 and 2005, the youth suicide in the United States increased by 14% and in the Netherlands by 49%. After these proclamations, the rate of prescribing SSRI for adolescents was reduced by approximately 22% in the United States and the Netherlands. The objective of this review is to describe the relationship between antidepressants and suicide in adolescents. Methods: We conduct a systematic review on MEDLINE database. We utilized the following search strategy: ("Antidepressive Agents"[Mesh] AND "Adolescent"[Mesh]) AND "Suicide"[Mesh]. As inclusion criteria we used only articles in English, Portuguese or Spanish that described a direct relationship between antidepressant use and suicide in adolescents from 13 to 24 years old. Results: The search strategy found 662 articles, and after the PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analyses), we selected 15 articles that attended the inclusion criteria. From the 15 selected, 4 proposed AD as a protective factor, 1 as a risk factor and 10 didn't find any relationship between suicide and AD. The only article that found an increase in suicide attempts and AD use, highlighted that a casual relation couldn't be established. From the 4 articles that proposed AD as a protective factor, 3 evaluated the suicide rate and 1 the suicide risk. There were differences in methodologies, class of AD used, age interval and outcomes which impossibilitate the comparison between the articles. Conclusion: We didn't find evidence that would support the concerns of the international drug safety authorities. We should note that most of our selection examines completed suicides rather than suicide ideation or attempts. Nevertheless, we found no causal statistically significant relationship between AD and suicide. The use of AD in adolescence are of particular concern, because there is a higher risk of attempts at young age, however, it is not necessarily caused by antidepressants and most likely is accompanied by a similar risk of suicide.

No. 101

Risk Factors for Suicidal Ideation Among Adolescents: A Systematic Review

Poster Presenter: Laura Souza
Co-Authors: Anderson Silva, Mariana Butinhon, Ana Almeida, Marina Clemente, João Maia

SUMMARY:

Background: The World Health Organization (WHO) estimated that 1 million people died from suicide in the year 2000, despite being the leading cause of preventable mortality. Suicide is the fourth leading cause of death among adolescents aged 15 to 19 years worldwide. Suicide is uncommon before 15 years of age but increases in prevalence through adolescence and into adulthood. Although many suicide attempts do not result in death, completed suicide and suicidal behavior place a huge burden on society. So it would be ideal to recognize and manage suicidal ideation before the actual suicide happens. Suicidal ideation is defined as thoughts of harming or killing oneself, and it is prevalent among adolescents and young adults. The objective of this review is to describe the risk factors for suicidal ideation in adolescents. Methods: We conducted a systematic review on MEDLINE database. We utilized the following search strategy: ((("Suicide"[Mesh]) AND "Risk Factors"[Mesh]) AND "Adolescent"[Mesh]) AND "Self-Injurious Behavior"[Mesh]. As inclusion criteria we used only articles in English, Portuguese or Spanish that described a direct relationship with risk or protective factors for suicidal ideation in adolescents from 13

to 24 years old in the general population. Results: The search strategy found 4066 articles, and after the PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analyses), we selected 43 articles that attended our inclusion criteria. There were different methodologies and different populations studied, which doesn't allow any generalization of the results, but there are some risk factors that are listed in several articles. Thus we hypothesize that they would be more broad risk factors, being present in different populations. They are: depression (16 articles), parent-child conflict(12 articles), tobacco use(7 articles), alcohol use(8 articles), feminine gender(6 articles), bullying(5 articles), other psychoactive substance use(5 articles), cannabis(4 articles) and inadequate sleep(4 articles). Its important to notice that tobacco and alcohol use didn't show any significant correlation with suicide ideation as an independent variable, in 1 article each. Conclusion: Adolescent suicide remains an important clinical problem and a major cause of death in young people. Nonfatal suicidal behavior is also associated with a great deal of morbidity and suffering. Therefore identification of more broad risk factors of suicide ideation will help better prediction of suicidality and hence, better assessment process, better treatment and more prevention programs with potential to reach different populations.

No. 102

Suicide Prevention in Health Care Settings: An Emergency Pull Cord Creates the Emergency

Poster Presenter: Cody Bryant
Co-Authors: Kristi Wintermeyer, M.D., Lujain Alhajji, Vanessa L. Padilla, M.D., Samir A. Sabbag, M.D.

SUMMARY:
Background: In recent years, the rate of suicide has increased, now ranking as the tenth leading cause of death in the US. Our role as psychiatrists inevitably involves contact with patients at risk of self-harm. An important step of a psychiatric evaluation involves thorough safety assessments with a focus on recognizing factors that increase the risk of suicide, which can necessitate increased safety measures in the hospital setting. Case: A 34-year-old gentleman with a psychiatric history of depression, cannabis, cocaine, methamphetamine and over-the-counter stimulant use, presented to the medical emergency room with agitation and suicidal ideation after binging on multiple illicit substances for several days. He was guarded on arrival, then became loud, disruptive, and unable to be redirected, requiring chemical sedation. He was admitted to the medicine service for management of dehydration, rhabdomyolysis, QTc prolongation, agitation, and suicidal ideation. He was placed under video monitoring observation, as well as closer surveillance with a one-to-one patient attendant, and psychiatry was consulted. As the initial intoxication resolved, the patient denied suicidality and endorsed motivation to pursue sobriety via residential rehabilitation following hospitalization. After several days of medical care, he again became anxious, disruptive, intrusive, and loudly demanded discharge. This further increased concern for acute risk of self-harm and the patient's status was changed to involuntary. Soon after, the patient barricaded himself in his bathroom and attempted to hang himself with the emergency pull cord. Suicide attempt was interrupted and patient was transferred to inpatient psychiatry for further management. Discussion: Patients determined to be at high risk of self-harm are admitted to the hospital with a goal of treating and stabilizing the underlying cause of their suicidality. It is clear that identifying high-risk individuals remains important in decreasing morbidity and mortality, but we must be certain that by admitting them to the hospital we are in fact decreasing their risk of death. The Joint Commission (TJC) assembled a panel in 2017 to provide guidance on adequate safeguards to prevent suicide and made specific recommendations for psychiatric units, general medical/surgical units, and emergency departments. These measures include decreasing potential ligature attachment points, removing potential methods of self-harm from the setting, and monitoring closely for the risks that cannot be fully eliminated from the facility. Per TJC, of reported attempted inpatient suicides, 75% are by hanging. However, they did not list data for use of the emergency pull cord. In this poster, we discuss the challenges and importance of identifying patients at high risk of self-harm, screening for risk and protective factors for suicide, and understanding components of adequate safeguards for suicide prevention in healthcare settings.

No. 103

Worsening Suicidality in Kleptomania: A Case Report

Poster Presenter: Tejpal Bedi, M.D.
Co-Authors: Krutika P. Chokhawala, Rikinkumar S. Patel, M.D., M.P.H.

SUMMARY:

Kleptomania is described as an impulse control disorder wherein there is a recurrent, intrusive, irresistible impulse to steal objects not needed for personal use or monetary value. There is an increase in tension prior followed by a sense of relief after the act of theft [1]. Women are more likely than men to present for psychiatric evaluation, but men tend to have a higher risk of being imprisoned [2]. We present a case of a 34-year-old female who was brought by law enforcement to the psychiatric facility for a psychiatric evaluation. The patient presented with depressed mood and passive suicidal ideations with four past suicide attempts. The patient was recently reported to law-enforcement for shoplifting, and she had a history of multiple petit larceny charges. When asked about her symptoms, patient endorsed a feeling of tension before the act and an immediate sense of relief after stealing. The patient reported current suicidal ideation in conjunction with worsening symptoms of depression. She endorsed feeling "depressed," guilty, worthless, insomnia and low energy for two months and denies anxiety, mania, and psychosis. Her family history was significant for bipolar disorder in mother. Patients with kleptomania have high lifetime comorbidity of mood disorders, substance use disorders and impulse control disorders [3]. She has a past medical history of osteoarthritis, and as per a systematic review [4], depression and anxiety are prominent comorbidities in patients with osteoarthritis. A study conducted by Odlaug et al. [5] examined the predictors of suicide attempts. They concluded that individuals with kleptomania have high rates of suicide attempts (92.3%) and are associated with bipolar disorder (P=.047) and personality disorder (P=.049). We postulate that multiple suicidal attempts in our patients were related to worsening of depression due to uncontrolled kleptomania and osteoarthritis. The patient was treated with duloxetine 120mg QAM and gabapentin 100mg TID, and behavioral therapy that showed a marked improvement in her symptom during hospitalization. It is essential to manage the comorbidities in the depressed patient with kleptomania which is possible by in-depth interviewing and maintaining confidentiality due to patient's fear of judicial outcomes.

No. 104

Accelerating Mortality: Conflicting Bioethical Principles After an Attempted Suicide in Huntington's Disease

Poster Presenter: Shannon L. Mazur, D.O.
Co-Authors: Stephen Luippold, Lewis M. Cohen, M.D.

SUMMARY:

BACKGROUND Huntington's Disease (HD) is an inherited neurodegenerative disease, characterized by severe movement disorders such a chorea and hypokinesia, cognitive decline leading to dementia, and psychiatric symptoms. Compared to the general population, research has identified HD patients are significantly more likely to make a suicide attempt. CASE REPORT A 41 year old male with HD presented as a Level 1 trauma after a suicide attempt in which he jumped from the 4th floor of the hospital where he had been receiving care for the past 10 months. He presented with an advanced directive indicating he did not want to be resuscitated or intubated (DNR/DNI). He sustained extensive injuries including transection of the aorta, pneumothorax, mesenteric hematoma, spinal cord injury, and multiple fractures of his ribs, sacrum, pelvis, and vertebrae. The patient refused to consent for life saving surgery of his aorta, however was deemed incapable of decision making in light of his suicide attempt. His sister, who was his identified healthcare proxy, insisted on speaking with her brother prior to the surgery and was brought into the OR as he was being prepared for surgery. She then expressed her clear decision on the patient's behalf for him to be provided with comfort measures only (CMO). This caused significant conflict for the medical team. His sister discussed how he had watched the devastating progression of HD as his mother suffered through the disease. He tested positive for HD in his early 20's and had made consistent statements regarding his plan to commit suicide before the disease completely debilitated him. He had been unable to

care for himself for over 2 years. He had 2 prior suicide attempts including hanging himself in a nursing home less than a year earlier. Ultimately, the request by the HCP for the patient to be CMO was honored. He expired less than 12 hours after his fall. A literature review was performed utilizing PubMed and Medline. DISCUSSION Currently, most US hospitals override DNR/DNI orders when a patient comes into the ED with complications from a suicide attempt. However, some physicians and ethicists are challenging this practice. They believe if the patient previously expressed in an advanced directive a preference to be DNR/DNI as a choice, separated in space and time from the suicide attempt, it should be honored. This creates an ethical dilemma between autonomy confronting beneficence and non-maleficence which in turn creates an emotionally charged dilemma for care-providers. CONCLUSION Clinicians should be aware of bioethical considerations in light of a patient's previously established advanced directive when caring for a patient who has made a suicide attempt. This is particularly important in the HD population as they are significantly more likely to make a suicide attempt compared to the general population, and further present with cognitive, behavioral, and psychiatric changes secondary to their disease process.

No. 105

Neuroleptic Malignant Syndrome in a Patient With History of Traumatic Brain Injury

Poster Presenter: Jane Elizabeth Harness, D.O.
Co-Author: Alexandru I. Cojanu, M.D.

SUMMARY:

With a mortality rate of 10-20%, Neuroleptic Malignant Syndrome (NMS) is often on the radar of a conscientious psychiatrist. NMS is a potentially life-threatening neurologic emergency characterized by a tetrad of symptoms including acute change in mentation, muscular rigidity, hyperthermia and autonomic instability. It is associated with the use of neuroleptic agents in a non dose-dependent fashion as well as withdrawal of anti-parkinsonian medications. Current theories for the cause of NMS postulate dopamine receptor blockade. Treatment involves stopping the causative agent, providing aggressive supportive care and if necessary, medical therapy, which may include Dantrolene, Bromocriptine, Amantadine and/or electroconvulsive therapy (ECT). However, abrupt withdrawal of the above-mentioned medications can quickly send the patient back into NMS. At that point, balancing side effects with behavioral disturbance can be challenging. We present a case of NMS in a patient with Bipolar Disorder and a history of Traumatic Brain Injury (TBI). This patient also had re-emergence of NMS symptoms after abrupt withdrawal of Amantadine and Bromocriptine. Patients with structural brain disorders are at greater risk for the development of NMS, therefore, the titration of neuroleptic medications necessitates delicacy. The focus of this case study will be the role brain disorders such as TBI play in the risk of developing of NMS. This case demonstrates the clinical fragility of patients with TBI's.

No. 106

The Sharp Increase in Suicide by Charcoal Burning in the Republic of Korea From 2007 to 2015

Poster Presenter: Dae-Guen Han
Lead Author: Seung-Gul Kang
Co-Authors: Seo-Eun Cho, Seong Jin Cho, Kyoung-Sae Na, M.D.

SUMMARY:

Suicide by charcoal burning has been sharply increasing in several East Asian countries. We sought to investigate age- and gender-associated variations in suicide by charcoal burning. Data on annual causes of death from 1991 to 2015 in the Republic of Korea was used. We used the data of the Annual Report on the Causes of Death Statistics, which has been collected and published by Statistics Korea from the Microdata Integrated Service of Statistics Korea (https://mdis.kostat.go.kr/index.do). The rate of increase of charcoal burning from 2007 (n = 82, 0.8%) to 2015 (n = 2,130, 17.6%) was 2,497.6%. Charcoal burning showed strong gender-dependent patterns. The total of 8,919 males (81.6%) and 1,999 females (18.3%) died by charcoal between 1991 to 2015. Although suicide by charcoal burning increased in all age groups. There was a high use of charcoal burning among young and middle-aged males, whereas it was least frequent among youth under 25 and the elderly over 75 years in both genders. Between 2007 to 2015, suicide by charcoal

burning showed dramatically increase from 19 to 539 (2,376%) in the age group of 45 to 54 years old but less increment from 6 to 91 (1,416%) in the age group of under 25 years and from 4 to 68 (1,600%) in the age group of over 75 years. There are several possible reasons for the prevalent use of charcoal burning in those subpopulations. First, they are familiar with media reporting and other online networking such as social networking services (SNS) and media reporting. As the increase in suicides by charcoal burning is mainly due to media reporting, familiarity with the media coverage may lead to at-risk individuals learning detailed instructions for charcoal burning. Second, suicide by charcoal burning may be easier psychologically to go through with, as it does not directly injure one's body or cause fear as jumping from a height does. Our date suggest that age- and gender-specific suicide prevention strategies are needed in suicide by charcoal burning such as media reporting should be regulated, particularly for young and middle-aged men.

No. 107

Relationship Between Functional Connectivity of Default Mode Network and Cognitive Functions in Early and Late Mild Cognitive Impairment Patients

Poster Presenter: Si Eun Lee
Co-Author: Dong Woo Kang

SUMMARY:

Abstract Background: Amnestic mild cognitive impairment (MCI) is classified into early and late MCI based on the degree of deterioration in memory performances evaluated by detailed neuropsychological tests. Objective: To explore the difference in functional connectivity of default mode network (DMN) among healthy controls (HC) (n=37), early (n=30), and late MCI patients (n=35) and to evaluate a group by cognitive functions interaction for the functional connectivity of the DMN. Methods: Subjects underwent resting-state functional MRI scanning and a battery of neuropsychological tests. Results: A significant difference among the three groups was found in the functional connectivity between posterior cingulate cortex (PCC, seed region) and bilateral crus cerebellum, right medial frontal gyrus, superior temporal gyrus (Monte Carlo simulation corrected $p < 0.01$, cluster $p < 0.05$). Furthermore, there was a significant group (HC vs early MCI vs late MCI) by verbal and memory performances interaction for the functional connectivity between PCC and right crus cerebellum 1, medial frontal gyrus, superior temporal gyrus ($p < 0.001$). Additionally, a significant group (HC vs early MCI) by verbal and memory performance interaction was found for the functional connectivity between PCC and right putamen ($p < 0.001$). Conclusions: Early and late MCI patients showed significant difference in functional connectivity of DMN brain regions, known to be vulnerable and compensatory to Alzheimer's disease pathogenesis. Moreover, functional connectivity of these brain regions displayed differential associations with verbal and memory performances, depending on the trajectory of MCI. Keywords: functional connectivity, mild cognitive impairment, verbal performance, memory performance.

No. 108

Looking at Suicide and Self-Harm Behaviors in a College Psychiatric Clinic

Poster Presenter: Brittani Lowe

SUMMARY:

Although there is literature regarding college mental health care, surprisingly there is a paucity of data regarding college students specifically referred for psychiatric evaluation and treatment. The purpose of this research is to examine characteristic of college students referred to see the psychiatrist at an on campus clinic. In this study we specifically wanted to examine self-harm and suicidal characteristics. We conducted a retrospective chart review of 150 patients who were referred for psychiatric care, after having been evaluated by a mental health counselor at a college mental health clinic. Demographic and clinical data were collected, entered in SPSS, and analyzed. Preliminary results indicate that the population was high risk with almost one-quarter (24%) having attempted suicide at least once in their life time, and over one-third (36%) had a history of non-suicidal self-harm. In addition, a high percentage of students (43.3%) had suicidal ideation in the month prior to being seen by the psychiatrist. Diagnoses associated with suicidal ideation and attempts include borderline personality disorder (p=0.002), any substance use disorder

(p=0.036), post-traumatic stress disorder (p=0.021), and major depressive disorder (p < 0.000). Suicide attempts (p=0.048) and self-harm (p < 0.000) were both significantly related to being female. In summary, college students referred for psychiatric care represent a psychiatrically seriously ill group. Such information is vital to properly plan the necessary supports and services to adequately care for such students.

No. 109

Mental Health in Appalachian Versus Non-Appalachian College Students

Poster Presenter: Brittani Lowe

SUMMARY:

The purpose of this research is to investigate and describe Appalachian college students seeking psychiatric care, and in particular, to determine if Appalachian students differed from students from non-Appalachian regions. Appalachia is a rural area known to have limited availability and access to mental health care. These factors, along with a number of others (poverty, stigma/cultural issues, etc.), may combine and become significant enough to create differences in psychiatric profiles that manifest in college students in this area. Such information would be critical in planning for appropriate treatment and access to care. We conducted a retrospective chart review of 150 patients who sought psychiatric care from an on-campus psychiatric clinic at a southern Appalachian university (Marshall University). Demographic and clinical data were collected, entered into SPSS, and analyzed. Preliminary results indicate that Appalachian students were significantly more likely to be diagnosed with a depressive disorder (81.1% of Appalachian students vs 57.1% of non-Appalachian students, p=0.007). Similarly, Appalachian students were significantly more likely to have any anxiety disorder (65.5% vs 39.3%, p=0.010). Appalachian students were also significantly more likely not to have had psychiatric or mental health care prior to college (45.1% vs 14.3 %, p= 0.003). It appears Appalachian students are less likely to have had mental health care prior to college and are more likely to have depressive or anxiety disorders. Results and a review of the literature will be presented.

No. 110

Exercise Is a Treatment for Serious Mental Illness

Poster Presenter: Nawfel Abdulameer, M.D.

SUMMARY:

Serious Mental Illness (SMI), which includes diseases like depression, anxiety, and personality disorder, affect 1 in 20 Americans. Those afflicted with such disorders are more likely to have metabolic dysfunction and earlier mortality. Current pharmaceutical regimens are associated with adverse reactions that can worsen long-term health outcomes, particularly regarding metabolic function. New investigations into non-medicinal options do indicate positive outcomes without the negative side effects. In particular, exercise has been associated with reduced depressive episodes, schizophrenic symptoms, and anxiety; with the added benefit of improved general health. Research indicates that the poor allocation of resources towards standardized and flexible exercise protocols has prevented the universal expansion of this adjunct therapy in any meaningful way, in spite of its recognized benefits. To reiterate these observations, we had organized a project consisting of reasonable exercise sessions for five-times/week over a twelve-week time frame. These sessions will consist of 5-10 minute warm-ups, 30 mins of aerobics, 15 minutes of resistance training, and 5-10 minute cool down. One session will last for 1 hour, overall. The participants involved will also be providing valuable input for scheduling sessions and for techniques to increase motivation.

No. 111

How to Halve Your New Patient Waiting List Over the Telephone

Poster Presenter: Eugene Gerard Breen
Lead Author: Faraz Khan

SUMMARY:

Introduction: Many adult community psychiatry services have problems trying to reduce waiting times. This is usually due to increase in referrals and reduced resources. Our waiting list reached an all time high of 9 months delay with 115 referrals in 2017. This was due to more referrals and reduced doctor hours secondary to the European Working Time Directive. We

reviewed the system and began to ask "Is this waiting list real or virtual? Are the referrals appropriate? Do the people even know they are referred to psychiatry?" We decided to overhaul the list using tele-triage, a telephone "opt-in"protocol. methods: A designated junior doctor telephoned everyone on the list. Those who expressed an interest in being seen were given a provisional appointment date. The others were discharged to their family doctor with letters informing them and their doctor of this. Those not contactable by phone were sent a letter asking them to contact the secretary within 14 days. If they contacted they were given a provisional appointment otherwise they were discharged. Those deemed urgent were seen the following Wednesday. Non-contactable patients had 3 phoning attempts at varying times. results: At the start date there were 115 patients. Over the course of 5 weeks the above protocol was activated. 100 were contacted initially, 90 were given provisional appointments and 10 were discharged. After an interval of 14 days of sending letters asking them to contact the secretary, 96 responded by phone, 59 were offered appointments, and 37 were discharged. 37 failed to make any phone contact and were discharged. The waiting list in Feb six months into the protocol was 54 with a waiting time of 4.5 months a 50% reduction. The "did not attend" rate went from 35% to less than 5%. Discussion: Telephone triage is an accepted and necessary part of many businesses given its effectiveness in optimising resource utilisation. The health system is a very expensive service and resources are at a premium, especially since the economic crash of 2008. High "did not attend" rates and waiting times are not acceptable in any lean service and need to be scrutinised and fixed.

No. 112

Recognition and Referral of Parishioners With Mental Illness by Roman Catholic Priests in San Antonio, TX

Poster Presenter: Rigoberto Leyva, M.D.

SUMMARY:

Background: Adequate control of initial episodes of mental illness has a significant impact on further episodes and quality of life; therefore, the importance of timely referral and treatment is essential. Literature has demonstrated that those suffering from mental health issues prefer to first seek primary care providers or clergy over mental health professionals (1,3). Literature suggests that clergy (to include leaders of various faiths) feel inadequately trained to recognize mental illness(1.4), though interestingly, feel comfortable with their ability to refer and/or counsel patients with mental illness (4). Appropriate referrals depend on the ability to recognize clinical signs of severe mental illness and understanding that medical intervention is warranted. This study focused on assessing the ability of Roman Catholic Priests to recognize parishioners with severe mental illness. Methods: A 14-question survey was distributed to approximately 120 Roman Catholic Priests located in San Antonio TX. Vignettes using all Criteria A per DSM-V for Major Depressive Disorder, Suicidal Ideation, Mania, Psychosis, and Alcohol Use Disorder were presented. Questions assessed demographics, comfort with material, and their choices of referral options and potential treatments. Results: 92 Priests completed the survey (response rate of 77.5%). Of those who responded 60.12% feel confident in their ability to identify severe mental health issues. The majority of priests (roughly 70%) identified psychosis and mania as mental illness, but Less than the majority felt MDD and Alcohol UD were (47.08 and 46.8%, respectively.) Across all scenarios, the majority of the respondents did refer to at least an outpatient level of medical care. In the MDD case 82% referred to a medical doctor but only 47% agreed that medications were needed. Although not as pronounced, across all cases there were similar trends. Conclusion: Priests may more easily identify psychotic disorder and mania as being serious mental illness over depressive and alcohol use disorders. Although they commonly refer for medical treatment, there are less who agree that medications may be needed. This may suggest further education is needed to help identify psychiatric illness as having biological basis and needing of medical intervention. Future research and outreach projects could focus in breaching this educational gap, which may help to further decrease stigma and assist in supporting individuals in referral for mental health needs. ?

No. 113

Housing First Outcomes: A Longitudinal Pilot Study of Disability, Psychiatric Symptoms, Daily Functioning and Self-Stigma in Homeless Individuals

Poster Presenter: Michelle Trieu
Co-Authors: Francisco Quintana, Ph.D., Adriana E. Foster, M.D., Aniuska Luna, Angela Mooss, Julio Cesar Machado, Randel Martin

SUMMARY: Objective Evaluate changes in mental health outcomes in homeless populations with mental illness who are offered permanent supportive housing. Background In 2016-2017, homelessness increased for the first time in 7 years, creating a heavier burden on society and increasing the burden of chronic illnesses in people who are homeless. Application of Housing First (HF) model in the 1990's showed that when people who are homeless and have mental health disabilities were placed in permanent housing, the use of shelters as well as number and length of hospitalizations decreased. To expand on these results, we study how HF longitudinally impacts individuals' psychiatric symptoms, daily functioning, disability, and internalized self-stigma. Methods We recruited 33 people 18-70 years old who were homeless and agreed to enter the LIFT program which provides permanent housing and wrap-around supportive services from a Federally Qualified Health Center in Miami-Dade County. Those who volunteered completed the BSI (psychiatric symptoms), ISMI-10 (internalized stigma), WHODAS 2.0 (disability), and UPSA-B (daily functioning) within 1 month of entry into the LIFT Program. The assessments will be repeated 12 months after entry into the LIFT program. Results Baseline data was gathered in December 2017. Our study participants were 52.3 years old and 87.9% male. Schizophrenia and substance use disorder each comprised 27.3% of primary diagnoses. The highest WHODAS 2.0 scores (more severely disabled, scale 1-5) showed that participants were most severely disabled when standing for long periods of time (1.79), walking for long distances (1.81), and emotionally stressed from health problems (1.97). The highest ISMI scores (most stigmatized, scale 1-4) came from the statements about whether people with mental illness could make important contributions to society (2.66), whether having a mental illness destroyed their respective life (2.68), and whether they could have good, fulfilling lives despite their mental illness (2.63). The highest BSI scores (most severe symptom, scale 0-4) came from anxiety (1.4). Higher WHODAS scores correlated with higher ISMI and BSI scores. Higher BSI anxiety scores also correlated to higher ISMI scores. Discussion The baseline results support prior research that homelessness is correlated with higher rates of psychosis and substance-use disorder compared to the general population. ISMI scores indicate that participants had moderate levels of self-stigma. Higher WHODAS scores correlating with worse ISMI and BSI scores, and ISMI scores correlating to higher BSI anxiety issues indicate that disability, psychiatric symptoms, and self-stigma are interconnected. With proper housing and continuing treatment and services, we hypothesize that individuals in HF will have lower psychiatric symptoms, disability, and self-stigma, with higher daily functioning, correlating with prior HF successes. Follow-up data will be collected in December 2018.

No. 114

Prevalence and Impact of Personality Disorders on Drug-Dependent Homeless Individuals: A Literature Review

Poster Presenter: Zachary Michael Lane, M.D.
Co-Author: Asghar Hossain, M.D.

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 1,2 . 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 studies3,4. 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, and utilization of housing, vocational, mental health, and addiction services 5. Personality disorders are also strongly associated with drop out from treatment programs, especially Cluster B diagnosis6. 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 comorbid 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. 115

Hospitalization of Medicaid-Insured Adults for Behavioral Health Conditions: Identified Needs for Substance Use Disorder Services

Poster Presenter: Kaylin J. Beiter
Co-Author: Stephen Phillippi

SUMMARY:
Intro: Intensive outpatient services (IOSs) are known to be as effective as in-patient for treatment of some mental health conditions, including substance use disorders (SUD) (McCarty, 2014). Availability of such community services is known to reduce the overall necessity of hospitalization among Medicaid-insured adults if they are properly implemented (Wanchek, 2011). Patients who are not transitioned appropriately (enrolled in the IOS) from hospital care to a community IOS have higher rates of re-admittance (Busch, 2016). In Louisiana, 907,860 adults (18+) Medicaid-insured (LDH 2017), and have access to mental health services for both in and out patient settings. Data are presented for the case of Louisiana in order to clarify recommendations for where, and for which, patients such IOSs are needed in order to the reduce unnecessary hospital utilization. Methods: The Louisiana Department of Health (LDH) provided data of all paid behavioral health claims for care of Medicaid-insured adults aged 18+ in the year 2017. Unique service days were tabulated for in/out-patient care for each patient. The ICD-10 classification system was used to group diagnoses. State regional breakdown followed existing LDH parameters, and analyses were restricted to patients treated in only one region. Combination with US Census Bureau data allowed for analysis of regional geographic factors that may be associated with hospitalization rates, including the population demographics that suggest eligibility and reliance on Medicaid insurance. Data were analyzed using SAS. Results: 163,266 patients were reported to have utilized behavioral health services which were covered by Medicaid. 160,133 (98.9%) were treated in just one of the nine state regions and of these, 37,682 (23.5%) were hospitalized at least once. Hospitalized patients were treated for a greater number of days ($\bar{x}$=11.92) than non-hospitalized ($\bar{x}$=11.18) ($p<0.0001$). 41% (n=34,878) of patients with a peripartum substance use disorder (pSUD) were hospitalized, as were 39% (n=2157) of all SUD patients. Significant regional differences existed in the overall percentage of people in the region insured by Medicaid ($p<0.001$) and rates of hospitalization ($p<0.0001$). Even when restricting to SUD patients, regional hospitalization differences persisted ($p<0.0001$). Conclusion: SUD Medicaid-

insured patients appear to be at highest risk for hospitalization of all patients in Louisiana with a behavioral health diagnosis. Rates of hospitalization differ regionally even when restricting to SUD-patients only, suggesting that other characteristics may be affecting patient care indirectly. Regions have different reliance upon Medicaid for SUD treatment, and differing reliance upon hospitalization for treatment of such patients. Effective SUD IOSs should be implemented in accordance with regional needs in order to target areas specifically and allow for greatest impact on patient care.

No. 116

Grief Reaction in the Spouse of Terminally Ill Disease

Poster Presenter: Asghar Hossain, M.D.

SUMMARY:

Grief is a natural and universal response to the loss of a loved one. The grief experience is not a state but a process. Most individuals recover adequately within in a year after the loss; however, some individuals experience an extension of the standard grieving process. This condition has been identified as complicated grief or prolonged grief disorder, and it results from failure to transition from acute to integrated grief. Symptoms of acute grief include tearfulness, sadness and insomnia and typically require no treatment. Intense grief over the loss of a significant person may trigger the acute onset of myocardial infarction (MI). The impact may be higher with cardiovascular risk. Complicated grief has prolonged symptoms of painful emotions and sorrow for more than one year. There is now a new consensus that 7% to 10 % of bereaved individuals experience intense and chronic reactions called prolonged grief. Anticipatory Grief is a response to an expected loss. It affects both the person diagnosed with a terminal illness as well as their families.The objective of this literative review is to look for factors that causes complicated grief, vulnerable population and if not addressed risk for develop psychiatric illness. Discussion; The loss of a spouse typically causes greater negative consequences in men than women. Men experience greater depression and a higher overall health consequence than women. Vulnerable people such as those with low self-esteem, low trust in others, previous psychiatric disorder, previous suicidal threats or attempts, and/or absent or unhelpful family are more likely to experience increased symptoms. The grief evaluation measure (GEM) is a screening tool designed to measure the development of complicated grief symptoms in a mourning adult. It assesses both qualitative and quantitative risk factors including mourner's loss and medical history, financial resources both before and after the loss, and circumstances surrounding the death. It provides in-depth information on bereaved the individuals' subjective grief symptoms and associated experience. Patients having "complicated grief" symptoms may have interpersonal psychotherapy and cognitive- behavioral therapy as to reduce the severity of complicated grief symptoms. • Complications related to psychosomatic disorders include: Depression (with or without suicidal rise, anxiety, Panic disorders, Post-traumatic stress disorder, Chronic grief, Delayed or inhibited grief. Preparedness for End-of-Life Care It is important to mentally prepare spouses of terminally ill patients. Preparedness for death and coping with bereavement play a very important role in complicated grief. It is essential to have social support and place where to meet (setting). Provide information at a speed and language that is easily understood. It is important to give some time to patient and family to react emotionally. Encourage questions and monitor what is been understood. It takes time to hear

No. 117

Mental Health Crisis and ACT Teams Serving Culturally Diverse Neighborhoods in Queens, New York: Experience and Recommendations

Poster Presenter: Mark Reed Nathanson, M.D.
Co-Author: Dhruv Gupta, M.D.

SUMMARY:

Background and Issues of Focus The purpose of this paper is to describe the clinical and administrative experiences, lessons learned and recommendations for improvement, of two mental health community based teams in a culturally-diverse segment of the borough of Queens New York: Assertive Community Treatment (ACT) and Mobile Crisis Unit. (MCU) .Elmhurst Hospital Center (EHC), located in Queens,

New York City, serves an area of approximately one million people. The surrounding neighborhoods are considered to be the most ethically, culturally, and linguistically diverse communities in the world, with immigrants hailing from over 112 countries. Mobile Crisis Unit (MCU) is a component of the Comprehensive Psychiatric Emergency Program (CPEP) in New York State, charged with home visits to high risk mentally ill patients and their families. The goals of this Interprofessional team of social workers, psychiatrists, residents and students is to evaluate and assist in referral to community-based care or, in some cases, to facilitate transfer and care in emergency room or inpatient levels of care. ACT is a service delivery model that provides treatment, rehabilitation, case management, and support services delivered by a mobile, multi-disciplinary mental health team to individuals with severe mental illness whose needs have not been well met by more traditional service delivery approaches. ACT supports recipients' recovery through a highly individualized approach toward maintaining housing, employment, building relationships, improving psychiatric symptoms, managing crisis and preventing relapse.

No. 118

Persistent Delusions in Schizophrenia and Caregiver Burnout

Poster Presenter: Carla Paola Avellan Herrera, M.D.
Co-Authors: Raj V. Addepalli, M.D., Mohanika Gowda, M.D.

SUMMARY:

In schizophrenic patients a delusion is a false belief that is held despite information pointing to contrary, which persists despite consistent reorientation given by the caregivers or family. Capgras syndrome is a delusional misidentification syndrome, where a patient consistently believes that a loved one, or close relative has actually been replaced by an imposter . While a patient with paranoid schizophrenia might undergo treatment to treat the positive and negative symptoms, often times the delusion does not disappear. Depending on the type and the severity of the delusion, this may place undue stress on the caregiver. Caregiver burnout is an often overlooked problem in the psychiatric community. The stress placed on caregivers may affect the course of the patient's treatment and in extreme cases, caregiver burnout may cause neglect or impact in continued care of the patient. This is the case of a 63 year old African American woman with a past psychiatric history of schizophrenia, domiciled with her sister and with a history of diabetes mellitus type 2, hypertension and multiple hospitalizations related to medication noncompliance, aggressive behavior directed towards her sister whom she lives with . Patient has a history of multiple emergency room visits to our service, similar to this visit initiated by her caregiver citing medication noncompliance and aggressive behavior. Patient on evaluation was found to be disorganized and delusional that her sister was not who she claimed she was but actually her housekeeper. Patient's sister, her primary caregiver refused to take patient back home citing inability to cope with her aggression and requested help for placement in a supportive housing. Upon admission her home medications Fluphenazine 10 mg orally at bedtime and Benztropine 2 mg daily and fluphenazine decanaote intramuscular 25 mg monthly were resumed. During hospital course patient became more organized and her psychosis remitted to the point she no longer needed further inpatient care. However patient's misidentification delusion with her sister did not remit. In multiple meetings with the psychiatrist, social worker and the Assertive community team who were following the patient , patient's sister expressed her inability to deal with and take care of the patient in the community. The final disposition included referral to supportive housing in the community. In this case report we explore how the effect of persistent delusions which involve family members in spite of improvement of other symptoms of schizophrenia with treatment ,still leads to caregiver burnout. We also highlight in this case prevalence of capgras-like syndrome in schizophrenia, and other organic causes which cause a Capgaras like clinical scenario which lead to verbally or physically aggressive behavior directed towards caregivers.

No. 119

Considering the Therapeutic Alliance in Digital Psychiatry

Poster Presenter: Philip Henson
Co-Author: John Torous, M.D.

SUMMARY:

Background: The rapid global adoption of smartphone applications to increase access to care has generated broad attention from a wide variety of mental health stakeholders. However, technology's impact on therapy, specifically on the therapeutic relationship between patient and provider, is complex and understudied. There does not currently exist a concise way to capture this digital alliance that takes into account how people interact with technology. Methods: A literature search was conducted in PubMed, PsycINFO, Embase, and Web of Science to identify smartphone mental health research studies that investigated the therapeutic alliance. Data was extracted to inform development of a new digital alliance scale. Results: The review yielded five studies that mentioned the therapeutic alliance, but none that attempted to quantify a digital therapeutic alliance. Based on the traditional model for alliance and key qualities of smartphones, a new scale was developed for smartphone research studies called the Digital Working Alliance Inventory (D-WAI). Conclusions: Limited evidence-based research measuring the digital therapeutic alliance has prompted the development of a simple, easy to implement scale to be used in future studies. The more we learn about how people interact with technology, the better we can tailor that technology to improve care delivery.

No. 120

A Community Study: Violence, PTSD, Hopelessness, Substance Use, and Perpetuation of Violence in Newark, NJ

Poster Presenter: Devika Sachdev
Co-Authors: Philip A. Bonanno, M.S., Uma Raman, B.S., Aparna Govindan, B.S., Ashley Leto, Jay Patel, Atharva Dhole, Oluwafeyijimi Temiloluwa Salako, Cheryl Ann Kennedy, M.D.

SUMMARY:

Background: Many urban environments have high violent crime rates, but the City of Newark, NJ, has one of the highest with annual homicide counts as high as 112 victims per 100,000 with gang violence contributing to a third of these murders. It is well understood that violent crime has widespread adverse impacts on health, especially the mental health of local community members. There may be increased rates of PTSD and depression as well as increases in high-risk health behaviors like alcohol or other substance abuse, and aggressive behaviors. Hopelessness in the context of PTSD has been understudied, but recent literature suggests it plays a role in symptom severity. Our team of Rutgers New Jersey Medical Students seek to develop interventions aimed at bolstering resilience in Newark residents. We first investigated the relationships among chronic exposure to violence, PTSD symptomatology, hopelessness, substance use, and the further perpetuation of violence. Methods: Our IRB approved study included a convenience sample of 153 Newark residents recruited from local churches, support groups, and community centers during various events. We collected anonymous, self-report screening measures: PTSD screen (PCL-C), Beck's Hopelessness Scale, the CAGE screen and a CDC Health Behavior Scale that assesses drinking frequency, drug use, and fights. PTSD was evaluated as both a binary (positive vs. negative screen) and continuous (degree of symptomatology) outcome variable. We used descriptive statistics, Pearson's correlations, chi-square analyses, logistic, and linear regressions to evaluate our sample. Results: Analyses showed that 30% (95% CI [22.7, 37.4]) of our sample screened positive for PTSD, a percentage far greater than the 7-8% of people within the United States who develop PTSD at some point in their lifetime. Risk behaviors like bingeing on alcohol, drug use, fighting, carrying weapons, problematic steady drinking (CAGE score), and hopelessness were significantly related to degree of PTSD symptomatology ($p<0.05$). Females had three times greater odds of screening positive for PTSD compared to males ($p<0.05$). Along with female gender, hopelessness and CAGE scores were significant predictors of the degree of PTSD symptomatology ($R2=0.354$, $p<0.05$). Conclusions: While the sample is small and cross-sectional, these data suggest that PTSD rates are extra high in parts of the Newark community. The severity of symptomatology is related to female gender, high risk behaviors, and a sense of hopelessness. Our findings highlight a vicious cycle of perpetuating violence, substance abuse, and poor mental health among Newark community members. We are using what we have been taught by the community and

working with them to develop a resilience building support group for community members to add to treatment modalities to help communities help ameliorate violence-associated trauma.

No. 121

Trends in Racial Differences in Psychiatric Hospitalization in the U.S. (2010–2014)

Poster Presenter: Hema Mekala, M.D.
Lead Author: Rikinkumar S. Patel, M.D., M.P.H.

SUMMARY: Objective: To determine the socio-demographic trend of psychiatric hospitalizations and racial disparities. Methods: We used Nationwide Inpatient Sample (NIS), from 2010 to 2014 and included patients >18years with a primary psychiatric diagnosis of mood disorder, schizophrenia and other psychotic disorder, alcohol use disorder, and substance use disorder. We used the Analysis of variance (ANOVA) to analyze socio-demographic characteristics across racial groups. Multinomial logistic regression model was used to measure the odds ratio (OR) across the races with White as the reference category. Results: We analyzed 8,938,917 psychiatric admissions. Majority were Whites (67.3%) followed by Blacks (18.5%), Hispanics (8.9%) and Native Americans/Asians (5.3%). A higher proportion of Whites (41.3%) had mood disorder while schizophrenia and other psychotic disorders were higher in Blacks (36.3%). Substance use disorder was nearly in equal proportion in all racial groups (10.4%–11.9%). Psychiatric hospitalizations increased in the population aged 18 to 35 and above 50 by 8.2% and 5.1%. Native American/Asian young adults (18-35 years) had 1.6-fold higher likelihood of hospitalization than Whites (95%CI 1.58–1.59 and 1.54–1.56; respectively). Males accounted for more than half of the patients, and a Hispanic males had the highest odds for psychiatric inpatient admission (OR 1.46; 95%CI 1.45–1.47). The rate of hospitalizations increased by 3.1% in Whites, 9.2% in Hispanics, but it decreased by 16.5% in Blacks. About 75% of Blacks were from low-income families and those with income <25th percentile had 2.4-fold higher odds of psychiatric hospitalization (95%CI 2.36–2.39) than Whites. From 2010 to 2014, the uninsured population decreased by 27.6% due to an increase in the Medicaid and private insurance coverage by 13.5% and 8.8% respectively. The uninsured population was higher in Hispanics (22.3%) and lowest in Blacks as they had two times higher likelihood of being covered by Medicaid (95%CI 2.09–2.11). Discussion and Conclusion: Significant disparities were found in 2004-05 and 2011-12 for racial-ethnic minority groups compared to whites in a study using Medical Expenditure Panel Surveys (MEPS). Black-white disparities raised from 8.2% to 10.8% and Hispanic-white disparities increased from 7.9% to 10.2% in mental health care [1]. Another study using MEPS concluded that Blacks had fewer psychotropic drug fills and were more likely to have an acute psychiatric care and Blacks and Latinos had shorter inpatient stays [2]. A population-based household survey reported that African Americans had 2.5-folds higher odds (95%CI 1.91–3.33) of having a psychiatric hospitalization than Whites [3]. However, in our study, there were reductions in racial disparities in inpatient psychiatric care due to the expansion of health insurance over the years and elimination of financial and sociodemographic barriers.

No. 122

Refugee Resettlement Research in Texas: A Unique Collaboration Between Medical Professionals, Trainees, and the Community

Poster Presenter: Sophia Banu, M.D.
Lead Author: Sally Huang
Co-Author: Kaitlyn Marie Carlson

SUMMARY:
Background: From 2015-2018, Harris County resettled over 8,500 refugees from more than twelve different countries, and Houston remains home to one of the largest refugee populations in the United States. Despite the city's long tradition of welcoming refugees, many barriers to health still exist in the resettlement process. Though a wide range of community and governmental organizations have made it their mission to address these issues and facilitate the refugee resettlement process, these barriers are complex and require inter-professional and multidisciplinary solutions. Recognizing the unique mental health needs of refugees, including an increased prevalence of depression and PTSD in refugee communities, and the importance of the social determinants of health

and developing structural competency, our group of mental health trainees and professionals took a broad view in assessing and addressing refugee mental health and wellness. Methods: Since 2015, a group of medical students, residents, and faculty at Baylor College of Medicine (BCM) have partnered with Houston's five local refugee resettlement agencies to conduct extensive needs assessments of the refugee resettlement process and community and carry out interventions that seek to alleviate any identified needs. This collaboration emphasizes using community-based participatory research to improve the resettlement process. In doing so, we give voice to everyone involved in resettlement and utilize the resources and skills of both members of the refugee resettlement community – including case managers, community leaders, and the refugees themselves – and medical trainees and professionals. Results: Our group has conducted one qualitative needs assessment, comprised of 26 semi-structured interviews with case managers and refugee community leaders that addressed barriers and strengths across multiple areas of resettlement, including language learning, employment acquisition, transportation, domestic relations, and other categories. We have also developed a quantitative survey, based on PRAPARE (Protocol for Responding to and Assessment Patients' Assets, Risks, and Experiences) and RHS-15 (Refugee Health Screener-15). Finally, two interventions funded by the American Psychiatric Association Foundation Helping Hands Grant – a mental health course targeting Afghan refugees, and Honoring Stories, a narrative medicine intervention – examine the roles of community, discussion, and storytelling in mental health. These ongoing interventions are in the pilot phase, with the goal of making them sustainable for future collaboration between medical, mental health, and refugee communities. Conclusions: Successfully addressing the complex issues of the refugee resettlement process requires an interdisciplinary and inter-professional approach. Medical students, professionals, and community members and organizations each have important roles to play in facilitating the resettlement process.

No. 123

How Does South Korea Move From a Hospital-Based, Stabilization-Oriented System to a Community-Based, Recovery-Oriented System?

Poster Presenter: Carol S. Lim, M.D., M.P.H.
Co-Author: Jee Hoon Sohn, M.D., Ph.D.

SUMMARY:

There have been rapid growth of community mental health centers in South Korea during the last ten years. Psychiatric rehab services including residential services, supported housing, and day care programs have been gradually increasing in the major metropolitan areas. Despite such growth, there is no progress toward de-institutionalization, which is evidenced by the dramatic increase of the national wide bed numbers of psychiatric hospitals over the past ten years. In this poster, from the literature review and also from the review of governmental reports published by Korean governmental agencies, I would like to investigate factors delaying de-institutionalization in South Korea and ways to move toward recovery based mental health system. I also plan to investigate the feasibility of applying some of the well established evidence based practice models such as IPS (individual placement and support) and IDDT (integrated dual disorder treatment) to Korean mental health system to enhance the quality of psychiatric rehabilitation.

No. 124

Neutraceutical-Induced Psychosis: A Case Report

Poster Presenter: Jaykumar Unni
Co-Author: Dharmendra Kumar

SUMMARY:

Mrs. A, a 38-year-old Caucasian female with no past psychiatric history presented to the emergency room after an intentional fall from a 20-foot tower. Five years prior to presentation, she had become involved in physical yoga, and two years prior, she became more interested in the spiritual aspects of yoga. At the same time, her husband noticed changes in her personality. She became interested in metaphysical "energy", believed she had the power to detect illnesses, and believed she was a "goddess" who was "enlightened". She began to meditate for long periods of time and began going on yoga retreats. One month prior to presentation, she left to a yoga retreat in Italy, however she returned

home early after feeling “off”. After returning home, her husband noted prominent bizarre behaviors, including more irritable outbursts, paranoia regarding her food being poisoned, and an “aversion to electricity”. She eventually developed a Capgras delusion, feeling her husband and daughter had been replaced by imposters. She became frightened of the surroundings at her home, left the house, and was missing for three days. She had poor memory for the events of this period, but recalled feeling confused and like a burden on her family. She eventually scaled a 20-foot tower at a local school, jumped from it, and was found by a school employee. After presenting to the hospital, she was noted to have disorganized thought process, paranoid delusions, and labile affect, alternating from laughing to crying in minutes. She was started on risperidone, titrated to 6 mg/day, and over the course of two weeks of hospitalization, her psychosis dramatically improved. It was revealed she had been taking at least 20 different herbal and vitamin supplements, each of which had numerous ingredients, for the past two years. As her symptoms had improved dramatically, she was presumed to have a substance-induced psychosis. She was asked to stop all supplements, and she gradually weaned off all risperidone over the course of several months, with no recurrence of psychotic or mood symptoms. In this poster, we discuss the dangers of unmonitored neutraceutical use, and discuss the hypothesis that large quantities of ginseng1 and acetyl-L-carnitine2, which have both been associated with precipitation of manic episodes in bipolar disorder, may have contributed to this patient's psychosis.

No. 125

Partnering With People With Lived Experiences of Mental Illness and Their Communities: How the RANZCP Engages With Consumers and Carers

Poster Presenter: John Allan

SUMMARY:

People with experiences of mental illness (also referred to as consumers) and their carers and families have very valuable expertise to help shape mental health policy and practice. Understanding their needs, perspectives, concerns and values can play an important role in the development of policy and improvement of mental health services. Consumer and carer participation is increasingly regarded as a valuable facet in the health care system. The Royal Australian and New Zealand College of Psychiatrists (RANZCP) encourages genuine consumer and carer engagement and draws on these unique expertise across the College. The College believes that consumer and carer participation is essential for continuous quality and improvement. At a College level, we partner with people with lived experience through our Community Collaboration Committee (CCC), which is composed primarily of consumers and carers with a lived experience of mental health. Community representatives are members of a range of other College committees, and also provide advice directly to our Faculties and Sections. As members of College committees, consumers and carers bring new perspectives to College work by helping to develop policy and standards of practice. Input from consumers and carers is recognised and valued, and on committees, community representatives have full and equal voting rights alongside our Fellows and trainees. The RANZCP prioritises the achievement of high quality mental health outcomes for Maori, Aboriginal and Torres Strait Islander mental health through two key constituent committees, Te Kaunihera mo nga kaupapa Hauora Hinengaro Maori (known as Te Kaunihera) and the Aboriginal and Torres Strait Islander Mental Health Committee. In Indigenous health, strong consumer and community partnerships are essential. For many medical professionals, this approach represents a significant paradigm shift. In Australia and New Zealand, the RANZCP is respected by other specialist medical colleges for the importance the psychiatrists place on consumer engagement. Increasingly, Government is seeking out perspectives from consumers and carers to develop policy. Embedding input from consumers is key to ensuring the RANZCP remains a relevant and effective advocate for mental health in Australia and New Zealand. The RANZCP is constantly seeking opportunities to expand consumer and carer engagement, and is currently managing a project around Enabling Supported Decision-Making in the state of Victoria. With goals to promote empowerment, choice and recovery for people living with mental illness, this project is an Australian-first and models a process of co-

production with consumers. With external funding from Government, the project will help to develop principles and ideas that will be useful in other mental health contexts in Australia, New Zealand and around the world.

No. 126

The Business Models of Apps for Anxiety Management: An International Comparison

Poster Presenter: John Torous, M.D.
Co-Authors: Zongyang Yue, Chenglei Shan

SUMMARY:

Background: A wide range of effective mobile applications (apps) are available for anxiety management, but little is known about how their business models influence their success.[1, 2] This study evaluates how business models differ between anxiety apps for the U.S. and China markets, and how business models are associated with commercial success. Methods: Using Google searches during July 2018, the iOS App Store was queried for app description pages mentioning "anxiety", "Health & Fitness", "reviews", and "iOS". The U.S. and China versions of the store were queried separately, with "??" used in the query of the Chinese store instead of "anxiety". Apps were then reviewed to determine whether they cost money to download, offered in-app purchases, or had a subscription fee. The number of reviews and average ratings apps received were recorded as measures of commercial success. Chi-square tests were used to assess the association between nation and business model. Student's t-tests were used for univariate analyses related to success. OLS was used to assess factors associated with the number of downloads. Probit was used to evaluate the association between rating and business model. Results: Of the 619 apps initially identified by the search, 382 had complete data available and were applicable to people with anxiety. Most (346) of the apps included were from the U.S. store. Apps from the U.S. store were significantly more likely to have a download fee (P<.01) and to have a subscription model (P<.001). No significant difference was found in the number of ratings or average rating between apps on the two stores. There was a significant association between the number of ratings and the presence of a subscription model (P<.001) and in-app purchases (P<.03). The OLS regression assessing the association between business model and number of ratings found that subscription models were significantly (P<.01) associated with more ratings, after adjusting for presence of the other monetization strategies. The probit model found that subscription models were significantly (P<.01) associated with apps being more likely to be rated 4+ on a 5-point scale. Inclusion of country in the regression models did not change the significance of the findings. Conclusions: There are national differences in the business models of apps for anxiety. Business model characteristics are significantly associated with the number of ratings apps receive, as well as the ratings given. This suggests that clinicians and patients should consider the business model of an app for anxiety when considering whether to use it. Furthermore, anxiety app developers may wish to consider monetizing their apps through subscription models.

No. 127

Patient Interpersonal Style as an Important Determinant in Therapeutic Alliance

Poster Presenter: Vishnupriya Samarendra, M.D.
Co-Author: Alexander C. L. Lerman, M.D.

SUMMARY:

Introduction: Patients with a combination of a personality disorder, substance use, and severe mental illness like schizophrenia or schizoaffective disorder present as unique treatment challenges. Hostile and dominant interpersonal style is a major source of morbidity and mortality as it can interfere with treatment alliance. Mr. CA was a 37 year old undomiciled man diagnosed with schizoaffective disorder, polysubstance use disorder, and antisocial personality disorder (ASPD) that presented to BHC ED after calling his Crisis team with threats to shoot himself. He was brought to the ED for evaluation of suicidality. On evaluation, he did not appear manic, psychotic, or depressed, and denied any suicidal ideation. He was aggressive, and required behavioral codes with IM medication, but this was his behavioral baseline. He was deemed not for admission. A few hours later, he presented to a separate crisis center in the midst of an overdose. He did not survive. CA had presented to our psychiatric hospital over 25 times over 10 years and received

outpatient treatment for a few months in our clinic. A review of his presentations and outpatient treatment demonstrated that his ASPD, psychopathic traits, and resulting interpersonal style contributed to poor treatment alliance. He was generally hostile and dominant. CA's aggression was impulsive towards the beginning of his stay when he was intoxicated or actively withdrawing. Subsequently it was more instrumental and targeted towards staff and patients he judged as vulnerable. Staff generally had a dominant style, and occasionally responded with hostility, ultimately leading to aggression by this patient. CA frequently sexually harassed female staff and patients. Sexual harassment is a form of aggression that occurs in setting of person and situational characteristics. For CA, this was a way to reassert dominance, with the ultimate goal of reassuring himself of his self-worth. In this patient, interpersonal style contributed to morbidity and ultimately mortality. We examine how interpersonal style has a major impact on therapeutic alliance and specific challenges staff on an inpatient unit may face in managing patients labeled as difficult. We also suggest management strategies as a starting point. Conclusion: Awareness and strategies to cope with hostile and dominant interpersonal style of patients may be an important part of their treatment.

No. 128

Racial-Ethnic Disparities in Baseline Characteristics of Patients Admitted to a Coordinated Specialty Care Program for First-Episode Psychosis

Poster Presenter: Yasmin A. Rawlins, B.A.
Co-Authors: Ilana R. Nossel, M.D., Cale Basaraba, M.P.H., Els van der Ven, Ph.D., Leslie Marino, M.D., M.P.H., Lisa Dixon, M.D.

SUMMARY:
Background: Coordinated specialty care (CSC) programs for first episode psychosis (FEP) significantly improve outcomes for participants worldwide. However, several studies have suggested outcomes may vary by racial-ethnic groups. These disparities may be a consequence of differences in pathways to care, characteristics at enrollment, baseline psychopathology, and/or mental health service needs for individuals from various racial-ethnic groups. This study assesses differences in baseline demographic and clinical characteristics of 779 individuals enrolled in OnTrackNY (OTNY), New York State's community-based CSC program, from 2013-2017. Methods: Eligiblity criteria included individuals between the ages of 16 to 30 with a primary diagnosis of non-affective psychosis for less than two years. Data collected for purposes of quality improvement were de-identified. Differences among groups were analyzed using t-tests for continuous measures and chi-squared tests for categorical measures. The sample included 209 (26.8%) non-Hispanic white patients, 277 (25.5%) non-Hispanic black, 218 Hispanic (27.9%), and 63 (8.1%) Asian. Twelve (1.5%) identified as "other" were excluded. Results: Black and Hispanic participants were significantly (both $p<0.001$) younger than white participants (20.6 and 20.8 , versus 21.8 years, respectively). Asian and Hispanic participants were significantly ($p<0.001$) less likely than white participants to report their primary language as English (73.0% and 83.5%, versus 96.6%, respectively). Gender did not differ across groups. At admission, white participants (25.8%) were less likely to be in school than black (34.7%, $p=0.037$) or Asian (44.4%, $p=0.005$) participants. Black and Hispanic participants did not differ in higest grade completed, but were more likely to have less than a high school education and less likely to have a college or post-graduate degree compared to white (both $p<.001$) and Asian (both $p<.001$) participants. Baseline employment status did not differ across groups. On MIRECC Global Assessment of Functioning (GAF) evaluations at admission, Hispanic participants had significantly lower scores on the occupational functioning subscale than white participants (34.1 versus 38.3, $p=0.024$). However, there were no significant differences by race or ethnicity on the MIRECC GAF symptom or social functioning subscales. Measures of clinical variables, including violent or aggressive ideation, suicidal ideation or attempts, or self-injurious behavior, were similar across groups. Conclusion: These results suggest there are some baseline differences between racial-ethnic groups enrolled in OnTrackNY with regard to education and occupational functioning with few differences in clinical features. Future research should expand our understanding of how these factors interact. However, the data largely suggest that non-white groups may face disadvantages prior

to admission at CSC programs which may be areas of opportunity for treatment.

No. 129
WITHDRAWN

No. 130
Establishing Relevance of Patient Safety and Quality Improvement in Outpatient Psychiatry Practice
Poster Presenter: Amanda Mihalik-Wenger, M.D.
Co-Authors: Britany Griffin, Jacqueline A. Hobbs, M.D.

SUMMARY:
The topic of patient safety and quality improvement has exploded since the landmark document in 2000, To Err is Human. The subsequent document, Crossing the Quality Chasm, identified six domains of ideal care: safety, effectiveness, patient-centeredness, timeliness, efficiency, and equity. While large hospital systems and population-based care networks such as the Veterans Administration have embraced the field and devoted resources to develop and apply improvement strategies, smaller operations and other outpatient practitioners have been largely left out of the conversation. A fraction of the research on healthcare quality and safety has occurred in ambulatory care, yet a majority of physicians work in this setting. Data from the American Medical Association reported that 32% of practicing psychiatrists in the US are solo practitioners, the largest percentage of any specialty. Ambulatory care is also where the majority of psychiatric treatment is provided. In 2009, 93% of adults receiving psychiatric care in the US received outpatient treatment, with just 7% requiring inpatient treatment. More research is needed to determine how the field of quality and safety can translate to and benefit outpatient psychiatrists and their patients. Given competing demands for continuing education, creating a strategy to interest and incentivize outpatient psychiatrists to learn and apply quality improvement is necessary. A standardized interview of several outpatient psychiatrists in different practice settings was conducted to determine their understanding of the topic of patient safety and quality improvement, perspectives on how to engage outpatient psychiatrists on this topic, and how the topic can be made relevant by direct application to their daily practice. Analysis of the interviews demonstrated that outpatient psychiatrists framed patient safety and quality improvement as a way to avoid malpractice, and interviewees expressed interest in having targeted education with that aim in mind. It was initially challenging to find examples of how each psychiatrist had applied the topic in their daily clinical practice. However, with more conversation and introspection, the interviewer and interviewee identified past examples where the psychiatrist had made calculated interventions for improvement. Conversations like this improve engagement of the outpatient psychiatry community and encourage future applications of patient safety and quality improvement in the outpatient setting.

No. 131
Ethical Dilemmas and Correctional Facilities: A Case Report on NMS and Deviation From Standard of Care
Poster Presenter: Arushi Kapoor, M.D., M.Sc.

SUMMARY:
Background: Neuroleptic Malignant Syndrome (NMS) is a life-threatening condition associated with the use of neuroleptic medications. Distinctive clinical signs include altered mental status, fever, muscle rigidity, and exaggerated autonomic symptoms. Incidence rates range from 0.02 - 3 % among patients prescribed psychotropic medications. Even though mortality rate has declined, NMS continues to propose a great risk. Shortly after the introduction of antipsychotic medications, its diagnosis represents a significant challenge for clinicians (Delay, 1960). Methods: We present a case of a young adult male with no past psychiatric history who presented to the Howard University Hospital ER with generalized stiffness and hypoglycemia within 24 hours of being administered Haldol Decanoate 100 mg IM, Benadryl 50 mg IM in a correctional facility, without any prior oral trials or exposure to psychotropic medication. Consult-Liaison psychiatry consulted and diagnosed patient with NMS. He denied history and current hallucinations, delusions, or paranoia. No medical records were released, despite multiple attempts to contact the correctional facility Results: As with

several cases of NMS, he was admitted to the ICU. His admission vitals included a temperature of 100.3, pulse 106, BP 151/78, RR 23, and oxygen saturation 99% on room air. He had diaphoresis and muscle rigidity in upper and lower extremities. Despite aggressive management, multiple complications, including Rhabdomyolysis (CPK-124585), electrolyte disturbances, anion gap metabolic acidosis, AKI (Creatinine-13), and leukocytosis, loss of vision and status epilepticus occurred. Discussion: Standard of care requires a trial of oral medications prior to IM/IV administration. Also, Haloperidol IM depot is approved only for maintenance of previously diagnosed psychiatric condition. Since there was no indication of IM administration in the mentioned case, the standard of care was deviated from. Such practices raise concerns towards the integrity of correctional facilities and institutional biases (Each 2014). The discussion will also focus on what role do racial determinants play in the interface of psychiatric treatment obtained in a correctional facility. In addition to ethical standards and principles of Nonmaleficence and Beneficence, how often in literature are these overlooked in correctional facilities? Conclusion: It is important to consider racial determinants and systemic biases that may inhibit the delivery of culturally competent mental health care in correctional psychiatry. Comprehensive care at various levels within a patient's interaction with the criminal justice system can lead to better outcomes.

No. 132
WITHDRAWN

No. 133
Psychosis Associated With Alprazolam Withdrawal: A Case Report
Poster Presenter: Bruno Fernando Borges da Costa e Silva, M.D.
Co-Authors: Kirija Kokulanathan, M.D., Ljiljana Markovic, M.D.

SUMMARY:
Alprazolam, a short-acting benzodiazepine, is one of the most commonly prescribed anxiolytics for the treatment of generalized anxiety disorder and panic disorders. In spite of being able to provide quick relief to acute anxiety, this medication has a considerable addictive potential and has become, in the past few years, a popular recreational drug among teenagers and young adults. In the medical literature, alprazolam withdrawal syndrome has been described as much more complicated than other benzodiazepine withdrawal syndromes. Given that, it is important to include alprazolam withdrawal in the differential diagnosis of exacerbated anxiety, brief psychotic episodes and acute mental status changes in young individuals. Failure to do this can lead to unnecessary delay in symptom recovery and, in some cases, inappropriate treatment. We are presenting a case of a 19-year-old male, without documented psychiatric history, who was brought to our emergency department with confusion, bizarre behavior, disorganized thought process, delusional thinking, auditory and visual hallucinations. Neuroimaging was negative for intracranial processes and urine toxicology was positive for cannabinoids. He was medically cleared and was admitted to the intensive psychiatric unit for treatment of a suspected substance induced psychosis versus benzodiazepine withdrawal. While on the unit, the patient got increasingly agitated, requiring sedative medications and, eventually, endotracheal intubation. He was then transferred to ICU for further safe sedative management. With treatment with a diazepam taper, the patient eventually recovered with an almost complete resolution of his psychotic symptoms. This individual presented a year later with similar symptoms, and was, again, transferred to ICU with severe agitation, this time, directly from the emergency department. Just like in the initial episode, his psychosis cleared almost completely after he was treated for benzodiazepine withdrawal. Interestingly, the patient did not exhibit remarkable autonomic instability, such as blood pressure or heart rate changes, in none of the two aforementioned situations. Our overall impression is that the presentation of alprazolam withdrawal can be quite different from other benzodiazepine withdrawal syndromes. As a matter of fact, there is increasing clinical evidence suggesting that psychosis and delirium can be relatively common in these settings, even in the absence of remarkable autonomic changes. It is easy to divert psychosis due to alprazolam withdrawal as a primarily psychotic presentation, especially among young patients,

because they are at the typical age of onset of most primary psychotic conditions. The purpose of reporting this case is to increase general awareness of alprazolam induced psychosis, since identifying and treating these cases accordingly is an important, and potentially like saving skill, in the general psychiatric practice.

No. 134

Leadership Roles of Advocacy for Victims of Human Trafficking Is Crucial for Mental Health Providers

Poster Presenter: Nida Khawaja
Co-Author: Afifa Adiba, M.D.

SUMMARY:

Human trafficking is a form of criminal activity that involves the transportation of persons across national and international borders, using methods of violence, coercion and threats to engage victims in sexual exploitation or domestic and labor bondage which does not involve the consent of persons being trafficked.??Human trafficking affects approximately 40.3 million people world-wide as reported by The International Labor Organization, grossing an estimated amount of $150 billion dollars across the globe. Sex trafficking constitutes greater than fifty percent of victims, with the majority being women and children. In the past decade, more than 22,000 cases of sex trafficking victims have been reported in the United States. California, Texas and Florida have become prominent grounds for exploitation, carrying the most reported victim count, as conveyed through the National Human Trafficking Hotline. A 28-year old female presented to the emergency department in Mississippi after being struck in the head with a baseball bat and was agitated upon arrival. She was retrieved from a local motel. A history of psychosis and substance abuse disorders warranted a psychiatric evaluation, which under further investigation, created a high suspicion for this female to be a victim of human trafficking. It is not uncommon to have victims of trafficking present within the medical care system for evaluation and treatment, as a recent survey taken by one hundred trafficked survivors indicated that 88% of victims were in contact with a medical professional in the emergency department. This article highlights the screening methods for identifying trafficked victims, understanding the nature of trauma, associated symptoms and the provision of appropriate health care. The leadership role for advocacy for the mental health professional is pivotal, as recognizing the needs for rehabilitation for these victims may require intensive mental health treatment.

No. 135

On a Scale of Zero to Seven: Limitations of a CIWA Protocol for Managing Benzodiazepine Withdrawal Syndrome on an Acute Inpatient Psychiatric Unit

Poster Presenter: Andrew D. Mumma, M.D.

SUMMARY:

A 35-year-old male with a history of depression, anxiety, opiate use disorder on methadone, benzodiazepine use disorder and HIV, presented voluntarily to a crisis center after a suicide attempt via overdose on street alprazolam. He reported attending detox and starting methadone a few months prior to presentation. He recently relapsed on alprazolam, taking anywhere from nothing up to 8 mg a day when he could obtain it. He denied any history of severe withdrawal or seizures from stopping alprazolam in the past, and he was not showing any active symptoms after a day of non-use. Due to unavailability of dual-diagnosis units, he was admitted to an acute inpatient psychiatric unit with a CIWA protocol in place for withdrawal symptoms. He was restarted on his antidepressant and continued on methadone without issue for the first three days. Four days into his treatment he began showing anxiety and tachycardia but no other symptoms; staff gave hydroxyzine, which was one of his home medications. On day five he acutely worsened and exhibited delirium: disorientation, tachycardia, diaphoresis, tremulousness, nausea and vomiting, and he required immediate intervention with large doses of benzodiazepines for stabilization. Multiple factors played into his progression to delirium, including unusually delayed emergence of withdrawal symptoms for “alprazolam dependence” (likely due to unreliable composition of street drugs), staff unfamiliarity with the CIWA, attribution of his symptoms to an underlying anxiety and opiate use disorder, and his lack of engagement with staff despite being informed to seek help for withdrawal. The general notion of treating withdrawal with benzodiazepines is well established, but the

approach to monitoring symptoms and dosing appropriately can be complicated by the substance use history, character of the withdrawal, medical complexity and psychiatric co-morbidities. Studies have identified flaws with the established CIWA-Ar "symptom-triggered" approach when used outside of the detox center setting where it was validated, and some have proposed alternative measurement scales which take into account the need for a more efficient and objective measurement tool. This poster discusses some of the limitations of the CIWA-Ar and possible alternative withdrawal scales that are more applicable and effective across multiple treatment settings, including an acute inpatient psychiatric unit.

No. 136
Shall I Feed Him or Not? The Curious Case of the Stiff-Person Syndrome
Poster Presenter: Sherry S. Chandy, M.B.B.S.

SUMMARY:
A patient who does not take a prescribed medication or follow a prescribed course of treatment is called non compliant. The single best study of why individuals with severe psychiatric disorders do not take medication was done by Kessler et al. (The prevalence and correlates of untreated serious mental illness, Health Services Research 36:987–1007, 2001). In interviews with those not taking medication, the single most common reason, cited by 55 percent of the individuals, was that they did not believe they were sick. They had anosognosia. This particular case scenario occurs at the intersection of systems based practice and patient safety. The most common cause of treatment failure - medication non compliance and it consequence - Treatment failure is associated with high morbidity and mortality rates. The patient had a condition named Stiff-person syndrome and was unable to 'comply' due to a medical condition. The medicine primary team believed he was being non compliant secondary to paranoia from his mental health. The intervention was to establish rapport, identify and correct a systems based error by providing an alternate route of administration for the drug to enter his system. This lead to resolution of the medical symptom and improvement in clinical outcome.

No. 137
A Passive Suicide Attempt by Hyperkalemia? Medicolegal Questions Raised in Management of Mentally Ill Patients With Medical Comorbidities
Poster Presenter: Zev J. Zingher, M.D.

SUMMARY:
The patient is a 56-year-old African-American male with a history of type 2 diabetes, hyperlipidemia, hypertension, and bilateral above the knee amputation who presented to the hospital after he stopped his medications secondary to suicidal ideation and was found to be in DKA. He was brought to the general medical floor for DKA (Blood Glucose in 700's on admission). Per the medical admission, the patient wanted to snort as much cocaine as he could in order to die, as well as stop all of his medications including his insulin. A 302 was petitioned by the overnight resident. Additionally, the patient endorsed he "wants to go home, die, and get buried in the grave." Of psychiatric interest, the patient's had end-stage renal disease on hemodialysis three days a week. Given his psychosis and expressed wish to die, he repeatedly refused to go for hemodialysis despite being told his Potassium was dangerously elevated (K= 7.7) and he was at risk for a potentially fatal heart arrhythmia. Ultimately, the patient required repeated attempts by the resident to go to dialysis to reduce his potassium levels and was transferred from psychiatry to medicine. Question regarding the status of involuntatry psychiatric care versus involuntary medical care in mentally-ill patient was raised with this patient. Ideally, this case demonstrates differences between involuntary psychiatric care versus medical care.

No. 138
We for Wellness
Poster Presenter: Christine Lee Hopp, D.O.
Co-Author: Elizabeth Cunningham

SUMMARY:
Background: It is no secret while physicians are dedicated to help others lead healthy lives, their own wellness is often neglected. Looking at a career which has the highest rates of job fatigue, how do we prepare our providers to have longevity and

satisfaction in their career? Purpose: Community Health Network has recently started a medical group center for physician well-being and joined the AIAMC National Wellness Initiative. Interventions to target wellness are being employed, and metrics are being utilized to determine efficacy. Methods: Our program is harnessing collaborative relationships with key stakeholders to implement initiatives for wellness on an institutional level. Using principles from Shanafelt and Noseworthy's research published in the 2017 Mayo Clinic Proceedings, we are adopting systemic strategies to combat key drivers of physician burnout. Evidence based tools on burnout as well as the ACGME and physician engagement surveys will provide measures on the effects on resident well-being and culture. Results: While still in the implementation phase of improvements, data about the effectiveness of the interventions is pending. It is anticipated that the interventions will enhance resident and faculty well-being, engagement, and resilience. Conclusion: In a culture where the historic norm has been to brush off wellness, systemic initiatives about wellness are paramount in promoting and teaching resilience. Key stakeholders must be involved in the process, and metrics must be employed to track the effectiveness of interventions. It is essential to share these results and experiences with others to promote a much broader change in physician culture.

No. 139

Pager Fatigue: A Review of On-Call Psychiatry Resident Page Frequency by Symptom Type on a Veterans Affairs Inpatient Psychiatric Unit

Poster Presenter: Joseph Mansfield, D.O.
Co-Authors: Royce Molick, D.O., Kyle Evan Brown, D.O., Nicole Cupples, Pharm.D.

SUMMARY:
Background: Residency burnout is characterized as a "state of mental and physical exhaustion related to work or caregiving activities." This concept has recently gained significant attention due to multiple concerns including patient safety and overall clinician well-being. The prevalence rate of burnout for residents ranges between 27%-75% in recent studies and has been estimated to even be higher than reported. One of the factors that has been suggested to contribute to this has been the number of pages received by on-call residents. This project was designed to evaluate the alerts on a Veteran's Affairs inpatient psychiatric unit that led to the largest frequency of pages to the on-call residents. Objective: To compare and contrast the number of pages, by concern, received by on-call psychiatric residents on an inpatient Veteran Affairs Psychiatric Unit. Methods: A de-identified database of psychiatric inpatients was reviewed for a five month period to investigate the number of post-admission medications that were administered during off-service hours, Monday thru Friday 1730 to 0730 (non-holidays) and all weekends and holidays (24 hours). The list of medications prescribed was then reviewed and sorted by type. Inclusion criteria included male and non-pregnant females over 18 years old admitted to the Audie L. Murphy inpatient psychiatric unit and requiring the administration of at least one after-hours medication. Results: Of the 344 total patients for the 5 month period evaluated, a total of 120 patients required medications, totaling 164 pages during the on-call resident shifts. In descending order by type; Pain (42%), Anxiety (23%), GI complaints (12%), Sleep (7%), Miscellaneous (7%), Upper Respiratory concerns (4%), Nicotine replacement (3%), and Seasonal Allergies (2%). Conclusion: The most common pages to the on-call residents for additional medication needs were shown to be for pain (42%) and anxiety (23%). Proper evaluation of patients during the admission process with the use of prophylactic as-needed medication targeting these concerns could both assist the patient by increasing timeliness of care as well as have a positive impact regarding resident wellness.

No. 140

Pain Management Medication Standardization Effects on Psychiatry Resident Call Burden on a Veterans Affairs Inpatient Psychiatric Unit

Poster Presenter: Royce Molick, D.O.
Co-Authors: Joseph Mansfield, D.O., Kyle Evan Brown, D.O., Nicole Cupples, Pharm.D.

SUMMARY:
Background: Residency burnout, defined by psychologist Herbert Freudenberger, is characterized as a "state of mental and physical exhaustion related to work or caregiving activities." This concept has

recently gained significant attention due to multiple concerns including patient safety and overall clinician wellbeing. This study was designed to investigate this topic through utilization of a pre-ordered on admission standardized pain management medication regimen. Objective: To compare the number of pages received by on-call psychiatric residents for pain concerns in patients with a standardized pain management medication order and those without. Methods: The pharmacy drug catalog was reviewed for non-opioid acute pain medication options in conjunction with clinical pharmacy specialists. The chosen medications were then proposed to the three inpatient psychiatric staff providers who made further suggestions, eventually culminating in a review by an SICU/internal medicine and clinical pharmacist. Coordination with the local electronic medical record developer allowed for the inclusion of a pain order set on the psychiatry orders homepage. This order set was then made available to the experimental inpatient team for a period of three months in which the provider could simply scroll to the bottom of the screen to access the command. Medications were then distributed in accordance with subjective patient complaints and administered by nursing staff per order set instructions. Patients assigned to the two other staff provider's respective teams were handled on an as needed basis. During this time period the number of pages to on-call residents for pain specific management was recorded. Results: Of the 299 total patients for the three month period evaluated, a total of 35 pages for pain were made during the on-call resident shifts. Of those pages, only 1 was from the standardized pain management medication group and the remaining 34 calls occurred from the control groups. When compared to the relative patient pool for the standardized pain management medication and control groups, 206 and 93, respectfully, the difference in pages for pain was statistically significant (P=0.0001). Conclusion: Implementation of a standardized pain management medication order set for initial admission showed a significant decrease in overall pages for pain for on-call residents. It is unclear if this was due to program efficacy or lack of blinding or other unidentified variables. A need for better understanding of the risks and benefits, for both patients and on-call residents would be needed prior to formulating recommendations regarding this process.

No. 141

Use of Lightbox 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 implemented a quality improvement pilot study within the University of Wisconsin Psychiatry Residency during the first year resident nightfloat rotations of the 2017-2018 academic year. Their schedule consists of two 2 week and one 1 week nightfloat blocks (5pm to 5am). 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 blocks and continuing until the Wednesday of the second week. During their shifts over the treatment course, they were also instructed to use the lightbox when sitting at their workstations. We collected data using the Brief Resident Wellness Profile, Insomnia Severity Index, and Epworth Sleepiness Scale to evaluate resident wellness, sleepiness, and difficulty sleeping. Surveys were admininstered prior to starting nightfloat, in the middle of nightfloat, and at the end of nightfloat. We also gathered self-reports on frequency. Results: Sets of pre, mid, and post surveys was collected on 5 nightfloat rotations with 2 additional pre-rotation surveys. There was a mild reduction in resident wellness over the course of the

rotation as well as mild increases in sleepiness and drowsiness. Residents subjectively reported increased energy when using the lightbox throughout the night. There were no reported side effects with the lightbox. Conclusion: Due to the extreme shift in the sleep cycle caused from a nightfloat schedule, it is understandable for sleep quality and resident wellness to worsen over the course of the rotation. We hypothesize that the lightbox use diminished this decline.

No. 142

The Effect of a Mental Health-Promotion Program on Korean Firefighters

Poster Presenter: Jonghun Lee
Co-Authors: Tae Young Choi, M.D., Jin Hyeok Lee

SUMMARY:
Background: There has been worldwide interest in the mental health of firefighters, since they are more prone to traumatic stress and psychiatric disorders. This study aimed to assess the mental health and provide individualized support to local firefighters through a mental health promotion program. Method: Eighteen hundred and fifty-nine active firefighters in the Gyeongsang province in 2015 and 2017 (502 and 1357, respectively) participated in 'The Visiting Counseling Center for Firefighters' program commissioned by the National Fire Agency. The program consisted of an education session, counseling (additional brief intensive counseling (BIC) was provided to certain participants), and self-administered questionnaires, i.e., the Post-traumatic stress disorder Checklist (PCL), Beck's Depression Index (BDI), Beck's Anxiety Index (BAI), Beck Scale for Suicidal ideation (BSS), Insomnia Severity Index (ISI), Korean version of the Alcohol Use Disorders Identification Test (AUDIT-K), and the abbreviated World Health Organization Quality of Life, before and after the program. Additional analysis was performed to determine whether BIC participation further improved the psychopathological outcome. Results: The mean age was 40.11 ± 8.01 years in 2015 and 40.99 ± 9.08 years in 2017. Most participants were male (94.5%). Participants showed statistically significant improvement in BDI, ISI and AUDIT-K at 2015, while significant change was found in all psychopathological scales at 2017. Those who participated BIC at 2015 showed statistically significant improvement in BDI, AUDIT-K. Meanwhile, BIC participants at 2017 experienced significant change in BDI, BAI, BSS, ISI, and AUDIT-K. Conclusion: The mental health promotion program significantly improved the mental health of the participating firefighters. Systematic and long-term strategies to establish infrastructure and continuity for firefighter support should be considered. Future studies on intervention programs for firefighters may benefit those at high-risk.

No. 143

Effectiveness of Infant Mental Health Training on Health Workers in Developing Countries

Poster Presenter: Abishek Bala, M.D.
Lead Author: Alexandra M. Harrison, M.D.
Co-Author: Alayne Stieglitz, M.Ed.

SUMMARY:
Despite being a critical factor in positive health outcomes, infant mental health is frequently either absent from the training of frontline health workers or relegated to a low priority. The Infant Mental Health Mini Course, "Protect, Nurture and Enjoy" (PNE) was designed to equip health workers – both professional and paraprofessional - with the knowledge and motivation needed to facilitate positive caregiver-infant interactions in the community. This project focuses on increasing services and attention provided to the infant-caregiver relationship by assessing the effectiveness of the intervention on the capacity of nurses to support the infant-parent relationship in Kasganj, India. This course was administered in Christian Hospital Kasganj in Uttar Pradesh, India. 45 nursing students and their interactions with post-partum mothers in the maternity ward was compared to a control group of 45 students. Data was collected from the administration of 5 questionnaires. Two questionnaires were provided to the students to evaluate their knowledge in infant development and the degree to which their behavior towards infants and parent was changed by the intervention. Three brief questionnaires were given to the mothers to assess the effectiveness of both I-students' and C-students' training in terms of their capacity to support the caregiving relationship. The scores attained from the questionnaires will be compared to identify any statistically different behavioral traits

between the groups. In comparing the behaviors supporting the parent-infant relationship demonstrated by the nursing students, the students who completed the PNE training are expected to demonstrate greater knowledge of infant development, ways to support the parent-infant relationship, and greater confidence in caring for infants and their families. This training is expected to reinforce positive, mindful interactions between the mother and the infant thereby providing infants in adverse circumstances with buffering that a good infant-caregiver relationship can offer them. Moreover, it will likely contribute towards the improvement of peripartum care in a developing setting through the lens of community based, infant mental health.

No. 144

Breaking the Cycle: Using Burnout Markers to Launch a Resident Wellness Program

Poster Presenter: Alaa Elnajjar, M.D.
Co-Authors: Alexander C. L. Lerman, M.D., Ori-Michael J. Benhamou, M.D., Matthew Francis Garofalo, M.D.

SUMMARY:
Burnout and depression among physician has been a well known problem for the last 10 years among the US medical graduates, with more prominent rate during the early training period. Yet the current statistics shows that our efforts to solve that issue still lag behind in many practical aspects. This poster presents preliminary screening data to be used as basic benchmarks for psychiatry resident wellness. 33 residents at Westchester Medical Center (WMC) from all four classes were surveyed in a questionnaire measuring burnout, workplace stress, and workplace achievement and satisfaction. We will further quantify baseline wellness metrics using the Maslach Burnout Inventory - Human Service Survey for Medical Personnel (MBI-HSS (MP)), which is a validated, reliable questionnaire. The data obtained, along with subjective feedback, will guide a program of resident wellness. Twelve months after the initial data collection, the inventory will be repeated to assess improvement in resident wellness. The objective of the project is to pilot a program to improve resident quality of life, workplace satisfaction, and burnout using standardized, objective metrics.

No. 145

Trait Forgiveness, an Antidote to the Cardiotoxic Influence of Physician Burnout

Poster Presenter: Emelina A. Arocha, M.D.
Co-Authors: Lidia Firulescu, M.D., Ross May, Frank Fincham, Marcos Sanchez-Gonzalez

SUMMARY:
Study Objective: Recently, physicians' burnout has gained public health relevance as a growing mental health concern. Often, work burnout (WB) has been associated with poor sleep quality, long working hours, and negative affectivity (e.g. anxiety, depression, suicidal thoughts). Although the relationship between WB and negative affectivity has been well documented, the association with positive affect, such as trait forgiveness (TF) has been overlooked. Research has shown that lifetime stress severity as well as lower levels of forgiveness predicts worse mental and physical health. On that note, WB has been typically associated with increased sympathetic tone to the heart and blood vessels after mental stress, as well as lowered physiological post-stress cardiovagal rebound, which may eventually lead to increased cardiovascular risk. Since TF has been linked strongly with healthy workplace relationships, positive occupational outcome and general well-being, its correlation with WB remains to be investigated. A potential antidote to the cardiotoxic influence of burnout is trait forgiveness (TF), as it has shown associations with heart rate variability (HRV) and cardiovagal tone. Therefore, the aim of the present study was to explore the connection between TF and WB, and cardiovagal tone. Method: Study subjects were 62 medical residents at a Teaching Hospital. Residents were administered surveys on work burnout (Maslach Burnout Inventory), workplace bullying, personal bullying (PB), interpersonal rejection sensitivity (IRS), TF, anxiety, depression and perceived stress scale (PSS), all of which were anonymously submitted via electronically. Heart rate was measured with a monitor (Polar 800CXS; Kempele Finland) placed below the sternum. Physiological parameters gathered and derived from HR monitor were HRV and root mean square of

successive R-R intervals (RMSSD; surrogate of vagal tone). Results: The mean age 33.1 ± SD 4.2 years. HMR analysis using WB as main outcome contained 6 predictors: Model 1 contained depression and anxiety, Model 2 added PB, Model 3 added IRS and PSS, Model 4 added TF. Anxiety and TF were the only significant predictors ($p < 0.05$) accounting for 10.4% and 17.5% of the variance in WB scores, respectively. TF was also the only significant predictor of ($p = 0.028$) of cardiovagal tone accounting for 8.8% in RMSSD variance. Conclusions: The novel finding of the present study is that TF is associated with lower burnout scores and negative affectivity in addition to higher cardiovagal tone. These data suggest that TF may play a role as a protective factor against the development of burnout and impaired cardiovascular functioning. Prospective studies aimed at examining interventions based on forgiveness training in order to improve mental and physical health in physicians are warranted.

No. 146

Cultivating Wellness in Physician Trainees: The Intern Proskills Project

Poster Presenter: Sarah Bommarito, M.D.
Co-Authors: Matthew Jared Hughes, Heather E. Schultz, M.D., Kathryn Baker, M.D.

SUMMARY:

Background: Resident physicians are particularly vulnerable to burnout, with alarming depression rates (28.8%) that are higher than age-matched controls, though rates of treatment seeking are lower. Purpose: To develop a preventative model to teach residents coping skills and build resilience to burnout and depression. Methods: The design of ProSkills is a combination of process group ("Pro") and cognitive skills training ("Skills"). During their months on psychiatry rotations (50% of the year), interns met twice monthly with a consistent faculty psychiatrist and chief resident for a 60-minute process group. Emphasis was placed on creating a "safe" space in which interns could express emotions and concerns without repercussion. The last 30 minutes were used to teach mindfulness and cognitive skills. To track effectiveness, a Qualtrics survey was created consisting of numerous mental health scales including PHQ9, GAD7, MBI, SF self-compassion scale, MAAS, and brief resiliency scale. This survey was sent to all psychiatry residency classes before ProSkills began and then quarterly for the academic year. Results: In the intern class, mean PHQ-9 scores increased after the beginning of intern year. Mean burnout level tested by MBI was in the low to moderate range and did not vary significantly over the course of intern year. Self-compassion scores, mindfulness, and resilience remained stable. Discussion: Further data is yet to be collected given that this is a pilot study with a small initial sample size. Conclusions: While interns did not report a significant increase in resilience, mindfulness, or self-compassion scores, levels of burnout remained stable, which may reflect a benefit of the program.

No. 147

Psychological Underpinnings in the Care of a Bipolar Attending Physician by a Trainee

Poster Presenter: Michael Esang, MB.Ch.B., M.P.H.
Co-Author: Hasnain Afzal, M.D.

SUMMARY:

Early identification and treatment of physicians with psychiatric illness is challenging for a variety of reasons. A significant barrier is stigma and the fear that others will doubt their competence as physicians even after they recover. Literature review yields a paucity of data on intervention systems designed to encourage early disclosure and treatment-seeking behavior among physicians. We present the case of a 36-year-old male internist, who was admitted to inpatient Psychiatry with a diagnosis of bipolar disorder, manic, severe, with psychotic features. Mr. P had walked out of his private outpatient practice where he had several patients waiting to be seen and had subsequently been picked up by EMT after going missing for several hours. He presented with pressured speech, grandiose delusions, expansive affect, and aggressive behavior, and with no insight into his illness. On inpatient Psychiatry, he subsequently became catatonic, necessitating management with a high-dose lorazepam regimen. Throughout his hospitalization, he dictated his own treatment and would frequently debate with his treatment team on the pharmacological basis for treatment decisions, asserting his expertise as an internist with a general knowledge of the acute management of patients who are agitated. He, however, gradually responded

to treatment, demonstrated improved insight, and was subsequently discharged home to the care of his immediate family, and to follow up with an outpatient psychiatrist. During his hospitalization, the resident physician, a member of the treatment team, struggled with countertransference towards him. Treatment decisions, especially with respect to the use of benzodiazepines had to be carefully considered to rule out malingering in a professional who was capable of mimicking physical signs and symptoms. This was balanced with the duty to care for the patient, regardless of his background. This case highlights the importance of early recognition and treatment of psychiatric illness among physicians. Given the propensity for depression to precede mania in bipolar disorder, Mr. P's manic episode and a potentially disastrous outcome could have been averted by early self-disclosure, treatment, and regular follow-up by a psychiatrist. Our medical culture needs a paradigm shift, one with a model designed to encourage early self-disclosure and treatment-seeking among physicians when they become patients.

No. 148

Burnout in Resident and Fellow Physicians in a Metropolitan Academic Medical Setting

Poster Presenter: Tia Mansouri, M.D.
Co-Author: Michael F. Myers, M.D.

SUMMARY:

Introduction: Burnout is a psychological syndrome characterized by feelings of exhaustion, detachment, and reduced personal efficacy. Physician burnout is a topic both of increasing concern and widespread effects for physicians, their families, their patients, and society. Attention should be paid to burnout in resident and fellow physicians as rates are as high as 60-75% and prevalence is higher among physicians than among their peers in the U.S. population. Academic training sites are in a unique position to not only measure the scope of potential burnout among trainees, but to mobilize resources in order to effect change. We aimed to measure burnout among a diverse group of trainees at SUNY Downstate, an academic training center in Brooklyn, New York. Methods: The study was a cross-sectional survey in which residents/fellows were asked to complete a survey of demographic information (age, sex, PGY level, subspecialty type, average weekly duty hours) and were asked to take the Oldenburg Burnout Inventory (OLBI) a 16-item survey with positively and negatively framed items that covers 2 areas of burnout, exhaustion and disengagement. They were asked additional questions related to their attitudes towards perceived support in their programs. Recruitment was done via email. Data collection occurred for a period of 2.5 months. Average scores for exhaustion and disengagement were compared between male and females, those under 30 and those over 31, junior level and senior level residents/fellows, surgical and nonsurgical subspecialties, and among different self-reported duty hour quartiles. Results: Of the 960 possible residents and fellows, 235 agreed to begin the survey (24.5%) and 203 completed the OLBI (21%). Independent t-test and one-way Analysis of Variance (ANOVA) were used to compare the mean Disengagement and Exhaustion levels between different groups. Tukey adjustment for the p-values were used when significant differences were found using ANOVA. There was a significant difference between females and males in the mean levels of Exhaustion ($p=0.0009$) and Disengagement ($p=0.01$), with females scoring higher on average for both disengagement (Mean (M)=2.58, Standard Deviation (SD)=0.55) and exhaustion (M=2.81, SD=0.52) compared to male counterparts' scores for disengagement (M=2.38, SD=0.53) and exhaustion (M=2.54, SD= 0.58). There was a significant difference in the mean levels of Exhaustion for the groups based on the number of reported duty hours ($p=0.0001$). The group with duty hours <50 had significantly lower mean for the Exhaustion subscale compared to the groups reporting 51-60 ($p=0.01$), 61-70 ($p=0.003$) and 71+ ($p<.0001$) hours. No significant differences were found between the other groups. Conclusions: Among residents and fellows at an academic medical center, being female was associated with higher likelihood of burnout. Self-reported duty hours of more than 50 per week were associated with significantly higher average exhaustion.

No. 149

How to Overcome Barriers for Seeking Mental Health Treatment Among Health Care Providers?

Poster Presenter: Oleksiy Levantsevych, M.D.

Co-Authors: Ayesha Saleem Adil, M.D., Fauzia Zubair Arain

SUMMARY:
Our objective is to report a case of 28-year old male who has been experiencing symptoms of anxiety and psychosis since he was in Ivy League dental school but was reluctant to seek appropriate professional help. Patient was among top 10 students of his class and was extremely fearful from negative impact of stigmatization associated with mental illness diagnosis on his college grades and jeopardizing his opportunities to get into dental residency. Due to delay in diagnosis and treatment, his mental illness worsened and ended up in him having his first psychotic break and he had to resign from his dental residency program at a prestigious local hospital due to persecutory delusions that his residency chief is after him. To address these barriers, there is a need for practical implication of interventions for early diagnosis and appropriate treatment of healthcare professionals incase if they themselves suffer from mental illness. It has been proven by several studies that medical professionals experience high level of stress and psychological morbidity compared to other professionals. Despite this, due to certain strongly perceived barriers, most of them are hesitant to seek professional help. These barriers include stigmatization associated with mental illness; fear of negative impact on academic, career and job opportunities and performance; confidentiality among colleagues'; lack of awareness and guidance from where and when to seek help; cost, lack of time; denial; and self-prescribing behavior. These barriers should be addressed throughout the period of medical professional career, including medical school and residency training. To make a real difference in physician's wellness, annual psychiatric examination should be mandatory along with general physical examination. Furthermore, certain barriers, such as confidentiality, fear of jeopardizing career opportunities and associated strongly perceived stigmatization with mental illnesses and physical disabilities, should be addressed in their annual health examinations, starting from 1st year of medical school and continue throughout their medical profession. Further research is needed to focus on the optimal methods of service delivery, awareness of medical facilities for medical professionals, easy and smooth access to appropriate professional help to increase service utilization rates and satisfaction among medical professionals. In medical community all over the world, there is a need to inquire that physician wellness should receive the same priority as patient care and ?nancial viability. In healthcare system, strong policies should be made for all health care facilities, implementing individual physician wellness as a valid indicator for organizational health.

No. 150

The Relationship Between Burnout and Anxiety, Depression, and Suicidal Ideation Among Medical Resident Physicians: A Literature Review

Poster Presenter: Mousa Botros, M.D.
Co-Authors: Jennifer Ferrante, Heidi Allespach, Vanessa L. Padilla, M.D., Joan St. Onge, M.D.

SUMMARY:
IMPORTANCE: According to the annual Medscape lifestyle report in 2018, burnout rates among US physicians have been trending upwards from 40% in 2013 to 42% in 2018. About 14% of which reported both burnout and co-occurring depression. The highest percentage of burnout were among intensivists and neurologists (48%). The phenomenon remains higher amongst female respondents (48% vs. 38%). Bureaucratic tasks and increasing computerization of practice (EHR) were amongst the top reasons US physician related to burnout. In 2012, a national survey among 7288 US physicians revealed a higher rate of burnout compared to the 3442 non-physician control sample (37.5% vs. 27.6%, P<0.001). Another study demonstrated that medical students and residents/fellows (n=6103) were more likely to exhibit symptoms of depression than the general population (P < 0.0001). OBJECTIVE: To examine the relationship between burnout and anxiety, depression and suicidal ideation among resident physicians. DATA SOURCES AND STUDY SELECTION: We conducted a literature review using the keywords "burnout AND depress* AND anxiety AND residen*" on PubMed. All articles published up to August 2018 were included, leading to 33 search results. Reviewed studies were published from 1998 through 2018. The review was supplemented with related articles published on Science Direct.

Duplicate records were removed. Inclusion criteria entailed articles published in English, in peer reviewed journals using validated and reliable assessment tools. RESULTS: Multiple studies examining residents across different medical specialties have found a strong positive association between anxiety and burnout. Residents meeting criteria for burnout also often meet criteria for depression. Some studies point to an association between burnout and increased suicidal ideation. CONCLUSIONS: Despite the growing recognition of the negative impact of burnout on residents' well-being, many aspects remain unclear. However, based on our literature review, it appears that burnout may be related to anxiety, depression and suicidal ideation in resident physicians in the United States, as well as in other regions of the world. Some predictive and protective factors of burnout were identified. Unfortunately, studies to date have not been able to determine causality. Future research is needed to identify causal relationships between these variables, as well as robust and effective interventions aimed at the prevention of burnout among resident physicians, from both individual and organizational perspectives.

No. 151

If You Invite Them, They Will Come: The Report of an Intervention With Anesthesiology Residents

Poster Presenter: Eduardo de Castro Humes, M.D.
Co-Authors: Arthur Danila, Daniel Augusto Mori Gagliotti, M.D.

SUMMARY:

Over the past decades, there has been a growing body of research on the mental health of physician residents. Burnout and depression stand among the most prevalent conditions that affect the mental health of these populations and constitute a continuum that may lead to suicide. Postvention initiatives are an essential part of the management of completed suicides. In June 2018, the Psychological Assistance Group of the University of Sao Paulo Medical School Students (GRAPAL-FMUSP) was asked to talk to Anesthesiology Residents as two former residents had just died by suicide in the previous trimester. All residents were invited to the intervention and dismissed from their regular activities. The first part of the activity was focused on presentations regarding Mental Health issues (Burnout and Depression, Stigma, How to talk to someone in need of help and Substance use among Anaesthetists). During the break, residents were invited to answer questionnaires on depressive symptoms and institutional aspects. Afterward, in small groups (up to 13 residents each) mediated by GRAPAL's professionals, residents had a space to talk about how those subjects were related to their professional lives and discuss what do they believed to be the main problems with their residency program. The participants were very happy to have a moment to talk about their mental health. Some particular situations between residents and faculty arose and were brought to the latter anonymously, facilitating improvements on their work environment.

No. 152

The Practice, Enhancement, Engagement, Resilience, and Support (PEERS) Curriculum: Improving Medical Student Resilience and Well-Being

Poster Presenter: Annie R. Hart, M.D.
Lead Author: Jordyn Feingold
Co-Authors: Catherine Crawford, Lillian Jin, Murad Khan, B.A., Adrienne I. Rosenthal, Asher B. Simon, M.D.

SUMMARY:

Physician burnout, a syndrome of emotional exhaustion, depersonalization and loss of meaning, is increasingly prevalent in the United States with >50% burnout rates among medical students, residents and practicing physicians. The PEERS program (Practice Enhancement, Engagement, Resilience, Support) is a trainee-led longitudinal curriculum aimed at reducing burnout and cultivating well-being, resilience and community among medical trainees. Over the span of ten 90-minute modules, the curriculum addresses stressors specific to each stage of medical education to equip learners with relevant skillset to face challenges and thrive during training. Content is comprised of discussion, mindfulness exercises, and evidence-based techniques from multiple modalities including CBT and positive psychology. Groups are lead by a resident and a senior medical student, paired with a cohort of 8 students. In 2017-2018, the program was

piloted at the Icahn School of Medicine at Mount Si nai. We are conducting an ongoing IRB-exempt longitudinal study of medical students measuring resilience, well-being and burnout using the Connor-Davidson Resilience Scale (CD-RISC), PERMA (Positive emotion, Engagement, Relationships, Meaning, and Accomplishment) Profiler, and the Maslach Burnout Inventory, respectively. Progress between sessions is measured with the Medical Student Well-Being Index (MSWBI). Preliminary results suggest that under-represented minority students and women report higher rates of burnout and lower resilience and well-being, and this gap may increase over time. Our goals are to understand factors that contribute to burnout, and to design an intervention that mitigates these risks in order to improve resilience and well-being among trainees. With safe discussion space, peer and mentor relationships and practical resilience skills, we hope to contribute to a culture change with a compassionate and humanistic approach to the practice of medicine.

No. 153

A Review of Antidepressant Treatment Resistance in Posttraumatic Stress Disorder

Poster Presenter: Chelsea L. Pluta, D.O.

SUMMARY:

For some patients, PTSD is a constellation of life-altering symptoms which can be difficult to treat. In the practice of administering standard antidepressant therapies for PTSD, we seek to understand why some individuals benefit from SSRI or SNRI treatment while others do not. Investigators continue to explore the source for pharmacological failure in this population, and we have reviewed some of these findings here. Researchers have studied various potential etiologies and observations associated with treatment resistance, including: cerebral perfusion, variations in hormonal levels and feedback systems, epigenetics (including receptor polymorphisms), alterations in BDNF, and neuroanatomical variations and trauma. Review and understanding of current findings potentially contributing to treatment resistance is an integral component to inspiring and developing future therapeutic modalities for patients suffering with PTSD.

No. 154

Off-Label Low-Dose Naltrexone for Posttraumatic Stress Disorder

Poster Presenter: Kamal Patel, M.D.
Co-Author: Kelly E. Melvin, M.D.

SUMMARY:

Naltrexone primarily approved to treat and manage opioid and alcohol dependence. However per scarce literature when used at low dose it has shown to improve and alleviate signs and symptoms of post-traumatic stress disorder Here we present a 20-year-old Caucasian female who was admitted to inpatient psychiatric hospital due to worsening of depression over the months following a sexual assault. Patient endorsed symptoms of sleep disturbance, hypervigilance, anxiety, nightmare and flashback from the incident which led to diagnose of post-traumatic stress disorder. Patient had tired multiple antidepressants prior to her admission to the hospital however she either failed or was unable to tolerate the medication. During her inpatient hospitalization, patient was started on fluoxetine however only able to tolerate 20mg dosage for mood, mirtazapine 15mg at bedtime for sleep, and hydroxyzine 10mg daily as needed for anxiety. Patient however continued to endorse daily nightmare and flashback there for patient was tried on low dose naltrexone (4.5mg) at bedtime. Following the first dose of naltrexone patient denied having nightmares and flashback ever since.

No. 155

MDMA-Assisted Psychotherapy for PTSD: A Review

Poster Presenter: Aaron Wolfgang, M.D.
Co-Authors: Sean Lowell Wilkes, M.D., M.Sc., Alexander K. Rahimi, M.D., David Marino, M.D., Rachel M. Sullivan, M.D.

SUMMARY:

HISTORICAL CONTEXT 3,4-methylenedioxymethamphetamine (MDMA) was first synthesized in 1912 by Merck as a precursor in synthesizing hemostatic substances. It was otherwise forgotten until Alexander Shulgin synthesized it again in 1965. He first ingested it in 1976 and subsequently shared it with numerous other colleagues who ushered in a decade of widespread use in MDMA-assisted psychotherapy

for depressive and anxiety disorders as well as marital therapy. In 1986, courts ruled that MDMA should be categorized as a Schedule III controlled substance due to its moderate abuse potential and accepted medical use. Later that year, the Drug Enforcement Agency categorized it as Schedule I where it remains today. PHARMACOLOGICAL MECHANSIM MDMA enters the neuron through the serotonin reuptake transporter (SERT) which it also strongly antagonizes. Within the neuron, MDMA inhibits vesicular monoamine transporters, leading to release of serotonin from storage vesicles. MDMA also has strong agonistic activity at 5HT2B which may account for its anxiolytic and analgesic effects. PSYCHOTHERAPEUTIC MECHANISM While under the influence of MDMA, patients are able to access emotionally painful memories and reprocess those events with significantly less anxiety and greater insight through the lens of heightened empathy, compassion, and self-compassion. This leads to persistent changes in personality domains of increased openness and decreased neuroticism. NEUROTOXICITY & SAFETY Studies in rat models using high doses of 5-150mg/kg were found to produce significant and lasting neurotoxic effects. When taken at therapeutic doses of 1.5mg/kg, humans show no evidence of lasting structural, functional, or cognitive deficits on imaging and neuropsychological testing. CURRENT STATE OF AFFAIRS MDMA-assisted psychotherapy is an emerging paradigm in the treatment of chronic PTSD. Phase 2 trials have demonstrated that 58-86% of subjects were no longer diagnosable with PTSD after two treatment sessions of MDMA-assisted psychotherapy, an effect that was durable 1-4 years post-treatment. Although first-line trauma-focused psychotherapies such as Prolonged Exposure and Cognitive Processing Therapy represent some of the most efficacious treatment options currently available, 28-40% are no longer diagnosable with PTSD after a full course of these treatments. Current trauma-focused psychotherapies are also known for their high dropout rates of 27-40%, whereas 8-14% of subjects dropout in studies of MDMA-assisted psychotherapy. The FDA has now designated MDMA for PTSD as a Breakthrough Therapy, and it is being fast-tracked to be FDA-approved in 2021 if efficacy is maintained in phase 3 trials currently in enrollment. Eligible sites will also be able to administer MDMA to patients with PTSD under the FDA's Early Access program beginning in 2019.

No. 156

Tattoo Recognition in Screening for Victims of Human Trafficking

Poster Presenter: Shelley Fang
Co-Authors: John H. Coverdale, M.D., Phuong Nguyen, Ph.D., Mollie R. Gordon, M.D.

SUMMARY:
There is little information on the secondary prevention of human trafficking and how medical professionals can screen for victims. There is a paucity of validated screening tools for use in clinical settings to identify adult trafficked patients, although one for use in pediatric populations exists. Many victims withhold information about their trafficked status. Since traffickers may mark victims, identification of tattoos provides a useful method for screening patients which complements history taking, especially when victims are unable to disclose that information. We searched existing medical literature, PsycINFO, PubMed, Google and JSTOR using keywords "human," "trafficking," and "tattoos". Because there is scant literature on this topic we also searched the gray literature which enabled preliminary identification of several themes used in trafficking tattoos. We also discussed tattoo placement and quality. Tattoo recognition is a critical factor in identifying victims and setting them on a pathway to freedom and recovery.

No. 157

Mental Health in First Responders: A First-Person Perspective

Poster Presenter: Meghan Elizabeth Quinn, M.D.

SUMMARY:
Montgomery County, MD, is home to one of the largest combined service (career/volunteer) fire-based EMS delivery systems in the United States, responding to over 120,000 911 calls annually. At any given time, volunteers make up about 50% of the providers working for the organization. This flies counter to national trends, where nearly 70% of all fire-rescue workers are volunteers. Given the organization's position of relative privilege amongst volunteer fire rescue organizations, the department

offers a variety of different mental health interventions that are available to all employees and their family members for any concerns, directly or apparently unrelated to their work, to include a peer-to-peer stress management team, a clinical social worker, and a clinical psychologist. This presentation offers the first person perspective of a volunteer fire-rescue worker who has engaged with the various mental health interventions across a 10+ year career in the department, examines some of the pearls and pitfalls of the current system of resource implementation and availability, and provides suggestions for providers looking to support first responders.

No. 158

Exploring School-Based Mindfulness to Decrease PTSD Following School Shootings

Poster Presenter: Zhong Ye, M.D.
Co-Author: Michael A. Shapiro, M.D.

SUMMARY:
School shootings are on the rise with the United States already reporting 23 in 2018 thus far. These traumatic events cause negative mental health outcomes in their survivors who are then expected to not only go back to the same school every day but also continue to learn and thrive in an environment of fear. And while social support and counseling help, they are often unevenly distributed with the most vulnerable receiving the least help. Additionally, these interventions are often difficult to sustain over time, leaving the most at-risk students vulnerable when help wanes. This poster, through literature review, explores an alternative solution that is systematic, evenly distributed and sustainable - the incorporation of mindfulness in a school curriculum following a school shooting. Studies show experiential avoidance and dissociation are strong predictors of post-traumatic stress (PTS) following a traumatic event. Because trauma disengages the mind from bodily experiences, trauma victims often rely on avoidance-based coping. Mindfulness is based on the principles of awareness and acceptance, allowing patients to form insight into their emotional symptoms decreasing experiential avoidance (i.e. thought suppression, rumination). Mindfulness also develops greater flexibility and less reactivity, contributing to higher resilience – a characteristic that decreases PTS and increases post traumatic growth. Moreover, incorporation of mindfulness into school curriculum in the past has been shown to reduce stress and promote learning. Studies have shown chronic activation of stress hormones interferes with learning and can cause hippocampal atrophy resulting in memory impairment. However, mindfulness helps counteract this by teaching students to regulate their emotions and stress levels to optimize learning in the face of external stressors. Ultimately, this is the end goal of a post-shooting intervention – to make schools not only feel safe again but be a productive place of learning. More research, such as pilot programs or trials, would be helpful in providing evidence that these programs are effective specifically for PTSD relating to school shootings. In the wake of increasing school shootings, it is imperative for mental health providers to be involved in trying to make that happen. Incorporating mindfulness into a school curriculum is one way to help survivors develop effective coping skills, decrease the emergence of PTSD and ultimately, resume learning and achieving.

No. 159

Exploring Pain Medication Utilization in Adult Psychiatry Patients With Histories of Childhood Adversity

Poster Presenter: Elizabeth Meryl Olsen, M.D.

SUMMARY: Objectives: We explored the relationship between utilization of pain medications and childhood adversity (CA; eg, abuse, neglect, and parental death) in a population of patients with mental illness whose data demonstrated an initial causal relationship between CA and metabolic syndrome (MetS). In addition to being related to the later development of psychiatric conditions, CA has been associated in the literature with poor health outcomes, including chronic pain and MetS. We hypothesized that, as with MetS, CA is a risk factor for pain medication utilization in patients with mental illness. Methods: We conducted a paper chart review of 400 patients, ages 17–87 years, seen in a Psychiatry Residents' Clinic from 2011 to 2013 and subsequently discharged. Most were women (64.5%) and White Europeans (82.3%). Variables included histories of CA, psychiatric diagnoses,

medications, fasting lipid and glucose levels, height, and weight. An adversity score was calculated, giving 1 point for each type of CA endorsed. The number of classes of psychotropic medications used, of pain medications utilized, and of mental health diagnoses were calculated for each participant. Using the criteria of the American Heart Association, each patient was given a MetS score (0–5). Results: Seventy-eight percent of patients were reported as experiencing any CA. Parental mental illness and parental substance abuse were most often endorsed. Most (76.5%) had = 2 diagnoses, with anxiety (55%) and depression (57%) being the most common. Ninety-eight percent were given psychotropic medications, and 78.2% were prescribed =2 types of medications. Use of pain medications was reported in 31.8%, with 72.2% of these individuals reporting use of = 2 pain medications. Those that used pain medications were older, had higher rates of MetS, and had used a greater number of psychotropic medications. Multiple regressions examined whether age, sex, CA score, the number of psychotropic medication classes, MetS score, and the number of psychiatric diagnoses predicted the use of pain medications. The model was significant [$F(5,394) = 12.072$, $p < 0.001$, $R2 = 0.133$]. Age and the number of psychiatric medication classes were independent predictors; CA, sex, MetS score, and the number of diagnoses were not. Conclusions: Results indicate that age and the number of classes of psychotropic medications predicted psychiatric patients' utilization of pain medications, which did not confirm our hypothesis. However, considering that CA has been shown in our population to be a predictor of the number of classes of psychiatric medications used, it may be possible that CA has more of a downstream effect on pain medication use in this population due to its main effects on mental health. This warrants further investigation given the severity of both physical and mental illness in these patients.

No. 160

Examining Sex and Childhood Trauma Effects on Sleep: A Spectral Analysis Study

Poster Presenter: Cristine Hyun Oh
Co-Authors: Meredith Wallace, Ph.D., Anne Germain, Ph.D.

SUMMARY:
Introduction: Although some have examined the effects of sex and childhood trauma on subjective and polysomnographic measures of sleep, their synergistic effects on quantitative EEG (qEEG) during sleep remain unknown. We first evaluated the effects of childhood trauma on sleep qEEG using power spectral analysis, and examined whether sex moderates these effects. EEG activity bands during NREM and REM sleep included delta (0.5-4 Hz), theta (4-8 Hz), alpha (8-12 Hz), sigma (12-16 Hz), and beta (16-32 Hz) power bands in a community-based sample of healthy young adults. Methods: A sample of 77 men and 95 women aged 18-30 (M=23.857, SD=3.363) without any comorbid mood, anxiety, substance use, medical, or sleep disorders, completed the Childhood Trauma Questionnaire (CTQ) (M=29.650, SD=5.372) and one night of polysomnography (PSG) with spectral data extracted from left and right frontal leads (F3, F4) and averaged. Multiple regressions were used to determine the interaction of childhood trauma and sex on spectral activity bands during both REM and non-REM sleep. If sex was not a moderator, we examined independent effects of sex and CTQ. Models were adjusted for both race and age. Results: Sex and childhood trauma interactions were non-significant across all bands (p>0.429). Greater CTQ was significantly associated with increased beta power only during NREM sleep (ß=0.155, SE_β=0.000, p=0.042, η_p²=0.024). Sex was significantly associated with greater power in women than men across the delta (ß=0.274, SE_β=4.351, p=0.000, η_p²=0.083), theta (ß=0.319, SE_β=0.297, p=0.000, η_p²=0.101), alpha (ß=0.212, SE_β=0.161, p=0.006, η_p²=0.044), and sigma (ß=0.237, SE_β=0.080, p=0.002, η_p²=0.056) bands during NREM sleep. The same pattern was seen across the same bands during REM sleep: delta (ß=0.273, SE_β=0.537, p=0.000, η_p²=0.077), theta (ß=0.249, SE_β=0.174, p=0.001, η_p²=0.060), alpha

(ß=0.305, SE_β=0.055, p=0.000, η_p²=0.090), and sigma (ß=0.248, SE_β=0.019, p=0.001, η_p²=0.061). Conclusion: No Sex by Childhood trauma interactions were detected in this sample of healthy young adults. Childhood trauma had a specific effect—independent of sex—on beta activity during NREM. This observation suggests that childhood trauma has long-lasting effects of central arousal during sleep, even in healthy sleepers, and may be a marker of vulnerability to sleep or psychiatric disturbances. Consistent with prior studies, women in this sample showed significantly greater power across all activity bands during NREM and REM sleep than men. This sex difference may contribute to the higher prevalence of sleep and mood disorders in women.</sup>

No. 161

The Comprehensive Evaluation of a Patient With Brief Reactive Psychosis in the Context of Sexual Assault: A Medical, Psychological, and Legal Approach

Poster Presenter: Rebecca I Katz, M.D.
Co-Author: Carolina I. Retamero, M.D.

SUMMARY:
A 23-year-old African American female with past medical history of mild intermittent asthma and no past psychiatric history was brought to the emergency room by police after she was found alone, walking in the streets at 2am in the morning. In the emergency department, she appeared disheveled, wearing dirty clothing and had unkempt hair. She appeared confused, disoriented to person, place and time and was significantly guarded. Physicians in the emergency room were unable to obtain any information as she refused to speak. She declined all labs however was amenable to urine drug and pregnancy tests only which were negative. She accepted food and drink at that time, after which she fell asleep. Several hours later she awoke abruptly, appeared paranoid, began screaming at staff and became extremely agitated and combative eventually requiring haloperidol, lorazepam and diphenhydramine intramuscularly to calm her down. ED physicians petitioned an involuntary psychiatric evaluation due to inability to care for self and acute psychosis. On arrival to the inpatient psychiatric floor, she remained fairly sedated and declined initial evaluation. The following day staff noted that she exhibited odd behaviors such as, whispering to herself, making nonsensical statements, responding to internal stimuli and hesitant when approached by staff. On interview with the team she was not able to provide an emergency contact nor any information about events that led up to her hospitalization. She was started on haloperidol as she tolerated it well after receiving it in the emergency room. On her second day of hospitalization, she was found crying, on the ground in the hallway, oriented to person, stating “Help me please I think I was raped.” This presentation describes the complexities in assessing a person presenting with a brief psychotic episode with marked stressor(s) as well as attempts to develop an initial protocol for evaluating this patient in a comprehensive manner which includes medical, psychological and legal approaches.

No. 162

The Effectiveness of an Interactive Teaching Session in Changing Medical Students’ Attitudes and Misconceptions Regarding Rape and Sexual Violence

Poster Presenter: Akhil Mehta
Co-Author: Jocelyn Nugroho

SUMMARY:
Intimate partner violence (IPV) is a public health problem that is known to significantly impact millions of people in the United States each year, both in terms of causing immediate harm as well as other long-term health consequences. In light of these findings, it follows that medical students, residents and attending physicians working in any medical discipline are all highly likely to encounter patients who have experienced sexual violence, although the specific history pertaining to the incident many never be disclosed to them. Amongst the many factors that influence a victim’s decision to report such incidents, access to good medical care provided by knowledgeable and empathetic clinicians appears to be very important. Unfortunately, an abundance of research to date demonstrates myths surrounding sexual assault are not only highly prevalent in general society, but also appear to be frequently endorsed by healthcare

professionals and medical students. Moving forward, significant steps need to be taken to help medical students, in particular, understand what sexual violence entails, if they are going to be able to recognize and effectively manage it as clinicians. With that in mind, the purpose of this study was to evaluate the effectiveness of a reproducible teaching session on how to care for victims of sexual violence appropriate for the undergraduate medical student. First year medical students were asked to complete a 32-question survey designed to assess their understanding, attitudes and misconceptions regarding rape and sexual violence. They were then exposed to a 1-hour interactive lecture on "Caring for Victims of Sexual Violence." Following the lecture, students were asked to complete the survey again to determine significant alterations, if any, in awareness of key issues related to patient care as well as attitudes towards such patients. Mann-Whitney U test was used for statistical analyses. Post-lecture, both male and female medical students showed significant changes in responses to eleven and ten of the survey questions asked, highlighting improved knowledge of clinical and forensic aspects of sexual violence as well as insight in to common rape myths. In particular, both groups showed significant changes post-lecture to the statement: "As a medical student, I would know what to do if somebody disclosed to me that they had been raped." That said, prior to the lecture, male and female medical students had significantly different responses to four survey statements: "During a rape a woman should do everything she can to resist", "Most allegations of rape are false", "If arrested, rapists are likely to be sent to prison", "Women over the age of 50 rarely get raped." Post-lecture however, these differences were no longer statistically significant, suggesting the interactive teaching session was successful in ameliorating the role gender plays in one's understanding, attitudes and misconceptions about rape and sexual violence.

No. 163

Putting Nightmares to Bed With Cyproheptadine

Poster Presenter: Amos Burks, M.D.
Co-Author: Krutika P. Chokhawala

SUMMARY:

A nightmare is an unpleasant dream which causes an emotional response. The content of the dream can cause extreme fear, horror, distress, or anxiety. Nightmares occur in rapid eye movement (REM) sleep and evoke a sympathetic response which causes awakening and difficulty to fall back asleep. Typically, after arousal, a person is able to vividly recollect the dream. Nightmares are more common in childhood and adolescence and typically become less frequent in adulthood. They can be idiopathic or related to another condition like Post-traumatic stress disorder, Schizophrenia, Anxiety, Substance use, or personality disorders like Schizotypal, Schizoid, and Borderline personality disorders. The sympathetic arousal can cause symptoms related to PTSD like hyperarousal and anxiety. Serotonin 2A receptor (5HT2A) signaling has some role in REM sleep. Methods: A combination of search terms which included "Nightmares", "Cyproheptadine", and "PTSD" across three databases: PubMed, Google Scholar, and Clinicaltrials.gov over the past twenty years yielded 15 results which met criteria for this review. Results: There is indirect evidence that Serotonin 2A receptor (5-HT2A) signaling is involved in regulating REM cycles. There are several case reports and open trial case series which have shown promising results for the treatment of nightmares related to combat trauma in PTSD by addressing this signaling cascade. Discussion: Along with psychotherapy, selective serotonin reuptake inhibitors fluoxetine, sertraline and paroxetine are currently FDA approved for treatment of trauma-related nightmares in PTSD dues to their efficacy, safety profile and reducing symptoms of anxiety. SSRIs are thought to be more effective for non-combat related trauma. The alpha-1 adrenergic antagonist Prazosin has shown promising results in the management of nightmares in combat-related trauma. Other treatments used are tricyclic antidepressants, atypical antipsychotics, alpha-2 adrenergic agonist Clonidine, and beta-blocker Propranolol. Cyproheptadine is a first-generation antihistamine with additional antiserotonergic, specifically antagonism of 5-HT2 serotonin receptor. The proposed mechanism for this action of Cyproheptadine is feedback inhibition. There is some evidence suggesting decreased REM duration and near normal sleep architecture seen on EEG after administration of Cyproheptadine in PTSD patients.

Though the data is limited, through a thorough literature review we propose the value of considering cyproheptadine as an alternative treatment for combat-related nightmares in those with PTSD.

No. 164

Psychosocial Disability and Barriers to Mental Health Care in Colombia

Poster Presenter: Lina Maria Gonzalez, M.D.

SUMMARY:

People who suffered traumatic events have a high probability of being psychologically and socially dysfunctional due to Post-Traumatic Stress Disorder, anxiety and depression symptoms. These mental health disorders often result in social isolation due to the stigma imposed in the victims, creating them difficulties to successfully take part in society, a condition known as psychosocial disability. Victims of armed conflict are exposed to social stressors that make them prone to suffer from psychosocial disability, derived from violent acts and a rarified social environment that reinforce stigmatizing behaviors. This situation can lead to barriers in access to mental health-care and even to the proper acknowledgement of the psychosocial disability, making it difficult to recognize and treat these population, leaving them unattended at governmental, community and personal levels. Considering the history of violence lived in the last 50 years in Colombia, this study has the objective of identify the stigma imposed in the victims of the country's armed conflict that leaves them in a psychosocial disability condition, with special attention to those populations recognized for being vulnerable in an already socially hostile environment for all members of Colombian society, indigenous communities, African American descendants and women. Taking a qualitative approach through the conformation of focal groups and in-depth interviews with people from four cities of Colombia, causes of self and outer imposed stigma are identified and explained jointly with the interpretation of the social relations between victim and non-victim populations in the setting of psychosocial disability and the way this interaction give form and reshape their social environment through day to day life. A thorough knowledge of the social stigma phenomena in mentally ill people can help to inform and lead the decisions needed to be take in all levels of society to attend this population in the currently post-conflict scenario faced bay Colombian people. In this poster, we discuss the conception of mental health, stigma and psychosocial disability found in various actors of Colombian society and propose ways to take the steps necessary to successfully attend the mental health of victims and integrate them to society.

No. 165

Psychosocial Interventions for Suicide Prevention Among Young Individuals: A Systematic Review

Poster Presenter: Freddy Escobar

Co-Authors: Mayra Alejandra Duran Montes, Alan R. Hirsch, M.D., Aurelio Diniz, Preet Brar

SUMMARY:

Introduction: Suicide is a multifactorial and preventable phenomenon that requires the intervention of a team of experts. Psychosocial interventions have been developed to prevent and reduce suicidal behavior (thoughts of suicide, suicide attempt and completed suicide), encourage help-seeking and to identify signs of imminent suicide among young populations. These interventions are crucial for addressing the global burden of mental health disorders and suicide, which is considered a main cause of death in adolescents. Methods: Systematic review - A search was conducted on databases Pubmed, Cochrane and PsycInfo using the search terms "suicide OR suicide attempt AND prevention AND intervention" for articles published up to August 2018. 112 initial studies written in full were found and their abstracts reviewed. Studies were selected based on the following criteria: (1) Randomized Clinical Trials evaluating psychosocial interventions for suicide prevention (2) Participants enrolled were adolescents or young adults between the ages of 12 and 25. Studies in which suicidal behavior was not a primary outcome and those in which psychosocial interventions were not used as main preventive or therapeutic strategy for suicidal behavior were excluded. Results: A total of 7 studies were included for full review, 5 were based in schools and the remaining included hospitalized patients following a suicide attempt. A total of 20407 participants were enrolled, with a mean age of 16

years. 56.44% (11519) of the participants were females and 43.56% (8888) males. Only 1 study described the presence of psychiatric diagnoses among participants, the most frequent ones being Major Depressive Disorder (78%), Post-traumatic Stress Disorder (53%) and Substance use disorder (24.17%). Various psychosocial interventions were used: 2 studies used Cognitive Behavioral Therapy, 1 study used Problem-solving therapy and the remaining utilized community-based support, psychoeducation and motivational interviewing. 2 studies were distance-based, through the use of letters, cards or videos. Conclusions: There is limited and low-quality evidence to determine the efficacy of psychosocial interventions on young people for the prevention of completed suicide, suicide attempts or self-injury. Due to the great variability among these interventions and differing sample sizes between each study, it is difficult to assess the efficacy of any specific intervention. None of the studies found a null effect of the evaluated intervention, suggesting that these interventions are safe and cause no harm. There are no studies comparing the preventive efficacy on suicidal behavior of one-on-one psychosocial interventions against interventions using information and communication technologies, which could be proposed considering the ease of access of newer generations to these technologies and the high costs that one-on-one interventions represent Key words: Suicide, Prevention, Young individuals

No. 166

Inhibition of Nightmares With Pramipexole: A Possible Treatment for PTSD?

Poster Presenter: Freddy Escobar
Co-Authors: Alan R. Hirsch, M.D., Preet Brar

SUMMARY:

Introduction: The association of sleep disorders and post-traumatic stress disorder (PTSD) is almost universal. Nightmares are not only one of the most commonly associated but also featured as a diagnostic criterion for PTSD. PTSD-related nightmares are particularly distressing, may impair functioning and increase risk of suicide. No specific pharmacologic agent has been demonstrated to impair dreaming. Inhibition of PTSD-related nightmares with pramipexole has not heretofore been described. Such a case is presented. Methods: Case study - This 60 year-old male with PTSD and trauma-related nightmares upon introduction of pramipexole 0.5 mg PO qHS for Restless Leg Syndrome (RLS) had total elimination of dreams, which recurred upon discontinuation of this agent as a result of insomnia and increased anxiety. A lower dose of 0.375 mg qHS provided optimal RLS-symptom control and overall improved tolerance despite nightmare recurrence. Results: Abnormalities on Neurological examination: Recent recall: 2 of 4 objects without improvement with reinforcement. Able to spell the word “world” forwards but not backwards. Abstract thought impaired. Chemosensory testing: Anosmia and normogeusia. Motor: Drift: mild right pronator drift with right cerebellar spooning and right abductor digiti minimi sign. Reflexes: 3+ brachioradialis and biceps bilaterally, absent ankle jerks. Other: CT scan with and without contrast: normal. Discussion: Nightmares related to PTSD may occur during Rapid Eye Movement (REM) sleep and non-REM sleep. Underlying sympathetic activation may lead to disruptive motor behavior similar to that seen in REM sleep behavior disorder. The exact mechanism of action by which inhibition of dreams occurred with use of pramipexole is unclear. Such a response is consistent with prior documented evidence of REM sleep suppression with low-dose pramipexole such as it's efficacy in reducing the intensity and frequency of nightmares and dream enactment related to REM sleep behavior disorder. Further research on therapeutic interventions that target nightmares directly may be beneficial for the management of patients with PTSD. Key words: PTSD, Pramipexole, Nightmares

No. 167

Approach to Auditory Hallucinations in Borderline Personality Disorder

Poster Presenter: Laya Varghese, D.O.

SUMMARY:

Ms. H is a 33 year old African American female with Borderline Personality Disorder and PTSD who is admitted voluntarily for suicidal ideation with plans to overdose in setting of her husband leaving her several weeks ago. In addition to depressive and PTSD symptoms, as well as borderline traits, she

endorses history of mood-congruent auditory hallucinations since childhood that are worsened during periods of stress. She does not exhibit other signs of psychosis or mania, and denies any significant history of substance use. Her AH are felt to be related to BPD rather than to a primary psychotic disorder, and she is not started on an antipsychotic. This led to the question of the role of antipychotics in BPD for AH. As numerous studies have noted, AH is a fairly common symptom in both BPD and trauma spectrum disorders, yet it is unclear if whether antipsychotics are useful for these symptoms. In this poster, we discuss the prevalence of AH, the theories of their etiology, and the current evidence on antipsychotic efficacy for AH in BPD.

No. 168

Better Safe: Restricting Active Duty Servicemembers' Firearm Access Through National Instant Criminal Background Check System (NICS)

Poster Presenter: John F. Chaves, M.D.
Co-Authors: Sandy P. Glassberg, M.D., Patcho N. Santiago, M.D., Christopher Willis

SUMMARY:

The intersection of psychiatric illness, firearm access, mortality, and policy is increasingly relevant to psychiatrists and trainees—national headlines covering mass shootings have sparked countless debates and discussions. Though less sensational, deaths from suicide via firearm are orders of magnitude greater than homicides, and this solemn fact is especially important to psychiatrists who take care of active duty service members and veterans, populations at especially high risk (Ursano, 2015, Wintemute, 2015). In response to mass shootings and climbing suicide rates, legislators continue to advocate for more restrictive firearm purchasing laws for psychiatric patients (Brown, 2018). However, psychiatrists are often unfamiliar with existing opportunities to restrict some patients' opportunities to buy firearms through established federal laws ("Mental Health Reporting," 2018). In the United States, the Federal Bureau of Investigation hosts a National Instant Criminal Background Check System (NICS) that prevents registrants from purchasing firearms for many reasons including various psychiatric issues (NICS, 2016). In many states patients who meet criteria for registration on NICS, such as those required to engage in involuntary treatment, are referred to the FBI by the state judicial body ("Virginia," 2018). Unfortunately, military treatment facilities (MTF) do not have an established reporting process. The authors of this poster will comment on the need for such a standardized reporting process at United States MTFs based on trainee experience at Walter Reed/National Capital Consortium. They will also report on the design and implementation of such a process. Finally, they will discuss pertinent literature including legal arguments for and against further restriction of patients' right to bear arms (Felthous, 2017).

No. 169

Adjusting to the Army: A Look at the Diagnosis of Adjustment Disorder in the Active Duty Army Population, Its Prognosis and Treatment Implications

Poster Presenter: Alexander K. Rahimi, M.D.
Co-Authors: Aaron Wolfgang, M.D., Paul M. Morrissey, M.D.

SUMMARY:

Intro: Adjustment disorder, grouped under the general category of "trauma and stressor-related disorders" is a common diagnosis in psychiatric settings characterized by an emotional response to a stressful event. Epidemiological studies suggest the diagnosis is made with greater frequency in the military psychiatry setting, with 10% of Army SMs receiving the diagnosis in 2016 compared to studies documenting 1-3% prevalence in general populations. Examination reveals many factors that may be contributing to this finding, including the extreme and unique stress the military environment provides (to include geographic and social isolation, strenuous training and job function), provider mis-/over-/under diagnosis, USA regulations, and predisposing factors unique to the population. Army Population: In one study, almost 25% of 5,500 active duty non-deployed Army soldiers tested positive for at least one psychiatric disorder. Placing an already vulnerable population into the stresses of overseas deployment and combat is likely to then create a stress reaction, which can often lead to adjustment disorder or other diagnosis. Mental Health in Army: While studies have documented increased

predisposition, incidence, and prevalence of mental health diagnoses in the Army population, this trend does not seem to have impacted other psychiatric disorders to the same extent, including those in the category of trauma and stressor-related disorders. For example, PTSD with a general population lifetime prevalence of 3.6% compared to roughly 4% prevalence in Army service members. Army Regulations: Since the DOD placed constraints on the "personality disorder discharge," an increase has been seen in discharges for "Conditions and Circumstances not Constituting a Physical Disability" but "interfering with assignment to or performance of duty." (AR 635-200). Prognosis: By definition, adjustment disorder should resolve in the short-term with removal of the stressor. Oftentimes, chronic impairment leads to separation from the service. Data should be examined regarding treatment and resolution of active duty Army diagnosed service members.Similarly, limited data exists tracking patient outcomes on separation from service. Conclusion: The divide between the general and Army populations warrants further study. Examining provider practices (to include their understanding of and attitude towards Army retention guidelines, the fidelity with which they follow diagnostic criteria) and tools used to diagnose the disorder may shed light on the discrepancy.Other topics of interest of further study include how Active Duty Army patient's treatment and prognosis may differ from those in the general population who carry the same diagnosis. Finally, population studies continue to document differences in Army service members from that of the general population. Examining differences amongst other service branches and MH diagnoses can guide the care of soldiers moving forward.

No. 170

Royal Australian and New Zealand College of Psychiatrists' Initiatives to Improve Veteran and Military Psychiatry in Australia and New Zealand

Poster Presenter: Andrew Peters

SUMMARY:

Psychiatrists are often unfamiliar with the specialised experiences and mental health needs of veterans and military personnel. Psychiatry for veterans and military personnel is a highly specialised field and many psychiatrists in Australia and New Zealand who do focus on this practice area will report significant barriers for patients that seek treatment. These barriers are compounded by models of care, both in private settings and public systems, which fail to provide veterans and military personnel with the care they need. The Royal Australian and New Zealand College of Psychiatrists (RANZCP) is committed to improving the mental health of Australia's and New Zealand's veterans and defence service personnel through increasing the number of psychiatrists interested in veteran and military psychiatry, and by better connecting those psychiatrists already practising in this field. A bi-national RANZCP Military and Veterans' Mental Health Network was established in 2018 to promote this sub-specialty of psychiatry and improve the clinical expertise of RANZCP members across both Australia and New Zealand. The Network reports directly to the RANZCP Board to reflect the RANZCP's focus in this area. To collect information about practice in and knowledge of veterans' and military mental health, the Network carried out a survey amongst RANZCP members in June 2018. The survey found that the majority of responders were men aged 50–59 who practise in Australia and obtained RANZCP Fellowship over 25 years ago. 38% of respondents had served in the ADF/NZDF Reserves and 12% had served for the police and/or the State Emergency Service. Advocacy is another very important component of efforts to improve psychiatry for military personnel and veterans, and the RANZCP is committed long-term to this important initiative. The RANZCP has developed relationships and partnerships with Government Ministers and Government Departments, and has been invited to appear before public committee hearings. To respond to growing interest in this area from Government decision-makers, the RANZCP has prepared policy submissions and advice on support and services for military personnel and veterans. The RANZCP is also developing a Position Statement on key issues for veteran and military mental health, and looking at ways to share resources and information on the topic among RANZCP Fellows and the wider community.

No. 171

Apply Deep Learning in Suicidal Ideation Prediction Via Brief Symptoms Rating Scale-5 (BSRS-5) Among Military Population of Taiwan
Poster Presenter: Yueh-Ming Tai

SUMMARY:
Examining the performance of deep learning models in prediction military suicidal idea via the Brief Symptom Rating Scale-5 (BSRS-5). And comparing with tradition cut-off point. The BSRS-5 has been a common suicide-predict instrument in Taiwan since 1990. In 2012, the military suicide prevention center (MSPC) of Taiwan was established on the purpose as its name. Based on registration data from first-line in troops and military psychiatric clinics, soldiers with suicidal ideation were recruited and ratted by BSRS-5. Those who evaluated BSRS-5 as high as 15 or later 10 were defined as high suicide risk group. This study is aimed to re-examine the accuracy of BSRS-5 in predicting suicidal ideation via new deep learning modeling comparing with simple cut-off point mentioned above. Among 5,221 records within four-year data in MSPC, 3,186 of them were stratified as testing group (male/female: 3001/185) and 1.021 as validation group (M/F: 945/76) and 1,004 as testing group. By virtual of deep learning model, accuracy rate for testing group showed 84.3% (sensitivity: 61.2% and specificity: 85.9%). In view with simple cut-point models for BSRS-5 greater than 15 (accuracy: 74.3%, sensitivity: 70.5%, specificity: 75.8%) and greater than 10 (accuracy: 64.5%, sensitivity: 51.2%, specificity: 89.6%), our deep learning model provides higher accuracy including modest sensitivity and specificity). Theoretically, better performances for further more models specific for genders of other confounding factors are highly warranted.

No. 172
Diagnostic and Clinical Characteristic of Narcolepsy With Nocturnal SOREMP
Poster Presenter: Seung-Chul Hong

SUMMARY:
Study Objectives: The aim of this study is to investigate the diagnostic characteristic of the narcoleptic groups, which are categorized based on the presence of nocturnal sleep onset rapid eye movement sleep period (nSOREMP) and cataplexy. Materials and methods: Subjects included 167 narcoleptic patients diagnosed at the St. Vincent Hospital, the Catholic University of Korea. They underwent polysomnography and Multiple Sleep Latency Test for objective sleep parameter. The standardized face to face interview and Epworth Sleepiness Scale (ESS) were used to inquire about daytime functioning of patients. Overall retrospective chart review were performed on their sleep health data. Results: In terms of daytime functioning, subjects without nSOREMP showed lower ESS score (P=0.05) in the group without cataplexy. However, the quality of sleep at night was significantly lower in the subjects without nSOREMP compared to any other group. Conclusions: The presence of nSOREMP and cataplexy demonstrated worse daytime functioning but better quality of sleep at night. Our study thereby suggested that classifying narcolepsy based on the presence of both cataplexy and nSOREMP possibly indicates novel type of narcolepsy with identifiable/characteristic symptoms

No. 173
A Case Report of a Patient With New Onset of Obstructive Sleep Apnea and Nocturnal Enuresis After Sudden Weight Gain
Poster Presenter: Seung-Chul Hong

SUMMARY:
A 35-year-old Asian man presented to the sleep clinic with excessive daytime sleepiness (EDS) accompanied by a nocturnal enuresis (NE) and daytime urinary incontinence (UI) especially in the morning. During the interview, the patient reported a sudden weight gain of about 30 kg after his marriage 1 year ago, possibly due to overeating midnight snack with his wife. During the prior 1 year, he experienced NE or daytime UI two or three times a month and was treated with desmopressin by a urologist but the symptoms had been continued. His EDS assessed as a total score of 22 by Epworth sleepiness scale (ESS) which could make several accidents in his workplace where he drove a forklift. He was taking antihypertensive medication, Valsartan, and using tobacco and alcohol, but denied the childhood history of NE and daytime UI. His family remembered that his snoring was initiated in his 20's however EDS was not appeared until 1 1

year ago. On examination a body mass index of the patient was 50.5 (160 kg, 178 cm) and his blood pressure was 178/122 mmHg. He had a narrow upper airway with enlarged tonsils, and redundant soft tissue of the tongue as categorized as class 3 in Mallapati score. Due to a strong suspicion of obstructive sleep apnea, split-night polysomnography was recommended. On pre-positive airway pressure (PAP) period of polysomnography, his sleep efficiency was 92.6%, rapid eye movement (REM) latency was 229.0 minutes. Sleep stages were distributed with N1 as 20.2%, N2 as 50.9%, REM as 27.4% of total sleep time, respectively, but none of slow-wave sleep. The apnea-hypopnea index was 109.2/h with subsequent desaturation to 73%. Total arousal index was 109.8/h in pre-PAP period and repeated oxygen desaturation, snoring, bradycardia and tachycardia were observed. On PAP period, snoring and breathing events were disappeared at a pressure of 14cm H2O. During the level of a pressure of 15cm H2O, frequent arousals were observed which might be caused by the excessive pressure of CPAP treatment. After 1 month of applying CPAP, the patient reported a prominent improvement on EDS and snoring. Also, his NE and daytime UI were resolved and discontinuation of desmopressin was done. Since now, there had been reported several cases of NE with daytime UI in patients associated with OSA, but the cases developed OSA and NE after a sudden weight gain were scarce. This case shows the possibility of hypothesis that OSA could be a risk factor for enuresis in adults and cause NE in predisposed adults. Therefore, when a secondary enuresis is presented in adults, the evaluation for untreated OSA should be considered in the differential diagnosis. And routine work-up for NE for patients with OSA might be beneficial in sleep clinic.

No. 174

The Effect of Morningness-Eveningness and Shift Work Duration on Nurses: Sleep Quality, Depressive Symptoms, and Occupational Stress

Poster Presenter: Hayeon Kim
Co-Author: Tae-Won Kim

SUMMARY:

Background: Morningness-Eveningness indicates that an individual has a preference in diurnal performance, sleep-wake cycle for activity and alertness during the day. The purpose of this study was to investigate the effect of morningness-eveningness type and shift work duration on nurses relative to sleep quality, depressive symptoms and occupational stress. Methods: Data was collected using self-administering questionnaires by 257 three eight-hour randomly rotating shift system nurses at St. Vincent's hospital. Questionnaires were composed of baseline demographic data, Korean version of Morningness-Eveningness Questionnaire, Pittsburgh Sleep Quality Index, Epworth Sleepiness Scale, Beck Depression Inventory and Korean Occupational Stress Scale. Kruskal-Wallis H test and analysis of covariance (ANCOVA) were used to identify significant differences in sleep parameters, depressive symptoms and occupational stress according to morningness-eveningness type. Results: There was significant difference in Subjective Sleep Quality score (p=0.018). Post hoc analysis revealed differences between eveningness vs. morningness (p=0.001) in Subjective Sleep Quality score. There were tendencies in sleep efficiency, PSQI total score and ESS between morningness-eveningness type. However, there were no significant differences in total sleep time, depressive symptoms and occupational stress including eight sub-categories according to morningness-eveningness type. Morningness-Eveningness score revealed negative correlation with Subjective Sleep Quality score and Total score of PSQI and ESS, and positive correlation with sleep efficiency. Shift work duration showed positive correlation with total stress and stress due to job demand. Conclusion: Eveningness type nurses revealed lower Subjective Sleep Quality and tendency for poor sleep efficiency, poor overall sleep efficiency and more severe daytime sleepiness than other type. Morningness type might have positive effects on sleep quality and daytime sleepiness. However, morningness-eveningness were not decisive factors for total sleep time, depressive symptoms and occupational stress. Longer shift work duration had correlation with higher occupational stress. Short-term medication, workers' chronotypes consideration and naps before night shifts may be helpful in improving mental health and quality of life

for shift nurses, especially for evening shifts. This study has no conflicts of interests.

No. 175

Otologic Symptoms as an Aura to Sleep Paralysis

Poster Presenter: Luvleen Shergill
Co-Authors: Jasir Nayati, Reshma Nair, Alan R. Hirsch, M.D.

SUMMARY: Objective: To understand that tinnitus may be an aura for sleep paralysis. Background: Sleep paralysis is a transient-paralysis which occurs during awakening or falling asleep (Wilson, 1928). Those affected experience symptoms including visual, auditory, and haptic hallucinations, voluntary motor paralysis with intact ocular and respiratory motor movements, and diffuse or localized paresthesias. Sleep paralysis associated with tinnitus as an aura, has not heretofore been described. Methods: A 34 year-old, right-handed female presented with a 13 year history of sleep paralysis. One month prior, she began to notice tinnitus prior to the onset of sleep paralysis. The tinnitus was bilateral, high-pitched, with a volume intensity of 5/10, lasting seven seconds prior to sleep initiation. She denied hearing loss, vertigo, dizziness, cataplexy, deja vu and jamais vu. After termination of tinnitus, she experienced paresthesia, “like at a dentist’s office” radiating from her posterior neck, to her tongue and down to her toes. She described seeing a white-shadowy male figure moving around her room, lasting seven seconds. Accompanied by a masculine “ahh” sound, lasting for three seconds. The sleep paralysis occurred after these events, lasting up to eight hours, or until her husband wakes her. Results: Abnormalities in Physical Examination: General Examination: right arm hemangioma 4 by 5 cm. Reflexes: absent bilateral brachioradialis, 1+ bilateral quadriceps femoris and bilateral Achilles tendon. Neuropsychiatric Examination: Calibrated Finger Rub Auditory Screening Test: faint 70 AU (normal). Discussion: Tinnitus has been described as an aura for migraines (Schankin, 2014), temporal lobe epilepsy (TLE) (Florindo, 2006), and narcolepsy-cataplexy (Marco, 1978). These epochs may represent amigranous migraines, which initially present with tinnitus that occurs both during the day and night, forcing the patient to be partially awoken at night with induction of the sleep paralysis sequence. It would be worthwhile to query those with narcolepsy or sleep paralysis if tinnitus precedes the event.

No. 176

Dissociative Episodes in a Patient With REM Sleep Behavioral Disorder

Poster Presenter: Smitha Aailaboyina, M.D.

SUMMARY:
Mr. N is a 46-year-old OIF/OAF vet with history of PTSD and TBI, who was transferred from residential PTSD program to acute inpatient psychiatric unit for periods of dissociative episodes for the past 2 weeks during which he became violent and tried to hurt other peers and staff. While in residential PTSD program, Pt had multiple such incidents of these dream enactment behavior, occurring in the latter half of the sleep. Per staff report, Pt had episodes where he woke up suddenly at around 2 AM and began to throw books, pool table balls at other peers and staff present in the room. He even tried to punch one of the staff. The patients and staff retreated to a nearby shower room for safety; the situation was brought to control once the police intervened and tried to verbally engage Mr. N. Pt reports having no recollection of him chasing the peers or staff and reported having a combat related nightmare. He reports that he was trying to defend himself in his dream and goes on state that all he remembers was the staff saying “we are secure”. He reports similar incident 2 weeks back when a technician shined light into his eyes while sleeping. He jumped up, took his cane and went down the hallway making combat postures. This incident also occurred in latter half of the sleep, which was eventually resolved. He reports dreaming about an incident in which people were trying to attack him. Pt reports disruptive sleep, especially trouble staying asleep due to nightmares. He reports similar episodes in the past, evidenced by his girlfriend. Per his girlfriend, pt screams loud, thrashes, kicks and punches during those episodes which last for about 30-40 sec. He states in one of those episodes he was calling helicopter, telling them how many were killed, wounded etc. He endorses PTSD symptoms including flashbacks, re-living combat experiences, nightmares, hypervigilance and avoidance which are causing functional impairment. In this poster, we

discuss the variable presentation, considering the possibility of REM behavioral sleep disorder, polysomnographic findings in the disorder and further management.

No. 177

Working Memory and Dorsal Attention Network of Shift Workers: A Preliminary fMRI Study

Poster Presenter: Na-Young Shin
Lead Author: Woo Jung Kim, M.D.

SUMMARY:

Background: It is known that nonstandard working hours have deleterious effects on cognitive ability in shift worker. However, study focused on revealing culprit regions related to cognitive function in these populations is lacking. Therefore, this study aimed to discover neural substrates and possible predictors for working memory (WM) performance in these populations using task-based fMRI. Methods: We conducted prospective study and twelve shift-working nurses who had been performing shift work at least 6 months were enrolled. All participants underwent WM task-based fMRI. Sleep quality was measured by the Pittsburgh Sleep Quality Index (PSQI), depressive and anxiety symptoms by the Zung Self-Rating Depression and Anxiety scales, respectively, and perception of stress and job stress by the Perceived Stress Scale and the Korean Occupational Stress Scale, respectively. Results: All participants except for one (total PSQI score = 4) had poor quality of sleep (total PSQI score = 5; median, 7; range 4–14). Lower accuracy of 2-back task was significantly correlated with poor habitual sleep efficiency (higher PSQI component 4 score; r = –0.632, P = 0.027), more severe depressive symptoms (r = –0.610, P = 0.035). On multivariate linear regression, poor habitual sleep efficiency (odds ratio = 0.769, P = 0.023) was independent predictor for lower accuracy of 2-back task after adjustments for age (odds ratio = 1.064, P = 0.054) and years of education (odds ratio = 1.267, P = 0.015). On task-based fMRI analysis, When the participants were dichotomized to group with (n=3) and without (n=9) incorrect answer on 2-back task, dorsal attention network were hyperactivated in the group with incorrect answer. Conclusions: Decreased WM performance might be attributable to inefficient recruitment of dorsal attention network during WM task along with poor habitual sleep efficiency in shift-working nurses. This work was supported by the National Research Foundation of Korea (NRF) grant funded by the Korea government (MSIP; Ministry of Science, ICT & Future Planning) (No. NRF-2016R1C1B1009247).

No. 178

Obstructive Sleep Apnea Screening Outcomes in Adult Inpatient Psychiatric Unit at an Academic Medical Center

Poster Presenter: Fenil Patel
Co-Authors: Anne-Marie Duchemin, M.D., Rita M. Aouad, M.D., Subhdeep Virk, M.D.

SUMMARY:

Obstructive sleep apnea (OSA) and major psychiatric disorders such as major depressive disorder, schizophrenia, PTSD, and bipolar disorder have a bidirectional association as demonstrated in multiple studies to date (Sharafkhaneh et al, 2005; Gupta & Simpson, 2015). OSA also plays a crucial role in exacerbation of comorbid medical illnesses in patients with severe and persistent psychiatric disorders, leading to significantly shortened lifespans in these patients. OSA can cause severe cardiovascular disease, metabolic dysfunction, and neurocognitive deficits as a result of nocturnal hypoxia and hypercapnia (Hashmi & Khawaja, 2014). In addition, several psychotropic medications have direct inhibitory effects on the central nervous system or indirect effects like weight gain which may exacerbate OSA symptoms (Zolezzi & Heck, 2015). Given this overwhelming data, OSA screenings were started for all psychiatric consults to the emergency department (ED) at the Ohio State University Wexner Medical Center beginning in 2014. Patients were screened in the ED using the STOP-Bang questionnaire. STOP-Bang is a short questionnaire that can be employed by any trained health care professional and is easy to implement even in the setting of busy emergency departments. Those patients who screened positive on the STOP-Bang and were subsequently hospitalized into the psychiatric wards were monitored with overnight pulse oximeter for nocturnal hypoxia. Patients with significant desaturations on the overnight pulse oximeter monitoring were referred to a sleep center consultation for polysomnography. We hypothesized

that OSA is underdiagnosed among psychiatric patients. This is a retrospective study using chart review, analyzing orders for overnight pulse oximetry and referral for polysomnography among the adult inpatients during two comparative time periods. This study reveals the importance of active screening for obstructive sleep apnea in psychiatric patients. There is ample evidence to suggest that treatment of OSA can help reduce psychiatric comorbidities. Identification of the disorder can also inform the choice and/or dosing of psychotropic treatments (Zolezzi & Heck, 2015). Therefore, detecting and treating OSA should be a priority for all mental health professionals.

No. 179

Relationship Between Sleep Patterns and Mental Illness of Korean Adolescents

Poster Presenter: Junsoo Chung
Co-Author: Min-Hyeon Park

SUMMARY: Objectives: In past studies, Evening-type reports more often mental disorders than Morning-type, and depression are known to be associated with Evening-type. In the study of adolescents, Evening-type are known to be associated with behavioral/emotional problems and are at risk of suicide. In this study we aimed to investigate factors affecting the difference in sleep patterns between morning and evening type in Korean adolescents and accompanying mental illnesses. Methods: The questionnaire survey was done for students in middle and high schools located in Seoul. The participants answered the questionnaires about Sleep patterns(School Sleep Habits Survey, SSS), sleep/wake schedules both on school days and weekends, Sleep problem(Epworth Sleepiness Scale, ESS; Insomnia Severity Index, ISI) and depressive symptoms(The Children's depression inventory, CDI), anxiety symptoms (The revised Children's Manifest Anxiety Scale, RCMAS), internet use(Young's internet addiction scale). The morning and evening groups were defined as participants who scored in the top or bottom 25% of the morningness-eveningness scale, respectively(MT: Morning-type group, ET: Evening-type group). Results: A total of 747 students(Male: N=449, Mean age=15.59±1.291; Female: N=298, Mean age=14.27±1.045) participated in the survey. Among them, 207 were MT(Male:87, Female:120) and 208 were ET(Male:155, Female:53). There were significant differences in average bedtime on school days and weekends between MT and ET(MT: 23:48PM and 00:10AM, ET: 00:16AM and 00:55AM, respectively on school days and weekends). There were significant differences in average wake time on weekends between MT and ET(MT: 09:30AM, ET: 10:15AM), but no significant differences in wake time on school days between MT and ET. There were significant differences in internet use on school days and weekends between MT and ET(MT: 1.42 hours and 2.70 hours, ET: 1.82 hours and 3.36 hours, respectively on school days and weekends). There was significant difference in Young's internet addiction scale(MT: 31.79, ET: 34.56, p=0.025) and SSS(MT:30.30, ET:34.09, p<0.04). ET tended to score higher than MT in ESS(MT:6.38, ET:7.13, p=0.06), ISI(MT=9.20, ET=9.78, p=0.14) but not significant. There were no significant differences in CDI(MT: 13.82, ET:14.92, p=0.132), RCMAS(MT:11.30, ET:10.92, p=0.528) between MT and ET. Conclusions: Regardless of sleep patterns, Korean adolescents showed signs of mild insomnia and daytime sleepiness. ET tended to spend more time using the internet at bedtime and therefore showed more severe daytime sleepiness and internet addiction than MT. In comparison of wake time, ET wake up significantly later than MT on weekends, but there was no significant difference on school days, which seems to have been a major limitation of school hours, rather than biological factors. In this study, significant differences in depression and anxiety measures were not identified between MT and ET, but only in their tendency.

No. 180

Differentiating Between Bipolar Spectrum Disorder and Severe Major Depressive Disorder With Sleep State Misperception

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

SUMMARY:
Mrs. IW is a 50-year-old woman who presented to the clinic with a historical diagnosis of Bipolar Spectrum Disorder with psychosis. She had been diagnosed 1.5 years before her intake appointment at our clinic. This diagnosis was made following a one-month hospital stay after she was in a police

standoff for over 8 hours where she was throwing items out of her broken windows and digging erratically in her yard. She was ultimately discharged on a mood stabilizer and a long-acting injectable antipsychotics. Her thought process, content, and sleep notably improved during her hospitalization. After treatment, she was able to explain her behavior leading up to her hospital admission which she admitted was uncharacteristic of her. However, she continued to have a chief complaint of insomnia, "brain fog," and low mood. The exam included a continuously blunted affect, linear thought process, concrete abstraction, and her thought content was focused, and at times ruminative, on her disability with difficulties swaying her to other conversational topics. She required assistance from her husband to eat and bathe as she felt her symptoms has made it difficult for her to function. She tried multiple antipsychotics, three different mood stabilizers, TMS, and numerous hypnotics with no improvements in her symptoms. Her antipsychotic, which started during her hospitalization, was tapered off because she no longer had psychotic symptoms. She had testing done for menopausal hormones, autoimmune markers, and standard psychosis lab workup which were all unremarkable. Her EEG and MRI were also unremarkable after consultation with neurology. She ultimately received a sleep study which revealed a standard and efficient sleep pattern indicative of Sleep State Misperception. As there was less evidence for a possible mixed state of Bipolar Disorder, a decision was made to discontinue her mood stabilizer, the only medication she was on at the time. After stopping her medication, she was no longer blunted. However, she continued to endorse low mood, insomnia, and eventual suicidal ideations. She was admitted and a plan to start an antidepressant was pursued to address a possible severe major depressive episode. After several weeks, her mood and concerns for insomnia steadily improved. In this poster, we explore the difficulties with differentiating between a mixed state of a Bipolar Spectrum Disorder and a severe Major Depressive Episode with Sleep State Misperception as symptoms endorsed for these conditions are commonly similar. An accurate diagnosis is warranted as the treatments for these conditions are different.

No. 181

Sleepless in Staten Island: A Look at Suspected Valerian Root Toxicity and Adverse Side Effects

Poster Presenter: Prince Prabhakar, M.D.
Co-Authors: Aleksandr Zverinskiy, M.D., Kinjal Patel, M.D.

SUMMARY:
Valerian root has been used for centuries by many European and Asian cultures for insomnia, restlessness, anxiety, and other ailments. Its use still remains common today and is found in various preparations such as in herbal teas and extracts, with variable active ingredients and doses. The speculated mechanism of action is based on potentiating GABAa receptors activity. Many times the use of herbal medication is not reported to or screened by treating physicians, which may lead to interactions and adverse effects. This case report discusses a 47 year old female of Eastern European descent with history of Major Depressive Disorder, Anxiety and panic attacks currently in treatment with Lorazepam and Escitalopram. Patient has past medical history of Lyme disease treated 3 months prior with Doxycycline. There is no family psychiatric history. Patient emigrated from her home country about 25 years ago. Patient's symptoms of depression, anxiety and insomnia started about 4 years ago who presented with worsening "restless sleep" and insomnia, in context of suspected valerian root toxicity. Patient presented to the outpatient clinic complaining of difficultly with sleep initiation and maintenance. Additionally she described seeing the image of a bloody fish when she closed her eyes causing her significant distress. Patient denies intrusive images like this during the day and denies symptoms consistent with psychosis and mania. She relates when she was able to sleep she did not find it to be restful. During this time patient related that her depression and anxiety had improved during the days. Upon further questioning, patient revealed that she was using valerian root for sleep concurrently with Escitalopram and Lorazepam. Studies have shown the interaction of valerian root and Escitalopram through the enzymes CYP3A4, CYP2D6 has potential to elevate medication levels or even lead to serotonin syndrome. Additionally, Use of valerian root has been

associated with insomnia and anxiety. The patient was advised to keep good sleep hygiene and to stop the use of valerian root. She was started on Mirtazapine 7.5 mg and Escitalopram was discontinued. In the next follow up visit, patient reported resolution of insomnia and improvement in her sleep. This case illustrates the importance of screening patients for herbal remedies that may interact with prescribed medications, as in this case between Escitalopram and valerian root. It also brings to light the paradoxical side effects such as insomnia and worsening anxiety. Various studies have attempted to establish efficacy and risks of Valerian root. Though many studies show modest benefits as compared to placebo, it is difficult to conclude benefits due to non-standardization of Valerian root preparations. It is imperative to screen for herbal medications as they may result in adverse side effects and possible interactions with prescribed medications

No. 182

Discontinuation Rate of Doxepin in Insomnia Patients

Poster Presenter: Yongwon Choi
Co-Authors: Jihyeon Lee, Jong-Hyun Jeong

SUMMARY: Objectives: We aimed to investigate the discontinuation rate and reasons of doxepin base prescription pattern in insomnia outpatients of psychiatry department of a university hospital. Methods: 534 patients prescribed doxepin were screened. 201 patients were included and reviewed for their medical records retrospectively. The discontinuation rate and reasons of doxepin after 2 months of prescription were investigated. Patients were divided into three groups according to the prescription patterns. The initial group, prescribed doxepin as the first hypnotic, the add-on group, prescribed doxepin while maintaining existing hypnotics, and the switching group, prescribed doxepin after discontinuation of existing hypnotics. Results: The discontinuation rate after 2 months of prescription of doxepin was 56.2%. There were significant differences in the discontinuation rate among three groups. The initial group had the highest while the add-on group had the lowest (P=0.018). In reasons for discontinuation of doxepin among three groups, lack of efficacy (P<0.001) and adverse events (P<0.001) were significantly higher in the add-on group. In the initial group, patient's refusal (P=0.022) and unknown or loss to follow up (P<0.001) were significantly higher. Conclusions: The results of this study suggested that add-on is superior than switching method and gradual reduction of existing hypnotics is necessary to maintain doxepin treatment and prevent adverse events. Additional large scale prospective studies are needed to evaluate various factors and risks of discontinuation of doxepin. Keywords: discontinuation, doxepin, insomnia

Poster Session 2

No. 1

Traumatic Brain Injury Induced Psychosis

Poster Presenter: Nawfel Abdulameer, M.D.

SUMMARY:
Contemporarily, the public associates traumatic brain injuries (TBI) with a generalized deterioration in function, aggressiveness, and suicidality with athletics. However, crippling conditions comparable to schizophrenia can also manifest in any victim of traumatic brain injury. This case report covers the story of a young patient whose ambitions were ruined by multiple brain injuries (strokes and seizures) leading to a chronic, baseline psychosis. His life became dominated with paranoia, irritability, and regression to his high-school years. His medical management was comparable to a patient with Schizophrenia. The discussion that follows is on the evidence based approach to the severity of presentation, neuroimaging findings, and prognosis of TBI induced psychosis in comparison with traditional schizophrenia.

No. 2

Role of Adjunctive Estrogen in the Treatment of Schizophrenia in Women: A Systematic Review

Poster Presenter: Viviana Alvarez Toro, M.D.
Co-Author: Elise E. Turner, M.D.

SUMMARY:
Background: Some evidence suggests estrogen and the modulation of estrogen receptors can help treat schizophrenia. We conducted a systematic review of the literature to assess the effects of adjunctive

estrogen treatment on positive and negative symptoms of schizophrenia in adult women compared to standard of care treatment (antipsychotics). Methods: We searched all articles in PubMed and PsychInfo (English and Spanish language) that included the words "schizophrenia" and "estrogen", "estradiol," or "oestrogen." Studies were limited to randomized controlled trials (RCT) that only included adult women diagnosed with schizophrenia based on the DSM-IV, DSM-IV-TR or DSM-V criteria. The RCTs were also limited to studies that used evidenced based scales, such as the PANNS or BPRS, to measure the positive and negative symptoms of schizophrenia. Results: Six studies met inclusion criteria and were deemed to have a low risk of bias. Five of the six studies found a statistically significant reduction in symptoms as measured by the PANNS or BPRS scales. Conclusions: Estrogen as an adjunctive treatment to the standard of care decreases the positive and negative symptoms of schizophrenia in women. Clinically, this finding is extremely relevant and may expand treatment options for women with schizophrenia.

No. 3

Excited Catatonia: Primary Illness or Secondary to a Hidden Psychiatric Disorder?

Poster Presenter: Viviana Alvarez Toro, M.D.
Co-Author: E. Jane Richardson, M.D.

SUMMARY:

Ms. M, a 27-year-old Caucasian female with a past history of major depressive disorder and generalized anxiety disorder, was brought in to the psychiatric emergency room with an acute onset of altered mental status and disorganized, combative behavior. She was admitted to the inpatient psychiatric service, after an appropriate medical workup, and her behavior was determined to be secondary to excited catatonia, or delirious mania. Nevertheless, a primary etiology of catatonia was unclear at that time. While on the unit, Ms. M received treatment with benzodiazepines, and within a week, quickly returned to her baseline. One year later, after being tapered off benzodiazepines in the outpatient setting, Ms. M had a similar relapse in symptoms, where she began having disorganized behavior in addition to a confused mental state. At that time, Ms. M engaged in repetitive behaviors and speech, which were quickly identified by family. Her symptoms improved significantly again by restarting benzodiazepines in the outpatient setting. Nevertheless, she has had intermittent psychotic symptoms since. Given Ms. M's guarded presentation, in addition to the fact that she has been able to maintain a somewhat high level of functioning, it has been difficult to determine if Ms. M's catatonic symptoms come as a consequence of an underlying psychiatric illness, or if it is part of an independent etiology. Understanding etiology when treating catatonia is essential, not only in terms of being able to understand the illness, but also, in terms of finding appropriate treatment. Ms. M's case aids us in understanding how to take all factors into consideration when assessing for symptoms, but also, how to be cautious when choosing medications, which can often alter the course of the illness.

No. 4

Atypical Presentation of Psychosis in a Patient With Mild Autism and Cannabis-Induced Psychosis

Poster Presenter: Jennifer Harkey, D.O.

SUMMARY:

20 year-old Caucasian male Navy recruit of 1 week with past psychiatric history of mild autism spectrum disorder who presents with a 3-day history of transient visual hallucinations of black birds and black dots in the lower half of his visual field bilaterally followed by anxiety and confusion. Each episode lasts for 10-15 min. and is precipitated by getting yelled at during boot camp. Patient refers to each episode as a "white-out." During episodes of confusion, patient is unable to recall his location and current activities. He denies loss of consciousness, seizure, and history of head trauma. Patient reports use of cannabis 3 times per day since the summer of 2016. Patient was started on venlafaxine for depressed mood and hydroxyzine for anxiety. Patient continued to report anxiety, so hydroxyzine was discontinued and patient was started on lorazepam. Patient became more comfortable socializing and showed improvement with regard to articulating words. He continued to have intermittent visual hallucinations of black birds. Risperidone was started for visual hallucinations.

Following this, patient no longer saw formed objects, only reporting "glitter in the shower." Patient exhibited visual hallucinations and marked improvement in response to a lorazepam challenge, suggesting catatonia, despite the absence of overt catatonic features including immobility, rigidity, mutism, posturing, excessive motor activity, stupor, negativism, staring, and echolalia. He also demonstrated disorganized speech in the form of difficulty verbalizing his thoughts and decreased fluency; however, this may be related to underlying social anxiety or mild autism spectrum disorder. Patient's visual hallucinations improved significantly on risperidone by the time of discharge. Given the patient's regular use of cannabis from the summer of 2016 to 12/2016 and association between cannabis use and schizophrenia, this hospitalization may represent a prodromal episode of schizophrenia.

No. 5

Decompensation of Schizophrenia on Clozapine and Pramipexole

Poster Presenter: Emily Amador
Co-Authors: Jendayi L. Olabisi, M.D., Elizabeth Cunningham

SUMMARY:
Dopamine agonists represent a medication class used to treat various neurological disorders. One of the more serious but rare adverse effects of this medication class is psychosis. This is a case of a 56-year-old female with a history of previously well controlled schizophrenia who presented with acute psychotic symptoms shortly after starting a dopamine agonist medication for restless legs syndrome. At initial presentation, the patient's symptoms included paranoid delusions, auditory hallucinations, and episodic hemiparesis, concerning for conversion disorder. Prior to this admission, the patient had been stabilized on clozapine for thirty years after having a prior history of multiple hospital admissions and several antipsychotic medication trials before clozapine was initiated. Three months prior to the admission, the patient was started on a dopamine agonist, pramipexole, for treatment of restless legs syndrome. Initial workup at the time of presentation indicated that the patient had therapeutic clozapine levels, which suggests a high likelihood for medication compliance. Further medical workup as well as thorough history gathering and collateral information from relatives indicated no recent stressors or changes that may have contributed to this episode. It was thought that the use of pramipexole had caused the patient's psychotic decompensation, despite the use of clozapine. To date, several studies have demonstrated an increased risk of psychosis with dopamine agonists (1, 2), however, the use of these medications in patients with a history of psychotic disorders while successfully stabilized on an antipsychotic medication has not been fully described. The purpose of this case study is to highlight the importance of identifying patients at an increased risk of developing psychiatric symptoms from this medication class. Additionally, this case will explore current knowledge of the use of dopamine agonists in vulnerable patients with psychiatric diagnoses.

No. 6

Medication Dosing at the End of Life for Persons With Psychotic Disorders

Poster Presenter: Salma Rashan Velazquez, M.D.
Co-Author: Sheni Meghani

SUMMARY:
Background: There is little research concerning end-of-life care in patients with chronic psychotic disorders. Currently, there is a lack of specific guidelines regarding medication dosing and symptom management for patients with psychotic disorders as they receive hospice care at the end of their life. Aim: To review dosing requirements of medications for symptom management at the end of life for patients with schizophrenia and schizoaffective disorder receiving hospice care. Methods: A retrospective chart review of patients receiving hospice care was conducted at the Topeka VA Medical Center. Included in the review were patients who died between January 1, 2018 and May 31, 2018. Specifically, the doses of opiates, benzodiazepines and antipsychotics were reviewed during the last 48 hours of life. Results: A total of 20 patient charts were reviewed, 95% of which were men, with an average age of 74.5 years at the time of death. Out of these 20 patients, 4 patients (20%) had a secondary diagnosis of either schizophrenia or

schizoaffective disorder (group 1) and 16 (80%) did not have diagnosis of schizophrenia or schizoaffective disorder (group 2). During the last 48 hours of life, patients in group 1 required an average of 105 mg of parenteral morphine equivalents (PME), 20.5 mg of lorazepam and 54 mg of haloperidol. Patients in group 2 required 59 mg of PME, 18.6 mg of lorazepam and 19 mg of haloperidol. Conclusions: Patients with comorbid psychotic disorders required higher doses of opiates, benzodiazepines and antipsychotics in order to manage symptoms in the last 48 hours of life when compared to patients without psychotic disorders. Agitation, pain, and air hunger were documented in both group 1 and group 2, but the differences in dosage requirements may point to a unique need in patients with psychotic disorders. Possible explanations for these differences may include exacerbation of psychotic symptoms at the end of life (such as paranoia and hallucinations), higher levels of anxiety, or difficulty in the ability to communicate needs. Overall these results suggest that there is a greater degree of suffering at the end of life for patients with psychotic disorders and that more research is warranted to address the needs of these patients.

No. 7

Challenges of Managing Catatonia and Underlying Mood Disorder With Psychotic Features in a Treatment-Naïve Patient

Poster Presenter: Christopher Taekyu Lim, M.D.
Co-Author: Jessica L. Stern, M.D.

SUMMARY:

Background: Catatonia frequently occurs in the setting of a primary mood disorder, yet the management of such patients, particularly in the pediatric population, entails a number of challenges. We discuss a case of a treatment-naive adolescent male, with significant underlying cognitive and learning deficits, who presented with catatonia in the setting of a mood episode with psychotic features. Case: A 14-year-old male with developmental delay, no prior psychopharmacologic treatment, prior depressive symptoms, possible prior manic symptoms, and a previous episode of catatonia that resolved under observation in a medical hospital outside the US presented to an outside hospital after two weeks of depressed mood and social withdrawal followed by three days of progressive withdrawal, command auditory hallucinations, rigidity, and verbal unresponsiveness. The patient was transferred to our inpatient adolescent psychiatric unit after non-psychiatric primary etiologies of catatonia were ruled out. The catatonia reportedly resolved with a total daily dose of 18 milligrams of lorazepam divided into 3-milligram doses every 4 hours. We tapered the dose of lorazepam and initiated olanzapine for maintenance treatment of his underlying mood disorder with psychotic features. However, there was some recurrence of catatonic symptoms in the course of the lorazepam taper; in addition, as the dose of the benzodiazepine was adjusted, there was concern for possible benzodiazepine withdrawal. Thus, the dose of lorazepam was increased and the dose of olanzapine was decreased. The patient remained stable leading up to and following discharge. Discussion: We discuss several challenges encountered in this case: 1) clarifying the primary mood disorder diagnosis; 2) assessing for clinical improvement in the setting of medication adjustments and the patient's developmental delay; 3) selecting maintenance medications and doses to address the catatonia, treat the underlying mood disorder, and minimize adverse effects; 4) making treatment decisions in the setting of limited literature and guidelines.

No. 8

Noninvasive Brain Stimulation (NIBS) Techniques Promise Efficacy and Safety as an Add-on Therapy in the Treatment of Negative Symptoms in Schizophrenia

Poster Presenter: Banu O. Karadag, M.D.
Co-Authors: Muhammad Aadil, M.D., Rashi Aggarwal, M.D.

SUMMARY:

Background: Negative symptoms (NS), which comprise two main domains 'diminished expression' and 'avolition-apathy', are very debilitating and shown to be associated with poor social and occupational outcomes and cognitive dysfunction. Despite the developments in the psychopharmacological treatments, the efficacy for the treatment of NS is still very limited. Since the

dorsolateral prefrontal cortex dysfunction is known to play a role in the NS of schizophrenia, activating this area with NIBS techniques such as transcranial magnetic stimulation (TMS) and transcranial direct current stimulation (tDCS) have been hypothesized to be effective. We review the relevant randomized controlled trials (RCT) in the literature, which focused on investigating the efficacy of these modalities compared to sham stimulation. Method: The literature search was performed through the databases PubMed, PsycInfo, Cochrane Database and Web of Science from 2002 to 2018. We used MeSH terms 'transcranial magnetic stimulation' AND 'negative symptoms'. Total of 185 articles were reviewed and 17 RCTs were selected. We also reviewed the literature for tDCS with the MeSH terms 'transcranial direct current stimulation' AND 'negative symptoms'. Out of 58 articles, 5 RTCs were selected related to this subject. Results: There is significant difference between sham and active intervention in favor of active TMS. Most common target brain area for treatment with TMS is left DLPFC, some studies are performed in both right and left DLPFC. Activation of left DLPFC has shown to be effective. However the number of subjects in the studies is small and the methodologies differ from each other, which possibly lead to inconsistent results. Some of the studies did not report whether they controlled the results for depressive symptoms. Nevertheless these results are promising. In all studies NIBS was added to the antipsychotic treatment. Shortest duration of treatment is 2 weeks and longest is 6 weeks. Most common protocol is 10Hz, which has been found effective. Post treatment follow up is usually lacking or available for a very short period of time. NIBS has been found to be safe and feasible. None of the studies have investigated the long-term effects or the necessity for maintenance therapy so far. There are similar results for tDCS, although the number of studies is much less. Four RCTs revealed significant effects of tDCS compared to sham stimulation with no adverse events as an additional treatment with antipsychotics. Conclusion: More longitudinal studies with longer follow up duration with larger samples are needed to strengthen the evidence for the efficacy of NIBS in treatment of NS. These studies also may contribute to understand the underlying physiopathology of the NS.

No. 9

Treatment Options for Postpartum Psychosis With Catatonia

Poster Presenter: Stephanie Wick, D.O.

SUMMARY:

Post-partum psychosis with catatonia is a relatively rare and poorly understood pathology. We present case of a 30-year-old Caucasian woman who presented to the ED with new-onset disorganization, auditory and visual hallucinations, and bizarre behavior 10 days post delivery of her first child. Patient was diagnosed with post-partum psychosis and subsequently developed catatonia, which was treatment resistant. There is little research into the most effective treatment of post-partum psychosis with catatonia. Through literature review the goal of this poster presentation is to discuss the treatment options of post-partum psychosis with catatonia.

No. 10

Evaluation of Gingko Biloba as an Effective Treatment for Tardive Dyskinesia: A Case Report

Poster Presenter: Philip A. Bonanno, M.S.
Co-Authors: Sri Puli, Najeeb Hussain

SUMMARY:

Background: Tardive dyskinesia (TD) is a motor syndrome that manifests as a side effect of antipsychotic therapy. It is characterized by repetitive and involuntary hyperkinetic movements and affects approximately 30% of patients managed with neuroleptic therapy. Its pathophysiology is thought to be related to increased production of neurotoxic free radicals due to compensatory increases in dopamine metabolism. Free radical accumulation is thought to damage motor regions, such as the basal ganglia, leading to characteristic hyperkinetic movements. In patients requiring continued antipsychotic therapy, treatment of TD is often challenging for physicians as few evidence-based therapeutic options are available and patients often respond variably. Gingko biloba, an ancient Chinese tree, has been explored as a treatment option for TD due to its potent antioxidant properties and propensity for increasing BDNF in the brain, though its efficacy has yet to be evaluated in depth. The current case, presents a young

schizophrenic male with distressing TD, who responded quickly to Gingko biloba treatment, as evidenced by assessment with the Abnormal Involuntary Movement Scale (AIMS). Case Presentation: Mr. R is a 24 year old male with a history of schizoaffective disorder, bipolar type, and multiple psychiatric admissions, who presented to our tertiary care medical center for aggressive and bizarre behavior. He was admitted to our inpatient psychiatric unit for stabilization. Outpatient medications were lithium 300 mg BID, olanzapine 10 mg BID, amantadine (dose unknown), and benztropine 2 mg BID. Upon evaluation, Mr. R displayed severe distressing neck hyperextension, involuntary jaw clenching, and restless fingers, which he states has been present for 2-3 years. Baseline AIMS score: 17/40. Mr. R was started on clonazepam 1 mg PO BID, with no effect on TD. We attempted to start valbenazine 40 mg qd, though insurance denied our request due to cost considerations. Mr. R was offered clozapine, though he refused due to need for frequent blood draws. Recent evidence suggests Gingko biloba is "probably effective" for treatment of TD, and so Mr. R was started on 120 mg daily and uptitrated to 240 mg daily. AIMS score after one week: 6/40, with reduced distress, impairment, and pain associated with TD. Mr. R is continuing to be followed for resolution of TD. Conclusion: While various treatment options exist for TD, most have insufficient evidence to support or refute their efficacy. Deutetrabenazine and valbenazine are new medications hailed as breakthroughs for their successful treatment of TD though they remain expensive and inaccessible to many patients. Gingko biloba is a relatively inexpensive and safe treatment option that was effective in reducing the symptoms of TD in the current case. More research should evaluate this herb as treatment for TD, and physicians should consider it as an option for patients with TD who are not responding to other treatments.

No. 11

A Pilot Study of Online Drug Forums as a Source of Self-Report Data: Do Self-Reports of NMDA Antagonist Use Support the PCP Model of Schizophrenia?

Poster Presenter: Philip A. Bonanno, M.S.
Lead Author: Joshua Dumbroff
Co-Authors: Michael Hughes, Douglas Opler, M.D.

SUMMARY:
Background: It is known that the dopamine theory of schizophrenia (SZ) does not fully explain pathology of SZ. It is speculated that NMDA receptor (NMDA-R) antagonism is a better model due to evidence of psychotogenic effects of NMDA antagonists, the discovery of NMDA-related genes implicated in the pathogenesis of SZ (Moghaddam & Javitt, 2012), a potential NMDA-related mechanism of clozapine (Lane et al., 2006), and the ability of glutamatergic dysfunction to impair tonal discrimination as observed in SZ and as induced by NMDA-R antagonists like ketamine or PCP (Javitt & Sweet, 2015). It is proposed that NMDA antagonists are appropriate models of SZ. Given the challenges posed by administering potentially harmful substances experimentally, online forums may be a rich source of self-report data. We hypothesize that online forums would be a useful source of data on PCP use, and that these subjective experiences would meet the DSM-5 criteria of SZ bolstering the NMDA hypothesis. Methods: A search was conducted on three forums: Reddit, Erowid, and Drugs-Forum. Search terms included "PCP" and "PCP experience". Comments on original posts were explored as well. On Erowid, a search was conducted by exploring "PCP" under the "chemicals" subsection. Posts were selected if they included a self-report description of PCP use without the use of other drugs. Experiences using PCP were examined considering the DSM-5 criteria for SZ. Symptoms were either present (P), not present (NP), or unclear if they were present (U). All posts were collected and reviewed by authors JD, MH, and PB. Discrepancies between investigators were resolved via discussion. Results: A total of 27 posts describing experiences using PCP were evaluated. The findings are shown below: Delusions: 22% P, 63% NP, 15% U Hallucinations: 44.5% P, 44.5% NP, 11% U Disorganized Speech: 22% P, 70% NP, 8% U Disorganized/Catatonic (D/C) Behavior: 48% P, 15% NP, 37% U Negative Symptoms: 18.5% P, 44.5% NP, 37% U The most prevalent symptom of SZ with PCP use was disorganized/catatonic behavior. The least common was disorganized speech. Many posts contained questionable presence of D/C behavior and negative symptoms. Conclusions: Results show a

definitive overlap between symptoms of PCP use and DSM-5 SZ criteria. Many potential confounding variables and unknowns were present. We were unable to consistently obtain data on comorbidities, gender, age, dose, or length of use. It was unclear if additional unreported drugs were used. There is potential bias in the specific types of people who may report their experience. Further research into the role of NMDA-R dysfunction in the pathophysiology of SZ is ongoing and needed. Using online forums as a data source appears to be confirmed as a potentially useful source of subjective self-report data, although it suffers from limitations that require supplementary sources of evidence. That said, this is a readily available, safe, and inexpensive method of research.

No. 12

A Case of New-Onset Auditory Verbal Hallucinations and Delusions Following Subacute Hearing Loss/Bilateral Cerumen Impaction

Poster Presenter: Philip A. Bonanno, M.S.
Co-Authors: Joshua Dumbroff, Douglas Opler, M.D.

SUMMARY:

Background: Auditory verbal hallucinations (AVH) are most commonly associated with primary psychotic disorders such as schizophrenia (SZ), but have also been observed in approximately 15% of the healthy population. In rare cases, new-onset AVH have been seen following hearing loss, though this has only been documented in a handful of case reports and has not been well-described. A similar phenomenon, dubbed “musical hallucinosis” (MH) has been better described. This condition is characterized by new-onset auditory hallucinations of a tonal or melodic character following hearing loss and has been considered as the auditory variant of Charles-Bonnet syndrome (CBS), a condition where complex visual hallucinations follow the loss of visual acuity due to a range of ophthalmologic conditions. These conditions are best explained by two complementary theories: Bayesian Cognitive Modeling and Sensory Deafferentiation, which will be discussed. CBS is the best-studied of these conditions, and helps to model the current case, though much is still unknown. Case Description: Ms. T is a 70-year-old female with a history of essential hypertension and opioid-use disorder in full sustained remission who presented to our tertiary care medical center with a chief complaint of threatening AVH that began recently. ROS were significant for bilateral (b/l) otalgia and tinnitus, but was otherwise negative. Her physical exam was significant for b/l hearing loss, and CT head only demonstrated evidence of chronic microvascular ischemic changes. Labs revealed mild hyponatremia and acute kidney injury leading to admission on the medicine service; B12, Folate, and TFTs were within normal limits, and RPR and HIV were negative. Psychiatry was consulted regarding AVH. Initial interview revealed that the voices had only been present for two months, were threatening in nature, and appeared shortly after sub-acute hearing loss due to b/l cerumen impaction. The patient demonstrated rich persecutory delusions as a result of the voices. MoCA testing was performed indicating underlying cognitive impairment/dementia, though this result may have been confounded by hearing loss. PHQ-9 testing revealed symptoms of moderate depression with unclear time of onset. The patient was started on aripiprazole, which was titrated to 20 mg daily, leading to clinically significant reductions in the intensity of AVH. Patient was to follow up with ENT outpatient for cerumenolysis. Conclusions: Hearing loss anteceding AVH is a rare phenomenon, though can be potentially understood in the context of MH, CBS, and phantom limb syndrome. Our patient matched certain characteristics related to other sensory deafferentiation disorders which are discussed in the current report. While our patient responded to neuroleptic therapy, general management and treatment of patients with this condition have not yet been established; it is also unclear if resolution of hearing loss would serve as definitive treatment.

No. 13

A Case Report of Morgellons Disease

Poster Presenter: Matthew Scott Vanden Hoek, M.D.

SUMMARY:

Delusional infestation is a rare disorder characterized by the fixed, false belief that the body is infested with parasites or other living organisms. This may present as a primary psychiatric disorder, with the delusion of parasitic infection as its sole

manifestation, or secondary to another psychiatric disorder such as substance abuse. Morgellons disease is a syndrome characterized by symptoms that appear to be identical to delusional infestation, but with the addition of the affected patient's belief that inanimate objects such as fibers are present in skin lesions. There is no standard treatment for delusional infestation. Two double-blind placebo-controlled studies have been conducted utilizing pimozide with positive results; however, the successful use of atypical antipsychotics has been limited to case reports. We report a case of Morgellons disease in a 49-year-old woman who was referred to our clinic by her dermatologist and subsequently treated with risperidone and escitalopram.

No. 14

Religious Fasting Leading to a PEG Tube for More Than One Year While on Clozapine: Behavior Driven by OCD or Psychosis?

Poster Presenter: Salman Elfeky, M.D.
Co-Author: Dante Martin Durand, M.D.

SUMMARY:

Patient is a 24 yo Hispanic, Christian-identifying male previously diagnosed with schizophrenia who presented accompanied by father to an academic outpatient psychiatric clinic in Miami for medication management. Patient was seen by an outpatient psychiatrist at a rate of every 3 months and family desired closer follow-up. Patient was received on a regimen of clozapine 300mg per day which patient self-administered through a PEG tube that had already been in place for ~1year. Patient had been only drinking water by mouth but consuming prescribed nutritional supplements and medications strictly by PEG tube as per his absolute preference. A year earlier, patient had presented to an outside hospital on clozapine 150mg PO total per day with significant weight-loss due to religious-themed fasting (ie, father's complaint of "not eating for 3 months" with weight decrease from 170lbs to 80 lbs noted during that admission). Patient was hospitalized for 2 months during which a PEG-tube was placed and during which clozapine was increased to a total of 350mg total per day. Patient was with prior therapy trials and >20 ECT sessions but did not progress regarding PO intake. He was very articulate in defending his stance that not eating is "God's will" and that he didn't want to disappoint God. In clinic, patient would explain that his fast began when he had a [guilt-provoking] thought that he enjoyed a piece of cake that he was eating more than he enjoyed God. Patient spends his mornings reading scriptures to protect him from demonic forces/influences and would spend ~10 hours a day in Church on a strict/disciplined basis. Patient expressed a high level of "guilt" if he tried to pursue anything non-religious (ie, productive tasks). In clinic and after months of CBT-Psychosis attempts, patient's active mental illness symptoms were found to have a clinical presentation consistent with OCD-Scrupulosity. His guilt burden was consistent with OCD-type-guilt and not a traditional psychosis-driven delusion-of-guilt. On thorough review of his symptoms and historical narrative, his guilt and neuroticism were suspected to be explained by OCD-scrupulosity in the context of clozapine (ie, a known side effect of clozapine is worsening of OCD). Prozac was introduced and titrated to 80mg per day with mild improvement to his general OCD burden but no significant improvement regarding to PO intake (ie, strictly water). Clozapine regimen was then decreased from 300mg PO daily total to 100mg PO daily total. Each time patient's clozapine was decreased he experienced joy/happiness/relief (ie, opposite of guilt) and guilt burden was observed to decrease. Patient initially began listening to music again (ie, after having not listened to music in years). Patient began completing assigned readings, writing assignments, and even applied to a job while on a reduced clozapine regimen . On the reduced clozapine regimen, he removed the PEG tube and began eating 3 times a day!

No. 15

Self Penile Amputation by a Patient With Schizophrenia: A Case Report

Poster Presenter: Abdelkarim Mahmoud Kassem Ashour, M.B.B.S.
Co-Authors: Menahi Al Subaie, Mostafa Hussein Sultan Mohamed, M.B.B.S.

SUMMARY:

Mr. S, a 34-year-old male, with a past history of schizophrenia, history of violence act using a sharp object, no past history of chronic medical illness, or

psychoactive substance use. The patient used to be admitted many times to psychiatry inpatient unit. He presented to psychiatric Emergency with recent onset of a belief that someone drew an image of his face on his penis. He was admitted to the psychiatric inpatient unit and was managed as a case of schizophrenia with antipsychotics (tablet haloperidol 20 mg/day, Amisulpride 800mg/day). After 18 days of admission, he was granted for out on pass with his father for 24 hours. At home, he went to his room, latched the door and sliced off his penis from the base with a shaving blade and made deep cuts around his scrotum. He did not perceive any pain or expressed any shock and did not get perturbed after seeing blood. His father brought him immediately to the Emergency Room. He was managed by urology and plastic surgery teams and applied for many surgeries and the amputated part had been replanted successfully. After that, he was transferred to the psychiatric inpatient unit and planned for a long-term stay. This case study increases awareness about challenges of predicting successful discharge from psychiatric inpatient units. It also demonstrates the possible outcomes and risk of remission for patients with genital self-mutilation. In this poster, we have highlighted the risk factors for genital self-mutilation. We conclude that although it is difficult to estimate the risk of genital self-mutilation, the danger of such deeds should be kept in mind in high-risk patients.

No. 16

Delayed-Onset Clozapine-Induced Stuttering at Low Serum Levels in a Chinese Female: A Case Report and Review of Literature

Poster Presenter: Kenny Lim
Co-Author: Somnath Sengupta

SUMMARY:
Introduction Stuttering is a rare side effect of clozapine. We reviewed the literature on clozapine induced stuttering and report a case of a Chinese female with delayed onset of clozapine induced stuttering at subtherapeutic serum levels. Case description Ms A is a 35 year old Chinese female who was admitted to our inpatient unit for a relapse of schizophrenia. She was initially diagnosed with schizophrenia at the age of 16. She had an IQ test done 1 year after diagnosis showing a FSIQ of 46 on the WISC III. She was initiated on trifluoperazine and haloperidol but developed oculogyric crisis and extrapyramidal side effects. She was then maintained on risperidone and was stable as an outpatient for 14 years with no inpatient admissions although there was a gradual increase in her dose of risperidone. She was admitted as an inpatient 5 years ago due to a relapse with auditory hallucinations, paranoia towards family members and poor hygiene. Depot flupenthixol was initiated and she was stable for 2 months before she had 2 more relapses where her oral pharmacotherapy was changed from risperidone to olanzapine and valproate. Venlafaxine was also initiated for depression. She remained stable for 2 year before having another relapse where she was paranoid against her family and was noticed to be talking elatedly and to herself and Venlafaxine was stopped. She continued to be paranoid against hospital staff despite being on olanzapine and depot zuclopenthixol and was initiated on clozapine and increased gradually to 250mg/day. Her paranoia subsided with clozapine and her speech was normal. Routine blood monitoring was also normal. She was stable and well until 8 months after initiation where she complained of palpitations. Physical examination and EKG was normal except for elevated pulse of 113bpm. Clozapine was reduced to 200mg/day with resolution of cardiac symptoms 1 month later but she was noticed to stutter and she reported having difficulty communicating. Her clozapine dose was further decreased to 150mg/day. During subsequent reviews, she was observed objectively to stutter less during clinical review and subjectively reports no difficulty in communicating. Some infrequent facial movements were noted. No seizures or EPSEs were observed. She was also able to eat normally. A serum level of clozapine was taken after her stutter was noticed (at 200mg/day) which as subtherapeutic at 220ng/ml. We also requested for an EEG from the neurologists but were advised that EEG would be of low yield in detecting epileptiform activity. Discussion Previous reported cases of clozapine induced stuttering occurred at high doses and during rapid initiation of clozapine. This is the first report of clozapine induced stuttering in an East Asian country and also the first to report delayed onset of stuttering at low doses after 9 months of exposure and persistence at low serum levels which may

suggest an exposure related and dose independent effect.

No. 17
WITHDRAWN

No. 18
"He Kidnapped and Murdered My Son!
Poster Presenter: Oyinkansola Ogundipe
Co-Authors: Lauren Marie Pengrin, Eric Li, M.D.

SUMMARY:
Delusions are defined as fixed false beliefs that are not shared by people of the same educational and cultural background. Delusional Disorder is a relatively rare psychiatric condition characterized by the presence of one or more bizarre or non-bizarre delusions lasting a duration of at least one month in the absence of other medical or psychiatric explanations. Delusional disorders have a reported prevalence of 0.1% in the general population and the average age of onset is 40 years. This poster presentation explores the case of a patient diagnosed with delusional disorder and highlights the various challenges of diagnosing and treating said patient. Due to the rarity of delusional disorders, very few studies exist regarding treatment. Studies that do exist, suggest no difference in efficacy between antipsychotics. They also suggest that treatment with antipsychotics result in about a 50% improvement in symptoms but there is never a complete resolution of the delusion. Psychotherapy and Cognitive Behavioral therapy are being explored as a means of treatment, however, studies regarding their efficacy do not exist at this time. Until high quality, evidenced-based studies are conducted, patients with delusional disorders would not fully benefit from effective treatment. Research could be enhanced by organizing randomized control trials precisely for patients with delusional disorder.

No. 19
Folie a Deux: A Case of a Married Couple With Delusional Infection With Serratia Marcescens
Poster Presenter: Jonathan Myrtil, M.D.
Co-Authors: France M. Leandre, M.D., Almari Ginory, D.O.

SUMMARY:
Shared psychotic disorder in the Diagnostic and Statistical Manual (DSM) Fourth Edition is a rare disorder in which two or more people from a close relationship share a common delusion. In the DSM-5, shared psychotic disorder was is no longer listed separate diagnosis but included in the section of Other Specified Schizophrenia Spectrum and other psychotic disorders. It was defined as delusional symptoms in partners of individual with delusional disorder: In the context of a relationship, the delusional material from the dominant partner provides content for delusional belief by the individual who may not otherwise entirely meet criteria for delusional disorder. We present a case of a 63 year old female who presented to the emergency department for evaluation of worsening shortness of breath associated with progressive fatigue and weakness after being treated appropriately for Serratia Marcescens at an outside hospital. She reported that she has been seen numerous times for evaluation of this recently and has completed a four-week course of Levofloxacin. After treatment, patient continued to be very distressed by her symptoms. Her husband, who was also at bedside, explained that they both started suffering from shortness of breath, cough and believed to be from Serratia Marcescens despite treatment with antibiotics. The patient was evaluated by Pulmonology and Infectious disease and despite stable vital signs, negative sputum culture and negative CT chest, she and her husband continued to complain of respiratory symptoms and were adamant that this was from the infection with Serratia Marcescens. Psychiatry was consulted and recommended treatment for anxiety. As no other medical cause could explain patient's shortness of breath, she was discharged from the hospital with the continued belief that she had shortness of breath was from continuous infections of Serratia Marcescens. Folie a Deux is a difficult diagnosis to treat as patients usually do not view their beliefs as delusional. This can lead to non-adherence with psychiatric medications and/or psychotherapy. Another difficulty with this diagnosis is the inability to fully investigate partners who may share the same delusions as they may not be a patient as in this case. It becomes clinically challenging to conduct the appropriate diagnostic tests and subsequently treat the partners as well. Therefore, we recommend that

more research be performed on such diagnosis in order to determine how to best medically manage such patients.

No. 20

No Birth Seasonality of Schizophrenia and Bipolar Disorder: Review of Inpatient Records

Poster Presenter: Carolina Olmos
Co-Authors: Matthew King, M.D., Jane Hamilton, Teresa Pigott, M.D., Rania Mahmood Elkhatib, M.D., Asim A. Shah, M.D., Salih Selek

SUMMARY:
Aims: Numerous studies on seasonality of birth and schizophrenia risk have been published but findings about seasonality of birth in individuals with mood disorders have been inconsistent 1. We aimed to test the hypothesis in inpatient admissions. Methods: 15969 inpatient records in UTHealth Harris County Psychiatric Center between 2012-2013 were enrolled (HSC-MS-14-0274). Patients birth months that were diagnosed as Schizophrenia (n=4178) and Bipolar Disorder (n=5303) according to the DSM IV Criteria were tabulated including admitting diagnosis. Texas Birth statistics between 1903-1997 were obtained as control group (n= 17096471). Results: There was no significant difference for winter births between schizophrenia patients and control group (P=0.738) and there was no significant difference for winter births between bipolar patients and control group either (P= 0.862). Mann Kendall Trend Analysis showed no significant trends of birth months for schizophrenia, bipolar and control groups. Conclusions: Our large sample showed no association between birth season or months with schizophrenia or bipolar disorder. The climate in Houston may play a role in those findings.

No. 21

Stroke Masquerades as Psychosis

Poster Presenter: Orlando Xavier Ramos, M.D.
Co-Author: Mudhasir Bashir, M.B.B.S.

SUMMARY:
The differential diagnosis for psychosis is extensive, including primary thought disorders, primary mood disorders with psychotic features, and a multitude of medical and toxic causes of secondary psychosis. Among these is stroke, which is known to cause both affective and psychotic symptoms in the post-stroke period. However, without clinical suspicion, it is easy to overlook stroke as a potential cause of psychosis, as its physical manifestations can be subtle, and its medical workup costly and time consuming. This can be especially true in the emergency psychiatry setting, where information might be limited, and there are exigencies for rapid intervention and disposition. This case report will explore a 47-year-old male who presented to the emergency room with worsening, new onset psychosis. Though a differential diagnosis was developed and a basic workup was done, it was not until the patient was admitted to the psychiatric unit that stroke was considered, delaying the appropriate workup and urgent intervention. We will discuss this patient's presentation of post-stroke psychosis within the context of the current literature, treatment, outcome, and how the delay in medical intervention could have been avoided during evaluation in the emergency department.

No. 22

Long-Acting Injectable: A More Positive Approach Toward Solutions to Destigmatize Nonadherence

Poster Presenter: Fauzia Zubair Arain
Co-Author: Asghar Hossain, M.D.

SUMMARY:
In the treatment of schizophrenia, an illness with cognitive dysfunction, lack of insight and social support, apathy and illness associated stigma, a major challenge faced by psychiatrist is non adherence to treatment. Data has shown that LAI has significantly influenced medication adherence rate by facilitating medication intake and keeping track of compliance/days without medication.1 The FDA has recently approved long acting injectable (LAI), for immediate initiation of the atypical antipsychotics as an alternative to oral therapy. This literature review is done to compare efficacy of LAI and oral antipsychotics in terms of relapse of symptoms and hospitalization. A meta analysis have shown significant data on lower risk of relapse in patients who continued to take antipsychotic medications for 1 year compared with patients who took placebo.2 Unfortunately, due to lack of insight and motivation which is hallmark of this chronic

illness, many patients find it difficult to consistently take medicine as prescribed.3

No. 23

Association Analysis Between Chromogranin B (CHGB) Genetic Variations and Smooth Pursuit Eye Movement Abnormality in Korean Patients With Schizophrenia

Poster Presenter: Mingyu Hwang
Co-Authors: Yeon Jung Lee, Sang Woo Hahn, Sung Il Woo, Jung Han Yong, Il Hoon Lee, Sehoon Shim, Yeongsuk Lee, M.D.

SUMMARY: Objective According to previous studies, the Chromogranin B(CHGB)gene could be an important candidate gene for schizophrenia which is located on chromosome 20p12.3.Some studies have linked the polymorphism in Chromogranin B(CHGB)gene with the risk of schizophrenia. Meanwhile, smooth pursuit eye movement (SPEM) abnormality has been regarded as one of the most consistent endophenotype of schizophrenia. In this study, we investigated the association between the polymorphisms in Chromogranin B(CHGB)gene and smooth pursuit eye movement abnormality in Korean patients with schizophrenia Methods We measured SPEM function in 24 Korean patients with schizophrenia (16 male, 8 female) and they were divided according to SPEM function into two groups, good and poor SPEM function groups. We also investigated genotypes of polymorphisms in Chromogranin B(CHGB) gene in each group. A logistic regression analysis was performed to find the association between SPEM abnormality and the number of polymorphism. Results The natural logarithm value of signal/noise ratio (Ln S/N ratio) of good SPEM function group was 4.19±0.19 and that of poor SPEM function group was 3.17±0.65.In total, 15 single nucleotide polymorphisms of CHGB were identified and the genotypes were divided into C/C, C/R and R/R. Statistical analysis revealed that two genetic variants (rs16991480, rs76791154) were associated with SPEM abnormality in schizophrenia[p=0.004] Conclusions Despite of the limitations including a small number of samples and lack of functional study, our results suggest that genetic variants of CHGB may be associated with SPEM abnormality and provide useful preliminary information for further study. Key words :

Schizophrenia, Chromogranin B gene, Smooth pursuit eye movement

No. 24

Psychosis and Neuropathy: Nitrous Oxide (Inhalant) Use Disorder

Poster Presenter: Scott Swain, M.D.

SUMMARY:

Mr. F is a 47 year old Caucasian male with no past psychiatric history brought in by police after he was found acting bizarrely in a Walmart parking lot, talking about how he was “playing a video game with the TV in my eyes” and reported a “major religious experience with the Lord” and he was fearful that he may have caused “spiritual damage” by breaking his covenant with god by being “a liar, cheater, drinker, and drug user”. He reported having not slept for 3 days due to “fear”. He remained actively psychotic for several days, refusing all medications on religious grounds, until he gradually began to clear up spontaneously and was able to detail that he had been going through “boxes and boxes of whippets” (nitrous oxide) daily in the context of a recent divorce and Of note, he also reported that he was having right lateral leg numbness and lancinating pain and he was found to have B12 deficiency and was started on oral supplementation of 1000 mcg cyanocobalamin daily with full resolution of symptoms by discharge. In this poster, we discuss the recognition and treatment of nitrous oxide abuse and its sequela, severe B12 deficiency.

No. 25

Psychopathology and Adherence of Patients With Schizophrenia on Long-Acting Injectable Antipsychotics

Poster Presenter: Maria Nystazaki
Co-Authors: Stamatia Tolia, Agapi Georgou, Maria N. K. Karanikola, Georgios A. Alevizopoulos, M.D.

SUMMARY:

Background: Schizophrenia is a debilitating chronic disease that requires life-long medical care. Long Acting Injectable(LAI) antipsychotic formulations were developed in order to improve adherence of patients with schizophrenia. Non- adherence has been associated with an increased risk of

hospitalization, more frequent relapses and impaired mental functioning. Methods: This retrospective cohort study was conducted at the Depot Clinic of Agioi Anargyroi Hospital, Department of Psychiatry and at the Depot Clinic of the University Community Mental Health of Zografou, both located in Athens, Greece. The electronic files of 29 patients receiving LAI antipsychotics were retrospectively assessed for a period of 12 months. Psychopathology was evaluated by the Brief Psychiatric Rating Scale (BPRS), total scores were calculated at each visit. Adherence rates were calculated by attendance to scheduled appointments for the administration of the injectable. Results: 29 patients, 12 men and 17 women, with a mean age of 40,7 years (SD=11,7 years) were included in our study. The follow-up period was 12 months for all patients, regardless of treatment initiation. BPRS scores decreased significantly over the first 4 months for all patients (ß=-1.18, SE=0,33, p=0.002). No further significant changes in scores were shown after the 4 month period. Sex, age, diagnosis and treatment duration were not significantly correlated with BPRS scores. Compliance to treatment was high and adherence rates for all patients ranging from 93,1% to 100% over the 12 month period. Conclusions: LAI antipsychotics represent a valuable option for treating schizophrenia. LAI antipsychotics improve adherence significantly, resulting in better outcomes for patients with schizophrenia. Key Words: Long acting injectable antipsychotics, schizophrenia, adherence, psychopathology

No. 26

Decreased Efficacy of Clozapine Due to Concomitant Administration of Rifampin and Determination of the Therapeutic Dosage

Poster Presenter: Hwa Yeon Jo
Co-Authors: Choyeon Park, Seok Hyeon Kim, Dongjoo Kim

SUMMARY:

Introduction Rifampin acts as an inducer of the cytochrome P 450 system and is known to be less effective in metabolizing metabolites through the CYP 450 system. In particular, clozapine is subject to hepatic metabolism by isoform of CYP 450 and therefore when it combined with rifampin, which may reduce the plasma concentration of clozapine. There are lack of evidences of effective serum level of clozapine while using Rifampin and clozapine simultaneously. We investigated the following case to determine otimal clozapine doses required for remission of psychotic symptoms during the administration of antituberculous durgs. Case Ms P is a 25-year-old female who are adimitted the psychiatric unit repeatedly over 8 times. Every hospitalization, she said 'A millionaire loves me and he says that he'll marry me.' During course of her illness she has been tried any other antipsychotics but the effective is limited so switched to clozapine up to 200mg then the symptoms were relieved. However, hyperthermia occured and active pulmonary tuberculosis was suspected. After the first week of TB medication, weakness and dysphagia were appeared, so all medications were discontinued.It was regarded as isoniazid-induced photosensitivity reaction so the specialists recommanded ethambutol, rifampin, pirazinamide combination therapy for 9 months. Since then, antipsychotics have been controlled only by quetiapine and tolerable for the tuberculosis drugs, but the psychotic symptoms were aggravated. We restarted clozapine increased up to 450mg but erotic delusion still remained and disorganized behavior occurred. It was judged that clozapine efficacy wa decreased due to interaction with Rifampin, and we increased clozapine with serum level monitoring. After increasing clozapine to 850, she defended against auditory hallucination and did not soliloquy in the space when oher persons around her. At this time, serum clozapine level was measured as 167.7ng/ml but highly under the reference ranges.(ref.350-600ng/ml) Despite increasing to 950mg of clozapine, and the serum level did not reach the therapeutic rage,being measured as 288.2ng/ml. The therapeutic range (417.8ng/ml) was reached only after increasing to 1050 mg then she can control the the concrete belief. Discussion Clozapine is known to undergo complex hepatic metabolism including cytochrome (CYP) P450 isoform. It is primarily metabolized by CYP1A2 isoform. Rifampin can be expected to lower serum clozapine levels.In this case, clozapine 200mg is optimal, but psychotic symptoms were deteriorated after using rifampin. When we titrated clozapine to 1050 mg, the therapeutic range was reached and psychotic symptom's relief was seen.There is a

burden of using more than twice of the referred maintenance dose. Furthermore, more attention should be given after the termination of TB medication. Considering that the clozapine concentration in the blood may be too high, rapid tapering should be required.

No. 27

Directions for Treating Bereavement in Schizophrenia: A Case Report

Poster Presenter: Olaniyi O. Olayinka, M.D., M.P.H.
Co-Authors: Ayesha Mahbub, M.B.B.S., Olusegun Adebisi Popoola, M.D., M.P.H., Ayodeji Jolayemi, M.D.

SUMMARY:
Models and therapeutic approaches to bereavement have focused on patients without mental illness, with limited studies done on patients with psychiatric disorders. Even more limited are studies of bereavement in patients with Schizophrenia. A question may arise as to how the models of bereavement may be modified in Schizophrenia and what are the possible modifications in bereavement counseling for patients in Schizophrenia. We describe the case of a 50-year-old African American male with a history of schizophrenia who was living with a mother who has been his only source of support. He was admitted to the psychiatric inpatient service after he was found living at home with a rotting body of his dead mother for several days. He reported that his mother's bedroom smelled of burning incense from tree stems and tuna cans from garbage. He demonstrated delusional denial, as he believed his mother, who was eventually reported as dying of natural causes, was watching television and still had a pulse. He also exhibited a complex combination of auditory and visual hallucinations in which he was in communication with his mother using a red telephone glove that he wears in his hand. His acute episodes in the past were usually positive symptoms of persecutory delusions and grossly disorganized behavior, but his current episodes were mostly negative features with limited affective reactivity. A comorbidity of bereavement was diagnosed, and the treatment of the same was incorporated into his treatment plan as it may have precipitated and perpetuated his acute decompensation. A modified model of bereavement was formulated in light of his acute psychotic symptoms, based on Kubler-Ross and Cognitive theory. This consisted of 20 sessions implemented over four weeks of his hospitalization. Initial sessions were supportive, focused on establishing rapport, psychoeducation about the concept of dying and losing support systems. Later sessions focused on the exploration of cognitive beliefs and targeting cognitive distortions. He continued to receive pharmacotherapy during this period. At the end of the four weeks, he did not exhibit the delusional denials, and more readily accepted the finality of his mother's death. PANSS score was 8 on the positive scale and 19 on the negative scale with loss of points due to the resolution of hallucinations and delusions about his mother's death and some improvement in emotional reactivity. In conclusions, there are limited studies on bereavement and managing bereavement in patients with mental illness. We utilized a modified model of Kubler Ross with a modified model of bereavement counselling in this patient with a resolution of the psychotic denial phase of his loss. Further studies need to be done on the possible utility of our modified model and modified therapeutic approach for bereavement in patients with Schizophrenia.

No. 28

WITHDRAWN

No. 29

Clozapine Titration in Schizophrenia and Its Impact on Tolerability and Response: A Systematic Review

Poster Presenter: Marie-Christine Noël, M.D.
Co-Authors: Milan Lemez, M.D., Gary Remington, M.D., Ph.D., Roshni Panda, Ph.D., Estelle Ouellet, M.D., M.P.A.

SUMMARY: Objective: To review published clozapine titration strategies in adult individuals with schizophrenia and the impact of these different approaches with respect to tolerability and response. Methodology: A systematic review of articles was undertaken using Medline, PsycINFO, Embase and CINAH, In addition, a grey literature search was completed including drug monographs. Search terms included clozapine, schizophrenia, dosing and titration, and all study types were

included as the majority of relevant articles were anticipated to be non-RCTs. Study selection and data extraction were done by two authors using predefined data fields. Data synthesis: A total of 2063 records were identified by our systematic search, with only 16 articles meeting inclusion criteria and consequently selected for data synthesis. We classified the different titration schedules compared to product monograph and common clinical practice as: slow, standard, or rapid titration. Three articles support using slow vs. standard titration, especially in selected conditions e.g. previous non-tolerability and outpatient settings. Literature detailing standard clozapine titration was scarce and dated; further, only one study directly compared standard and rapid titration. For patients with severe, acute psychotic symptoms, there is evidence from two cohort studies, a case series and a case report, concluding that rapid titration is safe, effective, and may shorten hospitalization. Our meta-analysis results indicated that the mean percentage change in Clinical Global Impression scale scores is significantly greater in the rapid titration (46.68%) compared to standard titration group (23.92%) ($F=11.53$; $p<0.05$). We found that the speed of titration (measured as number of days taken to reach 200 mg/day) is negatively correlated with percentage symptom change, i.e., faster titration showed greater clinical response ($r = -0.771$, $p<0.05$). However, we also found two case reports of life-threatening adverse events in the context of rapid titration. Further, data are lacking as to the impact of rapid titration on clozapine retention rate, which could impact illness outcome over the longer-term. Limitations: Heterogeneity in terms of patient populations, study type, outcome measurements, as well as low quality of evidence, limited our synthesis and meta-analysis. Notably, older original RCTs involving clozapine do not detail titration schedules. Conclusions: There is very limited evidence supporting what might be described as standard clozapine titration. Both slower and more rapid titration schedules have both been detailed, each with respective pros and cons. The paucity of evidence related to clozapine titration may well contribute to the drug's underuse; indeed, this can be said as well about evidence related to optimal dose. Going forward, there is a real need for more research specifically addressing the impact of titration on both tolerability and response.

No. 30

"The Devil's Work": Grappling With Diagnosis and the Politics of Cure in an Ethnographic Study of First-Episode Psychosis

Poster Presenter: Suze Gillian Berkhout, M.D., Ph.D.
Co-Authors: Juveria Zaheer, Gary Remington, M.D., Ph.D.

SUMMARY:
Background: Within a biomedical worldview, the processes and practices of psychiatric diagnosis aim to achieve objectivity, reliability, and neurobiological veracity in the codification of mental illness (Kupfer and Regier 2011). Yet these same practices are cultural, socio-material achievements that have profound effects on the individuals whose bodyminds (Price 2015) are so-categorized, especially because diagnostic considerations frequently inform prognostication as well as direct a variety of biological and psychological interventions. The implications of these interrelations is of particular significance for the area of first episode psychosis (FEP), where diagnostic uncertainty is often the norm and prevention of disability the aim. Methods: We describe findings from an ongoing ethnographic study examining meanings and experiences of psychosis within an early intervention program in Toronto, Canada. Combining participant observation with formal and informal open-ended, serial interviews of service users, family members, and clinic staff, a reflexive, interpretivist analysis of the data was undertaken. Emerging themes were triangulated against subsequent interviews and through member-checking, in an iterative process. Results: Ten service users, five FEP clinic staff members, and three family members of service users have participated in serial (longitudinal) interviews to date (n=29 interviews), in addition to numerous informal interviews carried out through participant observation in the clinic setting. Service users were frequently disinterested in diagnostic labels, particularly in contrast to their family members and psychiatric service providers. The process of psychiatric diagnosis was, at times, felt by psychiatric service users to devalue their own embodied knowledge and enmeshed them in

regimes of medical authority against which they struggled. And yet in other instances it brought relief through the naming of the confusing and frightening lived experience of psychosis. Diagnosis was frequently linked by participants to the role of antipsychotic medications, which were conceptualized through both positive and negative meanings and attributes. Discussion: Our findings attempt to articulate a deep tension within the field of early intervention in psychosis: that as a process of categorization, diagnosis is simultaneously useful and dangerous; it organizes visceral (bodily) realities (Clare 2016) while presuming that those so-classified will take up "cure" as inevitable and desirable. In contrast, the lived experience of psychosis is much more equivocal and ambivalent. Attending to such tensions has the potential to offer greater understanding around service users' engagement in clinical care and adherence to pharmacological interventions.

No. 31

A Case of Delusional Parasitosis

Poster Presenter: Kodjovi Kodjo, M.D.
Co-Authors: Ayotomide E. Oyelakin, M.D., M.P.H., Oluwaseun Adeola Ogunsakin, M.D., M.P.H., Mohammed Khan, M.D., Olaniyi O. Olayinka, M.D., M.P.H., Olalekan Olaolu, M.B.B.S., M.P.H., Chiedozie Obinna Ojimba, M.D., M.P.H., Olusegun Adebisi Popoola, M.D., M.P.H., Tolulope A. Olupona, M.D., Jason E. Hershberger, M.D.

SUMMARY:
Introduction Delusional parasitosis is a rare psychotic illness. It is an infrequent psychotic illness characterized by an unshaken false belief of having being infested by a parasite when there is no evidence of infestation. (Murray et al, 2004). It is also called Ekbom syndrome, named after the Swedish neurologist, Karl Ekbom, who did significant work on this condition (Rapini et al, 2007, Trabert 1995). Delusional parasitosis can be categorized into three distinct categories namely; primary, secondary, or organic. Primary delusional parasitosis comprises of a single belief of being infested by a parasite (Prakash et al, 2012). Secondary delusional parasitosis occurs in the background of other mental disorders like depression, schizophrenia, and dementia. Organic delusional parasitosis can occur in the setting of some common organic disorders such as hypothyroidism, cerebrovascular disease, allergies, and cocaine intoxication (Prakash et al, 2012). The individual suffering from this condition typically reports parasites in or on the skin, around or located inside body openings, in the internal organs namely stomach or bowels, and this is usually associated with the belief that the parasites are infesting patients' home, clothing, and surroundings. Patients may have a sensation of parasites crawling or burrowing into their skin. Individuals with this condition often scratch themselves to the point of skin damage or self-mutilation. They tend to develop discrete bruises, scars, or ulcers frequently produced by trying to extract the offending parasite(s). Treatments commonly employed are second generation or atypical antipsychotics such as Risperidone, Olanzapine or Amisulpride (Meehan et al, 2006, Driscoll et al, 1993). In this report, we describe the case of a 53-year-old Caucasian male with delusional parasitosis in the context of chronic mental illness. Case summary: This is a case of a 53-year-old Caucasian male with a history of chronic mental illness, multiple hospitalizations, and physical abuse in childhood who presented in the ED with the complaints of insect infestation in his apartment since moving in three years ago. Patient reported worsening depressed mood, poor sleep and suicidal thoughts for about 3 days due to the sensation of insects crawling into his genitals and on his scalp/hair. He described different types of insects namely, roaches, fleas, sober fish crawling all over his body, on the stove top, kitchen sink and in bubbles that climb northwards when he is taking a shower. Patient exhibited social isolation, difficulties in working/executive functioning and poor reality testing. He reported a history

No. 32

Capgras Delusions in a Schizophrenic Patient

Poster Presenter: Rachel Kossack, M.D.
Co-Authors: Ahmad Jilani, Asghar Hossain, M.D.

SUMMARY:
Capgras Syndrome (CS), part of Delusional Misidentification Syndromes (DMS), is a relatively uncommon afflictions characterized by delusions where the patient believes familiar people have been replaced by imposters. It was named after Jean

Marie Joseph Capgras who, along with Jean Reboul-Lechaux, reported a case of 56-year-old-female holding a delusional belief that her husband and daughter along with neighbors, police, and even herself had been replaced by imposters [1]. Capgras and other such misidentification disorders are associated with schizophrenia, dementia, as well as traumatic brain injury [2]. Pathophysiology of these syndromes is complex and possible includes organic lesions in frontal, and parietal regions of the brain. Management of such patients is uniquely challenging due to distrust inherent to the delusions they suffer from. Here we present a case of a patient suffering from schizophrenia complicated by Capgras delusions.

No. 33

Nystagmus Seen in a Patient With Schizophrenia: A Case Study

Poster Presenter: Rachel Kossack, M.D.
Co-Authors: Ahmad Jilani, Asghar Hossain, M.D.

SUMMARY:
Schizophrenia is a heterogenous syndrome characterized by perturbation of language, perception, thinking, social activity, and volition [1]. It usually begins in late adolescence and has an insidious course. The life time prevalence of schizophrenia is about 0.5% to 1%. Common age of onset is 18-25 years for men, and 21-30 years for women [2].Disorders of smooth visual pursuit are seen more commonly in those with schizophrenia compared to the general population [3]. Smooth pursuit eye movement dysfunction may have functionality as a trait marker for risk of schizophrenia [4]. Vestibular hyporeactivity, as well as dysfunctions of saccadic eye movements have been reported in patients with schizophrenia. Here we present a case of a 72 year-old Caucasian male with Schizophrenia who presented with delusions. During the course of his stay at the facility, nystagmus was consistently observed.

No. 34

Eye Movement Disorders in Schizophrenia: A Literature Review

Poster Presenter: Rachel Kossack, M.D.
Co-Authors: Asghar Hossain, M.D., Ahmad Jilani

SUMMARY:
Instances of dysfunction of smooth visual pursuit and disinhibition of saccadic eye movements in association with schizophrenia are well documented. These eye movement disorders occur independent of the treatment and clinical state. They present at a much higher rate in those with schizophrenia than general population, and may be a trait marker for the disease [1]. Dysfunction in eye movement especially in smooth pursuit and antisaccades can be seen in biological full siblings who otherwise do not suffer from schizophrenia [2]. These eye tracking disorders may be genetic markers for the risk of schizophrenia [3]. Here we try to gain a better understanding of the of eye movement dysfunction in the setting of schizophrenia by reviewing the available literature.

No. 35

Prevalence, Pathophysiology, and Neuroanatomical Changes in Psychiatric Disorders Associated With Multiple Sclerosis: A Case Report Series

Poster Presenter: Zachary Michael Lane, M.D.
Lead Author: Zachary Michael Lane, M.D.
Co-Authors: Asghar Hossain, M.D., Zargham Abbass, Madia Majeed, M.D.

SUMMARY:
Introduction: Multiple Sclerosis (MS) is a chronic inflammatory disease of the central nervous system (CNS) producing progressive demyelination of nerve cells. While the neurological manifestations of the disease are well understood, however, comparatively less attention has been paid to the associated psychopathology. The neuropsychiatric abnormalities in MS are divided into two categories. Objective: We present two patients, one with prior hospitalization of psychiatric illness with a history of MS and the other presenting initially with psychosis and diagnosed with MS at the time of presentation. In addition, we elaborate on the prevalence, pathophysiology, and neuroanatomical changes in psychiatric disorders found in MS patients. Case 1: This patient is a 32-year-old Hispanic woman with multiple inpatient psychiatric hospitalizations. She was diagnosed with MS seven years ago. This patient has been increasingly paranoid, exhibiting persecutory delusions, and displaying bizarre behavior. The patient has a history of depressive

episodes with passive suicidal ideation secondary to intimate partner violence and medication non-compliance. She was treated with Depakote 500mg twice daily and Zyprexa 5mg twice daily leading to improvement of her symptoms. Case 2: This patient is a 58-year-old Caucasian female with no prior history of inpatient psychiatric hospitalizations. The patient presented with confusion and aggressive behavior on the day of evaluation. She has no prior history of any psychiatric illness. Non-contrast computed tomography (CT) was performed with results consistent with her MS diagnosis. The patient started on Zyprexa 5mg twice daily leading to improvement of her symptoms. Discussion: The relationship of psychological and psychiatric disorders with MS is multifactorial. Studies show higher than baseline probability of major depression in MS patients. The presumed pathogenesis of depression in MS is due to the breakdown of the blood-brain barrier, entry of inflammatory cells into the CNS, and local production of cytokines within the brain. The limited database on psychosis in MS shows high occurrence of bilateral plaques involving temporal horns on CT scans. MRI evidence demonstrates that both MS and mania are associated with these white matter changes. MS-associated cognitive impairment can be present early in the course of disease; however, the profile of deficits is more dramatic with progression of disease. Conclusion: In this case report, we have discussed the prevalence, pathophysiology, and neuroanatomical changes in psychiatric disorders that are found in MS patients. There is limited research done on the psychiatric manifestations and treatments specific to MS. Our patients were successfully treated with low-dose Zyprexa. It is important for healthcare professionals to recognize MS associated psychosis in the list of differential diagnosis and if suspicious, perform an imaging study to confirm the diagnosis.

No. 36

Challenges in a Male Patient With Schizoaffective Disorder, Gender Identity Preoccupation, and Pseudocyesis

Poster Presenter: Daniel McCarthy, M.D.
Lead Author: Katie J. Kist, D.O.
Co-Author: Cameron Risma, M.D.

SUMMARY:
The coexistence of gender identity preoccupation and psychosis represents a diagnostic and therapeutic challenge. While genuine comorbid gender dysphoria and schizophrenia is considered to be quite rare, patients with schizophrenia may develop delusions related to gender during the course of their illness. Indeed, such delusions occur in about 20% of patients with schizophrenia. Even more uncommon, male patients may develop delusions of pregnancy. Sparse literature exists surrounding this topic, with few case reports of males with pseudocyesis. Ethical challenges may also arise in treatment of gender dysphoria in the context of active psychosis. We report a case of a 48 year-old male with longstanding history of schizoaffective disorder who was hospitalized due to refusal of medications, acute psychosis, and aggression. He had chronic gender preoccupation, identified as female, preferred women's clothing, and had a history of attempted penile auto-amputation. He also described a chronic belief of multifetal pregnancy, frequently reporting sensations of fetal movement. Although he understood the typical nine-month gestation period, he reported his pregnancy lasting several years. His delusion of pregnancy was strengthened several years ago during a trial of risperidone that reportedly caused galactorrhea. Staff from his AFC home reported at baseline he persistently identified as female, and he felt the other occupants at the home teased him for being pregnant. He had tried many antipsychotic medications, including clozapine, which did not impact his delusion of pregnancy and was eventually stopped due to medication noncompliance. During this hospitalization he was trialed on several antipsychotics including haloperidol, olanzapine, and fluphenazine. Despite adequate treatment with fluphenazine (both oral and decanoate) and improvement of psychosis, his gender preoccupation and delusion of pregnancy persisted. He became less aggressive, more appropriate with staff and peers, and was discharged back to his AFC home. This case represents a diagnostic challenge of a patient with co-occurring acute psychosis, gender preoccupation, and delusions of pregnancy. It was difficult to determine the etiology of his gender preoccupation, whether delusional versus comorbid gender dysphoria. Ethical concerns of not addressing the

patient's gender identity were raised, as these preoccupations had led to longstanding emotional distress, social interaction difficulties, and genital self-mutilation. Ultimately, it was determined to first treat his acute psychosis and defer definitive intervention for gender identity. Several factors lead to this determination, including: his inability to base gender identity in reality, his inability to participate in a meaningful discussion about pursuing definitive gender-affirming therapies, and there was no known history of his identifying as female gender without also believing he was pregnant.

No. 37

Cognitive Decline in Schizophrenia: A Literature Review

Poster Presenter: Steven Anthony Vayalumkal, M.D.
Co-Author: Asghar Hossain, M.D.

SUMMARY:

Schizophrenia is a debilitating psychotic disorder that affects the lives of many patients and families worldwide. Multiple studies done over the past 20-25 years have shown the presence of characteristic cognitive decline in up to 75% of the patients. Cognitive decline has a strong correlation with schizophrenia, and there has been debate over the inclusion of cognitive symptoms as part of core symptomatology. It has also been postulated that treatment modalities focusing on improvement of cognitive functioning might improve the outcome and quality of life of these patients. The deficits in the cognitive decline are suggested to be due to involvement of dorsolateral prefrontal cortex and due to neurochemical involvement of dopamine, GABA and glutamate. There has also been an evidence that the cognitive deficits may appear earlier than the positive symptoms and may also act as a premonitory symptom of the disease. This literature review was performed to better understand the pathophysiology of the disease, the different domains of cognition that are affected, and the steps that may be taken to improve the current standard of treatment. Many patients with chronic schizophrenia prove unresponsive to different trials multiple anti-psychotic medications, making this condition difficult to manage and further contributing to the poor quality of life of many of these patients. Improving one's understanding of the pathophysiology, factors related and the outcome of managing cognitive decline in the patients may lead to improved quality of life in patients with chronic schizophrenia and may lead to improved clinical outcomes.

No. 38

The Link Between Childhood Attention Deficit/Hyperactivity Disorder and the Development of Psychosis in Adulthood: A Literature Review

Poster Presenter: Steven Anthony Vayalumkal, M.D.
Co-Author: Asghar Hossain, M.D.

SUMMARY:

Attention deficit hyperactivity disorder (ADHD) is an insufficiency in behavior inhibition which affects 1 in 20 children in the United States. Despite extensive research regarding the neurobiological mechanism of ADHD, the diagnosis remains clinical, comprising of a triad of inattentiveness, impulsivity and hyperactivity. The long-term outcome of ADHD is of major concern as presence of ADHD in childhood increases the predisposition to various psychiatric conditions and increases the risk of psychoactive substance use in adulthood. Psychotic disorders, including Schizophrenia, are a well-known frequent comorbid psychiatric condition in patients with ADHD. It is of unique significance as ADHD is associated with decreased dopamine and psychotic disorders are associated with increased dopamine. Multiple studies have established an antecedent history of childhood ADHD in patients presenting with first psychotic break as compared to general population. This implies a need of frequent screening by clinicians for psychotic symptoms in patients with ADHD. The early recognition and intervention of psychotic symptoms in ADHD patients is a strong predictor to improve quality of life. We herein present a literature review to illustrate a strong correlation between these two psychiatric comorbidities. Primary objective: To explore the predisposition of childhood ADHD to development of psychotic manifestations in adulthood. Secondary objective: To discuss the role of psychostimulants in treating ADHD with comorbid diagnosis of psychotic disorders. Acknowledgments: The authors wish to thank Sukaina Rizvi for her help in preparing this abstract.

No. 39

Antipsychotic Use in Schizophrenia in the Korean Population: A Case Series and Literature Review

Poster Presenter: Anita Kulangara, M.D., M.S.
Co-Author: Asghar Hossain, M.D.

SUMMARY:

The patterns of antipsychotic use are variable between nations and ethnicities. It is often influenced by the country's healthcare policies, preferred treatment interventions, cost and availability of the prescription medications, and cultural practices. Antipsychotic polypharmacy has been connected to adverse side effects, high cost, metabolic syndrome, cardiac conduction problems and sudden death, and reduced medication compliance among patients. Thus, many medication guidelines for schizophrenia stress antipsychotic monotherapy. However, the reality in clinical practice among Korean patient populations is that there is a broad range in rates of antipsychotic polypharmacy. This result has most likely been influenced by clinical settings, cultural practices and personal preferences. When atypical antipsychotic drugs were found to have less adverse side effect profiles, and greater effects on cognitive and negative symptoms in schizophrenia, psychiatrists attempted administering higher doses of atypical antipsychotics, engaging in antipsychotic polypharmacy, or augmenting treatment regimens with antidepressants, benzodiazepines, and mood stabilizers to obtain faster and stronger responses in severely disabled Korean patients suffering from schizophrenia. However, even until recently, there is still limited information regarding the prescription patterns of psychotropic medication use, including antipsychotics, among Korean patients. This poster aims to examine the different treatment regimens of four Korean adults with severe schizophrenia, along with a literature review of medication regimens in this population. Korean patients with complicated cases of schizophrenia will benefit in the future from larger prospective longitudinal studies assessing the safety and efficacy of these treatments.
Acknowledgements: Dr. Asghar Hossain, Dr. Barbara Palmer, Dr. Tahira Akbar

No. 40

Schizophrenia in Marfan Syndrome: A Literature Review

Poster Presenter: Anita Kulangara, M.D., M.S.
Co-Author: Asghar Hossain, M.D.

SUMMARY:

Marfan syndrome is a connective tissue disorder characterized by musculoskeletal, ocular, and cardiovascular abnormalities resulting from a defect in the fibrillin-1 gene passed down by an autosomal dominant inheritance pattern. We present a review of literature implicating possible common routes that result in both diseases. Thus far, schizophrenia has been reported in several people with Marfan syndrome. Studies suggest a common etiological pathway in aberrant growth factor signaling cascades. Further investigation of this potential connection may offer possible disease models and treatment modalities. In understanding the possible genetic defect that these conditions may share, it could help elucidate the roles of connective tissue proteins and growth factors in the neurodevelopment and pathogenesis of schizophrenia. This knowledge can provide better outcomes for these individuals. Acknowledgements: Dr. Asghar Hossain, Dr. Barbara Palmer, Saba Mughal

No. 41

Schizophrenia in an Adult With Marfan Syndrome: A Case Report

Poster Presenter: Anita Kulangara, M.D., M.S.
Co-Author: Asghar Hossain, M.D.

SUMMARY:

Mr. T., a 21-year-old Filipino male with a history of Marfan syndrome and schizophrenia, presented with persecutory delusions, irritability, aggressive behavior toward family, and was often found talking to himself. His level of functioning decreased during the two weeks prior to his admission, which was around the time he became noncompliant with his medications. He has a psychiatric history of ADHD. He has a history of medication trials of Vyvanse, Depakote, Seroquel, Abilify, Risperdal Consta, and good response to Risperdal (Oral Disintegrating Tablet form). Schizoaffective disorder Bipolar type and Bipolar 1 disorder with psychotic features were considered in his differential diagnosis. The psychiatry team placed him on Risperdal oral

disintegrating tablet 1mg twice daily, Cogentin 1mg twice daily, and Risperdal Consta 37.5mg injection every 14 days. Gradually, he stopped having persecutory delusions, stopped responding to internal stimuli, and became behaviorally-controlled on the unit. Understanding the possible genetic defect that Marfan syndrome and schizophrenia may share could help determine roles of connective tissue proteins and growth factors in the neuropathogenesis of schizophrenia, and thereby offer possible disease models and treatment targets to provide better outcomes for these individuals. Acknowledgements: Dr. Asghar Hossain, Dr. Barbara Palmer, Saba Mughal

No. 42

Effect on Length of Stay and Readmission Rates When Changing Oral to Long-Acting Injectable Antipsychotics in Schizophrenia

Poster Presenter: Vishal Akula, M.D., M.B.B.S.

SUMMARY:

Background: Non-adherence with oral anti psychotics in patients with schizophrenia has been associated with symptom relapse and re hospitalizations, resulting in increased morbidity and health care costs. Long-acting injectable antipsychotics (LAIAs) are an alternative to enhance adherence and decrease relapse requiring hospitalization. The objectives of this study are to determine the impact of LAIAs on reducing length of stay, the rate of annual readmissions with schizophrenia admitted to an acute inpatient psychiatric unit. Methods :Using the hospital database, 100 patients receiving a diagnosis of schizophrenia treated with oral antipsychotics and later transitioned to LAIAs were evaluated retrospectively. Results : Patients treated with LAIAs did show a statistically significant reduction in length of stay compared with their length of stay on oral antipsychotics. Patients treated with LAIAs experienced a statistically significant reduction in the rate of annual readmissions and a reduction in the number of failed annual discharges. These findings suggest a potential role for maintaining patients with a diagnosis of schizophrenia on LAIAs to prevent relapse and rehospitalizations.

No. 43

Clozapine Use in Iceland: Is Constipation and the Risk of Ileus an Overlooked Problem?

Poster Presenter: Oddur Ingimarsson

SUMMARY:

Introduction: Clozapine is the only evidence-based antipsychotic for treatment-resistant schizophrenia. Constipation is a fairly common side effect of clozapine that can progress to ileus. Clozapine associated constipation may receive too little attention from clinicians who focus more on rare but potentially serious adverse effects like neutropenia and agranulocytosis. The aims of this study are to describe the prevalence of constipation and ileus during clozapine treatment of patients with schizophrenia in Iceland. We will also assess the concomitant use of medication that can cause constipation and laxatives that used to treat constipation. Methods: We identified 188 patients treated with clozapine by searching the electronic health records of Landspitali, the National University Hospital of Iceland, during the study period 1.1.1998 – 21.11.2014. Cases of constipation and ileus were identified in the patients' electronic health records using an electronic search with keywords related to ileus. Detailed medication use was available for 154 patients that used clozapine for at least one year. Results: Four out of 188 patients were diagnosed with ileus that led to admission to hospital and two required a permanent stoma in due course. The mean time from the onset of clozapine treatment to the diagnosis of ileus was 13.7 years (15.3, 8.7, 17.6 and 13.3 respectively). Laxatives were prescribed to 24 out of 154 patients (15.4%) while on clozapine treatment. In total 40.9% of the patients either had laxatives prescribed or constipation documented in the medical records. Apart from clozapine, other medication known to cause constipation was prescribed to 28 out of 154 patients (18.2%). Discussion and Conclusions: Constipation is a common problem during clozapine treatment that can progress to ileus which is potentially fatal. The prevalence of ileus in this study is higher than the prevalence of the very well known side effect of clozapine, agranulocytosis, in Iceland and in other studies where the prevalence has been reported to be 0.7%. The case fatality in ileus has been reported

be in the range 7.3% to 38% versus 3% from agranulocytosis so physicians should be at least as vigilant with regard to constipation and the development of ileus as they are with regard to neutropenia and agranulocytosis. We recommend that clinicians regularly and proactively screen clozapine patients for constipation and respond promptly with recommendations of lifestyle such as increased physical activity, adequate fluid intake with high fiber diet and consider treatment with laxatives as well if symptoms are not resolved by life-style changes.

No. 44

Difficulties in Managing Maintenance Electroconvulsive Therapy Combined With Long-Acting Paliperidone in the Treatment of Resistant Schizophrenia

Poster Presenter: Thiago Brandão
Co-Authors: Leonardo De Jesus, André Franklin, Natalia Santos

SUMMARY:
Mr. N., 34-year-old white male suffers refractory schizophrenia and a severe intellectual disability associated with convulsive clonic tonic seizures. His Psychotic Disorder started at age 17, was no use of drugs and no longer family history. Along these 17 years of treatment, there were more than 35 hospitalizations, mainly due to aggressive behavior relative to family members, breaking objects in his home and refusing medication. In the hospitals, it was very common in his behavior of attack in relation to employees and very time in restrictions. He also presented delusional thoughts and hallucinations without remission drugs, only partial and poor control of their disruptive behavior. Clozapine was not an option for the presence of seizures that occurred 5 years after the first psychotic episode. During two years, he was successfully treated with electroconvulsive therapy associated with long-acting Paliperidone. Patient is submitted to maintenance electroconvulsive therapy at 2 times a week. Maintenance electroconvulsive therapy can be a good strategy for long term control of severe forms of recurrent psychiatric disorders It is important to discuss the current response and sustained remission of this treatment. In this poster, we discuss the challenges and the implications for long-term maintenance electroconvulsive therapy in patients with refractory schizophrenia and comorbidities.

No. 45

Barriers Preventing Use of Clozapine and Proposed Solutions: A Literature Review

Poster Presenter: Berniece Chen
Co-Authors: Nicole Christina Rouse, D.O., Sharon Lee

SUMMARY:
Background: Treatment resistant schizophrenia is defined as an inadequate response at least two different antipsychotic medications at the maximum therapeutic dose. Studies have shown that between 10 to 30 percent of patients with schizophrenia have very little or no response to antipsychotic medication. In these instances, clozapine is the treatment of choice; however, due to the side effects and the frequently required monitoring, there have been delays initiating it. Studies have shown that only 5-25% of patients in the United States who should be on clozapine have been started on the medication. Some contraindications to starting clozapine include risks factors for neutropenia, cardiac disease, and seizures. For patients on clozapine in the United States, that FDA mandates that patients undergo weekly neutrophil monitoring for the first six months, every other week for the following six months, then every four weeks thereafter. Methods: We have conducted a retrospective literature review examining the underutilization of clozapine or the delay of its treatment. These articles surveyed psychiatrists, examining institutional barriers for clozapine use, investigating the reasoning for delay in treatment, and proposing solutions. Results: The requirement for physicians to prescribe and dispense clozapine are delineated in a program called clozapine risk evaluation and mitigation strategy (REMS). Due to complexities in the program, psychiatrists often have a challenging time viewing past labs and receiving further education. A consistently reported barrier identified by surveyed psychiatrists was a lack of experience prescribing clozapine. One study showed that <7% of those surveyed have prescribed the drug and 48% of those surveyed had less than 5 patients on this treatment regimen. Many providers reported that they prefer other strategies such as employing

several first generation antipsychotics alone or in combination before resorting to clozapine. Two of the main barriers relating to clozapine management were noted as patient nonadherence to blood work regimen. Despite the barriers to initiating clozapine, patients were reportedly more satisfied after starting clozapine due to its efficacy in controlling their psychotic symptoms. The NASMHPD website published several recommendations to expand use of clozapine. Solutions include improving psychiatrists' understanding of how to manage side effects, assigning a team in charge of coordinating the care necessary after clozapine initiation, as well as simplifying the process of blood monitoring. Conclusion: Clozapine has been shown to be effective for treatment resistant schizophrenia. However, studies have shown delays in starting clozapine due to inexperience prescribing and the potential for patient noncompliance. Proposed solutions include streamlining monitoring and increasing provider education.

No. 46

Autoscopic Hallucinations in Fregoli Syndrome

Poster Presenter: Justin Virk
Co-Author: Alan R. Hirsch, M.D.

SUMMARY:

Introduction: Autoscopic mirror hallucinations have been described as virtual images of the person appearing outside the person, usually associated with a neurological condition involving the parietal or occipital lobes. However, autoscopic hallucinations appearing only embedded in a mirror, has not heretofore been described. Such a case is presented. Methods: Case Study: A 47 year old right-handed female presented with autoscopic hallucinations upon viewing herself in mirrors. During these episodes, the autoscopic hallucination advises the patient in different ways through verbal communication. The patient's mouth does not move, but in the reflected image in the mirror the autoscopic hallucination's mouth is moving during its commands. As soon as the patient leaves the sight of a mirror, the visual and auditory hallucinations cease. She experiences intense paranoia of being followed while driving, especially when glancing in her rear-view mirror. In response to such distress, she pulls over to the side of the road to let the vehicle, the object of her delusion, drive away. As a result, the patient no longer uses her rear-view mirror, and her side mirrors are positioned so she cannot see the driver or passengers, of which she is most terrified of. Results: Abnormalities in Neurological examination: Mini-mental status: Immediate recall: 5 digits forward and 3 digits backward. Recent recall: 2 out of 4 objects with reinforcement. Cranial Nerve (CN) examination: CN II: Visual acuity 20/40 OU without correction. CN V: bilateral ptosis. CN X: absent gag reflex bilaterally. Reflexes: 0 in upper and lower extremities. Hematologic abnormalities: Chloride: 98 mmol/L (low). Total protein: 8.2 g/dL (high). Folate RBC: 355 ng/mL (low). UA bacteria: Rare/hpf (abnormal). Discussion: This patient demonstrated autoscopic hallucinations only when imbedded in a mirror. These context dependent hallucinations suggest a higher level of functioning since it approximates normal visual phenomena and is almost illusionary in nature. The presence of this in an individual with fregoli syndrome implies a dysfunctional visual network for visual perception or recognition. While the brain tumor in this individual is not occipital or parietal in location, it may have induced secondary dysfunction to these regions as a result of diaschesis. The resulting change in blood flow or neurotransmitter levels then may have precipitated these hallucinations. Given the frequent organic nature of these types of hallucinations, management with anticonvulsants or surgical intervention in those with true mirror image hallucinations is warranted.

No. 47

Chemosensation in Cotards Syndrome

Poster Presenter: Justin Virk
Co-Author: Alan R. Hirsch, M.D.

SUMMARY:

Introduction: The co-ocurence of Cotard's syndrome, the delusion of being fully or partially dead (Debruyne, 2009), and Olfactory Reference Syndrome, the belief that an odor is emanating from the sufferer (Hirsch, 2015), has not heretofore been described. Such a case is presented. Methods: Case study: A 35 year-old right-handed female presented with the belief that she had died and was putrefying from the inside-out. She would intensely valsalva to eliminate her internal decaying corpus, inducing a

hernia. She feared her miasmic flatulence would kill her roommate since the mephitic gas was emanating from her anus. She perceived a ghastly aroma of trash from her bowels, and was paranoid believing that others were laughing and talking about her disparagingly, that she literally possessed the air of trash. Fearing such a release, she would avoid bowel movements and suffered from chronic constipation. Metallic phantogeusia also appeared when the patient did not have a bowel movement for a prolonged period of time. Results: Her symptoms have been unresponsive to duloxetine, quetiapine, risperidone, ziprasidone, haloperidol, bisacodyl, docusate, and lactulose. Discussion: The somatoform delusion of Cotard's Syndrome of being dead and putrefying fecal matter obstructing the intestine, served as a nidus for the nosopoetic Olfactory Reference Syndrome delusion (Lochner, 2003). While initially a full Cotards syndrome with the entire body being dead, over time the psychosis consolidated to decomposing bowels. Query as to Cotards and Olfactory Reference Syndrome in those with complaints of chronic constipation may be revealing, and may aid in approaches for this condition.

No. 48

Myxedema Madness: A Case of Hypothyroidism Progressing to Psychosis

Poster Presenter: Avaas Sharif, M.D.
Co-Author: Asghar Hossain, M.D.

SUMMARY:
We report a case of a 51 year old female who presents with recent development of persecutory delusions and hallucinations. She has a history of unregulated hypothyroidism after previously undergoing a total thyroidectomy, in addition to various psychosocial stressors and positive substance abuse history. Hypothyroidism is commonly encountered in the clinical setting and has a classical spectrum of symptoms, which may include fatigue, dry skin, constipation, hair loss, and cold intolerance. In rare instances, psychological disturbances may be noted, including behavioral changes, cognitive dysfunction, and psychotic features. Psychosis in the presence of myxedema has been referred to as "myxedema madness" and requires management with psychotropic medications and thyroid hormone supplementation. Psychiatric disorders may be the sole presentation in some cases, and it is imperative to consider disrupted or altered endocrine function in the differential, as misdiagnosis and delayed treatment can result in symptoms, such as cognitive dysfunction, that fail to resolve completely.

No. 49

The SPIKES Protocol Is Not Followed in the Process of Breaking Bad News With Patients With Schizophrenia

Poster Presenter: Doron Amsalem, M.D.
Co-Author: Doron Gothelf

SUMMARY: Objective: Considering there are no clear guidelines for breaking bad news in psychiatry, the current study aims to investigate if the SPIKES protocol steps of the Setting, Perception, Invitation, Knowledge, Empathy and Summary, which is used in general medicine, can be effectively applied in psychiatry. Methods: Semi-structured interviews were conducted in accordance with the SPIKES protocol and delivering difficult news satisfaction and acceptance questionnaire (DDNSAQ), that was designed for the current study purpose. Sixteen people who have been recently diagnosed with schizophrenia spectrum diagnosis and the first degree relative of 15 of them completed the SPIKES interview and the DDNSAQ. Results: The SPIKES protocol for delivering bad news was generally not followed. All relatives reported that the SPIKES protocol steps of perception, invitation and summary were not applied. Only 14% to 21% of relatives and 6% to 37% of patients reported that the other SPIKES steps were followed. We found positive correlations between the way relatives learned about the diagnosis (e.g. incidental encounter) and several DDNSAQ items, including receiving the expected information, agreement with the diagnosis, the quality of the communication with the clinician and general satisfaction. Only the satisfaction item of the DDNSAQ correlated with the way patients learned about the diagnosis. Conclusions: The standard principles of delivering bad news in medicine were not applied with most patients and their relatives. Development of adapted SPIKES protocol for delivering difficult news in psychiatry is needed in order to improve the way of

communicating the diagnosis to patients and relatives. Key Words: Breaking bad news, Delivery of difficult news, Shared decision making, SPIKES

No. 50

Misidentifying Self: Reverse Fregoli—"Untrap the White Child Kidnapped by a Black Woman"

Poster Presenter: Shawn Singh Sandhu, M.D.
Co-Authors: Santosh Ghimire, M.B.B.S., Harjasleen Bhullar Yadav, M.B.B.S., Seema Hashmi

SUMMARY:
Delusional Misidentification Syndromes especially Fregoli and Capgras Syndrome are known to exist for decades, but have not yet been included in DSM. The lack of comprehensive knowledge poses multiple challenges in its treatment. We present one such case to emphasize on the need of including Delusional Misidentification Syndrome in DSM either in it's classical form / variants / as co-morbidity to other existing illnesses. Neurophysiological and neuroimaging studies have pointed to the presence of identifiable brain lesions, especially in the right fronto-parietal and adjacent regions, in a considerable proportion of patients with DMS. Prior to the advent of such studies, DMS phenomena were explained predominantly from the psychodynamic point of view. Deficits in working memory due to abnormal brain function are considered to play causative roles in DMS. Ms. X is a 48 YO African American female with diagnosis of schizophrenia for over 20 years, with multiple hospitalizations. Patient has a chronic fixed delusion that she is a white female child living in the body of an African American male who kidnapped her as a child. Despite having no insight into her illness, she has been compliant with medications for almost 10 years with no hospitalizations. As part of her delusion, patient believes that she needs to continue taking psychiatric medications so her kidnapper will be fit to stand trial and she can be freed. During this past decade patient remains pleasant, has functioned well in the community and able to gain employment Antipsychotic use to stabilize the co-morbid conditions for example schizophrenia in this case while validating the patient's delusion is important in initial stages to order to establish the trust to further the treatment. Antipsychotics have long been used as a supportive treatment in Delusional Disorders as well in treatment of other psychotic symptoms that could be present due to likely Schizophrenia. Convincing our patient to take medications was challenging, but validating her psychological self as a white child trapped in a black women's body was instrumental, and the idea that antipsychotics could help free the white child from the black women's body as the sole reason of compliance only emphasizes on the role of validation in treatment.

No. 51

Very Prolonged Parturiency: Eight Years of Pseudocyesis

Poster Presenter: Daniel Larez
Lead Author: Alan R. Hirsch, M.D.
Co-Authors: Emma Moghaddam, Mohammad Hussain

SUMMARY:
Introduction: A very prolonged pseudocyesis, of eight years, has not been thoroughly described. Such a case is presented. Methods: Case study: This is a 44 year old right handed female who presented with a long history of schizophrenia and paranoia, along with multiple psychiatric hospitalizations for the past ten months. Patient reported history of persistent dizygotic twin pregnancy for the past eight years. Patient presented with concern that Tylenol may have killed her babies. Symptoms of pregnancy started eight years ago around the same time her fiancée passed away. Patient reports multiple abortions and miscarriages in the past. She stated that her babies are "intelligent, observant and give her all source of opinions" and descent from Indian culture, which they have a preference for. Patient avoids alcohol and refuses to take medications stating "babies will shrink." Patient is afraid babies would not survive if delivered. Results: Abnormalities in physical examination: General: thyromegaly. Mental Status Examination: remembered 0/4 objects in 3 minutes even with reinforcement. Ten years of education. Poor cognition. Cranial Nerves (CN): CN I: Alcohol Sniff Test: 6 cm (Anosmia). CN II: Vision acuity 20/100 OU. Anisocoria OD 5mm OS 3mm. CN III/IV/VI: left ptosis. CN V: decreased pinprick and decreased temperature on left V1, V2 and V3. Motor examination: 4/5 platysma, strap muscles. 4/5 Deltoids bilateral. 4/5 Extensor carpi radialis. 4/5

Extensor carpi ulnaris. Cerebellar examination: endpoint dysmetria left more than right on upper extremities. Positive left Holmes rebound phenomenon. Sensory examination: decreased pinprick and temperature on left upper extremity. Reflexes: 3+ both biceps and brachialis, left more than right. Bilateral 3+ knee jerk and pendular. Bilateral positive Hoffmann's reflex. Discussion: Delusional disorder manifests by perception of pregnancy, while in men is Couvade syndrome, in women is pseudocyesis and it is generally a very short duration (Small, 1986). Such a somatic delusion falls within the realm of other somatic delusions including Cotard syndrome, Ekbom syndrome or Olfactory Reference syndrome (Harrison, 1999). The lack of response to past treatments, and the persistence nature of this syndrome, may reflect a strong psychological investment in this disorder, as well as the noncompliance of the patient with management of antipsychotics. Her past history of abortions may have served as a nidus and the focus for her delusional disorder. Psychotherapy specifically design to approach the psychodynamics of this problem may demonstrate utility in management of this condition. Presence of other evidences of psychosis, including paranoia and auditory hallucinations, solicit that pseudocyesis may be one component of a larger psychiatric dysfunction (schizophrenia). In those who have somatic delusions, query as to presence of delusion of pseudocyesis is warranted.

No. 52

Schizophrenia and Nutrition, a Review of the Current Literature

Poster Presenter: Ianna Hondros-McCarthy, D.O.
Co-Author: Walter J. Kilpatrick III, D.O.

SUMMARY:

Introduction: According to the National Institute of Mental Health, schizophrenia is one of the 15 leading causes of disability in the U.S., and it is well-known that schizophrenia confers a shorter life expectancy in the majority of patients affected (Global, 2017). It is also well-established that the primary treatments of schizophrenia, antipsychotic medications, can have significant, and sometimes permanent side effects, such as clozapine's neutropenia or tardive dyskinesia. Therefore, finding alternative approaches to treating or preventing schizophrenia would behoove not only the patients suffering from the disease and their family members worried about contracting it, but the clinicians and therapists working with them and the governments and tax-payers supporting their care, the costs of which are disproportionately high in comparison to other mental health disorders. The links between mental health and nutrition have become so intriguing to the medical community, that in recent years a new specialty called Nutritional Psychiatry has emerged. Depression and anxiety have been the most often studied mental health issues when it comes to nutritional interventions, but schizophrenia has recently become a more frequently studied topic. We know that there is a 10% chance of developing schizophrenia if a first degree relative is affected, but we also know that 50% of cases are sporadic, without a family history, and that the causes of schizophrenia and multifactorial, involving both genetics and environment. We also know that the foods that we consume affect epigenetics (what genes are turned on and off). Some of the research on schizophrenia and nutrition even works towards identifying specific genes affected by nutrition that are linked to schizophrenia (Dauncey, 2012). Methods: A thorough review of the literature on the relationship between schizophrenia and nutrition was conducted using PubMed, Cochrane Library Database, Embase, PsychINFO, CINAHL Complete, ClinicalTrials.gov, and Google Scholar. Results: There are many researchers looking at schizophrenia and its relationship with nutritional status, from prenatal nutrition to high carbohydrate and coffee-rich diets prior to patients' first psychotic episodes (Royal, 2016). Other research has found that fasting for long periods has been shown to potentially cure psychotic symptoms of schizophrenia (FAWZI, 2015). Unquestionably. there is a wide range of types or research and angles of approach when it comes to this topic. Conclusion: Much of the body of research on the topic is currently comprised of case reports, non-generalizable populations, and are not conducted in a robust, randomized, double-blind-control trial format. However, any new treatment modality takes time to learn about, and understanding what has already been done, and the rationales for continuing to research the topic are

the first steps, which is what this presentation intends to convey.

No. 53

Psychoeducation for Inpatients With First-Episode Psychosis (FEP): Results From a National Survey

Poster Presenter: Molly R. Belkin, M.D.
Lead Author: Mimi C. Briggs, M.D.
Co-Authors: Kristin Candan, Ph.D., Kristen Risola, Ph.D., Neel Jaysukh Lalkiya, Michael L. Birnbaum, M.D.

SUMMARY:
Background: Despite evidence that psychoeducation is an essential component of successful management of first-episode psychosis (FEP), the content, timing, and format of this intervention has not been well-defined. Furthermore, most psychoeducation described in the literature targets outpatients, which represents a knowledge gap, as patients with FEP are frequently hospitalized. The aim of this study was to evaluate how inpatient psychoeducation is conducted for patients with FEP and their families at hospitals across the United States. Methods: An email was sent to all training directors and/or coordinators at 247 psychiatry residency programs, requesting that they forward a survey link to the residents and inpatient psychiatrists at their institutions. A similar email was sent to 131 early psychosis treatment centers nationwide, requesting that they forward the same survey link to inpatient psychiatrists who routinely refer patients to their clinics. Survey responses were analyzed using descriptive statistics. Results: 167 providers at 43 hospitals completed the survey. 88.0% of responders identified as psychiatry trainees and 10.2% as attending psychiatrists. Most clinicians reported that they do provide psychoeducation to patients with FEP (95.0%) and their families (94.4%) during inpatient hospitalization. Those who do not provide psychoeducation to patients cited lack of materials, lack of time, and severity of illness as the most common barriers. Those who do not provide psychoeducation to families cited lack of time, lack of staff, and family availability as the most common barriers. Of those who provide psychoeducation, 87.0% indicated that the content and delivery method is not uniform, but rather varies based on the individual's needs and interest. Most clinicians provide psychoeducation through unstructured conversation (98.7%), followed by use of handouts (39.9%), most frequently sourced from NAMI and UpToDate. Content of psychoeducation conducted was variable across providers. However, the most commonly discussed topics included diagnosis (98.0%), medication side effects (97.4%), and treatment options (95.4%). Number and duration of educational sessions were also variable across responders. Conclusion: Most clinicians at teaching hospitals in the United States are providing some form of psychoeducation to patients diagnosed with FEP and their families. Those who are not cite lack of materials, time, and trained staff as barriers. Few providers are utilizing a standardized psychoeducational method, suggesting that patients with FEP and their families are not receiving the same content and quality of information. This finding highlights an important treatment gap and may inform the future design of a standardized psychoeducational intervention that can be easily implemented on an inpatient unit.

No. 54

Delusional Infestation in a Patient With Chronic Schizophrenia: A Case Report

Poster Presenter: Carola Rong, M.D.
Co-Author: Sami B. Alam, M.D.

SUMMARY:
Ms. BO, a 47-year-old female from Nigeria with a past history of schizophrenia presents to the inpatient psychiatric unit at Harris County Psychiatric Center in Houston, Texas due to bizarre behavior and somatic complaints of having "snakes in her body". Upon further questioning, she described the sensation as snakes crawling up and down her spine. She reports the first time she experienced this was in 2016. At that time, she was complaining of snakes in her entire body including her head and legs. She reports that they had caused her so much distress that she had headaches and difficulty walking, and had quit her job shortly after. Her past medical history is significant for fibroid surgery in 2012. Ms. BO was diagnosed with schizophrenia in 2011. On review of her past psychiatric history, it was found that beginning in early 2017 she became medication non-compliant for 2 months before she had a severe episode of psychosis which included paranoid

delusions and auditory command hallucinations. At that time she also endorsed visual hallucinations of snakes crawling over her body. These hallucinations and delusions abated with antipsychotic treatment with risperidone and she promptly returned to baseline. However, she returned to the psychiatric hospital multiple times within one year for persistent bizarre behavior and paranoid delusions. On further review of her past psychiatric history, it was found that each time she was discharged from the hospital she did not seek follow-up outpatient care and treatment, and so was medication non-compliant. On the unit, Ms. BO endorsed poor insight into her situation, repeatedly refusing antipsychotic medication because she believed in "divine healing from God". She was hyper-religious, had poor self-care, and was isolated to herself. She fixated on the topic of "black magic" and metallic, black and green colors and kept talking about how she was "wrestling for her biological mother". She denied past history of substance abuse and her urine drug screen was negative. In regards to her social history, she had been homeless and living at a church at the time when she was brought to the psychiatric hospital. Court-ordered medication was eventually ordered and the patient began a course of oral risperidone. At the time of discharge, she denied somatic and paranoid delusions, and denied any auditory or visual hallucinations. In this poster, we discuss delusional infestation as a symptom of schizophrenia.

No. 55

My Life Is a TV Show: A Case of Cannabis-Induced Psychosis

Poster Presenter: Roaya Namdari, M.D.
Co-Author: Brandon G. Moore, M.D., M.B.A.

SUMMARY:

Background: This is a case of a 48-year-old Caucasian female with no past psychiatric history who was admitted to the mental health unit for new-onset psychosis with disorganized behavior. We present this case as a useful teaching case that provided a broad differential diagnosis with a number of roadblocks and some unanswered questions. Of particular highlight is the role that substance use can play in diagnosis and treatment. One day prior to admission, the patient presented to the emergency department at a different hospital after a motor vehicle accident, details of which she could not recall. The day after the accident, the patient was found naked in her backyard with dog feces on her face; she was subsequently brought to our hospital by her son. Treatment Course: On admission, the patient did not allow for collateral information to be obtained and records from her previous emergency department visit were unavailable. She believed that she was part of a television show experiment and that she had been hospitalized for the past 15 years. Patient endorsed ideas of reference, persecutory delusions, and auditory hallucinations. She also exhibited flight of ideas with loosening of associations. Given the limited information at hand, differential diagnoses were broad and included first-episode psychosis in the context of late-onset schizophrenia, bipolar disorder with psychosis, drug-induced psychosis, NMDA-receptor encephalitis, psychosis secondary to closed head injury and delirium due to substance intoxication and/or withdrawal. The patient initially refused medications due to paranoid ideation that she was being poisoned. Psychopharmacologic intervention was therefore delayed pending court-ordered treatment. A thorough medical workup ruled-out organic etiology of psychosis. With continued effort to establish a therapeutic alliance, the patient accepted medications and allowed for collateral information, which revealed cannabis oil use preceding symptom onset. Insight and judgment did improve with treatment and self-care also was also noted to improve. Patient was able to be discharged from the hospital without psychotic symptoms but continued to struggle with guilt and acceptance of the situation that led to her being hospitalized. Discussion: In this poster, we review the literature on cannabis-induced psychosis, the importance of timely and specific toxicology screenings, and the challenges of treatment. One substance that was suspected, given the history, was GHB but we were never able to confirm this due to the rapid metabolism of this drug and her presentation to another facility prior to ours. We do not have further follow-up beyond her hospital stay, but it would be educational to follow this patient to identify return of psychotic symptoms.

No. 56

A Case of Cotard's Syndrome: A Self-Fulfilling Prophecy

Poster Presenter: Thomas Joseph Knightly, M.D.
Co-Authors: Becky Shuang Wu, M.D., Justin Faden, D.O.

SUMMARY:
The patient is a 67-year-old Latino male with a history of schizoaffective disorder who presented to the ED brought in by his sister. Per his sister, he had been nonverbal and not eating, drinking, sleeping or showering for the past several days. It was thought by the sister that he had been non-compliant with his psychotropic medication for the past week. In the ED, he was worked up for an altered mental status. The work up included an EKG, CXR, CT head, TSH, CMP, CBC, HCV, troponin, lipase, UA, UDS, ammonia and lactate which revealed no abnormalities. A UA was positive for trace ketones. Vitals were stable. His outpatient medications included Klonopin 1mg BID, Depakote 500mg BID, Zyprexa 20mg qHS and Remeron 45mg qHS. His UDS was negative for benzodiazepines, supporting his sister's statement that he has been off medication for at least one week. He had a past psychiatric history of schizoaffective disorder with multiple prior inpatient hospitalizations. His past medical history included diabetes mellitus type 2, dyslipidemia, hypertension, anemia and arthritis. After medical clearance, he was transferred to the inpatient psychiatric unit for further care. Upon initial evaluation, he remained mostly nonverbal, was thought blocking and catatonic. He was not eating food or drinking water and needed assistance with ADL's. He was started on Ativan for catatonia, which was gradually increased to a total dosage of 12mg/day before there was any response. While his PO intake improved marginally with treatment of his catatonia, he still required much encouragement to eat and drink regularly. The reason for this, ultimately, became clearer as he became more verbal and the severity of his delusional thinking bared itself. Examples of his delusions included: "I have no blood. I have no organs. My body is rotten. I am dead. I can't talk (while verbalizing this). I can't swallow." His psychosis was treated with Zyprexa, however little response was seen. When he no longer displayed catatonic symptoms, the Ativan was taper down over time from 12mg to 6mg, however, during this process, he again further decreased his PO intake. He was ultimately transferred to the medical unit after developing an acute kidney injury and electrolyte abnormalities secondary to dehydration as a result of his poor PO intake. Importantly, it was learned that he had lost nearly 50 pounds in the previous several months prior to hospitalization. In this poster, we explore the hypothesis that the patient first developed Cotard's syndrome which led to his decrease PO intake, medication non-compliance and subsequent catatonia. In many ways, if left to his own care, the patient's sense of self and his delusions of being dead may have foretold of his ultimate demise.

No. 57

A Case of Treatment-Resistant Schizoaffective Disorder, Likely Precipitated by Untreated Complicated Grief

Poster Presenter: Li Anne Ong
Co-Author: Nigila Ravichandran, M.B.B.S., M.Med.

SUMMARY: Objective: To present a case of "Treatment Resistant Schizoaffective Disorder", likely precipitated by untreated complicated grief Method: Case report Summary: A 35 year old man with a known diagnosis of Treatment Resistant Schizoaffective Disorder was readmitted for the 8th time in seven (7) years due to persistent symptoms and poor insight. His family reported his baseline behaviour of talking to himself, and emergency room review revealed he was having florid auditory hallucinations and grandiose delusions, revolving around his ability to communicate with the supernatural. A diagnosis of psychosis was originally made in 2011, 9 months after witnessing the sudden death of his youngest brother in a freak rock climbing accident. His parents reported that he never cried after the incident and months later, rationalised that his brother's death was on his behalf. Over the years, his diagnosis evolved into Schizoaffective Disorder. What began as occasional auditory hallucinations of giggling developed into grandiose and religiously themes delusions, believing he was a messenger of God and the devil. In more recent years, persecutory ideations which originally related to paranoia and conspiracy theories, began to relate to the supernatural, sensing demonic presences. There was notable resistance from him

and his parents to psychoeducation from early on. Pharmacological therapy was inconsistent as he lacked insight and reportedly used sleight of hand to mask occasions of skipping medications under his parents' watch. In 2016, he set up a small business providing "angel therapy" services which revolved around using his abilities of "clairsentience, clairaudience, clairvoyance and claircognizance" for clients. He reported lucrative earnings of about $1000 a month which his family supported despite their feeling he was unwell. His insight, once responsive to psychoeducation, began to decline and his delusions became more fixed. It is likely that societal positive reinforcement by way of his lucrative business entrenched his rationalisation of his illness. At his latest admission, he revealed that he was significantly affected by his brother's death. It was apparent he attributed his brother's death as the result of the supernatural causes and found relief in being able to communicate with his late brother. He admitted to ongoing florid hallucinations despite appearing well. It was the team's opinion that had it not been for a premature "Discharge against Medical Advice", his condition may have benefited from psychotherapy to explore residual grief pertaining to his brother's untimely death. Conclusion: There is little literature on the role of grief pre-disposing to psychosis. This case highlights the potential manifestation of psychosis from untreated grief, along with detrimental consequences in patient's insight and care when they possess strong cultural belief elements alongside their delusions, which also sustain their livelihood

No. 58

A Ketogenic Diet for Clinical Improvement and Weight Loss in a Patient With Schizophrenia on Clozapine: A Case Report

Poster Presenter: Stephanie Ann Stramotas, M.D., M.P.H.
Co-Author: Cynthia Ann Chavira, M.D., M.P.H.

SUMMARY:
Mr. A, a 38 year-old male with schizophrenia, presented to the hospital with symptoms of psychosis after weeks of medication non-compliance. He was seen talking to himself with dramatic body language and hand gestures, and he was unable to engage in conversation with anyone. After restarting clozapine for psychosis and valproic acid for impulsivity, he appeared to demonstrate less responding to internal stimuli and was able to provide brief responses to interviewers. However, it was noted that Mr. A experienced significant weight gain during his hospitalization, likely due to psychotropic medication side effect. His weight upon admission was 95 kg, which increased steadily to 107 kg after two months. He was started on a ketogenic diet, which is a low carbohydrate, high fat, and moderate protein diet with a 2,000 calorie daily intake. This diet has been used for over a century in patients with treatment-resistant epilepsy, and more recently a case study was published demonstrating its use in a 70 year-old female with schizophrenia in eliminating auditory hallucinations that were refractory to psychotropic medications. After 19 days on the ketogenic diet, Mr. A experienced weight loss to 105.8 kg. The weight loss was somewhat impeded by high carbohydrate food brought in by visitors (he weighed 102 kg on day 10 of the diet). More impressive though, was an improvement in his clinical symptoms. Even after initial stabilization with medication, he experienced daily auditory hallucinations, which he was noted to respond to in the afternoons. After starting a ketogenic diet, Mr. A appeared more able to engage with treatment team members, family, and visitors from open residential mental health treatment programs. He was linear in conversation and demonstrated greater insight into his mental health. In this poster, we discuss the initiation of a ketogenic diet in a patient with schizophrenia in a psychiatric hospital, drawing special attention to the blood monitoring used to track metabolic state and nutritional ketosis. In addition, we elaborate on a ketogenic diet being used as an augmentation strategy to clozapine in a patient with schizophrenia. Finally, we discuss the increased patient morale due to weight loss, which improves compliance with psychotropic medication associated with weight-gain.

No. 59

Sexual Disinhibition in a Schizophrenic Patient

Poster Presenter: Asna Tasleem
Lead Author: Irfan Ahmed, M.D.

Co-Authors: Adebanke Adekola, Stanley P. Ardoin, M.D., Hema Mekala, M.D.

SUMMARY:

MP presented to St. Anthony Hospital on 08/12. He was brought in by the Oklahoma Highway Patrol Trooper, who mentioned that he had observed MP pulling his pants down and digging at his anus, not talking and not looking at anyone. He was not standing still and was resistant to multiple officers. The father had called the cops when the son tried to jump off the moving vehicle. Upon stopping, MP got out and "it was like I was talking to someone that was gone , just gone and he started digging in his ass like an animal in the middle of the highway," states father. Five days, after he was brought to the "OKLAHOMA COUNTY CRISIS INTERVENTION CENTER": On 08/17th, he was playing with his private parts. He was found urinating on the wall and masturbating in the common area. Later he was staring and intimidating female peers(particularly female patients who had been newly admitted). On 08/18th, he was given IM meds., but nonetheless, he appeared catatonic. On 08/19th, he was found to be regularly urinating on floor in the day room. On 08/20 he was given an injection in the morning for urinating on floor and "stripping off" his clothes. He was also touching his private parts. On 08/21, he appeared to rest, without distress. No abnormal eye movements. He was wearing clothes and his respirations were even. On 08/22, pt. continued to have active psychosis. He continued to be hypersexual in his room and out in the day room. Two days after, he was brought to Griffin Memorial Hospital: On 08/24 onwards, during MP's stay at GMH; he was not found to be hyper sexual. This can be alluded towards the patient's acute schizophrenic psychosis becoming better which could be attributed towards the medication. Prior to his admission at SAH, patient was not compliant with his medications. Over the transition of his stay at crisis center and GMH, a significant change was noted in his sexual disinhibition. This improvement had its embarkment upon reinstitution of MP's medication regimen. Background: Hyper sexual syndrome is noted in bilateral basal-frontal infarction. CT scans have shown right thalamic infarction in certain cases of hyper sexual state. Comparatively, above mentioned brain regions are also affected in patients with schizophrenia. Specific subcortical regions are affected, with reduced hippocampal and thalamic volumes. In the cortex, changes in folding patterns and a reduction in cortical volume and thickness, most pronounced in the frontal and temporal lobes are seen. Hence, areas that lead to sexual disinhibition are affected in schizophrenia and acuity of psychosis can be gauged with the hyper sexuality monitored in the patient. Psychiatrists should be cognizant of the hyper sexuality and its prevalence in schizophrenia, and advise the staff to notify the physician when any sign of sexuality prevails, in a schizophrenic patient.

No. 60

Folie a Deux: A Case Report of an Indian Immigrant Couple

Poster Presenter: Vishal Biala, M.D.
Co-Authors: Ljiljana Markovic, M.D., Nadina Abdullayeva

SUMMARY:

Background: Folie a deux (FAD) was first described in the nineteenth century by Lasegue and Falret, and literally means "psychosis of two." It is a rare disorder in which psychiatric contagion of delusions is shared between people enmeshed in a tight knit relationship. We hereby present one such rare case of an Indian immigrant couple who was admitted to the inpatient psychiatric units with shared delusions and psychosis. In this report we discuss the importance of socio-cultural factors in the development of FAD. We also briefly talk about the nosological significance in diagnosis and management of the condition. Case: Mr. A and Mrs. A, were a young Indian couple, 38 and 35-year-old respectively, married for eight years, who emigrated to the U.S.A two years ago on Mr. A's work visa. They had no children or family in the area and were socially isolated. There was no reported history of psychiatric disorders, substance use or any other medical conditions. The couple was brought to the emergency department by police, after the neighbors called 911 due to flooding from the patients' apartment. Both Mr. A and Mrs. A reported that people were trying to do "black magic" on them and "hack into our minds." Amongst the both, Mrs. A appeared to be more delusional, paranoid and psychotic. They were admitted to different inpatient

psychiatric units in the hospital. Urine toxicology was negative for any illicit substances. Laboratory testing was grossly normal except for mildly elevated transaminases for both. As per the collateral information, Mr. A's mother was diagnosed with schizophrenia. Mr. A was also reported to be socially isolative, religiously preoccupied and paranoid at times in the past, but largely functional. During the course of hospital stay, Mr. and Mrs. A refused the medications and were finally discharged as they no longer met criteria for involuntary admission. Discussion: Perceived social and cultural threats like moving to a new country, work or home environment can often exacerbate underlying fear and paranoia in the individuals who are susceptible. This can manifest clinically as delusions or psychosis in extreme cases. More interestingly, the second person in close relationship with the primary case can develop similar delusions. Although the exact mechanism is not well understood, as per the available literature, recipients who are younger than the primary case, mostly females, in close marital relationship with dominating partners, are more likely to develop FAD. Folie a deux is briefly described in DSM 5 as "delusional symptoms in partner of individual with delusional disorder," as a subcategory of Other Specified Schizophrenia Spectrum and Other Psychotic Disorder. With poorly defined criteria in DSM5 and lack of standardized treatment protocol, it is rather challenging for clinicians to appropriately diagnose and manage the condition. Hence there is a need for further revision of diagnostic criteria and treatment guidelines.

No. 61

Pregnancy-Induced Psychosis

Poster Presenter: Madia Majeed, M.D.
Co-Authors: Soroush Pakniyat Jahromi, Asghar Hossain, M.D.

SUMMARY:

Pregnancy is a stressful situation for women that could induce psychosis especially when paired with other factors such as prior physical or mental health issues. This is a case report of a 34-year-old female with a history of being diagnosed with bipolar disorder in the past, which was acutely psychotic and internally preoccupied with disorganized behavior on assessment. Patient's mood became more labile four days prior admission with poor sleep and increasing agitated towards family. In her lab works HCG level was 406, which is equivalent to gestational age of 4-5 weeks. This case report signifies the importance of ruling out pregnancy in women of childbearing age with psychiatric problems in the initial assessment. The challenging aspect of managing psychotic symptoms during pregnancy has also been highlighted. The treatment of psychiatric disturbances during pregnancy has been a sensitive topic and always requires a careful assessment of the risks and benefits of treatment for both mother and the child. It requires an interdisciplinary approach among psychiatrists, obstetricians, and primary care physicians. More research needs to be done to help physicians develop a safer treatment plan in psychosis during pregnancy.

No. 62

Role of Neutrophil-Lymphocyte Ratio in Schizophrenia Treatment With Clozapine

Poster Presenter: Hussain Abdullah
Co-Author: Alexander C. L. Lerman, M.D.

SUMMARY:

Clozapine has been associated with impairments of immune function, manifested as reversible neutropenia. Also, there are reports of transient and chronic paradoxical neutrophilia with clozapine treatment in the absence of infectious focus. Several hypotheses are proposed for potential pathophysiology of this presentation and its possible relation to treatment response. Bidirectional communication between the neuroendocrine, immune and central nervous systems is well acknowledged. There is evidence that neutrophils and lymphocytes carry dopamine transporter (DAT) and express dopamine receptor subtypes. The potential of clozapine to modulate neutrophil and lymphocyte behavior could be studied by neutrophil to lymphocyte ratio (NLR), which has been found correlated with depression severity to predict role of inflammation. On the other hand, there is possibility of direct modulatory effect of central nervous system (CNS) stress, as in psychiatric illnesses, on behavior of neutrophils and lymphocytes. We studied two patients with transient rise in NLR and ANC irrespective of change in dose. Ms. Z is a 61

years old Caucasian woman with past psychiatric history of major depressive disorder with psychotic features and presented to the mental health care facility following a suicide attempt. NLR changed from 3.4 at baseline to 9 with potential decrease in clozapine serum level and trend down to 5.9 on day five. Ms. X is a 42 years old woman with past psychiatric history of schizoaffective disorder, non-compliant with prescribed clozapine, who presented with worsening bizarre behavior. Her NLR changed from 3.1 at baseline to 9.1 when started on clozapine and trend down on day two. Moreover, persistent serum hypo-globulinemia was observed in both patients irrespective of change in dose. Although of our patients were on lithium, associated with raised ANC when concomitantly given with clozapine, its dose was stable and changes in NLR and ANC were transient. In this context, a question could be raised whether NLR has potential to reflect illness severity and treatment response with clozapine. The hypothesis that leukocytosis could be predictor of loss of treatment response with clozapine could be further studied in context of complex interaction and potential of clozapine to regulate DAT and dopamine receptor modulation in neutrophils and lymphocytes. Clozapine is one of the effective treatments for schizophrenia but less frequently used or delayed in context of its immunologic manifestations and need for regular monitoring. There is need to establish batteries of surrogate biomarkers to predict illness severity and help navigate treatment. Considering the complex interaction between clozapine and the immune system, NLR, monocytes to lymphocytes ratio and Albumin to Globulin ratio could be studied as potential therapeutic response measure and illness severity index among schizophrenia patients.

No. 63
WITHDRAWN

No. 64
Delusional Disorder: Contemplating Treatment Continuity in Delusional Disorder
Poster Presenter: Waquar Siddiqui, M.D.
Co-Authors: Sabeen Khaliq, Umang Shah, M.D., M.P.H.

SUMMARY:

Delusional disorder is associated with false believes based on incorrect inference about reality and lasting at least one month per DSM-5. Patients with delusional disorder are not impaired in daily life and are able to function, therefore this has been often referred to as “partial psychosis”. Additionally, personal beliefs should be evaluated with great respect to complexity of cultural and religious differences; some cultures have widely accepted beliefs that may be considered delusional in other cultures. Patients are usually referred by others as patient’s themselves do not see the delusion as unreal, leading to underreporting of delusional disorder. There are no current guidelines of treating delusions but antipsychotics are the mainstay treatment and there are several case reports showing improvements with antipsychotics. In our report we discuss when is the right time to discontinue antipsychotics in patients with delusional disorder. In this case report, we present an interesting case of persistent delusional disorder of a 66-year-old female involving persecutory delusion that people are trying to lock her up and people are breaking up and sabotaging in her home. She also seems to have fixed belief that her family wants to be under guardianship in order to sell her property. Patient was tried on several mood stabilizers, and antipsychotics before she was stabilized on paliperidone injectable once a month. For the last 2 years she has not exhibited delusions and so now we are questioning if she should be continued on treatment or not. This case highlights the significant improving course of delusional disorder over the years with the concomitant use of antipsychotic medication. The possible role of socio-cultural beliefs in shaping the content of delusion, dilemma in labeling the psychopathology due to the same and also the difficulties in exactly pinpoint the role of antipsychotic medication makes it hard to decide either to continue or to stop the antipsychotic medication.

No. 65
Use of Vitamin B6 in the Treatment of Tardive Dyskinesia: A Case Report
Poster Presenter: Erika Maynard, M.D.

SUMMARY:

Neuroleptic-induced tardive dyskinesia (TD) is an involuntary movement disorder and common side effect from chronic use of dopamine receptor antagonists in the treatment of psychiatric disorders. Available treatment options for TD include vesicular monoamine transporter 2 inhibitors, such as valbenazine, tetrabenazine, and deutetrabenazine. However, these pharmacological agents are very expensive with a significant side effect profile. Other options include: benzodiazepines, botulinum toxin injections, and anticholinergic agents. In comparison, therapeutic use of vitamin B6 (pyridoxine) for the treatment of TD offers a lesser side effect profile and is an inexpensive alternative. Current accepted effective dose is 400 mg/day with up to 1200 mg/day considered safe with a longer lasting effect [Lerner et al. 2015]. This case follows a patient with longstanding schizoaffective disorder, bipolar type with neuroleptic-induced tardive dyskinesia. He had been treated with several antipsychotics in the past, but at this time was on Risperdal Consta. We noted significant reduction in TD symptoms over the course of 3 months on vitamin B6 200 mg BID. AIMS score went from 12 to 5 during this time period. Interestingly, when trying to wean the patient down to 100 mg daily of vitamin B6, TD symptoms reemerged and he required an increase back up to 200 mg BID. Upon discharge, TD symptoms were well controlled on this dose as this patient responded very well to vitamin B6 treatment with significant reduction in symptoms. The current state of thought regarding the efficacy of vitamin B6 in treating TD is that better evidence is needed before a compelling case can be made for widespread use. This case supports the need for "well-standardized, randomized controlled trials to determine the beneficial effect of pyridoxine on patients with TD" [Umar et al. 2015].

No. 66

Psychogenic Polydipsia: A Cause for Concern in Schizophrenic Population

Poster Presenter: Venkatesh Sreeram, M.D.
Lead Author: Romi Grover Shah, M.D.
Co-Authors: Emeka Charles Oputa, M.D., M.P.H., Kafilat A. Ojo, M.D., Ankit Jain, M.D., Tresha A. Gibbs, M.D.

SUMMARY: Objective: Psychogenic Polydipsia (PPD) is present in around 20% of chronic psychiatric illnesses with significant mortality. Our aim is to identify the association between schizophrenia and PPD and to understand the link between the two by literature review and discussion of a case report. Design: Case report and literature review. Case presentation: A 64 year old female with past psychiatric history of schizophrenia and generalized anxiety disorder, brought to emergency department (ED) for worsening of anxiety with tremors and excessive water intake. Patient reported that her anxiety improved by consuming excess water, leading her to drink more water. She reported drinking several glasses daily with increased frequency in urination. Patient was also endorsing auditory hallucinations for two weeks. She denied any other symptoms. Her tremors seemed as the tremors of Parkinson's disease. On labs noted to be hyponatremic with sodium level 125. Neurology consultation placed, and diagnosed with Psychogenic Polydipsia, as the lab results could not confirm any other functional abnormality. Brain CT showed enlarged ventricles with sulcal enlargement, suggestive of long-standing changes related to combination of cerebral atrophy and schizophrenia. Patient was started on Olanzapine for psychotic symptoms and behaviorally management for water restriction in the unit. Sodium levels were consistently monitored and the sodium level came back to the baseline gradually along with the tremors. Discussion: PPD is often underdiagnosed and overlooked in patients with mental illness leading to electrolyte imbalance with resultant hyponatremia and increase mortality. Furthermore, hyponatremia commonly remains undiagnosed and untreated in patients with mental illness. It is commonly associated with impaired thirst control which is not due to antidiuretic hormone. PPD is found in around 18% of patients with schizophrenia without any medical reasoning. The pathophysiology in most cases is unknown. Few studies also reported that psychosis can temporarily reset the body osmostat or elevated dopamine levels may stimulate the thirst centers. Several antipsychotics have been studied and few found to be effective with PPD that include Risperidone, Olanzapine and Clozapine. Careful monitoring is required to identify hyponatremia across the spectrum of mental health

disorders. The measurement of serum sodium and close watch for the signs and symptoms of PPD should be included as a part of assessment to recognize promptly. Limited studies are available focusing treatment of PPD therefore additional studies are required to indicate the management and early identification of the disorder to reduce the morbidity and mortality.

No. 67

The Challenges of Assessing Psychosis in a Deaf Patient: A Case Review

Poster Presenter: Adam M. Berns, M.D.
Co-Author: Tahia Haque, M.D.

SUMMARY:

Mrs. P is a 57-year-old woman with congenital bilateral hearing loss and a history of schizophrenia with visual hallucinations, who was brought into the emergency room by family who witnessed the patient spending hours talking to herself, sleeping poorly and not caring for herself. Mrs. P was admitted psychiatrically and was observed responding to internal stimuli and harboring referential ideas towards family members. A sign language interpreter was utilized during these interactions, and collaboration was required between the psychiatrist and interpreter to understand the elements of psychosis that had manifested in this patient. Schizophrenia in the hearing impaired is often difficult to assess and classify. This is primarily because a patient's cognition, which includes thought process and content, is evaluated through linguistic analysis. Schizophrenia is conceptualized as a broad deficiency in several domains of cortical processing, including thought and language. Barriers in communication often hinder a psychiatrist's ability to decipher formal thought disorder, auditory and visual hallucinations, and ideas of reference. Additionally, people who are deaf primarily process information on a visuospatial level. Thus, a nonlinguistic approach is necessary to evaluate hallucinations and delusions within their cognition. This case review will explore how psychosis manifests in those who are hearing impaired, and discuss current literature of linguistic and cognitive analysis in assessing this patient population.

No. 68

Influence of Oral or Long-Acting Injectable Antipsychotics on Treatment Adherence and Suicide Attempts in People With Severe Schizophrenia

Poster Presenter: Juan J. Fernandez-Miranda
Co-Authors: Danny F. Frias-Ortiz, Sylvia Díaz-Fernandez

SUMMARY:

Background To prevent suicidal behavior among people with severe schizophrenia is an important treatment goal. And to improve adherence seems to be a way for reaching this outcome. The objectives of this study were to know treatment adherence and suicide attempts of patients with severe schizophrenia in a standard treatment in mental health units and under treatment in a community-based, intensive case managed program. And the role of oral or long-acting injectable antipsychotic medication on both outcomes. Methods Observational, mirror image study of ten years of follow-up (treatment in an intensive case managed and community based program) and ten of standard treatment in mental health units, of patients with severe (Clinical Global Impression-Severity scale, CGI-S=>5) schizophrenia (N=344). Reasons for Program discharge (including deaths by suicide) and suicide attempts in both treatments were recorded. Also antipsychotic drugs used (1st vs 2nd generation and oral vs long acting injectable). Assessment included the CGI-S. Results After 10 years in the Program only 12.2% of the patients were voluntary discharges (In previous standard treatment: 84.3%). CGI-S at baseline was 5.9(0.7). After ten years 51.7% of patients continued under treatment (CGI-S= 3.9(0.9); $p<0.01$); 19.3% were medical discharged (CGI-S=3.4(1.5); $p<0.001$). Suicidal attempts decreased significantly compared to the previous ten years (38.9 vs 7.6% of patients; average 0.3 vs 0.07; $p <0.0001$). Prior to begin in the Program, 61.1% of patients of patients were treated with 2nd G antipsychotics and in the Program almost all of them, 98.4 % ($p <0.00001$); and previously 72.4% of patients were on oral antipsychotics (OAP), and during the Program most of them changed to be treated with long-acting injectables (LAI): 56.7% ($p <0.001$). In relation to suicide attempts, they were significantly related with being treated with OAP and

not with LAI, both before treatment in the Program (p <0.001) and especially during it (p <0.0001). Conclusions The fact of being treated with long-acting injectable antipsychotics was clearly effective in improving treatment adherence and in reducing suicide attempts compared with oral ones in patients with severe schizophrenia both in standard treatment and in a case managed community-based program.

No. 69

Psychiatric Hospitalizations of Patients With Severe Schizophrenia Treated in a Community-Based, Case-Managed Program Versus Standard Care

Poster Presenter: Juan J. Fernandez-Miranda
Co-Authors: Sylvia Díaz-Fernandez, Danny F. Frias-Ortiz

SUMMARY:

Background Case managed approach with pharmacological and psychosocial integrated care have been suggested as a way to improve treatment adherence and to prevent hospital admissions among people with severe schizophrenia compared with standard treatment. The objectives of this study were to know the treatment adherence and the psychiatric hospitalizations of patients with severe schizophrenia before (standard treatment in mental health units) and during treatment in a comprehensive, community based, intensive case managed program. And also the role of oral or long-acting injectable antipsychotic medication. Methods Observational study, mirror image, of ten years of follow-up and ten retrospectives (pretreatment), of patients with severe (Clinical Global Impression-Severity scale, CGI-S=>5) schizophrenia in a community based program, with integrated pharmacological and psychosocial treatment and intensive case management (N=344). Reasons for the Program discharge and psychiatric hospital admissions (and if they were involuntary) were recorded ten years before and during treatment. And also the antipsychotic medication prescribed. (1st vs 2nd generation and oral vs long acting injectable). Assessment included the CGI-S. Results After 10 years only 12.2% of the patients were voluntary discharges (In previous standard treatment: 84.3%). CGI-S at baseline was 5.9(0.7). After ten years 51.7% of patients continued under treatment (CGI-S= 3.9(0.9); p<0.01); 19.3% were medical discharged (CGI-S=3.4(1.5); p<0.001). The percentage of patients with hospital admissions, and the number of admissions due to relapses decreased drastically after entering the Program (p <0.0001), and as well the involuntary ones (p <0.001). Being on long-acting injectable antipsychotic treatment was related to these results (p <0.0001). Conclusions The incorporation of patients with severe schizophrenia into a comprehensive, community-based program, with integrated pharmacological and psychosocial treatment and intensive case management achieved high treatment retention, and was effective in drastically reducing psychiatric hospitalizations compared to the previous standard treatment. The fact of being treated with long-acting injectable antipsychotics was clearly linked to these outcomes.

No. 70

Suicide Attempts in People With Severe Schizophrenia: A 20-Year Mirror Image Study Comparing Case-Managed Community Program Versus Standard Treatment

Poster Presenter: Sylvia Díaz-Fernandez
Co-Authors: Danny F. Frias-Ortiz, Juan J. Fernandez-Miranda

SUMMARY:

Background Case managed approach with pharmacological and psychosocial integrated care have been suggested as a way to prevent suicide attempts among people with severe schizophrenia compared with standard treatment. The objectives of this study were to know the suicide attempts of patients with severe schizophrenia before (standard treatment in mental health units) and during treatment in a comprehensive, community based, intensive case managed program. And also the role of antipsychotic medication (oral or long-acting injectable) in these outcomes. Methods Observational, mirror image study of ten years of follow-up and ten retrospective (pretreatment), of patients with severe (Clinical Global Impression-Severity scale, CGI-S=>5) schizophrenia under treatment in an intensive, integrated, case managed and community based program (N=344). Reasons for Program discharge (including deaths by suicide) and suicide attempts before and during treatment were recorded. Also antipsychotic drugs used (1st vs 2nd

generation and oral vs long acting injectable). Assessment included the CGI-S. Results The retention in the Program was high: After 10 years only 12.2% of the patients were voluntary discharges (In previous standard treatment: 84.3%). CGI-S at baseline was 5.9(0.7). After ten years 51.7% of patients continued under treatment; 19.3% were medical discharged and continued standard treatment in mental health units. Suicide attempts decreased significantly compared to the previous ten years (38.9 vs 7.6% of patients; average 0.3 vs 0.07; p <0.0001). The fact of being treated with oral and not with long-acting antipsychotics (LAI), both before treatment in the Program (p <0.001) and especially during it (p <0.0001), was related to higher risk of suicide attempt. Conclusions Retention in treatment of patients with severe schizophrenia in a comprehensive, case-managed and community based program, with integrated pharmacological and psychosocial treatment, was high, and it was effective in drastically reducing suicidal attempts. The fact of being treated with long-acting injectable antipsychotics clearly influenced the achievement of these outcomes. Both treatment characteristics (intensive case management and regular LAI antipsychotic use) helped to improve treatment compliance and to prevent suicide behavior than standard treatment and oral antipsychotic use.

No. 71

Late-Onset Schizoaffective Disorder

Poster Presenter: Ammara Raziuddin, D.O.
Co-Author: Suporn Sukpraprut-Braaten

SUMMARY:

Schizoaffective Disorder can be difficult to distinguish between Schizophrenia, Bipolar Disorder, and Unipolar Depression since it lies in between Affective and Psychotic Disorders. Here we have a case of a 27 y/o Caucasian Female who presented to our inpatient unit after her first break at 26y/o with no previous psychiatric history, family psychiatric history, or substance abuse issues. Her diagnosis after her first admission was Delusional Disorder, Unspecified Type and discharged her on Abilify 5mg PO QHS and Lexapro 20mg PO QHS. It wasn't until her third admission that we changed her diagnosis to Schizoaffective Disorder and discharged her on Risperdal 3mg PO BID, Seroquel 600mg PO QHS, Trazodone, 150mg PO QHS, and Melatonin 6mg PO QHS. Her presentation was not as clear to us in the beginning and it took time to get her onto the correct medications to treat her symptoms. Prior research demonstrates that interrater reliability was only moderate for Schizoaffective Disorder where it was "substantial for schizophrenia."3 That study found that many key characteristics of patients with schizoaffective disorder were more similar to schizophrenia than to patients with unipolar depression. They also found that Schizoaffective patients were on average younger at onset, had a higher percentage of men with the diagnoses, had lower percentage of married patients, and tended to be more severely affected than patients who had Unipolar Depression4. In another study it was found that many key characteristics of patients with schizoaffective disorder were more similar to schizophrenia than to patients with unipolar depression. They also found that Schizoaffective patients were on average younger at onset, had a higher percentage of men with the diagnoses, had lower percentage of married patients, and tended to be more severely affected than patients who had Unipolar Depression4. The main takeaway from this case is to keep Schizoaffective Disorder as a main differential diagnosis when considering Schizophrenia, Bipolar Disorder, or Unipolar Depression and to follow-up and re-evaluate the patient as time progresses. With this in mind it will help us to identifying Schizoaffective Disorder earlier in patients and treating it accordingly.

No. 72

Side Effects of Combining Two Long-Acting Injectable Antipsychotics

Poster Presenter: Abdullah Bin Mahfodh, M.D.
Co-Author: Umang Shah, M.D., M.P.H.

SUMMARY:

Psychiatrists face multiple challenges when they treat patient with schizophrenia, some of them include poor adherence, poor response, and treatment resistance, which often leads to treatment failure. It is estimated that 20% to 50% of patient will fail to show improvement in their symptoms with multiple antipsychotic trials. Though combination of antipsychotics are common practice, its not encouraged. To overcome poor adherence

issues, long acting injectable (LAI) antipsychotics were introduced to the market in bi-weekly, monthly or even longer shots. There are some case reports that describe efficacy of starting patients on 2 LAIs, but few that would describe the behavioral implications of such practice. LAI antipsychotics are particularly helpful in increasing adherence and reducing relapse rate.They may also provide a more consistent plasma level of medication than their oral counterparts, leading to improved tolerability. We are discussing a case of a 30-year-old African American female with a past medical history of treatment resistant Schizophrenia, Post-Traumatic Stress Disorder (PTSD) who had aggressive behavior, paranoia, and persecutory delusions. Adequate trials of oral medications like Lurasidone, Asenapine, Quetiapine, Risperidone, and LAI such as Fluphenazine Decanoate and Olanzapine were tried in the past in various combinations without much success. The initiation of Clozapine was overlooked as patient has a history of being violent and noncompliant with blood work up. Patient was started on paliperidone (LAI) and aripiprazole (LAI) was added later. She was on the combination regimen for 3 months with only minimal improvement; on the contrary side, there has been a noticeable increase in agitation, aggression and use of as needed agitation medication alongside multiple "show of support codes" being called due to her behavior. A decision was made to discontinue paliperidone and follow up showed a reduction in the severity and frequency of her aggressive behaviors, as evident by reduction in use of as needed medication as well as codes. Some case reports have shown some efficacy in using two concurrent LAIs in complex patient population. But it is important to keep in mind various side effects associated with such practice. Increased akathisia, tardive dyskinesia, and neuroleptic malignant syndrome can occur and can be hard to reverse since medications cannot be washed out rapidly. Thus, an implementation of a thorough health monitoring is needed in such patients.

No. 73

Parkinsonism With Atypical Antipsychotics in a Patient With Post-Encephalitis Psychosis

Poster Presenter: Abdullah Bin Mahfodh, M.D.

Co-Authors: Umang Shah, M.D., M.P.H., Manar Abdelmegeed, M.D., M.P.H.

SUMMARY:

Encephalitis clinically manifests as impairment of brain functions, depending upon the area of brain parenchymal involvement. Of multiple neuropsychiatric consequences during post encephalitis phase, parkinsonism has been well studied, particularly since the epidemic of encephalitis lethargica. A reduction in dopamine at substantia nigra as well as nigrostriatal pathways, has been postulated as a common mechanism for development of parkinsonian symptoms, also a common side effect with the use of typical antipsychotics. We present a case of a 55 years old male with remote history of encephalitis, who developed parkinson's symptoms as a side effects with atypical antipsychotics, which are less prone to produce such symptoms otherwise. A 55 years old African American male with past psychiatric history of post- encephalitis psychosis and cognitive decline who presented to our hospital with back pain and decreased ability to take care of daily activities due to rigidity. Patient was on Aripiprazole 20 mg daily for psychosis. Review of obtained records shows that the patient was healthy and functional until five years ago when presented to a hospital with fever and confusion, at that he was diagnosed with encephalitis of unknown etiology and since then he has been demonstrating cognitive decline, one year later he started having hallucinations, delusions and disorganized behavior. Neurology was consulted as he demonstrated parkinsonian symptoms (Cogwheel rigidity, mask like face, bradykinesia, and tremors); CBC, BMP. B12, EEG, and CSF studies were within normal limits. Brain MRI and Head CT showed global atrophy that was consistent with previous imaging tests. Neurology believed that his symptoms are related to post-encephalitis parkinsonsim that was complicated by Aripiprazole. Aripiprazole was discontinued and after 6 days patient's symptoms dramatically improved. At that time further records were obtained and it showed that he had similar parkinsonian symptoms when he was taking Olanzapine 10mg at night, at that time Olanzapine was discontinued and his symptoms improved as well. Our patient showed rather severe parkinsonism despite being on atypical antipsychotics that have

low incidence of such symptoms. This presentation can be due to preexisting condition of post-encephalitis syndrome, his symptoms improved after Aripiprazole and Olanzapine was stopped, on both occasions within a week and he was capable of performing daily physical task. Physician should be cautious when treating psychosis in patients diagnosed with post-encephalitis syndrome. Further research is required to determine the pathophysiology, prevention and effective management of such manifestation.

No. 74

Neuroleptic-Induced Transformation of Fregoli Syndrome Into Hyper Familiarity Facial Syndrome: Evidence of a Spectrum Disorder

Poster Presenter: Emma Moghaddam
Co-Authors: Alan R. Hirsch, M.D., Mohammad Hussain, Daniel Larez

SUMMARY:

Introduction: Conversion of Fregoli syndrome into hyperfamiliarity for faces (HFF) in those treated with neuroleptics has not heretofore been reported. Furthermore, the two syndromes have not been reported to occur in the same person. Such a case is presented. Method: This 44 year old right handed female presented with schizoaffective disorder. Patient stated that strangers appeared to be people she knew but were in disguise and coconspiring plots to harm her. After one week of treatment with quetiapine (up to 300 mg/day), she noted a gradual transformation such that now everyone she saw were not people she knew disguised as strangers, but rather felt she knew from the past. She was unable to recall who they were nor the context of their association. This feeling that everyone was familiar to her persisted and occasionally she would confront these individuals where she knew them from, but they would deny any familiarity. Patient reported 3 discrete such episodes which occurred over a period of 10 years with the longes episode lasting about a week. Results: Abnormalities in Physical examination: General: supraventricular tachycardia, Bilateral Palmar erythema. Mental status examination: Memory: Immediate Recall: 7 digits forwards and 4 digits backwards. Recent Recall: 3 of 4 objects in three minutes and 4 of 4 objects with reinforcement. Completed 9 years of education. Animal Fluency Test: 23(abnormal). C-SSRS Scale :8. Cranial Nerve Examination (CN): CN I: Alcohol Sniff Test: 7 Cm (Anosmia). CN II: Visual Acuity Exam: 20/20 OD 20/25-1 OS. CN IX,X: decreased gag reflex bilaterally. Motor Examination: Intrinsics of both extremities 4/5, abductor pollicis brevis of both extremities 4/5. Cerebellar: Finger to nose: end point dysmetria bilaterally. Reflex Examination: 3+ bilateral pendular knee jerks. Bilateral Hoffmann reflexes. Discussion: Fergoli syndrome, the misidentification of strangers as disguised individuals that are well known to the subject has been associated with over activity of the right perirhinal cortex (Devinsky, 2009). Hyperfamiliarity for faces on the other hand suggests left temporal lesion (Devinsky ,2010). Antipsychotic medication converted this patient from Fregoli`s Syndrome to Hyperfamiliarity for faces suggests that this represents a single syndrome with a continuity between the two with different phenotypic expressions depending upon severity of the illness. Furthermore, HFF has not heretofore been described in primary psychiatric disorders. In the presence of this individual, with evidence of other psychotic manifestations, suggest that it may not only be due to an organic lesion, but also associated with primary psychiatric abnormalities. Given the associations above, query in those who present with Fregoli, Capgras syndrome, Hyper familiarity for face is warranted. progression from Fregoli to HFF may be used as an indicator of resolution of the underlying delusional disorder. Further investigation is warranted.

No. 75

Treatment of Burning Mouth Syndrome Through Manducating Mucilage

Poster Presenter: Emma Moghaddam
Co-Authors: Mohammad Hussain, Alan R. Hirsch, M.D.

SUMMARY:

Introduction: Manducating mucilage has been reported to transiently reduce pain in BMS (Hirsch, 2010; Cheung, 2014). However, the differential effect of short as opposed to long acting gum functioning as an analgesic agent for this condition has not heretofore been described. Methods: Case Study: Two weeks following an intestinal obstruction

repair surgery, a 63 year old female presented with BMS symptoms that have persisted for the past two years. The burning pain is localized in her upper and lower lips, along with the anterior and middle portion of her tongue. It is aggravated by drinking water and eating any food. Alleviated with mouth movement, ice, Blistex and lidocaine mouthwash. Symptoms are relieved by chewing gum, much more effective when it is long acting, causing resolution of symptoms for 3 hours, while short acting gum improves them for 15-20 minutes. Of the gum flavors, mint tends to work best. Results: Abnormalities in neurological examination: Motor Examination: abductor pollicis brevis 4/5 bilaterally. Drift testing: bilateral cerebellar spooning with bilateral abductor digiti minimi signs. Cerebellar Examination: Decreased rapid alternating movements in the left upper extremity. Reflex's: 3+ BUE. Ankle Jerks: 2+ bilaterally with delayed return. Hoffman reflexes: positive bilaterally. Chemosensory testing: Olfaction: Normosmia on: Brief Smell Identification Test: 11 Retronasal Smell Index: 9. 4 Item Pocket Smell Test: 4 (normosmia). Gustation: propylthiouracil disc taste test: 8 (normogeusia). Taste quadrant testing: (normogeusia). Taste threshold testing: mild hypogeusia 10-30% to sodium chloride, hydrochloric acid. Saxon test: 2 gm (abnormal). Other: Schirmer test: negative. Anti SS-A, anti SS-B: negative. Conclusions: Possibly, the sweet taste acted to satisfy glycolimia and thus the pain (Hirsch 2010). Chewing gum may have allowed the exposure to sucralose or another sweetener agent sucralose to reduce pain, with hedonic fulfillment reducing the analgesic state (Hirsch 2010). This mechanism would support the paradigm of a primary BMS pathophysiology involving inhibitory interaction between sweet gustatory chemosensory input and trigeminal pain fibers. The act of chewing alone induces movement of the tongue, and such lingual kinesthetic activity may be the source of mucilage-induced pain reduction (Cheung, Trugill, 2014). It is also possible that the somesthetic stimulation of chewing the gum reduced the pain, and that the prolonged sensory stimulus of long acting gum increased the duration of mandibulation, allowing the alleviation of symptoms for a greater period of time. Since pain is exacerbated with anxiety, the longer duration of gum chewing might also have a beneficial effect in managing patients with BMS because of the associated anxiolytic properties of masticating gum (Sasaki-Otomaru et al, 2011). Use of long acting mucilage should be considered in the management of BMS and warrants formal investigation.

No. 76

Multiple Long-Acting Injectable Antipsychotics: Challenges in the Management of Treatment-Resistant Schizophrenia Associated With Aggression

Poster Presenter: Zohaib Majid, M.D.
Lead Author: Caroline Bifano Vasendin, M.D.
Co-Author: Michelle Salpi Izmirly, D.O.

SUMMARY:

A 50-year-old African American female with a 30 year history of schizophrenia was referred to our outpatient clinic following an eleven week hospitalization for psychosis and aggression towards staff at her residence in the context of noncompliance with medication for over one year. The patient was stabilized on Haloperidol Decanoate 200mg IM every four weeks along with Assisted Outpatient Treatment due to her significant history of violence during periods of non-adherence to medication. During the first year of treatment post hospitalization, patient consistently presented with chronic paranoid delusions, auditory and visual hallucinations, disorganized thought process, sporadic depressed mood, disrupted sleep cycle, and social isolation, with a PANSS score P: 22, N: 15, G: 31. Haloperidol Decanoate was increased to 220 mg IM; however the patient did not show any improvement over a period of 5 weeks. Due to the complexity of the patient, specifically her prior history of non-adherence along with consistent refusal for all oral medication, including clozapine, the patient was presented with the option of adding a second generation long acting injectable along with her Haloperidol Decanoate. The patient was educated on the benefits and possible adverse side effects and the lack of evidence in literature for this treatment. Invega Sustenna 117mg IM every four weeks was started along with Haloperidol Decanoate 175 mg IM. On the twelfth week, the patient's PANSS score was reported P: 10, N: 15, G: 20. Though the patient missed her dosage of Invega Sustenna at fourteen weeks, it was reinstated on the

eighteen week while continuing Haloperidol Decanoate. Patient did not tolerate further tapering from Haldol Decanote 100mg due to recurrence of psychotic symptoms. On 31st week, PANSS score was P: 14, N: 15, G: 22, while on Invega Sustenna 117mg and Haldol Decanoate 100mg. On week 37th, patient reached symptom stabilization on Haldol 100mg IM and Invega Sustenna 156mg IM, with a PANSS score of P:13, N:9, G:20. Finally the 53rd week, patient reached symptom stabilization on Haldol 50mg IM and Invega Sustenna 156mg IM, with a PANSS score of P:8, N:10, G:17 with an overall PANNS score reduction of 48.5% . Patient's quality of life has improved, and is currently in the process of becoming her own payee for SSI. The concurrent treatment with two LAIs is not approved by the FDA and therefore currently there are no guidelines to support this practice in treatment resistant or refractory schizophrenia. Reports show that combining two or more oral antipsychotics is a frequent observed phenomenon (10–50%) in clinical practice. Although there is no treatment guidelines for concurrent use of two long acting antipsychotics, there are few cases reported describing successful use. We present the case of a patient with Schizophrenia who showed significant improvement clinically and in her quality of life on a combination of two long acting antipsychotics.

No. 77

Challenges in the Management of Hypersexual Behavior Following a Traumatic Brain Injury: A Case Report

Poster Presenter: Zohaib Majid, M.D.
Co-Authors: Asa L. Cheesman, M.D., Marieliz V. Alonso, M.D.

SUMMARY:

We present a 56 year old man, domiciled, living at home with his wife, unemployed on SSI, with a history of traumatic brain injury (TBI) in 1989 resulting from a bicycle fall and confirmed by brain CT to have right frontparietal craniotomy, with no known past psychiatric history or history of previous suicide attempts or self-injurious behavior prior to the incident. Almost immediately following the TBI, our patient developed changes in behavior and personality which led to multiple psychiatric hospital admissions, ER visits, and ultimately established outpatient care to our services. On examination, he was sexually preoccupied with inappropriate verbal sexual obscenities and physical gestures towards female staff; at times following them and placing his hand on their shoulders. We were unable to attain detailed information during patient interview as our patient is aphasic and only able to answer simple yes or no questions. All information obtained is from patient's wife. As per wife, the patient has displayed bizarre sexual behavior such as allowing his dog to lick his genitals for pleasure and having aggressive outbursts with inappropriate sexual advances towards wife. The patient is currently taking Haloperidol 5mg BID, Valproic Acid 500mg BID, Benztropine 0.5mg BID, behaviors are somewhat controlled but have not remitted and at times patient decompensates. Although traumatic brain injuries can cause an orchestra of neuropsychiatric symptoms which can be difficult to manage, we will focus on the literature available on managing hyper sexuality. In this case report, we will discuss how a considerable amount of individuals with TBI show inappropriate sexual behaviors and sexual dysfunctions, which usually can be the result of interaction between the psychological makeup of the injured person, their sociocultural background and the neurological sequelae of the injury itself. We will explore the clinical research on the outcome of insults to neuroanatomical structures, which regulate sexual behavior. Some research suggests deviant sexual behavior and the removal of moral-ethical constraints are caused by damage to the orbital parts of the frontal lobes, and also a rise in disinhibition. Additionally, patients with injury in this location exhibit stimulus-driven behavior with poor impulse control, diminished social insight, explosive aggressive outbursts, emotional lability, inappropriate verbal lewdness, distractibility, jocularity and lack of interpersonal sensitivity. Since our patient has a confirmed frontoparietal lobotomy, these findings could explain changes in our patient's impulse and sexuality. Finally, we discuss the importance of collaborative efforts needed to support research in this field in the future for accommodating better treatment and rehabilitative options to the patients who suffer TBI with chronic psychiatric sequela.

No. 78

Mega Cisterna Magna and New Onset Psychosis in a 17 Year-Old Male

Poster Presenter: Lan-Anh T. Tran, D.O.
Co-Authors: Vanessa E. Freeman, M.D., Johanna Fermina Paulino-Woolridge, D.O.

SUMMARY:
Dandy-Walker complex (DWC) is a group of congenital disorders involving a spectrum of anomalies that includes the DWC malformation, DWC variant, mega cisterna magna, and posterior fossa arachnoid cyst (5). An enlarged posterior fossa, otherwise known as mega cisterna magna, is a structural abnormality that occurs in about 1% of brain imaging (1). There have been several case reports of mega cisterna magna with associated mania, catatonic schizophrenia, obsessive-compulsive disorder, psychosis, and recurrent catatonia (3,5). Established functions of the cerebellum consist of motor coordination and balance, however, the involvement of these anomalies in psychiatric manifestations suggests an extension of cerebellar functions to neurocognitive and affective regulation. Case: A.A. is a 17-year-old male U.S. Naval Academy Midshipman with no psychiatric history who was admitted for sudden onset disorganized behaviors, staring spells, confusion, amnesia, paranoid delusions, auditory/visual hallucinations, and severe agitation following a possible heat-related illness. Prior to his presentation, the patient was a high-functioning individual both academically and physically. Throughout admission, the patient began demonstrating hypersexual behaviors, catatonic features, and significant disorganization. An extensive medical workup was performed to include lab work (CBC, CMP, TSH, T4, APAP, ASA, EtOH, synthetic cannabinoids, bath salts, UDS, UA, lipid panel, HgbA1C, heavy metal, ceruloplasmin, B12, Lyme, HIV, RPR, ANA, and anti-NMDA antibodies), lumbar puncture with spinal fluid analysis (VDRL, Lyme, West Nile, meningitis/encephalitis, and fungal/bacterial cultures) with an expanded autoimmune panel, routine EEG, and head CT which were all within normal limits. In addition, the patient received both psychological and neuropsychological testing which revealed several cognitive abnormalities. A brain MRI was obtained and showed a congenital mega cisterna magna. Discussion: The role of the cerebellum in neuropsychiatric symptoms can be explained by Schmahmann and Sherman's cerebellar cognitive affective syndrome (CCAS) - a range of affective dysregulation and psychosis observed in both congenital and acquired malformations of the cerebellum. This theory is based on the cortico-cerebellar-thalamic-cortical circuits (CCTCC), which is the communication between the cerebellum and cerebral cortex through an intricate network of neural pathways (3). Disruption of these circuits acquired or congenital, and the ensuing affective and behavioral dysregulation may explain the psychosis and schizophrenia spectrum that has been observed in this patient population (3). Though the current evidence for a correlation between cerebellar abnormalities and psychiatric symptoms is limited (2), this case report demonstrates yet another case of neuropsychiatric symptomatology in DWC. Further studies are necessary to establish a definitive role of the cerebellum in neuropsychiatry.

No. 79

Pharmacological Treatment of Agitation and/or Aggression in Patients Suffering From Traumatic Brain Injury: A Systematic Review of Reviews

Poster Presenter: Elham Rahmani, M.D.
Co-Author: Anita S. Kablinger, M.D.

SUMMARY:
Introduction: Traumatic Brain Injury (TBI) is a major cause of disability and it has been associated with agitation and aggression. The treatment of these symptoms usually falls in inter-disciplinary arenas and suffers from a lack of evidence and available guidelines. The aim of this study is to synthesize available data and provide guidelines. Methods: A literature review of the following websites: PubMed, MEDLINE, CINAHL, DynaMed Plus, Clinical Key, Health Business Elite and Google Scholar, was performed looking for systematic reviews on the treatment of agitation and/or aggression among patients suffering from TBI. This search led to 23 reviews. The title and abstract of these articles were evaluated for meeting inclusion criteria and 5 published articles and one review protocol were selected. Results: Before pharmacological management, medical etiologies of agitation and behavioral measures need to be considered. After

the implementation of these methods, in cases of acute agitation, atypical antipsychotics have the best evidence for acute management. Benzodiazepines and typical antipsychotics may interfere with neurocognitive recovery and should be avoided. In addition to these concerns, the efficacy of typical antipsychotics and, in particular haloperidol, is questionable for patients with TBI. Amantadine, beta blockers, and valproic acid have the best evidence for long-term preventative treatment of episodes of agitation or aggression associated with TBI. Conclusion: Despite the paucity of rigorous data for treatment of agitation and aggression in TBI, some recommendations can be derived from available information to inform clinical decisions. Further well-designed, prospective studies are required.

No. 80

New-Onset Visual Hallucinations in a Patient With Cytochrome C Oxidase Deficiency

Poster Presenter: Shane Verhoef, M.D.
Co-Authors: Albert Nguyen, D.O., Benjamin Ehrenreich, M.D.

SUMMARY:
While mitochondrial disease is associated with significant psychiatric symptomatology, visual hallucinations have only been found in case reports limited mostly to Mitochondrial myopathy, Encephalopathy, Lactic acidosis and Stroke-like episodes (MELAS). We present a patient with a long standing history of Cytochrome C Oxidase Deficiency without previous psychiatric history who developed sustained visual hallucinations along with urinary incontinence, self-harm (biting self) and aggressiveness with no clear precipitant. He had a negative neurologic workup for an etiology beyond his mitochondrial disease and had no other medical problems. We will present the current state of literature on psychosis in mitochondrial disease and information regarding the known psychiatric sequelae of Cytochrome C Oxidase Deficiency. We will also detail this patient's findings and course of treatment while in the emergency department and while on a specialized neuropsychiatry unit at Sheppard Pratt.

No. 81

Hallucinatory Interactions of a Patient With Right Insular Stroke and Seizures: A Case Report

Poster Presenter: Anton Power, D.O.

SUMMARY:
74 year old male veteran presented to the hospital emergency room with paranoia, delusional behavior, and agitation by police escort. The patient consented to an MRI of the brain which showed an acute infarction within the right insular ribbon without hemorrhagic conversion, and diffuse small vessel ischemia. the psychiatry consult team made the remarkable discovery that the patient was actively interacting with his auditory hallucinations, holding up his left hand to his ear as if it was a telephone, and having a simultaneous dialogue with the psychiatrists. The nursing staff reported that suddenly, several minutes prior to the team's arrival, the patient seemed to be having an intense conversation at a rapid pace with an imaginary person and did not want to be interrupted by them. The psychiatry team observed the patient interrupting the interview to speak with his hallucinations and going back and forth between the psychiatry team and his hallucination in parallel conversations. It was so convincing, the team initially wondered if there was actually a phone device in the patient's ears. The patient consented to an EEG which revealed seizure activity in the central region of the brain with episodic atypical sharp contour waves mixed with generalized slow waves. The patient was started on divalproex sodium for the treatment of his seizures, psychosis and agitation and mirtazapine to improve his appetite, as well as impulsivity and agitation. His psychotic symptoms remitted and a repeat EEG showed no epileptiform activity. While he was taking divalproex sodium, his hepatic enzymes increased a moderate amount. He was started on lacosamide instead and agreed to continue this medication outpatient with neurology and behavioral health follow-up. This case report demonstrates how a simple partial seizure in a right insular stroke patient can present with frank auditory and visual hallucinations in which the patient interacts with both the hospital staff and his hallucinations simultaneously as if speaking to two groups of people. We concluded that simple partial seizures were the primary cause of the patient's psychosis because of the intermittent nature of the

psychosis, the focal nature of the seizures in the visual and auditory processing regions of the insula, and the patient's ability to maintain focus and awareness of his surroundings.

No. 82

Psychosis in a Young Female With Multiple Sclerosis

Poster Presenter: Ozan Toy, M.D.

SUMMARY:

Multiple Sclerosis is a neurological illness that is commonly associated with psychiatric co-morbidity. However, the literature regarding the association between Multiple Sclerosis and Schizophrenia is limited. In fact, the rarest neuropsychiatric signs in Multiple Sclerosis are hallucinations and delusions. While Multiple Sclerosis patients can present with psychosis during an exacerbation, a flare may not always be present at the time of psychiatric presentation. We present a case of a young female with a history of epilepsy diagnosed in childhood, which resolved, and multiple sclerosis diagnosed as a teenager, who presented with psychotic symptoms without MS exacerbation years later. This case study supports the hypothesis that Multiple Sclerosis may predispose patients to developing psychotic illness and both neurologists and psychiatrists should be aware of this association.

No. 83

Remission of Psychiatric Symptoms in a Patient With Phenylketonuria (PKU) Upon Re-Institution of a PKU Diet

Poster Presenter: Ashlee Senay, D.O.

SUMMARY:

Ms K., a 41-year-old Caucasian female with phenylketonuria (PKU) and a past psychiatric history of depression and anxiety presented to the outpatient clinic for management of her psychiatric symptoms. The patient had been non-adherent to a PKU diet for over 30 years. The patient displayed cognitive deficits in multiple domains on mental status examination. Given the known neurocognitive effects of phenylalanine toxicity on the central nervous system, the patient was referred to a PKU specialist for re-institution of a PKU diet. Upon resumption of the PKU diet, the patient had remission to her psychiatric symptoms and significant improvement to her cognitive functioning. She subsequently did not require any changes to her psychiatric medications. In this poster, we discuss the importance of identifying any underlying metabolic disorders such as PKU and discuss the cognitive and psychiatric implications of non-adherence to a PKU diet.

No. 84

Traumatic Brain Injury-Induced Neuropsychiatric Symptoms Complicated by Drug Use: A Case Report

Poster Presenter: Akriti Sinha, M.D.

SUMMARY:

INTRODUCTION Mild TBI also referred to as a concussion, is defined as blunt,nonpenetrating head trauma that accounts for more than 80% of all TBI cases including those that occur during participation in contact sports.There is an estimated 1.6 million to 3.8 million sports-related concussions occurring in the US per year[1].Over 50% of patients after mild TBI report personality changes, irritability, anxiety and depression along with post-concussion syndrome.At-risk patients may benefit from a multidisciplinary medical team to optimize symptomatic treatment and maximize patient function and quality of life. Increased medical and public awareness around the diagnosis and prevention of TBI remains paramount[2]. CASE DESCRIPTION In this case report, we describe a case of an 18 -year- old high school football player, without previous medical and psychiatric history, who sustained multiple concussions from 8/2014 to 8/2015.Starting fall of 2015,the patient started experiencing migraine headaches along with emotional, behavioral and cognitive decline severely disrupting daily functioning and academic performance. The patient made multiple visits to ED, Neurology,PMR,PCP for management of his symptoms.The history was further complicated by substance abuse.In 1/2016, he attempted suicide requiring inpatient psychiatric stabilization. In 9/2017, he was hospitalized for acute agitation, auditory-visual hallucinations and suicidal ideation.A month later, he was admitted again with similar complaints. He expresses concern if he is experiencing symptoms of Chronic Traumatic Encephalopathy (CTE) and wants to donate his brain for research. The patient started following

outpatient Psychiatry in 11/2017, about 2 years after the onset of his initial symptoms.Currently, he continues to undergo medication changes to improve his depressive and psychotic symptoms.His diagnosis has been revised from Depressive Disorder due to General Medical Condition to Schizophrenia versus Psychotic Disorder Due to TBI. DISCUSSION Delusional disorders and Schizophrenia-like psychosis are common psychotic syndromes among persons with TBI.Substance abuse and TBI may interact to increase the risk of psychosis[3].CTE is a neurodegenerative disease found in people who undergo repetitive head injuries in contact sports.At least 12 former NFL players have committed suicide over past 25 years.A JAMA study reported of 177 (87%) of 202 former football players, including 117 (98.3%) of 119 who played professionally, who met neuropathological criteria for CTE[4].Recently many states, schools, sports leagues, and organizations have created policies and action plans on concussion in youth and high school sports.Our case report further emphasizes the importance of early involvement of multidisciplinary team-Psychiatry, Medicine,PMR and Neurology. This allows early treatment of substance abuse, affective disorders, headaches and sleep disturbances that profoundly erode their quality of their life.

No. 85

A Case of Repeated Shoplifting in a Female With Neuropsychiatric Manifestations of Multiple Sclerosis

Poster Presenter: Jun Yan Ong
Co-Author: Rochelle Kinson

SUMMARY:

Introduction We report a case of repeated shoplifting in a middle-aged Female with neuropsychiatric manifestations of Multiple Sclerosis (MS) presenting as depressive symptoms and cognitive deficits. Her offences all occurred within a month prior to her MS or depressive relapses. We also outlined our management of this case, with a comparison of her Neuropsychology Assessment before and after 2 years of treatment, and reviewed the current literature. Case Description Ms W was diagnosed with Relapsing Remitting MS since 2009 at the age of 37. She was started on treatment from 2010 to 2011 but ceased thereafter due to cost issues. She was first seen by a Psychiatrist in July 2014 a few months after her first shoplifting incident and was started on Escitalopram for her depressive symptoms. She served a Mandatory Treatment Order for the initial offence at the Institute of Mental Health, Singapore from December 2014 to January 2016 where she was mainly treated for her depressive symptoms. She required 3 inpatient admissions to the Tan Tock Seng Hospital for MS relapses from December 2015 to October 2016 for intravenous (IV) steroid treatment. She had 3 further shoplifting incidents which all occurred within a month prior to these relapses. It was noted that she also complained of worsening memory, which was prominent since February 2014. A detailed Neuropsychological Assessment done in August 2014 demonstrated moderate deficits in divided attention, verbal memory and delayed recall. During her admission in October 2016, also following a shoplifting incident, she was diagnosed to be suffering from Major Neurocognitive Disorder as well as a relapse of her depressive symptoms, both neuropsychiatric manifestations of her MS. A repeat Neuropsychological Assessment showed moderate to severe difficulties in multiple domains requiring assistance in community living. Her medications on discharge were Vortioxetine, Fluoxetine and Sodium Valproate. She also restarted regular treatment for her MS with monthly IV Natalizumab. Results After 2 years of treatment, her repeat Neuropsychology Assessment was repeated and was shown to have demonstrated marked improvements. Cognitive domains including immediate auditory attention span, visuo-spatial skill, verbal new learning and memory, executive functioning which were previously impaired, have become unimpaired. She also managed to gain full-time employment. Conclusion Ms W suffered from neuropsychiatric manifestations of her MS with depressive symptoms and cognitive deficits. These may have contributed to the mental state leading up to her offences of shoplifting. With concurrent treatment of both her psychiatric and neurological health, her cognitive impairment and mood instability were reversed. She had no further episodes of shoplifting thereafter. This case demonstrates how cognitive impairment and mood instability can be reversed with regular immunosuppression and psychotropics in patients with MS.

No. 86

Anosmia as an Enantiopathy of Palinageusia

Poster Presenter: Monica Khokhar

SUMMARY:

Introduction: A common experience is that of a bitter aftertaste lingering after imbibing in diet soda, sweetened with aspartame, such aftertaste is characterized as hedonically negative and bitter. Case Study: A 54 year old right handed female presented with a lifelong history of distortions in taste, whereby many foods including lettuce tastes like lawn grass and cruciferous vegetables tastes bitter. She observed that she can at times even smell the difference in colors. Diet sodas taste flat with an arficial aftertaste, that will linger for fifteen minutes after swallowing. Results: Abnormalities in Neurologic Examination: Mental Status: Immediate Recall: Digit span: 5 digits forwards and backwards. Recent Recall: 4 of 4 objects in 3 minutes. Proverb testing revealed concentration. Calculation ability was poor. Motor Examination: Drift testing right Abductor Digiti Minimi Sign, left cerebellar spooning, and right Holmes Rebound Phenomenon. Gait: spontaneous gait was antalgic. Tandem gait was unstable. Chemosensory Testing: Olfaction: Phenylethyl Alcohol Threshold Testing: left > -2.0, right > -2.0 (anosmia). Quick Smell Identification Test: 3 (normosmia). Pocket Smell Test: 3 (normosmia). Odor Memory Test: 12 (normosmia). University of Pennsylvania Smell Identification Test: left 30, right 29 (hyposmia). Sniffing Sticks Olfactory Threshold: left <1, right: <1, dirhinous: <1 (anosmia). Discrimination: left: 8, right: 5 dirhinous: 5 (anosmia). Identification: left: 8, right: 9, dirhinous: 9 (hyposmia). Olfactometer N-Butanol Threshold Testing: left: 1.5, right: 3 (anosmia). Sniff Magnitude Testing: Sniff Magnitude Ratio: 1.07 (anosmia). Suprathreshold Amyl Acetate Odor Intensity Testing: parallel pattern (normosmia). Suprathreshold Amyl Acetate Odor Hedonic Testing: crossed pattern (abnormal). Retronasal Olfactory Testing: Retronasal Smell Index: 4 (abnormal). Gustation: Taste Threshold normogeusia to sodium chloride, sucrose, urea, phenythiocarbamide. Ageusia to hydrochloric acid. Propylthiouracil Disc Taste Test: 6 (normal). Taste Quadrant Testing: decreased taste left side and frontally with a generalized weakness to quinine hydrochloride. Tongue Piesesthesiometry Test: normal. Electrogustometry Testing: >34 on right posterior tongue, bilateral palate, bilateral anterior tongue. Fungiform Papillae Count: left: 24, right: 19 (normal). Discussion: In this patient, recurrent sinusitis induced anosmia initially manifested with a resolution of bitter palinageusia from aspartame. With elimination of bitter palinageusia, as a deterrent to drinking such soda, the soda became hedonically positive and changed her drinking habits to consume diet drinks. Despite having lost most sense of smell, she was still able to have enough retronasal olfaction to gain the flavor of diet sodas. This suggests that modulation of aspartame may be used to control bitter aftertaste and thus hedonics towards drinks.

No. 87

Images Within Images as a Form of Folie a Deux

Poster Presenter: Monica Khokhar

Co-Author: Alan R. Hirsch, M.D.

SUMMARY:

Introduction: The spreading of pareidolia, the visualization of one image inside another image, from one member of a couple to another one is seen in a subtype of folie á deux called folie imposée. Case study: A 27 year old right handed male started having delusions two years prior to presentation. He experienced marked hallucinations in which he saw faces imbedded in clothing and demon-like faces that would appear in curtain shades. During his visual hallucinations, “demonic-like angles would tell me how to get to heaven.” His pareidolia would be such that he would be looking at shadows on the walls or folds in clothing and see images within another. His fiancé, whom which he had been with for six years, also began to have pareidolia where she would be able to see facial images in furniture; for example, a chair would have an evil face or folds of material would have a jagged, folded distortion. These persisted more prevalently when she was with him. Results: General physical examination: Hypopigmented skin. Mental Status Examination: Feelings of unreality, blunted affect, disorganized and pressured speech, flight of ideas. Thought process: abnormal with circumstantiality. Cranial Nerve Examination: Cranial Nerve 2: Visual acuity 20/70 OD, 20/50 OS. Retinal freckles OS. Cranial

Nerve 3, 4, 6: bilateral tortuosity. Cranial Nerve 9, 10: deviated to right. Motor Examination: Drift test: right abductor digiti minimi sign. Cerebellar Examination: decrease amplitude to move left upper extremity. Finger to nose with dysmetria bilaterally. Reflexes: Brachioradialis: right 1+, left 3+. Biceps: right 1+, left 2+. Triceps: 2+ bilaterally. Knee Jerk: right: 2+ and pendular. Ankle Jerk: 3+ bilaterally. Discussion: Healthy pareidolia where images inside clouds or images of constellations and star formations is a zeitgeist of imagination which is more intense in some cultures than others. Folie á deux is a shared delusional disorder and folie imposée is a subtype when the dominant or principal person forms a delusion and imposes it onto the secondary or associate person. If folie imposée pareidolia is spread from one member of a couple to the other, it suggests that the second individual may be overly empathic to the first due to the dominating nature of the principal individual; the associate individual may be passive and submissive and thus accepting these visual perceptions more willingly. Alternatively, the associate individual could already have pareidolia of visual images which subliminally influenced the principal individual to have them, and can be misinterpreted as the opposite. In this patient, the dominant person had a multitude of different delusions but the delusion of pareidolia was the one which transferred to the associate. It is unclear as to why it was this that transferred as opposed to the other delusions and further investigation in this realm is warranted.

No. 88

Intractable Epilepsy? No, Multidisciplinary Approach to Manage Psychogenic Nonepileptic Seizure in a Patient With History of Epilepsy

Poster Presenter: Fei Cao, M.D., Ph.D.
Co-Authors: Jaskirat Singh Sidhu, M.D., Ambika Kattula, M.B.B.S.

SUMMARY:
Mr. A.is a 28 year old Middle-East male with a past medical history of perinatal anoxic brain injury, intellectual disability, and epilepsy. His 1st episode of seizure-like activity occurred at his age of 2 year old and later his seizure-like activities were confirmed as the diagnosis of epilepsy through EEG study. Although he tried different anti-seizure medications, including Valproate, Levetiracetam, Phenytoin, Carbamazepine, Topiramate, etc., he had never been seizure free. One day, he went to Neurology clinic with his mother for routine follow up every 3 months. Although he was on the maximal doses of anti-seizure medications, including Levetiracetam (2000mg BID PO) and Carbamazepine (600mg BID PO), he still developed 3 times seizure-like activities within 3 months period. His recent life stressors included some family issues. Other than that, neurologist didn't find any significant abnormality during this routine follow-up. As a result, neurologist decided to continue his current management plan and recommended him to return to clinic within 6 months. However, immediately after Mr. A. left clinical office and he developed a long episode of seizure-like activity in the clinical elevator without any warning or provoking. Code blue was called and medical resuscitation was immediately started on the spot by ED team. Ativan was given 3 times separately but still could not fully control his seizure-like activities. Then he was transported to ED and ketamine was given through IV routine but Mr. A. continued to exhibit seizure-like activities. Ultimately, due to inability of fully controlling his seizure-like activities and concern of airway protection, Mr. A received intubation after rapid anesthesia induction through succinylcholine, fentanyl and protocol, his seizure-liked activity finally ceased. The whole process lasted more than 1 hour. Then he was admitted into ICU for further diagnosis and management. A 72-hour prolonged EEG was performed on the bedside to monitor his seizure-like activities. During this period, EEG caught 5 clinical events in total without any electrographic correlate. As a result, psychogenic non-epileptic seizure was confirmed. Psychiatric service was then involved to work with neurology team to treat this patient's psychogenic seizure. This poster will discuss multidisciplinary approach to manage psychogenic non-epileptic seizure, especially for patients with history of epilepsy.

No. 89

Patient Is Nonverbal, Behavioral Problems Versus Psychosis? Unusual Psychiatric Presentations of Non-Convulsive Epilepsy

Poster Presenter: Fei Cao, M.D., Ph.D.

Co-Authors: Jaskirat Singh Sidhu, M.D., Ambika Kattula, M.B.B.S., Haitham Salem, M.D., Ph.D.

SUMMARY:

Fei Cao, Jaskirat Sidhu, Ambika Katulla, Haitham Salem, Xiaofeng Yan, ¬¬Timothy Dellenbaugh Ms. M is a 59 year old female with a past medical history of Major depression disorder, schizophrenia, epilepsy, COPD, stroke, Type 2 DM, and Hypertension. She was brought to our ED due to altered mental status. When arriving at ED, Ms. M was awake but not verbal at all. Collateral information showed she was on Lurasidone for schizophrenia, Duloxetine for depression, and Levetiracetam and Lamotrigine for epilepsy. When in ED, her vital signs showed: Tmax 99.2, and BPmax 190/73, HRmax 105; lab tests, including CBC, CMP, A1c, TSH, Ammonia, Lactic acid, Troponin, UA, serum alcohol level, and UDS, were all unremarkable. CT showed no acute process. Then patient was admitted into medical floor for further diagnosis, along with symptomatic and supportive management. Due to relevant medical history, both psychiatry and neurology team were asked for consultation. Neurology evaluation showed: no focal neurologic deficits were found; unusual mental status characterized as being alert but nonverbal. Neurologist team thought it was more likely a primary psychiatric disorder. They resumed oral Levetiracetam for patient's epilepsy and also ordered the regular EEG to track her recent epilepsy change. Psychiatric evaluation showed: detailed psychiatric evaluation could not be performed well since Mr. M was non-verbal; Ms. M intentionally shifted her body position to avoid engaging with Psychiatric team. At that moment, Psychiatrist thought Ms. M might either experience some psychotic symptoms which convinced/comannded her not to talk, or had some behavioral problems, although overt psychostic or bizarre behaviors were not observed during the psychaitric enoucnter. They resumed patient's psychotropic medications, including Lurasidone for schizophrenia, Duloxetine for depression. Intriguingly, her regular EEG showed Ms. M had continuous spike and slow wave activities which was consisent with a diagnosis of nonconvulsive status epilepticus. As a result, she was admittined into ICU immediately and started on IV Levetiracetam and midazolam under the monitoring of extended vedio EEG. The next day when neurology and psychiatry teams saw patient again in the ICU, she was able to answer the questions approrpiately and follow simple commands. Meanwhile, her EEG abnormal finding was sginificantly improved without status epilepticus. This poster will discuss ununual clinical presentations of nonconsulive status epileys.

No. 90

Inhibition of Gustatory Hallucination With Breakfast Cereals: Sugar Pops Are Tops

Poster Presenter: Madhusudan Patel
Co-Author: Alan R. Hirsch, M.D.

SUMMARY: Objective Elimination of Gustatory hallucination (phantogeusia) with manipulation of breakfast cereal has not heretofore been reported. Methods A 59 year old right handed woman presented with a 4 years history of a bitter, sour, sweet tastes on her entire tongue and roof of her mouth, 8/10 in intensity, constant, persistent, without any external stimuli. Over a year, the persistent taste became limited to bitter and sours but not sweet. Drinking water tasted bitter and sour. Eating cereals markedly masked the taste which made her constantly crave cereals. For instance, she would consume one large box of cold cereal (26.6 oz) over 2 hours. Before cereal her persistent taste was 7-8/10 in intensity and with cereal it was reduced to 2-3/10 in intensity. Immediately after finishing an entire variety pack of cereals her phantom taste would return. Different cereals have different effects. The intensity of phantogeusia reduced from 5/10 to 0/10 with Sugar Pops, 5/10 to 0/10 with Apple Jacks, and 7/10 to 0/10 with Fruit Loops. After occluding nostrils with nose clips, phantogeusia dropped from 7/10 to 0/10 with Sugar Pops, Apple Jacks, and Fruit Loops. Result Abnormalities in Neurological examination: Mental status examination: Bradyphrenic. Mood sad. Cranial Nerve (CN) examination: CN lll, lV, Vl: saccadization of horizontal eye movements. Hypomimetic. Decreased blink frequency. Motor Examination: Bradykinetic. Pill rolling tremor in right hand. 1+ cogwheel rigidity in left upper extremity. Gait: 2+ retropulsion. Chemosensory testing: Olfaction: Alcohol Sniff Test: 6 (anosmia). Phenylethyl Alcohol Threshold Testing: left -2.5 (hyposmia), right > -2.0 (anosmia). 4 Item Pocket Smell Test: 3/4 (hyposmia).

Retronasal Smell Index: 10 (normosmia). Gustatory testing: Propylthiouracil Disc Taste Test: 10 (normogeusia). Taste Threshold: normogeusia to NaCl, Sucrose, HCl, Urea, and PTC. Other: DOPAPET: positive for Parkinson disease. Discussion Diminutions in the phantogeusia in response to manducating the cereal suggests chemosensory origin for the problem. Lack of response to Shredded Wheats but response to sweetened cereals suggest that it's not primarily due to effects of chewing alone but rather due to the sensory components of cereal. The absence of reduction with elimination of retronasal smell with nose plugs indicates that the effect is not olfactorily mediated but rather true taste. Furthermore, the lack of response to Shredded Wheat as opposed to sweetened cereal suggests that it is not just the somasthetic/ texture sensation or the origin for the effects but rather the impact of the different components of the flavor of cereals, most noticeably sweet component. This concept is further amplified with response to the multitude of sweet cereals. These results suggest that phantogeusia may respond to sweet food or sweet gum which has fewer side effects than pharmacological intervention.

No. 91

A Challenging Diagnosis of Anti-NMDA Receptor Encephalitis in an Adolescent Male: A Case Report

Poster Presenter: Bill Chen
Co-Author: Pravesh P. Deotale, M.D.

SUMMARY:
Background: Anti-NMDA receptor encephalitis is an autoimmune encephalopathy first described in 2005 in young women with ovarian teratomas. Despite increasing literature and data, psychiatric symptoms in the adolescent population have not been clearly elucidated. We present a case with diagnostic and treatment challenges in an adolescent male with anti-NMDA receptor encephalitis. Methods: Our patient is a previously healthy 16-year-old male who presented with an episode of "blackout", confusion, anxiety, insomnia, auditory and visual hallucinations for past 6-8 weeks. These episodes manifested with purposeless bizarre behaviors such as laughing inappropriately, non-speech oral movements, pinching and gesturing in air. They increased in frequency to one or two in a week and each episode would last 24-36 hours. Throughout the hospital stay, he had multiple episodes of agitation and aggression often requiring chemical and physical restraints. Neuro-imaging, EEG, and CSF were done for infectious and autoimmune workup. The CSF immunofluorescence assay detected NMDA-R autoantibodies in serum and CSF. His workup for autoimmune etiology and malignancies revealed no abnormalities. His condition improved after rituximab and 5 cycles of plasmapheresis. Discussion: The clinical phases of anti-NMDA receptor encephalitis can present with a broad range of neuropsychiatric symptoms such as fear, agitation, aggression, insomnia, mood lability, bizarre behaviors, paranoia, grandiosity and hallucinations. In multiple studies, insomnia with irritability and agitation was an important identifying feature as the course of the disease progressed. Recognizing the underlying organic cause of the neuropsychiatric symptoms in anti-NMDAR encephalitis is crucial for the treatment and prognosis of the diseases. Presentation in our case is different from others in several ways: adolescent boy, sub-acute onset over 6-8 weeks, episodic nature of symptoms, poor response to antipsychotics, and no inciting event. Furthermore, despite the absence of a viral prodrome, the patient responded to immunotherapy. This brings into consideration a contributory role of the prodromal viral-like disorder, which by itself or in combination with a tumor sets off or enhances the autoimmune response. Conclusion: Patients with anti-NMDA receptor encephalitis can present with atypical onset and course. The experience gained from the close clinical monitoring and long-term follow-up of this case has important implications for patients with atypical presentation and course.

No. 92

Late-Onset Psychosis and Cerebrovascular Disease

Poster Presenter: Aaron J. Greene, M.D.

SUMMARY:
This is a case report regarding Mr. Z, a 63-year-old Caucasian man with a psychiatric history of a major depressive episode with one suicide attempt, complex bereavement with significant irritability and insomnia treated with lithium and mirtazapine, and cannabis use disorder with intermittent use, and a

medical history with several risk factors for cerebrovascular disease, who subsequently developed auditory and visual hallucinations, consistent with descriptions of psychosis of organic etiology at the age of 53. Regarding his hallucinations, Mr. Z had initially reported seeing shadows and bright lights when he closed his eyes for approximately one year before the onset of conversations and vivid images of his deceased wife. His hallucinations increased in frequency and duration over four years, and the content of these experiences expanded to include other deceased friends and family members. Eight years following his initial onset of psychosis, Mr. Z began to report significantly different content, described as "aliens" visiting him to discuss the future of the world. Mr. Z consistently described that these hallucinations occur explicitly during wakefulness and while he is sober, do not cause any distress or discomfort, and do not correlate with his mood states. Importantly, he remains aware he is hallucinating throughout the various occurrences, and the hallucinations have not responded to risperidone. Mr. Z has no history of dementia, and has undergone a comprehensive eye examination within the past year with no findings indicating macular or retinal pathologies. Routine reversible causes and associated substance use were assessed and ruled out. On brain MRI, he was found to have subcortical occipital white matter hyperintensities indicative of chronic microvascular ischemic changes. These findings, along with Mr. Z's clinical presentation, are more consistent with an organic cause of late onset psychosis versus a primary psychiatric disorder. This case highlights the emerging body of evidence elucidating the contribution of cerebrovascular disease to the development of late onset psychotic symptoms. In order to mitigate potential adverse psychiatric sequelae of chronic diseases, such as hypertension and diabetes, with high mortality and prevalence, ongoing investigation into the underlying pathologies and education focused on the connection between cerebrovascular and mental health are necessary. This presentation outlines Mr. Z's psychiatric and medical histories, in particular his symptoms of psychosis and their response to neuroleptic treatment, corresponding structural neuroimaging, and reviews the pertinent literature correlating late onset psychotic symptoms with cerebrovascular disease.

No. 93

Aseptic Meningitis and Depression: The Neuropsychiatric Manifestations of a Patient With Systemic Lupus Erythematosus

Poster Presenter: Ivania Trinidad Irby, M.D.

SUMMARY:

A 34 yo African American female seen in the emergency department with complaints of fever, headaches and weakness in both arms and legs over the past five days. She had acute onset of severe, holocranial headache about 5 days before arrival. It was associated with nausea, photophobia and nasal congestion. She was diagnosed with sinusitis and prescribed oral antibiotics and analgesics. These medications did not provide any relief. She developed weakness of both arms and legs two days later. On initial physical examination, she was noted to be lethargic, followed commands and had effort dependent weakness in all the limbs. Computed tomography of the head was obtained which was unremarkable. Cerebrospinal fluid analysis showed pleocytosis with increased protein, normal glucose and increased red blood cell count. Concern for traumatic tap was raised, but repeat tap showed similar results. Viral meningitis was suspected and Acyclovir was started. Magnetic resonance imaging of the head without contrast was done which did not show any abnormality. There was no improvement in her symptoms despite starting Acyclovir. She developed apathy, psychomotor retardation and decreased level of responsiveness suggestive of depression. Additional investigations were done to look for other possible diagnoses. She was found to have anti-Smith antibodies and Ribonucleoprotein antibodies indicative of SLE. On further questioning her family, it was discovered that she was diagnosed to have SLE 12 years ago and was on steroids for two years. Treatment with high dose intravenous steroids was started and a dramatic improvement in her symptoms was seen. SLE as a cause of aseptic meningitis is commonly overlooked and leads to delayed or even missed diagnosis. We report a case of aseptic meningitis who was later discovered to have SLE and institution of appropriate treatment led to clinical improvement.

No. 94
WITHDRAWN

No. 95
Atypical Psychosis in a Patient With Arnold Chiari Malformation: A Case Report
Poster Presenter: Amina Hanif, M.D.
Co-Authors: Maria Teresa Carvajal, M.D., Mohamed H. Eldefrawi, M.D., Elba Contreras, Marlene Carrillo

SUMMARY:
Arnold-Chiari malformation (ACM) is a congenital brain anomaly characterized by herniation of the cerebellar structures through the foramen magnum. General signs and symptoms include headache, dizziness, tinnitus, visual or oculomotor symptoms, dysphagia, trunk or extremity dysesthesias, ataxia and drop attack. In addition, psychiatric complications like anxiety and mood disorders are frequent and affect the quality of life and the global functioning. Individuals with this condition are typically asymptomatic and the identification of the malformation is usually an incidental finding during the course of treating another disorder. It is valuable to highlight that psychotic symptoms like hallucinations and primary bizarre delusions in this case may be caused by this congenital malformation, that typically has nonspecific onset. Therefore, it is important to consider an organic etiology while challenging a resistant clinical picture with unusual presentation. There is paucity of literature pertaining to psychiatric illness in the presence of ACM, in our source query we found three reported cases of co-morbid anxiety and three with psychotic features.

No. 96
New-Onset Psychosis: Differentiating Encephalopathy From Psychopathology
Poster Presenter: Tomi Rumano, D.O.
Co-Authors: Virmarie Diaz Fernandez, M.D., Sherry Syed, M.D., Almari Ginory, D.O., Sarah M. Fayad, M.D.

SUMMARY:
Background: Encephalitis is inflammation of brain. Currently there are multiple etiologies causing encephalitis. Autoimmune encephalitis involves antibodies attacking neuronal synaptic proteins. Patients can presents with declining cognitive function, focal neurological deficits, altered level of consciousness and even psychiatric symptoms. Case: Pt is a 57yo AAM with no past psychiatric hx who presented under Baker Act from LEO; as he is found at a gas station telling LEO he is being followed. On initial presentation Pt is vague, but paranoid, constantly looking around the room. He reports multiple different stories about a friend who wants to kill him as he knows too much. Pt becomes more guarded during exam and changes his story multiple times to an assassination of me but later had to do with money and only other people who know about this are incarcerated for something to do with this. Also, he was preoccupied with his health, wanting a prostate exam and colonoscopy as a man his age needs to get those checked. Collateral obtained from wife confirmed he had no family psychiatric hx, no past psychiatric hx, no prior admissions, or medications. In the past month, he had become paranoid, hiding knives in the home until he took off driving across state lines ending up in Florida near our psychiatric facility. Due to new onset psychosis at 57 yo, neurology was consulted to rule out organic pathology. MOCA score at the time was 18/30. Neurological workup included Brain CT/MRI, EEG, RPR, NMDA, Antibodies, LP serology/immunology testing. Initially Pt was started on Risperidone without any improvement in his psychosis, while neuro imaging and lab test results were pending. LP showed elevated CSF IgG, increased IgG synthesis rate, elevated total protein. Thyroid Peroxidase AB was elevated, and Serology showed elevated EBV Capsid Ag IgG and EBV Nuclear Antigen Antibody. All neuro imaging did not reveal any pathology. Pt was started on solumedrol IV infusion for 5 days with improvement in cognition and resolution of psychiatric symptoms. Conclusion: Pt was initially started on Risperidone with no improvement in psychiatric symptoms. Due to his age and acute onset of psychiatric symptoms a neurological cause for psychosis was investigated. On the third day of Solumedrol IV infusion, Pt cognition improved to baseline and no symptoms of psychosis were presents. Autoimmune encephalitis can present with psychiatry symptoms and Pt can first present to psychiatric facilities. Thus psychiatrist need to be aware of treatable causes of psychosis.

No. 97

Diagnosis on Admission, Schizophrenia, but Is It Really? Dandy-Walker Variant Presenting With Psychotic Symptoms: Case Report and Review of Literature

Poster Presenter: Muniza A. Majoka, M.B.B.S.
Co-Author: Isuree N. Katugampala

SUMMARY:

The case: A 31-year-old Trinidadian American male with a history of command auditory hallucinations, paranoia with a reported diagnosis of Schizophrenia who was brought in after reporting low mood with hopelessness and suicidal ideation of jumping off a bridge, as per his command hallucinations. He had history of 2 suicidal attempts: trying to strangle himself 10 years ago & by eating rat poison 5 years ago. He had a history of 12 inpatient psychiatric admissions since the age of 20 & was symptomatic on current regimen of Haloperidol 20 mg QHS, Zyprexa 20 mg QHs, Lithium 900 mg QAM, Cogentin 1 mg BID, trazodone 50 mg QHS. He had no family history of medical or neurological illness. He initially denied having any medical conditions but was found to have ataxic gait and had a fall during the admission. He then reported having a Ventriculoperitoneal shunt for 5 years, followed 6 months by his neurological team. Upon imaging it was found that the patient had Dandy Walker Variant with grossly enlarged ventricles.Developmentally, he was born prematurely at 6.5 months after an uncomplicated pregnancy with delayed motor milestone and did not walk until 2 years old. He had difficulty with balance and coordination leading to frequent falls since childhood that have been progressively worsening. The patient was described as having delusions,hearing voices, and suicidal thinking by his care-workers, and was diagnosed with schizoaffective disorder in 2007. Literature Review and Discussion:Dandy Walker Complex (DWC) is a series of neuroanatomical malformations, including hypoplasia of the cerebellar vermis, enlargement of the posterior fossa, and cystic dilatation of the 4th ventricle (1). The three subtypes of DWC, Dandy Walker Malformation (DWM), Dandy Walker Variant (DWV), and Mega Cisterna Magna (MCM), have been associated with a variety of psychiatric symptoms(2).Following a discussion of the case, a review of the literature is presented resulting from keywords search yielding 16 case reports. In these case reports, a similar cache of characteristics have been described with DWC patients with psychiatric symptoms including: young adult onset, family history of psychosis, atypical psychiatric symptoms, prevalence of a cognitive deficit & refractoriness to treatment . The cerebellar lesions are postulated to result in Cerebellar Cognitive Affective Syndrome (CCAS), a spectrum of decreased language fluency, personality changes, affect flattening & impulsivity issues (3) and may possibly have a bearing on DWC patient presentations. Given the similarities with schizophrenia & affective disorders, it is important to discuss whether the psychiatric symptoms develop independently of the anatomical changes or if they are associated with these anomalies in DC patients. The combination of a refractory psychiatric condition as well as motor difficulties experienced by these patients also highlights the need for a multi-pronged approach to treating these patients.

No. 98

The Neuropsychiatric Manifestations of Partial Agenesis of the Corpus Callosum: A Case Report

Poster Presenter: Olusegun Adebisi Popoola, M.D., M.P.H.
Co-Authors: Ayesha Mahbub, M.B.B.S., Olaniyi O. Olayinka, M.D., M.P.H., Olalekan Olaolu, M.B.B.S., M.P.H., Chiedozie Obinna Ojimba, M.D., M.P.H., Kodjovi Kodjo, M.D., Tolulope A. Olupona, M.D., Carolina D. Nisenoff, M.D., Ayodeji Jolayemi, M.D.

SUMMARY:

The corpus callosum is the largest connective pathway in the human brain that connects the left and right cerebral hemispheres. Agenesis of the corpus callosum is a relatively rare brain malformation with a reported incidence 0.05 and 0.7 percent of the general population. While there are studies linking pathologies of specific brain areas and circuits to some psychiatric disorders, reports of the psychiatric implication of its dysgenesis is yet to be clearly understood. We describe the case of a 45-year-old man who was admitted following a recurrence of lability of mood. Associated with this presentation was a fugue-like state and visual hallucinations. Further history revealed that he has had multiple similar episodes since childhood, each

episode lasting one to two days. Notable in his history, his mother's pregnancy was complicated leading to premature delivery at seven months. Developmentally, his language was delayed until the age of 7 years but gross motor development was normal. He had a history of cognitive developmental delay and intermittent behavioral disturbances which led to a disrupted education in early childhood. Mental status examination was notable for labile mood, memory impairment, and perceptual disturbances of the visual type. A Montreal Cognitive Assessment revealed a score of 13/30. Toxicology for illicit substances was negative. Blood alcohol level was normal. Laboratory studies for the metabolic profile, complete blood count, chest radiology were within normal limits. Computed tomographic scan and magnetic resonance imaging revealed partial agenesis of the corpus callosum with the absence of the posterior body and the splenium. His disorientation, mood lability, and visual hallucination spontaneously resolved within three days of admission, consistent with prior episodes. This is a patient who had a sudden onset of recurrent transient loss of memory, lability of mood and visual perceptual disturbances of short duration since childhood. The finding of dysgenesis of the corpus callosum, in the absence of other findings for possible etiology, suggests further exploration of the role of the corpus callosum in these cluster of symptoms. Further studies are needed to explore the possible neuropsychiatric manifestations of dysgenesis of the corpus callosum.

No. 99

The Rare Differential Diagnosis Between Eating Disorders and Intermittent Porphyrias: A Case Report

Poster Presenter: Maria De Falco Lucia
Co-Author: Leonardo De Jesus

SUMMARY:

In this case report we aim to discuss the case of a 20-year-old female patient, no psychiatric history, who was admitted to the emergency department due to an intense medical condition caused by induced vomiting. The patient reported that she caused vomiting with her hands and feet due to diffuse and intense abdominal pain. It was emaciated (20 kg was lost in 3 months), with difficulty in walking and ataxic gait. Clinical and neurological hypotheses were established: Cerebellar ataxia, Wernicke's Syndrome and Bulimia. After thiamine replacement and hydroelectrolytic correction, the patient was referred to our psychiatric ward. Both the patient and the family avidly denied signs and symptoms of anorexia, bulimia or body dysmorphic disorder. There was never obvious concern with body image, so few episodes of periodic binge eating or purging. It has been reported that the condition started three months earlier, after gastric discomfort after a copious meal. The patient was also accompanied by multidisciplinar teams, considering important atrophy of the fingers and difficulty of walking that evolved to a thalamic and signs of peripheral neuropathy. Tests were done in order to clarify the origin of pain and the differential diagnosis. Evidence of cognitive decline appeared, and magnetic resonance imaging revealed significant atrophy, fourth ventricle dilation and periventricular gliosis areas, with involution in relation to previous MRI performed 3 months earlier. Thoracic and abdominal tomo evidenced large aspiration pneumonia and hepatosplenomegaly. Upper digestive endoscopy and total aortic angioresonance did not show findindings. Tumor markers and autoantibodies were negative. Despite de pneumonia, patients evolved with anemic core, blood cells were transfused. After 5 days on ICU, she was again referred to the psychiatric ward with Bulimia HD. Thalassemia and hemoglobinopathies tests were requested, as well as urinary porphyria. There was worsening of the psychomotor agitation of the patient, which maintained inducing vomiting, in the presence of nasoenteral catheter and difficulty in gaining weight. Correction of potassium, sodium and phosphorus were necessary. Neuropsychological tests were applied, which showed diffuse impairment, especially in the executive and executive and cognitive areas. Due to the diagnostic challenge, we received the result of the uroporfibilinogenic, which was increased. We therefore initiated control measures for Intermittent Acute Porphyria: dietary measures, systemic hyperglycemia, withdrawal of medications possibly triggering, clorpromazine for psychic and emetic conditions, and tramadol for the pain. There was a significant progression and improvement of the case with these measures, demonstrating the importance of differential

diagnosis, although rare, between cases with a complex and florid neuropsychopathology with gastric symptoms and cases of newly diagnosed Porphyria or first porphyritic episode.

No. 100

Balancing Risks of Complications in Treatment of a Patient With Schizoaffective Disorder and Seizures on Clozapine and ECT

Poster Presenter: Lauren P. Baker, M.D.
Co-Author: Jacob Weiss

SUMMARY:

Ms. Z, a 48 year old Caucasian female with past psychiatric history of schizoaffective disorder, bipolar type and medical history of seizure disorder presents to the emergency department with altered mental status over the last three days including disorientation, automatisms, and perseveration. She had been discharged from the inpatient psychiatry service four days prior for a cluster of electroconvulsive therapy ("ECT") treatments for management of refractory auditory hallucinations and delusions. The patient is evaluated by psychiatry due to concern for post-ECT delirium, and neurology consult is recommended. Ms. Z is admitted to the neurology service for further assessment including electroencephalogram and receives loading doses of anti-epileptics. The patient's delirium worsens and she is found to be in non-convulsive status epilepticus. There is suspicion from neurology that the patient's anti-epileptic medications were at sub-therapeutic doses at the time of presentation. This is of particular concern since the patient's home medication regimen includes both clozapine and carbamazepine, and drug levels of both medications are decreased by carbamazepine's potent P450 induction. The patient has a prolonged stay in the neuroscience ICU for loading of multiple anti-epileptics and coma induction, with eventual weaning of anti-epileptics to topiramate and divalproex sodium. As she had recently experienced iatrogenic seizures from ECT, we question whether ECT may have contributed to the development of status epilepticus in this patient. There is currently limited literature describing status epilepticus diagnosed in the days following ECT. In addition, there is a dearth of reports of ECT in patients with chronic severe mental illness and concomitant seizure disorder. In this poster, we discuss the complexity of planning further treatment of refractory schizophrenia in a patient with seizures on both clozapine and anti-epileptic medications. We also examine the psychiatrist's role in caring for patients with chronic mental illness who present with acute medical illness.

No. 101

Traumatic Brain Injury and Psychosis: Clinical Characteristics and Diagnostic Challenges

Poster Presenter: Ashaki Martin, M.D.
Co-Authors: Luisa S. Gonzalez, M.D., Pankaj Manocha, M.D., Houssam Raai

SUMMARY:

Traumatic brain injury accounts for 5.3 million persons living with long term disabilities in the United States. It is estimated that approximately 10 % of patients who sustain a traumatic brain injury go on to develop psychosis. Chronic psychosis, personality changes, behavioral disturbances and cognitive deficits are consequential neuropsychiatric sequelae of traumatic brain injury. Research has shown that patients with psychosis secondary to traumatic brain injury most commonly present with impairment in memory and executive functioning, auditory hallucinations and persecutory delusions; these patients however have a lower likelihood of presenting with negative symptoms. Currently psychosis following brain injury is poorly understood and identified. In this case report, we discuss the complexities in establishing a diagnosis in a 40 year old Hispanic female who presents with auditory hallucinations, violent outbursts at work and aggressive behavior towards family and neighbors, following brain injury subsequent to a motor vehicle accident. The patient also presents with seizure disorder and active cannabis use which are comorbid conditions contributing to her psychotic symptoms. This case report will also focus on the underlying structural brain abnormalities and neuroimaging findings which are prominent in patients with psychosis secondary to traumatic brain injury.

No. 102

Porencephaly and Psychiatric Correlates: A Case Report and Literature Review

Poster Presenter: Rouzi Shengelia, M.D.

Co-Author: Felix Oscar Priamo Matos Padilla, M.D.

SUMMARY:
Introduction Porencephaly is a rare congenital disorder of the central nervous system involving a cyst or a cavity filled with cerebrospinal fluid, located in the brain's parenchyma. It is caused by either local damage from ischemia in the brain hemisphere, or most commonly, hemorrhage after birth. It can also occur as a consequence of abnormal development before birth, though less common. Malformations of the cerebral cortex are often associated with developmental delay and mood/psychotic symptoms. Decreased prefrontal gray or white matter volumes, metabolism or blood flow, as well as decreased hippocampal and entothinal cortex volumes in psychotic patient have been demonstrated. An increased risk of suicidality among individuals with diverse disabilities have been well documented in the literature, but there is scarce literature is available regarding neuroimaging of abnormal radiological findings and suicidality in such patients. Case presentation The patient is a 40-year-old single unemployed male, with a psychiatric history of Major Depressive Disorder and a medical history of Cerebral Palsy with left sided hemiparesis, Seizure Disorder and hypertension, brought to the hospital due to recurrent suicidal ideation with a plan of setting himself on fire in the context of medication non-compliance. On his admission, he displayed a sad and constricted affect and endorsed auditory and visual hallucinations. He was started on fluoxetine, gabapentin, Oxcarbazepine and Seroquel, but he remained depressed and interacting poorly with peers. After a couple of weeks, Mirtazapine was started to improve his depression and titrated to 30 mg HS, venlafaxine was started and fluoxetine discontinued, and prolixin decanoate was started after ensuring oral tolerability. Buspirone was started after a month, as the patient remained depressed despite the above, and he started showing a clinical improvement in his positive psychotic symptoms and depression, even thought his suicidal ideations were intermittently present. MRI of the brain (without contrast) revealed a large right porencephalyic cyst with absent right frontal parietal lobe. Conclusion This case report emphasizes the continuum and crucial relationship between brain functioning, psychopathological and phenomenological correlates. It suggests a continuum of "reproductive causality", presenting with various phenomenological indicators across the individual life span. Our discussion will highlight the need for a thorough brain morphological correlate of the evolution of symptomatology in the "development of phenotypes". Further careful observations and research are needed to develop a better understanding of mental illness and its underlying biology.

No. 103

Mind of Its Own: Traumatic Brain Injury With Psychosis

Poster Presenter: Akhil Anand, M.D.
Co-Authors: Marian Zgodinski, Poorvanshi Alag, M.D., Ngu Wah Aung, M.D.

SUMMARY:
Each year an estimated 1.5 million Americans sustain a TBI. TBIs contribute to 30% of all injury deaths. Despite its prevalence, schizophrenia-like psychosis is a rare and severe consequence of TBI that is still poorly understood. In this report, we intend to discuss such a presentation and how we formulated a diagnostic and treatment plan for this case by conducting a literature review through PubMed to retrieve information on the clinical characteristics, pathophysiology and therapeutic approach to psychosis secondary to TBI. Mr. P is a 24 year-old Caucasian male with no significant medical history and a past psychiatric history of un-treated ADHD. He presented to the local emergency department after having endured a thoracic crush injury where he was caught between a pickup truck and a pole. The patient was witnessed to have undergone seizure-like activity during the event and went into cardiac arrest. He was then intubated in the field and transported to a nearby hospital. The family provided all of the history leading up to the event. Mr. P sustained a series of injuries including multiple right-sided rib fractures, sternal fracture, right-sided pneumothorax, laceration of the liver, and left atrial rupture. After many life-saving surgical operations and the beginning stages of various types of rehabilitation, the consultation psychiatry team was asked to see the patient after he began showing signs of internal stimulation and complex delusions (saying he was married and had children, father was

not his real father). The family confirmed that these delusions were, in fact, false. In regard to his psychosis, the psychiatry team treated the patient with Seroquel, which seemed to have lessened his response to such internal stimulation although the delusions remained. Our case report and literature review concludes that further studies are needed to understand the biology and pathomechanism of psychosis secondary to TBI and further studies are needed to compare efficacy of different pharmacotherapy agents for the treatment of it.

No. 104

OCD Following Cerebellar Tumor Resection: A Case Report and Understanding the Role of the Cerebellum in Psychiatry

Poster Presenter: Arindam Chakrabarty, M.D.
Co-Author: Eric Black

SUMMARY:
Ms. A, is a 23-year-old, single, African American,right handed, female, undergraduate student who was referred by her therapist for medication management of anxiety and depression. She has a history of neurofibromatosis type 1 which was diagnosed at the age of 9 years and she has had multiple surgeries over the years which include resection of a tumor on the left side of her cerebellum with her last surgery at the age of 18. She reported feelings of depression and anxiety all her life which had gotten worse in the last 3-4 years but had shown some improvement since beginning therapy. She also reported obsessive thoughts of contamination and compulsions of cleaning behavior since the tumor resection. She reported that she needs to clean the entire bathroom in her dormitory room thoroughly every morning. If she does not do so she has repeated thoughts of contamination, which cause great anxiety relieved only temporarily by doing some kind of a cleaning act. The anxiety and thoughts do not stop until she cleans the bathroom thoroughly. She reported that if she takes a shower without cleaning the bathroom she feels dirty even after taking the shower. She realized the absurdity of her rituals and thoughts but had adjusted her routine to be able to do them. She had not brought these up with her therapist as she did not feel that they were her primary concern at the time. She had tried fluoxetine in the past with poor tolerance. She was on sertraline with a maximum dose of 50 mg per day and had noticed some improvement in mood but not optimal and no change in compulsive behavior. She also reported using lorazepam in the past as needed with some benefit with her anxiety. She reported neuropathic pain for which she was on carbamazepine and gabapentin and reported nausea and vomiting for which she was on ondansetron as needed. She denied any psychiatric admissions or any suicidal attempts or ideas. There is no history of psychiatric illness in the family. There is no history of substance use in the patient or her immediate family. In view of partial response to sertraline, the dose was gradually titrated up. She showed some improvement in her mood and began cognitive behavioral therapy with her therapist aimed at treating her obsessive-compulsive symptoms. In this poster we discuss the role of the cerebellum in obsessive compulsive disorders and the cerebellar models and pathways implicated in psychiatric disorders. We review the current neurobiological evidence about the cerebellar pathways in affective and cognitive disorders and implications for management.

No. 105

Catatonic Features and Delirium Presenting in a Patient With Thiamine Deficiency

Poster Presenter: Mallory Morris, M.D.
Co-Author: Joshua Feriante

SUMMARY:
Wernicke encephalopathy is the most commonly recognized neurological complication of thiamine deficiency and is associated with excessive alcohol ingestion, malnutrition, and bariatric surgery. The classic triad of Wernicke encephalopathy includes ophthalmoplegia, ataxia, and altered mental status though patients do not always present with all three elements. This can create an issue of under-recognition and misdiagnosis. Prolonged thiamine deficiency eventually results in a chronic amnesiatic syndrome known as Korsakoff Syndrome. We present a 65 year-old woman who presented with sudden onset of severe altered mental status prior to hospitalization. The patient appeared to be in a nearly catatonic state. Initial Busch-Francis score for catatonia was 13. Patient was found to have

psychiatric history but did not respond to trial of Ativan. Differential diagnoses that would explain this acute alteration in mental status such as infection, substance use, seizure, stroke, and vascular dementia were ruled out. Collateral history collected from family members eventually revealed that she had undergone bariatric surgery. A thiamine level was drawn which revealed a nearly undetectable level of thiamine. Intravenous and enteral thiamine replacement were immediately initiated with progressive improvement of symptoms. The unusual disease course with sudden onset of delirium secondary to thiamine deficiency and the prevalence of vitamin deficiency in critically ill patients suggest that thiamine deficiency should be considered as a differential in similar cases. The importance of detecting and treating thiamine in critically ill patients as well as prophylactic thiamine administration is discussed.

No. 106

Anti-NMDA Receptor Encephalitis: When to Test, How to Treat? A Case Presentation and Literature Review

Poster Presenter: Kinjal Patel, M.D.
Co-Author: Adam Joshua Schein, M.D.

SUMMARY:
Anti-NMDA receptor autoantibodies induced limbic encephalitis is a relatively new and rare diagnosis in the field of neuropsychiatry, and the diagnosis is often delayed due to symptoms that may be interpreted as sequela of various primary psychotic disorders or substance induced psychotic disorder. This poster discusses a unique case of a 19 years old female, with no previous psychiatric or neurological diagnoses, who presented with initial symptoms of psychogenic non-epileptic seizures (PNES) and psychosis in setting of anti-NMDA encephalitis. Although epileptic seizures are commonly perceived in cases with Anti-NMDA encephalitis, this case may be a first of its kind to have the initial presentation of PNES as the initial symptom. Patient presented to the ER after having experienced three new-onset convulsive seizure-like episodes within 48 hours in context of heavy cannabis and herbal oil use and poor oral intake. CT scan was unremarkable and video EEG was significant for non-specific findings of delta-wave slowing. A tentative diagnosis of seizure secondary to hypoglycemia or substance abuse was made, and she was transferred to psychiatry for new-onset of disorganized behavior. Patient had begun acting hypersexual, experiencing auditory hallucinations and paranoia. She also had severe global memory impairment and intermittent catatonia. Initially, she was suspected to have substance induced psychotic episode or a brief psychotic disorder. However, her condition continued to deteriorate over the span of two weeks despite multiple pharmacological interventions. Additionally, she began to have autonomic dysfunction including elevated heart rate with no relation to medication administration regimen or hydration status. At this point, a full neurological workup, including MRI, paraneoplastic panel and serum anti-NMDA antibodies level were ordered. Serum Anti-NMDA antibodies titer was 1:160 (n = 1:10). She received intravenous immunoglobulin, methylprednisolone and oral prednisone treatment with modest improvement in behavior. CSF studies were completed after the administration of steroids, and were unremarkable anti-NMDA antibodies. Eventually, patient began treatment with Rituximab with moderate improvement in her behavior; autonomic function and mental status at 6 months follow up. Studies have shown that constellation of symptoms, including rapid onset and progression of psychosis despite pharmacotherapy, memory impairment, seizures, autonomic dysfunctions, hallucinations and non-specific EEG findings make limbic encephalitis a probable diagnosis. Testing based on cluster of these symptoms has shown to reduce the delay in diagnosis from 470 days to 40 days. It is imperative to test for anti-NMDA receptor encephalitis in patients presenting with these symptoms to establish an early diagnosis, as it can help improve the long-term prognosis of the disease.

No. 107

Intervention at the Intersection: Porencephaly, Psychosis, and Agitation

Poster Presenter: Fiona Fonseca, M.B.B.Ch., B.A.O., M.S.
Co-Author: Samuel Wedes, M.D.

SUMMARY:
Comorbid psychopathology and intellectual disability (ID) is a substantial and under-addressed problem in

psychiatric literature. Psychotic disorders, for instance, are three times more common in people with an intellectual disability than in those without. Low IQ is not only indicative of ID, but also a risk factor for poor outcomes in psychosis. As we embrace the necessity to explore innovative ways of engaging with patients by acknowledging intersections of patient identity, it is imperative that we also address intersections of patient pathology. This inclusive approach to treatment is illustrated through a case study and accompanying neuroimaging. A 48-year-old African-American woman presented with delusions, auditory and visual hallucinations of deceased family members, disorganized behavior, and heightened agitation and combativeness. These symptoms were superimposed over a background of severe porencephaly where almost 3/4 of the right hemisphere was replaced with a fluid-filled cavity in communication with the lateral ventricle, which had resulted in cerebral palsy with left-sided hemiparesis, epilepsy, and ID. The patient's psychosis and agitation had been refractory to multiple prior trials of antipsychotic medication, mood stabilizers, antidepressants, and sedatives. After ensuring that the patient's antiepileptic regimen was therapeutic, and EEG was negative for any epileptiform activity, we started the patient on clozapine and gently uptitrated to a dose of 150 mg PO BID. Through the course of her admission, the patient progressed from voiding in the hallway, biting and hitting members of staff, hallucinating angry family members in her room, and requiring multiple emergency medications to attending group, requiring no emergency medications, and experiencing a resolution of psychotic symptomatology. She tolerated the clozapine well other than constipation that was treated supportively. In this poster, the patient's successful trial of clozapine is discussed, including challenges to medication monitoring and side effects. Although clozapine is recommended for treatment-resistant psychosis, there is a paucity of literature on the use of this medication among patients with ID for whom medication might work differently, for instance, causing more side-effects. Recommendations are offered regarding work with patients who have comorbid neurodevelopmental disorders, psychosis, and behavioral dysregulation, particularly with respect to using clozapine in treatment-refractory cases. Considerations and challenges to communication with this unique patient population are also addressed to optimize favorable therapeutic outcomes.

No. 108

Guanfacine as a Potential Treatment for Misophonia

Poster Presenter: Quincy X. Zhong, M.D.

SUMMARY:

Misophonia, or selective sound sensitivity syndrome, is characterized by negative emotional reactivity and sympathetic nervous system arousal in response to specific sounds (e.g., chewing, pen clicking, finger tapping)(1). Some estimates suggest misophonia may be a relatively common phenomenon (2), yet little is known about the underlying mechanisms of misophonia. There have been several case studies examining behavioral interventions (3), but there are no published studies reporting the effects of pharmacologic treatments. This is the case of a 37-year-old female with a history of misophonia, attention-deficit/hyperactivity disorder (ADHD), persistent depressive disorder, and post-traumatic stress disorder who incidentally experienced improvement of misophonia symptoms with use of guanfacine in the course of trying different treatments for ADHD. This case has important implications for alpha-2 adrenergic receptors as a potential target of study in the neurophysiology and treatment of misophonia.

No. 109

Long-Term Comorbid Neurology/Psychiatric Sequelae of Hypoxia at Birth: A Case Report

Poster Presenter: Karuna S. Poddar, M.D., M.S.

SUMMARY:

Introduction: There has been discussion regarding hypoxia in perinatal infants and long-term effects of behavioral problems such as aggression, impulsivity, ADHD and ASD. The majority of studies have focused on detecting major developmental abnormalities at a very young age, so little is known about the effects in the long run. Objective: This case demonstrates the need for more long-term research regarding hypoxia in infants at birth, so that we may be able to

intervene at an earlier stage of development. Case: This is a 38-year-old male with past medical history of chronic migraines without aura, OSA and obesity and no past psychiatric history coming to the office for the first time. He came in because his chronic migraines started a year ago, and he was referred by neurology for signs of depression. He states that people talking, bright lights, and outside noise make his pain worse; therefore he has no interest in going out and seeing people. He rated the pain an 8/10 in the moment and a 10/10 at its worst. The pain is frontal and located over his left eye. Before he was only sleeping 3-4 hours a night, but now that he has a sleep machine he has been able to sleep 4-7 hours a night. His energy is decreased since the migraines have started. He admits to anhedonia and irritability. He admits to passive SI during which he "hopes he doesn't wake up in the morning." He denies a plan. He admits to HI and road rage without physical altercations. He states that he received a warning for his ill conduct at the age of 23 from a judge, and he since stopped his impulsive behaviors. Under neurology's care, the patient was tried on sumatriptan, rizatriptan, topiramate, propranolol, nortriptyline, trazodone, and valproic acid and had recently undergone Botox treatment with minimal relief. Collateral was collected from his mother, and she describes complications at birth, stating the "cord was wrapped around his neck, and he came out blue." She states that when her and her husband got divorced, the patient reacted on two occasions. He held a knife to his throat and tried to hang himself on the neighbor's tree when he was 10 years old. She states the patient never physically harmed anyone but did "push his sister up against a car" once for driving too quickly and causing their mother to hit her head. A CT head without contrast revealed nonspecific deep subcutaneous soft tissue mass overlying left occipital bone, measuring approximately 2 cm and basal diameter. An MRI brain without contrast showed small vessel disease. Discussion: In this poster we discuss, the neurological and psychiatric implications of hypoxia in an infant in the first minutes of life. Children with impulsive behaviors and irritability may be thought to have MDD or bipolar disorder. Misdiagnosis can lead to mistreatment and misunderstanding of the patient's needs. A better understanding of the developmental changes in brain maturity can prevent life altering behaviors and physical ailments.

No. 110

A Case of Conscious Control of Hallucinations in a Patient With Peduncular Hallucinosis

Poster Presenter: Karuna S. Poddar, M.D., M.S.
Co-Author: Frederick Rhode Stoddard, M.D., Ph.D.

SUMMARY:

K.L. is a 52 year-old male with a past medical history of hypertension, ESRD on HD, polysubstance abuse (in remission for several years), and MVA 1 year prior who was admitted for shortness of breath secondary to hypertensive urgency. Psychiatry was consulted for auditory and visual hallucinations. On initial presentation, K.L. was calm and cooperative with no evidence of disorganized thought or pressured speech. He reported that for the past 3 to 6 months he has been experiencing stereotyped, intermittent "black-outs." While these events could happen at any time, they tended to be more frequent in the evening. Events were described as sudden onset, without an aura or preceding symptoms. He will typically find himself in a new environment, often a park or someone else's home. These scenes of altered reality were described as being incredibly realistic and dream-like and would last for about 2-3 minutes. He would often see people or events triggered by real events previously that day or within the last few days. If he was walking at the time of onset, he would continue to walk and would often walk right into a wall or occasionally off the sidewalk. While these events are not typically upsetting, he reported being afraid of injuring himself or walking into traffic; as a result, he tries to keep a companion with him at all time to keep himself safe. His companion reported that during the events K.L. was appears as if "lights on but no body home." More recently he has found that he can identify when these events are occurring as he will see people that should not be there. When he realizes this he is often able to "pull himself out." Also reports insomnia and difficulty sleeping for last 3 months. K.L. would often only get 2-3 hours a night and when not sleeping he would watch TV or think about sports. He denied any goal-directed activity or racing thoughts during that time. At the time of interview, patient stated that he had not slept in 2

days but did not feel tired. Hallucinations only occurred these events. He denied any symptoms of mania, depression, or psychosis. He denied any loss of bowel or bladder control and no confusion or headache after the events. CT scan from 1 month prior indicated basal ganglia and frontal lobe infarcts. Current MRI revealed small regions of chronic basal ganglia hemorrhage. Urine drug screen was negative. Other laboratory values only significant for elevated BUN and Creatinine as expected by his ESRD. Peduncular hallucinosis is a rare form of visual hallucination associated with a vivid, dream-like states that are not perceived as reality. This case is unique in its very localized lesions to the head of the caudate and left posterior thalamus. Furthermore, K.L. is unique in his ability to be aware of the events and to exhibit a degree of conscious control over stopping them. This case expands our understanding of the lesions which can contribute to this rare form of hallucination.

No. 111

Rapid Eye Movement Sleep Behavior Disorder in a Patient With Posterior Fossa Ependymoma: Idiopathic or Symptomatic?

Poster Presenter: Yasmine Gharbaoui, M.D.
Co-Authors: Dharmendra Kumar, Sudha S. Tallavajhula, M.D.

SUMMARY:

Mr. K, a 56 year-old male with history of unspecified anxiety disorder, began to experience threatening and vivid dreams. His wife reported that he had abnormal movements during sleep as though he were fighting someone. A sleep study revealed obstructive sleep apnea and the initiation of continuous airway positive pressure successfully decreased the frequency of the abnormal nocturnal behavior. Six months after the onset of symptoms, he was diagnosed with a fourth ventricle ependymoma. It was subsequently resected, leaving him with disabling neurological sequelae that led to worsening depression and culminated in a suicide attempt. The patient had a first-degree family history of Parkinson disease in his father, who also experienced dream reenactment episodes in his middle age. A repeat sleep study diagnosed central sleep apneas and loss of atonia in rapid eye movement (REM) sleep. In conjunction with his clinical presentation, these findings confirmed REM sleep behavioral disorder (RBD). He was started on high-dose melatonin by mouth at bedtime and his symptoms of RBD improved significantly. Since the onset of his symptoms was associated with the diagnosis of a brain lesion in an area known to be related to REM sleep, his diagnosis appeared to be symptomatic RBD. However, since his symptoms were not improved by the resection of the tumor, his diagnosis could be argued to be idiopathic RBD. In this poster, we discuss the challenges in differentiating idiopathic vs symptomatic RBD. Furthermore, this case, along with several others, illustrates the importance of head imaging in patients with RBD and no clear etiology in order to rule out treatable brain lesions.

No. 112

Two Ankylosing Spondylitis Patients Treated With Adalimumab Associated With Parieto-Occipital Cerebral Abscesses and Neuropsychiatric Sequelae

Poster Presenter: Tamara Murphy, M.D.
Co-Author: Tiffany M. White, D.O.

SUMMARY:

Ankylosing spondylitis (AS) is a rheumatologic condition that is progressively debilitating, affecting mainly the axial spine and causing both bony overgrowth and erosive osteopenia. It predominantly affects men, with usual onset before age 40, and has a 0.5% predominance in the general population. The main classes of drugs used to treat AS are disease modifying anti-rheumatic drugs (DMARDs), such as methotrexate (MTX), and the newer biologic drugs, including anti-tumor necrosis factor alpha (TNF-a) blockers like adalimumab (humira). Treatment of autoimmune conditions has been revolutionized by anti-TNF drugs. TNF-a is the master of pro-inflammatory cytokines, and anti-TNF drugs have been found to be very effective. However, up to 40% of patients have no efficacy from these drugs, and possible side effects include gastrointestinal tract bleeding, ulcers, kidney injury, and increased infection risk. One recent review article found statistically significant increases in the occurrence of serious infections with anti-TNF drug use for AS patients (40% higher risk). Fewer studies are available for AS patients on MTX. A PubMed review yielded no return of articles citing the risk of

serious infections for AS patients taking MTX, but one review article said that all outcomes studied were not statistically significant between AS patients treated with MTX and those treated without. Our study includes two male AS patients in their sixties who developed brain abscesses after immunomodulation therapy with adalimumab. Both patients also developed neuropsychiatric manifestations of these brain infections. Patient 1 was found to have listeria bacteremia and developed multiple symptoms, including musical hallucinations, which are only described in approximately 0.16% of the general hospital population. He also had severe depression with suicidal ideation, visual hallucinations of spirits, and behavioral changes, including anger and homicidal ideation. Patient two had group A streptococcal bacteremia and developed repetitive, stereotyped, and complex visual hallucinations consistent with Charles Bonnet Syndrome (CBS), which is also under-reported in the literature. Both patients were incidentally on adalimumab; patient one had discontinued this medication three months prior to the discovery of his abscess and started MTX. Interestingly, both patients had parieto-occipital abscesses; for patient 1, the abscess was right-sided; for the second, it was left-sided. No studies were found on a PubMed search describing neuropsychiatric manifestations of brain abscesses in AS patients on anti-TNF drugs. It is our hope that this case series will add to the literature, as it focuses on a unique intersection of rheumatology, infectious disease, neurology, and psychiatry. Also, it points out a very serious complication of adalimumab treatment in patients with AS, one that should be well considered when deciding treatments.

No. 113

Delirium, Primary Psychosis, Dementia, or a Zebra? Atypical Presentation of P/Q-Type Voltage-Gated Calcium Channel Encephalitis in a 63-Year-Old Female

Poster Presenter: Jennifer D. Bellegarde, D.O., M.S.
Co-Author: Sapna Dhawan, M.D.

SUMMARY:

Voltage-Gated Calcium Channel Encephalitis is most commonly associated with Lambert-Eaton myasthenic syndrome (LEMS) and both paraneoplastic and non-paraneoplastic cerebellar degeneration. Classic descriptions in the literature include a triad of proximal muscle weakness, areflexia and autonomic dysfunction. We present a case with atypical presentation of psychosis, hyponatremia, and autonomic dysfunction. A 63yo female with no formal past psychiatric history and medical history notable for atrial fibrillation and hypertension presented from an outside hospital with a 3-week history of altered mental status. She initially was thought to have delirium. However, her symptoms did not resolve with treatment of her UTI and hyponatremia. Symptoms included confusion, disorganized thoughts, visual hallucinations, and paranoia. At admission to the inpatient psychiatry unit, she was hypotensive despite discontinuation of her four home anti-hypertensives. Hyponatremia recurred and required oral supplementation. Her psychosis did not respond to typical or atypical antipsychotic trials. Collateral revealed that the patient had a history of a nearly identical presentation one year prior. At that time, her behavior returned to normal with correction of her hyponatremia. She had been asymptomatic in the intervening time. There was no report of prodromal mood or psychotic illness prior to either episode. The patient's unusual history and presentation, and her lack of response to antipsychotics prompted extensive medical and neurological work-up. This revealed positive finding of elevated P/Q Calcium Channel Antibodies. Malignancy workup was unremarkable. She was subsequently treated with two courses of IVIG, after which her symptoms quickly resolved. She has been followed for two years and has not had recurrence. Our poster will compare this patient's presentation and course with other common autoimmune encephalopathies and will discuss indications for testing and the importance of early recognition and accurate diagnosis.

No. 114

Acute Precipitated Opioid Withdrawal Masquerading as Aortic Dissection: Case Report of Inadvertent Misuse of Naltrexone in a Heroin User

Poster Presenter: Jennifer D. Bellegarde, D.O., M.S.

SUMMARY:

Background The Opioid Crisis, best known for soaring overdose mortality rates, is also marked by increasing morbidity. The magnitude is such that opioid-related conditions account for 1 in 6 ED visits in Ohio. Prevention, recognition, and management of these potentially life-threatening conditions is of great importance. Case Summary We present the case of a 72yo male with history of hypertension and coronary artery disease who presented to the ED with clinical picture suggestive of aortic dissection, which was later attributed to acute precipitated opioid withdrawal from inadvertent misuse of Naltrexone. On presentation, patient described snorting heroin prior to ingesting an unknown new medication. Chills, nausea, and severe "tearing" back pain began abruptly 15 minutes later. He was noted to be writhing in pain, diaphoretic, tachypneic, and hypertensive in 220's/110's. Hypertension was refractory to Clonidine and Esmolol, but eventually responded to Nitro drip. Pain was not relieved by total of 4mg IV Morphine and 6 mg IV Dilaudid. Aortic dissection was suspected given risk factors, hypertension, and tearing back pain. CTA imaging was difficult to obtain due to severe agitation. Administration of 3mg IV Ativan and conscious sedation with etomidate was minimally effective. Intubation was eventually required to rule out aortic dissection. Patient was admitted to MICU on Propofol and Fentanyl drips. Hospital course was complicated by traumatic foley with clot retention and upper GI bleed. Psychiatry consult identified Naltrexone, prescribed during recent detox admission, as the unknown medication. Patient followed instructions to wait 2 weeks before starting Naltrexone, but resumed heroin use during that time. He reported being unaware of the risks of concurrent use. Discussion Naltrexone is an opioid antagonist used to maintain abstinence in Opioid Use Disorder. Concurrent opioid use can precipitate acute withdrawal. Precipitated withdrawal should be suspected with abrupt onset of amplified symptoms of opioid withdrawal, combined with severe agitation. Potentially life-threatening complications often occur, which highlights the critical importance of recognizing this condition. There are no validated management protocols. Treatment is largely symptomatic. Benzodiazepines and sedation with Propofol are effective for agitation, whereas treatment of pain with opioids is both ineffective and dangerous. The severe morbidity associated with precipitated opioid withdrawal warrants diligent patient education. The risks of concurrent opioid and antagonist use should be emphasized. Conclusion Acute precipitated opioid withdrawal, induced by antagonists such as Naltrexone, is a potentially life-threatening condition increasingly encountered in emergency and CL settings. Our poster will discuss prevention, recognition, management, and the critical importance of patient education.

No. 115

The Importance of Pre-Haloperidol ECG in the Acute Setting: A Case Report

Poster Presenter: Sochima Isioma Ochije, M.D.

SUMMARY: Objective: This case report describes a patient with unknown cardiac history developing a new arrhythmia after administration of intravenous (IV) Haloperidol used as a STAT medication for the management of agitation in the Emergency Department (ED). The pre-excitation pattern was seen to be Wolf Parkinson White Syndrome (WPW). We want to address the importance of getting an electrocardiogram (EKG) before the administration of emergency psychotropic medications. Questions we aim to answer with this review include: a) Why it is important to have an EKG before giving antipsychotics in the acute setting? b) How do we do it now in our ED setting? c) What can be suggested and done to implement this? Case summary: Here, we describe a 24-year-old Hispanic male with a history of Bipolar Disorder, who presented with agitation in the acute setting, known in this this hospital setting as a Code Leon. He was medicated with IV Haloperidol 5mg and IV Midazolam 2mg STAT. EKG done afterward revealed a WPW pattern and a prolonged QTc interval of 473 milliseconds. He was placed on telemetry with serial vital sign measurements. The patient was stable without any medications. He was admitted in the inpatient psychiatric unit; Haloperidol was then discontinued and red-flagged and no further EKG changes were noticed. Conclusions: Our case report and others from the literature suggest that IV Haloperidol administration may prolong QT intervals in some patients, precipitating some potentially life-threatening arrhythmia. Since it is used regularly

along with Midazolam in the management of agitation and delirium, clinicians should be aware of the potential risk of arrhythmias and order an EKG before administration of this antipsychotic.

No. 116

Responding to a Violent Patient With Untreated Hemophilia B

Poster Presenter: Adam Colbert
Co-Author: Joan Ruth Winter, M.D., M.S.

SUMMARY:

In psychiatric emergencies, if de-escalation is unsuccessful, progression to restraint or medications may be necessary to ensure safety. We present a case of a patient with untreated hemophilia B who became violent in the emergency room, and these interventions were withheld due to uncertainty of his bleeding risk. Due to the rarity of hemophilia, there are no known case reports of this disease in the context of psychiatric emergencies. HM is a 27-year-old male with a history of mild autism, IED and hemophilia B managed with bi-weekly infusions of long-acting factor IX. Due to a needle phobia, he had not received factor replacement for one month prior to presenting to the ED for suicidal ideation, resulting in a baseline level of 2% clotting factor IX. At the time of psychiatric evaluation the patient had not yet received factor infusion. While being assessed with physical exam, he suddenly became violent, using a heavy gynecologic stirrup as a weapon. He was quickly disarmed, but continued to pace, posture, and shout about wanting to be killed. As several staff gathered near his room, he violently twisted his head several times in attempt to break his own neck. Security was asked not to intervene due to concern that physical hold may result in inadvertent trauma, and emergency medication was similarly withheld due to concern for bleeding from intramuscular injection. After about 10 minutes he agreed to take medications orally. In hemophilia, the severity of disease is based on amount of clotting factor, graded from mild to severe (in this case, 2% is considered moderate). The most common complications are hemarthroses and hematomas, and bleeding can be fatal without proper treatment. Intramuscular hematomas can progress to compartment syndrome if not promptly recognized. While spontaneous bleeds are uncommon in this group, bleeding after injury can be prolonged. In the US, children with hemophilia are often given routine IM injections with careful monitoring, though in Europe, subcutaneous injections are often preferred. In this case, interventions were withheld where they may have been used in other cases due to uncertainty of bleeding risk. There are no formal guidelines for patients with hemophilia presenting with psychiatric complaints, but some recommendations can be made based on experience and drawing from other protocols: 1) Know the patient's severity of hemophilia and prophylaxis status to estimate bleeding risk. 2) Start prophylaxis early to reduce the risk of bleeding in case of emergency. Prophylaxis should be considered for patients being admitted to the inpatient psychiatric unit. 3) Attempt oral medications first if possible. However, IM injections are not contraindicated, especially in patients with mild/moderate disease. 4) Make sure staff and security are educated on the patient's bleeding risk and risk of physical trauma. 5) Carefully monitor for bleeding or hematoma post-intervention.

No. 117

Characterization of Emergency Department Visits for Malingering of Psychiatric Problems at a Northwest Piedmont Medical Center: 2017–2018

Poster Presenter: Phillip Arcendio Smith, M.D.
Co-Author: Susmita Hazarika

SUMMARY:

Background: Malingering is not considered a mental illness. The Diagnostic and Statistical Manual of Mental Disorders, 5th ED (DSM-5), describes malingering as the intentional production of false or grossly exaggerated physical or psychological problems. The purpose of this study is to describe the characteristics of emergency department (ED) visits at Wake Forest (WF) Medical Center of patients who demonstrated signs and behaviors suspicious for malingering. Methods: We propose to survey the electronic medical record of WF Medical Center from 2017-2018, using well defined variables and specific keywords for retrieval of pertinent patients connected to signs and behaviors suspicious for malingering. Patients of interest will involve the patients who either received a primary psychiatric diagnosis or declared an acute psychiatric

disturbance or emergency as the reason for the visit. Patient subjective and objective characteristics, treatment provided, and dispositions of these locally representative visits will be assessed. Results: We anticipate enumerating an estimate of annual ED visits with psychiatric problems that may involved malingering or feigned illness. We anticipate identifying data represented by gender, age, racial-ethnic groups, variant social factors, content of care, treatment and disposition patterns, and various other variables that will help guide service delivery, interventional research, and generate hypothesis regarding the health-care seeking behaviors of persons with malingering presentations. Conclusion: EDs are frequently used by patients experience challenging times in their life. Often times persons may not have a true medical illness, however the ED may be a place to gain safety, evade harm, establish shelter, or fulfillment of other non-medical needs. Psychiatric illnesses are most difficult to corroborate objectively in medicine, however if missed have high stakes. Given limited resources for psychiatric patients, minimizing loss of resources to patient's without true psychiatric needs is important. Doing this safely, and developing resources for those who are malingering demands further exploration. This study will help guide this future endeavor.

No. 118

Psychiatric Crisis Assessment: Descriptive Multi-Year Data From the Crisis Walk-in Clinic at Sheppard Pratt Health System

Poster Presenter: Aaron E. Winkler, M.D.
Co-Authors: Benedicto R. Borja, M.D., Armando Colombo, Robert Paul Roca, M.D., M.P.H., Harsh K. Trivedi, M.D.

SUMMARY:

Psychiatric crisis management is central to the deployment of effective, evidence-based care. When managed well, the patient experiencing crisis (and their loved- ones) may develop trust in the psychiatric treatment establishment's capacity to provide compassionate, patient-centered care in a time of need. When managed poorly, the results may not benefit the patient or reflect well on the profession. As a national leader in psychiatric care delivery, the Sheppard Pratt Health System (SPHS) based in Maryland has developed a unique system for managing crisis assessment in accordance with best-practices and patient-centered principles. This poster presents demographic, diagnostic, and treatment plan data from the Sheppard Pratt Crisis Walk-In Clinic (CWIC) which has been operating continuously for the past 7 years. SPHS takes pride in offering dignity and respect to all while crafting expert care plans tailored to each patient's need in the moment. Importantly, as seen in the data presented, it is often the case that inpatient treatment is not indicated. Offering the best outcomes at the least cost is in fact consistent with patient-centered care delivery when patients are directed to the care they actually need rather than simply being directed to the highest level of service offered by the assessing provider. It is our hope that this data will spark an important conversation about how best to meet the needs of patients, decrease burden on the health care system, and foster positive public regard for psychiatric crisis services.

No. 119

A Case Series: "13 Reasons Why" and Suicidal Ideation in Young Adults

Poster Presenter: Aamani Chava, M.D.
Co-Authors: Avaas Sharif, M.D., Asghar Hossain, M.D.

SUMMARY:

With the growing popularity of TV shows and easy accessibility of social media, we will investigate the effect of external factors on patient's who have had a history of depressive and anxiety disorders. The cases are limited to patients ages 18-25 and propogation of suicidal behavior/ideation with exposure to the popular Netflix show, "13 Reasons Why". Discussion: As 13 Reasons Why has continued to expand in popularity, the effect on young adults below the age of 25 has been significantly increasing as well. We will focus on young adults ages 18-25 and the exacerbation of overt suicidal ideations/behavior.

No. 120

Inhaled Loxapine for Acute Agitation in Psychiatric Patient Populations: A Phase 4 Trial

Poster Presenter: Karen S. Clarey

SUMMARY:

Proper management of agitated patients in a mental health facility is important for staff safety and proper treatment of patients. When behavioral management fails, it becomes necessary to use pharmacological intervention. Pharmacological management of acute agitation has been done most commonly using antipsychotics +/- benzodiazepines. Though IV administration of these medications would be ideal, it is impractical, thus, PO and IM routes are more commonly used. However, these routes have a delayed onset of action and the invasive nature may result in distress and injury risk for both the patient and caregivers. Recently, phase II and III clinical trials have shown that inhaled loxapine provides a rapid, effective, and safe treatment option that may be more readily accepted by staff and patients with schizophrenia and bipolar I disorder. These findings are supported by a phase IIIb clinical trial comparing inhaled loxapine to intramuscular Aripiprazole. Furthermore, case report series on dual-diagnosis and borderline personality disorder patients support the findings of clinical trials in a more realistic setting. To this date, there have been no phase IV clinical trials published using inhaled loxapine in acutely agitated psychiatric patients. We aim to be a part of a phase IV clinical trial to assess the safety of inhaled loxapine in a real-world clinical setting in patients with agitation associated with schizophrenia or bipolar I disorder. We expect to see a fast onset of action and decreased need for further interventions with minimal adverse effects, as well as, an increase in patient and staff satisfaction while using inhaled loxapine. Results of the proposed study will allow for further study of inhaled loxapine in comparison to other medications used for agitation.

No. 121

The EMhelps Project: Simulation in Emergency Psychiatry Training—an Egyptian Experience

Poster Presenter: Nahed Khairy, M.D.
Co-Author: Nasser Loza

SUMMARY:

Training in a safe environment for skills of assessment and intervention in an Emergency cannot be overemphasized. Simulation provides this safe environment beyond role play. Patient simulators are highly skilled actors that not only feign a range of symptoms, but provide immediate feedback that otherwise would not be possible except in the real situation, a risk for everyone. This work describes the two tiered process of training Arabic speaking patient simulators (and the difficulties involved), and of delivering training to health care providers of different specialties and background, where nurses who may carry the brunt of meeting an excited patient, and physicians in the ER who are confronted with violence and or agitation are primary target

No. 122

Patients in the Psychiatric Emergency Services in the Netherlands

Poster Presenter: Stefan Streitz

SUMMARY:

In the psychiatric emergency services we see patients with different psychiatric diseases. They are referred to psychiatric emergency services by the police or the practitioner with a certain diagnosis and will be seen within 24 hours. Research shows us the differences between diagnosis by referral and diagnosis by the psychiatric emergency service. Also research shows us the follow-up process.

No. 123

The Demographic Factors, BMI, and Diagnosis That Affects the Administration of Emergency Treatment Orders in Patients in Psychiatric Wards

Poster Presenter: France M. Leandre, M.D.
Co-Author: Sarah M. Fayad, M.D.

SUMMARY:

Emergency Treatment Orders (ETO) are defined by Florida Law as an immediate administration of rapid response psychotropic medications to a person to expeditiously treat symptoms that if left untreated, present an immediate danger to the safety of the person or others. Although ETOs are often used in psychiatric wards; published data on the practice of these ETOs are very limited. Thus far, research have shown some discrepancies between genders indicating that males receive more ETOs. Immigration status also plays a role in determining the need for ETOs. Our aim was to replicated these studies in psychiatric wards and explore other discrepancies in the administration of these ETOs.

The study's final analytic file included data for 1460 patients with at least one ETO. Mean age was 41.2 years with a standard deviation of 15.5, and there were 657 females (45.3%) and 792 males (54.7%). The univariate analyses revealed that age, BMI, LOS and diagnosis were significantly associated with ETO. Patients with high BMI value significantly increase risk of receiving more ETO (OR=1.60, p=0.037 for patients with 25=BMI<30, and OR=1.97, p=0.003 for patients with BMI =30). Multivariate analysis (Table 3) showed that compared to the patients with 26=Age<41, the younger patients with 18=Age<26 significantly increased risk of receiving more ETO (OR=1.47, p=0.039); the older patients did not significantly increase risk of receiving more ETO (OR=1.20, p=0.225 for patients with =41); no surprise, compared to the patients with LOS=14 days, the patients with LOS >14 days significantly increased risk of receiving more ETO (OR=4.68, p<0.001); the patients with a Schizophrenia Spectrum / other Psychotic Disorder were more likely to receive more ETO (OR=1.67, p<0.001). In conclusion, patients with a higher BMI have a significantly increase risk of receiving ETOs. This may be due to inadequate dosing and the need for additional ETOs in that population. This of course affects patient care and jeopardizes their safety and the safety of staff. Further research will need to be conducted to evaluate the efficacy of ETOs.

No. 124

From 43 to 14 Years Old: A Case of Age Regression

Poster Presenter: France M. Leandre, M.D.
Co-Authors: Michael John Gower, M.D., Daniel P. Witter, M.D., Ph.D., Marnie Mireya Stefan, M.D.

SUMMARY:

This is a case of a 43 year old Caucasian male with a past psychiatric history of depression and PTSD who was brought to the emergency room by his girlfriend for recurrent episodes of dissociate states. He was originally stabilized on vilazodone and temazepam; however, he could not afford vilazodone and stopped taking it 2 weeks prior to his admission. He had worsening of his flashbacks, reverted back to his 14-year-old self, and was reliving the physical abuse induced by his mother. On interview, the patient was tearful, childlike, insisted that the day was October 17, 1988 and had no recollection of his life post this date. His vocabulary, mental content, and affect were appropriate for a 14-year-old. He was prescribed his home medication of temazepam and started on mirtazapine to help with sleep as he did not sleep his first night on the psychiatric unit. On day 3, he had improvement of his sleep and had regained his memory. He was then able to express that he was feeling depressed and was started on bupropion. He had no further episodes of age regression during the remainder of his hospitalization and his mood steadily improved. On day 6, he was discharged on temazepam, hydroxyzine, bupropion and mirtazapine. Non-Hypnotic age regression can occur in patients who have undergone recent stressors and with severe trauma experiences early in childhood. A few case reports have reported multiple forms of dissociative symptoms associated with PTSD; however, the epidemiology on this phenomenon has not been studied and the pathology is not well understood. Moreover, this patient did not meet diagnostic criteria for any of the current DSM-5 diagnoses. Currently there are two specifiers for dissociative PTSD: depersonalization and derealization. This patient met neither as he continued to be himself during the episode only at a younger age; neither did he have any derealization symptoms. We are therefore suggesting that age regression be added as a dissociative specifier for PTSD. In addition, more research should be done on dissociative symptoms in PTSD in order to help improve treatment guidelines.

No. 125

Persistent Amnesia in a Psychiatric Setting: A Case Report

Poster Presenter: Rose Zhang, M.D.

SUMMARY:

Ms. A, a 43-year-old Hispanic female with an unclear past psychiatric history, presented to the psychiatric hospital involuntarily, reported by her sister to have been wandering the streets confused, without memory of anything but previously expressing paranoid thoughts. On exam, patient appeared depressed and constricted, stated she felt "sad" but claimed not to remember anything. She was not oriented to person or time, stated her name was L*** and could not remember her last name. She

could not provide autobiographical data or recall past events. She answered most questions with "I don't know." She reported a vague history of trauma, with mention of Hurricane Harvey. Patient was thin and presented with skin lesions of unknown origin and unusual pattern and APS report was filed. Routine labs, TSH, and B12 were within normal limits. HIV and RPR were negative. CT head was negative. Patient was tried on escitalopram and then olanzapine, with minimal improvement. Patient was then transferred to an outside hospital for brain MRI, but eloped during transport and was lost to follow up. Three weeks later, patient was found admitted to the inpatient neurology unit at an outside hospital with chief complaint of amnesia. Patient was using a false name and the care team did not have information on her. She was identified by this writer, who had begun rotating with the neurology team and recognized her as Ms. A from the psychiatric hospital. Neurological workup was negative. Family was contacted, her identity verified, and she was transferred back to the psychiatric hospital. Patient continued to provide unclear history and no psychiatric symptoms except paranoia about family and somatic complaints. She was started on court-ordered haloperidol and benztropine. She continued to claim that she had been assaulted, but eventually exhibited improvement of her paranoia and affect, with fewer somatic complaints, and was able to make logical decisions about discharge and allowed the team to locate a shelter for her. In this poster, we discuss the differential diagnosis of amnesia and the challenges of managing a patient with memory loss.

No. 126

Diagnostic Derealization: Differentiating Dissociation on the Border of Psychosis and Neurosis

Poster Presenter: Timothy Brian Marcoux, D.O.
Co-Authors: Lisa Herrington, M.D., Laura Francesca Marrone, M.D.

SUMMARY:

When patients report dissociation and derealization symptoms at first presentation to mental health, the differential diagnosis remains broad with multiple potential etiologies to include psychotic disorders, personality disorders, trauma and stress related disorder and dissociative disorders. Here we present the case of a 21yo male with three years of active duty service and no psychiatric history who spontaneously presented to mental health with intense feelings of unreality and cognitive clouding to the point that he at times could not discern if he was alive or dead. This presentation in conjunction with suspicion for cognitive impairment and negative symptoms was concerning for an underlying psychosis and schizophrenia spectrum disorder. The patient was referred to the Psychiatric Transition Program—the Department of Defense's only first episode psychosis program—for treatment and further assessment while he underwent a medical board. However, his presentation and response to medication evolved in ways that were inconsistent with a primary psychotic disorder. Ultimately, he would be medically discharged from the military with substantial medical and disability benefits via both the Veterans Administration and the Department of Defense with Depersonalization/Derealization Disorder as a working hypothesis along with additional diagnostic considerations of cluster B personality traits, debilitating anxiety, and malingering. Dissociative Disorders are rarely diagnosed despite epidemiologic surveys suggesting a prevalence comparable to schizophrenia. Such patients are often misdiagnosed with psychosis due to overlap in symptomatology. In reviewing the course of this patient's care, the evolution of his diagnosis—from an apparent psychotic process, to one of dissociation, to one of character pathology and even Rosenhan-esque chicanery—serves as a rich learning experience in phenomenology and the potential for human bias. A discussion of this case highlights challenges and clinical approach to differentiating between psychotic, dissociative, and neurotic processes.

No. 127

Social Media Use and Its Association With Depression, Anxiety, Insomnia, and Self-Esteem in Mexican High School Students

Poster Presenter: Beatriz Quintanilla Madero, M.D.
Co-Authors: Antonio Villa, Marselle Urquiza, Rodrigo García, Andrés Vargas, Dafne Alejandra Torres, Lucila Servitje Azcarraga

SUMMARY:

Background: Social media use has been studied for its possible negative effects on mental health. However, to our knowledge, there is very few information obtained from Mexican population. The overall aim of this study was to explore the association between the presence of some mental health variables and social media overuse in Mexican high school students. Methods: The PHQ-9 depression scale, the GAD-7 anxiety scale, the ISI-81 insomnia scale, and the Rosenberg self-esteem scale were applied to 803 students (409 men, and 394 women), from 18 private schools in the Mexico City area, along with a questionnaire that included basic sociodemographic data, and a section of 14 questions elaborated by our study group directed to evaluate the quantity and quality of social networks use, as well as school performance. Results were tabulated in the SurveyMonkey platform, and were analyzed using SPSS statistical program. Results: Significant differences were found using chi-squared test and odds ratios (OR) for associations between social media use and mental health variables. The results revealed that a greater exposure to social media correlated with higher odds of having increased symptoms of depression, anxiety, insomnia, and lower self-esteem. Academic performance was also altered by time spent using social media. All associations were significant ($p<0.05$). Conclusions: There is a clear association between the use of social media and a higher prevalence and severity of depression, anxiety, insomnia and low self-esteem. Students, as well as their parents and teachers should be counseled to monitor the activities and amount of time spent in social media in order to become aware of the risk to develop mental health problems.

No. 128

Social Media: A Discussion on Patient Well-Being

Poster Presenter: Samuel John Fesenmeier

SUMMARY:

Due to a massive growth in technology, social media has become an embedded staple in our everyday culture, thus playing a major role in how we think about, and pursue communication. What effects, whether positive or negative, is this having on our mental health? This poster explores a variety of studies, aiming to expose the potential effects of social media on our mental health. The topics include: amount of use (Mak et al), number of platforms used (Primack et. al), and ways in which these platforms are used (Shensa, et al). Additionally, a discussion detailing the possible diagnostic capabilities within social media platforms related to the prediction of depression (Aldarwish et. al.) will be covered. Millions of people use these platforms every day, for several hours a day, inadvertently earning billions in revenue for the creators of these platforms. By exploring the above concepts, we can provide users with an awareness to the potential effects these platforms may be eliciting.

No. 129

Back to the Drawing Board: Using Tablet Computers to Improve the Outpatient Experience

Poster Presenter: Hyun Hee Kim, M.D.

Co-Authors: Christian Bjerre Real, M.D., Michael Dean Kritzer-Cheren, M.D., Ph.D., Jane P. Gagliardi, M.D.

SUMMARY:

Background: In ambulatory practice, doctors spend twice as much time on administrative tasks than in direct patient care (Sinsky et al 2016). Even though overall patient satisfaction did not decline with implementation of EHRs (Lelievre et al 2010, Stewart et al 2010), increased computer usage correlated with decreased patient satisfaction, increased provider burnout and changes in provider behavior such as increase in negative rapport building (Ratanawongsa et al 2016). This may be especially detrimental in a psychotherapeutic relationship. Although it is no longer feasible to run an outpatient practice without computers, tablet computers may be an alternative. Given the low profile, ease of use, availability, tablets may allow physicians to document more easily and efficiently during the encounter, access useful applications and clinical resources, while eliciting less of a negative response from patients. We created this pilot study to explore the potential advantages of incorporating tablets into an outpatient psychiatric practice. Methods: We enrolled total of 12 Duke Psychiatry Residents. Residents were provided tablets and training on how to use them in clinic. Using a modified Maslach burnout inventory and internal surveys, we

measured residents' level of perceived burden of documentation, quality of time spent with patients, amount of time engaged in patient interactions, and number of days spent in clinic after hours. We conducted feedback sessions for input from residents on additional features, training and troubleshooting. We also tracked same day encounter closures, as more efficient methods of documentation may allow for more encounters to be closed on time, leading to increased reimbursement for the clinic. Results: In the post-implementation group, there was a positive trend in Maslach Burnout Inventory scores, and more residents leaving clinic on time. Fewer residents were dissatisfied with the clinic as a place to work. There were no significant differences in same day encounter closures or clinic reimbursements for clinic as a whole. Despite some positive findings, there were barriers to residents being able to use the tablets in a consistent and effective way in clinic. Discussion: As with any new technology, incorporating the tablet into the encounter has been a learning curve for residents not familiar with the device; however, the results of our pilot study appear promising. Providing alternative methods of documentation may be a way to alleviate burn out related to inevitable administrative tasks, in addition to the direct benefit of reduced work hours provided by a more efficient documentation method. We also address barriers we encountered and considerations for future projects involving new technology in the clinical setting.

No. 130

Utilizing Remote Patient Monitoring in Mental Health

Poster Presenter: Rustin Dakota Carter, M.D.

SUMMARY:

Our trial utilizing a remote patient monitoring platform ran for 90 days with a sample size (n=40); our system stratified our sample size into two groups, one cohort with a primary diagnosis of a depressive disorder and another for anxiety disorders. Patient Health Questionnaire-9 (PHQ-9) and Generalized Anxiety Disorder-7 (GAD-7) scales were sent out weekly, respectively, with daily engagement sessions for medication compliance and encouragement to engage with clinic staff utilizing the messaging system and video chats for non-emergent needs. For those with depression, we engaged self-reporting about sleep, appetite, energy/activity, and suicidal ideation/intent/plan. Although the system was not utilized for emergent care, the system allowed for clinic staff to track chronic suicidality in some patients and to triage any changes in symptoms over time including medication noncompliance, insomnia/hypersomnia (sleep), hypo-/hyper-phagia (appetite), lack of behavioral activation (energy), or thoughts of death/self-harm (suicide). These were also compared with PHQ-9 data collected weekly. Each were stored and graphed over time, with staff engaging with patients outside of parameters and utilizing the data to influence patient appointments during the trial. Similarly, for those with anxiety, medication compliance, sleep, somatic complaints, and suicidality were tracked with GAD-7 data and graphed. Again, those patients outside of set parameters were contacted by clinic staff and increased focus was given to these symptoms during subsequent visits. Overall, the trial was a success; patients consistently checked in daily or were contacted by clinic staff to complete daily questions. As time progressed, patients were more engaged and required fewer reminders. Some appointments were conducted via HIPAA-compliant, secure video chat for those that could not make an in-person appointment. Our trial identified several key factors in using a remote patient monitoring system in behavioral/mental health; this is captured in 6 themes or trends. 1) Increased medication compliance a. Medication side effects, complaints, or efficacy communicated via messaging system, increasing patient compliance and overall outcomes 2) Improved accuracy in symptom reports, and overall tracking of positive clinical improvements of total population a. Increased utilization of clinically-valid, evidence-based scales to track patient symptoms over time 3) Reduction in appointment time with focused-symptom, graph-driven data 4) Prevention of self-harm and suicide 5) Reduction of enrolled patient office phone calls by 66% 6) Increased patient engagement via messaging or video conferences Multiple graphs will be shown and data will be shown regarding these outcomes with significant findings.

No. 131

Determining a Clinical Role for Digital Apps for Mental Health

Poster Presenter: Hephsibah Loeb, M.D.
Co-Author: Ann Chandy

SUMMARY:

In 2017, the FDA approved the first app for treatment of alcohol, cocaine, marijuana and stimulant use disorders. In a preceding randomized controlled trial, mobile software Therapeutic Education System (TES) was found to reduce dropout from treatment and to increase patients' rates of abstinence from substance abuse. Another study showed that PRIME-D, a mobile-based treatment for depression, positively affected symptoms of depression and disability. Many individuals seek out self-help apps for psychiatric complaints, although, in general, little evidence exists for evaluation of the most accessible mobile apps for self-help. What are the strengths and weaknesses of digital apps for treatment of mental illness? How should a mental health clinician assess the role and efficacy of mobile apps within a patient's treatment? Results of the TES trial include lower dropout rate and greater abstinence rate from non-opioid substance abuse. Through use of PRIME-D, individuals were found to have improvement in self-reported depression and self-reported disability. Both TES and PRIME-D trials involved a clinician or coach alongside the mobile intervention. Patients in the PRIME-D study who had greater interaction with masters' level mental health coaches were more likely to have greater improvement in mood symptoms. The high level of retention in study was also thought to be related to human support from mental health coaches. Self-help apps for mental health can increase access to care, without barriers such as clinician availability or clinic hours. Lower cost and convenience could increase compliance. Psychoeducational information can be accurately provided, without risk of faulty administration by staff. The potential for a mobile app-based approach to treatment can reduce stigma and thus increase the likelihood of a patient seeking to address mental illness. Significant drawbacks of self-help apps for mental health include the concerns about privacy of data shared on apps. Apps can provide information that is inappropriate, incorrect or that may be misinterpreted by individual users. Apps may not be suitable for emergency situations and may not be easy to use by patients who have serious mental illness. Developed by the American Psychiatric Association, the APA App Evaluation model provides a means for clinicians to evaluate apps for mental health. The model employs a five-tiered system for assessing background information, privacy and security, clinical evidence, ease of use, and potential to share data with the clinical team. In conclusion, evidence from two interventions shows that mobile apps can improve outcomes in patients with non-opioid substance use disorder and depression. Digital apps for mental health can allow increased access to mental health resources; however, also have significant drawbacks related to privacy, the risk of misinformation, and inadequacy in an emergency.

No. 132

Adoption of Telepsychiatry in the Middle East: A Multidisciplinary Clinical, Technology and Policy Review

Poster Presenter: Ayman A. Albdah, M.D.
Co-Author: Timothy Mackey

SUMMARY:

Background: The Middle East has experiencing an alarming increase in mental health burden due to an acute shortage of mental health providers, conflict and war, stigmatization, migration, and lack of access to healthcare services in rural settings. Concomitantly, new forms of technology can be used to improve mental health coverage including use of telehealth/telemedicine approaches. This has led to the field of "telepsychiatry", which employs video, mobile, and internet-based technologies to delivery mental health services. However, little is known about the scope, characteristics, policy, and levels of adoption of telepsychiatry in the Middle East. Methods: We conducted a multidisciplinary review of the peer-review and grey literature to identify articles related to telepsychiatry use in WHO Eastern Mediterranean (EMRO) countries. This included querying scholarly databases PubMed, Google Scholar, JSTOR, conducting Google searches in both English and Arabic, and reviewing data included in the WHO Atlas of eHealth Country Profiles and Ministry of Health websites. Results: Our literature

review uncovered 8 articles detailing telepsychiatry programs in Somaliland, Afghanistan, Pakistan, Iraq, Syria, and Yemen. Technologies included Skype, mobile/android applications, store-forward applications, Internet-based therapy/interventions, and virtual environments. Types of disorders treated included post-traumatic stress disorder, depression, and psychosis. Of the 23 EMRO countries, only 14(60%) responded to the WHO survey and only 3 (Afghanistan, Bahrain, Pakistan) reported having a national telepsychiatry program, with only Afghanistan listing the status as established. In comparison, 8 countries (57%) stated that they had a national tele-radiology program. Conclusion: Based on these results, there appear to be few official telepsychiatry programs or policies in the Middle East, and reviewed studies show a wide range of intervention types and technology utilized. Better data, investment, infrastructure, and technical assistance is needed to advance telepsychiatry in the Middle East to fully realize its potential to address the region's global mental health burden.

No. 133

Treatment of Post-ECT Agitation in a Patient With Bipolar Disorder and Alcohol Use Disorder: A Case Report

Poster Presenter: Angela T. Vittori, M.D.
Co-Author: Samuel Adam Neuhut, M.D.

SUMMARY:

Mr. N, a 73-year-old Caucasian male with a psychiatric history of a Bipolar Disorder and Alcohol Use Disorder, moderate, and no history of withdrawals presents to the psychiatric inpatient unit in order to receive first time bilateral electroconvulsive therapy (ECT) for treatment-resistant depression. ECT was scheduled in the Post Anesthesia Care Unit (PACU) and patient was given Etomidate 20 mg and Succinylcholine 100 mg followed by ECT treatment. The patient within 5 minutes post-ECT became severely agitated and combative. He was given Midazolam 50 mg/40ml infusion and Lorazepam 2 mg IV which exacerbated his agitation. Due to his history of alcohol use disorder, it appears benzodiazepines had a paradoxical effect on his behavior. Eventually, the patient required Dexmedetomidine 200 mcg/2ml and transfer to the ICU. For his next ECT session, it was determined that benzodiazepines would be avoided to treat his post-ECT agitation. Following his next ECT, the patient became again severely agitated and was given Haloperidol 5 mg IV and Diphenhydramine 50 mg IV with a positive outcome and resolution of the agitation. In this poster, we discuss the efficacy of neuroleptic medications to treat post-ECT agitation. We will also review benzodiazepine response in patients with a history of alcohol use disorder and post-ECT agitation; does the use of benzodiazepines usually lead to paradoxical agitation in this subset of ECT patients?

No. 134

Medicolegal Challenges With Informed Consent in Electroconvulsive Therapy: Time to Rebrand and Market as an "Emergent Medical Treatment"

Poster Presenter: Vanessa Yvette Freeman, M.D.
Co-Authors: Samidha Tripathi, M.D., Lou Ann Eads, M.D.

SUMMARY:

Informed consent underpins all medical decisions, including the decision to undergo electroconvulsive therapy (ECT). Written informed consent remains the standard before the initiation of ECT and requires the inclusion of several components to be considered valid (1). Consent for ECT presents a unique challenge as patients with disorders severe enough to require ECT (like severe depression, psychosis, catatonia, neuropsychiatric syndromes like NMDA-R encephalitis, status epilepticus etc.) may not possess the ability to provide informed consent. In such situations, most states require a court order for involuntary ECT. Regulation of ECT practice varies widely across the United States. Whereas some states have detailed restrictions on use, other states have no regulation at all (2). Stigma surrounding ECT and increasing legal restrictions continues to influence clinical practice and behavior of legislatures towards proposals to reclassify ECT devices. Many states classify ECT under their mental health act; thereby limiting its use in life threatening medical conditions such as neuroleptic malignant syndrome or catatonic stupor, where court approval must be sought in order to administer ECT for management of these conditions. This not only limits but also delays patients' right to receive life-saving treatment in a timely manner, when they are unable

to consent for treatment. Surrogates and guardians can consent to far more toxic and life-threatening medical treatments for incapacitated loved-ones under 'emergent medical treatment act", but not for ECT (3). We present a case of a young female patient with severe catatonic stupor who presented with mutism, profound rigidity, poor oral intake leading to 20lb weight loss over 1 month, and autonomic instability. Her lethal catatonia proved to be treatment refractory to benzodiazepines and dopamine agonists. ECT was recommended by the psychiatric consultation and liaison service. Waiting for a court order for involuntary treatment with ECT in this incapacitated patient, could've proven to be life threatening. We, with hospital attorneys, navigated a tedious medico-legal process and permission for ECT was granted under "medical emergency" status under our state's Emergency Medical Treatment Act Code. Informed consent was obtained from the surrogate (spouse) in compliance with the state's Consent to Treatment Code and hospital's informed consent policy. This case sets a precedent in the state of Arkansas for utilizing ECT as an emergent medical treatment in life threatening conditions, with surrogate decision making; without the need for court order. Using this case as an example, we will present a guideline for navigating complex medico-legal challenges in consent for ECT. We hope this case will raise awareness for the growing need to rebrand and reclassify ECT as treatment for "neuropsychiatric conditions" as the term "mental" in its indication for management of mental disorders, has an implicit bias.

No. 135

Use of Electroconvulsive Therapy in Adolescents in Texas State

Poster Presenter: Naveed Ahmad

SUMMARY:

Methods: This study examined the use of ECT in adolescents using annual state ECT report (1). The data was obtained from Texas Department of States Health Services website that is open to public. For years between 2010-2016, total patients, gender and ages of the patients were tabulated. The age was stratified into 5 groups per ECT annual reports including two groups of adolescents. Results: 16440 patients received ECT in total at Texas. There was a significant difference among age groups (F= 227.8609, p <0.001). 29 patients were of age group 16-17 (0.17 %) and 938 were of age group 18-24 (5.7 %). Conclusions: The use of ECT is especially low in age group 16-17 although jurisdiction allows to use it. Stigma and low exposure of ECT training among child and adolescent psychiatrists might contribute the under utilization.

No. 136

Collaborative Care Approach for ECT in a Patient With Left Hypoplastic Heart Syndrome

Poster Presenter: Divya Khosla, M.D.
Co-Author: Kevin Charles Reeves, M.D.

SUMMARY:

Miss L. is a 17 year-old Caucasian female with a history of major depressive disorder with psychotic features, generalized anxiety disorder, hypoplastic left heart syndrome, and hypothyroidism, who was admitted to an academic psychiatric unit for worsening depression, anxiety, and psychotic symptoms. Her sad mood had been present since age 11, but worsened in the past couple of months with depressive symptoms of low mood, feelings of worthlessness, low energy, low concentration, anhedonia, increased sleep with vivid nightmares about murdering her girlfriend, and suicidal ideation with plan to hang herself. Her anxious symptoms had been present since age 9, but most recently had worsened due to vivid nightmares and panic attacks keeping her from attending school. She endorsed delusions that demons were inside of her controlling her so she would cover her mirrors so that the demons would not be able to enter this dimension. She also thought that bugs were living in her stomach and that there was a tracker in her wrist. She reported visual hallucinations of blood on her hands, auditory hallucinations of chatter in the background that felt like another version of herself, and tactile hallucinations of bugs in her stomach or under her skin. She otherwise denied any symptoms of mania and PTSD. Since age 13, she has had multiple hospitalizations with similar presentations during with she received a neuropsychiatric evaluation and several trials of antidepressants, antipsychotics, and mood stabilizers, including Zoloft, Lexapro, Prozac, Wellbutrin, Abilify, Risperdal, Seroquel, Latuda, Haldol, Lithium, Depakote,

Lamictal, Buspar, Klonopin, and Ativan. These medications either had no effect, plateaued, or worsened her symptoms. On this admission, ECT was considered due to the non-responsiveness to medication trials. The evidence behind the use of ECT in her specific cardiac condition is limited, so the inpatient interventional psychiatry team coordinated with cardiology, allowing the patient to safely have 2 ECT treatments in an inpatient setting and 8 more in the outpatient setting. This interdisciplinary approach allowed the opportunity to provide ECT treatment for resistant depression in a patient with a complicated cardiac condition.

No. 137

Inpatient Electroconvulsive Therapy (ECT) Utilization for Severe Manic Episodes of Bipolar Disorder in 2,585 Patients From a National U.S. Sample

Poster Presenter: Rikinkumar S. Patel, M.D., M.P.H.
Co-Authors: Ahmed Z. Elmaadawi, M.D., Nagy Youssef

SUMMARY: Objective: To determine the frequency and distribution of ECT utilization for inpatients with a severe manic episode of recurrent bipolar disorder (BD) and to estimate the effects of ECT use early in the hospitalization on the length of stay (LOS) and cost of inpatient care. Method: Data from the 2012-2014 Nationwide Inpatient Sample (NIS) were analyzed to determine the rate of ECT use for adult inpatients with a primary diagnosis of BD. Associations between prompt initial use of ECT (in first 7 hospital days) and LOS and cost of inpatient care were examined before and after control for sociodemographic and hospital organizational characteristics. Results: A total of 2585 patients received ECT during this 3-year period (representing 18.5% of adult inpatients with BD). Higher rates of ECT use were found among young adult patients (<50 years, 25.4%), females (21.9%), Whites (20.5%), private health insurance beneficiaries (32.2%), and patients with a household income >75th percentile (26.9%). The likelihood of receiving ECT was 10-fold higher when treatment was in an urban hospital (95% CI 7.17 to 15.78) compared with rural hospital. Patients treated in teaching hospitals were approximately 3.5 times as likely to receive ECT (95% CI 3.19 to 3.88) as compared to non-teaching hospitals. A majority (55.3%) of patients received the initial ECT session within the first 7 days (median) after hospital admission. Administration of ECT during the first 7 hospital days was associated with an 18-day reduction in LOS (95% CI -20 to -17, P <0.001) and a decrease of $53,210 in hospital charges (95% CI -58695 to -47726, P < 0.001). Discussion and Conclusions: Median LOS after starting ECT was similar to that of non-ECT admissions (12 vs. 13 days) after controlling for severity and chronicity and deducting those delays [1]. The use of ECT during hospitalizations for mania was associated with longer LOS. However, this effect was due mostly to delays in starting ECT, rather than to the duration of the treatment [1]. The costs of psychiatric hospitalizations are highly correlated with their duration (r= 0.96) [2]. ECT is one of the most effective treatments for acute and life-threatening mania, as well as one of the preferred treatments for patients with treatment-resistant mania [3]. When patient selection is taken into account, prompt administration of ECT is associated with shorter and less costly hospital stays. Administrative or referral delays in using of this powerful treatment for appropriate cases do not consider cost-effectiveness or patients suffering.

No. 138

Analysis of Risk Factors and Outcomes in Psychiatric Inpatients With Tardive Dyskinesia: A Nationwide Case-Control Study

Poster Presenter: Rikinkumar S. Patel, M.D., M.P.H.
Co-Authors: Zeeshan Mansuri, M.D., M.P.H., Jay Lekireddy, M.D., Amit Chopra, M.D.

SUMMARY:

Background and Objective: Prior studies on tardive dyskinesia (TD) have been conducted to assess its prevalence [1-5], risk factors associated with TD severity [6-8], and association of TD with different antipsychotics [9-13]. The objective of this study is to analyze differences in comorbidities and hospital outcomes between patients with versus without TD. Methods: We conducted a case-control study using the Nationwide Inpatient Sample. It included 77,022 adult inpatient admissions for mood disorders and schizophrenia. Cases had a secondary diagnosis of TD, and controls without TD were matched for age. Multivariable logistic regression was used to

generate odds ratio (OR). Results: Majority of TD patients were older age adults (50–64 years; 40%), and were in nearly equal proportions of men and women. African Americans had two-fold higher odds of TD (OR= 1.812). TD patients had a higher likelihood of cardiometabolic comorbidities- obesity (OR= 1.613), hypertension (OR= 1.776) and diabetes (OR= 1.542) compared to controls. They also had 1.5-fold increased risk of comorbid drug abuse. Patients with schizophrenia and bipolar disorder(depressive) had higher odds of TD (OR= 4.643 and OR= 4.171; respectively). TD patients had about six-folds higher odds of severe morbidity at presentation (OR= 5.755). The mean inpatient stay per admission was higher in patients with TD compared to controls (12.84 vs 9.74 days; P <.001). Also, mean inpatient cost was higher in TD patients ($35,598 vs $22784; P <.001). TD patients had the highest likelihood of disposition to the skilled nursing facility/intermediate care facility (OR= 5.358) and short-term hospital (OR= 3.294) as compared to controls. Conclusion: In the inpatient settings, TD is associated with demographic factors such as advancing age and African-American race. Presence of TD portends a higher risk of comorbidities and poor hospital outcomes including increased length of stay and cost of hospitalization, and adverse discharge. More systematic research is warranted to implement clinical strategies to both prevent TD and optimize inpatient outcomes in psychiatric patients with TD.

No. 139

Improving Access to New Treatments: Creating Repetitive Transcranial Magnetic Stimulation (rTMS) Service in a City Hospital Setting

Poster Presenter: Jihoon Ha, M.D.

SUMMARY:

Background: rTMS has shown to be effective and safe in treatment of treatment resistant depression (TRD) for past 2 decades and has emerging evidence for other illnesses such as post stroke depression and obsessive-compulsive disorder (OCD). Unfortunately, despite this growing evidence, rTMS are mostly available in academic centers or in private practices only, while there are lacks of rTMS in community hospitals setting which limits its availability and access for real world patients. We at Kings County Hospital (KCHC) serve a community that has tremendous need and want to improve access to newer treatments while maintaining financial viability. In this presentation we will review KCHC data so that real-world institutions can take to set their own TMS service and help improve outcomes for patients in need. Methods: Using the electronic medical record we reviewed sample of 60 KCHC outpatients, with diagnosis of major depressive disorder (MDD), whom were active patients within 6-month prior to study. Co-morbid anxiety disorder was included and patients that had a primary substance disorder were excluded from this sample. Through chart review, data on class, dosage, duration and number of antidepressant trials was obtained. Trial was defined as 6 week on a therapeutic dose of an antidepressant and response was measured by subjective report of the patient and clinical assessment by the treating psychiatrist. Results: Diagnosis of MDD was not confirmed for 14 patients out of the sample of 60 patients with an initial diagnosis of MDD. 9/46 (19%) of patients were not on any antidepressants, trial of 1 anti-depressant were 16/46 (34%), trial of 2 anti-depressant were 9/46 (19%), trial of 3 anti-depressant trials were 8/46 (17%) and trial of 4 anti-depressant were 4/46 (8%). Among all the patients who were on antidepressants 41% still had persistent symptoms despite these trials. Conclusion: Failure of 2 adequate trials of antidepressants has been generally defined as treatment resistant depression. Food and Drug Admisnitration (FDA) believes there is sufficient evidence to prove effectiveness of rTMS systems for the treatment of MDD in adult patients who have failed to achieve satisfactory improvement from one prior antidepressant medication at or above the minimal effective dose and duration. Majority of the managed care companies set a higher bar for re-imbursement and define treatment resistant as failure of 4 or more antidepressant trials which includes augmentation and 2 different class of antidepressant medications. There is little scientific basis to support this criteria. In our sample, 37% of the patients met FDA criteria for indication of rTMS use, and 8% met managed care company criteria for its use. This is an important issue that needs to be resolved before hospitals choose to make rTMS more widely available for patients that could potentially benefit from this treatment.

No. 140

Electroconvulsive Therapy and Implantable Cardioverter-Defibrillators

Poster Presenter: Glen Henry Rebman, D.O.
Lead Author: Lucas Haase

SUMMARY:

Electroconvulsive Therapy (ECT) is used in numerous settings in psychiatry, and is a mainstay for treatment-resistant depression. Although there are no absolute contraindications to ECT, disorders of the central nervous system and cardiovascular system are often considered prior to treatment. There are theoretical concerns about ECT in patients with cardiac issues due to the changes in cardiac physiology during treatment. Firstly, the electrical impulse stimulates the Vagus nerve resulting in increased parasympathetic tone and a transient decrease in HR and BP. The seizure increases sympathetic tone with a large release of catecholamines and resultant increase in HR and BP. Due to these rapid changes in normal physiology, patients with cardiac disease are at risk for cardiac complications including infarction and arrhythmia. Implantable cardiac defibrillators (ICD) are used to manage recurrent arrhythmias including ventricular tachycardia and fibrillation. These devices rely on electromagnetic waves for communication with the cardiac leads and determination of rate and rhythm. Given this, there is concern for electromagnetic interference (EMI) during procedures that produce electrical signals. The interference may result in pacing inhibition or false interpretation of tachyarrhythmias. The use of ECT in patients with ICD has been an area of limited study, with case reports representing the main source of information on safety. There is little evidence that suggests significant EMI generated by ECT will result in adverse outcomes. This case report poster highlights the current literature on patients with an ICD undergoing ECT by discussing the steps necessary to ensure a good outcome.

No. 141

Does a Blood Sample Obtained by a Physician in the Course of Treatment Constitute Privileged Information?

Poster Presenter: Glen Henry Rebman, D.O.
Co-Author: Chinmoy Gulrajani, M.B.B.S.

SUMMARY:

Physician-patient privilege has been created under the law to facilitate disclosure of sensitive information by the patient to their clinicians without the risk of the information becoming public. In Minnesota, this privilege has been created under MN statute § 595.02. If a person does not or cannot provide a blood sample to the police, can police obtain his blood sample from the hospital and use it as evidence to bring charges of driving while intoxicated? Or, does the patient have a right to get this information excluded from evidence because it constitutes privileged information? This question was recently addressed in State vs. Atwood (A7-1463, MN Court of Appeals, 2018). In this poster, we will discuss the holding of the Minnesota Court of Appeals and its ramifications for physician-patient privilege in Minnesota, especially as it relates to the field of psychiatry.

No. 142

Danger to Self or Fetus: A Review of Legal and Ethical Issues of Substance Use During Pregnancy

Poster Presenter: Amy Beth Cooper, M.D.
Co-Authors: Madeleine Fersh, Michael B. Greenspan, M.D.

SUMMARY:

Ms. G, a 30-year Hispanic American woman at 31 weeks gestation, presented to the Emergency Department of a New York City hospital with three days of persistent emesis and altered mental status in the context of one week of intravenous hydromorphone use. Formerly employed as a nurse, she was married with two dependent children, and had a past psychiatric history of post-partum depression and opioid use disorder. Ms. G was admitted to the intensive care unit due to severe hypokalemic metabolic alkalosis and was diagnosed with acute encephalopathy secondary to metabolic derangements and opioid ingestion. Her urine toxicology was positive for opioids and her fetal ultrasound was within normal limits. On interview, Ms. G endorsed one week of opioid abuse, mixing illegally obtained hydromorphone pills with saline and injecting herself with this medication. She reported insomnia, and intermittent sadness in the

context of marital discord, though denied all other psychiatric symptoms, including suicidal and homicidal ideation, intent, and plan, and denied intention to harm her fetus. She was not felt to meet any DSM-5 diagnoses aside from Opioid Use Disorder. Ms. G. voiced regret over using opioids and denied that she would use again, though she minimized the seriousness of her actions. Although the patient's substance use placed herself and her fetus at risk of harm, the patient was not involuntary committed as it was felt she did not meet New York State commitment standards. Across the United States, there is considerable variation in statutes regarding substance use during pregnancy. Currently, four states consider it grounds for civil commitment, 24 states have mandated reporting of pregnant women who use substances, eight states require health care providers to test pregnant women for drugs or alcohol if there is clinical suspicion, and 23 states consider substance use during pregnancy a form of child abuse. Rationales for such policies include deterrence, though the limited available data suggests this may not be the case. Of concern, policies that criminalize or civilly commit pregnant patients who use substances may lead to disengagement or avoidance of prenatal care and have been found to disproportionately target minorities and patients of low socioeconomic status. The American Psychiatric Association (APA) opposes involuntary civil commitment for pregnant woman who abuse substances and is against the criminalization of substance use during pregnancy. The United States Supreme Court (USSC, 1962) has addressed the issue of criminalization of addiction in Robinson v California, though they have not decided on the specific circumstance of addiction during pregnancy. In this poster, we review the varied legal and ethical considerations related to substance use during pregnancy across the US, and explore the recommendations of professional medical groups in the management of pregnant women who use substances.

No. 143

The Jensen Settlement and After: Systemic Changes in the Care of the Developmentally Disabled in Minnesota

Poster Presenter: Laura C. Sloan, M.D.
Co-Author: Chinmoy Gulrajani, M.B.B.S.

SUMMARY:
In 2009, families of three individuals with developmental disabilities treated in a state residential program filed a lawsuit against the Minnesota Department of Human Services (DHS). The lawsuit alleged, among others, that the program's use of restraints and seclusion violated the civil rights of the individuals. A class action settlement agreement between the families and DHS, termed the Jensen Settlement Agreement, was approved by the US District Court - Minnesota in 2011. The settlement included stipulations on treatment of people with developmental disabilities, including changes in practice of the use of restraints and seclusion in this vulnerable population. These stipulations have since resulted in overhauls in care of this population in Minnesota, in accordance with the Americans with Disabilities Act (ADA) and related civil rights laws. In describing this case and the ongoing challenges with implementing statewide changes in care, this poster aims to demonstrate how through the Jensen Settlement Agreement, the state of Minnesota has aspired to become a national model for bringing about positive change in the quality of life of individuals with developmental disabilities.

No. 144

Legal and Ethical Considerations Regarding Surrogate Decision Making for LPS Conserved Terminally Ill Patients

Poster Presenter: Ezequiel Brown, M.D.
Co-Author: Saba Syed, M.D.

SUMMARY:
Most states allow next of kin to act as a surrogate to provide consent to almost all medical decisions for patients who lack decisional capacity. Similarly, in the state of California, a close family member or acquaintance deemed to have a "close, caring relationship with the patient" is able to act as a surrogate and make all medical decision including end of life decisions. However, when such patients are conserved under the Lanterman-Petris-Short (LPS) act in California, the court limits the medical authority and expects the conservator (even if they are the next of kin) to request additional powers for any invasive interventions and end of life decision

making. This sometimes creates an ethical challenge, particularly in situations when consent is needed for time sensitive medical interventions that do not fall under the category of emergency exception and cannot wait until the court permission is granted, which unfortunately can take up to 30 days. We illustrate this dilemma using a case presentation of a 76 year old female with a history of schizophrenia, who was admitted for respiratory distress in a medical ICU – emergently requiring intubation and ventilator support. She was subsequently found to have inoperable, advanced stage small cell lung cancer. The patient was unable to speak or otherwise communicate her preferences for goals of care due to respiratory distress and altered mental status. Given her deteriorating medical condition, poor prognosis and visible distress associated with the use of restraints to prevent her from pulling lines, transitioning her to comfort focused care was recommended. Her niece was her LPS conservator, who provided consent for ongoing psychiatric care and general (i.e., non-invasive) medical care but was required to file appropriate paperwork for additional powers with the court. This creates an unequitable burden to families and loved ones of incapacitated, medically ill patients who happen to be LPS conserved due to co-morbid mental illness. Additionally, it inadvertently may force medical provides to continue medically futile treatments.

No. 145

Fury and Fantasy: A Case for Evaluating Violent Fantasies and Dangerousness With Ethical Responsibility

Poster Presenter: Ashika Bains, M.D.

SUMMARY:

Ms. B, a 40-year-old veteran with a history of Post-Traumatic Stress Disorder (PTSD) and depression follows up as outpatient for monitoring and management of symptoms. Her PTSD and mood symptomology has been stable on venlafaxine for over two years, however at several appointments, the patient reports homicidal ideation with intent to harm her ex-husband due to the previous abuse she suffered by his hand in their marriage. She angrily describes visualizing punching and kicking him, and at times, shooting him with a gun. Her ex-husband lives in another state; she denied thinking about it all the time, denied any plans to travel to his state to hurt him, and demonstrated an understanding of the legal consequences of physical assault. She denied any access to firearms. When asked about her intention, she makes the troubling statement, "I know I will end up in prison but sometimes I think it might be worth it." In the wake of Tarasoff v. Regents, psychiatrists and therapists struggle between responsibility to the patient and responsibility to society. Even given that accurately predicting future dangerousness is impossible, residents, psychiatrists, and even medical students are routinely taught to ask about homicidal ideation. With the recent national discussion on violence, dangerousness, and firearms, it is time to revitalize our thinking on homicide risk assessments and our role in assessing potential violence. Let us disrupt our focus on algorithmic appraisals and consider the drives and utility of the violent fantasy. This case fosters discussion about civil responsibilities of psychiatrists and law enforcement, gun control, and many important topics. However, for the purposes of this poster, we will discuss violence risk assessment, the utility and/or dangerousness associated with violent fantasies, and review court decisions involving violent fantasies.

No. 146

Adolescent Cyber Stalking, Cyber Bullying, and Facilitated Suicide: Legal and Forensic Implications

Poster Presenter: Pooja P. Shah, M.D.
Co-Authors: Barbara Robles-Ramamurthy, Clarence Watson, M.D., J.D.

SUMMARY:

Abstract: While traditional stalking is broadly defined as a course of conduct directed at a specific person that would cause a reasonable person to feel fear, cyber stalking cultivates the same response primarily using electronic technology by text or media messages, mass e-mailing, internet blogs and social networking sites, is anonymous and is beyond physical boundaries. Traditional bullying is assertion of power through physical, social or emotional means of aggression. With an increase in universal availability and accessibility to digital technology, the incidence of cyber bullying and cyber stalking has increased leading to victimization and facilitated suicide. Methods: We performed a thorough

literature review of the data using search engines including PubMed and Google Scholar which demonstrated the incidence of cyber stalking and cyber bullying in each of the states and helped us in understanding associated forensic and legal implications. We have demonstrated various factors that would help distinguish the legal charges of misdemeanor from felony charges. We also assessed the difference in the outcome of self-reported versus identified cases of cyber bullying and cyber stalking. Results/ Conclusion: A thorough literature review revealed that stalking is considered a crime under the laws of 50 states, the District of Columbia, the U.S. Territories, and the Federal government. Approximately 7.5 million individuals are stalked every year in United States. The effects of cyber stalking and cyber bullying can lead to or worsen feelings of isolation, rejection, exclusion, despair, depression, anxiety and have very poor outcomes including but not limited to facilitated suicide. Less than one of states classify stalking as a felony upon first offense. More than half of states classify stalking as a felony upon second or subsequent offense or when the crime involves aggravating factors. Aggravating factors may include: possession of a deadly weapon, violation of a court order or condition of probation/parole, victim under 16 years, or same victim as prior occasions. Currently all 50 states have some form of laws against cyber bullying. Our research will assist in highlighting the laws against cyber bullying and cyber stalking and will possibly assist in implementing new strategies to protect adolescents from this growing epidemic. It will educate the adolescents, parents and schools for early identification and guide them through appropriate legal resources to combat it. Keywords: Cyber stalking, cyber bullying, facilitated suicide, juvenile delinquency

No. 147

Role of Forensic Psychiatrist in Risk Assessment, Harm Reduction, Early Intervention, and Education in Cases of Mass Shootings

Poster Presenter: Pooja P. Shah, M.D.
Co-Authors: Barbara Robles-Ramamurthy, Clarence Watson, M.D., J.D.

SUMMARY:

While gun violence is a tragic epidemic with detrimental after effects, there are no clear national policies which effectively aid with early identification and disaster prevention caused by mass shootings in United States. Psychiatrists, particularly Forensic Psychiatrists, are in a unique position to change the trajectory of this controversy and will possibly have a significant impact in the outcome of implementation of evidence-based violence risk assessments and public health interventions while reducing the stigma associated with mental illness. Methods: We performed a thorough literature review of the data using search engines including PubMed and Google Scholar which demonstrated the incidence of high school mass shootings within the past 10 years in each of the states within United States. We searched for bio-psycho-social profile of the mass shooter which would help in early identification of risk factors. We have highlighted the current laws associated with gun control and have highlighted the forensic and legal implications associated with it. Results/ Conclusion: It is important to identify legislative initiatives which facilitate identification of individuals with dangerous mental illness and prevent them from accessing firearms. Psychiatrists, specifically forensic psychiatrists can intervene at a very early stage in this process, help in early identification of significant stressors including history of trauma, poor social support, antisocial personality, co morbid substance use and associated psychiatric illnesses. Forensic psychiatrists work as a linchpin between violence risk assessment, mental illness and public safety. Approximately 80 mass shootings have occurred in United States since 1983 resulting in approximately 600 deaths. Media coverage of mass shootings exacerbates negative attitudes towards individuals with significant mental illness which reinforces the belief that mass shootings are a result of mental illness. We concluded that all individuals with mental illness are not dangerous and not all dangerous individuals have mental health illness. Psychiatrists should participate in a multidisciplinary public health initiative to reduce the rates of firearms- associated morbidity and mortality. Keywords: Gun violence, homicide, suicide, forensic psychiatry

No. 148

Mass Shootings, Thoughts and Prayers, and of Course… "More Mental Health"

Poster Presenter: Amilcar A. Tirado, M.D., M.B.A.

SUMMARY:

The focus of this poster presentation will examine why we as psychiatrists have allowed others to control the narrative about the relationship between mental illness and mass shootings. As a result of allowing others to control the narrative, mass shootings have been inextricably linked with those who suffer from a psychiatric illness 1,2,4,5,6. Furthermore, after a mass shooting, there is often a call from the public and elected government officials for "more mental health." Unfortunately, there has been insufficient input from psychiatrists on what "more mental health" would look like and how to effectively implement this so that it would be meaningful towards the goal of reducing mass shootings. Although mass shootings are relatively rare events, the number and amount of media attention these tragedies receive has steadily climbed 1,2,3,4,5,6. It has become formulaic on how the media, politicians, and the general public respond to mass shootings. There is usually a generic statement of condolences by government officials that almost always incorporate them saying something along the lines of "we offer our thoughts and prayers to the victims of this tragedy." The next phase is a heated debate about gun regulation that becomes politicized and is polarizing but ultimately leads to little if any significant new or improved gun regulation laws. The following step in this cycle (although phases in this cycle may not always follow this sequence) is usually where mental health is brought up in the news and social media. A range of people will discuss the need for greater mental health access and mental health screening. These people typically include survivors of the shootings, family members of victims, news pundits, and politicians. A critical player often missing from this discussion on mainstream news networks, social media, premium channels, and streaming media services, has been psychiatrists.

No. 149

HCR-20 to Assess Violence Risk in Bipolar I Disorder: A Case Report

Poster Presenter: Darmant Bhullar, M.D.

Co-Authors: Felix Oscar Priamo Matos Padilla, M.D., Panagiota Korenis, M.D.

SUMMARY:

Bipolar I disorder has been strongly linked to traumatic childhood experiences, and the potential for violence (1). The combination of an increased tendency to act on impulse, grandiose delusions and history of substance use increases the propensity of these patients to be involved in violent acts, in both the inpatient setting and community (2). Additionally, Bipolar I disorder is associated with an increased rate of interpersonal violence compared with other psychiatric disorders, and this risk increased with factors such as low-income families and immigration (3). 37-year-old unemployed, single, African American male on assisted outpatient treatment, with a psychiatric history of Bipolar I Disorder, Amphetamine use disorder, and a medical history of human immunodeficiency virus, admitted due decompensation in the context of medication non-compliance, and active amphetamine use. On admission, patient reported grandiose delusions, and was re-started on Fluphenazine, Lithium, Benztropine and Abilify Maintena. Additionally, the patient was sexually abused by his cousin during childhood, and was incarcerated for seven months due to physical assault charges. HCR-20 was used to determine his violence risk on the inpatient unit. On the historical scale the patient has a history of institutional violence, unstable interpersonal relationships and employment, amphetamine use, major mental disorder and traumatic experiences (sexual abuse); on the clinical scale, he demonstrates poor insight into his mental illness, and symptoms of a major mental illness (grandiose delusions and paranoid ideation); and on the risk management scale, he lives in an apartment and supports himself through supplemental security income. The aim of this abstract is to stratify the violence risk on the inpatient unit using HCR-20, and develop an effective treatment plan that will mitigate those factors, in order to ensure safety of peers and unit staff. Currently, there is a lack of a scored screening instrument that helps objectively classify violence risk and no treatment guidelines to consider the above.

No. 150

Coercion in Psychiatry: Structural Disparities and Ethical Implications

Poster Presenter: Zain Khalid, M.D.

SUMMARY:

Coercive practices remain a contentious and ethically fraught aspect of psychiatric practice, raising important ethical and policy questions. Inpatient and outpatient commitment, involuntary medication administration and the use of restraint and seclusion measures represent some of the commonly deployed coercive practices in contemporary psychiatry. Concerns about balancing staff safety against patients' dignity and liberty interests, questions of therapeutic vs. custodial or punitive intent, and the ethical imperatives of autonomy vs. beneficence as well as justice and equality frequently attend these interventions. A considerable amount of regulatory and legal attention has therefore been directed at these practices. The impact of coercive practices on clinical outcomes and societal perceptions of psychiatry nevertheless provide grounds for continued vigilance and further investigative scrutiny. This review examines existing data on how structural factors such as racial, ethnic, gender and class disparities in mental health care access and criminal justice involvement complicate discussions on the ethics of coercion in psychiatry and includes a survey of case law regulating coercive practices in both correctional and non-correctional treatment settings.

No. 151

Corticosteroid-Induced Psychosis and Formication in an HIV-Positive Male With Eczema Using Topical Triamcinolone

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

Co-Author: Modupe Ebunoluwa James, M.D.

SUMMARY:

Systemic corticosteroids used to treat various autoimmune conditions have long been associated with adverse psychiatric effects. Symptoms such as euphoria, insomnia, mood swings, personality changes, severe depression, and psychosis, referred to as corticosteroid-induced psychosis, have been estimated to develop in 5% to 18% of patients treated with corticosteroids. Triamcinolone is a topical corticosteroid that is the standard of care for treating eczema, a form of atopic dermatitis that usually develops in early childhood. It is not typically implicated in the exacerbation of psychiatric symptoms, but it is theorized that long-term use of triamcinolone by an already-immunocompromised individual may render such an effect. Here, we outline the case of a 26-year-old African American male with HIV who came to the emergency room in acute distress and formication (tactile hallucinations), feeling that mites were crawling underneath his skin. He had deep scratch marks on every aspects of his body, and had used a razor to make cuts on all of his limbs, hoping the mites would "come out." Upon interview, it was learned he had been overdosing on topical triamcinolone for five years in an attempt to control exacerbation of eczema on various parts of his body. The patient was admitted to the inpatient psychiatric unit, withdrawn from triamcinolone, and started on antipsychotic medications. The patient returned to psychiatric baseline over the next few days. In studying this case, we outline how the potency of corticosteroids combined with the immunocompromised state caused by HIV can make an individual prone to psychosis.

No. 152

Comorbid Depression and Incremental Hospital Utilization in Patients Admitted for Chronic Pain: A Trend Analysis

Poster Presenter: Mayowa Olusunmade, M.B.B.S., M.P.H.

Co-Authors: Ketan A. Hirapara, M.B.B.S., Rashi Aggarwal, M.D.

SUMMARY: Objectives: To assess for an association between co-morbid depression and hospital utilization in patients with chronic pain in the United States. Methods: We used the National Inpatient Sample (NIS) for years 2011 – 2015. The NIS is a nationally representative database of all inpatient admissions in the USA compiled by the Health Care Utilization Project (HCUP). We extracted hospital records for patients with a diagnosis of chronic pain and compared the length of stay (LOS), number of procedures (NPR), total hospital charges (THC) for patients with and without co-morbid depression. Total hospital charges were adjusted for inflation

and are reported in 2015 USD. We also looked to see if there was a trend over time in the prevalence of co-morbid depression in this population. We used descriptive statistics and linear regression methods in our analyses. Results: A total of 2,075,321 observations with a diagnosis of chronic pain were extracted from the database estimating a total of 10,260,172 admissions for chronic pain over the 5-year period. About 22.9% of patients with chronic pain had reported co-morbid depression. The mean LOS, NPR and THC in all patients admitted for chronic pain were 5.0 days (95% CI: 4.97 – 5.03), 1.63 (95%CI: 1.61 – 1.65) and $47,853 (95% CI: 47,216 – 48,489) respectively. The mean LOS among patients with comorbid depression (5.05 days) was 0.08 days (95% CI: .05 - .11 days) higher than among patients without comorbid depression (4.96 days). The mean NPR among patients with comorbid depression (1.54 procedures) was 0.12 procedures (95%CI: 0.11 – 0.13 procedures) lower than among patients without comorbid depression (1.67 procedures). The mean THC for discharges among patients with comorbid depression ($46,267) was $1,650 (95%CI: $1,341-$1,960) lower than among patients without reported comorbid depression ($47,917). The differences in LOS, NPR and THC remained statistically significant after controlling for potential confounders (age, race, gender, insurance type). A trend analysis of the prevalence of co-morbid depression in patients with chronic pain was not significant for a change in prevalence of co-morbid depression in this patient population over this 5 – year period (p = 0.13). Total hospital costs trended upward over the 5 year period (p = 0.00) even after adjusting for inflation while length of stay (p=0.19) and number of procedures (p=0.88) stayed relatively stable. Discussion: While length of stay is higher in patients with co-morbid depression, number of procedures and total hospital charges were lower compared to patients without co-morbid depression. A possible explanation is that providers are less likely to offer procedures to chronic pain patients with co-morbid depression effectively lowering direct hospital costs but also leading to longer time for pain to improve and causing an increase in length of stay.

No. 153
WITHDRAWN

No. 154
Severe Mania Triggered by Gonadotropins in an Ovarian Hyperstimulation Protocol for Egg Harvesting

Poster Presenter: Michael Lenn Yee, M.D.
Co-Authors: Caitlin E. Stork, M.D., Elizabeth Streicker Albertini, M.D.

SUMMARY:

Ms. D is a 35-year-old woman with a past psychiatric history of bipolar disorder type 1 who presented to the psychiatric emergency department with manic symptoms and paranoid delusions. She had not had a mood episode in over fourteen years, her psychiatrist stated that the patient had excellent medication adherence throughout this time. A month prior to admission, the patient had undergone ovarian hyperstimulation for egg harvesting requiring 9 days of injections containing follicle stimulanting hormone (FSH) and lutenizing hormone (LH), with the addition of cetrorelix acetate injections starting on the 5th day. The patient reported that the initial gonadotropin injections led to hypomanic symptoms a few days after initiation that persisted throughout the month, although she continued to remain functional and adherent with medications. Five days prior to admission, she decompensated to full mania when she was nonadherent with medications for two days. Initial laboratory workup in the emergency room revealed no major abnormalities. Clinical presentation included multiple symptoms of mania in addition to irritable mood, disorganized behavior, paranoia and disorientation. Per corroborative, disorientation was not consistent with prior manic episodes. Hospitalization was complicated by multiple incidents of agitation and physical violence requiring seclusion and several intramuscular medication administrations. Given the refractory nature of her symptoms, treatment over objection for ECT was obtained. A total of 3 sessions were administered over 1 week with remission of symptoms. To our knowledge, this is the first reported case of an ovarian hyperstimulation protocol leading to a manic episode in a patient with a known history of bipolar disorder. While it is well known that gonadotropins can cause mood and anxiety symptoms, these side effects have been noted to be transient except in

rare circumstances. In this poster, we discuss the implications of ovarian hyperstimulation being a possible biological risk factor for a mood episode and the need for multidisciplinary care, close follow up and patient education in this vulnerable population. Lastly, these symptoms were different compared to prior manic episodes and show features that are more commonly seen in postpartum psychosis, which has potential implications for treatment and directions for future research.

No. 155

Monthly Exacerbation of Female Bipolar Disorder: Is It Premenstrual Dysphoric Disorder?

Poster Presenter: Teresa T. Lee, M.D.

SUMMARY:

Ms. A is a 38 yo female with bipolar 2 disorder, using the copper IUD for birth control, who was referred to our outpatient psychiatric clinic by her therapist due to a change in prescribers. Although she had been stable on oxcarbazepine for over a year, at the time of intake, she had been non-compliant with treatment for several months due to financial issues. At intake, she presented with dysphoria, irritability, and insomnia, which improved significantly once she was resumed on her reported oxcarbazepine dose. During the course of treatment in our clinic, she admitted to menstrual cycle related changes in mood and physical symptoms since her teenage years. Her premenstrually timed increases in irritability, anxiety, self-deprecating thoughts, lack of energy, feeling overwhelmed, and physical sensations of bloating and cramps, which contributed to increased interpersonal conflicts and avoidance of social activities, was suggestive of premenstrual dysphoric disorder. As she refused to complete the Daily Record of Severity of Problems, her PMDD was specified as “provisional.” Conventional treatments including SSRIs, hormonal contraception, calcium and vitamin B6 supplementation, and benzodiazepines were discussed with patient, who refused all but benzodiazepines and vitamin supplements, citing prior history of hypomanic and somatic effects when trialed on serotonergic and hormonal agents, respectively. As there was no prior history of substance abuse, we agreed to several months trial of a weeklong supply of lorazepam and vitamin supplementation, the latter with which she quickly became noncompliant. Although patient reported some improvement in mood lability, it was noted that the duration of her mood symptoms varied from cycle to cycle, including persisting for few days after her menses ended during one cycle. This led to the consideration that her bipolar disorder had premenstrual exacerbation instead of an independent premenstrual dysphoric disorder. This case illustrates the challenges of parsing out menstrual exacerbations from disorders in females with a primary bipolar disorder and realistic tailoring of treatment around patient preferences.

No. 156

WITHDRAWN

No. 157

A Review of Smartphone Application Interventions for Peripartum Mood Disorders: Trends, Goals, and Evidence in Academia and Industry

Poster Presenter: Natalie Feldman, M.D.
Co-Authors: John Torous, M.D., Robert Joseph Boland, M.D.

SUMMARY:

Background: A diverse set of technological resources have been developed for peripartum mental health; however, the quality of these interventions has rarely been compared directly, particularly between direct-to-consumer apps and academically-developed apps. Objectives: This review will examine the smartphone application (mHealth) interventions that are available for peripartum mental health conditions at this time. The objective of this research is to identify trends in the types of resources that are available, as well as to evaluate their effectiveness. Methods: The two most widely used smartphone stores, Apple iTunes and Android Google Play, were searched for apps containing the words “postpartum”, “peripartum”, or “pregnancy”, which also included mention of mental health in their description or title (defined by the words “depression”, “anxiety”, “health”, “psychology” or “wellness”). Six academic databases were also searched, including CINAHL, EMBASE, Health Business Elite, PsycInfo, PubMed, and Web of Science. Search terms differed due to databases’

search formats, but overall searched for publications with at least one of the terms “postpartum depression”, “peripartum depression”, “perinatal depression”, “antenatal depression”, or “maternal mental health”, as well as at least one of the terms “software”, “mobile application”, “apps”, or “smartphone”. Duplicate results were excluded from both sets of search results, as were any results that exclusively focused on pre-conception mental health. The apps will be evaluated based on stated goals of the interventions, informational content provided, evidence basis for the intervention, redundancy of the available interventions, and efficacy based on existing evidence and/or treatment guidelines. Discussion: This research demonstrates the need for a clear set of guidelines for minimum evidence basis and avoiding redundancy in technological interventions for peripartum mental health.

No. 158

All the Lonely People: A Qualitative and Quantitative Study of Factors Influencing Perceived Social Isolation in Urban Minority Women in Midlife

Poster Presenter: Jennifer Trinh, M.D.
Co-Authors: Amie Devlin, Susan Fisher, Mary Morrison

SUMMARY:
Background: Loneliness has long been linked with detrimental health effects in different populations. Social isolation has been associated with functional decline and increased mortality in the elderly. Loneliness in midlife women has been linked to a higher incidence of coronary artery disease. Among low-income populations, loneliness has been described as a contributing factor to long-term problems with anxiety and depression. In a 2016 community health needs assessment of North Philadelphia, loneliness was identified as a mental health priority with 7% of older adults reporting speaking with family or friends less than once a week. Objective: To determine factors promoting problems with loneliness in midlife, predominantly minority, low-income urban women. Population: Fifty-one midlife women (ages 35-60), residents of 11 zip codes in North Philadelphia. Methods: Semi-structured individual interviews were conducted and recorded in women’s homes by two female research staff. Eight items from the Revised UCLA Loneliness scale were included in the interviews. Recordings were transcribed and coded in rotating pairs. Analysis of qualitative data used an inductive thematic analysis approach assisted by N*VIVO software. A subgroup (N=21) attended one of two focus groups conducted after completion of interviews. Results: Women in this study had a mean age of 50.3 (SD=8.5) and were primarily African American (72%); 20% of subjects self-identified as Hispanic. Most women completed high school/equivalent (88%) and few completed college (6%). Twenty-two percent of women reported “always” while another twenty percent endorsed “sometimes” in response to “How often do you feel that there is no one you can turn to?” Fourteen percent of women reported “rarely” feeling close to other people, and ten percent reported “never.” Four common themes emerged from the focus groups, including loneliness due to burden of responsibility, loneliness due to trauma, loneliness due to unhealthy relationships, and supportive relationships as a preventative factor. One participant noted, “Mentally I grew up alone, even though I was in a house, a family, and people around me, mentally, I grew up alone. Mentally, I was broken… It’s a sadness, and the darkness that I’ve experienced as a child never allowed me mentally to have a life.” Conclusions: Urban minority midlife women face unique life challenges and report experiencing loneliness due to strained family and romantic relationships, responsibilities as a caregiver, trauma, and social isolation. Though they may be involved in interpersonal relationships, the poor quality of these relationships leads to subjective feelings of loneliness and isolation. By identifying and characterizing these nuances, targeted interventions and community initiatives can be devised and implemented for improved engagement in mental health treatment. This research was supported by the Commonwealth of Pennsylvania.

No. 159

Urban African-American and Hispanic Midlife Women Express Their Mental Health Treatment Preferences: A Qualitative Study

Poster Presenter: Allison M. Loudermilk, D.O.

Co-Authors: Susan Fisher, Amie Devlin, Mary Morrison

SUMMARY:
Background: Disparities in mental health treatment among minorities are well known, and are not adequately explained by differing access to resources. Differences in treatment preferences among minority groups may explain some of these disparities. Minorities display specific treatment preferences for particular characteristics of their mental health provider, as well as the type of treatment provided, that may affect willingness to enter mental health treatment. Objective: To determine specific mental health treatment preferences of urban women in the North Philadelphia area. Population: Fifty-one midlife women (ages 35-60), residents of 11 zipcodes in North Philadelphia. Methods: Semi-structured individual interviews were conducted, and recorded in women's homes by two female research staff. Recordings were transcribed and coded in rotating pairs. Analysis of qualitative data used an inductive thematic analysis approach assisted by N*VIVO software. A subgroup (N=21) attended a focus group after their interview. Results: Women in this study had a mean age of X (SD=), and were primarily African American (Y%). Z out of 51 women did not complete high school/equivalent. Nine overall themes were identified from individual interviews regarding considerations whether to access and sustain treatment: attitudinal barriers, confidentiality, coping skills, being helpful, medication, being an outlet, prior bad experience, structural barriers and relationship with their mental health professional. One participant remarked about her positive relationship with her therapist , "… She relates with me on my level. That's what I like with people and I think that's they way you get along with people a little bit better. Mentally and physically. You got to sort of relate to them on their level not because you got the job you better, come down with me and feel me in…" Conclusions: Providing education and positive role models to inform minorities about mental health treatment specifically targeting treatment preferences and concerns could increase the willingness of midlife minority women to access treatment. Ongoing monitoring of treatment preferences and satisfaction may increase the likelihood of midlife minority women to attend treatment through to completion. This research was supported by the Commonwealth of Pennsylvania

No. 160

Change in Obstetric Provider Knowledge and Attitudes After Completing Educational Module on How to Address Perinatal Depression

Poster Presenter: Cassidy H. Cooper, D.O.
Co-Authors: Anne-Therese Hunt, Tiffany Moore Simas, Charles Hamad, Janet Twyman, Melissa Maslin, Nancy Byatt, D.O., M.B.A., M.S.

SUMMARY:
Purpose: To evaluate obstetric providers' change in knowledge and self-efficacy regarding perinatal depression management after completion of an educational module. Background: Perinatal depression, a common pregnancy complication, is under-recognized and under-treated. It complicates maternal, birth and infant/child outcomes. Professional societies recommend screening for perinatal depression. Screening needs to be followed up with assessment, treatment, and/or referral. However, provider discomfort with managing perinatal mood disorders impedes them from integrating depression care into their practice. Methods: We designed an online, asynchronous, interactive, educational module, vetted by an advisory board of subject matter experts. Core concepts included how to assess, manage, and treat perinatal depression. Phase I involved a formative evaluation by five providers, resulting in module and question refinements prior to Phase II. Phase II included a summative evaluation with module effectiveness quantified via pre- and post-test questions regarding knowledge and self-efficacy. Results: Sixteen obstetric providers averaged a 32% improvement in their pre- to post-test scores ($p<.0001$). The average pre-test score was 49%, with a range from 20-70% and the average post-test score was 81%, with a range from 70-95%. Provider beliefs ($p=.01$), self-efficacy ($p<.0001$), and confidence ($p<.0001$) in treating perinatal depression were also significantly increased between pre- and post-test answers. Discussion: The results suggest that the module is effective at improving provider knowledge of perinatal mood disorders and improving self-rated

confidence and self-efficacy with incorporating this information into practice. Data indicate high satisfaction with the training module with significant increases in participant awareness of and motivation to learn more about perinatal depression.

No. 161

Rethinking Our Approach to Suicide: Evaluation and Treatment of a Young Patient With Postpartum Psychosis

Poster Presenter: Hayley Kathleen Getzen, M.D., M.P.H.

SUMMARY:

Ms. S, a 22-year-old Arab-American female with no previous psychiatric history, presented to the emergency department as a level II trauma after an attempted suicide by jumping out of a third-story window. She was two months postpartum and reported "mood swings," poor sleep, and overwhelming thoughts of suicide, which began a few days after her delivery. Given the patient's suicidality and the timing of her symptoms, she was provisionally diagnosed with postpartum depression, admitted to the inpatient psychiatric unit, and started on an antidepressant. Collateral information obtained during the admission revealed a five-week history of an elevated mood, decreased sleep, disorganized behavior, paranoia, flight of ideas, increased activity, and psychomotor agitation. These symptoms increased in severity after initiation of the antidepressant and the diagnosis was revised to bipolar I disorder, current manic episode with psychotic features, with peripartum onset. The antidepressant was subsequently discontinued, and antipsychotic/mood-stabilizing treatment was initiated, which proved effective. The postpartum period poses an increased risk for development of new-onset or recurrence of psychiatric illness. The most recognized postpartum psychiatric illnesses include depressive and anxiety disorders, however women are also at an increased risk for the rapid onset of psychosis, which is strongly associated with bipolar disorder. Up to 50% of patients presenting with psychotic symptoms in the postpartum period will have no prior psychiatric illness. Postpartum psychosis significantly increases the risk of suicide, which has become one of the leading causes of death in postpartum women, especially within the first 6 months of delivery. Of concern is the violent nature and increased use of lethal means to attempt or complete suicide during the postpartum period. When generating a diagnostic differential in the context of suicide during the postpartum period, providers must have a high clinical suspicion for alternative diagnoses to depressive and anxiety disorders, giving special attention to psychosis and other mood disorders. Initiation of antidepressant treatment should be executed with caution as it can delay appropriate treatment or even exacerbate underlying bipolar-related symptoms if alternative diagnoses are not explored.

No. 162

Premenstrual Psychosis in an Adolescent

Poster Presenter: Jack Pasquale Fatica, M.D.
Co-Authors: Salima Jiwani, M.D., Salman Majeed, M.D.

SUMMARY:

Our patient is a 15-year-old female with no prior psychiatric history who presented with disorganized thought processes, visual and auditory hallucinations, persecutory delusions, agitation, and mood lability that began earlier during the day of admission. She had a history notable for heavy menstrual periods and significant premenstrual symptoms such as mood lability, irritability, anxiety, difficulty concentrating, low energy, changes in sleep, and abdominal cramping, for which she had been taking ethinyl estradiol/norethindrone acetate oral contraceptives regularly up until two months prior to presentation. On day two of her hospitalization she was treated with olanzapine 5 mg PO with improvement in the severity of her symptoms. Her menses started later during the second day of admission and with it came further improvement in her symptoms. Throughout her nine-day hospitalization, she continued to gradually improve. She resumed her oral contraceptive later during her hospitalization after resolution of her menses. Because of lingering symptoms of paranoia, anxiety, and difficulty recalling events during the hospitalization with associated confabulation, she was discharged to an outpatient partial hospitalization program. On follow-up approximately three months later, despite discontinuing the olanzapine she remained symptom-free while

continuing her oral contraceptive. Premenstrual psychosis is a rare phenomenon initiating during or preceding menses, often lasting one to two weeks after the onset of menses. Previous literature shows links between the estrogen decline of the menstrual cycle's late luteal phase and the worsening of preexisting symptomatology in psychosis. In this poster, we discuss the presentation and management of psychosis related to the menstrual cycle using current literature, which is primarily comprised of clinical cases, to highlight successful treatment options such as oral contraceptives and atypical antipsychotics.

No. 163

Acute Onset of Psychotic Symptoms Outside the Postpartum Window: Diagnostic and Treatment Considerations

Poster Presenter: Ivan Chik, M.D., M.P.H.
Co-Author: Barbara Wilson, M.D.

SUMMARY:

Mrs. H, a 30yo woman with no past psychiatric history presented to the emergency department with insomnia, ideas of reference, auditory hallucinations and the belief that her husband may be an imposter (Capgras Syndrome) in addition to limited engagement in caring for her newborn for four days. Patient was 9-weeks postpartum following an uncomplicated at-home delivery of her first child and had been recovering without issue until her symptoms started. Initial workup including head imaging, CBC, CMP, TSH, UA was negative, though she does report a chronic history of cannabis use without previous issues. Due to concerns for the safety of the newborn, the patient was admitted to the psychiatric unit and was started on risperidone with limited benefit and an initial worsening of her symptoms including increased paranoia toward staff and family. Preparations for electroconvulsive therapy (ECT) were started, however, the patient's symptoms had a notable improvement by hospital day 4 with the titration of risperidone; this included a complete resolution of psychotic symptoms and paranoia. This poster will highlight differential diagnoses for bizarre thinking in the post-partum period, the importance of emergent management of psychosis in new mothers, including ECT, and long-term management of psychosis in new mothers.

No. 164

Stepped Care for Women's Mental Health in Primary Care in Tajikistan

Poster Presenter: Angela Devi Shrestha
Co-Author: Stevan Merrill Weine, M.D.

SUMMARY:

Background: In Tajikistan, women bear a disproportionate burden of common mental disorders (CMD), many of which are undiagnosed and untreated due to lack of mental health resources. Lifting this burden can be approached through task sharing, which utilizes non-specialists to deliver mental health services. The stepped care model is a sequential, multi-component program where persons with less severe conditions receive lower intensity treatments, and higher intensity treatments are reserved for those with more severe conditions or who don't respond to less intensive care. The purpose of this study was to utilize a task sharing approach to develop a novel stepped care model, and assess the feasibility and acceptability of this model with women who have depression recruited from a primary care clinic in Dushanbe. Methods: Participants included 45 Tajik women (18 to 45 years old) who scored >16 on the Hamilton Depression Scale (HAM-D), recruited by primary care (PC) nurses. Participants were referred to stepped care, which included 1) peer and PC nurse co-led 8-session psycho-education and support groups (BRIDGES); 2) peer or PC nurse led 6-session Interpersonal Counseling (IPC), ; and 3) PC physician led medication treatment. Participants were longitudinally assessed initially, and at 3 and 6 months (Waves 1, 2, and 3) using the HAM-D and other standardized measures. Results: All 45 participants were referred to BRIDGES, then 12 to IPC, and 5 to medication management. Engagement and retention was 92% for BRIDGES, 91% for IPC, 100% for medications, and 100% for longitudinal assessments. For all participants, mean depression scores diminished from 25.8 (Wave 1) to 10.6 (Wave 2) to 7.4 (Wave 3), with moderate-severe depression decreasing from 96% in Wave 1 to 9% in Wave 3. There were also statistically significant reductions in anxiety and PTSD. The 12 participants referred to IPC had higher Wave 2 depression scores [14.3 (n=12) v. 9.3 (n=33)]. Following IPC, Wave 3 depression scores

continued to decline in those who received only BRIDGES (n=29; 5.4) and BRIDGES plus IPC (n=11; 5.9), asides from a sub-group with elevated scores (n=5; 24.0). Most of this sub-group could not attend BRIDGES and IPC, and were referred for antidepressant medications. Post-medication assessment is pending. Conclusion: This study demonstrates the feasibility and acceptability, and potential effectiveness of the stepped care model in decreasing symptoms of CMD in Tajik women. This intervention was shown to fit in sociocultural, environmental, and organizational contexts. The results of this pilot study suggest that the stepped care approach should be scaled up and evaluated for effectiveness and implementation. This study was supported by the National Institute of Mental Health and the Fogarty International Center.

No. 165

Challenges of Managing the Acutely Psychotic Patient During Pregnancy and Postpartum

Poster Presenter: Adriana Emperatriz Marachlian El Yammouni, M.D.
Co-Authors: Zohaib Majid, M.D., Priyanka S. Adapa, M.D., Raj V. Addepalli, M.D., Melissa Begolli, M.D.

SUMMARY:

Ms. S.R. is a 32-year old G3P0020 Hispanic woman at 35 weeks and 1 day gestation with previous psychiatric history of Bipolar Disorder, no known history of suicide attempts or self-harm behavior, who presented to the emergency room with suicidal ideation and aggressive behavior. On initial evaluation, she was agitated, threatening to harm herself and others, and required Haloperidol 5 mg intramuscular and Lorazepam 2 mg intramuscular for violence toward another patient. Collateral information confirmed she was on psychiatric medications prior but had stopped her medications once pregnant. On admission to our inpatient psychiatric unit, she exhibited mood lability, paranoid delusions, violent behavior, and fluctuating beliefs about her pregnancy, stating “I feel something rotting inside me” and “My baby is dead.” Her disorganization and aggression in the context of medication noncompliance warranted 31 instances of intramuscular medication administration in 2 months. She showed poor response to trials of Valproate, Olanzapine, Aripiprazole, and Chlorpromazine. Patient was unable to participate in the decision-making process regarding her delivery and was deemed without capacity due to her mental state, which deteriorated as delivery approached. After C-section, concerns arose about her ability to take care of the newborn due to persisting psychosis, thus the infant was placed in ACS care. Post-partum, she insisted that she was “17 months pregnant,” and exhibited escalating aggression, sexual preoccupation, and religiosity. Patient was taken to court for forced medication. She showed improvement on a regimen of Clozapine 200 mg PO twice daily, Valproate 1500 mg PO daily, with tapering of Olanzapine. Pregnancy is a physiologically stressful period that has been shown to exacerbate mood and psychotic episodes and alter the metabolism of commonly used medications. Prospective studies documenting bipolar episodes in pregnancy have reported that up to 70% of women may have an acute mood episode during pregnancy, which is amplified by abrupt discontinuation of medication. We explore the literature available for the psychopharmacological and psychotherapeutic treatment of acutely psychotic and violent pregnant patients. Management of the pregnant agitated patient is particularly challenging. This case highlights the importance of an interdisciplinary approach, including the involvement of social services and family, consideration of approaching the court system for court-ordered medications, and the benefits of Clozapine for controlling symptoms of aggression and psychosis.

No. 166

Psychotherapy for Hallucinogen Persisting Perception Disorder

Poster Presenter: Elise E. Turner, M.D.

SUMMARY:

A 20 y.o. Caucasian male with a history of depression and marijuana use was referred for evaluation in an outpatient psychiatric clinic following his second episode of substance induced psychosis. He originally presented to the emergency department for intense paranoia, auditory hallucinations, depersonalization, derealization, mind reading, and thought blocking after ingesting LSD for the first time. For the next two months, the patient

abstained from all substance use and had no psychosis. He took LSD for the second time and smoked marijuana. He began to experience the same symptoms of his previous episode of psychosis for about five hours. He was observed in the emergency department and referred for further treatment outpatient. On admission to the outpatient clinic one month later, he was abstaining from all substances. He continued to have discreet, short episodes of paranoia and derealization. He would get a feeling someone was trying to harm him a few times a day. He described it as a less intense continuation of his previous LSD induced episodes without actually taking the LSD. His symptoms were consistent with hallucinogen persisting perception disorder (HPPD). Typically, treatment of HPPD involves at least the temporary use of an antipsychotic until psychotic symptoms remit. However, this patient did not want to take medications and was only interested in therapy to alleviate his symptoms. He participated in weekly supportive therapy that focused on grounding techniques. Six months into therapy, his psychotic episodes lessened in intensity and frequency to about once a week. In this poster, we discuss different therapy strategies including supportive therapy and therapies focused on distress tolerance skills that have been helpful for persistent substance induced psychosis. We also discuss contraindications to psychotherapy as the sole treatment modality for HPPD in certain populations such as psychotic patients with dangerous behaviors.

No. 167

Difficulties in Psychodynamic Psychotherapy: Role of the Structure of the Training Clinic

Poster Presenter: Alyson Gorun, M.D.
Co-Author: Kristopher A. Kast, M.D.

SUMMARY:

The role of the structure of the training clinic has been a neglected component of learning and implementing psychodynamic psychotherapy and can create unique challenges to the trainee, their supervisors, and clinic patients. Distinctive features of the training clinic include multiple and time limited forced terminations, varied roles of the trainee including psychotherapist, psychopharmacologist, and supervisee, and tension between educational and therapeutic needs of the trainee and patient. These structural elements of the training clinic can create transference and countertransference processes, allow for defenses that enable the avoidance of therapeutic goals, and influence dynamics in the supervisee and supervisor dyad. In this poster, we will describe each of these principles and provide clinical vignettes illustrating them. We will also demonstrate how successful navigation of these challenges can ultimately lead to educational and therapeutic benefit for both the patient and trainee. The impact of the structure of the clinic on the frame and therapeutic process will bring awareness of this concept to trainees and supervisors and the importance of its function in the psychodynamic frame and process.

No. 168

The Effect of the Experience of One Session Psychodynamic Psychotherapy on Ego Identity and Perceived Parenting Attitude in Medical Students

Poster Presenter: Yong Chon Park, M.D.
Co-Authors: Eunkyung Kim, Choyeon Park, Dongjoo Kim, Hwa Yeon Jo

SUMMARY:

Background: The experience of receiving psychodynamic psychotherapy in a psychiatry clerkship is expected to increase understanding of the patients as well as that of psychotherapy skills and procedures. Especially, psychodynamic formulation according to Deborah L.Cabaniss consists of 3 phases; phase of describing chief complaints, of reviewing developmental history, and of linking the complaints and developmental histories (Cabaniss, 2013). Especially, psychodynamic formulation allows them to introspect themselves and reflect on experiences with their parents, and consequently may affect perception on themselves and their parents. Therefore, this study investigated the effect of psychodynamic psychotherapy experience in medical students on ego identity and perceived parenting attitude. Methods: Of total 52 participants (mean age=25.57, 56.9% male), 19 were the client group, who received 1 session psychotherapy for psychodynamic formulation. The control group consisted of 32 participants who did not have any experiences of psychotherapy or observed the psychotherapy procedures of the client

group. All participants answered questionnaires on ego identity and perceived parenting attitude, prior to and after the psychotherapy session. For statistical comparison, the mixed-model repeated measures of ANOVA were conducted. Results: In the client group, ego identity significantly decreased after the psychotherapy ($p<0.5$). Also in the control group, there were no significant findings on emotional warmth subscale and rejection subscale, but a significant decrease on overprotection subscale in perceived parenting attitude after the psychotherapy ($p<0.5$). Conclusion: This finding suggests that the experience of psychodynamic psychotherapy may decrease the ego identity. Moreover, the control group showed a significant decrease on overprotection parenting attitude after the psychotherapy. This finding can be accounted for by over the half of the control group participants being observers of the psychotherapy of the client group. While observing the reviewing process of family history of a client, they may have unconsciously compared parents of the client to those of their own. From the comparison, they may have perceived their own parents as relatively positive, and as less overprotective in parenting than parents of the client. These findings suggest that experiences of psychodynamic psychotherapy in medical students may affect ego identity, and requires further study on the effect of indirect experience of psychotherapy. The authors received no funding for this study.

No. 169

From Guidelines to Practice: Implementing a Psychotherapy for Psychosis Program in Public Sector Psychiatry

Poster Presenter: Ali Maher Haidar, M.D.

SUMMARY:

Randomized controlled trials have demonstrated the efficacy of psychotherapy for psychosis, a finding reflected in the United States Schizophrenia Patient Outcomes Research Team Guidelines (PORT) and British NICE guidelines for the treatment of schizophrenia. Despite the inclusion of psychotherapy in evidence-based guidelines, individual psychotherapy has yet to become standard practice in the treatment of schizophrenia. One reason for this gap between guidelines and practice is that individual psychotherapy requires clinicians to spend more time with individual patients than other forms of treatment (increased intensity of care). For example, rather than seeing patients once-a-month for 20 minutes to monitor their clinical status, individual psychotherapy would require clinicians to spend 45 minutes a week with the patient. Increased frequency and duration of clinical contact adds an expense that funding sources may be unwilling to pay. In this case, evidence-based guidelines become unfunded aspirations. The US literature has paid little attention to this gap, while interest in other countries has been higher, particularly in England and Germany. In our study, we explore the gap between guidelines and practice. Our objective is to assess whether community mental health clinics control case loads in order to allow their staff to practice evidence based psychotherapy. Psychiatric clinics in the community do not use an algorithm to determine staffing needs and do not control staff to patient ratio. 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. Secondly, we conducted an anonymous online survey using Qualitrics, to determine how many outpatient psychiatric clinics currently use an algorithm to relate caseloads to intensity of care. The survey was be distributed online to the list serve of the American Association of Community Psychiatry and the International Society for Psychological and Social Treatments of Psychosis (ISPS). Results: Preliminary results show that 70% of surveyed clinicians reported not having a maximum caseload on their census. In case a maximum was set, only 25% of clinicians reported that they are determined by a structured algorithm. Among those surveyed psychologists were 2 times more likely to have set maximal caseloads than psychiatrists. Conclusion: Despite a current emphasis on evidence-based treatment, evidence-based psychotherapy for psychosis at present appear to be an unfunded mandate that has not been implemented in clinic practice.

No. 170

What Has History Taught Us on Psychiatric Impacts of Childhood Separation From Care Givers?

Poster Presenter: Ali Maher Haidar, M.D.

SUMMARY:

Several studies have found childhood trauma to be associated with severe repercussions in adult life. Specifically, early life stress has been long associated with grave mental health consequences and linked to neurobiological markers of decreased resilience in the adult. Recently, the United States media has fervently covered the separation of children from their parents at the US border as part of new strict immigration policies. The APA and several other professional organizations have emphasized the detrimental effects of such separation could have on children's mental health and recommended the halt of such policies. Although several studies have focused on the long term sequelae of children separation from their caregivers, we set out to review the literature for any evidence on the temporary separation from caregivers during childhood. We focused our search on particularly temporary separation with ultimate reunification. To address our specific question, we hypothesized possibilities of reviewing studies on major modern historic events. We attempted to find data on events such as World War, the Iron wall or recent refugee crises. Our historic review yielded several studies from world war II Finland and evidence that temporary separation was found to be associated with increase in long term personality pathology development. We also review the available data on effects of separation on mental health by detailing: neuromolecular studies, personality development and epidemiological estimates of impact of separation on development of adult mental illness. Further research is needed to address the effects of separation on the children at the US borders and to push for protection of future children form being subjected to possible outcomes.

No. 171

A Case Report: Olanzapine Treatment in Refractory Chemotherapy-Induced Nausea

Poster Presenter: Dilys Ngu, M.D.
Co-Author: Kirsy Japa, M.D.

SUMMARY:

Introduction Chemotherapy-induced nausea and vomiting are associated with a significant deterioration in the quality of life and are perceived by patients as major adverse effects of cancer treatment. Chemotherapy-induced nausea and vomiting (CINV) remain the most distressing event in patients receiving highly emetogenic chemotherapy (HEC) or moderately emetogenic chemotherapy (MEC). Olanzapine is an anti-psychotic drug that has been used for preventing and treating Chemotherapy-Induced Nausea and Vomiting. Studies such as the article published by the New England Journal of medicine in 2016 "Olanzapine for the Prevention of Chemotherapy-Induced Nausea and Vomiting" showed promising results in the treatment of chemotherapy-induced nausea. Other studies have shown that a loading dose was not necessary and another showed that the dose of 10 mg per day for 4 days was a dose associated with no toxic effects except minimal sedation. Case report: This case report is about a 55 -year -old female with a history of stage III endometrial cancer and a recent diagnosis of NSCLC. Other comorbidities include Hypertension, Hypothyroidism, Lung cancer (HCC), and Migraine who presented to the hospital with protracted nausea and vomiting and was admitted medically. Psychiatry was consulted to manage depression and ongoing anxiety. A few days prior to this presentation, the patient completed her first cycle of chemotherapy with cisplatin and etoposide to treat non-small cell lung cancer with neuroendocrine features. The patient was receiving Ondansetron, Reglan, and Compazine with minimal and transient relief. She continued to report nausea and vomited daily. Given that the patient's acute medical condition was contributing to her depressed and anxious mood, the psychiatry team decided to focus on nausea and vomiting. Based on the article published by the New England Journal of medicine in 2016, psychiatry recommended initiation of a trial of Zyprexa 10 mg x 4 days in addition to the patient's antiemetics that included Ondansetron, Reglan and Compazine. We found that the patient had significant relief with resolution of symptoms of nausea and vomiting on the days the patient took the Zyprexa. However she reported re-emerging symptoms of Nausea with emesis after

discontinuation of Zyprexa. Conclusion: Chemotherapy-induced nausea and vomiting remain poorly controlled in patients receiving moderately emetogenic chemotherapy (MEC) or highly emetogenic chemotherapy (HEC). Studies have shown that Olanzapine significantly improved nausea prevention, as well as the complete-response rate, among previously untreated patients who were receiving highly emetogenic chemotherapy. Based on our findings, we observed that the patient was completely relieved of symptoms while she was taking the Zyprexa. In line with existing data from clinical trials, this case study justifies the need for further research of the role of olanzapine in the prevention of CINV.

No. 172

Escitalopram—Raising More Than Moods: A Case Report of Escitalopram-Associated Priapism

Poster Presenter: Waqas Yasin, M.B.B.S.

SUMMARY:

Primary care providers are often the initial point of contact for patients seeking care for mood disorders. Selective Serotonin Uptake Inhibitors (SSRIs) are a common first choice medication for anxiety and depression treatment due to good tolerability and side effect profile. This case discusses an uncommon but serious side effect of escitalopram during treatment of depression.

No. 173

Treatment of Recurrent Valproic Acid-Induced Hyper Ammonia

Poster Presenter: Waqas Yasin, M.B.B.S.
Co-Author: Saad Wasiq

SUMMARY:

Valproic acid, first manufactured as anticonvulsant, is commonly used to treat both neurological and psychiatric conditions. Some of the common side effect associated with this medication include a dry mouth, nausea, vomiting and hyper somnolence. One of the rare and deadly side effect due to this medication is hyper ammonia presenting as lethargy, confusion, seizure and ultimately coma In rare circumstances, hyper ammonia can be recurrent and devastating especially in patients with underlying N-Acetyl glutamate deficiency as Valproic acid can enhance this enzyme deficiency leading to blockage of conversion of ammonia into urea in liver. This recurrent hyper ammonia can be very challenging for physician when treating patients who are clinically responsive to just valproic acid. For these subtypes of patients FDA have recently passed a medication carglumic acid (carbaglu) that can act as a scavenger by effectively increasing the levels of N-acetyl glutamate synthase ultimately enhancing conversion of ammonia to urea. Below we have a rare case report of recurrent hyper ammonia in patient with N-acetyl glutamate deficiency and its effective management by carglumic acid.

No. 174

A Narrative Review of Portrayal of Early Treatments in Psychiatry in Arts

Poster Presenter: Tricia Lemelle, M.D., M.B.A.
Co-Authors: Badr Ratnakaran, M.B.B.S., Ayotunde Ayobello, M.D., Thomas David Joseph, M.D., Nina Meletiche, M.D.

SUMMARY:

Background: Treatment of mental illness has been documented since 5000 BC and paintings have depicted such treatments. Objective: To identify important paintings depicting various treatment methods of mental illness. Method: A literature search was done on the depictions of various treatment methods of mental illness in famous paintings and various experts interested in the field of art and psychiatry were contacted for their opinions on 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 museum of Art. The paintings were selected and a narrative review was done by the authors. Results: 12 famous paintings were identified that depicted various treatments of mental illness.The methods depicted include trepanation,being in restraints, hypnosis, hydrotherapy, moral therapy, Katzenklavier, Cox's chair and tranquilizer chair. Conclusion: The paintings depict various perspectives of understanding and treatment of mental illness in different eras in history.

No. 175

A Narrative Review of Portrayal of Scenes From Asylums in Art

Poster Presenter: Nina Meletiche, M.D.
Co-Authors: Badr Ratnakaran, M.B.B.S., Ayotunde Ayobello, M.D., Thomas David Joseph, M.D., Tricia Lemelle, M.D., M.B.A.

SUMMARY:
Background: Mental illness and the context surrounding it have been an important theme in art. Mentally ill patients in the context of them being in asylums have also been depicted in famous paintings Objective: To identify important paintings depicting scenes of asylums. Method: A literature search was done on the depictions of asylums in famous paintings and various experts interested in the field of art and psychiatry were contacted for their opinions on the same. Sources used from the internet including websites by The Lost Museum Archive, Wikiart, Wikimedia Commons, E.G Bruhl Collections, Leicester galleries, Welcome Trust, Tate museum, Museum of Modern art, Metropolitan museum, Museo Del Prado and Philadelphia museum of Art. The paintings were selected and a narrative review was done by the authors. Results: 10 famous paintings were identified that depicted various scenes of asylums from 18th to 19th century. The various paintings have depicted the asylums at Bethlem Royal Hospital, Hôpital universitaire Pitié-Salpêtrière, Bicêtre Hospital, Asylums in Spain, Saint-Paul Asylum at Saint-Rémy and New York City Lunatic Asylum. Majority of the paintings have depicted the scenes of asylums as being unkempt, crowded and with patients in different states of suffering from mental illness. Conclusion: The paintings depict various perspectives of understanding of how mentally ill were treated during the 18th and 19th century and also on life in an asylum during the aforementioned time periods.

No. 176

Mindful Melody: Exploring the Use of Music to Reduce Agitation on an Acute Inpatient Psychiatric Floor

Poster Presenter: Trevor Scudamore, M.D.
Co-Authors: Nekpen Sharon Ekure, M.B.B.S., Christopher Botash, M.D., Lioubov Leontieva, M.D., Ph.D.

SUMMARY:
Background: Music is widely recognized for its therapeutic value. Songs possess a unique ability to mirror human emotion, and by doing so, are able to influence the mood of their listeners. Agitation, defined as an attempt to communicate an unmet psychosocial need, is typically managed with as-needed psychotropic medications (PRN) on inpatient psychiatric units. Such PRNs, though administered with the intent to maintain a safe therapeutic environment, have the potential to produce adverse reactions. The question remains whether musical intervention may quantifiably assist in reducing medication administrations in the inpatient psychiatric setting. Method: We initiated a quality improvement project, where listening to music is proposed as an alternative intervention to “PRN” medication (e.g., sedatives, antipsychotics) for reducing anxiety and agitation on an inpatient psychiatric unit. On admission, patients are made aware of the music de-escalation option, which involves listening to a preset playlist (multiple music genres offered) through headphones for thirty minutes, rather than receiving pharmacologic intervention. Medication remains available after the music session, if still requested. Patients are free to roam the unit or sit in an open area while listening. The music is controlled wirelessly from the nursing station. Nursing staff are trained to complete the Overt Agitation Severity Scale (OASS, Yudofsky, 1997) both during the initial agitation event and within fifteen minutes after removal of the headphones. The OASS was chosen for its previous use in the inpatient psychiatric setting and its reliance on objectively observable behaviors of agitation. Patients are also asked to subjectively rate if they found the music helpful (using a Likert scale), after they finish listening. Results: As of this writing, the average daily census on the unit was 17 patients. Over 2 weeks, more than 20 patients have agreed to participate in the project. 89% of patients who opted for music de-escalation ranked their experience as “Helpful” or “Very Helpful.” OASS scores decreased by an average of 2.8 points after music intervention. PRN administration revealed significant decreases in clonazepam, gabapentin, perphenazine, olanzapine, propranolol yet significant increase in benztropine and diphenhydramine. The latter PRN medications

were the extra pyramidal symptoms correction for the most part.The amount of PRN medication administrations on the unit during the 1 month prior to starting the project was 109 counts. In the initial 21 days of music program running, the amount of PRN medication administrations totaled 50.3 (excluding benztropin and diphenhydramine), a twice decrease. Conclusion: The project has been well-received by patients and staff. As-needed music administration appears to be a feasible intervention for reducing reliance on PRN agitation medications in the inpatient psychiatric setting.

No. 177

ECT Safety With Intracranial Hemorrhage: A Case Report and Literature Review

Poster Presenter: Feier Liu, D.O.
Co-Author: Lawrence Carl Peters, M.D., Ph.D.

SUMMARY:
Introduction Electroconvulsive Therapy (ECT) is an effective treatment for depression, bipolar disorder, and schizophrenia. Intracranial lesions such as hematomas are a theoretical relative contraindication and there is no clear indication regarding ECT safety as related to intracranial hemorrhage. There are a few case reports presenting ECT in patient with known hemorrhage. We present another case to discuss the safety of ECT and to summarize the cases that are available in the literature. Case Report 67 year old female with past medical history of hyperlipidemia and past psychiatric history of bipolar disorder presented after intentional overdose on Ibuprofen necessitating medical ICU treatments. After transfer out of the ICU, patient developed progressively worsening anemia, acute aphasia, and a possible seizure which prompted a CT Head. This showed acute left frontal epidural and subdural hematoma. At the time of admission, her presentation was consistent with Bipolar Disorder with depressed episode. She was restarted on Depakote with minimal effect. ECT was initially considered, however it was held due to hematoma seen on previous CT. Her outpatient psychiatrist had informed the team that patient's depression responded very well to ECT in the past, and never responded to medications. The team reconsidered ECT and consulted our medical, neurology, and neurosurgery teams. Neurosurgery recommended no ECT until the clot was completely resolved. Neurology and medicine agreed. The psychiatric team followed neurology's recommendation and began ECT after a repeat head CT showed complete resolution of the hematoma. After 8 ECTs, another head CT still showed no abnormalities. The patient was discharged soon after completing 11 ECTs with good mood and bright affect. She had improved cognitive function and there was no neurological deficit. Discussion Our patient was successfully treated with ECT without complications. In reviewing the literature, there were five patient cases with known history of previous hemorrhages in different brain locations. In these patients, there was no recurrence or worsening of the bleed after ECT treatments. These cases also discussed using beta-blocker to control intra-procedural blood pressure to prevent intracranial bleeding. The limited data suggests that ECT might be safe for patients with a history of intracranial hemorrhage, especially when beta-blockers are used for acute blood pressure management.

No. 178

Feasibility Study of Cognitive Enhancement Therapy in Real-World Schizophrenia Population

Poster Presenter: Ambika Kattula, M.B.B.S.
Co-Authors: Laura Faith, Jaskirat Singh Sidhu, M.D., Fei Cao, M.D., Ph.D.

SUMMARY:
Introduction: Pharmacological and psychosocial interventions are proven to help patients with schizophrenia (SZ) in alleviating positive symptoms and reducing inpatient hospitalizations (Lehman et al., 2003). Nonetheless, the complete social and vocational recovery is lacking because deficits in social cognition and behavioral skills persist. Cognitive enhancement therapy (Hogarty & Flesher, 1999) may be promising in improving cognitive, functional and vocational outcomes in patients with SZ. However, current research has primarily focused on highly controlled randomized trials of CET rather than uncontrolled real-world studies (Eack et al., 2009). The aim of this poster is to evaluate the implementation and feasibility of CET in a real-world population. Methods: N=23 individuals enrolled in cognitive enhancement therapy were retrospectively

assessed for cognitive outcomes, retention rate and overall satisfaction. Individuals were offered the 48-week program that spanned over one year with once a week session following the manualized schedule. Therapy sessions include computerized neurocognitive exercises, individual coaching, and interactive discussions related to social cognition. Results: Among 23 participants, 15 individuals graduated, with retention rate of 65.22%. The graduating sample included 3 females (20.00%) and 12 males (80.00%). Participants were Caucasian/white (n=6, 40.00%), African American/black (n=5, 33.33%), Asian/pacific islander (n=2, 13.33%), and multi-racial (n=2, 13.33%). All graduated participants were diagnosed with schizophrenia spectrum disorders (n=15, 100%). They were an average age of 42.80 (SD=13.63). Participants (n=13) completed a computerized reaction time test at pre- and post- intervention. Overall, 77% of participants improved their reaction time. MATRICS Consensus Cognitive Battery testing pre- and post- intervention showed 93.33% of participants improved in at least one subtest of cognitive functioning. Further, 60.00% of participants improved in four or more subtests. Participants completed a satisfaction survey at the end of therapy which indicated that CET was worth their time (n=17, 100%), satisfaction with CET classes was high (M=4.06), and all CET participants felt comfortable talking with their CET coach (n=17, 100%). Conclusion: Overall, our results demonstrated that participation in CET in a real-world setting showed some improvement in areas of cognition in individuals with schizophrenia who seek to improve their neurocognitive and social cognitive functioning. Individuals in our research sample showed decent retention rate and considerable satisfaction at the end of therapy. In sum, these results suggested that CET could have a promising positive impact on patient's quality of life after completion of therapy, though effectiveness in the long term is yet to be explored.

No. 179

Micro-Dosing LSD: Cultural Trend or Revolutionary Therapeutic Breakthrough?

Poster Presenter: Mustafa Kaghazwala, D.O.

SUMMARY:

Psychedelic compounds have had a significant role in many cultures around the world spanning millennia. Initially, they were revered by many ancient societies as a way of transcending what it meant to be human and as a way of connecting with a higher being. It has been argued that their emergence in western culture in the 1960's sparked the counterculture revolution that ignited the women's rights and environmental movements at the time. Furthermore, it has been argued that the criminalization of use of psychedelics was largely political and not based on any scientific or medical reasoning. Regardless of the reasons, current laws have served as a huge impediment to harnessing the potential of these substances. With that being said, public opinion and stigma of these substances has been improving; along with incidence of recreational use. Specifically, Silicon Valley, the technological juggernaut of the world, has embraced the idea of micro-dosing LSD and psilocybin as a means of sharpening cognitive processes and dealing with mental illness. While researching the applications of psychedelic compounds has increased in recent years, there is still no clinical data available on micro-dosing. It is well known in the psychiatric community, that certain medications have different effects at different doses. Some medications at lower dosages have greater effect on sleep and at higher dosages a greater effect on mood; the contrary with other medications is also true. If that is the case, does it not make sense then to research the potential benefits of LSD or psilocybin at low and non psychedelic inducing doses? According to people around the world and specifically in Silicon Valley, the effects of micro-dosing have been profound. Leaders in technology are using micro-dosing to gain advantages in creativity, sensitivity, productivity, and organization. Additionally, as mentioned before, there have all been subjective improvements in mood and motivation without any sensation of "feeling high." This review will investigate the proposed neurobiological mechanism that is allowing micro-doses of LSD to have these positive effects. Specifically, LSD's effect on the Default Mode Network (DMN) will be examined. Additionally, data collected from unofficial surveys online will be observed to examine the subjective experiences of people who have micro-dosed LSD. Collectively, this review will look at biological

mechanisms, testimonials, and the shortfalls of micro-dosing LSD. Lastly, the aim of this review is not to give definitive answers, but instead to spark an intellectual dialogue in the psychiatric community.

No. 180

TMS and PTSD

Poster Presenter: Krupa Pathak, M.D.
Co-Authors: Fnu Syeda Arshiya Farheen, M.B.B.S., Raman Marwaha, M.D.

SUMMARY:

Introduction: Post- traumatic stress disorder (PTSD) is mental disorder that can develop after a person has witnessed or experienced a traumatic event, such as a natural disaster, combat, sexual assault, or a car accident. Symptoms may include reliving the event, avoiding trauma-related cues, hyperarousal,and cognition and mood symptoms for at least one month. Transcranial magnetic stimulation is a non-invasive procedure using an electromagnetic coil, in which magnetic fields stimulate nerve cells in areas of the brain associated with mood regulation. Objective: The purpose of this review is to evaluate the efficacy of repetitive transcranial magnetic stimulation (rTMS) as a treatment for post-traumatic stress disorder due to different traumas (i.e. combat, sexual abuse, natural disasters, etc). Methods: We performed a literature review of Pubmed/Medline and Psycinfo through September 9th, 2018 using the keywords “TMS”, “post-traumatic stress disorder”, and “PTSD”. 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 five articles of which only three met the inclusion criteria. The first article studied addition of rTMS to the cognitive processing therapy. The second article evaluated the cortical excitability in PTSD group and the control group using TMS. The third article discussed the efficacy, tolerability and response to the rTMS. Conclusions: The results of this systematic review indicate that rTMS decreases the cortical excitability (which is increased in PTSD) and appears to be an effective and well-tolerated treatment for PTSD warranting further investigations are needed to determine treatment parameters, course, and side effects.

No. 181

The Cat’s Meow? Feline Warning of Imminent Seizures

Poster Presenter: Chevelle Winchester
Co-Author: Alan R. Hirsch, M.D.

SUMMARY:

Study Objective: Cats may respond to seizures with a threat response (Strong, 1999). Detailed description of this for seizures or pseudoseizures has not heretofore been described. Method: Case study: A 29-year-old right handed female, two years prior to presentation, developed onset of seizures which last approximately one minute, almost on a daily basis. These are associated with shortness of breath and postictal blurred vision. During these epoch, she would experience temporary amnesia; a feeling as if she had lost a couple years of memory which gradually returned within an hour. Pain and stress would precipitate a seizure. There were two different types of seizures. The first type was with an aura of white visual entopias in the center of her visual field without postictal amnesia. The second type is without aura, but there is amnesia for the event. In neither type would she bite her tongue nor manifest urinary or fecal incontinence. Just preceding either type of seizures, her cat, would uncharacteristically meow, saunter over to her, and nudge her head against her legs or scratch her with her front paws. In response to this, the patient would move as fast as she could to a safe place where she would be cushioned if she were to fall. Less than a minute after the cat would warn her, a seizure would manifest. During this event the cat would meow and lay beside her “as if guarding me” until the seizure would resolve. The cat has never displayed these behaviors unless a seizure was eminent. She admitted to daily panic attacks which the cat appeared to ignore.
Results: Abnormalities in physical examinations: General: 1+ bilateral pedal edema. Neurological examination: Mental status examination: Digit span: 7 forward and 2 backwards. Able to spell the word “world” forwards but not

backwards. (CN) examination: CN III, VI and IV: Right lateral rectus weakness. Reflexes: bilateral 3+ brachioradialis and quadriceps femoris. Absent ankle jerk. Positive jaw jerk with clonus. Bilateral positive Hoffman's reflexes. Neuropsychiatric testing: Clock drawing test: 3 (abnormal). Go-No-Go Test: 6/6 (normal). 72-hour EEG normal. Conclusion: Olfactory emanations occur (Brown, 2011) several hours prior to seizures (Litt, 2009; Rajna, 1997) which the feline may be sensitive due to its superior olfactory ability. The cat's comportment may have induced anxiety in the patient, which then may have precipitated the seizure. The animal thus may be an epileptogenic animal rather than a warning animal. The cat may detect changes in emotion, which predicts the pseudoseizures. On the other hand, the cat may have been acting as an anxiogenic agent, precipitating a pseudoseizure. There may have been a misattribution error, such that she recalled the cat in a position of warning seizures but did not recall when the cat did not warn the seizures. Further investigation in the use of alarm cats as warning for imminent seizures is warranted.

No. 182
Social Isolating and Low Frustration Tolerance Associated With Mobius Syndrome
Poster Presenter: david Schwartz
Lead Author: Vandana Kethini, M.D.
Co-Author: Saba Mughal

SUMMARY: Objective: Social isolation and lack of relationships in patients with mobius syndrome leading to suicidal attempts and impulsive behavior. Abstract: Mobius syndrome is a very rare congenital neurological disorder affecting an estimated 1 in 50,000 live births. It is characterized by weakness and/or paralysis of sixth (abducens) and seventh (facial) cranial nerves. These people are unable to show facial expressions and the upper lip is often retracted. Most often these patients have struggle having and maintaining relationships and friendships leading to social isolation. This in turns leads to low impulse threshold leading to aggressive behavior from trivial trigger. This case of mobius syndrome demonstrates similar pattern. Case overview A 59-year-old Caucasian male, single, never married, no children living with mother and sister. He was diagnosed with mobius syndrome when he was 5. He has a history of aggressive behavior, intermittent explosive disorder, suicidal ideation and attempts at age 18 and 19 ages 25 and 26 by over dosing of sleeping pills and was hospitalized for that. Patient was in restaurant with his mother while inquiring why he is sad and quite he became agitated and threw table on her mother causing injury to her. Patient endorsed that while during his teens and early twenties he had very low tolerance potential and became very aggressive and agitated as he felt very lonely and isolated because of his facial appearance. Although patient endorsed that this syndrome is a second nature to him but lack of relationships and social isolation was a big obstacle for him. Which has resulted in the social and occupational impairment for the patient.

Sunday, May 19, 2019

Poster Session 3

No. 1
Deutetrabenazine for Treatment-Resistant Tics Associated With Tourette Syndrome
Poster Presenter: Oleksiy Levantsevych, M.D.
Co-Authors: Ayesha Saleem Adil, M.D., Edward George Hall, M.D., Sarah Meyers, D.O.

SUMMARY:
Tourette's Syndrome, a disease evidenced by vocal and motor tics with a prevalence of 1 in 200 people, has a fourfold higher suicide rate compared to the general population (1,2). We present a 15yo male adolescent Tourette's patient whose course was complicated by OCD and ODD. Past therapeutic treatments encompassed 15 different medications and spanned several drug classes including antipsychotics, antidepressants, mood stabilizers, anti-seizure medications, sedatives, sympatholytics, and muscle relaxants, all of which inadequately controlled his symptoms, and inadvertently increased agitation and aggression. Due to the refractory nature of his condition, we are considering using deutetrabenazine, a VMAT2 inhibitor, which has recently been FDA approved for Huntington's Chorea and is also being used off-label for Tardive Dyskinesia (3,4). Specific therapeutic challenges associated with this case are due to the

patient's significant genetic polymorphisms as they relate to the pharmacogenetics of psychiatric drugs. This patient is homozygous c/c genotype for ADRA2A, which reduces binding to the alpha-2A receptor gene, compromising his ability to use clonidine or guanfacine (5). Additionally, he is heterozygous for the VAL/MET of the COMT gene (which codes for a dopamine-degrading enzyme), demonstrating intermediate activity of psychostimulants (6). He also is heterozygous for the C677T polymorphism of the MTHFR; this gene is involved with converting folic acid to L-methyl folate associated with brain degradation (7). Without MTHFR, synthesis of dopamine D4 is impaired (8). He also had the SLC6A4 genotype, limiting his responsiveness to SSRIs. Additional complications occurred due to the pharmacodynamics of this patient. He has the CYP1A2, CYP2C19, and UGT1A4 genes which cause ultra-rapid metabolism of drugs. The CYP1A2 variant is specifically detrimental toward atypical and typical antipsychotics. The 2C19 variant increases metabolization rate of SSRIs and antiepileptics (9). At this time, only haloperidol, pimozide, and aripiprazole are approved for treatment of Tourette's syndrome (10,11). A novel therapeutic approach we are considering for improving tics is the use of VMAT2 inhibitors. Deutetrabenazine is an isotopic isomer of tetrabenazine and a dopamine-depleting drug. Deutetrabenazine has an integral role in the release of neurotransmitters such as dopamine from the cytosol into the synaptic cleft (12). The longer half-life of this drug is subsequently increased therefore requiring fewer injections than tetrabenazine (13). In a report of patients with impaired CYP2D6 metabolism, the highest dose of deutetrabenazine was tolerated (11). Our patient's CYP2D6 enzyme has poor metabolizing function, indicating he would be a good candidate for this therapy. Given deutetrabenazine has a mild side effect profile when compared to tetrabenazine, we are considering using it for our patient with treatment resistant Tics.

No. 2

Frequency of Occurrence of Specific Reading Disorder and Associated Psychiatric Comorbidity in a Sample of Egyptian Primary School Students

Poster Presenter: Abdulaala M. Elfiky, M.D.

Co-Authors: Mona M. Elsheikh, M.D., Heba Ibrahim Essawy, M.D., Marwa Elmissiry, M.D.

SUMMARY:

Specific reading disorder (dyslexia) is common in primary school students. Data on prevalence rates in Egypt are needed along with better screening tools to guide future research. We aimed to estimate the frequency of dyslexia in a sample of fourth and fifth graders. Method: A cross-sectional study was conducted in Eastern Cairo through multistage random selection of students from three governmental primary schools. A total of 586 students were recruited. Only 567 students fulfilled the inclusion criteria; they were subjected to screening by Goodenough Draw-a-Man test for intellectual quotient (IQ), the Reading Disability Test of Nasra Gilgil (RDT) to identify dyslexic children, Wechsler Children Intelligence Scale for thorough detection of IQ, and the Kiddie Schedule for Affective Disorders and Schizophrenia (K-SADS-PL) to detect psychiatric comorbidity. Results: The frequency of occurrence of specific reading disorder (dyslexia) was 11.3% among the studied sample of Egyptian primary school students. The gender ratio was nearly 1.3:1 boys to girls. Comorbidity with other psychiatric disorders was found in 57.8% of the sample. Attention deficit hyperactivity disorder (ADHD) was present in 33%, generalized anxiety disorder in 21.6%, and major depressive disorder in 16.2% of patients. Conclusion: Dyslexia was prevalent in fourth and fifth graders. A meaningful presence of ADHD, anxiety, and depressed mood was detected in students. There is a need for better screening and awareness for early intervention and service provision. The cross-sectional design, lack of collateral information, and records precluded inference of casualty. The lack of rural comparator and samples from other governorates limit generalization of results.

No. 3

Infantile Trauma Resulting in Aggression

Poster Presenter: Manar Abdelmegeed, M.D., M.P.H.

Co-Author: Saumya Singh

SUMMARY:

Our patient is a four-year-old girl with no prior psychiatric history who presented to our clinic with

her mother for psychiatric evaluation due to severe behavioral problems. Mother reported these problems began around two-years-old. These included the following: pulling her hair, banging her head on the wall, biting herself, pulling the dog fur, hitting her mother and her younger sister as well. Mother reported the patient had poor sleep and frequent nightmares. At the daycare, she would have two to three bad days a week, where she was found hitting other kids and having difficulty following instructions in class. These behaviors were noted to be worsened with anxiety. Additionally, mother reported deficits in her linguistic skills, where she would flip letters. Throughout most of the interview patient demonstrated hyperactivity, playing with blocks and engaging in self-talk as she played. Patient was noted to bite herself and her mother a few times when frustrated. However she was easily redirectable. Patient had a history of trauma within the first six months of her life; as birth father had shaken, thrown things at her, and suspectedly molested her. Despite being exposed to trauma as an infant; prior to memory formulation, patient's learning, behavior, and social skills seem to be majorly impacted by these horrific incidents.This was found in a consensus in literature as well[1] where it is suggested that the first years of life are extremely sensitive to substantial and enduring cognitive effects from such exposures. Additionally, such deficits were noted to result in long term consequences with cognitive development and adjustment skills. As a result, identifying at-risk families and preventing trauma in early life is crucial to promoting positive cognitive development throughout childhood.[2] Most studies focus on trauma in older ages, and rarely in childhood. There is paucity in literature about trauma exposure in infancy. Thus, further studies about this age are needed.

No. 4

Pediatric Bipolar Disorder? ADHD With DMDD? A Challenging Case With Multiple Treatment Failures—What Next?

Poster Presenter: Sudhakar K. Shenoy, M.D.
Co-Authors: Zargham Abbass, Arun G. Prasad

SUMMARY:

We present the case of Mr. J, an 8-year-old African-American male, with a past history of multiple inpatient psychiatric hospitalizations due to aggressive behaviors, presenting with impulsivity, physical outbursts and irritability. Upon further evaluation, he posed a challenge diagnostically as he showed features of Disruptive Mood Dysregulation Disorder, Attention Deficit Hyperactivity Disorder; but with severity pointing to possible Pediatric Bipolar Disorder. The patient's condition worsened with stimulant medications, selective serotonin reuptake inhibitors and was not responding to trials of multiple atypical antipsychotic medications. Furthermore, we will elaborate on the different options for treatment in such challenging cases. Also, we will discuss current trends in management of possible pediatric bipolar disorder.

No. 5

ADHD and Polymicrogyria: Association/Coincidence?

Poster Presenter: Meelie Bordoloi, M.D.
Co-Authors: Geetha Chandrashekar, M.D., Faheem S. Arain, M.D.

SUMMARY:

Prevalence of ADHD is about 5-8% in children and frequently persists into adolescence and adulthood. Polymicrogyria, a malformation of cortical development, is a condition in which neurons reach the cortex but distribute abnormally. Per our knowledge, only one case report of a patient with ADHD, Polymicrogyria and Trisomy 18 exists. We report here a case of an 8-year-old boy with Polymicrogyria diagnosed with ADHD with no known genetic testing. Patient was admitted to the hospital for worsening physical aggression and making suicidal statements. Very little was known of the developmental history except that the patient had suffered emotional neglect as a child. He had earlier been diagnosed with Polymicrogyria and had been on Depakote Divalproex Sodium for seizures associated with it. He had minimal speech. He was known to have low IQ. Per our evaluation, he was endorsing key symptoms of hyperactivity, impulsivity and inattentiveness. We diagnosed him with ADHD, combined and started him on Dexmethylphenidate hydrochloride 5 mg TID and Guanfacine Hydrochloride 1 mg BID and discontinued

Atomoxetine, his home medication. For his physical aggression, we started him on Risperidone 0.5 mg BID. He did well on this medication regimen and we discharged him to his foster home. While gyrification abnormalities in the left medial temporal region and folding abnormalities in the right frontal lobe have been reported in children with ADHD in a few small-scale studies, such abnormalities were not seen in a larger study of gyrification. Bearing in mind the conflicting results, we propose further research and exploration in this field. It may also be relevant to order an MRI in patients with ADHD having known developmental delay for possible association of ADHD and Polymicrogyria versus just concurrence.

No. 6

Are Culture-Bound Syndromes Still Bound to Cultures? Sudanese Male With Koro

Poster Presenter: Dimal D. Shah, M.D.
Co-Author: Paige McLaughlin

SUMMARY:

Koro is an episode of sudden and intense anxiety that the penis, or vulva and nipples in females, will recede into the abdomen and result in death. Prior to 1960s, Koro was viewed as a Chinese Disease as it affected people of Chinese descent.1 It was not until Pow-Meng Yap in mid-1960s that Koro was reclassified as a Culture-Bound Depersonalization Syndrome.2 Koro was added to DSM IV in 1994 as a Culture-Bound Syndrome. Koro is more commonly found in Southeast Asia, particularly in Malaysia and Indonesia.2 However, sporadic epidemics of Koro have been recognized throughout the years in West African nations. Cases of Koro were reported in Great Britain, France, Canada, United States of America, Georgia, Yemen, and Nigeria.1 BM is a 27 year old Sudanese male with no past medical or psychiatric history and no distinguishable connection to China or Chinese descent. BM immigrated to United States of America from Sudan three months prior to presenting with sudden onset of a firm belief that his penis is shrinking and he will die. His belief caused increased anxiety, which affected his activities of daily living. BM was diagnosed with Koro and treated appropriately. With 21st Century technology, such as social media platforms and transportation for leisure and migration, and advancements in social acceptance, such as intercultural relationships, Culture-Bound Syndromes may no longer be confined to one culture or region. It may be time to reclassify Culture-Bound Syndromes in the next version of DSM to recognize the impact of these technological and social advancements and, potentially, destigmatize cultures, like Chinese and Southeast Asian in regards to Koro.

No. 7

Can Paranormal Activity Be Explained by Munchausen Syndrome by Proxy?

Poster Presenter: Omar Shah, M.D.

SUMMARY:

Munchausen syndrome is a factitious disorder characterized by falsification or induction of signs and symptoms of a disease as well as alteration of laboratory tests by individuals who want to play the sick role and tend to seek treatment at various facilities, without secondary gain. Munchausen syndrome by proxy is a term used to describe children whose mothers produced histories, signs and symptoms of a illness along with alteration of laboratory tests in them This syndrome entails falsification of a condition in a child sufficient for the diagnosis by the child's caretaker for her own psychological needs. It is more common to see identified medical conditions and mental disorders. However, there is scant literature on paranormal symptoms explained by Munchhausen syndrome by proxy. A 12 year old Caucasian boy with a current history of aggression, anxiety, low mood and anger, was admitted to the our Crisis unit for psychiatric evaluation and safety. He and his family reported that his symptoms started 10 months ago after he got possessed by beings which haunted their home. The patient and family were adamant that paranormal activity was responsible for the patient's behaviors. They insisted the patient had no known medical or psychiatric illnesses which could explain the patient's symptoms. The family supported their belief with eye witness accounts, having similar experiences as the patient, having support of priests, demonologists, paranormal activity investigative teams and even video evidence. It is not certain what the cause of the patient's condition is. However, Munchausen syndrome by proxy is a plausible diagnosis. This case illustrates the difficulty

diagnosing clients with Munchausen's syndrome and Munchausen's Syndrome by proxy. While many cases present with symptoms looking like medical conditions, this case presents with symptoms that the patient and his family explain as a consequence of paranormal activity.

No. 8

Conversion Disorder Manifested as Intractable Sneezing in an Adolescent Female

Poster Presenter: Umang Shah, M.D., M.P.H.
Co-Authors: Waquar Siddiqui, M.D., Naga Prasuna Vanipenta, M.D., Sabeen Khaliq

SUMMARY:

Psychogenic sneezing is a relatively rare entity, first described by Shilkret in 1949. The condition is usually suspected in young adolescent females, between 9 & 15 years of age, with an absence of organic causes for a nasal mucosal irritation, presenting with an atypical normal sneeze reflex. This is often distressing for the individual and diagnosis is often delayed. We discuss a case of 14 years old African American female, with no past medical history, referred to consult team from school, for declining grades, related to her higher anxiety, feeling hopeless and frustrated about intractable sneezing, present for nearly 3 years. Her episodes are worse during weekdays when she has to go to school, and absent during weekends. During this period, patient has seen ENT specialist, allergist, and neurologist, with no benefit. During evaluation, it was discovered that the episodes began soon after she witnessed someone getting shot through her house window, leading to high anxiety and worry about safety of herself and her mother. There are about 20 episodes in 1 minute, usually start in the morning after she wakes up on weekdays, worsen on her way to school, and she attempts to suppress after reaching school due to feelings of embarrassment and being judged. She has reportedly received many detentions from teachers, most times due to excessive sneezing, and feels annoyed and irritated due to lack of understanding. This has led to bullying, instilling feelings of low self-esteem. She has also reported feeling exhausted because of these episodes, has lost focus in studies, started to miss school days, lost interest in things, started to isolate herself at home, which has all contributed to her worsening academic performance. There have also been feelings of hopelessness with vague suicidal ideations without any plans or intention, due to persistence of such episodes despite seeking medical attention. She reportedly had a mental breakdown in mid class, had to talk to school counselor who handed her suicide prevention paperwork. Patient was started on fluoxetine 10mg daily for her anxiety and depression, along with relaxation techniques, leading to significant improvement in her symptoms in 2 months. Intensive efforts should be made to diagnose functional symptoms at an early stage because this will prevent stigmatization and fixation of symptoms and disease, and also prevent children from undergoing unnecessary and potentially harmful therapies. Further clinical research is warranted in this area, pertaining to its early identification for prevention and an effective management.

No. 9

Association Between Event-Related Potential Components and Intra-Individual Variability in Children and Adolescents With ADHD

Poster Presenter: Tsubasa Morimoto, M.D., Ph.D.
Co-Authors: Kazuhiko Yamamuro, M.D., Ph.D., Naoko Kishimoto, Ph.D., Hitomi Morito, M.D., Junya Ueda, M.D., Teppei Tanaka, M.D., Izumi Harada, M.D., Yashurio Matsuda, M.D., Ph.D., Toyosaku Ota, M.D., Ph.D., Junzo Iida, M.D., Ph.D., Toshifumi Kishimoto, M.D., Ph.D.

SUMMARY:

Attention deficit hyperactivity disorder (ADHD) is a serious psychiatric disorder with a prevalence of approximately 5%. Core ADHD symptoms manifest as greater intra-individual variability in response times (IIV-RT) during neurocognitive tasks. IV-RT reflects the temporal variation in an individual's performance of a cognitive task, displayed as the shape of the distribution curve for RTs. Although previous studies suggest that patients with ADHD exhibit longer tau than healthy controls during cognitive tasks, to date, no studies have determined whether children and adolescents with ADHD show altered tau in auditory odd-ball tasks. However, little is known about abnormalities in IIV-RT during the auditory odd-ball task, and how these changes relate

to event-related potential (ERP) components. In the present study, we used ERPs to measure P300 amplitude and latency using an auditory odd-ball task in treatment-naïve children and adolescents with ADHD. Finally, we investigated the correlation between P300-related measures and RT tau in children with ADHD. We measured ERPs to compare 40 treatment-naïve adolescent and pediatric patients with ADHD and 20 healthy age, sex, and IQ-matched controls. Consistent with previous studies, we found that the amplitudes of the P300 components in the Fz, Pz, C3, and C4 regions were significantly smaller in the ADHD group than the control group. In addition, we found that the latencies of the P300 components in the Fz, Cz, C3, and C4 regions were significantly longer in the ADHD group than in the control group. Interestingly, we found significant correlations between tau and P300 latency at P3 and C4 for all participants. Our results support increased IIV-RT during several cognitive tasks in treatment-naïve pediatric and adolescent patients with ADHD, and associated ERP components.

No. 10

Neuropsychiatric Sequelae From in Utero Exposure to Warfarin

Poster Presenter: Ritambhara Wadhwa

SUMMARY:

INTRODUCTION & OBJECTIVE: Fetal warfarin syndrome also known as warfarin embryopathy or Di Sala syndrome is the disorder of the fetus caused due to warfarin exposure during pregnancy. Warfarin, a well-known teratogen, can cross the placenta and cause wide array of problems depending on the time and duration of exposure during gestation. Abnormalities range from skeletal abnormalities, stunted growth, to central nervous system abnormalities. While phenotypical consequences of warfarin exposure are well-understood, neuropsychiatric sequelae due to warfarin exposure such as attention deficit hyperactivity disorder and intellectual disability are less known, and their management remains even more challenging. To date, there is a paucity of literature pertaining to psychiatric illnesses associated with warfarin embryopathy. CASE PRESENTATION: After a comprehensive chart review, we report the case of an 8-year-old Hispanic male who had intrauterine exposure to warfarin and presented with unspecified intellectual disability and attention deficit hyperactivity disorder, combined presentation. Management with a trial of dexmethylphenidate and guanfacine along with behavioral therapy may offer promising outcomes. DISCUSSION AND CONCLUSION: In assessing the overall quality of life and psychiatric morbidity in patients exposed to warfarin, 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 intrauterine exposure to warfarin. 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. 11

Social Networking Addiction in Adolescents

Poster Presenter: Rebecca E. Pistorius, M.D.
Co-Authors: Swathi Parvataneni, M.D., Miky Kaushal, M.D., Anuj Shukla, M.D., Lee Stevens, M.D.

SUMMARY:

Social networking site usage has increased dramatically over the past few years among adolescents. Popular social networking sites include Facebook, Twitter, Snapchat, and Instagram, where one can create an individualized public profile and connect with others for a variety of purposes. Common uses of social networking include gaming, dating, sharing photos and videos, blogs, and connecting with others based on shared interests. Access to social media has become more convenient as it is now accessible on mobile devices in addition to computers, which also has led to the development of smart phone addiction. A related phenomenon termed "nomophobia" (no mobile phone phobia, or not having access to one's mobile phone) has emerged, particularly among adolescents and young adults. Fear of missing out (FOMO) has been identified as a key component of social networking site usage, and has been associated with negative consequences such as decreases in self-

esteem, mood, and life satisfaction. Adolescents often consider social networking sites as part of their identity. These sites also are valued as a way to belong, and as a means of expressing themselves and gaining support from others. Problematic smart phone use has been linked to increased depression, anxiety, and stress levels. Excessive use of social media may develop when it is used as a primary way to alleviate stress or negative mood or when individuals have difficulty with real-life socialization. The time spent on social networking then can lead to problems in relationships, work, and school, which in turn creates negative moods and interpersonal conflict. A cyclical pattern of further reliance on and escape into social networking often will ensue. Studies have shown that the use of social media can intensify and transform from excessive use to meet criteria for an actual addiction. Griffiths (2013) noted that social networking usage can qualify for the six core components of addictive behavior which include tolerance, salience (preoccupation with use), alterations in mood, conflict, withdrawal, and even relapse. The symptoms described by individuals who are addicted to social media are the same as those with substance or other behavioral addictions. The addiction to social networking is unique in that complete abstinence from internet usage would not be possible in the current culture, as it is an integral component of society. It has been recommended that more controlled use of internet use (social media in particular), would be an appropriate therapy goal instead of abstinence.

No. 12

Posttraumatic Disorder Misdiagnosed as Attention Deficit/Hyperactivity Disorder Associated With Childhood Trauma

Poster Presenter: Sukaina Rizvi, M.D.
Lead Author: Musaddiq Tariq, M.D.
Co-Author: Edward George Hall, M.D.

SUMMARY:

Childhood exposure to trauma is highly prevalent but often an unrecognized condition. Some researchers have described it as a silent epidemic. It culminates in immediate and in some instances long-term emotional disturbances, psychological sufferings and functional compromise. Attention deficit hyperactivity disorder and post-traumatic stress disorder are two separate entities which exhibit high degree of comorbidity. There exists an overlapping or bi-directional relationship between these psychiatric conditions, which is also validated by researchers in multiple studies documenting higher prevalence of abuse in children with ADHD. Impulsivity, inattentiveness, dangerous behavior and hyperactivity in ADHD predisposes to risk of victimization. On the other hand, recurrent flashbacks, hypervigilance and hyperarousal in PTSD increases vulnerability to develop ADHD in future. It is of eminent significance that a person with PTSD is often misdiagnosed as ADHD in context of defensive behaviors such as making use of purposeful efforts to block traumatic experience, forgetfulness, distractibility to decrease frequency of traumatic thoughts which might be perceived as ADHD by a clinician. We herein present a literature review, which is an extension of discussion of the prior studies to illustrate entangled correlation between these two psychiatric conditions as its recognition, diagnosis and management poses a big challenge to today's psychiatrist.

No. 13

The Management of Acute Aggression on Inpatient Psychiatric Child and Adolescent Units Across the United States

Poster Presenter: Stephanie Eng
Co-Author: Ema Saito

SUMMARY:

Background: Aggression is defined as imminent verbal threats or physical violence toward self, others, or property. On inpatient psychiatric child and adolescent units, aggression is often the product of psychiatric conditions warranting hospitalization (i.e. attention-deficit/hyperactivity disorder, mood disorders, or psychotic disorders) or can arise in the context of hospitalization itself. Thus, the management of aggression and subsequent maintenance of safety can, in real time, become a priority for clinicians. Historically, the approach to manage aggression in inpatient children and adolescents has varied across institutions, but involves singly or a combination of behavioral interventions, seclusion, mechanical restraints, or psychotropic pro re nata (PRN) medication. According to a 2017 systematic review that analyzed

the use and effectiveness of PRN medications in this population, the most common classes of medication that have been used to manage aggression are antipsychotics, benzodiazepines, and antihistamines. Of these medications, first-generation antipsychotics (haloperidol, chlorpromazine) are most common. However, few controlled studies exist comparing the efficacy of non-pharmacological interventions versus medications within and across different classes, posing difficulty for providers to make evidence-based choices to manage aggression. Objectives: The objective of the study is to examine the types of non-pharmacological measures and psychotropic PRN medications that are currently used to manage aggression on inpatient child and adolescent psychiatric units across the United States. The study will shed light on the patient-centered and contextual factors that providers consider when opting for particular psychotropic or non-psychotropic measures to manage aggression. Methods: The study will be carried out via: (1) a retrospective chart review of PRN types used on 1 West, the inpatient child and adolescent unit at Zucker Hillside Hospital from January 1, 2014 to December 31, 2017, and (2) a telephone survey conducted among directors of inpatient child and adolescent units across the United States to assess PRN types currently used to manage aggression on their respective units. No identifiable information related to patients will be collected. IRB approval has been granted to conduct these two projects. Statistics: Descriptive analysis will be conducted. Results and Conclusion: The study will describe the current use of non-pharmacological measures and psychotropic PRN medications to manage aggression in inpatient children and adolescent units in the United States, as well as make recommendations regarding best practices and future research.

No. 14

Visual Hallucination as a Manifestation of Anxiety Attack: A Case Report

Poster Presenter: Soroush Pakniyat Jahromi
Lead Author: Ayesha Shaheryar, M.B.B.S.
Co-Authors: Shahan Sibtain, M.D., Asghar Hossain, M.D.

SUMMARY:

Visual Hallucination (VH) can occur in people with anxiety disorder. This case report is about an 11 year old Hispanic female who had developed bizarre and disturbing VHs, which were not hypnopompic, nor hypnogogic. She was diagnosed with unspecified anxiety disorder and no organic etiologies for her hallucinations were identified. She was started on anxiolytic, Zoloft 25mg daily, and her VH and anxiety were resolved. This case report is another valid example of VH in a person with nonpsychotic disorder. It is crucial for clinicians to rule out nonpsychotic disorders as primary causes of VH, prior starting antipsychotics and further complicating the condition of such patients. More studies can provide better understanding of similar conditions leading to better management of patients suffering from VHs.

No. 15

Association Between Kawasaki Disease and ADHD

Poster Presenter: Soroush Pakniyat Jahromi
Lead Author: Musaddiq Tariq, M.D.
Co-Authors: Edward George Hall, M.D., Soroush Pakniyat Jahromi

SUMMARY:

ADHD is a common neurodevelopmental disorder that starts in earlier years of life. Risk factors for ADHD are mainly genetic, however there are also other factors involved. Comorbidity of autoimmune diseases such as Kawasaki disease with ADHD has been reported; however, there are controversial reports regarding their association. This is an interesting case report of an 8-year-old European American male with ADHD without any family history. Patient has a past medical history of Kawasaki disease that was treated when he was 5 years old. There have not been many case reports of children with Kawasaki disease leading to ADHD. This case report is another important example of association of Kawasaki disease with ADHD. Broader controlled studies are warranted to help us understand the role of Kawasaki and other immune system diseases in development of ADHD.

No. 16

Pharmacological Interventions for Treatment of FASD-Associated ADHD Symptoms

Poster Presenter: Deepika Sundararaj, M.D.

Co-Author: Stephanie M. Daly, M.D.

SUMMARY:
Background: ADHD is the most commonly associated disorder with Fetal Alcohol Spectrum Disorders (FASD). Currently, guidelines focus on diagnosis however there are not any clear guidelines for pharmacological management of ADHD symptoms in FASD. Case Report: JJ is an 8-year-old male with FASD and ADHD who was referred to our partial hospitalization program due to escalating behavioral issues (hyperactivity, impulsivity and aggression) as well as suicidality. Notably, patient had speech and language deficits that affected social communication skills. He also had several psychosocial stressors that was exacerbating his symptoms. At initial presentation, patient had failed 3 stimulant medication trials. Treatment team was left to decide whether to trial another stimulant medication or to consider other medication options. Method/Results: Literature review showed limited number of guidelines for medication management of ADHD in FASD. There's a paucity of studies looking at efficacy of medications in ADHD in FASD, and those that exist have low power due to small study groups. Predominately, providers favor stimulants however some studies indicate that FASD children may not respond to stimulants as well as those with only ADHD. Further studies indicate that while stimulants may address hyperactivity and impulsivity associated with FASD patients may still struggle with inattention. These studies also suggest that these symptoms may have a better response to neuroleptics (ie, Risperdal) especially with other concurrent behavioral issues (such as aggression) that are also characteristic of this population. Another showed that psychosocial interventions in combination with neuroleptics yielded the best results however this was based on a study from 1994 with n of 77. Young et al introduced a treatment algorithm for providers. Their recommendations for specific pharmacological interventions are vague, and they do not address regimens involving multiple psychotropic medications. Discussion/Conclusion: Our patient, who had already failed 3 stimulant trials and had limited psychosocial resources in place, was started on a 4th stimulant trial. However considering patient's history of failed stimulant trials, it would not have been unreasonable to start a neuroleptic as a monotherapy (or even as an augmenting agent). His response to prior stimulant medications is consistent with results as mentioned above. An antipsychotic could have better targeted his aggressive tendencies especially in the setting of poor social interventions. We offer a modification to Young et al's treatment algorithm in which providers start with stimulant medications to target ADHD symptoms in FASD patients however if trials fail, they can augment with or switch to neuroleptics. Moving forward, a systemic review or randomized study will help determine which treatment intervention is more efficacious and further expand on a medication logarithm for treatment of FASD-associated ADHD.

No. 17
Acute Withdrawal Dyskinesia Masquerading as Tardive Dyskinesia in the Pediatric ER
Poster Presenter: Jonathan Browning, M.D.
Co-Author: Michael A. Shapiro, M.D.

SUMMARY:
The relationship between dopamine and acetylcholine is complex, and balance is needed to maintain proper motor functioning. Since dopamine excess and dopamine depletion can present with similar movement related symptoms, diagnosis can often be difficult. The acute use of dopamine antagonists can cause dystonia, and their chronic use may cause upregulation of dopamine receptors leading to tardive dyskinesia. Withdrawal dyskinesia, which is more often observed in children, is another phenomenon which includes abnormal movements in the neck, face, mouth, arms, and legs and can occur after discontinuation of a dopamine antagonist. The pathophysiology is not well known but is also thought to be partly due to dopamine hypersensitivity, but perhaps by a different mechanism. In this poster, we present the case of an 8-year-old female with previous diagnoses of ADHD, ODD, and bipolar disorder who presented to the pediatric ED with her mother due to involuntary movements including tongue protrusion and jerking movements of her shoulders and neck, which resembled tardive dyskinesia. The abnormal movements began after the cessation of a dopamine-blocking agent (quetiapine) and the initiation of a dopamine-releasing medication

(lisdexamfetamine). Symptoms did not improve with IV diphenhydramine and IV lorazepam which was given in the ED and the patient became disoriented and began to hallucinate. While movement symptoms resembled tardive dyskinesia, the timing of the symptoms in relation to the medication adjustments was consistent with withdrawal dyskinesia. It was hypothesized that the combination of the two medication changes led to a dopaminergic surge and relative acetylcholine depletion, resulting in worsening dyskinesia and signs of delirium. Lisdexamfetamine was held and risperidone was started to disrupt the dopamine surge, and symptoms resolved in 48 hours. This case provides further support for the dopamine hypersensitivity theory of withdrawal dyskinesia, at least in part, by providing a unique case report of withdrawal dyskinesia following the discontinuation of a dopamine antagonist and initiation of a drug increasing the dopamine concentration. Providers should utilize caution when adjusting medications that impact dopamine and acetylcholine levels and dopamine receptor regulation to avoid potential adverse reactions. While symptoms of withdrawal dyskinesia generally resolve in one to two weeks, a proper diagnosis allows for engaging in treatment, which shortens the duration of symptoms and reduces patient anxiety.

No. 18

Psychostimulant Use and Skin Picking Behavior Development: A Case Report and Review of the Literature

Poster Presenter: Xinyi Zhang, M.D.
Co-Authors: JinGu Lee, D.O., Sheila L. Griinke, D.O.

SUMMARY:

INTRODUCTION: Dermatillomania, also known as excoriation disorder, is a type of obsessive-compulsive related disorder that manifests in the repeated urge to pick at one's skin without a clear organic cause. Attention deficit hyperactivity disorder (ADHD) is a common childhood onset psychiatric disorder, characterized by inattentiveness, hyperactivity, and impulsiveness. Lisdexamfetamine, a psychopharmacologic treatment for ADHD, is known to promote release of dopamine and norepinephrine and block reuptake of catecholamines. We discovered a case of newly developed skin picking behavior while treating ADHD with lisdexamfetamine. This case revealed a possible correlation between psychostimulant use and dermatillomania development, which may shed light on treatment options for ADHD comorbid with obsessive-compulsive behaviors. CASE REPORT: The patient is a 15-year-old Caucasian male, with past medical history of asthma and mild acne vulgaris. He was diagnosed with ADHD at the age of 5. He was started with dextroamphetamine-amphetamine and was switched to lisdexamfetamine at the age of 13 due to intolerable appetite suppression. The patient's ADHD symptoms have been well controlled with the combination of 50 mg of lisdexamfetamine daily and 0.1 mg of clonidine at bedtime. The patient has also been compliant with 10 mg of montelukast every night for asthma. The patient underwent 1 month "medication holiday" at the end of the school year, and was restarted on the same medication regimen 6 weeks prior to the encounter. After 2 weeks, he developed skin picking behavior, describing an intense urge to pick on skin without abnormal skin sensation or any underlying dermatological condition. He denied other obsessive-compulsive symptoms. The use of lisdexamfetamine was stopped for 3 days as a trial, and skin picking behavior subsided. Lisdexamfetamine was restarted at a reduced dose of 30 mg daily. After 4 days, skin picking behavior reoccurred, and the severity was described as the same as while on the 50 mg dosage. We found from the patient's mother that the patient previously developed less distinct compulsive hair pulling behavior shortly after initiation of lisdexamfetamine 2 years ago. Lisdexamfetamine was discontinued, and the skin picking behavior disappeared 1 week later. CONCLUSION: This case demonstrated a clear timeline that highly suggests a correlation between lisdexamfetamine use and dermatillomania development. A search of PubMed revealed only 2 published articles describing the relatedness of psychostimulants use and skin picking. While studies have supported the hypothesis that hyperdopaminergic states underlie obsessive-compulsive behaviors, the mechanism is not fully understood, and controversy remains. Further research on the correlation between psychostimulant use and dermatillomania is greatly needed.

No. 19

Literature Review: Congenital Orofacial Deformities—Difficulty Through Adolescence, but Resilience as Adults

Poster Presenter: Etuajie Evelyn Halbert
Co-Author: Nicole Christina Rouse, D.O.

SUMMARY:

Background: Cleft lip and palate (CL/P) is the most common congenital orofacial deformity seen in the neonatal patient population. Congenital hand deformities are less common, occurring in 30 cases per 10,000 births. Congenital orofacial and hand deformities can have an astounding effect on psychological and behavioral outcomes later in life. There are contrasting perspectives, however, on these outcomes suggesting that there may be coping strategies to improve resilience for this population. Methods: In our poster we will do a retrospective literature review of congenital orofacial and hand deformities and its impact on psychological and behavioral outcomes later in life. We will then analyze what may be causing the contrast in perspectives. Results: Congenital orofacial and hand deformities have been linked with behavioral concerns, a spectrum of mood disorders, increased levels of negative self-perception, adjustment disorder, hyperactive disorder and a host of other concerns were found in pediatric and adolescent populations. These behavioral and psychological repercussions, however, were not observed unanimously in the literature. Not only did many of these issues decrease with age, there is also a subset of literature reporting that this population had fewer behavioral and psychological outcomes. In these studies, patients affected by congenital orofacial or hand deformities learned to adapt and cope, resulting in higher resilience and improved psychological and behavioral pathologies. Coping strategies including humor, self-acceptance, avoidance, seeking external support, concealment, educating others, and support programs were among the most common in this cohort. Conclusion: While CL/P and congenital hand deformities may be linked with psychological and behavioral pathologies in child and adolescent populations, the literature has reported opposing outcomes. This opposition may be a result of the age studied. The literature proposing a higher rate of resilience in this population appears to have evaluated patients after adolescence, suggesting that while they may experience more pathology through this period, as adults they may have more coping skills as a result.

No. 20

Exploring the Utility of Applied Behavior Analysis Informed Approach in Medication Management Visit for Children With ASD, IDD, and Related Conditions

Poster Presenter: Isuan Suzy Asikhia, M.D.
Co-Author: Michael S. Adragna, M.D.

SUMMARY:

There is limited research on medication adherence in the ASD and IDD pediatric population. Medication adherence is particularly poor in children with chronic or mental health disorders. Although there are no approved medications to treat ASD and IDD, psychotropic medications are commonly used in treating associated symptoms. Studies show that in examining treatment adherence among parents of children with autism spectrum disorder perceived family burden of treatment and ASD severity were associated with lower medication adherence. While there is good evidence on the use of ABA in improving functional out comes in the ASD/IDD population, there are no major studies examining how ABA can further be utilized to facilitate medication adherence in this population. Specifically, the study aims are: (1) to examine providers comfort level in implementing strategies to facilitate medication adherence in a 30 minutes outpatient medication management visit in the clinical care of patient with ASD and IDD; (2) The study will involve education/training providers on utilizing an ABA principle designed checklist to ensure factors affecting medication adherence are addressed in the office visit; (3) To reassess providers comfort level in implementing strategies to facilitate medication adherence post checklist training. A need assessment will be obtained of the participating providers. The assessment will evaluate providers' perception of patient barriers to adherence as well as their own barriers to supporting patient adherence. Then, a pre-test will be done that will assess providers adequacy in addressing medication adherence during a med-

management visit. Following the pretest providers will be trained in ABA strategies for addressing medication adherence and provided a brief checklist tool designed from ABA principles to facilitate process. The checklist will incorporate basic elements of ABA in conceptualizing antecedence and consequence potential barriers to medication adherence behavior. Some of the antecedent variables to be considered would include education/informed consent, patient skill deficits, reliability of caretakers, social barrier and setting events. Some of the consequences variable to be considered would include medication context, medication effects and landmarks such as, signs of effect, signs of side effect and signs of permanent medication product. A post-test of trained providers comfort level in implementing ABA strategies to facilitate medication adherence will thereafter be obtained. Clients of providers will be indirectly affected and there is anticipated risk to client. The hypothesis is that there is usefulness in incorporating ABA principles to improve how providers address medication adherence in the aforementioned population. This project was approved by the State University of New York IRB.

No. 21

There Is a Correlation Between Plasma Erythropoietin Levels and Attention Deficit/Hyperactivity Disorder Symptoms

Poster Presenter: Sehoon Shim
Co-Authors: Jung Han Yong, Sang Woo Hahn, Jongchul Yang, M.D., Ph.D., Ji Sun Kim, Yeongsuk Lee, M.D., Il Hoon Lee, Mingyu Hwang

SUMMARY:
Erythropoietin(EPO) is a circulating hormone that governs the rate of red blood cell production. There are a few animal models associating dopamine dysfunction with behavioral impairments that model ADHD. EPO has trophic effects on dopaminergic neurons. The aim of the present study was to examine the plasma EPO levels and determine whether there was any correlation between plasma EPO levels and clinical characteristics of ADHD. Plasma EPO levels were measured in 78 drug-naïve children with ADHD and 81 healthy children. The severity of ADHD symptoms was determined by scores on the Korean ADHD Rating Scale (K-ARS) in children and healthy controls. The ADHD group consisted of 64 boys and 14 girls, and the healthy control group consisted of 31 boys and 50 girls. The median plasma EPO levels in ADHD children was 12.9 mIU/mL, whereas it was 12.0 mIU/mL in the healthy controls. This difference was not statistically significant. Participants in the highest tertiles of plasma EPO had a 1.49 times higher risk of ADHD than those in the lowest tertile, and those in the second highest tertile had a 2.39 times higher risk of ADHD than those in the lowest tertile. A logistic regression showed that the plasma EPO levels were not associated with ADHD after adjusting for age and gender. Plasma EPO levels significantly correlated positively with K-ARS scores including hyperactivity – impulsivity and total scores as determined by Spearman's correlation test in ADHD children and healthy controls. A linear regression analysis performed adjusting for age and gender also indicated that the significant difference in inattention score comparing participants in the highest with those in the lowest tertile of plasma EPO was 1.70. The significant difference in hyperactivity-impulsivity score comparing participants in the second highest with those in the lowest tertile of plasma EPO was 2.00. The mean total K-ARS scores comparing participants in the highest tertile of plasma EPO levels were 4.2, significantly higher than those in the lowest tertile group. These findings suggest plasma EPO levels in untreated ADHD children did not differ with healthy controls. However, plasma EPO levels had a significant positive correlation with hyperactivity – impulsivity and K-ARS total scores in ADHD children and healthy controls. Further studies are required to determine the source and role of circulating EPO in ADHD.

No. 22

Aggressive Behaviors Among Adults With Intellectual or Developmental Disability

Poster Presenter: Henry D. Heisey, M.D., M.P.H.
Lead Author: Suzanne Holroyd, M.D.
Co-Authors: Oluwadamilare Ajayi, M.D., Makenzie Elizabeth Hatfield Kresch, M.D.

SUMMARY:
Background Approximately 1.2 million US adults suffer from intellectual disability or developmental

disorders (IDD), and as many as 97% of these patients may have comorbid psychiatric illness. Patients with IDD may be prone to aggressive behaviors, which can be self-injurious or directed toward caregivers or other individuals. While these behaviors are known to be common among adult patients with IDD, the prevalence of aggression and characteristics of adults with IDD who demonstrate aggression are not well described. Methods Data were analyzed from a retrospective chart review of 113 patients with IDD seen in an outpatient psychiatric clinic located in the Appalachian United States. Two-sided Fisher's exact tests and ANOVA compare variables against aggression outcomes. Findings/Results In this sample of patients with IDD, 60% have ever shown aggression, with a similar percentage across all ages and genders. Prevalence of aggression varies by IDD severity, with significant difference between mild and moderate (46% and 74%, respectively, p=0.021). Prevalence of aggression is lower among patients with comorbid major depressive disorder (41%, p=0.010), but it does not vary significantly among other psychiatric or medical comorbidities. Atypical antipsychotics are prescribed for more than twice as many patients with aggression compared to patients without aggression (79%, p=0.011); other psychiatric medications are prescribed to a similar percentage of patients regardless of their aggression history. Conclusions/Implications Aggression is a common adverse behavior among adults with IDD, especially among patients with moderate severity IDD. Patients with all-severity IDD suffer from similar medical and psychiatric comorbidities when compared to peers without aggression, except that major depressive disorder may be a protective factor against aggressive behavior. While various medications have therapeutic efficacy against aggression, atypical antipsychotics are used frequently in this sample. Aggressive behaviors should be studied prospectively among adult patients with IDD to better understand associated factors and improve therapy. List of key words Intellectual Developmental Disability Aggression

No. 23

Attention Deficit/Hyperactivity Disorder and the Role of Genetics: A Literature Review

Poster Presenter: Sibin Nair

Co-Author: Silpa Balachandran, M.D.

SUMMARY:

Attention Deficit Hyperactivity Disorder (ADHD) is a disruptive, disabling neurodevelopmental disorder that, according to CDC, affects 5% of children in USA. ADHD is defined as a persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development. This means in children, six or more of the symptoms have persisted for at least 6 months to a degree that is inconsistent with developmental level and that negatively impacts directly on social and academic/occupational activities. In this article, we look at the genetic component of ADHD and when assessing genetic influence in ADHD, twin studies are the best method to see genetic influence. Many twin studies have been performed in several countries (Australia, Sweden, UK, and US) and the average concordance rate is 0.76, indicating that genetics contributes ~70–80% to ADHD and environment contributes ~20–30% (Biederman and Faraone, 2005). Evidence of genetic involvement can be found in the treatment with stimulant medications that facilitate the release of neurotransmitters, such as dopamine and blocks dopamine reuptake in the synapse by blocking the dopamine transporter protein. We can also see changes in dopaminergic connections in brain regions of individuals with ADHD. The genetic markers of interest include Dopamine Transporter Gene (DAT1), Dopamine D4 receptor gene (DRD4), Serotonin transporter genes (5-HTT or SLC6A4). This research paper will look at various genetic markers associated with ADHD and theorize a possible correlation by analyzing studies. Methods: This review is initiated by looking for studies that were published via reputable sources like PubMed, JAMA and Google Scholar. Keywords involve "ADHD", "genetics" and "genetic markers." This led to a total of 6 articles that analyzes multiple study findings and patterns of genetic influence is graphed as a trend to further emphasize the strength of correlation. Results: the main findings in these articles show that out of 45 studies overall studied, 32 of the studies showed that there was 0.7 in heritability. 8 of the 45 studies were less than the 0.7 heritability. This means that the genotypic correlation in ADHD appears highly significant as the amount of studies done recently confirm. Most of

these studies involve analyzing dopamine receptor genes. The majority of the studies have shown atleast 0.6 heritability correlation and some of the studies that have less than 0.5 were conducted in small sizes or were unable to analyze multiple genes. The studies here are based on analyzing twin studies with specific gene locus involvement. Conclusions: In summary, these results show a clear pattern of strong correlation between genetics and ADHD. Further studies are required to understand the complete scope of genetics in ADHD and part of this involves understanding the role of environment as well. While the specific genetic causes of ADHD still remain unknown, more genetic studies can b

No. 24

Diagnosing ADHD in a Child With Hearing Loss: Challenges and Important Considerations

Poster Presenter: Ovayoza Adeleye, M.D.
Co-Authors: Selena R. Magalotti, M.D., Mary T. Gabriel, M.D.

SUMMARY:

Patient X is a 10 year old African American male with congenital bilateral severe sensorineural hearing loss, severe deficits in receptive language, and borderline average skills in expressive language. He communicates via American Sign Language (ASL) and speech reading, but his mother is not trained in ASL. He has no significant past psychiatric history and presented for evaluation due to poor attention and school performance. Clinical psychiatric interview of this patient was challenging due to his hearing loss and expressive language disorder. We reviewed results of Vanderbilt scales, Child behavior Checklist (CBCL), Individualized Education Program (IEP), Evaluation Team Report (ETR) - Expressive One Word Picture vocabulary test, Teacher Input- language, Parent Observational rating, and the North West education achievement test. The results of these tests showed concern for ADHD, as well as expressive and receptive language impairment. These tests also indicated that the child's hearing loss was not being adequately compensated for at school, despite utilizing the recommended personal hearing aids and school amplification system. Cognitive/Intellectual tests were administered, including verbal tests to measure the language deficiency caused by deafness rather than intellectual ability. WISC IV 3 subtests and Kaufman Test of Educational Achievement—Second Edition (KTEA-II) were administered to determine his verbal comprehension abilities. WISC IV 3 Index scaled score could not be calculated due to being two subscales below zero. KTEA-II test performance was in the low average range compared to same age peers. These intellectual tests are not normed for individuals who are deaf or with hearing impairment, though modifications were made with the aid of an ASL interpreter. Notably, when he took the Universal Nonverbal Intelligence Test, a non-verbal IQ test for people aged 5-17 years old with speech or language impairment, his scores showed average intelligence. This case highlights the challenges and special considerations that arise in diagnosing ADHD in a child with hearing loss and language disorder. Even when standard ADHD rating scales in this population raise concerns for ADHD, it is critical to first determine if hearing loss is being adequately addressed by the school and the IEP. It is also important to determine if there are comorbid learning disabilities contributing to poor school performance. Clinicians also need to be aware of the limitations of rating scales and neuropsychological tests in patients with auditory and language issues, as inappropriate testing or interpretation could lead to making the wrong diagnosis. Minimal literature exists on the effects of hearing loss in childhood development and psychiatric disorders. This poster will review the unique evaluation considerations when making a diagnosis of ADHD in this vulnerable population.

No. 25

Effect of Marijuana on the Adolescent Brain

Poster Presenter: Juan Sebastian Pimentel, M.D.
Co-Authors: Maria Elena Saiz, M.D., Asghar Hossain, M.D.

SUMMARY:

Adolescence is an essential stage in developing mind when vulnerable prefrontal reward pathways are developing. Early onset cannabis use has a detrimental effect on specific brain circuits resulting in long-term consequences on working memory, sustained attention and other intellectual functions. (MacDonald & Pappas, 2016) Several animal studies have proven that sex differences in brain

development and receptors density on brain cortices contribute to distinct structural and functional outcomes. (Crane, Schuster, Fusar-Poli, & Gonzalez, 2013) Despite no increase in the prevalence of marijuana among adolescent 12-17 years old in recent past years, statistics show an increase in the frequency of childhood and prenatal exposure to marijuana. The importance is several folded when considering the reduction in perceiving marijuana "harmful" among adolescents, and currently trending movements to legalize medical and recreational marijuana usage. (Hasin, 2018) Cannabis use in adolescence is associated with permanent changes in the brain structure including thinner temporal and frontal cortices, smaller brain volume, thicker entorhinal cortex that present with poor performance in attention-requiring tasks, memory, processing speed, visuospatial and executive functioning; Most of which are irreversible after abstinence. (Meruelo, Castro, Cota, & Tapert, 2017) While dose and age of onset dependent neurobehavioral damage following marijuana usage can argue for a pathophysiologic basis of brain damage underlying cannabis use; it still needs clarification in a longitudinal study whether pre-existing structural differences in users compared to non-users can predispose to the substance seeking behavior. (Jacobus & Tapert, 2014; Meruelo et al., 2017)

No. 26

A Research Protocol: Intensive Parent-Child Interaction Therapy (I-PCIT)—Feasibility and Effectiveness Study

Poster Presenter: Jennifer Inbarasu
Co-Authors: Chelsea Ale, Jyoti Bhagia, M.D., Magdalena Romanowicz, M.D.

SUMMARY:

Background: It is estimated that nearly 25% of preschool-aged children struggle with psychosocial stress and social-emotional issues. Early intervention programs that are evidence-based and easy to implement are crucial in helping young children with externalizing behavior problems. Parent-Child Interaction Therapy (PCIT) is an Evidence Based Therapy designed to help very young children with disruptive behavioral issues. Despite PCIT effectiveness, high dropout rate (in some studies as high as 50%) prior to completion of the treatment remains a significant problem. Hypothesis: Our aim will be to evaluate feasibility of implementing an innovative treatment protocol of Intensive-PCIT (I-PCIT) in a community clinic, measured by treatment attendance and caregiver's satisfaction (as measured by the Therapy Attitude Inventory) compared to the current gold-standard of PCIT treatment as usual (PCIT-au). We hypothesize that I-PCIT will have at least a 70% attendance rate. Our secondary aim will be to evaluate the effectiveness of I-PCIT by comparing measures of treatment attendance and number of children's behavioral issues in the I-PCIT group with PCIT-au group. We hypothesize that I-PCIT will be equally effective as PCIT-au when comparing parenting skills (clinically significant improvement in The Dyadic Parent-Child Interaction Coding System (DPICS)—Parenting skills), family impairment (clinically significant reduction on the Parenting Stress Index and on the Parenting Scale), and child behavior problems (clinically significant reduction of The Eyberg Child Behavior Inventory (ECBI) total score and clinically significant improvement of Child Compliance).

Methods/Protocol: Participants for the PCIT-au and I-PCIT groups will be recruited from an outpatient community behavioral health clinic. The study will include children 2.5-7 years old whose measure of ECBI rated above the clinically significant range. Families will be randomly assigned either to I-PCIT group or PCIT-au group. Parents of I-PCIT group will be asked to commit to 10 days of a daily treatment program during a 2 week period. The PCIT-au group will be enrolled in weekly PCIT with attendance being tracked over a 16 week period. Statistical analysis will be conducted to examine whether there are significantly different changes between groups (I-PCIT and PCIT-au) on parenting skills (DPICS—Parenting skills), family impairment (Parenting Stress Index and Parenting Scale), and child behavior problems (ECBI total score and observed Child Compliance) at pre-treatment, 2-weeks, and 16 weeks. Significance : Our study proposes development of an alternative treatment option that is easy to implement, short, intensive and has the potential to more adequately address the unique needs of families that struggle with significant behavioral issues of their children. This modified therapy could be delivered to patients who live in

areas without access to well-trained mental health providers.

No. 27

PTSD in 5-Year-Old Migrant Girl: A Case Report

Poster Presenter: Edward George Hall, M.D.
Co-Author: Asghar Hossain, M.D.

SUMMARY:

Migration due to war can cause a tremendous effect on mental health of a child, multiple traumatic and posttraumatic experiences can lead to severe, often undetected psychiatric symptomatology and disorders in these individuals. We studied a case of 5-year-old migrant girl with a speech delay problem.A 5-year-old Syrian girl living with parents and siblings in New Jersey, migrated 3 months back to US presented with irritability, hyperactivity, easy distractibility and speech delay. She is found to be obsessed playing with fire around the house, and doing odd behaviors like repetitive opening and closing the refrigerator door. She has witnessed the ongoing war with the ear deafening voices of bombs dropping, her family was confined to their house. The patient was born in Syria via normal vaginal delivery and met all her mile stones on time except speech which is delayed, and she can only say few words till the age of one and stayed at the same level since then. Out of three other siblings one elder brother is also nonverbal. During the clinical evaluation she showed hyperactivity as to moving around in the room.She was prescribed Clonidine and speech therapy. On her subsequent visits she showed a lot of improvement. Refugee during their journey goes through the phases of premigration, migration, and post migration, and each of these stages are challenging. [1] Starting premigration phase they face the situations like war, during migration they face countless hurdles such as crossing the deserts and rivers etc. Post migration phase is also not easy as it involves settlement to the new place, culture and language barriers and access to basic needs specially health care.All these events when summed up can cause a significant trauma to the developing brain of a child. Little has been studied about the effect of war on preschool children as the symptomatology is nonspecific in this age group [6]. They might present with overactivity, poor concentration, increased frequency of temper tantrums and attention-seeking behavior.Studies shows that there is a wide consensus that the prevalence of post-traumatic stress disorder (PTSD) and other mental health problems are higher in refugee children than host populations [2,3,4]. Numerous studies reveal that migrant children display more behavioral and emotional problems than non-migrant children without traumatic experiences, like depression, anxiety, post-traumatic stress disorder (PTSD), low self-esteem and dissatisfaction with life. Forced migration and experienced violence may destructively influence the mental health of the individuals. [5]

No. 28

Withdrawal-Emergent Dyskinesia, Sydenham's Chorea, and PANDAS: One Syndrome or Three?

Poster Presenter: Srinivasa B. Gokarakonda, M.D., M.P.H.

SUMMARY:

This report discusses two cases of children who presented to an inpatient children's hospital with overlapping symptoms reminiscent of PANDAS, Sydenham's chorea (SC), and withdrawal-emergent dyskinesia (WE-D). Both cases had a complex psychiatric profile as well as a concomitant history of recurrent streptococcal infections. When changes to antipsychotic doses were made, SC and PANDAS followed when said changes occurred current or post streptococcal infection. As the resulting symptoms could be viewed as SC, WE-D, or PANDAS, it is hypothesized that the sudden onset of these rare conditions resulted from the reduction of antipsychotics in the context of post streptococcal infection, leading to a severe PANDAS syndrome. Special consideration should be taken when treating youth with a complex psychiatric profile with recurrent strep infections and that clinicians should consider prophylactic treatment with antibiotics and take caution when reducing antipsychotics.

No. 29

Childhood Disintegrative Disorder

Poster Presenter: Asghar Hossain, M.D.

SUMMARY: Objective: Corticosteroid treatment seem to improve language, motor skills and behavior in kids with childhood disintegrative disorder

(Regressive autism). Abstract: Childhood Disintegrative disorder (CDD) comes under Autism spectrum disorder in DSM 5. It is a very rare disease and what causes this is still unknown. CDD is unique as it is relatively late in onset and is characterized by regression of previously acquired skills in the areas of social, language and motor functioning. It is often seen that kids having this disorder have achieved normal developmental milestones before regression of skills sets in. The age at which this disease manifest is variable, but it is typically seen after 3 years of achieving normal milestones. The regression can be so fast that the child may be mindful of it, and in the beginning may even ask, what is going on with them. Some children may appear to be responding to hallucinations, but the most common and distinct feature of this disease is that skills apparently attained are gone. This condition has been described as a devastating disease which affects both the individual's life and the family. Between the ages of 2 and 10, skills acquired are lost almost completely in at least two of the following six functional areas: Receptive language skills (comprehension of language - listening and understanding what is communicated) Expressive language skills (being able to produce speech and communicate a message) Social skills and self-care skills Bowel and bladder control Motor skills Play skills There is no treatment available to cure this disease. Most of the treatment plan is behavior-based and highly structured. Medications are used to treat the symptoms as they develop during the disease which includes mostly antipsychotic medications that are used for repetitive behavior patterns and aggression. Current studies suggest that corticosteroid treatment seems to improve language, motor skills and behavior in these children. This requires further research and clinical trials to implement for future management.

No. 30

Modafinil's Role in Regulating Sleep Wake Cycle and Physical Rehabilitation in the PICU

Poster Presenter: Kim Christopher Knudson, D.O.
Co-Author: Nikhil Pillarisetti Rao, M.D.

SUMMARY:

Recovery and rehabilitation after critical illness, organ transplant, or physical trauma are often complicated by a range of issues involving dysregulated sleep/wake cycle and physical fatigue. There is relatively little literature and a lack of adequate treatment recommendations from a psychiatric perspective regarding these aspects of illness despite potentially drastic effects on quality of life and recovery. We discuss how our psychiatry service came to be involved in such cases from both our and consulting service perspectives, and why modafinil as opposed to other activating or energy-inducing medications may be particularly suitable in this role for children with complex, chronic, or critical illness. Aspects of its potential include its unique mechanism of action, cardiovascular variables, metabolism, and relatively low incidence of psychiatric side effects. We then review a series of cases from a busy pediatric consultation-liaison service in which this modality was implemented, with input from primary team and rehabilitation specialists as to noted benefits and challenges. Medical reason for admission most commonly involved either lung disease or traumatic brain injury, while concomitant psychiatric disease ranged extensively from minimal premorbid or post-illness disease, to significant underlying or adjustment pathology. Outcome variables include improvement in energy, sleep/wake timing, and performance during physical therapy sessions. Finally we explore areas in which the use of modafinil can be expanded in medically hospitalized children for sleep/wake and recovery support as well as next steps in researching this novel treatment strategy.

No. 31

A Novel Look Into Symptoms of Prodromal Psychosis in Adolescence

Poster Presenter: Sagarika Ray, M.D.
Lead Author: Nungshitombi Chongtham, M.B.B.S.
Co-Authors: Shamaila Indrees, Victoria Katz

SUMMARY:

Anxiety and depressive symptoms may reflect core emotional dysregulation processes and delusional mood in prodromal psychosis (1). In the absence of definite criteria for defining the prodromal phase, the diagnosis is difficult and predominantly identified retrospectively as present during adolescence, a critical time for development of cognition and social functioning. There is limited

data available in treatment modalities due to difficulty in identifying prodromal cases. There is also suspected low conversion rate even among at risk adolescents and the ethical dilemma of starting antipsychotics in adolescent population prior to having a full understanding of the illness that prevents early interventions. In this poster we report two cases, a 15 year old Pakistani –American female and a 16 year old Caucasian female who presented at our Child Psychiatry outpatient clinic with predominant symptoms of anxiety, depressed mood, frequent emotional dysregulation, social withdrawal and isolation, and decline in school grades. History of both patients was significant for a genetic preloading of psychotic disorder in the family. They lacked presence of any positive symptoms during their initial presentation. Longitudinal treatment course for both patients subsequently raised significant suspicion for an underlying prodromal phase of a primary psychotic disorder. As per several previous studies, the features that best predicted transition to psychosis were: genetic risk of psychosis with recent deterioration in functioning and higher levels of unusual thought content, suspiciousness/paranoia or social impairment. Taking this into account along with the presenting symptoms of our patients, both patients were started on antipsychotic treatment with gradual improvement in their presenting symptoms. These cases highlight the increased importance of early recognition and intervention in prodromal cases in adolescence.

No. 32

An Atypical Presentation of Severe Tardive Syndrome in an Adolescent: A Case Report

Poster Presenter: Steven Tessler
Co-Authors: Karen Ding, M.D., Cristian Zeni, M.D., Ph.D.

SUMMARY:

A 13-year-old Hispanic male with a psychiatric history of bipolar Disorder, ADHD, ASD, and recent onset tardive syndrome, presented to the inpatient psychiatric facility with his mother due to self-harm. At home, patient had been banging his head, cutting his head on a sharp object, and tying a shoelace tightly around his neck. In addition, for the past 3 months, patient had been demonstrating abnormal movements. These movements were characterized by repetitive, non-rhythmic, contractions of the muscles of his back, arms, and legs, and repetitive yawning, grimacing, head scratching, and grunting. Patient had received an extensive inpatient neurological evaluation and was diagnosed with tardive dystonia resulting from aripiprazole use since the age of 9. Aripiprazole was discontinued (3 months prior) and the patient was discharged from the neurological service on clonazepam, clonidine, diphenhydramine, and gabapentin with little to no improvement of motor symptoms, per family. Patient also had received brief trials of C-Dopa/L-Dopa and tetrabenazine for less than 1 week with no effect. Patient was admitted to our child and adolescent unit and was engaged in the therapeutic environment. On day 2 of his hospitalization, patient was able to meaningfully engage with the psychiatric team and discuss his motivation for self-harm. Due to the severity of the patient's movements, he only slept 0 – 3 hours a night and ate constantly while hovering at a BMI of 14. Interestingly, his movement improved significantly when he played on the computer. A neuropsychiatric consult determined that the patient had symptoms of motor and phonic tics in addition to tardive dystonia. A more thorough assessment revealed that the patient had demonstrated occasional voluntary "jumpy" arm movements since he was a young child. The new historical finding suggested the possibility that the patient's presentation was due to worsening of an underlying tic disorder combined with tardive dystonia. A plan was made to add the VMAT-2 inhibitor, tetrabenazine, to the patient's regimen due to the inadequacy of the previous tetrabenazine trial of 1 week duration. However, before tetrabenazine was started, the patient had sudden worsening of his movement disorder, resulting in severe emotional distress. During this episode, 3 staff members were required to restrain the patient to prevent him from hurting himself. As a result, the decision was made to transfer the patient to a medical hospital for further management of his movement disorder. In this poster, we discuss the challenge of diagnosing and managing a patient with abnormal movements that are consistent with multiple distinct pathologies under the umbrella of tardive syndromes.

No. 33

Postoperative Emergence Delirium in Children: A Case Report

Poster Presenter: Tai Ursula Carmen McCadden, M.D.

SUMMARY:

Introduction: Emergence delirium (ED) is a common occurrence post-operatively that is often missed in children, usually dismissed as pain or tandrum. While many studies have been done in elderly adults, as the incidence of delirium increases the risk of mortality in that population, studies in children have been limited, and greatly complicated by the available methods of assessment of delirium. In order to further understand ED, it is important to first distinguish the definition of delirium, some probable mechanisms and pathophysiology of delirium, the risk factors of delirium for prevention, and how certain anesthetic drugs may contribute to ED. Case Summary: Patient C is a previously healthy 3 year old male with adenoid hypertrophy who presented to outpatient surgery for a scheduled adenoidectomy. Upon awakening from anesthesia status-post surgery, he became agitated with flailing arms and legs, was unable to verbalize his needs, was disoriented, and was difficult to console. Patient C most likely experienced a case of emergence/post-operative delirium, however, anxiety, pain, and tantrum can not be excluded. Evidence to support ED in this case included patient age between 3-5 years old, the use of sevoflurane, rapid onset of delirium, flailing of his arms post-operatively without clear communication, and the fact that the patient was inconsolible by his parents. It is unknown if the patient was awakened rapidly from sedation, or if his awakening in a strange environment (the PACU) contributed to his behavior at the time. Although the patient's "agitation" was brief, and resolved on its own, given the current literature on children and ED it should still be considered in this case. Discussion: Many studies have been done examining the causative effects of inhaled anesthetics on emergence delirium. Sevoflurane, because of its ability to exert an irritating side effect on the central nervous system, has become the most widely studied, and comparable anesthetic. In children, rapid awakening after the use of anesthetics, including sevoflurane, desflurane, isoflurane, and halothane equally, has been found to increase the risk of ED as high as 40% in preschool boys aged 3-5 years old (Aono et al. 1997). Conclusions: Although several studies have been done examining emergence delirium in adults, significant studies in children are limited. Further trials are necessary to discover the underlying causes of emergence delirium and to determine which factors might help predict and potentially prevent it.

No. 34

A Case Series: "13 Reasons Why" Inciting Suicidal Behaviors in Children and Adolescents

Poster Presenter: Avaas Sharif, M.D.
Co-Authors: Aamani Chava, M.D., Gobindpreet S. Sohi, M.D.

SUMMARY:

Background: Suicide was the second leading cause of death in adolescents in America in 2017 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 multiple cases over the time course of seasons 1 and 2, within the same community hospital. The patients are all within the age range of 9-17 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. 35

A Case Series: Review of Aggression and Psychostimulants

Poster Presenter: Julia Preusch
Co-Authors: Kristina Michelle Bryant-Melvin, M.D., Hillary Porter

SUMMARY:

Attention Deficit Hyperactivity Disorder (ADHD) is the most common behavioral disorder in children, and its prevalence is increasing (1). In school aged children, psychostimulants are the mainstay of treatment (1). Commonly prescribed psychostimulant medications include methylphenidate, dexmethylphenidate, and amphetamines (2). These medications increase levels of norepinephrine and dopamine neurotransmission in the prefrontal cortex (3,4). Psychostimulants carry similar psychiatric adverse effects including emotional lability, anxiety, agitation, irritability, and aggressive behavior (5,6). Aggression in childhood ADHD can be attributed to both the disorder itself (8,9) and an adverse effect of psychostimulant medication use (9). Psychostimulant-associated aggression occurs in up to 2% of children and adolescents with ADHD (5,6). In a 2006 FDA review of postmarketing safety data for ADHD medications, it was found that 20% of aggression reports were life-threatening or required hospital admission. The majority of reports submitted were in children and adolescents, and a male predominance was noted (11). A 2017 meta-analysis demonstrated that amphetamine derivatives are associated with an increased risk of irritability, while methylphenidate derivatives are associated with a reduced risk of irritability (10). ADHD-associated aggression is a clinical feature of emotional dysregulation (12). Both the severity of ADHD symptoms and the number of comorbid psychiatric conditions have a significant association with the development of aggression (13,14). One study reported clinically significant aggression in 46% of children with ADHD (n = 579) (15). Aggression is a common clinical presentation of ADHD, and often serves as the impetus for intitial ADHD evaluation (14). Our case review involves three pediatric ADHD patients who developed signs of aggression while on psychostimulant therapy. Patient one developed aggressive behaviors including physical violence one month after beginning Amphetamine-Dextroamphetamine. The patient's mother reported improvement in aggression after changing his medication to Methylphenidate. Patient two showed signs of aggressive behavior prior to starting psychostimulant medications, including physical violence and threatening to bring a gun to school. Three months after starting Lisdexamfetamine, the patient began to exhibit increasingly violent behaviors. After his medication was changed to Methylphenidate, his parents reported a reduction in aggression. Patient three is a 7-year-old male who showed signs of progressively worsening aggressive behavior after starting Amphetamine-Dextroamphetamine. Violent behaviors progressed from destructiveness to biting others. Per the patient's grandmother, behavioral issues improved after a medication change to Methylphenidate. Through this case review, we hope to add to the discussion of the effects of psychostimulant medication on aggression in childhood ADHD.

No. 36

Outcomes of Early Behavioral Interventions in Autism Spectrum Disorder

Poster Presenter: Syed Salehuddin, M.D.
Co-Authors: Ahmad Jilani, Asghar Hossain, M.D.

SUMMARY:

Autism spectrum disorder is a phenotypically heterogenous group of neurodevelopmental syndromes. It is a lifelong affliction, where the course and the symptoms of the disorder are highly variable [1]. Essential features of autism spectrum disorder include persistent impairment in reciprocal social communication and social interaction combined with restrictive, repetitive patterns of behavior, interests or activity [2]. Psychosocial treatment interventions exist, that aid patients develop skills which increase social acceptance and prosocial behavior. Early intensive behavioral intervention has been found to be helpful in children with autism, even leading to recovery and function in some cases [1]. Our aim is to review the available literature to determine if early initiation of behavioral interventions results in better outcome.

No. 37

Contribution of Epigenetic Factors in Etiology of ADHD

Poster Presenter: Syed Salehuddin, M.D.
Co-Authors: Sukaina Rizvi, M.D., Asghar Hossain, M.D.

SUMMARY:

Epigenetics is a unique mechanism which incorporates complex genetic expression with certain environmental factors to alter the behavioral phenotypes in neuropsychiatric conditions such as attention deficit/hyperactivity disorder (ADHD). ADHD is an insufficiency in behavior inhibition characterized by a triad of impulsivity, inattentiveness and hyperactivity. Although ADHD has heritable etiology, epigenetics plays an integral part in facilitating the structural and functional changes. Research has speculated neurobiological phenomena of cytosine methylation, histone modification and role of transcription factors in regulating variable gene linkage. This supported by inverse correlation between DNA methylation and evolution of affective, cognitive and behavior symptomatology in ADHD. Some studies have implicated a role of epigenetic marker VIPR 2 in regard to ADHD. Epidemiological factors influencing genomic imprinting in ADHD can be attributed to psychosocial dysfunction, maternal mental illness or substance use, childhood adversities. We herein present a literature review to corroborate epigenetic elements in mediating the developmental and behavioral changes in response to environmental factors.

No. 38

Dangerous Side Effect: A Case of Pediatric Clozapine-Induced Acute Interstitial Nephritis

Poster Presenter: Rohan Kedar, M.D.
Lead Author: Renee L. Bayer, M.D., M.P.H.

SUMMARY:
INTRODUCTION Clozapine is used for refractory childhood-onset or adult schizophrenia. Recent reports indicate clozapine's efficacy for post-traumatic stress disorder (PTSD) (1). A recent study of adolescents with PTSD demonstrated substantial improvements with Clozapine (2). The pharmacological action of Clozapine is proposed to be mediated through antagonism of the dopamine type 2 (D2) and serotonin type 2A (5-HT2A) receptors. It also acts as an antagonist at alpha-adrenergic, histamine H1, cholinergic, and other dopaminergic and serotonergic receptors (3). Clozapine for schizophrenia is offered after failure of two different antipsychotics due to the risk of agranulocytosis. Acute interstitial nephritis (AIN) is not well-documented (4) but is a potentially fatal side effect that justifies attention. AIN is an immune-mediated condition with inflammation and edema in the kidneys, most commonly due to a drug-induced, eosinophilic hypersensitivity reaction (5). Since 1999, PUBMED has reported 8 cases of Clozapine-induced AIN in adults (6). No pediatric cases have been described. CASE PRESENTATION A 13-year-old African American male was admitted to a psychiatric hospital post-suicide attempt with related dissociative behavior after sexual victimization at gunpoint. After medication failures, Clozapine was initiated. Eleven days later, he had malaise, tachycardia, and tachypnea but remained afebrile. On day 12, he developed a high fever, and a urinary tract infection was diagnosed. Culture showed sterile pyuria. All psychotropic medications were stopped secondary to continued fever. The patient presented with an altered mental status, and his serum creatinine was elevated to 1.65 from a baseline creatinine of 0.85. Nephrology was consulted and diagnosed Clozapine-induced Acute Interstitial Nephritis due to continued pyrexia despite appropriate antibiotic therapy, sterile pyuria, echogenicity on ultrasound, and eosinophilia. Thirty-four days later, kidney function normalized; however, eosinophilia continued, and the patient became neutropenic with an absolute neutrophil count of 1.0. DISCUSSION Biopsy was not performed. AIN can be caused by any drug. Given the presentation of the illness, the timing and titration of the medication, the most likely cause for this presentation was Clozapine. Refractory PTSD has few treatment options. Clozapine has been shown to reduce some of the disabling symptoms of PTSD. This case is a reminder of the importance of diligent surveillance in both pediatric and adult patients while using Clozapine, for agranulocytosis as well as AIN.

No. 39

Investigation of Polytherapeutic Treatment Modalities for Oppositional Defiant Disorder and Conduct Disorder

Poster Presenter: Lara Addesso, M.D.
Co-Authors: Edward George Hall, M.D., Ahmad Jilani

SUMMARY: Objective: To investigate polytherapuetic approaches to treating ODD and CD

in attempts of improving prognosis Abstract: Disruptive, impulse control and conduct disorders are some of the most common reasons for psychiatric evaluation in children and adolescents. As per DSM-5 both, conduct disorder and oppositional defiant disorder, are classified under this category [1]. Treatment modalities such as direct parent training exist, which are used to reinforce more prosocial behavior while diminishing undesired behaviors at the same time [2]. Atypical antipsychotics have replaced older, typical antipsychotics in the treatment of aggression in the setting of disruptive behavioral disorders [2]. These disorders are frequently comorbid to other psychiatric problems (ADHD, intellectual disability, etc.) which further complicate the management of such patients. Other factors that determine success of treatment include patient engagement and motivation which may be hard to maintain over a long duration of the treatment especially in the context of adverse effects seen with prolonged use of psychotropic medicine. As such prognosis in these disorders remains guarded, and problems in maintaining friendships and peer relationships as well as difficulties in workplace continue well into adulthood [3]. Our objective is to review the literature in an effort to find which treatment options, pharmacologic or otherwise, offer evidence of better outcome. To that effect, we reviewed programs that used website assisted parent training, or skills training for patients to relieve the disruptive behavior patterns. We also reviewed randomized controlled trials checking for efficacy of risperidone, aripiprazole, quetiapine, lithium, valproate, carbamazepine in control of symptoms of oppositional defiant disorder and conduct disorder.

No. 40

Social Media Use in Adolescents Admitted to a Psychiatric Unit

Poster Presenter: Patricia Ann Samaniego Calimlim, M.D.
Co-Authors: Muniza Siddiqui, M.D., Maher Kozman

SUMMARY:

Background - From 2008 to 2017, the percentage of the US population with a social media profile drastically increased from 10% to 80%, respectively. As of August 2017, approximately 28% are teenage users with either Facebook, Instagram, or Snapchat accounts. Recent research has linked social media use to negative impacts on young adult mental health, including psychological despair, poor self-esteem, body image inadequacy, and exposure to cyberbullying. These in turn, lead to an increase in depression rates, with a subsequent steep rise in adolescent psychiatric admissions. Despite these harmful outcomes, social media may also have a positive effect on overall teen mental health, such as exposure to relevant health resources and community building, leading to healthy networking and discovering emotional support. We will investigate the association between social media use and depression in adolescents admitted to a psychiatric unit and continue to follow their progress after discharge in outpatient clinic services. We expect improvement in their depressive symptoms by modifying social media use and adding mental health apps to further encourage the positive effects of social media. Methods – Social media use will be obtained during admission evaluation, specifically active hours spent. The presence and severity of depression will be determined using the PHQ9-A (Patient Health Questionnaire, adolescent version), a 9-question depression scale that is based on the DSM-IV diagnostic criteria of depression and modified for teens to further inquire about other aspects of depression such as dysthymia, suicide risk, and other mental illnesses. PHQ9-A scores will also be used to monitor progression of major depressive symptoms with limiting social media use. We will compare treatment as usual (TAU) alone with TAU and the addition of Mental Health Apps (i.e. What's Up, MoodKit) to guide adolescents through cognitive behavioral therapy and acceptance commitment therapy techniques, as well as to assist in developing coping mechanisms to prevent readmission.

No. 41

Childhood Exposure to Intimate Partner Violence

Poster Presenter: Madia Majeed, M.D.
Co-Authors: Zargham Abbass, Asghar Hossain, M.D.

SUMMARY:

Intimate partner violence (IPV) is a common form of violence against women and men. There are a significant number of United States children populations living in homes where IPV occurs.

Witnessing IPV can have devastating long and short-term age-dependent effects on children's emotional and behavioral health (including changes in the developing brain) and may be associated with adverse physical outcomes. IPV may not be identified unless the provider asks about it specifically. Here, we present a case of an 8-year-old male child with a history of attention deficit hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), violent behavior and a prior inpatient hospitalization due to suicidal statements; who witnessed physical abuse towards her mother from his stepfather. Furthermore, we will elaborate on the long and short-term effects on children witnessing IPV, screening modalities, and prevention strategies.

No. 42

Childhood Physical and Sexual Abuse and Chronic Pain: Results From the Israeli National Health Survey

Poster Presenter: Nadav Goldental
Co-Author: Raz Gross, M.D.

SUMMARY: Objective: Chronic pain is one of the main causes for ongoing suffering, functional disability, diminished quality of life, and prolonged use of analgesics. In spite of the large body of research on pain, many potential risk factors, such as stressful life events during childhood, have not received much attention. The purpose of our study is to examine whether childhood sexual and/or physical abuse are associated with chronic pain in adulthood. Methods: We analyzed data from the Israeli National Health Survey (INHS) conducted in 2003-2004, as part of The World Mental Health Survey. The study population comprised of 3906 respondents (73% response rate) from the Jewish sector of the population, aged 21 and above. Chronic pain was defined as 'chronic back/neck pain', 'chronic and frequent headache', or 'other chronic pain', for which the respondent was treated during the year prior to the interview. Statistical analyses were performed using multinomial logistic regression models. Results: Treatment for chronic pain during the year prior to the interview was reported by 29.4% (N=1148) of respondents. The incidence of childhood sexual, physical or any abuse was 5.7% (N=218), 2.7% (N=105) and 8% (N=307), respectively. The odds of developing chronic pain in adulthood were higher among respondents who were physically abused during childhood. After adjusting for potential confounding by lifetime major depressive disorder and PTSD, we computed an odd ratio of 2.36 (95% CI=1.50-3.40, p<.005). Childhood sexual abuse was not associated with a statistically significant increased risk of developing chronic pain in adulthood: OR=1.19 (95%CI=0.92-1.65, p=.15). A significant association was found, however, between complex sexual abuse, defined as exposure to at least 3 abuse events, with at least 2 of them sexual, and chronic pain in adulthood (Adjusted for MDD and PTSD OR = 1.80, 95% CI = 1.02-3.19, p=.04). After stratifying on age at exposure (0-12 vs. 13-18 years) we found that the increased risk for chronic pain was limited to exposure before age 13 years. Conclusions: In this large population-based representative sample we found that physical childhood abuse and complex sexual childhood abuse were associated with increased risk for chronic pain in adulthood.

No. 43

Diagnostic Clarity for the Cause of Psychosis in a Patient With a History of a TBI

Poster Presenter: Kerry Marie Sheahan, D.O.
Co-Author: Stephanie M. Daly, M.D.

SUMMARY:

Background: Onset of psychosis after a traumatic brain injury (TBI) is typically delayed by 1-4 years. Due to this delay there are limited evidence based assessments, especially in adolescents, for how to determine if a patient's psychosis is directly related to a TBI. The goal of this poster is to discuss a complicated case we encountered and our considerations around diagnostic clarity for our patient. Case Report: M.S. is a 13 y/o first generation Pakistani-American, who experienced a severe TBI resulting in intubation and an extended PICU admission. Her head CT showed bilateral subarachnoid hemorrhages, a subdural hematoma, and a significant midline shift. Patient reportedly had a complete recovery and returned to baseline functioning including having a bright and euthymic affect with no cognitive limitations. She then experienced physical assaults by older sibling in the home who was also having psychiatric symptoms

including visual disturbances. Six months later M.S. started reporting similar visual hallucinations. Her symptoms progressed and led to psychiatric crisis and inpatient admissions 3 years after her initial TBI. Her symptoms upon admission included severe delusions of persecution, visual hallucinations, and cruel command auditory hallucinations. Additionally she was responding to internal stimuli, disorganized, trying to tape shut doors, having a flat affect, and thought blocking. Results: To determine her diagnosis we addressed these potential causes: • Her siblings' symptoms were thought to be unrelated to psychosis by their primary treatment team as there were no other symptoms consistent with psychotic disorder and resolved very quickly. Therefore less data to suggest genetic component with no other family history of psychosis. • Abuse can at times mimic psychosis, but patient did not fit criteria for PTSD and her level of disorganization led us to believe that this was true psychosis. • Her symptoms at admission were consistent with schizophreniform diagnoses. Although it's possible would be very early onset for this illness. • Research has indicated that visual hallucinations can be more common after TBIs thus psychosis related to medical condition was considered. • As per Suhail and Cochrane, higher rates of delusions of persecution, visual hallucinations, and auditory hallucinations with negative content are seen in Pakistanis thus cultural considerations needed to be considered. Therefore, we determined that the patient had post TBI psychosis. This diagnosis is further validated by the delay in onset of symptoms after the TBI and, although psychosis usually occurs in right-sided lesions after strokes, in TBI cases psychosis can result from bilateral injury due to a coup contrecoup effect. Discussion: This poster will discuss the difficulties with diagnostic clarity for a young patient with psychosis following a TBI. In addition we will address concerns about trauma and cultural considerations.

No. 44

Symptom Severity and Resource Utilization of Pediatric Patients With ASD and Subclinical-ASD in Psychiatric Inpatient Setting

Poster Presenter: Adrian Jacques H. Ambrose, M.D.

SUMMARY:

Background: Youths with Autism Spectrum Disorder (ASD) have disproportionately higher rates of medical and psychiatric service utilization. An estimated 11% of youths with ASD will be hospitalized psychiatrically prior to the age of twenty-one. Furthermore, youths with ASD tend to have a significantly longer length of stay (LOS) in comparison to their peers. Some studies suggest that high rates of psychiatric comorbidities and dysregulated behaviors leading to safety concerns may account for higher rates of hospitalization. Given the recent changes in diagnostic criteria and wide range of clinical severity, youths with the ASD and subclinical ASD diagnoses may have varying clinical presentations. There is a current dearth of research examining specific clinical characteristics of the ASD and subclinical-ASD. Using validated psychometric tools, this study aims to explore specific clinical clusters of symptoms in pediatric patients with ASD and subclinical-ASD and their association with symptom severity and resource utilization in an inpatient psychiatric setting. Method: Patient data were obtained through retrospective chart reviews of a pediatric inpatient psychiatry unit in a metropolitan area. Psychometric tools for clinical symptom assessment were the Social Responsiveness Scale-2 (SRS-2), including brief screening scale, five treatment subscales, and DSM-V compatible subscales, and Brief Psychiatric Rating Scale (BPRS). Treatment variables for analysis included length of stay, suicidality (e.g. suicidal ideation, self-injury, suicidal attempts), and co-morbid psychiatric diagnoses. Subgroup analysis of 30-day post-hospitalization follow-up was completed for healthcare utilization (e.g. rehospitalization, crisis evaluation, therapy adherence, and medication adherence). Results: At admission, positively screened patients (SRS brief score > 65) were reported to have higher rates of behavioral problems ($P < 0.05$), psychomotor agitation ($P<0.01$), depression ($P< 0.05$). In addition, positively screened patients had a longer LOS ($P<0.05$) in comparison to their peers. Patients with higher severity in SRS subscales of Social Cognition and Restricted Interests and Repetitive Behaviour were more likely to report higher severity of suicidality ($P<0.05$). Conclusions: Psychometric tools may be helpful for clinical symptom assessment in pediatric patients with ASD and subclinical ASD. Patients with higher specific

subscales may require closer monitoring and management. Further study is needed to better understand the predictive nature of specific clinical symptoms in resource utilization and how to better guide the treatment of patients with ASD and subclinical ASD.

No. 45

More Than Decisional Capacity: Preoperative Psychiatric Evaluations for Adolescents

Poster Presenter: Sina Shah, M.D.

SUMMARY:

We present the case of a 17-year-old male from northern Africa, with no known psychiatric history, and significant medical history of sickle cell disease. The patient was in the process of being evaluated for bone marrow transplantation. The Child and Adolescent Consultation-Liaison service was consulted for pre-transplant psychiatric evaluation. Prior to his current plans for treatment, the patient had been hospitalized at least six times for sickle cells crisis. The patient's only home medication is hydroxyurea. He had emigrated to the United States seven years ago, is one of three siblings with sickle cell disease, with both parents carriers of sickle cell trait. The patient is first in his family being considered for bone marrow transplant as a curative treatment. While the patient's treatment team was primarily requesting determination of decisional capacity to assent to the procedure, the interview revealed information which required additional scrutiny. The patient stated his primary reason for considering a bone marrow transplant at this time was a financial consideration, adding that as an adult the cost of the procedure may not be fully covered by his insurance plan. Additional answers during evaluation raised concern that the patient may not be autonomous in making this important medical decision. The patient also revealed negative perceptions of self. Other unique aspects of this case involve cultural considerations, motivations of the parent's desire for treatment, the psychological distress of a chronic medical condition, and the patient's readiness to cope with postoperative recovery. In addition to the assessment of decisional capacity to assent to treatment, adolescents remain in a vulnerable stage of their development. The effects of transplantation or other high-risk procedures, if not evaluated with care, may place patients in unsafe situations with the possibility of long-term physical and psychological injury. We discuss the complexities of evaluating adolescents in the preoperative stage in order to maximize the chance that such treatments will improve their quality of life.

No. 46

Early Onset Psychosis in a Pre-Adolescent Male With a History of Exposure to Pre-Natal Maternal Infection

Poster Presenter: Modupe Ebunoluwa James, M.D.
Co-Author: Mihir Ashok Upadhyaya, M.D., Ph.D., M.P.H.

SUMMARY:

Maternal infection during pregnancy can be associated with a number of adverse post-natal outcomes. These complications are attributable to an ever-growing list of bacteria and viruses responsible for vertical transmission of infection in utero, during delivery, or while breastfeeding. Even with advancements in prevention, diagnosis, and treatment of maternal infections, the limited epidemiology and etiology data is a barrier to implementing effective public health measures. Much of the actionable information comes from individual studies on specific infectious diseases during pregnancy, which are limited to the time and population group from which they originated. Incidence of such infections depends on a multitude of determinants such as socioeconomic, access to health services, poverty, and education. There is a direct correlation between poverty and high incidence of maternal infection. With appropriate measures, there has been a substantial reduction in neonatal morbidity and mortality, and better mitigation of adverse effects to the newborn. However, the impact of maternal infection can linger long after the infection has resolved, and consequences may arise years later, including psychiatric complications. Among the after-effects is the potential for psychosis, a broadly-defined psychiatric term for symptoms that cause an individual to have sensory experiences without stimuli or beliefs not based in reality. We present the case of a 10-year-old African American male from an inner city community with a history of exposure to

maternal infections that included Toxoplasmosis and Cytomegalovirus, but no apparent psychiatric history, brought to the hospital after experiencing command auditory and visual hallucinations for six months to stab his younger sister with a knife. His parents further report the patient experiences depressed mood, social withdrawal, progressively poor performance in school, and developmental regression. In studying this case, health care practitioners may better recognize the prodromal symptoms of psychosis in patients with a history of exposure to maternal infection, allowing for potential control of symptoms to avoid exacerbation leading to debilitation.

No. 47

Diagnostic Challenges and Underlying Similarities Between ADHD and Pediatric Bipolar Disorder

Poster Presenter: Zargham Abbass
Lead Author: Shahan Sibtain, M.D.
Co-Authors: Bennett Silver, M.D., Asghar Hossain, M.D.

SUMMARY:
Pediatric bipolar disorders (PBD) were considered to be rare among children and adolescents. There is growing evidence that these disorders are more prevalent among the pediatric population than previously believed. PBD frequently presents with higher rates of co-occurring attention-deficit/hyperactivity disorder (ADHD). ADHD and PBD have been the subject of highly controversial debate, due to the clinical overlap of symptoms and the underlying pathophysiological processes. Here we present a case report of a 15-years-old female who was recently diagnosed with bipolar disorder presenting with symptoms that were uncontrolled with mood stabilizer and antipsychotics. Furthermore, we will elaborate on the diagnostic challenges that are often encountered by clinicians to differentiate between ADHD and PBD, epidemiology of both disorders, neurobiological and genetic similarities between the two disorders.

No. 48

A Case of NMDA Receptor Encephalitis in a 20-Year-Old Female With Ovarian Teratoma

Poster Presenter: Zargham Abbass
Lead Author: Shahan Sibtain, M.D.
Co-Authors: Musaddiq Tariq, M.D., Aamani Chava, M.D., Fauzia Zubair Arain, Asghar Hossain, M.D.

SUMMARY:
Anti-N-methyl-D-aspartate receptor (NMDAR) encephalitis is a relatively new disorder with rapidly growing literature on its pathophysiology, with a well-defined set of clinical features. The findings of this disorder have modified the diagnostic method to clinical conditions such as catatonia, subacute memory disturbances, seizures, abnormal movements, and limbic encephalitis. In addition, it has also lead to the recognition of various other immune mediated encephalitides such as AMPA receptor, GABAb-R, and LGI1. At first, NMDAR encephalitis was thought to be exclusively by a paraneoplastic disorder, occurring in young females in association with ovarian teratomas. The associated syndrome has been described as changes in mood, behavior, and personality, resembling acute psychosis1. It usually progresses to include seizures, decreased level of consciousness, dyskinesias, autonomic instability, and hypoventilation. The younger the patient is, the less likely he or she is to have any associated tumor. In addition, black females are more likely to have a teratoma than any other ethnic groups. Studies have also shown that patients with Asian or African origin are more likely to have this condition. Cases with other tumors such as testicular germ cell tumor, teratoma of mediastinum, small cell lung cancer, Hodgkin lymphoma, ovarian cystadenofibroma, and neuroblastoma have also been reported3. However, with recent studies, it has been shown to be present with or without tumor and can arise in children and young adults including males and females. Herpes simplex viral encephalitis (HSVE) is the only preceding infection that has been shown in 20% of the patients with NMDAR encephalitis. In many instances, an etiology is not identified and majority is autoimmune based. According to the California Encephalitis Project (CEP), 65% of patients are under the age of 18 years5. Here we present a case of 20-year-old Caucasian female with no prior inpatient psychiatric hospitalizations presenting to the emergency department with disorganized mood, agitated and aggressive behavior.

No. 49

Methylphenidate ER Toxicity With Awake Bruxism in a Six-Year-Old Boy

Poster Presenter: Selena R. Magalotti, M.D.
Co-Authors: Mary T. Gabriel, M.D., Sarah Lytle, M.D.

SUMMARY:

This report describes a unique case of stimulant toxicity presenting with awake bruxism. Patient X is a treatment-naive six year old boy who was diagnosed with attention deficit hyperactivity disorder, combined type, severe (ADHD-C). He was initially started on methylphenidate extended release (ER) 18mg by mouth every morning, which was increased after three weeks to methylphenidate ER 27mg. The patient was seen multiple times over the following eight weeks for monitoring, and ADHD-C symptom improvement was noted. The patient experienced weight loss during treatment, dropping from the 69th percentile body mass index (BMI) to 12th percentile BMI, but the methylphenidate ER was continued due to potential confounding factors. There were no other notable adverse effects. However, approximately ten weeks into treatment with the methylphenidate ER 27mg, the provider was notified that the patient had developed teeth grinding, lateral jaw movements, was extremely hyper, and his appetite was very low. Due to the concern for stimulant toxicity, the medication was discontinued. The patient was seen in the clinic two days later, at which time all adverse effect symptoms had resolved. The patient subsequently tolerated dextroamphetamine/amphetamine with improvement in ADHD-C symptoms. This is a unique case of methylphenidate ER toxicity with awake bruxism in the context of previously stable dosing. It is our opinion that the bruxism and other adverse symptoms were a direct effect of the methylphenidate ER, given that these problems abruptly resolved with medication discontinuation. It is possible that the patient's weight loss contributed to the toxicity, as it has been reported that people with higher body weight may have less methylphenidate exposure. Another, albeit unlikely, possibility is that the bruxism-type symptoms were a side effect of the patient's recent dental treatment. There is minimal literature regarding methylphenidate use and awake bruxism. This patient's stimulant toxicity was also unique given his previous stability on the medication dosage. This poster will review the literature on this rare presentation, with particular focus on the bruxism. Better understanding of this topic will lead to improved safety and patient care.

No. 50

Treatment-Resistant Catatonia in a 14-Year-Old Female With Lupus Cerebritis

Poster Presenter: Selena R. Magalotti, M.D.
Co-Authors: Nida Muzaffar, M.D., Ovayoza Adeleye, M.D., Kenneth Chidi Asogwa, M.D., M.P.H., Sarah Lytle, M.D.

SUMMARY:

Patient X is a 14 year old African American female, previously neurotypical child, who was recently diagnosed with systemic lupus erythematosus and presented to the hospital with altered mental status. Her treatment team included pediatrics, intensive care, rheumatology, neurology, cardiology, and infectious disease. Based on a thorough medical workup, the patient was diagnosed with lupus cerebritis and appropriate treatment was initiated. Within a few days of admission, the psychiatry team was consulted due to the patient becoming increasingly agitated, disoriented, confused, and having fluctuating mental status. During psychiatric evaluation, the patient exhibited paucity of speech, negativism, stupor, stereotypy, posturing, intense eye contact, intermittent echolalia, and rigidity in her extremities. Based on the history and evaluation, the psychiatric presentation was consistent with catatonia. The patient had a positive response to IV lorazepam challenge, including increased movements and decreased rigidity, and thus the patient was started on scheduled lorazepam. Due to catatonia treatment resistance, the patient was also started on amantadine as an adjunctive catatonia treatment, and on citalopram due to multidisciplinary team concerns for depression. ECT was eventually recommended due to minimal pharmacologic treatment response, but the multidisciplinary team felt that the risks outweighed the benefits in this patient. Thus, the patient's benzodiazepine dosing was further increased to 24mg daily lorazepam equivalent (lorazepam and clonazepam), which occurred on the same day as the second rituximab dosing. Within a few days, her catatonia symptoms started showing significant

improvement. The patient became able to purposely converse, walk short distances, and use the bathroom. She also regained the ability to feed herself, which allowed for removal of the nasogastric feeding tube. After nearly two months of hospitalization, the patient was discharged to a rehabilitation facility with near full resolution of catatonia symptoms and had begun being weaned off of benzodiazepines. We believe that this patient's catatonia symptoms were due to lupus cerebritis, and that the catatonia symptoms resolved as her lupus cerebritis improved and with optimized doses of benzodiazepine totaling 24mg lorazepam equivalent daily. This case represents a rare presentation of catatonia in a juvenile with lupus cerebritis. Further, this case is also interesting given that the patient required and tolerated very high dose benzodiazepines for catatonia treatment. This poster will review the pertinent literature on this diagnosis and its treatment modalities. Better understanding of this topic will lead to practitioners having a higher index of suspicion for catatonia in patients with lupus and improved knowledge of treatment options.

No. 51

Delayed Onset of Severe Dystonic Reaction With Intramuscular Haloperidol in a Child: A Case Report

Poster Presenter: Michael Mon Lwin Chu, M.D., M.S.

SUMMARY:

Mr. G is a 13-year-old Caucasian male with a past psychiatric history of autism spectrum disorder and attention-deficit/hyperactivity disorder who was admitted to inpatient psychiatry for mood and behavioral dysregulation with suicidal ideations and gestures. The patient had been receiving scheduled medications of escitalopram, clonidine, oxcarbazepine, and was recently started on dexmethylphenidate extended release after completing an atomoxetine taper. The patient was not on any scheduled antipsychotics nor other medications with significant dopamine blockade. During his hospitalization, the patient had an episode of behavioral agitation requiring locked door seclusion for safety, and patient subsequently received intramuscular haloperidol 5mg and diphenhydramine 50mg. Twenty-six hours after his intramuscular injections, the patient was comfortably doing homework with his mother when he suddenly reported neck stiffness, difficulty breathing, and eyes looking upwards. On examination, the patient's neck was twisted to his right, and he had bilateral upward deviation of his eyes. The patient was immediately given intramuscular benztropine 2 mg; there was moderate remission of symptoms within 10 minutes of treatment. The patient was then given another intramuscular diphenhydramine 25mg. After another 10 minutes, the patient had almost complete remission of his dystonic reaction symptoms. A review of the chart and discussion with nursing revealed that no antipsychotic nor other medications with significant dopamine blockade were given in the last twenty-six hours besides the intramuscular haloperidol of 5mg. The patient's presentation was concerning for delayed onset of oculogyric crisis and torticollis in context intramuscular haloperidol given twenty-six hours before with intramuscular diphenhydramine. Additionally, there was absence of symptoms concerning for extrapyramidal side effects prior to this delayed dystonic reaction. This case illustrates the challenges and importance of diagnosing and assessing in children for potential risk of developing delayed onset dystonic reactions from intramuscular haloperidol or other high-potency neuroleptics.

No. 52

Hypoactive Delirium Mimicking as Depression: A Case Presentation

Poster Presenter: Michael Mon Lwin Chu, M.D., M.S.

SUMMARY:

Mr. R is a 72-year-old Caucasian male with a past psychiatric history of depression and medical history significant for subdural hematoma status post (s/p) evacuation, hearing impairment (with bilateral hearing aids), visual impairment, and End Stage Renal Disease (ESRD) s/p DDT who was transferred from an outside hospital to University of Maryland Medical Center for worsening renal function, concerning for transplant rejection. His hospital course was further complicated by pneumonia. Patient subsequently developed altered mental status and depressed mood with frequent tears, which led to a psychiatry consult for concern for worsening depression. The patient had been on

home sertraline each day since admission. On psychiatry's evaluation, the patient had difficult attending to interview and was easily distractible, and expressed feeling paranoid about the hospital staff. He shared he was tearful and depressed because he has been seeing his son trapped in a trashcan, calling out for help. The trashcan was a Bair Hugger next to his hospital bed. Montreal Cognitive Assessment obtained revealed a 23/30, with the patient stating he could not perform several tasks because he felt "resistance" and "slow process." The patient's clinical presentation of waxing and waning mental status along with intermittent vivid hallucinations, paranoia, confusion, sedation, and psychomotor retardation was concerning for hypoactive delirium, particularly in context of complicated hospital course of pneumonia and acute kidney injury, along with his poor vision and hearing. This case illustrates the challenges and importance of differentiating depressive and psychotic symptoms from delirium as opposed to a primary affective or psychotic disorder in a patient with a previous history of depression.

No. 53

Tall Tales, Delusions, and Diagnostic Errors

Poster Presenter: Alexander Kaplan, M.D.
Co-Author: Christopher Wayne Wilson, D.O.

SUMMARY:
Introduction: Patients with a history of psychiatric illness who report implausible stories may increase the primary team's suspicion for delusional disorders. Delusions may be defined as inaccurate views of reality that are held with strong conviction, not responsive to logic, and considered erroneous or absurd by others. Delusions may be bizarre or non-bizarre. Cognitive bias including premature assumption of delusional thinking can potentially lead to diagnostic errors and missing important aspects of patient's history that may impact their medical care. Case Presentation: The presented patient is a sixty-six year old Veteran male, with a self-reported history of PTSD and bipolar disorder, admitted for surgical repair of an abdominal aortic aneurysm. The hospital's Consultation-Liaison Psychiatry Team was consulted by the primary team for evaluation of suspected delusional thought content. The patient made statements to the primary team regarding recent release from a Filipino prison after over one year of incarceration due to false allegations of abuse. He also reported that some of his family had been killed by his step-father. The team set forth to evaluate the veracity of these claims. While the events reported by the patient appeared implausible, the psychiatric team engaged with social work to obtain contact information from the patient's sister. Social work obtained Filipino government paperwork that proved that the patient had been accused of verbal abuse by this woman and had been held in a Filipino prison for one year before being put on trial. He was found not guilty and released. Shortly thereafter, the patient arrived in Hawaii for medical treatment. Discussion: Cognitive bias may distort the accuracy of diagnosis, especially when patients are labeled as 'psychiatric'. Patients may be labeled as 'psychiatric' when they self-report a diagnosis or a psychiatric history is identified in the medical record. In this case, the cognitive bias of premature diagnosis could have led to insufficient collateral information gathering of the accuracy of these implausible stories, and therefore a false diagnosis. Such cognitive bias can be avoided by considering all alternatives, encouraging feedback between providers, and enhancing insight and awareness. Conclusion: This case presents a patient with suspected delusional disorder with consultation for diagnostic clarification and medication recommendations. Through an interdisciplinary approach and involvement of collateral sources, the accuracy of a patient's unlikely stories were confirmed. We review the concepts of cognitive bias and strategies to minimize errors in diagnosis.

No. 54

Association of Body Mass Index and Death by Suicide

Poster Presenter: Anjali Thakrar, M.D.
Co-Authors: Deepak Prabhakar, M.D., M.P.H., Brian Ahmedani, Ashli Owen-Smith, Beth Waitzfelder, Hsueh-Han Yeh, Arne Beck, Rebecca Rossom, Gregory Edward Simon, M.D.

SUMMARY:
Background/Objectives: In the U.S. suicide rates have increased by 30% since 1999. This highlights the need to develop and implement more effective

suicide prevention strategies, including identifying novel risk factors. Obesity, which affects nearly 40% of the US population, is associated with multiple medical and mental health co-morbidities. Prior studies assessing the correlation between obesity and risk of suicide mortality have yielded mixed results, with some showing an inverse relationship, while other studies have either failed to show an association or demonstrated a positive correlation. This study aims to further clarify the association between death by suicide and obesity. Methods: A retrospective case-control study was conducted to investigate the association between obesity and risk of suicide death. BMI was used to define obesity. This study involved 7 Mental Health Research Network healthcare systems and included a total of 1,120 individuals who died by suicide (cases) and 5,600 control individuals matched by time period and site. We only included individuals who had a BMI recorded during the study period. Results: After adjusting for age, gender, race, neighborhood income and education, co-morbid medical diagnoses, and mental health conditions, we found that individuals with BMIs outside normal range had a lower risk of suicide death ($p < 0.05$). Compared with a normal range BMI of 18.5-24.9, adjusted odds ratios for suicide mortality were 0.43 (95% CI= 0.28-0.65, $p < 0.0001$), 0.74 (0.60-0.90, $p=0.0027$), 0.66 (0.52-0.85, $p=0.0011$), 0.32 (0.22-0.47, $p<0.0001$), and 0.32 (0.21-0.50, $p<0.0001$) for BMI values of <18.5, 25.0-29.9, 30.0-34.9, 35.0-39.9, and = 40.0 respectively. Conclusions: This case-control study found that individuals with normal BMI have a higher risk of suicide death compared to individuals with lower or higher BMI. This may be due to the health care visits associated with abnormal BMI increasing the chances of suicide related screening and management. Future studies should investigate this possibility.

No. 55

Acute Psychotic Disorder Associated With Immunosuppressive Agent Use Years After Liver Transplantation: A Case Report

Poster Presenter: Pallavi Joshi, D.O., M.A.
Co-Author: Robert Rymowicz, D.O.

SUMMARY:

Liver transplantation is an effective treatment for advanced hepatic diseases that are refractory to current medical approaches. Immunosuppressants are required for life after transplant (1). Psychiatric complications can contribute to morbidity in liver transplantation. The etiology of the liver disease, metabolic impairment, infection, rejection, and immunosuppressives are all implicated as possible factors in what appear to be psychiatric complications. The most common psychiatric symptoms associated with liver transplant are anxiety and depression. Psychosis, mood lability, and conduct changes are less common (2). Calcineurin inhibitors have known neuropsychiatric complications. Azathioprine and cyclosporine are associated with a reduced risk of psychosis, while tacrolimus has been associated with an increased risk of psychosis (3). Most cases of cyclosporine toxicity occur within days of liver transplant and are associated with high doses delivered intravenously (4). We present a case of a 68 year old Caucasian female presenting with late-onset psychosis without apparent neurological abnormalities on a stable immunosuppressant regime over 10 years after liver transplantation. The patient started exhibiting increasing paranoia, persecutory delusions, selective mutism, and refusing to eat food. The patient refused to take her immunosuppressant pills due to the psychosis. Although late-onset psychotic episodes are described in the literature, the patient's medical history (liver transplantation and immunosuppressive therapy) and presentation guide our diagnosis to a substance induced psychotic disorder rather than an endogenous psychosis. Although psychosis may be a rare side effect of immunosuppressive agents, it can have significant impact on the long-term prognosis and treatment in transplant patients. Psychiatric treatment of these cases is important because psychotic disorders can reduce treatment adherence and indirectly cause tissue rejection. It is important to identify mental status changes in patients on immunosuppressive treatment and collaboratively manage their care with psychiatry and the transplant team. Physicians should educate patients and their families on psychiatric side-effects so that they can be identified and treated early.

No. 56

Lupus Psychosis: Expanding the Differential in a Psychotic Patient With a History of Psychosis and a Medical History of Systemic Lupus Erythematosus
Poster Presenter: Nancy S. Handler, M.D.
Co-Author: Phebe Mary Tucker, M.D.

SUMMARY:
Introduction: Systemic lupus erythematosus (SLE) is among a variety of autoimmune diseases that can present with psychosis. The diagnosis should be considered in those with a personal or family history of lupus, or with diagnostic features consistent with lupus. Although a primary psychiatric diagnosis must be considered, a good medical history is key to identifying autoimmune diseases with a CNS complication of psychosis. We describe a patient admitted to the internal medicine service with psychotic symptoms who was found to have a history of uncontrolled SLE. After initiation of SLE medications including steroids, patient's psychosis resolved without further use of antipsychotics. Case Summary: Mr. S is a 60 year-old Hispanic man with past medical history of end-stage renal disease stage 5 on hemodialysis, chronic obstructive pulmonary disease, stimulant dependence, and SLE, admitted to internal medicine for a pulmonary embolus. Patient had symptoms of psychosis including auditory and visual hallucinations and paranoia. He had multiple prior inpatient psychiatry admissions for similar symptoms, each time treated with different antipsychotics which improved symptoms, though patient stopped medications after discharge. Further investigation by rheumatology consultants revealed a history of SLE diagnosis in 1990, one year prior to onset of psychosis. At the time, patient's SLE was treated and SLE symptoms, including psychosis, resolved. Since that time, patient had stopped medications and was lost to follow-up. On admission, symptoms consistent with lupus included morning stiffness, arthralgia, anemia, positive anti-nuclear antibody, positive double-stranded DNA, positive anti-Smith and anti-ribonuclear protein antibody. Treatment for lupus was initiated with hydroxychloroquine 200mg daily and prednisone 5mg daily. Patient's psychosis resolved and he was scheduled for follow-up with rheumatology and psychiatry, though he never presented for his appointments. Discussion: Like many autoimmune diseases, SLE can effect multiple systems in the body, including the central nervous system. CNS manifestations include psychosis, mood disorders, seizure disorder, neuropathies, demyelinating syndromes and headaches. Psychiatric disturbance due to CNS lupus is a diagnosis of exclusion; other etiologies to be excluded include infection, electrolyte abnormalities, renal failure, drug effects, mass lesions, and primary psychiatric disorders. One clue to the diagnosis of lupus psychosis is that the initial episode of psychosis typically occurs during the first 1-2 years after diagnosis of SLE. Some studies report psychosis in 5% of patients while other reports range from 14-75% in patients with SLE. While low-dose steroids are often used to treat SLE and can resolve psychosis, other cases require antipsychotics to control symptoms in addition to medications for primary management of SLE.

No. 57
A Unique Case of Sudden Clozapine Withdrawal-Induced Catatonia
Poster Presenter: Rakin Hoq, M.D.

SUMMARY:
There are a growing number of published case reports in the literature describing catatonia in association with the sudden discontinuation of clozapine. Of the cases of clozapine withdrawal induced catatonia reviewed in a literature search, most cases were stabilized using gold standard treatments of benzodiazepine and ECT. The mechanism for this induced catatonic syndrome remains poorly understood, though there is some theoretical connection drawn to the GABA-nergic activity of Clozapine. In this report, we review the case of a woman with schizoaffective disorder who was psychiatrically stable on clozapine but went on to develop an acute state of catatonia after sudden withdrawal of her clozapine due to severe acute medical illness. What is unique about this particular case is, unlike similar cases previously published in the literature, the patient did not respond to traditional treatments but instead only began responding upon re-introduction of clozapine treatment. This case reinforces evidence of the phenomenon of clozapine withdrawal- induced catatonia, and also raises consideration for clozapine's own efficacy in treating catatonia of this etiology.

No. 58

How to Manage the Racist Patient

Poster Presenter: Alaa Ahmed, M.D.

SUMMARY:

Mr.R is a 54 years old Caucasian male with past psychiatric history of depression, opiate use disorder, who presented to AEMC for worsening depression secondary to his homelessness. Upon initial evaluation by The Consult Liaison team, Mr.R was verbally abusive. He used racial slurs toward team members and was difficult to engage in the interview. Being the physician in this situation was tough and puzzling, given that it not that uncommon for physicians to encounter difficult patients, it was important to try to understand this population and oneself to be able to deliver the best medical care. In this poster, the aim is to shed some light on this patient's population subtypes, backgrounds, as well as the physician's reactions towards them and the different dynamics created; attempting to find the right balance between delivering quality medical care while maintaining self-boundaries.

No. 59

"Help Me Doc, I've Got Bugs!" Delusional Parasitosis: An Etiologic Challenge for the Consultation-Liaison Psychiatrist

Poster Presenter: Diana V. Punko, M.D., M.S.
Co-Authors: Joel Jeffrey Wallack, M.D., Carmen E. Casasnovas, M.D.

SUMMARY:

Background: Delusional Parasitosis (DP), a rare and poorly understood disorder sometimes presenting in medical settings, is characterized by the fixed and false belief that one is infested with bugs. There are three subtypes: primary, secondary (to an underlying psychiatric illness), and organic (due to medical etiology). Methods: We present the case of a patient with multiple contributory and/or etiologic factors found to have DP, as well as a review of the literature, to illustrate the disorder's complexity and challenges. Results: A 58 year old woman, with diabetes, traumatic brain injury (due to motor vehicle accident at age 7), major depressive disorder (receiving outpatient psychotherapy and bupropion), past history of crack cocaine abuse, and extensive physical and sexual childhood trauma history presented to the ED with complaints of seeing and feeling bugs on her skin for about two months. She was admitted to medicine for work up of bilateral lower extremity edema with rash (treated previously with prednisone) and finding of symptomatic anemia in the setting of hematochezia. When seen by Consultation-Liaison Psychiatry, the patient produced a plastic baggie filled with traces of dust and crumbs, stating it contained "bugs" (the "matchbox sign"). She reported trouble sleeping and increased work absences due to stress over the infestation. After unremarkable medical work-up (urine toxicology; vitamin B12, folate, TFTs; RPR, HIV; non-contrast head CT), psychiatry recommended low dose risperidone and tapering of bupropion. With this regimen the formication quickly resolved. Patient developed improved insight and was able to recognize that she had been delusional. On discharge, she was referred to an outpatient psychiatrist for further care. Discussion: The usual age of onset for Delusional Parasitosis ranges from 55 to 68 years with male-to-female ratio of 1:3. Both these demographics are in fitting with our case. The disorder is likely of a neurochemical etiology with abnormalities in dopamine signaling. Theories include decreased dopamine transport in the striatum and structural lesions of the putamen. This case demonstrates several of the possible contributing factors: dopaminergic medication (bupropion), recent corticosteroid use, poorly-controlled diabetes with peripheral neuropathy, pre-existing brain injury, depression, severe anemia, history of recreational drug abuse, among others. Conclusion: For the psychiatrist who may be presented with such a case, the patient must receive a thorough medical workup prior to dismissing symptoms as a functional disorder. Once medical causes have been excluded, low dose second-generation antipsychotics (risperidone, olanzapine, quetiapine) should be initiated as first-line treatment and titrated slowly. A multidisciplinary collaborative approach (between primary care, dermatology, psychiatry, etc.) and focus on stress reduction are essential to a positive outcome of treatment.

No. 60

Psychiatric Treatment Approach to Delirium in a Patient With Newly Diagnosed Tumefactive Multiple Sclerosis: A Case Report
Poster Presenter: Alessio Luinetti, M.D.

SUMMARY:
we present a unique case of severe delirium in a patient with Tumefactive Multiple Sclerosis (t-MS) and discuss a treatment approach for neuropsychiatric symptoms. Delirium is an umbrella term defined by the Diagnostic and Statistical Manual of Mental Disorders (5th edition) as an acute, fluctuating disturbance of alertness, awareness and attention, with incidence of delirium arising during a hospital stay ranging from 6% to as high as 56% (1). Though its exact pathogenesis is still poorly understood, treatment of delirium is imperative in the acute hospital setting due to associated with increased morbidity, mortality, and length of hospitalization (2). In multiple sclerosis, delirium is often observed as a side effect of treatment rather than a presenting symptom (3,4). Classically, MS is characterized by demyelinating lesions that are disseminated through space and time. These lesions can be visualized in the brain and spinal cord with magnetic resonance imaging (MRI) as small ovoid homogeneous plaques with varying degrees of hyperintensity depending on the age of the demyelination (5). A rare variant of MS displays atypical imaging features suggestive of a space occupying lesions,, mass effect, edema and ring enhancement(6). This variant is called Tumefactive and has a prevalence of approximately 1–2 per 1000 cases of MS (7). The clinical presentation can be highly variable and nonspecific, which further complicates diagnosis of tMS. An estimated 43% of patients present with cognitive symptoms, including confusion, memory impairment, aphasia, apraxia, Gerstmann syndrome, and coma (6). Nineteen percent have encephalopathy and 2% present with with stupor or coma (8). Sixty-one percent of patients experiencethis as their first neurological event and often require extensive evaluation (6,9). Overall, the constellation of neuropsychiatric symptoms, such as delirium, cognitive and behavioral disturbances, are common in MS, even in the early stages of the disease (10), however they are not pathognomonic to a specific cerebral disease (11) and their management is not been described extensively (4, 12). It can be reasoned that tMS patients may have increased risk of delirium due to the mass effects from the lesions. To our knowledge, this is the first reported case description of a treatment approach specifically for delirium in a t-MS patient.

No. 61
Cerebellar Damage Masquerading as Depression: A Case of Schmahmann's Syndrome
Poster Presenter: Lauren Elizabeth Mahoney, M.D.
Co-Author: Justin Bracewell Smith, M.D.

SUMMARY:
Cerebellar Cognitive Affective Syndrome, or Schmahmann's Syndrome, is a disorder characterized by changes in a patient's affect and cognition caused by cerebellar pathology. While damage to the cerebellum has historically been solely associated with motor and vestibular symptoms, it is now recognized as also playing a role in modulation of affect and neurocognition. The aspects of neurocognition typically affected are executive function, language, and visuospatial processes. This case report exams a 54 year old patient admitted to the hospital on the transplant service where he was treated for complications of a kidney transplant. The patient's brother and the primary team were concerned that the patient was depressed, because his personality had appeared more withdrawn. Psychiatry was consulted to assess and treat for depression. On interview, the patient denied depressed mood. He endorsed poor sleep and appetite since being in the hospital, and low energy since his recent surgery. He otherwise denied neurovegetative symptoms. On Mental Status Exam, his affect appeared flat. His speech demonstrated a slowed, scanning quality. A MMSE exam was performed, which demonstrated deficits in recall, attention and calculation, and visuospatial tasks. Finally, his neurologic exam was notable for multiple signs of cerebellar dysfunction. Schmahmann's Syndrome typically occurs in the setting of generalized cerebellar dysfunction, but particularly in dysfunction of the posterior lobe and vermis of the cerebellum. The patient's post transplant course had been complicated by Post Transplant Lymphoproliferative Disorder. He had been treated with the chemotherapeutic agent Cytarabine, and

suffered from cerebellar toxicity as a side effect. Based on his history, the patient did not meet criteria for a depressive disorder. Given his cerebellar injury and pattern of cognitive and language dysfunction, his affective change was best explained by Schmamann's Syndrome. His family expressed finding comfort in having an explanation for their brother's behavior. In addition, the diagnosis carried implications for treatment. He was not offered anti-depressant therapy, which would have been of no benefit. Rather, he was offered treatments specifically targeted for his symptoms of insomnia and low energy which were likely sequelae of his complicated medical illness and hospitalization.

No. 62

Steroid-Induced Decompensation in Schizophrenia

Poster Presenter: Alan Tomas Rodriguez Penney, M.D.
Lead Author: Shaina K. Singh, M.D.
Co-Author: Ramaswamy Viswanathan, M.D., D.Sc.

SUMMARY:
Existing publications state mood disturbances or psychotic symptoms to be significant adverse effects of corticosteroid medication. This is commonly seen in patients initiating therapy for immunosuppression for various medical reasons. The primary risk for developing psychosis is higher dose therapy, typically prednisone 40mg or higher (Gagliardi et al, 2010). Most commonly, however, patients have developed manic or depressive symptoms rather than psychosis. These psychiatric symptoms have shown response to steroid discontinuation, lithium, and low-dose antipsychotics, although no regimen can be considered clinically superior (Zagaria, 2016). There is little literature on psychotic symptoms arising from corticosteroid therapy in patients with comorbid schizophrenia. Without such documentation, we cannot establish guidelines on corticosteroid therapy, such as benefit versus risk, and ideal management of psychotic sequelae in patients with preexisting psychotic disorders. A 52-year-old woman with a diagnosis of schizophrenia, was well-controlled on risperidone 2 mg po hs, the last of three psychiatric hospitalizations being 11 years before. She presented to her primary care physician with complaints of multiple joint pains and stiffness unrelieved with over-the-counter treatment options. She was referred to a rheumatology clinic, where she was diagnosed with rheumatoid arthritis, and started on methotrexate 10mg and prednisone 15mg po daily. Two weeks later, at her following outpatient psychiatry visit, she presented with new symptoms of talking to herself, issues with sleep, anxiety, and restlessness. She described hearing voices and having paranoid delusions about her neighbors being after her. This acute decompensation led to inpatient psychiatric hospitalization. On the unit she was withdrawn, internally preoccupied, attempted to elope, and swung at staff. Through the course of her admission, prednisone was discontinued while methotrexate was continued, and risperidone was increased to 3mg po bid with good effect. Her symptoms improved and she was discharged to outpatient care. Rheumatology was notified about the event with recommendations to avoid steroid therapy. Given our patient's stability prior to corticosteroid therapy, and the known propensity of corticosteroids to cause mood or psychotic symptoms, it is likely that the addition of prednisone led to her psychotic decompensation. We cannot conclusively prove it because of ethical and clinical concerns associated with a rechallenge with corticosteroids. Our case suggests that physicians should consider the possibility of psychotic decompensation, if contemplating corticosteroid treatment of a comorbid medical condition in patients with schizophrenia.

No. 63

Wernicke's Encephalopathy From Hyperemesis Gravidarum: A Psychiatric Perspective

Poster Presenter: Dileep Sreedharan, D.O.
Co-Authors: Emily Elizabeth Haas, M.D., Anique K. Forrester, M.D., Olga Ponomareva, M.D., Ph.D.

SUMMARY:
Wernicke's encephalopathy (WE) is a neurological condition due to thiamine deficiency. While usually associated with excessive alcohol intake, several case reports of WE resulting from hyperemesis gravidarum in pregnancy have been published. The prevalence of WE from this condition is unknown, however, it is believed to be underestimated, and remains a common autopsy finding. The progression

of the disease is characterized by delirium, oculomotor findings, and ataxia. This classic triad is not seen in all diagnosed cases, and up to 80% of cases are not diagnosed during the life of the patient. Without treatment, WE progresses to coma and death. We report two cases of WE in patients with hyperemesis gravidarum who presented to the psychiatry service and were initially misdiagnosed as having a psychiatric condition, specifically catatonia and depression. Both cases involve multiparous women with prolonged hyperemesis resulting in significant dehydration, severe weight loss, and intrauterine fetal demise. These patients presented to the psychiatry service with altered mental status, weakness and oculomotor findings. In one instance, patient was transferred to the psychiatry inpatient service with concern for catatonia and somatization after prolonged medical and neurological workup at an outside institution. In the second case, the patient was admitted to the medical ICU following intrauterine fetal demise, and psychiatry was consulted to evaluate for depression. In both cases, there was a delay in diagnosis until MRI with contrast demonstrated findings consistent with WE. Treatment with high dose thiamine resulted in mild symptom improvement, however there were significant persistent deficits in both cases. Here, we highlight the diagnostic challenges, and the need for increased awareness of WE across medical subspecialties to aid in early intervention for patients with hyperemesis during pregnancy.

No. 64

"But It's Natural, Doc!": A Case of Acute Altered Mental Status Due to an Herbal Supplement in the Setting of Cobalamin Deficiency

Poster Presenter: Jordan A. Shull, B.S.
Co-Authors: Oscar Villarreal, B.S., Tina Thomas, M.B.B.S., Caroline Lowry, M.D., Kawal Bir, M.D.

SUMMARY:

ABSTRACT Introduction Nutritional supplements can have a significant impact on health, although they are often overlooked by providers and underreported by patients. Famous for alleged weight loss properties, Garcinia cambogia is sold widespread over the counter in many countries. However, there have been case reports of negative health effects related to its use. We examine the case of a female patient with severe B12 deficiency who took Garcinia cambogia and subsequently presented with acute onset of altered mental status and psychosis. Case Ms. M, a 55 year old female with a past psychiatric history of depression, presented to the emergency department with acute onset of altered mental status of 2 days duration. She was disoriented upon arrival but reportedly complained of chest pain, dizziness, shortness of breath, and hallucinations, along with unsteady gait. Past medical history was significant for multiple comorbidities including diabetes mellitus, vitiligo, congestive heart failure, and hypercholesterolemia. Upon exam she was found to be tachycardic, hypertensive and hyperglycemic. Antibiotics were started and initially mentation improved. However, the next day she acutely deteriorated. Routine organic work-up was unremarkable. She reported paranoid delusions and a sudden onset of intermittent mutism and echolalia, psychomotor retardation, dyskinetic facial movements and confusion with visual hallucinations, suggesting a possible psychiatric etiology. Upon further investigation, she was found to have severe cobalamin deficiency and had recently begun an herbal weight loss supplement coinciding with the onset of her symptoms. Discussion We discuss the differential diagnoses of our patient's altered mental status: severe cobalamin deficiency and use of Garcinia cambogia that is reported to have adverse psychiatric effects. Several cases of mania and manic psychosis have been reported. Properties of the fruit extract and rind have been shown to have serotonergic effects that help regulate satiety, and also could be linked to psychiatric sequelae. Vitamin B12 deficiency is well-known to lead to macrocytic megaloblastic anemia, paresthesias, subacute combined degeneration, and dementia; but we discuss the rare association with other neuropsychiatric symptoms, including mood impairment and psychosis. Conclusion Ms. M's unique clinical course gives the opportunity to discuss the rare presentation of severe vitamin B12 deficiency with the concurrent use of G.cambogia. This case highlights the importance of physician and patient education regarding the detrimental effects non-FDA regulated supplements can have on mental and physical health.

No. 65

A Case Report of Irreversible Neurotoxicity Due to Drug Interaction Between Paroxetine and Lithium

Poster Presenter: Sumayya Binth Ayaz, M.D.

SUMMARY:

Background Lithium toxicity can cause persistent cognitive and neurological impairment. In acute lithium toxicity, often time the neurological damages are reversible after the cessation of Lithium and or treatment with hemodialysis. (1) However, in chronic lithium toxicity irreversible neurological damages can occur and persist despite the cessation of the drug and hemodialysis. (1), (2) Case description: A 28 years old female patient with intellectual disability and Schizoaffective disorder who has been on Lithium and Fluphenazine for several years, was brought to the ER from a group home due to altered mental status. Patient was evaluated by ER physician, routine lab and a CT scan was done to rule out acute infectious, metabolic and or neurological causes of her altered mental status and was within normal limit. Psychiatry was consulted due to patient's history of Schizoaffective disorder. Collateral from the staff at patient's group home revealed that patient was hospitalized 2 weeks ago for auditory command hallucinations, paranoia and depression and she was started on Paroxetine 20 mg for depressed mood in addition to her Lithium and Fluphenazine. Staff noticed a decline in patients function shortly after the start of Paroxetine. A lithium level was done and was 4.2 mmol/l and patient was diagnosed with lithium toxicity. On examination, patient was only responsive to painful stimuli. Patient underwent emergency dialysis, was transferred to ICU and her Lithium and Fluphenazine were stopped and never restarted. Patient's blood lithium level came back to therapeutic level after several dialysis and she was subsequently transferred to regular floor. Eventually patient developed severe dysarthria, hypophonia, rigidity in both upper and lower extremities, generalized weakness in both upper and lower extremities with inability to walk. Patient was evaluated by neurologist, physical and occupational therapist and was referred to long-term rehabilitation treatment for permanent neurological impairment. Discussion: This is the first case report of a possible drug interaction between Paroxetine and Lithium leading to severe and irreversible neurological damage. In addition to reporting the case, the article focuses on the debilitating consequences lithium toxicity, importance of educating the caregiver of a patients who are on Lithium and educating other clinicians, particularly ER physician about lithium toxicity for a prompt diagnosis and aggressive treatment of patients with lithium toxicity.

No. 66

Idle Hands Are the Devil's Workshop: A Case of Neuroleptic-Induced Catatonia

Poster Presenter: Parostu Rohanni, M.D.
Co-Authors: Rachel H. Carpenter, Amit M. Mistry, M.D., Charles Huston Dukes, M.D.

SUMMARY:

Background: Neuroleptic-induced catatonia (NIC) is a rare adverse drug reaction. Patients with NIC present with mixed features of catatonia and extrapyramidal symptoms. Catatonia is a psychomotor syndrome characterized with stupor, mutism, slow or repetitive movement while extrapyramidal symptoms include dystonic reactions, tardive dyskinesia, akinesia, akathisia, Parkinsonism, and neuroleptic malignant syndrome (NMS). This poster will discuss a clinical case of NIC which is followed by a discussion. Clinical Case: Mr. P is a 21 year-old male with history of neuroblastoma status post resection and full treatment of chemotherapy, and no known psychiatric history who was admitted for evaluation of altered mental status. As per family, two days ago Mr. P began experiencing visual and auditory hallucinations and delusions with a hyper-religious theme. The family found this peculiar because the patient was not religious. Preliminary medical investigations were within normal limits with the exception of mild leukocytosis. Urine drug screen was negative and Computed Tomography scan of the head was unremarkable. Psychiatry was consulted for concerns of psychosis. Mr. P was limited in his participation with psychiatric examination. He demonstrated echolalia, repeating the interviewer's words. He was preoccupied with his hands, stating "these are God's hands" and endorsing suicidal and homicidal ideations in a religious context. Mr. P was started on haloperidol 5mg twice daily with plans for inpatient psychiatry admission once medically

cleared due to the severity of presentation. He continued to deteriorate, progressing to mutism with episodes of upper extremity tremors, rigidity, and posturing of his hands. This worsening of his clinical picture seemed to coincide with haloperidol. The psychotropic medication was discontinued on the fourth day of hospitalization and the patient was started on lorazepam 1mg three times daily for suspected NIC. Within two days and several doses of lorazepam, Mr. P's mental status improved and returned to his baseline mental functioning; and after seven days in the hospital, he was discharged home with appropriate follow up. Discussion: This case highlights the complex presentation of NIC. Treatment of the patient's brief psychotic disorder with a typical antipsychotic led to the development of NIC. This appeared to exacerbate the psychosis presentation. Medical investigations revealed no significant findings which further complicated the clinical picture. The rapid resolution of catatonic symptoms following discontinuation of haloperidol and initiation of lorazepam are consistent with features of NIC. Although NIC is a rare reaction, it is important that clinicians be able to identify it given that NIC can progress to NMS if left untreated. Improving awareness of NIC and prescribing psychotropic medication judicially are key to preventing NIC.

No. 67

Self-Medication With Nitrous Oxide for Anxiety Leads to Cobalamin-Responsive Psychosis

Poster Presenter: Anna Cummings Rork, M.D.
Co-Author: Michelle Elise Wiese, M.D., M.P.H.

SUMMARY:

Nitrous oxide ("whippits") use, initially used for periprocedural treatment of pain, is an increasingly prevalent and cheap recreational inhalant among adolescents and young adults. Side effects of nitrous oxide use include B12 deficiency, neurologic sequelae, and psychosis. There are case reports of nitrous oxide-induced psychosis from recreational use. We present a case of a 22-year-old woman from Mongolia with a two-year history of intermittent heavy use of nitrous oxide for self-management of anxiety. Use of nitrous oxide was her means of self-medicating for anxiety and insomnia. Throughout these two years, she also suffered from severe vitamin B12 deficiency with inadequate repletion. Her case culminated in a severe psychotic and dissociative episode, a jump from a 35-40 feet height, and significant orthopedic trauma. Treatment with B12 and risperidone helped to diminish her paranoid ideations, ideas of reference, and anxiety. This case illustrates the need for asking patients about nitrous oxide use as a potential cause of psychosis. More broadly, this case shows the importance of screening patients with anxiety and mood symptoms for attempted self-medication with substances, including nitrous oxide.

No. 68

Predicting Suicidality After Medical Hospitalization: An Application of Electronic Health Record Phenotyping to Multimorbid Populations

Poster Presenter: Juliet Beni Edgcomb, M.D., Ph.D.
Co-Authors: Trevor Shaddox, M.D., Ph.D., John O. Brooks, M.D., Ph.D.

SUMMARY:

Background: Individuals with serious mental illness are at risk of psychiatric destabilization and emergence of suicidal ideation following medical hospitalization (1,2). Yet, no readily clinically interpretable risk prediction model of suicidality in this multimorbid population yet exists. Method: The objective of this study was to develop an actuarial risk algorithm predicting readmission for suicide attempt or suicidal ideation after medical (non-psychiatric) hospitalization, via application of machine learning to a multi-institutional electronic health record (EHR) dataset. There were 16,552 medical hospitalizations (Npt = 5,255) of patients with serious mental illness (major depressive disorder, bipolar disorder, or psychosis) from 2006-2016. EHR data were extracted and used to predict readmission for suicide attempt or ideation in the subsequent 12 months. Regression trees (depth 5, minimum sample 5) were implemented to hierarchically structure linear, nonlinear, and interactive predictors. As the outcome of suicidality was infrequent, we derived balanced trees and used k-fold cross-validation to internally validate the models. The sensitivity, specificity, accuracy and area under the curve (AUC) were compared. Results: 287 patients were re-hospitalized (5.5% of all patients) for suicide attempt (Npt=83) and/or suicidal ideation

(Npt=220) following medical hospitalization. The model accurately identified 107/108 rehospitalizations for suicide attempt and 378/410 rehospitalizations for any suicidality (attempt or ideation). Strongest predictors of suicidality (attempt or ideation) were: prior suicidality, >4 prior year all-cause hospitalizations, medical comorbidity score (Van Walraven score >28), diagnosis of depression at index hospitalization, history of complicated hypertension, and absence of home health supports upon discharge [Sensitivity: 92.2%, Specificity: 85.9%, Accuracy: 85.2%, AUC 91%]. The following predictors were associated with risk of suicide attempt: prior suicide attempt, age >67, >4 medical comorbidity category diagnoses, prior year ambulatory visits, administration of analgesics, history of cardiovascular disease, and American Indian or Alaskan Native race [Sensitivity: 99.1%, Specificity: 97.1%, Accuracy: 97.1%, AUC: 95%]. Conclusions: The high concentration of risk of suicidality among patients following medical hospitalization might justify increased referral to psychiatric services or aftercare interventions for patients classified as having high post-hospital suicidality risk. Identification of modifiable risk factors may inform hospital-based interventions to mitigate risk of suicide after hospitalization. This study was supported by the NIH NCATS UCLA CTSI UL1TR001881 and NIH R03MH110877 (John Brooks, PhD, MD). The UCLA Institutional Review Board approved this study.

No. 69

Application of SIRS Diagnostic Criteria in the Psychiatric ED or Acute Inpatient Psychiatric Unit

Poster Presenter: Jonathan A. Kuhlman, M.D.
Co-Authors: Fei Cao, M.D., Ph.D., Jaskirat Singh Sidhu, M.D., Ambika Kattula, M.B.B.S., Haitham Salem, M.D., Ph.D.

SUMMARY:

Mr. S is a 41 y/o Caucasian male with a past medical history of unspecified mood disorder, OCD, unspecified anxiety disorder, cannabis use disorder, cocaine use disorder, ulcerative colitis (UC), hypothyroidism and GERD. He was admitted into acute inpatient psychiatric unit, due to passive suicidal ideation with worsening anxiety and recent use of methamphetamine, marijuana and benzodiazepine. His admission vital signs showed: Temp 99.2, BP 157/90, HR 100, and RR 16. Admission lab showed: WBC 2.3; UDS Amphetamine [+], Benzodiazepines [+], and cannabis [+]; BAL <10. After admission, we resumed his home psychotropic medications, including Lithium for mood, Clomipramine for OCD, and Zoloft for anxiety. Additionally, we also resumed Levothyroxine for hypothyroidism, Famotidine for GERD. Since his recent follow-up with primary care physician didn't find any flare of UC, no specific medications was started for his UC issue. Immediately then, patient developed some altered mental status on admission night, and he was sent back to ED for full evaluation. After significant causes had been ruled out, including acute intracranial changes and infection, Mr. S was sent back to inpatient psychiatric unit to continue his hospitalization. Initially we thought his mental status change could be related to his benzodiazepine use, which was not from prescription after confirmed by his pharmacists. As his mental status deteriorated gradually, his WBC was 2.5 on Day 3 and 11. 9 on Day 14 with consistent tachycardia (more than 100/min) and basically normal temperature, respiratory rate and BP. His WBC increased significantly within 2 weeks without apparent cause, we believed it might be due to either poorly-controlled anxiety, Lithium intoxication or Amphetamine use. However, his lithium level was actually low (0.4). Meanwhile, Mr. S only complained his anxiety was "roof high" and kept requesting Benzodiazepines. His altered mental status made history collection, mental status exam, and physical exam very difficult. On Day 31, his WBC was 21.5 with Temp 99.3, HR 112, RR 21, and BP 144/93. Medicine team was asked to see patient. They found patient achieved 3 of 4 SIRS diagnostic criteria, including borderline high fever (>100), tachycardia (>90), and leukocytosis (>12). Through detailed physical exam, they found patient had pain and tenderness in the right lower quadrant of abdomen (McBurney sign [+]). Thus, patient was sent to ED immediately and CT of abdomen and pelvis confirmed patient developed severe acute appendicitis with suspected contained perforation. Then patient was admitted into general surgery. With retrospective analysis, this patient had already showed some SIRS signs on his early hospitalization. This poster will discuss application of SIRS diagnostic

criteria in Psychiatric ED or acute inpatient psychiatric unit for patient with leukocytosis, in the context of lithium use, anxiety/stress, and substance use, among others.

No. 70

Botulism: Is There a Role for Psychiatry?

Poster Presenter: Joy Jiwon Choi, M.D.
Co-Authors: Aileen Park, Hart Nicholas Kopple-Perry

SUMMARY:

Botulism is a rare but potent neurotoxin with severe medical consequences including gastrointestinal distress, descending flaccid paralysis and respiratory failure. The recovery is slow and can take up to over a year. Long-term sequelae include fatigue, general weakness, dry mouth and shortness of breath. In 2016, the Center for Disease Control reported that there were only 24 cases of foodborne botulism in the United States. We discuss a case of foodborne botulism in three family members for whom psychiatric consultation was requested by the intensive care unit (ICU) physicians. This case presents a rare opportunity to review and identify symptoms of botulism that may complicate psychiatric evaluations. Specifically, we focus on how facial paralysis and respiratory failure are associated with depression, anxiety and delirium. We also demonstrate how these examples can serve as a prototype of physical symptoms confounding diagnosis of psychiatric illness in severely ill patients in the ICU.

No. 71

Origin, Prevalence and Treatment of Delirium in General Hospital

Poster Presenter: Leonardo Hess
Co-Authors: Jaime Mario Kuvischansky, M.D., Manuel Francescutti, M.D., Pablo Bassanese, M.D., Javier Monaco, M.D., Romina Martinangeli, M.D., Julia Javkin, M.D., Ezequiel Rodenas, M.D., Carla Graziadei, M.D., Alejandro Parolin, Martina Valdelomar, Sofía Leardi, Maria Virginia Tosetti Sanz, Nicolás Salgueiro, Martín Salomon, Julieta Agraso

SUMMARY:

Introduction and objectives Delirium is a syndrome characterized by changes in the state of consciousness, cognitive alterations and psychomotor agitation. It appears more frequently in older adults and institutionalized patients. Typically occurs by a clinical cause, which when resolved, the psychiatric's presentation remits too. It is usually associated with a general deterioration of the patient's health, increased risk of death included, and high health's costs. Psychomotor agitation is a common symptom and the treatment must be based mainly on environmental measures and psychopharmacological therapy, preferably using atypical antipsychotics with sedative profile. Material and methods It is a retrospective analysis study in the general hospital in a period of 18 months. The data was obtained from the medical records in the different services that consulted the liaison psychiatry service. The Confusion Assessment Method (CAM) and Richmond Agitation-sedation scale (RASS) scales were applied as criteria for the diagnosis of delirium and the level of agitation. The intervention was based on the use of atypical antipsychotics with sedative profile (Olanzapine 5-20mg, Risperidone 0.5-3mg and Quetiapine 12.5-200mg). The data were analyzed with GraphPad-v5.0. Results 113 patients were diagnosed, with a mean age of 64 ± 12.6 years. The consultations were made from general clinic (n53), neurology (n27), post-surgery (n21), and oncology / hematology (n12). 102 patients were treated according to the aforementioned psychopharmacological intervention, presenting symptomatic reduction compared with the first evaluation (mean = 2.8 ± 0.9) to (mean = 0.52 ± 1.6) (P-value <0.001). 21 of 38 controlled patients (randomly selected) showed alterations in plasma's ionogram. No significant differences were found between hyper and hypoactive delirium. Conclusions Data obtained support that delirium is a syndrome that is related to alterations of the internal environment, frequent in the general hospital, and most of the patients present symptomatic remission with the use of atypical antipsychotics.

No. 72

Social and Labor Functionality in Patients With Diagnosis of Bordeline Personality Disorder

Poster Presenter: Leonardo Hess
Co-Authors: Jaime Mario Kuvischansky, M.D., Manuel Francescutti, M.D., Ezequiel Rodenas, M.D., Carla Graziadei, M.D., Javier Monaco, M.D., Pablo

Bassanese, M.D., Nicolás Salgueiro, Julieta Agraso, Martín Salomon, Julia Javkin, M.D., Romina Martinangeli, M.D., Martina Valdelomar, Alejandro Parolin, Sofía Leardi, Maria Virginia Tosetti Sanz

SUMMARY:
Introduction: Borderline personality disorder is a common psychiatric disease; epidemiological evidence estimates 2% of American adults. It is also estimated that approximately 19% of inpatients and 11% of outpatients in psychiatry meet criteria for borderline personality disorder. Women represent 70% of patients diagnosed. Eventhough studies show that men and women represent similar percentages, women attend for assesment more frequently than men. It is characterized by fear of abandonment, pattern of unstable and intense interpersonal relationships, self-image alteration, impulsiveness, threats of suicide or self-injurious behavior, affective instability, chronic feeling of emptiness, difficulty managing anger, and transient paranoid ideas related to stress or serious dissociative symptoms. Also, it is associated with unemployment and comorbidities such as mood disorder, anxiety and substance use. Material and Methods: The following study uses a database of outpatients with diagnosis of borderline personality disorder according to the criteria of DSM-5 in the city of Rosario, Santa Fe Argentina. Between January 2017 - June 2018. The labour integration was evaluated in relation with comorbidities, marital status and the age range. Results and conclusion: The results show from a total of 98 patients, 89 female and 9 male, and the predominant age range was 20-30 years old. About labor integration, 62 patients had a job, 25 were unemployed and 11 were students. No difference was found between the groups employed/unemployed by comorbidities or marital status. However, it seems patients over 40 years old with TBP had more difficulty to get a job. Finally, females between 20-40 years old present more suicidal attempts and drugs use, but this fact does not affect their functional impairment.

No. 73

Chlorpromazine and Deep Venous Thrombosis

Poster Presenter: Bharat Reddy Sampathi

Lead Author: Matthew Joseph Reed, M.D., M.S.P.H.

Co-Authors: Sean R. Comeau, M.D., Todd R. Wojtanowicz, M.D., Sofia K. Penev, M.D., Aline Thomaz de Oliveira e Silva, Robert G. Bota, M.D.

SUMMARY:
Since the development of antipsychotic drugs in the 1950's, a variety of studies and case reports have been published that suggest an association between exposure to typical antipsychotics and venous thromboembolisms (VTE). Therefore, when starting treatment with antipsychotics, especially low potency typical antipsychotics and clozapine, health care providers must account for the patient's existing VTE risk factors. In this case report we describe the development of a pulmonary embolus (PE) associated with use of chlorpromazine in the treatment of an acute manic episode in a 51 year old female patient with Bipolar Disorder type 1. The patient was brought to the emergency room by police on an involuntary psychiatric hold for reported bizarre behaviors at a bus stop. On evaluation, she was found to exhibit disorganized thoughts, insomnia, rapid speech, labile mood, distractibility, auditory hallucinations, and grandiose delusions. During the course of her hospitalization, she received multiple doses of PRN chlorpromazine for severe agitation ranging from 50 to 200 mg IM/PO. On day 4 of treatment, the patient experienced difficulty breathing, hypoxia, tachycardia and was found to have bilateral expiratory wheezes. CT angiography showed sub-segmental pulmonary embolus and the patient was transferred to MICU service. She was then intubated and started on heparin by the medical team. Over the course of the next day, her respiratory distress resolved and she was extubated. It is possible that chlorpromazine may indeed increase VTEs, and there are various physiological postulations regarding the mechanism of action. However, multiple confounding variables existed in our report including venous stasis and the use of restraints, tobacco, and valproic acid. Each of these variables have been shown to increase VTE occurrence. Further controlled studied are necessary to identify the true relationship between antipsychotics and VTEs.

No. 74

"Just Transfer to Psych": When Psychiatric Symptoms Represent Organic Pathology

Poster Presenter: Sonya Sandhu, M.D.
Co-Authors: Kristi Wintermeyer, M.D., Vanessa L. Padilla, M.D.

SUMMARY:
Background: Psychiatric illnesses encompassed 4.9% to 6.3% of emergency department visits in the US between 1992 and 2001. Psychosis was represented in approximately 10% of all cases. Consultation-liaison psychiatrists are often involved in the management and treatment of those patients admitted to medico-surgical floors. Case: 33-year old female with no prior psychiatric or medical history presented to a Trauma Center after involvement in a motor vehicle accident. On admission, Psychiatry was consulted for concerns of severe anxiety with illogical and repetitive speech, with an initial diagnostic impression of acute stress reaction. Patient required surgical intervention of a clavicular fracture, remaining on the orthopedic service. Psychiatry re-consulted with concerns of post-operative hyperactive delirium, for which antipsychotic (olanzapine) treatment was initiated. Upon delirium diagnosis, orthopedic service proposed transfer to inpatient psychiatry. Psychiatry recommendations included transfer to medicine, along with neurology consult, for a full work-up of altered mental status and organic psychosis before consideration of transfer to behavioral health hospital. Over the course of a week, the patient's status appeared to worsen with intermittent episodes of paranoia, hyper-religiosity, inappropriate sexual behavior, depersonalization, and aggressive behavior towards others. 30-minute EEG was completed, which showed focal neuronal dysfunction in the left temporal region, with no epileptiform activity. 12 days after admission (7 days after initiation of antipsychotic), patient noted to be catatonic (Bush-Francis rating scale = 39) with positive response to a benzodiazepine challenge. Decision was made to discontinue antipsychotics, while lorazepam and valproic acid were initiated, with subsequent resolve of delirium and catatonia. Patient was then discharged, before completion of recommended lumbar puncture and prolonged EEG. Patient returned to psychiatric emergency room with family two days after discharge due to increasing concerns of hallucinations and confusion. Patient was re-admitted, with eventual transfer to medicine in the setting of clavicular hardware failure. Neurology agreed with decision to complete organic work-up. Blood Herpes Simplex 1 and 2 IgG were positive. Lumbar puncture results showed increased protein and nucleated cells. ANA test was positive. C-reactive protein was elevated. Studies were negative for autoimmune pathology. Infectious disease was consulted and diagnosed Herpes Encephalitis. Patient started on Acyclovir. Discussion: In this case, we will discuss the importance of ruling out organic causes of new onset psychosis and altered mental status. A complete neurological work-up is warranted in such atypical presentations. We will also discuss frequent challenges faced by consulting psychiatrists when co-managing the care of patients with multiple medico-surgical teams.

No. 75
Major Depressive Disorder and Suicidality in an Adult With VACTERL Association
Poster Presenter: Anita Kulangara, M.D., M.S.
Co-Author: Asghar Hossain, M.D.

SUMMARY:
Mr. S., a 22-year-old African-American male with a past medical history of VACTERL association, mitral regurgitation, end stage renal disease requiring a renal transplant, and bladder and bowel surgery requiring urostomy bag placement, presented to the psychiatric consultation-liaison service after inserting a crayon into the ileal conduit of his urostomy bag. He has a psychiatric history of major depressive disorder and impulse control disorder. The patient had worsening depressive symptoms during the few weeks prior to admission to the medical floor from his nursing home. His symptoms included sad mood, anhedonia, hopelessness, insomnia, decreased energy, poor concentration, and suicide attempts. His prior attempts included removing his urostomy bag, wrapping a cord around his neck, and overdosing on medications. Borderline Personality Disorder and Mild Intellectual Developmental Disorder were considered in his differential diagnosis. The psychiatric consultation team placed him on constant observation for his safety, and prescribed Quetiapine 200mg twice daily, Haloperidol 5mg twice daily, Valproic Acid Extended Release (ER) 1000mg at bedtime, and Diphenhydramine 50mg as needed every 6 hours for

extrapyramidal signs. Gradually, he became behaviorally controlled and denied suicidal ideation daily. He was transferred to another medical hospital with a higher level of medical care for his renal transplant follow-up. The burden of psychiatric conditions in persons with VACTERL association requiring organ transplantation is significant. It is an opportunity for psychiatric liaison services and medical teams to work together in the care of these medically-complicated cases. Furthermore, studies note coinciding mood disorders with varying prevalence rates in this demographic. Understanding co-existing psychiatric conditions in VACTERL association may uncover potential modalities to bolster good outcomes in these patients. In this poster, we report successful treatment interventions in a case of coinciding VACTERL association, major depressive disorder and severe suicidality. Longitudinal studies across its development and management are necessary for revealing risk factors, which identify optimal targets for treatment in this group of patients. Acknowledgements: Dr. Asghar Hossain, Dr. Arturo Archila

No. 76

Psychiatric Outcomes in Individuals With VACTERL Association: A Literature Review

Poster Presenter: Anita Kulangara, M.D., M.S.
Co-Author: Asghar Hossain, M.D.

SUMMARY:
VACTERL Association includes defining characteristics such as, vertebral anomalies, anal atresia, cardiac malformations, trachea-esophageal fistula, renal anomalies, and limb abnormalities. Individuals affected by these malformations often reach physically critical states, resulting in the need for organ transplantation. Studies have demonstrated the co-occurrence of psychiatric illness in those receiving solid organ transplants. The burden of psychiatric illness in persons with VACTERL association requiring organ transplantation is significant. It is an opportunity for psychiatric liaison services and medical teams to collaborate in the care of these medically-complex patient. Furthermore, studies report coinciding mood disorders with varying prevalence rates in this population. Gathering more knowledge of co-existing psychiatric conditions in VACTERL association may uncover potential therapies to bolster good outcomes in these patients. This poster aims to review literature regarding the prevalence and interventions for psychiatric disorders among adults with VACTERL association. Longitudinal studies across its development and management are necessary for revealing risk factors, which identify optimal targets for treatment in this group of patients. Acknowledgements: Dr. Asghar Hossain, Dr. Arturo Archila

No. 77

Was This Lady Ovary-Acting? A Case Report on Post-Hysteria-Ectomy

Poster Presenter: Sabreen Rahman, D.O.
Co-Authors: Hasnain Afzal, M.D., Guitelle St.Victor, M.D.

SUMMARY:
Neuropsychiatric conditions are distressing complications of surgery and anesthesia. Certain complications linked with anesthesia exposure include emergence delirium, postoperative delirium, post-operative cognitive dysfunction, and intraoperative awareness. A myriad of factors, including various anesthetics, analgesics, and anticholinergics can cause post-operative delirium. They are associated with increased morbidity, mortality, and hospital length of stay. We present a case of Ms. MC, a 47-year-old female with no past psychiatric history who developed a brief psychotic episode 24 hours after an otherwise uncomplicated hysterectomy. She alarmingly expressed to her family and treatment team that she was aware of the events of her surgery - even as far as recalling conversations. Furthermore, Ms. MC also exhibited psychotic symptoms of depersonalization, disorganized behavior, and intense persecutory delusions where she firmly believed the treatment team was trying to kill her. The next day patient's symptoms resolved spontaneously. This case illustrates the need for increased awareness of this post-operative complication. Moreover, it highlights the role of the Consultation Psychiatrist in the assessment of this to facilitate optimal care and treatment.

No. 78

Cat Got Your Tongue: An Unusual Presentation of Catatonia in Wernicke's Encephalopathy

Poster Presenter: Saeed Ahmed, M.D.
Co-Authors: Subhan Ata, Tayo Akadiri

SUMMARY:
This is a 41 years old African American Male with a past medical history of hypertension, no known past psychiatry history, brought to the medical emergency after his mother found him in the basement of their house. He was noticed mumbling, speaking with incoherent words, urine in bottles around him, also he had not eaten 4 days prior, was confused on arrival to the emergency room. In the emergency room, the patient appeared drowsy, groggy, nonverbal, lethargic, with difficulty communicating and responding to instructions and questions. The patient was admitted to the medical services for altered mental status. The patient was later evaluated by psychiatry consultation-liaison team for depressive symptoms. He was noticed blankly staring at the interviewer, had poor eye coordination suggestive of nystagmus as well. He remained minimally responsive despite several repetitions and verbal redirections. The patient displayed waxy flexibility with a tendency to remain in an immobile position after repositioning, exhibiting stereotypical meaningless repetition of words like ``a man a woman that's it''. Following such presentation, Psychiatry team started the patient on Lorazepam 1mg q6h PRN for suspected catatonia. Laboratory testing was remarkable for lactic acidosis, negative Urine toxicology and CT scan of the head, chest, abdomen, and pelvis came unremarkable. Urine analysis and culture, CSF culture, TSH, HIV, Lyme, B12, RPR, ammonia, ANA testing, EEG were all unremarkable. Per patient's mother, he had a chronic history of Alcohol dependence for more than a decade, and he was recently fired from a job due to his Alcohol use. The patient gradually responded to given treatment; he had received 2-3 times PRN on the average/day. On day 4, movement of extremities and eating improved, the patient became able to state his name but still had staring spells and memory impairment. On day 7, the patient displayed ataxia, ophthalmoplegia, vertical and horizontal nystagmus confirmed by ophthalmology. Medical services diagnosed patient with Wernicke's encephalopathy and treated with intravenous administration of 250 mg thiamine (plus other B vitamins and ascorbic acid). The objective of this poster is to recognize the unusual presentation of catatonia in Wernicke's encephalopathy. To the best of our knowledge, this is the first case in the literature pertaining to catatonia in a patient with Wernicke korsakoff encephalopathy.

No. 79

The Role of Quetiapine in Protection of Neurodegeneration After Traumatic Brain Injury

Poster Presenter: Joseph Anthony Morra
Co-Author: Adekola O. Alao, M.D.

SUMMARY:
Schizophrenia is a chronic psychotic disorder in which patients experience both positive and negative symptoms for a period of over 6 months. Positive symptoms include hallucinations, delusions, and disorganized speech and/or behavior. Negative symptoms include anhedonia, social isolation, flat affect, and alogia. Schizophrenia is also associated with early mortality, with 40% of this excess mortality due to suicide (Hor & Taylor, 2010). This is a case of a patient with schizophrenia who was placed on quetiapine after suffering a traumatic brain injury due to a suicide attempt. The patient subsequently recovered enough to be rehabilitated. Traumatic brain injury (TBI) is commonly associated with cognitive deficits and it is important to diagnose and treat victims of TBI as early as possible. There is evidence that medications which protect neurogenesis may be useful in mitigating and potentially reversing morbidity associated with TBI. One of these medications is quetiapine, a second-generation antipsychotic typically used to treat schizophrenia. Quetiapine has been shown to significantly decrease blood brain barrier hyperpermeability by preserving tight junction integrity in small animal models (Robinson et al., 2018). This anti-inflammatory effect may also help to preserve neurogenesis in TBI patients. The patient in this case was treated with quetiapine to help protect neurogenesis and recovered enough to be discharged to a rehabilitation unit. This case may help elucidate the nature of quetiapine's neuroprotective effects in patients who have suffered TBI, but also highlights the need to further

investigate other atypical antipsychotics and their potential neuroprotective role in treating TBI.

No. 80

Catatonia in the Setting of Central Pontine and Extrapontine Myelinolysis: A Case Report and Literature Review

Poster Presenter: Asheema Saripalli, M.D.
Co-Authors: Andrea Chapman Bennett, M.D., Jordan Harrison Rosen, M.D.

SUMMARY:
Central pontine and extrapontine myelinolysis (CPEM) is a neurological disorder that most frequently occurs after too rapid medical correction of hyponatremia and can be accompanied by numerous psychiatric symptoms. In this case, a 65 year old male with no previous psychiatric or significant medical history presented to the hospital with profound hyponatremia and renal injury requiring HD in the setting of a week long water fast. He was corrected with hypertonic saline and developed significant catatonic symptoms that were only mildly responsive to benzodiazepines. Early imaging did not show characteristic findings of CPEM, though concern remained high given his presentation and history. We present a review of the literature on the topic of catatonic symptoms in the setting of CPEM and the time course of findings and how these things might dictate care in this case. We also discuss ethical questions that arose from this case.

No. 81

A Case of Nonconvulsive Status Epilepticus Mistaken for Catatonia

Poster Presenter: Asheema Saripalli, M.D.
Co-Authors: Yusuf Azim, M.D., Mudhasir Bashir, M.B.B.S.

SUMMARY:
Ms. W, a 57-year-old Caucasian woman with a past medical history of bipolar II disorder, functional neurologic syndrome, and psychogenic nonepileptic seizures (PNES), presented with 36 hours of altered mental status including inattentiveness, mutism, and staring. Physical exam was limited by inability to follow commands, but was notable for rigidity in bilateral upper and lower extremities, increased tone throughout and normal range of motion in all extremities. CT head and MRI brain did not show acute intracranial abnormalities. She was evaluated by toxicology, neurology and internal medicine in the emergency department and she was ultimately admitted to psychiatry due to concern for catatonia or conversion disorder. The following day, her responses were limited to short laughs and phrases. She could not name simple objects or explain what they were used for and also had difficulty with shifting sets. She remained disoriented, inattentive and continued to have staring spells lasting a few minutes at a time. These symptoms prompted an EEG. EEG showed encephalopathy and predominately high amplitude generalized sharply contoured theta activities. Continuous EEG as well as transfer to neurology was recommended to further clarify diagnosis. Continuous EEG continued to show predominately high amplitude generalized sharply contoured theta activities. A benzodiazepine challenge was done and resulted in improvement in both EEG findings and mentation, which was diagnostic for nonconvulsive status epilepticus (NCSE). She was started on Depakote for seizure prophylaxis and discharged with neurology follow-up. Distinguishing NCSE from catatonia poses a unique diagnostic challenge, as both conditions can present with stupor, rigidity, mutism, inattention and staring and show improvement with benzodiazepines. Obtaining an EEG distinguishes NCSE from catatonia. This is not routinely done as part of the work-up for patients presenting with altered mental status and catatonic features, especially if they have a history of a psychiatric condition that is known to be associated with catatonia. In this case, it is also worthwhile to note that the patient carried a diagnosis of PNES, and she may have had true seizure activity that a routine EEG did not capture at the time this diagnosis was made. While both catatonia and NCSE are treated in the acute setting with benzodiazepines, it is important to distinguish them because long term treatment and management differs. In catatonia, the benzodiazepine is typically continued for 3-6 months and then tapered off while in NCSE, an anti-epileptic drug is started and continued indefinitely. This particular case of NCSE mistakenly identified as catatonia in a patient with a history of bipolar disorder and a functional neurologic disorder

demonstrates the importance of completing a full medical work-up prior to reaching a definitive diagnosis.

No. 82

Catatonia With Comorbid Delirium Following Cholecystectomy of a Patient With Schizophrenia Successfully Treated With Bilateral ECT and Lorazepam

Poster Presenter: Carol S. Lim, M.D., M.P.H.
Co-Authors: Ivan Chik, M.D., M.P.H., H. Samuel Landsman, M.D., Anne Felde, M.D.

SUMMARY:

Background: Catatonia is a behavioral syndrome that can occur in the context of psychiatric and general medical disorders. Given its association with significant morbidity and mortality, prompt initiation of treatment is crucial. Most patients with catatonia respond to benzodiazepines, but patients with longstanding catatonia, with underlying schizophrenia, or with comorbid delirium are less likely to respond to first-line treatment, often requiring ECT. Although there are few case reports documenting successful treatment of post-surgical medical catatonia with ECT, the literature on the management of post-operative catatonia in a schizophrenic patient with co-morbid delirium is limited. Case Story: 72 year-old man with underlying schizophrenia managed with low dose quetiapine and no history of catatonia, developed symptoms of catatonia following laparoscopic cholecystectomy, further complicated by comorbid delirium. The surgery was uneventful, but waxing and waning mental status was noted in the post-operative period, further developing catatonic symptoms, including posturing, mutism, negativism and rigidity in subsequent days. Post-surgical medical work up including complete blood count, serum electrolytes, Computed Tomography and Magnetic Resonance Imagine of the brain were unremarkable. His quetiapine was discontinued, and he was successfully treated with bitemporal ECT with co-administration of lorazepam 2 mg IV TID. Conclusion: Treatment of catatonia generally involves discontinuing antipsychotics and treating with benzodiazepines and/or ECT. Delirium on the other hand is managed by avoiding benzodiazepines but with continued use of antipsychotics. This case suggests that the management of post-operative catatonia and underlying schizophrenia with lorazepam and ECT may be successful in the presence of a delirium.

No. 83

Psychiatric Symptoms Related to Meningioma: A Case Report

Poster Presenter: Kirija Kokulanathan, M.D.
Co-Authors: Chrissy Mathew, M.D., Vishal Biala, M.D., Jerry Carter

SUMMARY:

Brain tumors are known to cause the development of focal neurological deficits and the location of the tumor determines the resulting symptoms that manifest. Patients with tumors that produce observable neurological deficits quickly receive appropriate medical care. Contrary to this, benign tumors such as meningiomas, in particular those that compress the frontal lobe may result in symptoms that are less obvious, delaying medical care. The anterior part of the frontal lobe plays a major role in regulating personality, emotions and behavior. Patients with frontal lobe tumors tend to present with psychiatric symptoms, most frequently with personality changes, which are commonly observable only after the tumor has enlarged – hence the importance of an immediate, comprehensive medical evaluation to identify the causative factor. We present a case of a 41-year-old female who over the past year had repeated visits to the ED with complaints of headaches; no other neurological changes were noted. She also had been experiencing worsening depression over a period of 6 months, along with newly onset personality changes that led to many social stressors. Considering the vague presentation, a conservative approach was taken and the primary care physician had started her on antidepressants to treat the symptoms. Family felt overwhelmed by the changes in the patient's personality, which included increased irritability, impulsivity and temperament, distinct from her previous baseline. These changes along with accompanied social stressors led to her overdosing on her antidepressants. She was admitted to the ICU and later transitioned to the medical floors. The suicide attempt prompted a psychiatric consult. Considering the sudden onset of

her psychiatric symptoms and persistent headaches, further evaluation was done including a head CT and MRI, which showed a 4.5cm left frontoparietal lesion consistent with a meningioma. There was local mass effect upon the left precentral and post central gyri; no visible vasogenic edema or midline shift was present. The patient was transferred to another institution for surgical excision of the mass. Meningiomas are slow growing tumors that are benign, usually occurring in females of ages 30-70 years old. The manifesting symptoms and signs are largely dependent on the site involved. When presenting with focal neurological symptoms, more caution is directed at finding the causative lesion. Conversely, the cases presenting with undifferentiated psychiatric symptoms are quickly categorized as mental health/behavioral related, failing to rule out possible organic causes. Neurological findings such as headaches with concurrent new onset psychiatric symptoms including behavioral or personality changes should prompt more testing including brain imaging. This case report further stresses the impact frontal lobe tumors may have on neurobehavioral disorders and the importance of a comprehensive investigation and treatment.

No. 84

"Scratching Away": A Challenging Case of Schizophrenia With Comorbid Excoriation Disorder

Poster Presenter: Travis Krew
Co-Authors: Anna Pearl Shapiro, M.D., Elias A. Khawam, M.D., Karen Salerno

SUMMARY:

Excoriation disorder has been written about for centuries and is suspected to have overlapping pathophysiology with obsessive-compulsive disorder and tic disorder. Treatments include cognitive behavioral therapy, selective serotonin reuptake inhibitors, and tricyclic antidepressants (1). However, the diagnosis and management can become more complicated when combined with psychosis. Treatment for excoriation disorder is based on self-monitoring, cognitive restructuring and the need for overall insight (1). This may not be possible in patients who are struggling with a psychotic disorder. We present a case of a 39-year-old homeless male with severe excoriation disorder in the setting of chronic schizophrenia. He arrived in the emergency room with complaints of a back sore. The patient had been compulsively picking at a wound on his sacrum causing a large, necrotic lumbosacral ulcer. He developed a severe skin infection and sepsis requiring medical hospitalization and treatment. The patient had been hospitalized five times before presenting to our care but had left against medical advice from previous hospitals. Throughout his admission, the patient struggled with agitation, demands to leave against medical advice, and continued picking behaviors. He was tried on a variety of medications, including haloperidol, aripiprazole, sertraline, gabapentin, lorazepam, and diphenhydramine. These medications appeared to improve his symptoms. It was determined that he lacked capacity to leave against medical advice, and a guardianship application was completed. His care required a significant collaboration between consultation-liaison psychiatry, the primary medical team, and social work. Once the patient was medically stabilized, he was transferred to inpatient psychiatry for continued treatment while awaiting guardianship. It is well known that patients with severe mental illness are at a higher risk of medical comorbidities and mortality when compared to the general population. Our patient suffered from a sharp decline in health over several months due to nonadherence with medical treatment and difficulties managing his psychotic disorder. In our presentation, we will discuss the pathophysiology, diagnostic criteria and the potential role of antipsychotic medications in the treatment of both excoriation disorders and psychotic disorders. We will highlight the importance of a multidisciplinary team approach in the management of seriously ill patients with comorbid excoriation disorder.

No. 85

WITHDRAWN

No. 86

A Psychiatric Consultation-Liaison's Guide to Factitious Disorder With Psychological Symptoms

Poster Presenter: Christopher Reid
Co-Author: Johanna Villasenor

SUMMARY:

Ms. A is a 34 year old African American female with psychiatric history of opioid use disorder, sedative, hypnotic and anxiolytic use disorder, high medical inpatient and Emergency Department recidivism, and medical history of tracheostomy, multiple back surgeries and multiple abdominal surgeries including subtotal colectomy. She was evaluated by the psychiatric consultation liaison team for a suicide attempt after patient initially presenting to the Emergency Department with abdominal complaints. Upon evaluation, patient attributed her chronic abdominal complaints and multiple abdominal surgeries to a self reported diagnosis of pseudomyxoma peritonei. After thorough chart review, no factual data available substantiated a diagnosis of pseudomyxoma peritonei. An oncological consultation did not reveal active disease. It was discovered that patient had become bacteremic during an admission to a medical inpatient ward one month prior. At that time, cultures grew bacteria found only in soil or feces, and her primary team documented their concern for intentional PICC line manipulation. During psychiatric interview, patient was vague and inconsistent in her report as to why she is consistently nonadherent with outpatient treatment. Collateral obtained from patient's family and outpatient providers revealed multiple inconsistencies when compared to patient's report of both psychiatric and somatic complaints. After careful consideration, patient was provided a diagnosis of Factitious Disorder. It has been theorized that the deceptive behaviors of patients with Factitious Disorder are unconsciously motivated and consciously fraudulent stemming from early deprivation or trauma. In this poster, we discuss techniques Consultation Liaison psychiatrists may utilize to: 1) identify patients with Factitious Disorder when their history and presentation is suggestive of the diagnosis (patient's with a constellation of but not limited to the following: objective evidence of deceptive behaviors, patient's with numerous allergies, high hospital recidivism, few visitors, inconsistencies in reported history, multiple feigned psychological symptoms, and inexplicable test results), 2) feel more confident in providing a diagnosis of Fictitious Disorder when it is warranted, 3) relay the diagnosis to the patient, and 4) care for the patient with a multidisciplinary framework in mind.

No. 87

Radiation Toxicity to the Right Frontal Lobe Presenting as Psychotic Mania

Poster Presenter: Roxanne Sholevar
Co-Author: Ahmed Sherif Abdel Meguid, M.D.

SUMMARY:
Mania can occur secondary to focal brain lesions e.g. stroke, neoplasm, and deep brain stimulation (Satzer, 2016). Radiation can result in CNS toxicity described as encephalopathy in the acute period, pseudo-progression of tumor in the early-delayed period, and radionecrosis and cognitive decline in the late-delayed period (Keime-Guibert, 1998). There have been no reports of psychiatric syndromes as the only manifestation of focal radiation toxicity. We present a case of a patient who developed psychotic mania after radiation to the brain. The patient is a 45-year-old right-handed male with no psychiatric history and a right frontal grade II oligodendroglioma diagnosed a decade ago who developed symptoms consistent with mania and psychosis while receiving fractionated radiotherapy. He had no psychiatric symptoms at diagnosis and was managed with resection and chemotherapy. Radiotherapy was initiated for an asymptomatic enlarging tumor nodule in the resection cavity margin discovered on surveillance imaging. His psychiatric symptoms had a subacute onset and consisted of irritable mood, decreased need for sleep, impulsivity, and thought disorder with an intact sensorium and cognition to testing. Diagnostic workup including neuroimaging revealed no abnormality. His presentation was severe enough to warrant four involuntary hospitalizations in the three months after symptom onset, and he achieved remission of mood disturbance and improved impulse control only after initiation of oral risperidone. He has maintained stability as an outpatient on long-acting injectable risperidone to date. We propose that radiation therapy to the non-dominant frontal lobe can produce a manic syndrome independent of tumor recurrence. This is consistent with prior reports of non-dominant frontal lobe lesions presenting as mania. This case was complicated by the patient smoking cannabis

regularly during his symptomatic period; however, he had premorbid cannabis use and has continued to smoke cannabis after stabilization. It is also unclear whether his stabilization was due to the self-limited nature of early-delayed radiation toxicity or to mood stabilizing effects of risperidone. His presentation differs from known CNS radiation toxicities, such as acute encephalopathy and clinical pseudoprogression. This is the first report to our knowledge of localized radiation toxicity to the brain presenting as a solely psychiatric syndrome in a patient with no psychiatric history. This case report suggests that the spectrum of neuropsychiatric syndromes caused by cranial radiation therapy is broader than previously recognized, warranting closer attention following treatment.

No. 88

Catatonic Presentation in Prion Disease: A Case Review

Poster Presenter: Eyden Sayah, D.O., M.H.S.

SUMMARY:

71-year-old Hispanic female w/PMH of HTN, COPD, DM, and schizophrenia presented to the ED with mutism, posturing and stupor. Per patient's daughter, the patient had been living with different family members and had not been compliant with her oral Olanzapine. Family reported the patient had been decompensating over the past several months with mental status worsening to the point where she was not eating, drinking, moving or verbally communicating. Due to a rapidly declining mental state, the patient's outpatient psychiatrist recommended the patient be seen in the emergency department for further evaluation and care. In the ED, initial labs including, CBC, CMP and thyroid, were all negative. After psychiatric consultation the patient was admitted to the medical floor for management of catatonia. IV Ativan was initiated which improved her rigidity and waxing flexibility, but not her mental status. EEG suggested metabolic encephalopathy. MRI of brain as well as lumbar puncture concluded a final diagnosis of Creutzfeldt-Jakob Disease. The CSF fluid was sent to Mayo Clinic regarding encephalopathy panel (14-3-3, tau, S100, and neuron specific enolase). The patient was transferred back to the initially admitting hospital where her vitals remained stable, but she continued to be non-verbal. She was placed on comfort care and discharged to SNF with hospice placement. Literature Review Creutzfeldt-Jakob Disease (CJD) occurs at a rate of 1 in 1 million per year, making it the most common prion disease. Sporadic Creutzfeldt-Jakob Disease (sCJD) is 90% of cases and less that 1% are iatrogenic or variant with Familial CJD representing 10% of cases. Typically the presentation is rapid in cognitive decline along and the development of myoclonic jerks. Catatonia is now being recognized as a feature of primary general-medical and neurological diseases. In a 20 year Mayo Clinic Study on Catatonia due to General Medical Condition, they found that absence of psychiatric history and history of clinical seizure were associated with increased risk. Along with finding Encephalitis occuring at a high frequency among patients who were positively identified. Spinal fluid analysis proved the most useful test in the acute setting, along with EEG (3). Discussion Creutzfeldt-Jakob Disease has been described in the literature with psychiatric presentations co-occurring with the rapid cognitive decline most commonly behavioral and mood disturbances, but is not a common presentation. Initially in this case, catatonia was believed to be secondary to mental illness due to history of chronic schizophrenia. Once collateral information was obtained outlining a recent history of abrupt cognitive changes, catatonia due to general medical condition became more suspected than catatonia secondary to primary mental illness. sCJD became the working diagnosis, which was supported by EEG and Spinal Fluid Analysis.

No. 89

Rytary-Induced Visual Hallucinations in a Patient With Parkinson's Disease: A Case Report

Poster Presenter: Anastasia Krivko, M.D.
Co-Authors: Adrianna Gatt, Guitelle St.Victor, M.D.

SUMMARY:

Rytary is a relatively new Extended-Release Levodopa Carbidopa medication FDA approved in 2015. It is designed to provide an initial rapid absorption of Levodopa comparable to Immediate-Release Carbidopa-Levodopa. Rytary, in addition, maintains stable Levodopa concentrations with reduced peak-trough excursions.2 The aim of this longer, more consistent availability of dopamine is to

minimize the dyskinesia and motor fluctuations associated with pulsatile stimulation of dopamine receptors. Ms. K's initial diagnosis of Parkinson's Disease was 30 years ago. For the past 4 years, she started experiencing worsening parkinsonian symptoms between three times a day dosages, commonly known as the "on-off" phenomenon.1 Therefore, her neurologist recommended the patient to be switched to Rytary. Safety and efficacy have been tested for Rytary. However, most patients switch to this medication from an immediate release version. This shift has fueled many clinical trials and research publications on how to effectively dose a patient switching to the ER formula.2,5 More research needs to be conducted in order to decrease the frequency and severity of risks associated with fluctuation in medication dosages.

No. 90
WITHDRAWN

No. 91
Increased Mortality in Patients With EEG Findings of "Diffuse Slowing"
Poster Presenter: Robert Wanzek
Co-Authors: Nicholas Bormann, Sayeh Sabbagh, Gen Shinozaki, M.D.

SUMMARY:
Background: Delirium is very common in older patients, complicating at least one in five hospital stays and is associated with mortality as high as 40% after one year follow up, but it is frequently underdiagnosed in the hospital. It is defined as an acute decline in attention and cognition with a fluctuating course and is typically identified by clinical assessment using the Confusion Assessment Method (CAM) or similar questionnaire style instruments. Findings of "diffuse slowing" on standard electroencephalogram (EEG) also is a characteristic feature of delirium and helpful in identifying delirious patients. This study planned to investigate associations between EEG findings of "diffuse slowing" read by neurology specialists and one-year mortality. Methods: Inpatient subjects 55 year or older who received a 24-hr standard EEG at the University of Iowa Hospital and Clinics between 2015 and 2017 were identified by retrospective chart review. EEG reports were extracted and coded based on specific EEG findings listed in the report documented by neurologists specialized in electrophysiology. In addition, Charlson Comorbidity Index (CCI) scores were calculated with ICD10 coding for all subjects. Mortality status and date of death were established using hospital chart review and searches for obituaries. Logistic regression models were used to calculate the association between the specific EEG abnormal finding of "diffuse slowing" versus normal finding with mortality status controlling for age, sex, and CCI score. Results: 272 subjects were identified. Subjects' average age was 69 (SD=10). 147 subjects (54%) were male and 125 (46%) were female. The average CCI score was 3.2. 107 subjects (39%) had a normal EEG and 165 (61%) had a finding of "diffuse slowing." 9 (8.4%) of those with normal EEGs died and 70 (41%) of those with an EEG finding of "diffuse slowing" died in a follow up period of at least one year. The average time-to-death was 65 days after EEG and median 14 days. After controlling for age, sex, and CCI, an EEG finding of "diffuse slowing" was associated with greater likelihood of mortality vs. those with normal findings on EEG ($P < 0.001$). The data was visualized with Kaplan-Meier-style curves demonstrating the difference in mortality over time as early as 30 days after EEG between the two groups. Conclusion: Our findings show that an EEG finding of "diffuse slowing" in the inpatient setting for patients 55 year or older is associated with greater mortality, most of which is in the first 30 days following EEG. Our study suggests that the finding of "diffuse slowing" on EEG, which is a characteristic EEG feature for delirium, is a useful clinical marker for predicting mortality and potential opportunity to intervene to improve patient survival.

No. 92
Challenges in C/L Psychiatry: Managing Patients With Postural Orthostatic Tachycardia Syndrome
Poster Presenter: Tahia Haque, M.D.
Co-Authors: Amy Beth Cooper, M.D., Matthew Boyer, M.D., Madeleine Fersh, Humaira Shoaib, M.D.

SUMMARY:
Ms. P is a 41-year-old female with a past medical history of dysautonomia, idiopathic thrombocytopenic purpura, and irritable bowel syndrome, and a past psychiatric history of somatic

symptom disorder and borderline personality disorder. She presented to the emergency room with chest pain, heart palpitations, and shortness of breath and was admitted to the medical service for failure to thrive. Prior to this, the patient was admitted to the hospital six times in the past year for a myriad of physical symptoms. All workups were negative and included collaboration amongst specialties such as neurology, cardiology, pulmonology, and gastroenterology. Consult-liaison psychiatry was consulted during this hospitalization, and extensive resources, time and effort were put into Ms. P's medical and psychiatric care. Due to her debilitating anxiety and preoccupation with medical illness, it was deemed that Ms. P was unable to care for her basic needs, and she was ultimately admitted involuntarily to an inpatient psychiatric hospital. Throughout her care, many providers experienced strong countertransference towards Ms. P, who displayed narcissism, projective identification, and a pervasive refusal to accept help. This left her and her providers dissatisfied with treatment outcomes. Postural orthostatic tachycardia syndrome, or POTS, is a challenging disorder to manage in an inpatient medical setting, and often presents with multiple psychiatric comorbidities. It is usually accompanied by dizziness, weakness, palpitations, nausea, and anxiety. The pathogenesis is unclear, and current medical interventions are not successful in bringing symptom relief. These patients often feel disregarded by the medical community and produce countertransference in providers involved in their care. As a result, many patients have turned to social media for support, blogging their journey with this disorder through the use of hashtags like #invisibleillness and #spoonies. This case review will provide background into POTS and discuss current literature and psychiatric management. The presentation will highlight obstacles in treatment, including issues of transference and countertransference, and collaboration with other medical specialties. Lastly, it will explore the positive and negative impact of the new social media movement surrounding this disorder.

No. 93

A Psychiatric Consult for Delirium: Valproate-Induced Encephalopathy

Poster Presenter: Faiq Hamirani

Co-Authors: Swapnil Khurana, M.D., Fnu Syeda Arshiya Farheen, M.B.B.S.

SUMMARY:

Introduction: Depakote induced toxicity needs early recognition and treatment as it can lead to potentially life-threatening complications. We report herein a case of Depakote toxicity and discuss about the treatment options. Case Presentation: 31y/o Male with history of Unspecified Intellectual Disability, Seizure disorder, Bipolar disorder and Psychosis NOS presented to our ED from his Group Home after he was found wandering by Police in his neighbor's yard confused and acting strangely). After arrival he was found to have altered mental status, VPA level elevated at 228 microgram/ml, Ammonia was elevated at 66 micromole/L, LFT were notable for mild transaminitis, CBC showed macrocytic anemia and thrombocytopenia and BMP was notable for mild AKI. His home dose of Depakote was 2000 mg 4 times daily. On the floor, the patient was disoriented, drowsy with intermittent episodes of agitation. He had multiple episodes of fecal and urinary incontinence too. Psychiatry was consulted for management of delirium. Patient was poor historian, per collateral from group home the patient had been having poor sleep and episodes of agitation recently prior to admission. On MSE included psychomotor agitation, disorientation, labile affect within a normal range and distractibility. Bilateral tremors were noted with mild cogwheel rigidity in all 4 extremities. Depakote was held. The patient received supportive management along with L Carnitine syrup. The VPA and Ammonia levels trended down over the course of his stay and AKI resolved. Discussion: Depakote is indicated in the treatment of seizures, bipolar disorder and migraine prophylaxis. It is primarily metabolized by the liver via glucuronic acid conjugation. Its therapeutic range is 50 – 100 microgram/ml. At therapeutic range it is eliminated by first order kinetics and has small volume of distribution whereas at high dose it has a high volume of distribution and is less protein bound which increases the toxicity which is characterized by several biochemical abnormalities, including hyperammonemia, hypernatremia, hypocalcemia, increased osmolal and anion gap, respiratory alkalosis, metabolic acidosis, increased transaminase activity, cerebral edema, encephalopathy.

Encephalopathy is caused by hyperammonemia (at therapeutic and supratherapeutic concentrations due to neurotoxic VPA metabolite 2-propyl 2 pentenoic acid). Treatment includes: supportive management, treatment with naloxone (to reverse the CNS depression) and L carnitine supplementation. As VPA mediated hyperammonemia is associated with L carnitine deficiency, thus L carnitine supplementation may reduce the hyperammonemia. Procedures like hemodialysis and hemoperfusion can be beneficial although there have been no controlled studies to confirm. Conclusion: Studies indicate that valproate toxicity causing AMS may be more common in psychiatric patients but underrecognized and thus inadequately treated. Prompt treatment improves outcomes.

No. 94

A Suspected Case of Baclofen Withdrawal

Poster Presenter: Nishant Bhat, M.B.B.S.

SUMMARY:

We present the case of a 44 year old female with a history of Chiari malformation, spontaneous spinal leak, meningioma, endometriosis & gastroparesis who was admitted with persecutory delusions, hallucinations, dysuria, blurred vision and xerostomia. Vital signs showed tachycardia and hypertension. CT head and labs were unremarkable except for borderline hypoglycemia and hypocalcemia. Her BAL was unremarkable while UDS was positive for benzodiazepines and opioids. Her home medications included Oxycodone, Baclofen, Diphenhydramine, Cyclobenzaprine, Lorazepam, Pantoprazole, Atorvastatin and Ondansetron. Due to initial concern for anticholinergic toxicity, Cyclobenzaprine, Diphenhydramine and Baclofen were held and delirium recommendations were made. She was also put on CIWA-Ar triggered Lorazepam due to suspicion of benzodiazepine withdrawal. 6 days following admission, she continued to deteriorate clinically and became increasingly disoriented and disorganized along with visual, tactile and auditory hallucinations. She continued to have xerostomia, urinary retention and tachycardia up to 140 beats per minute and hypertension up to 156/104 mm Hg. CAM-ICU was positive for delirium. Her signs and symptoms did not improve despite escalating Lorazepam administration peaking at 22 mg per day. Considering the lack of improvement in clinical status with discontinuation of anticholinergic agents and increasing Lorazepam dosage, Baclofen withdrawal was strongly considered as a differential. A recommendation was made to administer Baclofen 10 mg BID. Her presentation improved dramatically within a day, with resolution of paranoia and perceptual disturbances with negative CAM-ICU. Vital signs improved on day 2 of restarting Baclofen. Lorazepam was rapidly tapered off. She was discharged the following day with complete resolution of signs and symptoms. Patient was continued on Baclofen with recommendations for slow taper as an outpatient. Discussion: Baclofen is a GABA-B analog commonly used as a muscle relaxant [1]. Withdrawal from it can present with disorientation, hallucinations, delusions and autonomic disturbances [2]. In our case, the patient's presentation was complicated by concomitant use of multiple anticholinergic medications. Given the worsening of symptoms despite exclusion of anticholinergic medications, Baclofen withdrawal was strongly suspected. Her rapid resolution of symptoms with re-initiation of Baclofen was highly suggestive that her presentation was due to Baclofen withdrawal. Conclusion: Baclofen withdrawal can present with symptoms of delirium. Clinicians should be mindful of this etiology as a cause in patients who are abruptly discontinued from Balcofen. Symptoms can rapidly improve with re-initiation of the medication and may not respond adequately to discontinuation of anticholinergic medications or symptom triggered dosing as expected with alcohol or benzodiazepine withdrawal.

No. 95

Unusual Presentation of Catatonia Associated With Anoxic Brain Injury

Poster Presenter: Karolina S. Mlynek, M.D.
Co-Author: Ngu Wah Aung, M.D.

SUMMARY:

Initially described in 1874, catatonia, a neuropsychiatric syndrome, characterized by abnormal movements, behaviors and withdrawal, is a condition that is most often seen in mood

disorders, but can also be seen in psychotic, medical, neurologic, and other disorders. (1,2) Most episodes of catatonia can be classified as excited, retarded or malignant. (3) We report a case of excited catatonia due to cerebral hypoxia. A 28 year-old Caucasian female with history of MDD, GAD, and ADHD was admitted post-suicide attempt by hanging. She was found with a cord tied around her neck with agonal breathing. On admission her GCS was 3 and Head CT showed early anoxic brain injury with no acute fracture of cervical spine. During hospital course, she was somnolent and ventilator-dependent due to acute respiratory failure and was found to be in sympathetic storm. She was started on Clonidine patch, Gabapentin and Propranolol. She was sedated on Fentanyl and Versed drip. She displayed signs of agitation, with frequent arching of her back and pulling of lines and tracheostomy tube, and required 4-point restraints and received doses of IM Haldol. Haloperidol was switched to quetiapine as her agitation worsened. She was finally weaned off sedation but required 4-point restraints with intermittent agitation. She opened her eyes spontaneously but was not communicating. Her labs were mostly within normal limit and her brain MRI/EEG did not suggest acute findings to explain her altered mental status. Because of this, Ativan challenge was conducted to assess for catatonia. Approximately 20 minutes after 2 mg IV bolus, the patient transitioned from unresponsiveness to responding to commands. We repeated another 2 mg as she continued to be agitated, after which she was sedated. She was maintained on Ativan 1 mg TID PO thereafter. On the second day, she started to engage in conversation with good eye contact after almost a month of agitation in critical care unit. The word Catatonia means “tension anxiety”, in Greek (4) and is an all encompassing behavioral term that is heterogeneous in presentation. The classic presentation is the retarded subtype that includes negative signs such as staring, immobility and posturing. (4,5) Overall, excited catatonia is a less common presentation, with a more prolonged psychomotor agitation, which should be recognized. (4) It can lead to life threatening delirium, hyperthermia, and autonomic dysfunction if untreated. This case demonstrates the need to consider catatonia in the setting of cerebral hypoxic insult within the context of mood disorder. Prompt recognition can lead to resolution of symptoms with early treatment with benzodiazepines. Prolonged cerebral hypoxia, may result in a wide spectrum of acute neurologic manifestations. Catatonia is rarely described after cerebral hypoxia. It is important to have a high index of suspicion for catatonia in agitated patients with comorbid psychiatric disorders after hypoxic event.

No. 96

Insulinoma, Prion Disease or Neither: A Mystery in a Patient With New-Onset Behavioral Changes

Poster Presenter: Karolina S. Mlynek, M.D.
Co-Author: Jason Patel

SUMMARY:

Pancreatic endocrine tumors are very rare, with incidence of 4 cases per million. Insulinomas are the most common type of those tumors. (1-2) Creutzfeldt- Jakob Disease (CJD) occurs with an incidence of about 1 case per million in the United States. (3) Those unusual diagnoses can present with vague symptoms that can be easily misdiagnosed as neurological or psychiatric in nature. A 57 year old Caucasian female with no past psychiatric history, highly functional at baseline diagnosed with Hodgkin's lymphoma, stage IIA, status-post 4 cycles of ABVD presented to emergency department (ED) for 2 weeks of increasing confusion. On arrival, she was AAOx2 with labs notable for blood glucose of 48, TSH of 22 (normal FT3/FT4) and urinalysis positive for leukocytes. During that initial admission, patient was paranoid, delusional and intermittently refusing care. Psychiatry was consulted to address altered mental status etiology and initially diagnosed the presentation as consistent with delirium. Patient returned to ED several days later with worsening confusion and hypoglycemia. Additional work-up was positive for 14-3-3 in cerebrospinal fluid, suggesting potential diagnosis of CJD. Brain biopsy was being considered, however, neurosurgery recommend against brain biopsy as there was no lesion to target according to the imaging studies. Endocrinology consult recommended endoscopic ultrasound and angiography with intra-arterial calcium stimulation and hepatic venous sampling of insulin levels was recommended, however due to a possibility of prion disease, was not obtainable due lack of disposable equipment. This patient presented

with a lot of confounding variables, making it difficult to rule-out a purely psychiatric diagnosis explaining her behavioral, cognitive and emotional changes. It is possible that due to her high-functioning status, she might have lived most of her life with an untreated psychiatric condition that came to light, precipitated by multiple medical problems. Patient could also have CJD at a very early stage during which the mentation and personality changes are subtle. Although rare, the possibility of insulinoma and prion disease should be taken into account in the presence of vague neuropsychiatric presentation. (1-3)

No. 97

Major Depressive Disorder in End-Stage Amyotrophic Lateral Sclerosis: Integrated Care Issues

Poster Presenter: Marco Christian Michael, M.D.
Co-Authors: Ramaswamy Viswanathan, M.D., D.Sc., Yaacov Anziska

SUMMARY:
Amyotrophic Lateral Sclerosis (ALS) has been found to have genetic, histopathological, and clinical overlap to frontotemporal dementia. Additionally, people with ALS also have psychiatric comorbidities, with depressive disorders being the most prevalent. Of note is that premorbid major depressive disorder (MDD) often precedes the diagnosis of ALS itself. The following case illustrates the importance of adequate diagnosis and management of depression in persons with ALS. A 39 yo man with ALS presented with cachexia. Twenty-one months earlier he developed bilateral hand weakness/contractions and numbness. ALS was diagnosed after electromyography. Subsequently, the patient became progressively weaker with dysarthria and dysphagia. Riluzole 50mg twice daily failed to halt the progression of symptoms. He complained of sad mood and escitalopram 10mg daily was started. In month 7 he was hospitalized for intractable pain. Psychiatry was consulted for weight loss, depressed mood and decreased appetite. He was diagnosed with Adjustment Disorder with depressed mood, and escitalopram was switched to mirtazapine 15mg at bedtime to help with appetite and sleep. He did not present with comorbid dementia. He had three additional hospitalizations in the next 4 months for functional decline and intractable pain, had persistent worsening depressive mood, was diagnosed with MDD, and mirtazapine dose was increased to 30mg. The patient did not follow up with recommended outpatient psychotherapy, citing difficulties in ambulation. Upon hospitalization on month 19, he had become more undernourished and depressed, refused percutaneous endoscopic gastrostomy (PEG) placement and chose to be discharged home. However, in month 21 he returned with cachexia, refusing oral medications and with intermittent crying outbursts. He had stopped taking his oral medication since discharge. The hospital course was complicated by his refusal of PEG, as he associated it with end of life. A psychiatry resident rotating in neurology provided integrated neurologic and psychiatric care, overcoming communication challenges from impaired vocalization with great patience and by focusing on expressed emotion. With continuous encouragement and supportive psychotherapy, and restarting mirtazapine, the patient ultimately agreed to PEG placement. Pain management, sleep, mood and appetite improved during hospitalization. He tolerated PEG feeds, finally met his daily caloric needs and was successfully discharged to home hospice. This case illustrates the importance of an integrative approach in managing depression in neurological disorders. For patients with ALS, depression screening is crucial and early intervention is warranted to alleviate distress. Patients with ALS have a higher caloric need and weight loss can be detrimental to maintaining overall health. Prompt detection and aggressive management of depression can offer needed symptomatic relief and improve quality of life.

No. 98

Demographic Pattern and Hospitalization Outcomes of Depression Among 2.1 Million Americans With Four Major Cancers in the United States

Poster Presenter: Rikinkumar S. Patel, M.D., M.P.H.
Co-Authors: Kuang-Yi Wen, Rashi Aggarwal, M.D.

SUMMARY: Objective: To compare the prevalence and demographics of depression in four most common cancers in the United States and evaluate the differences in hospital outcomes including

morbidity, mortality, inpatient stay and cost in patients with the major depressive disorder (MDD) versus without MDD. Methods: This was a five-year cross-sectional study using a nationwide inpatient sample (2010-2014) provided by the Healthcare Cost and Utilization Project (HCUP). We selected 2,121,020 patients (>18 years' age) who had received a primary diagnosis of breast, lung, prostate and colorectal cancers. Target group included patients with co-diagnosis of MDD and were compared with non-MDD patients. Descriptive statistics were used to summarize the results. Pearson's chi-square test and independent sample T-test were used for categorical and continuous data, respectively. Results: The MDD prevalence rate was highest in lung cancer (11.5%), followed by breast (10.3%), colorectal (8.1%), and prostate cancer (4.9%). Depression was most prevalent in breast cancer in the 41–60 (49.7%) age group and on the contrary depression was prevalent in the lung (58.8%), prostate (54.3%) and colorectal (46.7%) cancer in the 61–80 age group. MDD was prevalent in females than non-MDD group in lung (63.8% vs 46.6%) and colorectal cancer (63.2% vs 47.7%). MDD was seen more in Caucasians and less in Blacks in all cancer types compared to the non-MDD group. Severe morbidity at admission was seen in the greater proportion of MDD group in all cancer types and was very high in lung cancer (60.5% in MDD and 55% in non-MDD). The mean inpatient stay and cost were higher in MDD group compared to the non-MDD group, with highest among colorectal cancer patients (8.6 days and $71,714 in MDD vs 7.8 days and $69,948 in non-MDD). Discussion and Conclusion: Older age is a risk factor for psychiatric illness in cancer patients [1]. Colorectal, breast and lung cancer showed significance for female predominance [2]. A prospective study conducted by Nipp et al concluded longer hospital stay in cancer patients was due to psychological distress (B= 0.11; P= .040) and depression symptoms (B= 0.22; P= .017) [3]. As per the Medical Expenditure Panel Survey (MEPS) data study, the average annual health care expenditures were higher in cancer patients with MDD compared to non-MDD [4]. The findings of our study recommend that future policy efforts are required to decrease excess healthcare expenditures related to depression in cancer patients. The results also highlight the importance of the integrated clinical care model in psycho-oncology to improve screening for depressive symptoms, preventing major depression, and appropriate management for depression.

No. 99

Psychosis and Catatonia Due to Recurrent NMDAR Encephalitis: Psychiatrist as Multidisciplinary Compass

Poster Presenter: Vecheslav Fedorchenco, M.D.
Co-Authors: Joseph L. Kugler, M.D., Alba Lara, M.D.

SUMMARY:
Ms. T is a 28-year-old African American woman initially diagnosed with NMDAR encephalitis in 2014. Prior diagnosis of depression and psychiatric admission during the index episode resulted in a delayed diagnosis and treatment. A 3-year period of return to functional baseline with residual cognitive deficits followed appropriate treatment with IVIG, corticosteroids and teratoma-negative left oophorectomy. She then presented to our medical center in late 2017 with subacute onset of non-specific fatigue, dissociative symptoms, possible seizures, and progressive functional deterioration. In spite of the timely recognition of recurrence, she developed worsening auditory hallucinations, visual hallucinations, agitation, and disorganization, with ambiguous features of catatonia and delirium. Persistence of dysautonomia, combative agitation, nutritional decline requiring nasogastric tube placement and treatment-refractoriness to immunomodulation - IVIG, plasmapheresis, rituximab - resulted in a 3-month hospitalization requiring ICU level of care. Ultimately her recovery hinged on complex multidisciplinary coordination between Neurologic, Psychiatric, Critical Care, Gynecological, and Oncological specialists. The Psychiatrists role proved essential in helping to navigate divergent perspectives and conflicting recommendations. Recognition and treatment of catatonia with ECT served as a catalyst to functional recovery. She received a total of 24 treatments, with resolution of agitation, dysautonomia, return to volitional maintenance of nutrition and improvement in functional status. While others have reported on approaches to managing psychiatric syndromes in anti-NMDAR encephalitis, there remains a dearth of literature guiding effective

treatment in recurrence. For patients, families, and clinicians who have experienced this devastating disease, expectations during recurrence may be resolutely influenced by prior episodes. Our case illustrates the Psychiatrists role in helping to understand, modify and manage expectations. Finally, we highlight the therapeutic utility in risk-stratifying treatment options for secondary psychiatric syndromes in treatment-refractory recurrent anti-NMDAR limbic encephalitis.

No. 100

Factitious Disorder in Pregnancy: A Case Report

Poster Presenter: Chrissy Mathew, M.D.
Co-Authors: Kirija Kokulanathan, M.D., Vishal Biala, M.D., Ljiljana Markovic, M.D.

SUMMARY:

Introduction: The diagnosis of factitious disorder is complicated by the variety and the often nonspecific nature of patient complaints and clinical expression of the disease. Affected patients deliberately and actively induce symptoms and signs in themselves, and they often have some knowledge of medicine and a history of repeated admissions. In obstetrics and gynecology, diagnosis is particularly difficult because, unlike other situations where malingering for purposes of secondary gain is understandable, clinicians have little reason to suspect these women. We review an interesting case of hyperemesis gravidarum in a 25 year old female at 23 weeks gestation, and discuss the challenges of diagnosis and management of factitious disorder. Case: 25-year-old single white female who was pregnant with her third child at 23 weeks gestation. She had been admitted for the fourth time during this pregnancy with hyperemesis gravidarum which prompted very severe dehydration and acute kidney injury. The obstetrician was concerned because of not only the acute dehydration and electrolyte imbalance but prolonged weight loss and starvation that emerged. Patient had been expressing ambivalence about this pregnancy since the beginning and had been refusing any offers to terminate the pregnancy earlier. Her observed self-inflicted injury (inducing vomiting witnessed on the video monitor), repetitive interpersonal conflicts with staff and family, and need for excessive clinical interventions were consistent with a diagnosis of factitious disorder. Discussion- Patients with factitious disorder often have underlying medical illness, but feign, self-inflict, or exaggerate illness in order to obtain the sick role and receive care. Is this a desire to receive affection and care, a sense of control from deceiving healthcare professionals, or an adrenaline rush from undergoing medical procedures? Unconscious psychological factors are at play and are an essential part of the picture and treatment. Identification of factitious disorder is usually made in one of several ways: the patient is accidentally discovered in the act, incriminating items are found, laboratory values suggest nonorganic etiology, or the diagnosis is made by exclusion. General treatment approach should include coordination of care with specialists, the PCP, and nursing staff. Goal is to send a clear message of wanting to ensure the safety of the patient that is consistent, non-confrontational, compassionate, but firm. Consistency among providers is a must in order to prevent the inevitable splitting that will occur without it.

No. 101

Dermatitis Artefacta: A Psychiatric Manifestation of Dermatological Condition

Poster Presenter: Ashwini Sakinala, M.B.B.S.

SUMMARY:

Dermatitis Artefacta a rare psychocutaneous condition where a patient consciously create skin lesions to satisfy underlying psychological needs without a secondary gain Dermatitis artefacta also called as factitious dermatitis. Case Presentation: A 65-year-old Caucasian male with a significant past psychiatric history of schizophrenia who presented to the ED, from a boarding home, with recurrent chronic non-healing ulcers located mainly on the arms, chest, trunk, and lower extremities. These have been worsening over the past 3 years. The patient reported noticing a small ulcer on his back while showering, and started scratching to a point of requiring a skin graft. On examination, the skin lesions are in various shapes, sizes and are at a different stage of healing, often geometrical. Dried skin and blood were noticed underneath the patient's fingernails. No skin excoriations were noted in inaccessible areas (pictures of skin lesions are provided in the poster) Patient's mood and psychotic symptoms were relatively stable during this

hospitalization. No similar presentation was noted in the past Discussion and conclusion: Is a psycho cutaneous condition where patient consciously creates lesions especially on the skin to satisfy underlying psychological needs, attract attention, or could not find any underlying motive. whereas in malingering the behaviors has underlying secondary gain. Female to male ratio varies from is 20:1 to 4:1, mostly prevalent in females, onset is during or after adolescents. should be differentiated from skin picking disorder, where as excessive distress often relieved after picking the skin. Denial to the underlying psychological component is a common finding Patient often lacked concern about how disfiguring the lesions are. Indescribable motives for scratching and lacks the ability to identify any stressor are the main component in identifying dermatitis artefacta. Religious and cultural beliefs were not found to be reinforcing. Patient has Unremarkable laboratory findings and No evidence of cognitive impairment. We Ruled out underlying medical conditions and illicit substance use that could potentially manifest these symptoms. Dermatology was consulted and ruled out all potential skin conditions. Non-confrontational, empathetic approach were used in treating. Patient was furtively monitored in the unit, Behavioral modifications were established, encouraged patient to wear soft mittens, engaged patient in therapy sessions. Rewarded positive behaviors. Patient showed tremendous improvement of his skin lesion with typical antipsychotics Both typical and atypical antipsychotics are the first line treatment in Dermatitis Artefacta, we titrated his medications to optimal level (pictures of skin lesions before and after antipsychotic treatment was provided in the poster).

No. 102

The Heart and the Mind: How to Educate Primary Care Doctors About Depression and Cardiovascular Disease

Poster Presenter: Anindita Chakraborty, M.D.
Co-Authors: H. Yavuz Ince, M.D., Nicole Stromberg, M.D.

SUMMARY:

Background: Major Depressive Disorder (MDD) is present in one in five patients with cardiovascular disease (CVD), and MDD is an independent predictor of adverse cardiovascular outcomes, and yet depression is often underrecognized and untreated in this vulnerable population(1,2). This poster aims to highlight the association between CVD and MDD while providing recommendations for screening and treatment in a primary care or a collaborative care setting. Methods: A detailed Pubmed, Cochrane and Google Scholar search was conducted to identify relevant publications related to major depressive disorder (MDD) in patients with CVD between 2000 and 2018. Keywords included: MDD, depression, coronary artery disease (CAD), cardiovascular disease (CVD) and myocardial infarction (MI). Results: Several mechanisms contribute to development of CVD in patients with MDD, including adverse physiologic effects such as platelet dysfunction, increased inflammation, HPA axis dysfunction and impaired health promoting behavior such as physical exercise, smoking cessation and medication adherence(3). The American Heart Association (AHA) recommends routine 2 step screening using the PHQ-2 (Patient Health Questionnaire) followed by the PHQ-9(4). Evidence suggests that routine screening for MDD, performed in the setting of collaborative care models may demonstrate improved adherence to health promoting behavior, improved blood pressure and cholesterol, reduced cardiac symptoms and reduced cardiac events (3,5). In other settings, routine screening is only beneficial if paired with a management protocol or referral to a psychiatrist. Selective serotonin reuptake inhibitors (SSRIs) are the first line of treatment of depression among SSRIs Sertraline has been tested in its safety and efficacy., Citalopram should be avoided due to dose-dependent QT prolongation. Bupropion is a good choice as it helps with smoking cessation. Tricyclic antidepressants (TCA) and monoamine oxidase inhibitors (MAOI) should be avoided due to side-effect profile. Cognitive Behavioral Therapy has been proven to be the most efficacious in patients with CVD. Patients recovering from depression are more likely to adhere to medications, diet and exercise regimens and more likely to enlist the support of family and friends (6). Conclusions: MDD is an independent predictor of adverse cardiovascular events and is highly co-morbid with CVD. Early intervention is associated with improved adherence

to health promoting behavior and quality of life. Whether treatment of depression improves cardiovascular outcomes is unknown at this time.

No. 103

Medication-Assisted Treatment in Alcohol Use Disorder: Can Education and EMR Interventions Increase Prescriptions?

Poster Presenter: Anindita Chakraborty, M.D.
Co-Authors: Musa Yilanli, M.D., Daniel J. Goyes, M.D., Umair A. Daimee, M.D., Lauren-Alyssa Wake, D.O., Dalia Mammo, M.D., Vindhya Baddigam, M.D., Cynthia Arfken, Nicole Stromberg, M.D.

SUMMARY:

Background: Alcohol Use Disorder(AUD) is a problem among US veterans with more than 40% of veterans having a life-time history of alcohol use disorder. VA guidelines recommend medication assisted treatment (MAT) in the treatment of moderate to severe AUD. These medications include Naltrexone, Acamprosate, Dilsulfiram and Topiramate. Despite this recommendation they are underutilized. VA administrative data reveals that during the last quarter of 2017, 9.24% of patients with AUD in the Detroit VA received MAT compared to a national average of 10.5%. A local survey of VA psychiatrists suggested two barriers to MAT: patients' lack of interest and psychiatrists' lack of perceived effectiveness. Provision of education and Electronic Medical Record (EMR) alerts to prescribe MAT were the preferred Quality Improvement (QI) interventions to increase MAT. Aims: We present a QI initiative that aimed to increase number of MAT prescriptions by 15% over 5 months. Methods: The project was conducted at the psychiatry clinic in the Detroit VA hospital between March-August 2018. Interventions targeting psychiatrists, were developed based on the survey and implemented in March 2018. A list of 249 patients with alcohol related disorders that may benefit from MAT were generated, and psychiatrists received a seminar on MAT guidelines and a course on motivational interviewing. Patients were then tagged with an EMR alert reminding psychiatrists of MAT considerations. Post audit data was gathered in August 2018. Results: Of the original 249 patients, 124 (50%) were seen as routine follow up between April to August 2018. During this period 56 (45%) were offered MAT, out of which 40 patients (71%) declined. Of those receiving MAT, 10 patients received Naltrexone and 5 received Acamprosate. A total of 69 patients (56%) received a referral to substance abuse program. Conclusions: MAT treatment for AUD is underutilized, nationally and in Detroit. Our intervention increased the number of people treated with MAT by 12% over a period of 5 months. Reasons for not meeting our goal include (1) guidelines recommend MAT in cases of moderate to severe AUD (per DSM-5), whereas the VA system uses the ICD system that does not have an analogous diagnosis, (2) psychiatrist turn-over, (3) patient preference, and (4) referral to substance abuse treatment program. This latter point may suggest a reluctance to prescribe. Altogether, the findings suggest a need for booster sessions in motivational interviewing, provider education on MAT and patient education programs to meet VA guidelines.

No. 104

Suicide Attempt Demonstrating the Grave Implications of Hyperthyroidism

Poster Presenter: James William Alewine, D.O.
Co-Author: Alyssa A. Soumoff, M.D.

SUMMARY:

Introduction: Hyperthyroidism is associated with a number of mental health syndromes including anxiety and depressive disorders. Furthermore, patients with hyperthyroidism, even subclinical hyperthyroidism, are at increased risk of suicide and psychiatric hospitalization. Case description: Ms. K is a 19 year-old athletic female with no past psychiatric history, beginning her second-year at an academically rigorous university on a military scholarship. She had excelled as a high-school student, achieving high grades and even running a marathon. However, her college experience was much different as she was struggling academically and physically with myalgias, arthralgias, and decreased physical fitness ability for which she had sought medical treatment. She presented to our psychiatric ward status-post suicide attempt via overdose with 40 to 60 pills of over-the-counter formulations of naproxen, acetaminophen, ibuprofen, and aspirin. She reported the suicide attempt was in the context of increased interpersonal, physical, and academic struggles. She

denied prior suicidality and the diagnostic criteria of major depression, but did endorse symptoms of anxiety. Our initial working diagnosis was adjustment disorder with anxiety. Thyrotropin levels were 0.007ulU/mL (reference: 0.27-4.2) and T4 Free was 5.66ng/dL (reference: 0.93-1.7). Upon further questioning the patient endorsed weakness, fatigue, difficulty concentrating, and polyphagia without weight gain. She reported that when she returned home for the first time during winter holiday of her freshman year, her family noted her eyes appeared "buggy." On physical exam she was tachycardic to the low 100s and had a widened pulse pressure; a goiter was observed. We changed her diagnosis to anxiety disorder due to hyperthyroidism. Discussion: A large number of providers had evaluated the patient after her difficulties began and prior to her suicide attempt, yet none identified the underlying etiology of her struggles. Hyperthyroidism is a common disorder, particularly in young adult females, and often manifests with neuropsychiatric symptoms satisfying diagnostic criteria of DSM-5 mood and anxiety disorders; however, as illustrated by this case, a purely psychiatric diagnosis would be inappropriate. Importantly, this case further suggests the role of hyperthyroidism as a driver of suicide. Given the relative ease of treatment of this disorder, as well as the potential symptoms and long-term effects of untreated hyperthyroidism, early recognition and treatment is vital to improved patient outcomes.

No. 105

Measuring Access of Epilepsy Care Using Social Network Analysis

Poster Presenter: Mariyam Habeeb

SUMMARY:

Epilepsy is a complex, chronic condition that requires specialty care. Patients with epilepsy face barriers such as insurance status, socioeconomic status, and racial and ethnic disparities and have a higher likelihood of suffering from comorbid psychiatric and chronic medical conditions, complicating their care and health [4]. As such, patients with epilepsy require extensive coordination and care from several disciplines in the healthcare system. Over 80,000 Veterans with epilepsy receive care at VA facilities. In 2008, VA Epilepsy Centers of Excellence (ECOE) were established in order to organize epilepsy specialty care and improve access to high quality care in VA patients. This project aims to find out whether the model is effective through the use of social network analysis. Current approaches to measuring coordination of care require time and are resource intensive, such as collecting surveys from providers that are costly and rely on high survey response rates. The Department of Veterans Affairs (VA) has no efficient or automated method to measure coordination of care system-wide. Social network analysis (SNA), however, is a validated measure that quantifies network connectivity among individuals and has been used successfully to quantify coordination of care [2]. Prior studies have shown that greater network connectivity is associated with more information-sharing, increased communication, and quality of care [1]. Our objective was to measure the coordination of care in the VA system and determine the relationship between provider network connections and specialty quality of care performance measures from the American Academy of neurology. We hypothesized that VA providers affiliated with ECOEs will have stronger network connections than providers not affiliated with ECOEs. The stronger connections will in turn be associated with higher epilepsy performance measures in patients within ECOEs versus those outside of ECOEs. Epilepsy encounters and associated providers from 2013 were identified and, using standard SNA algorithms, the VA epilepsy provider network structure was mapped [3]. Preliminary results demonstrate that across centers there is a great variability in connectivity across PCPs, psychiatrists and neurologists. Further study will determine if there is a correlation between measures of connectivity, utilization of services and performance measures.

No. 106

Use and Efficacy of Antipsychotics After Surgery

Poster Presenter: Carey J. Myers, M.D., Ph.D.

SUMMARY:

TS, a 39 year old African American female with a history of schizophrenia, presented for psychiatric evaluation of altered mental status starting 3 days after an emergency cholecystectomy. She had previously been stable on a moderate dose of

Abilify, and had continued to take her medication after surgery. She was treated for a UTI without improvement of psychotic symptoms. Other medical causes of psychosis were ruled out, including spreading surgical site infection, autoimmune disease, and neurosyphilis. She began to show some improvement after the initiation of ECT. Antipsychotics are typically lipophilic drugs, and therefore can theoretically be affected by the body's ability to process and absorb fats. Here we review the current literature regarding the use and efficacy of antipsychotics after alteration of the body's lipid metabolism after GI surgery.

No. 107

A Case of Psychosis in Neurosyphilis

Poster Presenter: Carey J. Myers, M.D., Ph.D.

SUMMARY:

50 year old CM, a Caucasian male with a history of TBI, presented to the psychiatric service for sudden behavioral changes, paranoia, and social withdrawal. A basic medical workup revealed no organic cause, and he was diagnosed with late-onset schizophrenia and started on Haldol with some improvement. Several years later, he re-presented with worsening psychotic symptoms and cognitive function. Additional testing revealed neurosyphilis, which was subsequently treated. He presented again approximately 8 months later with again worsening psychosis. Testing revealed new EEG changes, and once started on an anticonvulsant his behaviors returned to baseline. Although syphilis became relatively uncommon after the discovery and widespread availability of penicillin, incidence has been increasing in the last 20 years. Psychosis is a common presentation of neurosyphilis, which can occur at any stage of the disease. Late onset schizophrenia is an uncommon presentation of purely psychotic disease, and requires a thorough medical workup to rule out medical, neurological and organic causes. Differential diagnosis should include vitamin deficiencies or syphilis, major NCDs, substance-induced and affective disorders.

No. 108

Anti-NMDA Receptor Encephalitis: A Near-Miss

Poster Presenter: Carey J. Myers, M.D., Ph.D.

SUMMARY:

BC, a 29 year old Spanish speaking only Hispanic American female with no psychiatric history, was seen by the C&L service for "catatonia" after transfer from a psychiatric hospital, where she had been admitted for several weeks of "bizarre behavior." She had been medically cleared at another hospital twice in the preceding 11 days, but was brought to the AEMC ED for evaluation after she had not consumed anything, solid or liquid, in over 3 days, began defecating and urinating on herself, and was not responding to questions. A full medical workup, including imaging, LP, and EEG, led to a diagnosis of anti-NMDA receptor encephalitis, which was subsequently treated. Subsequent rapid improvement of her symptoms enabled discharge to a rehab facility for further treatment. Psychiatric diagnosis by necessity includes the exclusion of an organic origin for symptoms. Many psychiatric disorders, including aggression, agitation, and depression, are also caused by organic disease, including electrolyte and hormone imbalances, tumors, seizure disorders, and, as we are learning, autoimmune disease. The sudden onset of psychotic symptoms in a person outside the typical demographic should be carefully investigated to rule out medical causes before a psychiatric diagnosis is made.

No. 109

Inverse Correlation Between Pain Intensity and Gustatory Ability

Poster Presenter: Marcia Uddoh

Co-Author: Alan R. Hirsch, M.D.

SUMMARY:

Two divergent schools of thought define the interaction between gustatory ability and pain. Bartoshuk suggests that taste acts to inhibit pain (Bartoshuk, 2012). In this paradigm, pain directly correlates with the gustatory ability. Conversely, pain inhibiting taste has been described in myriad clinical conditions to include a response to an orthodontic wire (Yamauchi, 2002). However, the inverse correlation between the intensity of pain and the subjective perception of the degree of gustatory ability has not heretofore been described. Such a case is presented. Case Study: This 49 year-old right-handed woman presented with a severe bi-facial

pain and a change in taste. As the pain would increase, her taste ability would decrease. For instance, when the pain was 6-8/10, food would taste bland, 30% of normal. Alternatively, when she had no pain, taste was 100%. With gradual increase in pain, there was a gradual reduction of taste. Diazepam improved the pain, but there was no change in her taste. Results: Abnormalities in physical examination: Neurological Examination: Cranial Nerve (CN) Examination: CN II: Ophthalmologic Examination: absent spontaneous venous pulsations. CN V: Decreased pinprick right V2. Motor Examination: Drift Testing: Right abductor digiti minimi sign with right cerebellar spooning. Cerebellar Examination: Holmes rebound positive with vertical titubation. Rapid alternating movements decreased in the left upper extremity. Reflexes: 2+ bilateral ankle jerks. Bilateral pendular quadriceps femoris reflexes. Positive jaw jerk. Bilateral positive Hoffman reflexes. Chemosensory Testing: Olfactory testing: Alcohol Sniff Test: 7 (hyposmia) . Gustatory: Taste Threshold Testing: Ageusia to Phenylthiocarbamide. SPECT scan: Extreme hyperperfusion to the right putamen, and both caudate heads. The left putamen and cingulate gyrus were moderately hyperperfused. Discussion: The inverse correlation between analgesia and increased gustatory ability confirms the experimental findings of Bastian (Bastian, 2014). The mechanism for such a relationship is unclear. In the patient presented, only facial pain influenced taste. Non-facial somatic pain had no impact on gustation. This suggests the importance of trigeminal nerve involvement. This co-occurrence may be due to ephaptic transmission, or an alternative mechanism that involves a central nervous system localization overlap that subserves both trigeminal pain and gustatory sensations. Potentially, gustatory ability may be used as an objective measure to determine the degree of pain. Furthermore, management of facial pain with gustatory stimuli may be worth study. Additional investigation of taste perception and epochs of pain are warranted.

No. 110

Lost in Translation: Use of a Certified Deaf Interpreter in Psychiatric Care

Poster Presenter: Laura Leigh French, M.D.
Co-Author: Saba Syed, M.D.

SUMMARY:
Communication is an important tool for physicians in diagnosing a patient's illness and developing the patient–physician relationship. Health care communication becomes often difficult with patients with limited English proficiency or hearing loss. The prevalence of hearing loss is greater than that of heart disease, asthma, or diabetes. However, unfortunately medical providers often fail to recognize that patients with hearing loss may not use American Sign Language (ASL); instead, based on their educational and cultural background, they may use home learned signs or signs learned in another language making it difficult to accurately assess the patient. We present the case of a 63-year-old Caucasian male with past medical history of congenital deafness and bilateral upper extremity contractures who was repeatedly hospitalized for behavioral dysregulation and hand gestures indicative of suicidal ideation. The communication barriers included inability to properly sign due to bilateral hand contractures, low literacy level and home learn sign language, which unfortunately led to the misdiagnosis of Schizophrenia. He was subsequently treated with paliperidone long-acting injectable that resulted in tardive dyskinesia. A Certified Deaf Interpreter (CDI), an individual who uses sign language as their native language and has extensive knowledge and experience with deafness, the deaf community, and deaf culture, can be particularly useful in such nuanced interpretation situations. They can enhance the interpreting experience between the patient and the ASL interpreter. By concurrently using both the American Sign Language and Certified Deaf interpreters, we were able to communicate more clearly with the patient which helped with diagnostic clarification and appropriate treatment management. Appropriate use of medical interpreters leads to increased patient satisfaction, improves adherence, reduces adverse events and improves outcomes.

No. 111

The Case of the Psychotic Patient: Schizophrenia, Metastatic Breast Cancer, Lupus Cerebritis, or Culture-Bound Syndrome? A Lesson in Premature Closure

Poster Presenter: Francis O. Ridge, D.O.

Co-Author: Sherrell T. Lam, M.D.

SUMMARY:
Cognitive errors are a common pitfall in the practice of medicine. Cognitive errors play a role in about 46-75% of all diagnostic errors as opposed to no-fault errors and system only errors. One of the greatest drivers of cognitive errors is cognitive bias. Cognitive bias is the process by which one comes to a conclusion based on incomplete information and subjective factors rather than empirical evidence. This is a serious issue because many studies have shown an association between cognitive bias and therapeutic errors. We present the case of a 43-year-old African American female military reservist with a past history of paranoid personality disorder who presented with tangential, disorganized thought processes and perseveration about legal issues and feelings of being persecuted by the police after reporting late to a military training. During review of her past medical history it became apparent that she had poor adherence to management of previously diagnosed breast cancer. She expressed a belief that her breast cancer was related to an assault by the police. During routine work up of apparent new onset psychosis she underwent MRI of the brain, which showed multiple foci of punctate hyperintense lesions of undetermined significance which, given her history of breast cancer, could have been representative of primary or secondary neoplasm or rheumatologic disease. Further medical work-up also revealed positive ANA and Anti-Ro antibodies, while deeper exploration into the patient's family background brought to light an environmental disorganization and a cultural phenomenon involving suspicion of the police. Our patient's complex presentation, with its competing medical and psychiatric factors, was further complicated by social and cultural influences. Navigating all of these factors to come to the final diagnosis was a test of clinical stamina and a lesson in the pitfalls of premature closure. Our case illustrates the importance of maintaining a broad differential and fully exploring all elements of a presentation before drawing any conclusions.

No. 112
A Narrative Review of Portrayal of Faces of Insanity in Arts

Poster Presenter: Thomas David Joseph, M.D.
Co-Authors: Badr Ratnakaran, M.B.B.S., Tricia Lemelle, M.D., M.B.A., Ayotunde Ayobello, M.D., Nina Meletiche, M.D.

SUMMARY:
Background: Mental illness and the context surrounding it have been an important theme in art. The faces of people suffering from mental illness and maladaptive emotions have also been depicted in famous paintings. Objective: To identify important paintings depicting mental illness and facial expressions related to it. Method: A literature search was done on the depictions of mental illness in famous paintings and various experts interested in the field of art and psychiatry were contacted for their opinions on 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 museum of Art. The paintings were selected and a narrative review was done by the authors. Results: 20 famous paintings were identified that depicted various presentations of mental illness and the artist's rendering of facial expressions related to it. The paintings, mainly belonged to the Western culture, ranging from the Renaissance, neoclassicism to romanticism. The themes depicted include depression, anxiety, mania, kleptomania, psychosis and dementia. Conclusion: The paintings depict various perspectives of mental illness in different cultures and eras in history along with capturing the suffering of mental illness.

No. 113
Down or Delusional: A Case Report for Rethinking Common Perceptions and Differentiating Depression and Psychosis
Poster Presenter: Ashika Bains, M.D.
Co-Author: Hannah L. Reynard, D.O.

SUMMARY:
A 33-year-old homeless veteran presented with recurrent suicidal ideation and intent following a recent attempt by overdose which required treatment in the intensive care unit. Once medically cleared, the patient was transferred to the inpatient

psychiatric unit as he had several prevalent risk factors for suicide (history of attempts, active substance use, history of trauma, poor social support). On the unit, the patient would not fully engage in treatment: he would isolate, display selective mutism, would remain in bed most of the day, and would avoid eye contact with others. Depressive disorder was established as the preliminary diagnosis and antidepressant medications were initiated. The patient did not display improvement even with compliance and therapeutic doses of medication. Subsequent days of hospitalization revealed additional symptoms such as ideas of reference and significant paranoia. It became evident that his prior isolating behavior had been due to mistrust and suspicion rather than amotivation and anhedonia. The patient was started on an antipsychotic and his symptoms improved. In the context of suicide, when considering differential diagnoses, there is an inclination to consider mood origin as the primary drive, however not all suicide attempts are depression. It is imperative that clinicians be active in considering alternative etiology, particularly due to the recent Centers for Disease Control and Prevention released data indicating that suicide rates have increased in nearly every state from 1999-2016. In this poster, we aim to present a case to disrupt the common biases that all suicide is due to mood and revitalize differential diagnostic thinking for the presentation of suicide attempt, we will review suicide risk assessment, and outline the differences between paranoid behavior, negativism, and depressive symptoms.

No. 114

A Case of Late-Onset Psychosis in an Adult With Beta-Thalassemia Trait: Delayed Detection of Iron Overload With Heterozygous Hemochromatosis Responsive to Phlebotomy

Poster Presenter: Charisse Colvin, M.D.
Co-Authors: Jenna Lee Taglienti, M.D., Binu Chacko, M.D., Ateaya Ali Lima, M.D.

SUMMARY:

Late-onset, first break psychosis, presenting after the age of 50 years is rare and presents a diagnostic challenge. A medical disorder with standard workup should be considered, but pursuit of non-standard causes can lead to exhaustive medical workup that is not cost effective and difficult to justify. However, some cases do warrant a closer look. We present a unique case of hemochromatosis with co-occurring beta-thalassemia trait resulting in psychosis; conceivably due to an excess of iron deposits in the brain. Our case illustrates the diagnostic challenges and management of such cases. Literature search for psychosis in beta-thalassemia trait or heterozygous hemochromatosis revealed very few case reports with no available guidelines for the diagnosis and treatment of such patients. This is a case of a 58 year old male, married engineer, with past medical history significant for beta-thalassemia trait, who developed gradual onset of paranoid ideations and religious preoccupation over the course of six months. At work, he began to have explosive arguments, which led to a psychiatric evaluation. Next, a medical workup for first break psychosis, including an MRI of brain, CSF studies, EEG and routine laboratory workup revealed only a mild anemia with Hb=11.1 g/dl and no other significant findings. Patient was diagnosed with Bipolar Affective Disorder with Psychotic Features and was initiated on olanzapine. Although he improved initially, within 2 weeks of discharge, his wife, witnessing more bizarre behavior, drove him to our hospital where he was admitted to psychiatry. Temporal Lobe Epilepsy (TLE) was suspected after patient reported a burning smell, and divalproex was initiated. On divalproex and risperidone, his psychotic symptoms were controlled, and subsequent EEG and MRI brain were unrevealing. Continued paranoid delusions led to job dismissal. At the insistence of patient's family, a genetic workup ordered by patient's hematologist revealed heterozygosity for hemochromatosis. Bi-weekly phlebotomy was initiated and within 2-3 weeks patient was free of psychosis. All antipsychotics were discontinued. Patient remained free of psychosis for the next 6 months. However, he began to report paranoid ideations and demonstrate bizarre behavior which resulted in another psychiatric hospitalization and re-initiation of risperidone. New-onset psychosis, especially late onset, can be difficult to diagnose and treat. Importance of ferritinemia finding was dismissed during his initial intake due to attribution of beta-thalassemia trait. His recurrence of symptoms prompted consideration of a rarer cause of psychosis. Literature search for psychosis in

beta-thalassemia trait or heterozygous hemochromatosis revealed few case reports. Our case is significant because it is the only documented report of the combination of these two conditions presenting as psychosis, along with remission of symptoms through phlebotomy.

No. 115

Misdiagnosing Symptoms of Early Psychosis for Personality Traits

Poster Presenter: Kanwal Mirza, M.D.

SUMMARY:

Mr. A is a 26 year-old man with a history of ADHD and learning disability who presented to the ED for evaluation after police found him under his house, holding a knife; which patient explained was for protection against a woman who “dabbled in voodoo magic” and endorsed paranoid delusions she was trying to kill him. On evaluation, vitals, physical exam and lab work up were all within normal limits. Mental status exam revealed an anxious, scared young man with blunted affect and thought disorganization. He had poor insight and judgement, with non-command type auditory hallucinations and paranoid delusions of a “voodoo woman out to get him”. Patient denied history of routine alcohol, marijuana, or other mind-altering substance use. There was no suspicion of malingering or secondary gain. Patient's psychiatric and developmental history revealed prodromal symptoms starting in his late teen years, where mom described patient would isolate himself and had few friends. Patient recalled first having psychotic symptoms during this time. In unraveling of his social history it was discovered that he came from a lower socioeconomic area where he was exposed to gang members frequently. It was further uncovered that the patient had recently participated in a carjacking while intoxicated and was under the influence of active paranoid delusions of being pursued by the "voodoo woman" who wanted him dead. This landed him in prison without mental health care treatment. On this admission patient was diagnosed with a severe emerging psychotic illness. On readmission a few weeks later, prior to chart review and on a separate unit, patient's social history was uncovered again but without the previously obtained context of psychosis. Given his legal history and acquaintanceship with gang members, patient was diagnosed with antisocial personality disorder. This poster will address via case study, some challenges of differentiating personality traits from psychiatric symptoms and also potential long-term complications to treatment. These challenges include, but are not limited to, how to establish co-morbid personality and psychotic disorders in the setting of emerging severe mental illness, the impact of inaccurate diagnosis on the establishment of therapeutic alliances with patients, and how these potentially affect treatment planning for the patient.

No. 116

Barotrauma-Induced Pneumocephalus Versus Conversion Disorder Following Commercial Air Travel in a Patient With Traumatic Brain Injury

Poster Presenter: Junaid Kausar Mirza, M.D.
Co-Author: Saffa Ahmad

SUMMARY:

Pneumocephalus is the presence of air trapped within the cranial cavity, usually resulting from trauma, neoplasms, and surgical interventions. Barotrauma-induced pneumocephalus, resulting from a rapid change in the surrounding pressure, is a major concern for airline passengers. Recent advances in aircraft technology have led to a tremendous increase in air travel for neurosurgical patients. During air travel, a neurosurgical patient could experience fatal tension pneumocephalus resulting from expansion of residual air in the cranial cavity and cerebrospinal fluid (CSF) leakage due to the backflow of contaminated air through the bony defect. Mr. M is a 22-year-old male who presented to the emergency department with a severe headache, nausea, and acute flaccid paralysis after a four-hour flight on a domestic commercial airliner. During take-off, he complained of a headache, later describing a “popping/bubbling” sensation in his head during the flight. On mental status examination, he was somnolent but arousable, without confusion. A brief neurological examination revealed decreased sensation to light touch and 1/5 strength in all four limbs. Additional sensory function, cranial nerve function, and deep tendon reflexes were normal. Seven years prior, this patient suffered a traumatic brain injury and subdural hematoma status post motorcycle accident. He

underwent craniotomy and a transsphenoidal repair of an encephalocele to manage CSF rhinorrhea one year after the initial craniotomy. He did not experience further symptoms of a CSF leak. He subsequently developed a psychiatric history of unipolar depression and post-traumatic stress disorder (PTSD). A computed tomography (CT) scan of the head demonstrated evidence of previous bifrontal craniotomy with subjacent encephalomalacia and gliosis. Air was not appreciated within the cranial cavity. The routine laboratory blood tests (leukocyte count, hemoglobin, hematocrit, glucose, and C-reactive protein) were normal. Gradual resolution of the headache and return of motor function was achieved without medication over the course of a few hours. He was able to be discharged from the emergency room with no restriction in air travel. The unremarkable imaging report and resolution of symptoms excluded a neurological etiology and supported a diagnosis of conversion disorder. Conversion disorder is thought to be caused by the body's reaction to a stressful or emotional event. Diagnosis of this disorder is based on identifying particular signs that are common among people with the disorder, as well as performing tests to rule out other causes of the symptoms. Common symptoms include sudden blindness, paralysis, or ataxia. Conversion disorders have a prevalence rate ranging from 1 to 3% in the general population. There is a historical relevance of the disorder in relation to hysteria, however current knowledge regarding the etiology and neurological background of conversion disorder is incomplete.

No. 117

A Case of First-Episode Psychosis: Navigating a Military Servicemember's Minimization of Severe Symptoms

Poster Presenter: Amanda Louise Wilder, M.D.
Co-Author: Laura Francesca Marrone, M.D.

SUMMARY:
A Case of First Episode Psychosis: Navigating a Military Service Member's Minimization of Severe Symptoms Longitudinal observation is crucial in psychiatry as diagnoses and presentations evolve with time, especially when confounded by patient guarding, poor insight, minimization of symptoms, and underlying paranoia of providers. This is a case of a 27 year old female active duty service member with a first break psychotic episode in the setting of training stressors shortly after completion of boot camp. During hospitalization she was treated with a brief course of neuroleptics but later declined all psychiatric medications. She was discharged with extended outpatient follow up through the Department of Defense's premier First Episode Psychosis program at Naval Medical Center San Diego, a multidisciplinary treatment program based on the NAVIGATE model. She appeared to have complete resolution of symptoms and was briefly considered for continued military service. Her minimization of all symptoms, however, combined with poor insight into her own level of distress and paranoia of providers in the setting of her unrelenting desire to remain in military service presented significant diagnostic challenges. Her initial working diagnosis of Unspecified Psychosis evolved to Major Depression with Psychotic Features but after several months was converted to Schizophreniform Disorder followed by Schizoaffective Disorder, Depressed type. Here we discuss the diagnostic journey of this patient whose symptoms followed a stepwise deterioration and review notable complicating medication side effects such as truncal tardive akathisia self-reported as anxiety. Additional clinical features include her significant family history, psychological testing results which showed high levels of innate intelligence and cognitive reserve, and development of frank psychosis and suicidality ultimately treated with clozapine.

No. 118

Medical and Diagnostic Considerations in a Case of Postpartum First Break Psychosis

Poster Presenter: Thomas Wolfgang Mehlmauer Klotz, M.D.
Co-Author: Laura Francesca Marrone, M.D.

SUMMARY:
Positive symptoms of first break psychosis can be varied and difficult to interpret, and patients often face difficulty in clarifying or articulating their experience. Additionally, the post-partum period can be a vulnerable time for women with new onset mental health symptoms and disorders that can

further impact their recovery and other medical conditions. As such, a broad medical evaluation and differential diagnosis is recommended when a patient presents with possible first episode psychosis and mood symptoms especially in the post partum setting . Here we discuss the case of a 27 year old African American female active duty service member who presented with new onset delusions and atypical hallucinations and numerous other medical symptoms and objective findings after the birth of her second child. The patient first presented for psychiatric care 6 weeks post partum and described auditory, visual, and tactile hallucinations in combination with poor sleep and depressed mood. This led to her first inpatient psychiatric hospitalization with diagnostic considerations including Bipolar Disorder, Schizophreniform Disorder, Delirium, and sleep disturbance in the setting of infant care. Chart review revealed that the patient's pregnancy had been marked by pre-eclampsia necessitating C-section with postpartum complications of bilateral pleural effusion and tachycardia of unknown origin. These issues resolved spontaneously in the days prior to psychiatric presentation but recurred as an intermittent complication throughout the course of her outpatient treatment and led to expansion of her original differential diagnoses. This poster describes the psychologic and physical workup in conjunction with successful interdisciplinary and treatment interventions in this medically and psychiatrically complex case while she was treated in the Department of Defense's only outpatient first episode psychosis program based on the NAVIGATE model.

No. 119

Psychotic Disorder of Unknown Etiology, Suggested Anti-NMDA Receptor Encephalitis by an Abdominal Tumor

Poster Presenter: Mandeep Kaur, M.D.

SUMMARY:

Ms. H. is a 42 year old Asian female who drove herself to the Emergency Department complaining of not being able to talk or think from one hour. Patient communicated with gestures and by writing. She was frustrated due to her symptoms but otherwise denied any other symptoms e.g. headaches, fever, nausea, vomiting, paresthesias, weakness, focal neurological deficit, vertigo, falls etc. Patient had a past medical history of asthma, anemia, and an abdomino-pelvic tumor for the past 10 years. On physical examination, patient had a 20 cm abdominal mass. Patient was unable to stick her tongue out but able to open her mouth. Rest of the neurological and physical exam was unremarkable. Patient was admitted for further evaluation. Head CT, EKG, Carotid US, cardiac enzymes were all normal. Next day, patient started speaking She refused to interview with the physicians, refused all work up and treatment. Differentials considered included stroke vs. conversion disorder. Psychiatry consult was requested. Patient refused to speak to anyone specially regarding her mental health, appeared guarded, uncooperative and showed poor understanding about her current medical and psychiatric condition. Collateral information from her father indicated history of Schizophrenia treated in Taiwan since 2006. Information was not verified from Taiwan. Parents also reported that patient was employed at bank at World Trade Center. Patient is a September 11 survivor but lost 3 co-workers in the attack. She has been unable to work since and we do not have any information on her Psychiatric history besides the collateral information from the father. There were behavior changes/catatonia of unclear etiology. Psychiatry decided that patient lacked capacity to make decisions by herself and recommended to rule out PTSD, Paraneoplastic encephlitis, and Anti-NMDA receptor encephalitis from unknown abdominal tumor Patient and parents refused to give consent for further work up or treatment. Patient did not want to go home either. Eventually, father consented for CT abdomen and pelvis, MRI brain and blood work. CT abdomen and pelvis showed enlarged uterus measuring 17.0 cm with heterogeneity and hyper-density. MRI brain was negative for any findings of Anti-NMDA receptor encephalitis. Anti-NMDA receptor antibodies also came negative ruling out Anti-NMDA encephalitis. Patient was medically stable so she was discharged home and instructed to follow-up as a outpatient. In this poster, ethical and diagnoses challenges will be discussed.

No. 120

Clozapine-Induced Myocarditis: A Potentially Subtle and Lethal Revelation

Poster Presenter: Avni Mehta, D.O.
Co-Authors: Sonal Patel, D.O., Samuel Wedes, M.D.

SUMMARY:

We present a case of a 28-year-old male with no past cardiac history started on clozapine for treatment-resistant schizoaffective disorder, bipolar type, who had presented to the hospital with command auditory hallucinations and recent aborted suicide attempt. Within 2 weeks of starting clozapine, he developed nausea and diffuse myalgias, followed in several days by tachycardia (123 bpm) and fever (101 deg F). He denied chest pain. Troponin and CRP were found to be elevated at 2.52 ng/mL and > 18 mg/dL, respectively. EKG and CK were unremarkable. Echocardiogram showed reduced EF of 35% and moderate global systolic dysfunction and hypokinesis. Cardiac MRI revealed gadolinium enhancement consistent with myocarditis in the basal inferior and inferolateral wall, confirming a diagnosis of myocarditis. Comprehensive viral serology panel was negative, and eosinophils remained within normal limits throughout the patient's illness. The patient was diagnosed with clozapine-induced myocarditis and treated with supportive measures until his symptoms abated. Repeat echocardiogram 3 mos after cessation of clozapine was normal. Clozapine-induced myocarditis is rare and presents with highly variable and nonspecific symptoms. The diagnosis can be easily missed if a sufficiently broad differential diagnosis for flu-like symptoms in a patient taking clozapine is not considered, leading to potentially fatal consequences. Given its nonspecific presentation and high morbidity and mortality, clinicians need to maintain a high index of suspicion to diagnose myocarditis. This particularly pertains to psychiatrists, who are often on the diagnostic front line. A monitoring protocol for myocarditis, similar to what we use to monitor for neutropenia and agranulocytosis, could potentially help to diagnose and treat clozapine-induced myocarditis more quickly, or even prevent it from occurring. More research is needed to determine the utility and logistics of a monitoring protocol in clinical practice.

No. 121

Importance of Recognizing Overlapping Features of Catatonia, Dystonia, and NMS in a Patient During His First Psychotic Break

Poster Presenter: Karl G. Oberg, M.D.
Co-Authors: Carolina I. Retamero, M.D., Ajita Mathur, M.D.

SUMMARY:

MG is a 32-yo Caucasian man with history of Opiate Use Disorder-in sustained remission and no significant medical history, who was admitted involuntarily to inpatient psychiatric hospital for first time in his life. The patient had suffered an acute deterioration in his ability to care for himself. He had not ate or drank for about 3 days prior to admission. His speech and behavior were disorganized on admission, but there were no overt hallucinations or delusions. The only other acute stressor he endorsed was being hit in head (with unknown object) by his younger brother within 2-4 weeks prior to onset of symptoms. Of note, he has a well-known history of hyper-religiosity and evangelizing to the public since getting clear from using opiates in 2014. In this poster, we discuss a treatment-naive patient who demonstrated symptoms and signs consistent with features of catatonia, NMS, and acute dystonia over the course of four hospitalizations in a 3-month period. These features, confounded by the patient's mood and psychotic symptoms, made diagnosis difficult and therefore could have altered treatment choices along the way. Treatment trials varied widely while diagnosis was further refined over 3 months of psychiatric contact and included supportive treatment, Haloperidol Decanoate, and Ativan. We reflect on this case to highlight the overlapping (and differentiating) features of catatonia, dystonia, and NMS with the aim to help foster faster recognition of these side effects or syndromes in what is often an indefinite clinical picture. Finally, we will comment briefly on initial therapeutic recommendations.

No. 122

Using the Cultural Formulation Interview to Clarify Diagnosis Between Psychotic and Trauma-Related Etiology in the Case of an El Salvadorian Immigrant

Poster Presenter: Crystal Han, M.D.
Co-Author: Ann L. Hackman, M.D.

SUMMARY:

Refugees, immigrants and ethnic minority patients are at a higher risk of receiving psychiatric misdiagnoses than native populations. Psychotic disorders are especially over-diagnosed. Acculturative stress and perceived discrimination are some factors associated with an increase in reported psychotic experiences in immigrants. Emerging research suggests that psychotic symptomology can develop as a reaction to trauma, mediated through dissociative experiences. Refugee and immigrant populations are especially vulnerable to traumatic experiences, and the barriers of culture and communication may contribute to the misdiagnosis of primary psychotic disorder versus a trauma-related etiology. The following case is used to explore this phenomenon, as well as how the Cultural Formulation Interview can improve diagnostic validity. Mr. M is a 26 year old male who emigrated from El Salvador to the United States 5 years ago. He has been hospitalized 12 times in this brief span, and diagnosed with Schizophrenia and Post Traumatic Stress Disorder (PTSD). He was raised primarily by his grandmother who was physically and emotionally abusive as well as neglectful towards him. He was also verbally and sexually abused by his cousin. Per records, he has heard command auditory hallucinations telling him to kill himself since age 15. He has been described as paranoid and guarded, with persecutory delusions of other people wanting to beat him. These symptoms were attributed to presumed schizophrenia. He has reported nightmares and flashbacks of his past physical and sexual trauma. He had been treated with various antipsychotics including long-acting injectable formulations. However, he invariably required frequent hospitalizations. During our evaluation, the DSM-V Cultural Formulation Interview was used as well as a trauma informed interview. Based on these tools, his symptoms appeared more indicative of Major Depressive Disorder, recurrent with psychotic features as well as PTSD with dissociative features. Immigrants with mental illness are often misdiagnosed due to multiple factors, including language and cultural barriers, stigma, and lack of culturally sensitive providers. Diagnosis is further complicated by the presence of psychotic symptoms with dissociative experiences in the context of past trauma. Recent research suggests that hearing voices may be understood as dissociated components of the self, resulting from trauma. There have been some recent studies on ethnic variations in dissociation mediating past trauma and psychotic symptoms, but very little research is available on this phenomenon in immigrant populations. In this poster, we discuss the challenges and importance of differentiating psychotic symptom etiology using a culturally sensitive approach to guide diagnosis and treatment. It will also include specific recommendations on cultural formulation for providers working with immigrant populations faced with uncertainty in the diagnosis of psychosis.

No. 123

Acculturative Stress, Religious Coping, and Social Isolation in a Middle Eastern Patient

Poster Presenter: Tina Thomas, M.B.B.S.
Lead Author: Noha Abdel Gawad
Co-Author: Rania Mahmood Elkhatib, M.D.

SUMMARY:

Introduction Delivering culturally competent care is especially important in the management of immigrant populations in whom language barriers and cultural differences may present challenges to the treatment team. We utilize the case of a Muslim Middle Eastern female patient with bipolar disorder to examine the current literature on the relationships between psychopathology, acculturative stress, social isolation, and religious coping. Case The patient is a 34-year old Muslim Middle Eastern woman with a past psychiatric history of bipolar disorder, who presented to our inpatient psychiatric facility for the fourth time. The patient was treated by two Arabic-speaking female psychiatrists. This case was particularly challenging as she did not initially display any overt signs or symptoms of mania and/or psychosis. We relied heavily on previous treatment records and her husband's report of what is or is not culturally appropriate behavior. Some subtle clues pointing to underlying psychopathology were her insistence on covering her face and eyes entirely, her recent increase in religious behaviors including excessive fasting (outside the month of Ramadan and other fasting seasons), her lower functional baseline compared with her family, and her recent social withdrawal. With increasing medication compliance,

we noted her first symptom to improve was her level of insight. She gradually stopped covering her eyes then face but covered her hair with a 'hijab' as was typical for her. She stopped the daily fasting and engaged more with the treatment team. Discussion We discuss the four types of acculturation strategies and the role of acculturative stress as well as the effects of social isolation on the development of psychopathology. We explore the role of religious coping, both positively and negatively on acculturative stress and psychopathology. The difficulty of distinguishing between pathological and non-pathological religious activity is highlighted. Finally, we note that knowledge of a patient's religion and language alone are not enough for optimal management. Rather repeated attempts to understand the patient's cultural identity and the significance of religious activity facilitated the delivery of culturally-competent care. Conclusion It is important to acknowledge the role that acculturation and acculturative stress play in perpetuating psychiatric symptoms. Religious coping is not uncommon in different minorities in the face of acculturative stress, social isolation, and in primary psychiatric disorders.

No. 124

The Conscious and Unconscious Effects of Slavery on Middle Aged African American Males With Depression

Poster Presenter: Yehonatan Shilo, M.D.
Co-Author: Sarah C. Noble, D.O.

SUMMARY:

Overview: The history of slavery in the United States is an extremely delicate and sensitive topic. It can be interpreted as politics or social criticism. Treating the people who have slave ancestors, does not let you ignore that history. We can reference the research of Gray et al, showing that adverse childhood experiences on the mother can affect her child and cross generations. But what about the human aspects of knowing your origins and its existential significance? Objective: To increase socio-cultural awareness among therapists to the potential effects of slavery on their patients who experience depression. Clinical Cases: 1. 60-year-old AAM diagnosed with panic attacks and depression in 2014. Achieving only partial remission with SNRI and CBT, he reported contributing factors to his depression to be perseverations about his origins and his unique last name. He reported history of severe physical abuse he endured by his mother. It is his understanding that the specific physical punishment he had resembled punishments that slaves used to endure. 2. 57-year-old AAM diagnosed with depression and PTSD in 2016. He had psychotherapy for 4 years, achieving partial remission. He reported contributing factors to his depression were preoccupations with his origins as well as anger towards his mother who made him leave the house at 18 years old, due to "slave mentality". 3. 61-year-old AAM who was a health professional diagnosed with depression in 2013. He achieved partial remission of symptoms with psychotherapy. The patient describes how he has been consistently trying to retrace the history of his family with limited success. He reported lack of physical affection growing up and he believes that might be a result of physical abuse which he relates to their history of slavery and physical punishment. Discussion: These patients started having symptoms of depression in their late 50's. This is a period when it is appropriate to look back on one's life and make sense of accomplishments or missed opportunities. Each of the above patients not only is having an existential crisis but is also struggling with a similar experience of social rejection, financial disadvantage, and confusion regarding their origins. There is evidence that reactivity to stress is influenced by maternal experiences of stress. In addition, R. Yehuda's research with Holocaust victims has suggested that trauma influences future generations. Further more, Slavich and Irwin (2014) integrated the role of social rejection in the development of depression. In all of the above clinical cases, the patients had experienced rejection on the personal level, but also, in their perspective, on a socio-cultural level. Conclusions: Being mindful of the socio-cultural aspects of our patients is fundamental in helping them. Talking about factors that often seem taboo, in an open and nonjudgmental way, can contribute to an improved therapeutic alliance as well as improved mood.

No. 125

Major Depressive Disorder Relapse After Bariatric Surgery in a Previously Stable Patient Treated With Duloxetine

Poster Presenter: Yehonatan Shilo, M.D.
Co-Author: Carolina I. Retamero, M.D.

SUMMARY:
Overview: In recent years bariatric surgery has gained popularity for its ability to provide quick and noticeable results in weight reduction. The rates of depression in patients eligible for such surgeries are 19% to 40%. Previous studies showed that antidepressant use increases or changes after surgery. Limited information is available regarding the influence of bariatric surgery on the pharmacological changes in absorption and bioavailability of antidepressants. Objective: To emphasis the clinical consequences of the physiological changes in absorption and bioavailability of antidepressants resulting from bariatric surgery. Clinical case: The patient is a 55-year-old Caucasian female who was voluntarily hospitalized for depressive symptoms, which included suicidal ideation with a concrete plan. She met criteria for major depressive disorder, recurrent, severe. She had been living with depression since her 30's and was doing well on Duloxetine 60 mg daily. We met the patient 4 months after her bariatric surgery. The patient reported depressive symptoms following the surgery which started shortly after her discharge. She was treated in the outpatient setting. Duloxetine was replaced with fluoxetine with no response at 40mg once daily. We were unable to detect any other significant stressors in her life that could of triggered her relapse with the exception of the surgery itself. During her hospitalization, fluoxetine was increased to 60 mg daily and her depression gradually improved with resolution of the suicidal ideation and discharge to outpatient care. Discussion: In the literature we could find studies that report significant decreased in the levels of sertraline, escitalopram and duloxetine post Roux en Y surgery. Another study regarding venlafaxine showed no change in concentration. It is still unclear whether this decrease is only the result of the anatomical and physiological changes in the GI tract, or the result of a major stressor on the body and the psychological consequence of this life changing intervention. Conclusion: It seems that there is a small, but significant and somewhat intuitive evidence that bariatric surgery can affect antidepressants bioavailability. Further research is required to evaluate the specific pharmacological influence of bariatric surgery on each antidepressant. Until further knowledge is accumulated, it seems reasonable to discuss with the patient the possibility of decrease in effectiveness of the medication after the surgery, as well as, close monitoring of the patient in the post surgical period.

No. 126

Too Big to Place: Barriers to Inpatient Psychiatric Care for the Obese

Poster Presenter: Katherine Elise Camfield, M.D., M.P.H.
Co-Authors: Beatrice Rabkin, Daniel Holschneider

SUMMARY:
In the US 2 in 3 adults are considered to exceed a normal body weight, half of whom are deemed to be obese (BMI 30+). Those with mental illness are 2-3 times more likely to be obese than the general population, with many prescribed psychotropics leading to significant weight gain. Below, we describe a case that highlights the barriers to inpatient psychiatric hospitalization that obese psychiatric patients commonly face. A 42 year old, morbidly obese (BMI 53), homeless man admitted to a Los Angeles county hospital on an involuntary psychiatric hold for danger to self and grave disability. He had reportedly been immobile outdoors on a mat for 2 months, covered in lice and declining assistance. He was admitted to the internal medicine service due to his medical comorbidities and a psychiatry consultation was initiated. His psychiatric history was notable for severe, treatment refractory depression and multiple prior suicide attempts. He had few social connections and suffered with chronic thoughts of self harm. While acutely suicidal and in urgent need of inpatient psychiatric stabilization, no area mental health hospital would accept him because his body mass exceeded purported weight restrictions on facility beds (typically >250-350 lbs). He remained hospitalized on a medical unit for 20 days, requiring intervention by the hospital's Chief Medical Officer to finally allow discharge to a skilled nursing facility.

Reasons cited by many psychiatric facilities in excluding obese patients include inadequate staffing levels, inadequate training of staff, lack of interdisciplinary care and absence of specialized equipment to safely accommodate their needs. In addition, work-related disability policies may not cover staff working with patients over a specified weight limit. Furthermore, Medicaid may not reliably reimburse facilities for the cost of specialized equipment required. The paucity of available psychiatric beds has meant that heavy patients can languish in hospitals at great expense to insurance companies and hospitals. While held at medical facilities, patients are denied access to psychiatric inpatient care where risk of self-harm could be optimally managed. Moreover, use of medical beds for psychiatric patients is a significant misallocation of scare resources. While the American Disabilities Act does not formally define obesity as a legally protected disability, whether these routine denials to access psychiatric hospitalization violate anti-discrimination laws is unclear.

No. 127

Cultural Considerations in a Patient With Severe Major Depressive Disorder With Psychotic Features

Poster Presenter: Agnes Kwon, D.O.
Co-Authors: Omer Liran, Anthony Simone

SUMMARY:

Cultural Considerations in a Patient with Severe Major Depressive Disorder with Psychotic Features Mr. C is a 66 year old Filipino male with no formal psychiatric history who was brought to the emergency room after his sister called 911 for three days of visual hallucinations and command auditory hallucinations to commit suicide. According to the patient's sister, there was no concern for substance use, and the patient had no history of psychosis. On initial evaluation, the patient had normal vital signs but exhibited psychomotor retardation, with increased speech latency, thought blocking, barely audible speech, and discrete episodes of disorientation. Given his age and concern for acute encephalopathy, the patient was admitted to medicine to rule out organic causes. An extensive work up for encephalopathy, including blood work, CT head, lumbar puncture, EEG, and more, were all unremarkable. Upon obtaining more thorough history, we discovered that the patient had been a dedicated attorney in the Philippines for decades until he immigrated to the United States only four years prior. After moving to California, the patient worked at a Board and Care facility as a "live-in aid" six days per week. A few months prior to admission, the patient had an altercation with a coworker which prompted a transfer to another facility. After this altercation, the patient had episodes of odd behavior and confusion, including leaving his work to go to his sister's house late at night and making paranoid statements. The patient's sister had sought medical care several times over the preceding few months, but the patient was repeatedly discharged from the Emergency Room without thorough psychiatric evaluation and appropriate follow up. She felt that none of the providers fully understood how these work events had a significant impact on the patient. She explained that in Filipino culture, employment and strong work ethic are highly valued, and that the patient considered his work vital to his life. We would like to highlight not only the importance of thoroughly ruling out organic causes for an acute episode of psychosis, but also the importance of taking into consideration a patient's social and cultural background when formulating differential diagnosis.

No. 128

Hurricane After the Storm, a Mental Health Crisis: A Case Series

Poster Presenter: Sigella Vargas, M.D.

SUMMARY:

Maria, a category 5 hurricane swept across Puerto Rico on September 20th, 2017, at the time the island was recovering from Hurricane Irma. Just one other category 5 hurricane has made landfall on the island since 1851. Hurricane Maria came at a time when Puerto Rico was facing financial turmoil. The immediate impact on the island was unprecedented with power outages lasting months, no running water, no food, people losing their homes and business and hospitals overcrowding. Families were displaced and many fled to nearby islands and the United States. The death toll remains inconclusive and various studies report anywhere from 3000-4900 deaths. It is well known that experiencing natural disasters may exacerbate symptoms of

mental illness and Maria has demonstrated such an effect on the Puerto Rican community. Current literature suggests that suicide rates, depression, and anxiety increased in Puerto Rico roughly 30% in the months preceding the Hurricane when compared to data from the previous year. Similarly, studies after Hurricane Sandy showed an increase in emergency room visits for substance abuse problems, psychosis, mood disorders, and suicides. It also revealed that the longer the power outage continued, the greater the increase in emergency room visits. As of the 2010 census, New York City's total Puerto Rican population was 723,621, of which 298,921 (21.6%) live in the Bronx. Here we explore the impact of Hurricane Maria in the South Bronx. This poster will present the cases of three patients who were evaluated in the outpatient setting post-Hurricane Maria. We will discuss the importance of understanding the trauma related to natural disasters as well as the importance of appreciating culturally related issues.

No. 129

Difficulties in Determining Capacity to Rescind Planned Adoption in Postpartum Psychosis Patient

Poster Presenter: Stephanie Wick, D.O.

SUMMARY:

Capacity to consent is an ethical factor often important in psychiatry. While there is extensive literature on capacity to consent for treatment, there is minimal literature on capacity to consent to care for one's child and whether or not the same guidelines for capacity apply. We present case of a 30-year-old Caucasian woman who presented to the ED with new-onset disorganization, auditory and visual hallucinations, and disorganized behavior 10 days post delivery of her first child. Patient was diagnosed with postpartum psychosis and subsequently developed catatonia. During her inpatient hospital stay, while still displaying psychotic symptoms, patient requested to rescind the adoption of her child, which was planned prior to symptom onset. Through literature review the goal of this poster is to discuss the challenges and importance of determining capacity to care for one's child in patients with postpartum psychosis.

No. 130

Ethical Implications of Diagnosing and Treating Psychosis High-Risk Syndromes

Poster Presenter: Ike B. Iloka, M.D.
Co-Author: Faisal Akram, M.D.

SUMMARY:

Evidence indicates that longer durations of untreated psychosis lead to early functional decline and poorer overall health outcomes. In response to this, several diagnostic criteria have been proposed to prospectively identify individuals at high risk of psychosis. The Clinical High Risk (CHR) Criteria offer a viable approach to early intervention and prevention in these populations. But along with such preventive interventions, a thorough ethical workup involving the principles of beneficence, non-maleficence, autonomy and confidentiality is necessary as well. To this end, the ethical implications of diagnosing and treating Psychosis Risk Syndromes have been discussed in the context of emerging evidence from prodromal psychosis research. Specifically, we highlight that the limited capability of CHR criteria in predicting future psychosis exposes individuals to unwarranted labeling and thereby harm from preconceived discrimination and prejudice surrounding Mental health disorders. We argue that a stigmatizing label during adolescence may disrupt or engulf identity formation and interfere with the achievement of personal competencies. Since prodromal psychosis research has also identified individuals who never develop psychosis but continue to demonstrate attenuated positive symptoms with functional decline, questions arise whether it is ethical "neuroenablement" or unethical "neuroenhancement" to treat such individuals. We also touch upon the debate whether diagnosing sub-threshold symptoms in the form of psychosis high risk syndromes raises the possibility of "overmedicalizing" perceptual variations and thinking patterns. Strategic efforts need to be employed to reduce stigma and how to ethically disclose the diagnosis. As such, it will be important to communicate the difference between susceptibility and disease. We conclude that there is a need for interdisciplinary engagement of neuroscientists, psychiatrists, ethicists, legal scholars and policy makers along with continued empirical research efforts to ensure "primum non nocere" and

virtuous practice of indicated prevention in psychiatry.

No. 131

To Die or to Dialyze: Ethical Conflicts in Involuntary Hemodialysis for a Renal Patient With Chronic Psychosis

Poster Presenter: Beatrice Rabkin
Co-Authors: Susie Lisa Morris, M.D., M.A., Ilang Guiroy, M.D., Collin Lueck

SUMMARY:
Data suggests patients with psychosis receive a lower quality of pre-dialysis care as compared to non-psychotic patients. Patients with schizophrenia are also at higher risk for death from end-stage renal disease (ESRD). Treatment of ESRD patients with psychosis is further complicated by variable capacity to consent to hemodialysis (HD). In this poster, we present the case of a 41-year-old man with a history of treatment refractory schizoaffective disorder and chronic kidney disease. He was admitted to a large county hospital with complaints of chest pain. Labs and studies ruled out acute coronary syndrome. He was informed that he would be at risk of eventual death without HD. The patient refused HD, asserting that he did not have renal disease. His medicine and psychiatry teams found that he lacked capacity to decline this life-sustaining treatment. No surrogate was available. A medical consent petition was submitted to the court. The court found that the patient lacked capacity to refuse treatment. There was debate among his providers about the ethics of forcing invasive procedures to facilitate lifelong HD. Ultimately, no action was taken to initiate HD. Core principles in American bioethics include autonomy, nonmaleficence, beneficence, and justice. This case highlights how these seemingly congruous principles can come into opposition. The patient demonstrated a lack of capacity, and, therefore, an inability to meaningfully participate in informed consent. As a result, beneficence was promoted over autonomy in an effort to provide the patient with a life-sustaining intervention. This case is further complicated by the nature of HD: a highly invasive intervention which, though it can sustain life, is neither curative nor painless. Here, the concepts of non-maleficence and justice are highlighted. The belief is that access to basic healthcare is a manifestation of justice; however, the involuntary application of an invasive, non-curative treatment may be interpreted to betray the principle of non-maleficence, or not inflicting needless harm upon the patient. Cases involving persons with ESRD and psychotic disorders are ethically complicated as they tend to highlight conflicts amongst multiple medical principles, especially in the context of life-sustaining, though non-curative, interventions.

No. 132

Elective Abortion: An Ethical Dilemma in the Case of an Acutely Psychotic Mother

Poster Presenter: Sarah Lynn Vaithilingam, M.D.

SUMMARY:
Introduction: In psychiatry, there are three legal considerations regarding pregnancy; maternal capacity, concern for the mother's best interest and the best interests of the fetus and the possible need for maternal hospitalization in a psychiatric facility. In this case presentation, we describe an acutely psychotic mother, who was diagnosed at 7 weeks pregnant and requested an elective abortion. The ethical dilemma in our case was to what extent psychosis played on the patient's decision to abort her fetus. Intervention on behalf of the mother, in which the mother lacks capacity, is complicated, as in the present case; it requires the subjective laws of substituted judgment. Case Description: We discuss a case of a 34-year-old female, seven weeks pregnant, who presented with disorganized behavior and thought process. Early into the admission the patient expressed her desire to abort the pregnancy. The patient was evaluated and deemed to lack capacity. The patient's husband was titled health care proxy and requested that the pregnancy be carried out to term. While hospitalized the patient actively attempted to abort the pregnancy, she would hit her stomach and make statements such as "I do not want to be pregnant". With pharmacological treatment her psychotic symptoms improved, she was content with the pregnancy and the patient was discharged. Throughout her pregnancy the patient was hospitalized two more times for a similar presentation. In the patient's last trimester, police were called to the patient's home and had found the patient with a lifeless neonate. It is unclear what the details were regarding the

delivery of the fetus and subsequent death of the neonate; however at the time the patient was readmitted for psychiatric treatment. Discussion: This case highlights a need for clear ethical guidelines regarding the management of pregnancy in patients who lack capacity. Questions arose; regarding what could have been done differently. Denial of pregnancy is a medical emergency, should patients with this symptom be detained in a psychiatric facility during their last trimester to protect the health of the mother and viable fetus? Furthermore, pregnant women with schizophrenia have higher rates of obstetric complications, congenital malformations and post neonatal deaths. Should a patient with schizophrenia be forced to maintain a pregnancy and receive prenatal care that she does not want, in light of risk of poor outcomes? Moreover, there are varying degrees of psychosis, is it critical for the psychiatrist to evaluate the extent that psychotic symptoms have on a patient's decision to abort, to respect autonomy? Conclusion: The management of pregnancy in schizophrenic patients can be complicated in the event that a patient is electing for an abortion. There is a need for research discussing the clinical outcomes of pregnancy in schizophrenic patients and the ethics of pregnancy in patients who lack capacity.

No. 133

Quis Custodiet Ipsos Custodes? A Peculiar Case of Reverse Nepotism

Poster Presenter: Nahed Khairy, M.D.

SUMMARY:

The applicability and utility of an ethical standard are likely to predict widespread endorsement. While a deontological approach to ethical dilemma implies high standards of conduct, the world currently does not seem to be ready for adherence to standards no matter their outcome. The current human race, the world and the medical culture as a microcosm of the world, are subverted by the hegemony of corporate ideology. And it is this ideology that breeds nepotism and cronyism: two malignancies of the workplace. Nepotism is the practice of favoring relatives most often in the granting of jobs or positions of power. The opposite of nepotism would be, in case of obligatory hire, a relative or *obligatory supervision of a relative, to ensure their position doesn't involve money or power. Hollywood and politics have had their share of examination of nepotism within them, the medical sector not so much. The impact of this "restraint" on the relative in a subordinate position has not been addressed, where subordination may be experienced thrice: once out of the privilege endowed upon the relative, second while witnessing others receiving privileges from the relative, third while witnessing other families within the same "business" not observing the reverse nepotism policy. This subjective account of a seven year experience of reverse nepotism and its sequelae on the process of unfolding of the career of the author aims to shed light on organizational dynamics. While legislation may exist, the culture of nepotism is likely to prevail *example of obligatory hire is elected president of an organization where family member already works

No. 134

Utilitarianism: An Approach to Reduce Moral Distress

Poster Presenter: Safiah A. Amara, M.D.

SUMMARY:

Medicine, once a profession of virtues that emphasized the traditions of the Hippocratic Oath, has been radically transformed under the influence of corporatization, legalization, and economy driven policies. Often times, and particularly in the field of psychiatry, physicians are obliged to provide care wherein the responsibility to uphold the principle of "premium non nocere" (first, do no harm) may be compromised in order to serve social, legal, political, and financial interests. These constraints on a physician's personal liberty result in moral distress that jeopardizes the wellbeing of the physician as well as the virtue of medicine. Therefore, in reviewing multiple theories and case examples, we aim to understand the sources that contribute to moral distress in physicians. One such source of moral distress may be the inability to follow Kant's categorical imperative as any derivation of moral duty per this principle almost uniformly fails in real life scenarios. Rather, an attempt to approach moral duty to its nearest provides a reasonable and practical alternative. As such, we posit, although not without limitations, that Utilitarian principles may reduce a physician's moral distress while maximizing

the common good at the individual and societal level.

No. 135
Philosophical Implications of the Rise of Neuromodulating Devices
Poster Presenter: Mani Yavi, M.D.

SUMMARY:
The advent of neuromodulating devices challenges the philosophical notion of free will and conscious control of behavior. The sense of agency is the subjective experience of having made goal-directed actions with external consequences. Additionally there is a link between the degree to which the sense of agency is experienced correlates with the shortening of the perceived time interval between that action and its consequence. Many philosophers argue that agency presupposes that our actions are not generated by causal routes that bypass conscious control of the mental states that may include manipulation by an artificial devices. Motor movements may be modulated using electronic devices at the will of the operator. Mental conditions such as depression and borderline personality disorder are associated with an impaired sense of agency. Neuromodulation of overactive regions of the prefrontal cortex and underactive regions of the subcortical reward system can improve mood in some patients with depression in real time. In this review we explore the development of novel devices and the ethical and philosophical implications of innovations in neuromodulating bioelectronics.

No. 136
Governmental Assessment of Mental Health Systems (AIMS) of Egypt 2017
Poster Presenter: Mahmoud Hamdy Ahmed Gad, M.B.B.S.
Lead Author: Sally Ibrahim Noby, M.B.B.S.

SUMMARY:
The main goal of this study is to collect information about the governmental sector of mental health system in Egypt using the WHO-AIMS. Last assessment of mental health system of Egypt was reviewed in 2006. Objectives - Assess development of Governmental mental health system through the following domains: • Policy and legislation, Mental health services, Mental health in PHC, Human resources, Public Education and Links with Other Sectors and Researches. - Identify major weaknesses and challenges in mental health systems according to the collecting data for improve the services and prepare public mental health action plan. Methods: • WHO-AIMS module: WHO-AIMS were developed to assess key components of a mental health system and thereby provide essential information to strengthen mental health systems. WHO-AIMS 2.2 consists of six domains. All six domains need to be assessed to form a relatively complete picture of a mental health system. Study hypotheses: 1- Mental health system in governmental sectors has improved over the last ten years which reflected on the services provided to mentally ill patients. 2- Development of mental health law and policy are reflected in the quality of services provided to psychiatric patient and protects his rights. Study design: This is a cross-sectional descriptive study. Result and recommendations • Current Mental Health act in Egypt applied on mental health hospitals affiliated to Ministry of Health (Governmental and Private sectors) but not applied on University Hospitals and Military Hospitals, so the policy makers should be propose for broadening of application to applied mental health act on University Hospitals and Military Hospitals. • Policies and procedures for psychiatric community and rehabilitation in governmental mental health sectors need to be optimized to international standards. • Enlarging the training role of multidisciplinary teams in all mental health facilities and primary health care units are mandatory. • Enhance the referral system between primary care units and mental health hospital. • Lack of adequate numbers should be managed appropriately with increasing numbers of workers. Also each nurse main job should be confined to the care of the patient and not to be overloaded with security issues. • Mental illness remains one of the darkest corners in Egyptian community. Ashamed and embarrassed, Egypt has launched campaigns to increase awareness of mental health. These campaigns are usually in collaboration between the government, NGOs, professional associations, and international agencies. • There should be an improvement in the rehabilitation programs in the community that help discharged patients to merge normally in the

community. • Understanding the obstacles will help in promoting research and guiding the service providers to implement integrated pathways, which will eventually lead to significant improvement of psychiatric health care services in Egypt.

No. 137

Temporal Trends in Gabapentin Prescriptions at a VA Hospital: The Impact of Scheduling Policy

Poster Presenter: Alexandru I. Cojanu, M.D.
Co-Authors: Motaz Alshami, M.D., Anindita Chakraborty, M.D., Jody Wong, D.O., Nicole Stromberg, M.D., Cynthia Arfken

SUMMARY:

BACKGROUND: International treaties require scheduling or controlling substances based upon medical use and abuse potential. These substances are then monitored from production through distribution with almost all U.S. states requiring prescriptions for controlled medications entered into state-specific prescription drug monitoring programs. Scheduling also informs prescribers that a specific medication has abuse potential. In the U.S., changes in scheduling have resulted in changes in prescription claims, suggesting that prescribers are sensitive to the scheduling message. Although most medications are scheduled by the federal government, states can also schedule medication. Due to recent reports of gabapentin abuse, some states (i.e., Kentucky, Ohio and West Virginia) scheduled the medication, and Michigan is in the final comment period prior to scheduling. Gabapentin, approved in 1993 as an adjunct treatment for partial epileptic seizures, is currently approved for the management of post-herpetic neuralgia. However, it is estimated that 83% of gabapentin prescriptions are for off-label indications of bipolar disorder, diabetic neuropathy, complex regional pain syndrome, attention deficit disorder, restless leg syndrome, trigeminal neuralgia, periodic limb movement disorder of sleep, migraine, drug and alcohol withdrawal seizures, and as an alternative to opioids for the treatment of pain. Not surprisingly, prescription claims for gabapentin are increasing. OBJECTIVE: To compare the trend in prescription claims for Gabapentin before and after this medication becomes a controlled substance in the state of Michigan using one Veterans Administration Medical Center (VAMC) as a case study. The trend for gabapentin will be contrasted to the trends for two controlled medications for pain relief (hydrocodone/acetaminophen combination and tramadol) using interrupted time series. METHODS:Prescription and pharmacy claims data from the Detroit VAMC for preceding two fiscal years prior to scheduling were analyzed to characterize baseline prescriptions. IRB approval was not required as analysis involved only summary data without human identifiers. Data from 2019, post scheduling, will be presented. RESULTS: The preceding two fiscal years showed increase gabapentin prescription claims from 328.3 prescriptions per month to 360.7 prescriptions per month (9.9% increase). The total number of claims for gabapentin exceeded those of tramadol by 73% but were only 65% of those for hydrocodone/acetaminophen combinations. CONCLUSIONS: Gabapentin prescriptions at this one medical center saw a steady increase, mirroring that of the state, and suggest that prescribers are increasingly relying on gabapentin. When Michigan schedules the medication and providers are required to check the prescription drug monitoring program prior to prescribing, there may be upheaval. This project is well-placed to monitor prescription claims and educational efforts to minimize the upheaval

No. 138

Collaborative Care: Providers Power With Pharmacists to Improve Systems in Client Care

Poster Presenter: Sohail Imran Mohammad, M.D., M.P.H.

SUMMARY:

In 1999 and 2001, the Institute of Medicine published two landmark reports on the evidence for quality failures and called urgently for redesign of care systems to achieve improvements(1,2). The report, “To Err Is Human: Building a Safer Health System”(3), provided a “comprehensive strategy by which government, health care providers, industry, and consumers can reduce preventable medical errors”(3). It concluded, “know-how already exists to prevent many of the mistakes”(2,3) and suggested setting a minimum goal in reduction in errors. The American Psychiatric Association(4), highlights the four essential elements of the collaborative care

model(4): 1) team- driven, 2) population-focused, 3) measurement-guided, and 4) evidence based(4). Delaware Psychiatric Center (DPC) is a teaching long term care facility providing care to the most challenged client population with mental healthcare needs. In an effort to continually improve the DPC systems of care and the overall quality of health care provided to clients, the pharmacy initiated "Pharmacy Intervention Report". The objective of this descriptive study as part of quality improvement is to capture the types of interventions and learn the trends of these interventions for each of the three academic years between 2014 and 2017. This comprises the "Study" component of the IHI - PDSA tool, and the purpose is to determine the modifications that may be recommended i.e. the "Act" component of the IHI - PDSA, in order to achieve a goal to keep these interventions to minimal or even zero. This measurement guided approach may enable further improvement in care quality and is potentially cost saving. The pharmacist interventions were categorized as: allergy related, omissions in orders, non-formulary orders, previous orders not discontinued, unapproved abbreviation, drug-drug interaction, and other. The results showed that about 80% of pharmacy interventions comprised of omissions in orders, allergy related, and previous orders not discontinued. The results highlighted the provider prescription practice/ behavior that needed immediate attention to lower the intervention rates and improve the systems in care delivery. The yearly trends indicated potential external contributory factors like resident physician rotation schedule particularly of resident interns, inter-hospital system variations, adaptability to electronic/ paper medical records, and opportunities for training. Provider training on prescription and order writing on a quarterly basis at a teaching facility like DPC may significantly reduce the pharmacy interventions. The training may be achieved through resident didactics, pharmacy newsletters, and resident journal. In conclusion, improving systems in client care requires active collaboration and rejuvenating the working relationship between healthcare team members, the pharmacists and the providers, to continually improve and provide quality patient centered recovery-oriented care.

No. 139

Pre-Discharge Factors Predicting the Readmission to the Psychiatric Unit Within Thirty Days: A Retrospective Study

Poster Presenter: Felix Oscar Priamo Matos Padilla, M.D.

Co-Authors: Maria Teresa Carvajal, M.D., Joseph Sokpagna Soeung, M.D., Mihir Ashok Upadhyaya, M.D., Ph.D., M.P.H., Ingrid Haza

SUMMARY:

Readmission rates are used as an indicator of quality of care in the healthcare setting and represent an economic burden to the hospital, the healthcare system, and the patients alike. It is well known that severe and persistently mentally ill patients and substance use patients who have medical comorbidities are at higher rates of hospital readmission. Studies have shown that the overall 30-day readmission rate is 13 per 100 schizophrenic patients and 11 per 100 for bipolar patients in 15 Organization for Economic Co-operation and Development countries. Emerging literature suggests that early readmission, typically within 30 days, has been associated with premature discharge and a mismatch between patient's needs and outpatient arrangements. The aim of this retrospective study is to obtain medical records from all psychiatric patients readmitted to an inner urban community hospital within thirty days in the period between January 2016 and January 2018 (n=360), to evaluate pre-discharge variables and develop prevention strategies. The variables that will be reviewed are demographic factors, clinical characteristics (e.g. diagnosis, treatment), psychiatric history, discharge disposition and outpatient follow-up. We aim to further identify risk factors that predispose patients to readmission as well as identify discharge strategies and treatment strategies that have led to no readmission within our health system. Patients will also be assessed for their length of stay of subsequent admissions. We hypothesize that while there will be a subset of patients who will have long stay readmissions, the majority of those patients will have shorter lengths of stay and will be out of the hospital longer than thirty days arguing that perhaps patients are rushed to discharge before they have reached baseline and outpatient follow up plans are properly in place. We aim to add to the literature

around readmission rates and preventable factors and suggest that for a subset of patients, a longer initial length of stay may be warranted.

No. 140

Burnout Among Psychiatry Residents and Nurses Using the Oldenburg Burnout Inventory: A Cross-Sectional Study

Poster Presenter: Felix Oscar Priamo Matos Padilla, M.D.
Co-Authors: Darmant Bhullar, M.D., Maria Teresa Carvajal, M.D.

SUMMARY:
Burnout is a syndrome characterized by emotional exhaustion, depersonalization, feelings of cynicism and a low sense of personal accomplishment that results from work-related stress (1). This syndrome affects the professional and personal lives of healthcare professionals, which results in a reduction of their clinical working hours and represents an ethical challenge for healthcare institutions (2). Burnout has been shown to contribute to medical errors, suicidal ideation and lack of professionalism among healthcare providers (1). Recent literature suggests that residents and fellows are more likely to report high emotional exhaustion, high depersonalization, and burnout when compared to the general U.S. population. Such clinicians are also at risk for depression and have higher levels of fatigue (1). The aim of this study is to determine the rate of burnout among clinicians (attendings and residents) as well as nursing team members in an inner urban community hospital using the Oldenburg Burnout Inventory (OLBI) as well as other variables including gender, duration of being in the medical field and questions related to what are the identifiable causes of burnout. Using this baseline data, burnout prevention strategies will be implemented which will involve various modalities including exercise, education and integrative therapy modalities. A post survey will compare outcomes for these clinicians. We aim to identify successful approaches to managing burnout in the health care system.

No. 141

Improving the Administration of Clinical Skills Verification Examinations: A Performance Improvement Project

Poster Presenter: Courtney Elizabeth Kandler, M.D.
Co-Author: Sherrell T. Lam, M.D.

SUMMARY:
Approximately ten years ago, the American Board of Psychiatry and Neurology (ABPN) phased out the oral board examination and began requiring that individual psychiatry residency programs administer the Clinical Skills Verification (CSV) examinations. In order to be eligible to sit for the written boards, each graduating resident must have record of three passing CSV exams. In the time since the CSV has become a requirement for residency graduation, some progress has been made towards standardization of implementation, including general guidelines about how to administer the CSVs and two approved CSV evaluation forms posted on ABPN's website. In spite of this, faculty at our institution still do not fully understand the rules to administer and grade the CSVs and residents view it as merely another prerequisite to fulfill before becoming an independent licensed practitioner but do not value it as a promotion tool. We initiated a performance improvement project to address some of the weaknesses of the CSV infrastructure, beginning by surveying residents and faculty about CSV perception and knowledge about its requirements. Data was gathered on the average number of CSVs completed by each resident and faculty member, setting in which the CSV was completed, the grading provider, scores, comments and whether the exam was scored correctly. We saw significant variability in time allowed to perform the CSV, whether there was a component for presentation of the case and in grading of the CSV, with some faculty members eliminating the grading portion completely, surmising that completion of the CSV itself satisfied the requirement. The intervention to be implemented includes a brief presentation to the residents and faculty highlighting the important aspects of the CSV, and a series of faculty development modules provided by the American Academy of Directors of Psychiatry Residency Training. A "calibration" small group exercise will conclude the series, in which faculty watch several videos scripted as "poor/marginal performance,"

“good performance” and “excellent performance,” and information will be gathered on whether faculty appropriately graded each category and then provided feedback on grades that matched each performance. Follow-up surveys will be conducted with the residents and faculty addressing satisfaction and re-testing CSV knowledge at the mid-point (January 2019) and end of the academic year (June 2019). We hypothesize that faculty are uncomfortable with giving “failing” or “unacceptable” grades to residents and current CSV examinations are not providing useful feedback to the residents. We anticipate that faculty will inflate grades during the calibration exercise. Following the intervention, we expect more stringent grading and greater opportunity to utilize the CSV to identify areas of weakness in the patient interview, thereby increasing faculty and resident satisfaction in the CSV as an educational tool.

No. 142

Patient With Cocaine/Levamisole-Induced Vasculitis With Retiform Purpura

Poster Presenter: Oscar Fernando Plata, M.D.
Co-Authors: Claudia J. Chapa Garcia, M.D., Michelle Salpi Izmirly, D.O.

SUMMARY:

Cocaine is one of the most popular illegal substances abused in the United States. Up to 70% of seized cocaine contains the adulterant levamisole (2). Levamisole is currently used in the United States as an antihelminthic drug in veterinary medicine, but its use was discontinued in humans in 2000 due severe side effects such as neutropenia, agranulocytosis, skin necrosis, and vasculitis (2). Toxicity manifests clinically as leukocytoclastic vasculitis, and patients can present with cutaneous, hematological, and renal lesions (1). In addition, levamisole has been associated with neutropenia, intravascular necrosis and crescentic nephritis with anti-neutrophil cytoplasmic antibodies (ANCA) (1). The following report illustrates a case of a patient with cocaine use disorder with recurrent cocaine-induced vaculitis manifesting as retiform purpura and requiring hospitalization. Our patient is a 38 year-old Hispanic woman with a history of cocaine use disorder. Her past medical history is significant for asthma, seizures, and multiple medical hospitalizations for retiform purpura from levamisole-induced vasculitis secondary to cocaine use. She was brought in by EMS with chief complaint of "I'm itching, I have rashes everywhere; I don't know what I'm allergic to. Also, I'm depressed and want to see a psychiatrist." During evaluation, she reported using cocaine daily for the last 3 years with recurrent "rashes" all over her body. Multiple purpuric skin eruptions were noted on her face and upper and lower extremities. She reported having recurrence of these lesions ever since she started using cocaine and stated that other physicians explained to her that cocaine was the cause of these lesions. She was aware of risks associated with cocaine-induced vasculitis, however, she voiced her frustration about multiple unsuccessful attempts to quit using cocaine on her own. Cocaine has been found to contain an adulterant named levamisole, which is responsible for causing toxicity in humans manifesting as vasculitis with cutaneous lesions. Systemic vasculitis can be severe enough to cause glomerulonephritis and require immunosuppressive medications to prevent end organ damage. There is a 27% risk of recurrent symptoms in cocaine users after re-exposed to cocaine containing levamisole (2). It is believed that vasculitis caused by levamisole is due to antibody deposition involving anti-neutrophil antibodies(2). Treatment consists of supportive care. The skin lesions improve after cessation of cocaine use (2). In more advanced cases with skin necrosis, treatment is provided in a special burn unit. Steroids are often used as part of treatment, but their use remains controversial (2). This case illustrates complications associated with substance use and cocaine containing levamisole. It also demonstrates the struggle that patients encounter in their endeavors to quit substance use, despite evident clinical manifestations and the importance of proper refer

No. 143

“God Told Me to Fast” Catatonia Secondary to Psychosis Necessitating Inpatient Medical and Psychiatric Treatment

Poster Presenter: Claudia J. Chapa Garcia, M.D.
Co-Author: Michelle Salpi Izmirly, D.O.

SUMMARY:

Catatonia is a potentially life-threatening condition that is characterized by the inability to move normally, which can occur in the context of many psychiatric and general medical disorders. Diagnosis within several hours and treatment with benzodiazepines or electroconvulsive therapy (ECT) generally leads to remission, but in some instances it may require longer treatment to achieve remission such as recurrent catatonia. If not treated aggressively, malignant catatonia can have a poor prognosis for survival. Catatonia has been studied primarily in psychiatric inpatient units where it accounts for 5% to 20% of incidents (2-4).Non-malignant forms of catatonia usually respond to parenteral lorazepam, at 6–20 mg/day. Dosing is usually initiated at 3–4 mg/day and can be rapidly increased (5). In this case, patient is a 44 year old African American man, with unknown psychiatric history, who was brought in by the ambulance for evaluation due to verbal aggression at home. On evaluation, he was mute, unresponsive to verbal prompting, internally preoccupied, avoided eye contact and refused to eat or drink fluids. In the inpatient psychiatric unit, he continued to refuse fluids, oral intake, and medications. He became dehydrated and required transfers to the medical floor. On the medical floor, the psychiatric consult and liaison team found the patient to be: mute, not making eye contact, unaware of his surrounding, with stupor and negativism. A Lorazepam challenge test was performed. Soon after the administration of the Lorazepam challenge test he made eye contact, became verbal and reported he was not drinking fluids or eating food because he had a contract with God, who told him not to eat or drink. Standing Lorazepam order was started. During the hospital course, his Lorazepam dose ranged from 2mg-6mg daily. He would show improvement while on Ativan, then become catatonic every time he refused Lorazepam. He was transferred three times from the inpatient psychiatric unit to the medical floor when he would stop taking his medications and subsequently would stop oral intake and become catatonic. This case illustrates catatonia presentation and how it can be a life-threatening condition requiring aggressive medical intervention. It demonstrates how catatonia responds to lorazepam treatment and the need to provide adequate dosage and rapid titration to achieve a good response and patient's safety.

No. 144

Suicidal Behavior Independent of Comorbid Psychiatric Illness: A Literature Review

Poster Presenter: Saba Mughal
Lead Author: Shahan Sibtain, M.D.
Co-Author: Asghar Hossain, M.D.

SUMMARY:
Suicidal behavior is usually presented as a comorbid condition associated with other psychiatric illnesses. Research shows that about 10% of the population with suicidal attempt or deaths caused by suicide have no previous psychiatric disease. Many studies have reported Neurobiology of suicidal behavior shows role of Brain Derived Neurotrophic factor (BDNF). The levels of BDNF is demonstrated to be low in the plasma and blood cells of patients involved in suicidal behavior[5]. Its levels are also found to be low in post mortem brain studies of patients who have done suicide[6]. The involvement of serotonin in impulsive- aggressive behavior is a predominant risk factor for suicidal behavior. Suicidal behavior can be suggestive of specific genes variants involved in regulating serotoninergic system and other neuronal systems involved in stress response. It is found that levels of serotonin metabolite 5-hydroxyindoleacetic acid (5HIAA) are low in the Cerebrospinal fluid of patients who have fatal attempts[5]. Research data suggest that there are increased suicide rates in the children of suicidal parents as compared to non-suicidal parents favoring familial tendency of this behavior. There have been studies which propose the independent nature of suicidal tendency and behavior and not dependent on heritability of psychiatric disorders. We aim to review various literature and their proposal to consider the see if suicidal behavior could be independent of psychiatric illness and just not a symptomatic manifestation of Depression, Mania or Schizophrenia.

No. 145

Hallucination of Taste on Half the Tongue

Poster Presenter: Nikhil Rana
Co-Authors: Alan R. Hirsch, M.D., Emma Moghaddam, Rohan Rana

SUMMARY:

Introduction: Hemiphantogeusia has not heretofore been described. Such a case is presented. Methods: Case study A 64-year-old right handed nasute female, five months prior to presentation developed acute onset of salty taste. The salty phantogeusia was substantially more intense on the left side of the tongue than the right side. The phantogeusia on the left side of the tongue had a 10/10 intensity while the right side had a 5/10 intensity. The phantogeusia occurs on the tongue but not on the lips or palate. She also has observed a salty palingeusia at more than 300% of normal for more than 3 minutes. It presents at the front of the tongue at 300% of normal on the left and 200% of normal on the right. On the lips, it is 200% of normal bilaterally. This is precipitated by potato chips, crackers, and other salty foods. Likewise, her perceived flavor of salt was side dependent such that her response to salt in the mouth on the left side was 250% of normal, while the right side was 150% more than normal. Saltiness is less intense upon waking. This patient has been unresponsive to deep dental cleaning. She denied any problems with smell. Results: Abnormalities in physical examination: General: Bilateral palmer erythema. Reflexes: Quadriceps femoris: 3+ bilateral and pendular. Chemosensory Testing: Olfaction: Alcohol Sniff Test: 2 (anosmia). Phenylethyl Alcohol Threshold Test: Left > -2.0, Right > -2.0 (anosmia). Gustation: Propylthiouracil Disc Taste Test: 5 (hypogeusia). Taste Threshold Testing: Mild hypogeusia 10-30% to urea. Ageusia to salt. Other: Candida Culture: Positive Discussion: The pathophysiology of hemiphantogeusia in this patient is unclear. The origin of hemiageusia has been postulated to be an abnormality of the ipsilateral tractus solitarius or nucleus solitarius. Possibly, the phantogeusia represents a release phenomenon as a result of ipsilateral or contralateral damage to peripheral gustatory receptors. Alternatively, the hemiphantogeusia may be the manifestation of a cortical abnormality, such as partial seizure or disinhibiting cortical lesion or electrical activity at the level of the cortex, which manifests by spontaneous discharge at the level of the tongue. Since the tongue is somaesthetically localized to bilateral cortices, the more relevant question is why isn't hemiphantogeusia more prevalent than unilateral phantogeusia and how can a central basis of bilateral phantogeusia be explained? Possibly, phantogeusia is overwhelmingly truly unilateral and poor patient localization is the reason for phantogeusia being described as bilateral. Neurological disorders that present with phantogeusia such as migraines and epilepsy should be investigated to discover whether these are unilateral or bilateral in nature. These conditions query as to whether unilateral phantogeusia is present and a detailed chemosensory study may enlighten and provide information about the basic science of phantogeusia.

No. 146

Pain Management Education and Training During Psychiatry Residency: A National Survey

Poster Presenter: Ali Ahsan Ali, M.D.
Co-Authors: Muhammad Hassan Majeed, M.D., Ahmar Mannan Butt, M.D., Dhruv Gupta, M.D.

SUMMARY:

Background: There are over a hundred million people living with chronic pain in the United States. Although chronic pain is mostly treated by primary care physicians using opioids, psychiatrists are uniquely poised to manage chronic pain with modalities including psychotherapy. This national survey documents the current status of pain management education in psychiatry residency programs. Methods: An 11-item web-based survey was administered to psychiatry residency program directors. We assessed the current status of didactic and clinical experiences in pain management, barriers to training and the interest of psychiatry residents in a pain management education. Results: The survey was distributed to 221 psychiatry program directors, with a response rate of 49%. The majority (70%) agreed or strongly agreed that psychiatry residents should have education and training in pain management. Three-fourths of programs (74%) offered at least 1-5 hours of didactic education. Only forty-one percent of programs required at least 1-5 hours of clinical exposure during residency, while 23% offered at least 1-5 hours of supervision in pain management. Two-thirds of programs offered electives in pain management, although 52% said no residents had

selected electives in the past 5 years. A total of 87% of respondents indicated that no residents had pursued a career in pain management. Only 29% of programs were involved in multidisciplinary pain management initiatives at their institutions. Almost half (56%) of the programs planned to increase their educational offerings within the next two years. Lack of trained faculty (73%) and lack of time (37%) were the most cited barrier to increasing education and training. Conclusions: There is currently minimal didactic and clinical exposure to pain management across all residency years. Furthermore, few psychiatry residents pursue careers in pain management.

No. 147

13-Year National Trends of Annual Rates and Primary Diagnosis in First-Time Psychiatric Hospitalization Among Different Age Groups in Taiwan

Poster Presenter: Chun-Yuan Lin, M.D.
Co-Authors: Ya-Cheng Wang, Shuoyen Ting, Po-Han Chou, I-Chia Chien

SUMMARY:
Background First-time psychiatric hospitalization provides important information in public health because it reflects both exacerbation of psychiatric symptoms and the consequences of functional impairment of patients. The National Health Insurance Research Database (NHIRD) contains comprehensive healthcare data of 99% of the entire Taiwan population and has been successfully used to evaluate the protective or risk factors of a variety of diseases in the population. The study aimed to analyze the national trends of annual rates and primary diagnosis in first-time psychiatric hospitalization by age groups between 2000 and 2012 in Taiwan based on NHIRD. Methods The cases in this study were derived from the NHIRD which enrolled 266,328 patients who ever received inpatient psychiatric treatment in Taiwan. We examined the trends of first-time psychiatric hospitalization utilization among adolescents (12-18 years), adults (19-64 years) and the elderly (more than or equal to 65 years). Patients' age at first-time psychiatric hospitalization, primary diagnosis, geometric mean length of hospitalization and rate of the first-time hospitalization per 100,000 were estimated annually. A linear regression analysis was performed to assess the changes in rate and length of first-time psychiatric hospitalization over time. Results The rate of the first-time psychiatric hospitalization showed significantly declined trends for adults and the elderly, from 75.36 per 100,000 in 2000 to 66.32 in 2012 (p =0.003) and from 94.36 per 100,000 in 2000 to 70.53 in 2012 (p<0.0001), respectively. The length of stay in first-time hospitalization declined in adult male group, from mean 24.08 days in 2000 to mean 18.41 in 2012 (p=0.002). For all groups, the proportion of schizophrenia as primary diagnosis also showed declined trends (p=0.003). Notably, among adolescent groups, rate and length of first-time psychiatric hospitalization remained steady while affective disorders have replaced schizophrenia as the primary diagnosis during the 13-year study period. Conclusions Factors contributed to the reduced rate of first-time psychiatric hospitalization in adults and elderly deserve further study. The impact after first-time psychiatric hospitalization for adolescent patients warrants further investigation.

No. 148

A Curious Case of Visual and Somatic Hallucinations in a 16-Year-Old Japanese-American Female

Poster Presenter: Clayton Barnes, M.D.
Co-Author: Juan David Lopez, M.D., M.S.

SUMMARY:
Carla is a 16 year old Japanese-American developmentally normal female, currently engaged in outpatient individual and group therapy who initially presented for medication management in 12/2016. Her initial visit was prompted by her posting suicidal statements on her Instagram account. She was subsequently diagnosed with MDD and unspecified anxiety disorder, started on escitalopram, and titrated to 20mg QD without relief of her symptoms. She was cross titrated to fluoxetine in 09/2017 to 40mg QD with no side effects. In 04/2018 the patient began describing visual and tactile hallucinations, irritability, anger and increased energy alternating with days of fatigue and sadness. She was then cross titrated to aripiprazole 10mg QD with no side effects. Since 04/2018 Carla has consistently reported seeing insects such as bees and ants, a "blue thing with all

these eyes", and hands touching her body. She reports that she can feel the pressure of these hands touching her. Interestingly, these hallucinations are not distressing and last from "a minute" to "a few hours." She has no known history of sexual abuse, molestation, or of being sexually active, and of note, she endorses having a close friend who suffers from somatic and visual hallucinations of a nearly identical nature. More recently, Carla does not endorse diagnostic levels of anxiety or depression, but has now begun to complain of feelings of derealization and dissociation when she enters unfamiliar situations. Her neurological evaluation was normal and labs revealed a normal CBC, BMP and TSH. She is high achieving academically, and is involved in various extracurricular activities. Family history is notable for a mother who suffers from a mood disorder treated with pharmacotherapy. She has relatives who suffer from dementia and are primarily cared for by the patient's mother. Diagnostically, given the patient's history of depression, MDD with psychotic features has been entertained. However, the patient does not present as depressed. Folie a deux is also likely given the similarities in symptoms between the patient and her friend. A culture bound syndrome is possible, given that Japanese children have been reported to have high rates of hallucinations. Symptoms may also represent an unconscious need for increased care or support from her family given the emotional disconnection of her mother and the geographic disconnection of her father. The patient's apparent la belle indifference also supports this diagnosis. This is an interesting case given the quality of symptoms, their evolution, the patient's display of indifference towards them, along with her family and social influences. In this poster, we discuss the broad differential diagnosis for this atypical presentation of hallucinations utilizing a biopsychosocial model as well as the epidemiology of childhood onset hallucinations and treatment options.

No. 149

An Innovative Model for PGY-1 Learning in a Community Psychiatry Residency Program

Poster Presenter: Clayton Barnes, M.D.

SUMMARY:

Background: Residents at San Mateo County Psychiatry Residency have reported during verbal feedback sessions that they felt clinically unprepared for second year (PGY2). In order to address this, the residency program implemented a new strategy for teaching and mentoring first-year residents (PGY1). Methods: We organized the curriculum to contain a series of modules categorized by diagnoses including Psychotic Disorders; Bipolar Disorder; Depressive Disorders; Anxiety Disorders; Substance Intoxication and Withdrawal; Psychiatric Manifestations of Medical Illness; Emergency Psychiatry; and Neurology and Neuropathology. Each of these modules includes shared didactics with PGY2-4 as well as PGY1 specific didactics that detail interview techniques, diagnosis, treatment and literature review. Concurrently, PGY1 learning is augmented with a senior resident-as-teacher component. PGY1s are provided with teaching and mentorship by senior residents on a weekly basis. These lectures cover a wider variety of topics and include mentorship topics and didactic topics. Mentorship topics include identifying and practicing new learning strategies suitable to the residency setting; the resident role; practice-based learning activities; and general guidance on administrative and residency questions that interns frequently have. Additionally, senior residents prepare lectures on specific psychopharmacology topics that are not covered elsewhere in the PGY1 curriculum. In order to assess the changes that have been implemented, we created a survey adapted from the ACGME Psychiatry Milestones. This survey was given directly to PGY2 residents for self-assessment of their abilities to progress from PGY1 (approximately level 1 in ACGME Milestones) to PGY2 (approximately level 2). Additionally, two questions were added directly addressing residents' satisfaction and confidence transitioning to PGY2. PGY1 residents will be surveyed in January 2018. Results: Four PGY2 residents were surveyed in the control arm (N=4). The average rating for satisfaction with PGY1 didactics was 2.3 out of 5. The average rating for confidence was 2.8. The highest self-assessed competencies were related to psychiatry evaluation (3.8); understanding of psychopathology (4.0); developing relationships and resolving conflict (4.0); and sharing information and record keeping (3.8). The lowest self-assessed competencies were

understanding of development (1.3); understanding of psychotherapy (1.3); ability to serve in a consultation role (1.5); ability to participate in a quality improvement project (1.5); and development as a teacher (1.5). Discussion: This quality improvement project is ongoing. After conducting the initial PGY1 survey, planned for January 2019, we will better be able to comment on the effectiveness of our intervention and plan to discuss these results during the APA Annual Meeting. Future studies should evaluate the senior resident-as-teacher role in this curriculum.

No. 150

The Marriage Between Clinical Pharmacy and Psychiatry: A Novel Geriatric Training Experience

Poster Presenter: Victor Manuel Gonzalez, M.D.
Co-Authors: Erica C. Garcia-Pittman, M.D., Tawny Smith, Samantha Vogel

SUMMARY:
Given the expected rapid growth of senior adults and reducing numbers of geriatric providers, it is important to increase exposure to geriatric psychiatry among post-graduate trainees. One approach to address this problem is through interprofessional collaboration between clinical pharmacists and psychiatrists. Clinical pharmacists are uniquely trained to manage medical complexity and co-morbidity and can assist with providing care to geriatric patients. Through interprofessional care, we can improve how we deliver patient care by combining different perspectives on how to approach patient care issues with the common goal of providing the best care possible. In this poster presentation, we highlight the implementation of a novel interprofessional geriatric psychiatry outpatient residency training experience at The University of Texas Dell Medical School involving clinical pharmacy and geriatric psychiatry. An overview of the training experience is provided, along with a focus on novel curriculum aspects, while highlighting differences compared to traditional Accreditation Council for Graduate Medical Education (ACGME) requirements. Additionally, we offer perspectives and insights gained by trainees in clinical pharmacy and psychiatry regarding this collaborative training experience, focusing on the opportunity to learn from each other by leveraging the different professional training backgrounds to further enhance care. Outcomes of this unique training experience have included an increase in terms of access to care, patient satisfaction, interest in geriatric psychiatry, as well as scholarship opportunities. This approach should be used as a starting point to discuss potential future directions and goals for geriatric education. We hope to encourage institutions to consider unique training experiences to expand and improve psychiatric care provided to older adults.

No. 151

Herpes Virus Increases the Risk of Alzheimer's Disease in Carriers of the EPO-E4 Allele of APOE: A Literature Review

Poster Presenter: Fauzia Zubair Arain
Co-Author: Asghar Hossain, M.D.

SUMMARY:
Although the first observations of HSV1 in Alzheimer's Disease (AD) brain were reported almost three decades ago,1,2 recent studies have shown evidence for a major causative role of herpes simplex virus 1 (HSV1), which confers greater risk in etio-pathogenesis of AD when present in brain of carriers of the E4 allele of APOE4, which is a known susceptibility genetic factor for AD. This literature review focuses on research articles on this topic. AD is an inflammatory and neurodegenerative brain disease characterized by progressive decline in cognitive functions leading to memory loss, dementia and cognitive impairment, 1, 3, 4 AD affects 20 million people worldwide and the incidence is expected to rise in the future with increasing longevity.3HSV-1 is a neurotropic virus that infects most humans (90% prevalence by the 6th decade of life), and causes several diseases including cold sores, genital herpes, keratitis, and herpes simplex encephalitis (HSE). Once infected, the virus resides in the trigeminal ganglia of peripheral nervous system in latent form usually for the remainder of the infected person's life.4 Although usually dormant, reactivation can occur after stress and immunosuppression.5 Several data indicate that this acute or recurrent HSE produces similar damage,6 and biochemical alterations as those affected in AD) in localized regions of the CNS

related to the limbic system which are associated with memory, cognition, executive functioning and personality.1 Neuronal infection with HSV1 triggers expression of proinflammatrory molecules, uncontrolled neuroinflammation and neurodegeneration, apoptosis, activation of innate and adaptive immune system,3 processing and cleavage of amyloid precursor protein (APP) resulting in accumulation of amyloid-B (Aß, production of APP intracellular domain (AIDC) with transactivating properties, and hyperphosphorylation of tau protein resulting in neurofibrillary tangle deposition, which are the hallmarks of AD.7Research studies have also shown HSV infection seropositivity is significantly associated with development of AD,1, 8-10 with reactivated infection (anti-HSV IgM), the risk of developing AD was found almost double (p = .012).11Recent studies have also shown that in carriers of EPOE4, polymorphisigm in the APOE gene,3 that modulate immune function and susceptibility to infectious diseas,1, 12 there is increased risk of proinflammatory response and brain infiltration by pathogens, including HSV1.3, 13, 14 Genome-wide association studies have further revealed the association between HSV-1 receptor genes and increased risk of AD.15-20 Research has also proved that in APOE4 carriers, E4 allele is a greater vulnerability of infected neurons, leading to to Aß-mediated synaptic and cellular dysfunction,26 that also governs AD risk.4Other studies have also determined proximity and striking localization of HSV1 with in plaques in human brain section by using in situ polymerase chain reaction (PCR)

No. 152

Importance of Early Identification and Management of Benzodiazepine Withdrawal

Poster Presenter: Zohaib Majid, M.D.
Co-Authors: Adriana Emperatriz Marachlian El Yammouni, M.D., Mahamaya Bhattacharyya, M.D., Raj V. Addepalli, M.D.

SUMMARY:
We present a 57 year old Hispanic woman with history of Schizophrenia, Opioid Use Disorder, and Sedative Use Disorder and Related Disorders, with no history of previous suicide attempts or self-harm behavior, presenting to the emergency room due to "acting out at home and hearing voices". Patient exhibited bizarre behavior during evaluation, inspecting under her fingernails to remove imaginary objects, pulling her hair and rubbing her arms. She noted feeling "fine", denying suicidal/homicidal ideation and auditory and visual hallucinations and symptoms of depression or mania, and use of alcohol or illicit drugs. Throughout interview, patient was persistently disoriented and somnolent, requiring repetition of questions. On evaluation, she had a MMSE score of 12/30 and MOCA of 9/30, significant for cognitive decline. Urine toxicology was positive for methadone and benzodiazepines , consistent with records that she was prescribed Alprazolam 1mg three times daily by outpatient psychiatrist. She was subsequently admitted for benzodiazepine withdrawal treatment. Dose of methadone was verified and use of prescription benzodiazepine verified by I-STOP. She was treated with a tapering dose of lorazepam and eventually stabilized and discharged. At discharge her MMSE was 26/30 and a MOCA of 26/30.This case highlights the importance of suspicion of and prompt identification of benzodiazepine withdrawal and immediate treatment for successful resolution of symptoms. Benzodiazepine discontinuation is a significant challenge due to potential withdrawal symptoms and recurrence of psychiatric complaints. Identification may be made difficult due to coexisting use of opiates and methadone. Long-term use of benzodiazepines places the patient at increased risk of psychological and physical dependence, especially in susceptible patients with history of substance-related use disorders. In our poster we outline the guidelines for prescribing short- and long-term benzodiazepines, as well as discuss the additional problems encountered when combining benzodiazepines with methadone, as in the case of our patient. Review of literatures indicate that from 2000 to 2010, hospital admission rates related to co-abuse of benzodiazepines and opioids increased by a staggering 570% and in methadone-related mortality, almost 75% of deaths were attributable to a com¬bination of drug effects, and benzodiazepines were present in 74% of the deceased.

No. 153

A Case Review of Asymptomatic Clozapine Induced Myocarditis Found Incidentally on Routine Monitoring

Poster Presenter: Mariam Elizabeth Faris, D.O.
Co-Author: Dileep Sreedharan, D.O.

SUMMARY:
Patient X is a 51-year-old African American female with a history of schizophrenia, which had been well controlled with Prolixin Decanoate for many years. Despite long term stability, she decompensated in the absence of any identifiable stressors, medication changes or substance use. She was brought to the psychiatric emergency room by providers from her assertive community treatment team for worsening auditory hallucinations, paranoia, and poor self-care. She was admitted to the inpatient psychiatric service and underwent a full medical workup to rule out delirium, medication toxicity, substance intoxication or withdrawal. Given the unremarkable workup, the patient's symptoms were believed to be secondary to decompensated schizophrenia. In conjunction with her outpatient providers, the decision to start clozapine to better manage psychotic symptoms was made. Clozapine was titrated slowly, and halted at a total dose of 50mg BID, at which time she was found to have a therapeutic blood level of 437 ng/mL. The patient reported no adverse effects aside from mild constipation, which was alleviated with scheduled stool softeners. Throughout the treatment, CBC, EKG and clozapine level were monitored on a weekly basis. Midway through the titration, significant changes became apparent on EKG, and although troponins were monitored, they remained negative and physical exam was unremarkable. Cardiology was consulted, however, it was determined that further workup need not be pursued. Follow up EKG one week after showed subtle, progressing changes; repeat troponins were obtained and found to be elevated. Although cardiology was again consulted, findings were suspected to be benign and continued monitoring was recommended. Decision to obtain a cardiac MRI was made by the inpatient psychiatric team, which showed findings consistent with myocarditis. Clozapine was discontinued in favor of an alternative antipsychotic treatment, and EKG returned to baseline thereafter. Our case is meaningful and unusual because the patient did not report any symptoms indicative of myocarditis. This poster aims to identify the importance of regular monitoring of clozapine levels and troponins in asymptomatic patients, especially during the early stages of clozapine treatment. It highlights the role of psychiatrists in the identification and treatment of medical consequences of clozapine side effects as other specialties may be not be aware of clozapine induced myocarditis.

No. 154

Improved Diagnostic Criteria for Anti-NMDA Encephalitis: A Case Report

Poster Presenter: Vivek Chandrakant Shah, M.D.
Co-Authors: Daniyal Arshad Bashir, Nazar Muhammad, M.D.

SUMMARY:
This presentation's aim is to aid in identification of anti-NMDA receptor encephalitis symptoms through the scope of psychiatry via a case presentation. While some diagnostic criteria are proposed, improved detection of the disease could be achieved by increasing awareness through further description of the disease progression. Anti N-methyl-D-aspartate receptor (NMDAR) is a recently discovered synaptic autoimmune disorder in which auto-antibodies target NMDARs in the brain, leading to their removal from synapses. Patient manifests as psychiatric and behavioral symptoms develop in the vast majority of cases and include signs and symptoms of anxiety, agitation, irritability, paranoia, disinhibition, hallucinations, aggression, impaired cognition, speech impairment, and frank psychosis. In fact, psychiatric symptoms are the predominant initiating symptom in disease progression, but the picture may be complicated by seizure activity or autonomic and motor dysfunction. Apart from clinical manifestations, CSF findings, MRI and EEG and evidence of immunoglobulins in serum are part of diagnostic criteria. Anti-NMDA receptor encephalitis is considered a probable diagnosis when 4 of the following groups of symptoms are present: abnormal behavior and/or cognitive function is impaired, speech becomes irregular from baseline, seizure activity, movement disorder or postural abnormality, decreased consciousness, autonomic dysfunction or hypoventilation (central) are present. Laboratory findings that are consistent and supportive of diagnosis are CSF with pleocytosis or

oligo clonal bands, EEG abnormalities. Case Presentation: 28 year old El-Salvadorian-American male with PMHx of Seizure disorder who was non-compliant with Keppra and unclear psychiatric history, which was documented to be Bipolar D/O vs Schizoaffective D/O vs Schizophrenia BIB family for bizarre behavior two days after a tooth extraction procedure. Additionally, patient had a chronic right-sided facial droop for 6 years, and new right hand weakness Patient presented with flat affect and underproductive speech and was not able to engage in conversation. CSF fluid was positive for oligodendritic bands and NMDA antibodies. MRI finding of gyriform swelling. Patient's behavior was paranoid and anxious, as he frequently said the team is "after him." His thought process was concrete, and interviews were illogical and disorganized, frequently "talking to monsters." Patient claimed TV is giving him positive and negative messages but he only listens to positive messages. Delay diagnosis in psychiatric floor most common situation with patients. Discussion: The clinical picture of Anti-NMDA Encephalitis can initially be shadowed by a group of symptoms that individually distract away from a diagnosis.It is particularly important to pay attention to the phases and symptoms of anti-NMDA receptor encephalitis by physician because part of them mimic psychotic disorders.

No. 155

Residents as Teachers: A Curriculum on How to Teach Using the Principles of Andragogy

Poster Presenter: Sean Lowell Wilkes, M.D., M.Sc.
Co-Authors: Aaron Wolfgang, M.D., Paul Christopher Lee, M.D., M.P.H.

SUMMARY:

BACKGROUND The Accreditation Council for Graduate Medical Education requires psychiatry residency programs to evaluate residents' teaching abilities. However, the development of residents as teachers is a domain that lacks standardization, allowing for considerable variability between programs. There is a natural tendency for residents to teach with pedagogical approaches based on their prior educational experiences. This often results in lectures that may not be optimized for adult learning. Andragogy, an approach to adult learning, seeks to foster greater learner autonomy, adapt to learner needs, and encourage continual knowledge development. The teacher role shifts from instructor to facilitator of learning. Andragogy may be a more appropriate model for training residents to become teachers. Curricula guided by andragogy, and incorporating evidenced-based teaching approaches, is needed. The authors sought to develop such a curriculum. Its learner objectives were to: 1) Design an educational session based on a practically-oriented understanding of andragogy and 2) Demonstrate improvement in teaching performance. METHODS A PGY2 cohort at a military psychiatry residency program participated in the curriculum. Each participant was assigned to teach one 3rd year medical student topic throughout the year. The group met quarterly with faculty and senior resident facilitators over the course of the 2018-19 academic year. Using flipped classroom and experiential learning approaches, the PGY-2 residents explored andragogical principles and educational strategies, and shared suggestions for teaching improvements. Each resident implemented the feedback in subsequent medical student teaching sessions (MSTS) in an iterative process. The MSTS served as a resident experiential learning environment in which to experiment, seek feedback, and improve their teaching methods. RESULTS Outcomes measured include feedback provided for each seminar, in which medical students evaluate the seminar on its relevance and engagement. Medical students rate the relevance of the seminar to their preparations for shelf and step exams, as well as to what degree they felt the material was engaging. They are then asked to categorize the lecture into one of three formats: Didactic, Socratic, or experiential. DISCUSSION Residents in U.S. psychiatry training programs are frequently expected to teach as part of their regular duties, often without formal training in this area. Here, the authors applied a novel curriculum using a parallel process for residents as learners and as teachers. Residents learned about teaching through modeling, discussion, independent study, reflection and application of concepts in MSTS. The residents then used these approaches during their teaching in MSTS. This curriculum may serve as a template for other programs to develop curricula which are theory-guided and use evidence-based teaching approaches.

No. 156

Treatment Over Objection Outcomes From a State Psychiatric Inpatient Facility

Poster Presenter: Andrea Paulitsch-Buckingham, M.D.
Co-Author: Josie Lim Olympia, M.D.

SUMMARY:

Patients admitted to New York State Psychiatric Centers are entitled to a broad array of rights including the right to object to any form of care or treatment, regardless of their commitment status. Unless it is an emergency, defined as imminent threat to self or others, patients cannot receive treatment involuntarily. Emergency treatment cannot be continued without the patient's expressed consent when the emergency has passed. For non-emergent situations, involuntary treatment such as medications or ECT may only be administered through a court order in a process called Treatment Over Objection (TOO). In this legal process, the physician and hospital can petition the court to override patients' objections by showing that the patient is mentally ill, lacks capacity to participate in treatment decisions, that treatment is necessary for safety and recovery, and that all efforts at voluntary treatment have been tried and exhausted. Court ordered involuntary treatments are valid for a length of time specified by the judge or often only as long as the patient's civil commitment. Patients have the right to appeal decisions with which they disagree. There is very little in the literature to inform clinicians about the longer-term outcomes of the court-ordered Treatment Over Objection (TOO) process for psychiatric inpatients. For the purposes of this study, treatment includes psychiatric medications or electroconvulsive therapy(ECT). The court will authorize treatment over objection only if it finds that the patient lacks capacity to make a health care decision, that the treatment is in the patient's best interest, and that administrative remedies such as discussions with the patientand/or significant others, provision of information, and/or clinically appropriate, non-coercive efforts have been made to educate an objecting patient in order to secure a voluntary agreement to accept treatment, and all efforts have been exhausted. This open and closed record review study examines the outcomes after a TOO has been implemented at a state psychiatric facility for four years including 2014 through 2017. Clinicians need this information about whether a TOO has a positive impact on the course of a person's life beyond contributing to their immediate best interest. There are no interventions in this study. Data will be collected and examined on demographic information, type of medication or treatment given under the TOO, prn medication use, restraint and seclusion use, emergency psychiatric interventions, clinical observation and documentation of violent acts, documentation of various side effects and treatment for side effects, length of stay, how many TOOs were applied for and granted for the patient, readmissions, and indications of behavior change including attendance and participation in therapeutic and active treatment programs.Men and women ages 18 and older with a TOO will be included for analysis. Patients are excluded who have a Criminal Procedure Law

No. 157

Creating a "Help!" Flag for Live Supervision of Outpatient Psychiatry Resident Medication Management Visits

Poster Presenter: Yelena Mironova-Chin
Co-Author: Michelle Hume, M.D., Ph.D.

SUMMARY:

Three main considerations have been described when setting up an outpatient psychiatry resident outpatient supervision model: quality patient care, resident education, and financial sustainability for the clinic. Recent research suggests that the majority of psychiatry residency programs utilize live supervision for medication management visits. However, satisfaction with and effectiveness of this model have received little study. At the University of Wisconsin psychiatry residency outpatient clinic, we conducted a quality improvement project to address key issues related to resident and supervisor satisfaction with live supervision of medication management visits. We conducted interviews with both adult and child psychiatry faculty supervisors, soliciting key issues and challenges with the current supervision model. We surveyed current residents regarding the perceived educational value and contribution made by supervising faculty to patient care. We also solicited feedback directly from

patients regarding supervision using our Psychiatry Patient and Family Advisory Council. We identified a clear need for improved communication between residents and faculty regarding patients who had more routine needs as well as patients about whom residents had significant questions. In response, we designed and implemented a simple system by which residents could flag the electronic medical record ahead of the scheduled visit. The flag system was intended to indicate to faculty that they may need to pay particularly careful attention to the patient's history, and to help faculty consider the order in which patients should be seen within a block of supervisory time.

No. 158

Implementation of Quantitative Measures to Assess Change in Depressive Symptoms During Adult Psychiatric Hospitalization

Poster Presenter: Vuong D Vu, M.D.
Co-Author: Quan Ta, M.D.

SUMMARY:
Background: Depressive symptoms are common among psychiatric inpatients. However, quantitative assessments of symptoms during hospitalization are infrequently utilized. We hypothesize that implementation of depression measures for patients at admission and discharge would improve care and patient outcomes by: i) improving patient and staff awareness of symptoms, and ii) providing a quantitative measure of change during hospitalization. The Center for Medicare and Medicaid Services (CMS) proposed new Hospital-Based Inpatient Psychiatric Services (HBIPS) quality measures aimed at improving treatment and management of depression through collection of Patient Health Questionnaire (PHQ-9) data for admission and discharge on psychiatric inpatient units. The likelihood that this measure will be adopted provided a further incentive to developing a process for consistent administration of the PHQ-9. Purpose: The aim of this project is to improve safety and performance of HBIPS via implementation of the PHQ-9 at admission and discharge to aid in informed decision-making and quality improvement in the adult psychiatric inpatient setting. Methods: Residents and attendings will learn why this measure is being implemented and will be provided in-person and written instructions on the step-by-step process detailed below. Providers will give a PHQ-9 to each patient during the admission staffing with instructions to complete the survey on their own for collection that same morning. Providers will learn how and where to input the data in the electronic medical record. Providers will give patients another PHQ-9 during rounds on day of discharge and will input data before discharge. Successful completion rate of the PHQ-9 will be monitored at two-week intervals. Comments from providers will be collected at these intervals regarding effectiveness of the current protocol and barriers to completion. The protocol will be modified based on feedback with the goal of improving completion rates in successive cycles. The difference between PHQ-9 at admission and discharge will also be measured for each patient, and an average change in PHQ-9 for all patients will be calculated. Results: The primary outcome will be successful completion rates of PHQ-9 forms at admission and discharge. The secondary outcome will be the change in PHQ-9 from admission to discharge. Discussion: Our results will be evaluated to determine the success of our education and implementation strategy. Process analysis and review will lead to modifications for effective use of the PHQ-9. Preliminary results will help assess characteristics associated with the largest change in PHQ-9 from admission to discharge. This preliminary analysis may guide inpatient treatment strategies or suggest patient characteristics most associated with symptom improvement. Conclusion: This study will serve as a guide to initial implementation of standardized clinical assessments in the inpatient psychiatric setting.

No. 159

Factors Affecting Length of Stay in the Psychiatry Emergency Department

Poster Presenter: Chiedozie Obinna Ojimba, M.D., M.P.H.
Co-Authors: Adenike Ishola, M.D., M.P.H., Susmita Khadka, M.D., Alexander Maksymenko, M.D., Adesanmi A. Ojo, Tolulope A. Olupona, M.D.

SUMMARY: Objective Length of stay (LOS) is a key measure of emergency department (ED) throughput and a marker of overcrowding. Psychiatric patients

boarding time which ranges from long hours, even days, in EDs has become a considerable and widespread problem throughout the United States (U.S.). Also, patients presenting to the ED with mental health problems wait significantly longer time than those presenting with physical health problems. A 2008 American College of Emergency Physicians (ACEP) survey determined that 79% of EDss board patients with psychiatric emergencies. The objective of this study is to identify and quantify the principal ED patient care time intervals and to measure the impact of important service processes including laboratory testing, imaging, boarding time, consultations, psychiatrist evaluation and medical clearance, on LOS for patients in different triage levels. This project will help to identify and clarify the causes of patient care delays leading to prolonged LOS in the ED. Methods This study is a retrospective study conducted at the emergency department of a community teaching hospital, Brooklyn, NY. The investigators manually reviewed the electronic medical records of all patients who presented to the psychiatric ED between midnight December 1, 2017, and midnight December 31, 2017; and were admitted to inpatient units (Psychiatry and detox). The principal outcome was LOS longer than 10 hours. Results 250 patients were reviewed of which 151 (60.4%) were admitted to inpatient psychiatric unit while 99(39.6%) were admitted to inpatient detox unit. The Mean LOS for all inpatient admissions was 14.24 hours (14.30 hours for detox and 14.21 hours for psychiatry). 99 of the patients (38 detox and 61 psychiatry) had LOS greater than 10 hours. The least average LOS (2.01 hours) in the patients' flowchart process time was from medical clearance to departure to the inpatient unit, while the longest average LOS (4.33hours) in the flow process time was from arrival to medical ED to psychiatry assessment. Medicated patients contributed to longest LOS beyond 20 hours. Conclusion Prolonged LOS was common in this study; internal and external factors were identified. Some of these factors include patient characteristics, ED staffing patterns, bed availability, time of patient arrival, use of restraint, substance use history, testing, and treatment strategies chosen. Understanding the factors that contribute to ED process times is a critical step in improving ED patient care efficiency. Therefore, measures should be put in place to reduce LOS in the ED thereby decreasing the LOS and prevent overcrowding in the ED

No. 160

Differentiating Risk of Psychiatric Versus Medical Rehospitalization in Mental Illness

Poster Presenter: Trevor Shaddox, M.D., Ph.D.
Co-Authors: Juliet Beni Edgcomb, M.D., Ph.D., John O. Brooks, M.D., Ph.D.

SUMMARY:
Background: Rehospitalization is a critical metric of clinical care and resource utilization. Patients with co-occurring serious mental and medical illness contribute disproportionately to elevated readmission rates. Though many studies have sought to identify predictors of readmission, few have attempted to disentangle the factors that differentiate between psychiatric and medical readmission. Method: We addressed the issue of differential risk of hospitalization through a novel application of a competing risks framework. Competing risk models, a machine learning approach, provided an ideal tool for modeling survival data with multiple end-points. In this study, psychiatric and medical hospitalizations represented distinct end-points. We evaluated outcome-specific risk estimates by viewing each outcome as effectively censored relative to the other. In this clinically intuitive approach, we used outcome-specific variable selection to build models that efficiently estimate risks. We used 10 years of electronic medical record data from the UCLA Clinical and Research Data Repository (xDR) and Informatics for Integrating Biology & the Bedside (i2b2) data science resource. The UCLA Institutional Review Board approved this study. Results: Participants (N = 5,255) were adults seen at UCLA with serious mental illness (major depressive disorder, bipolar disorder, or psychosis) and at least one medical hospitalization during the study period. We observed 21,482 non-psychiatric and 1,283 psychiatric hospitalizations. We compressed our expansive covariates into clinically meaningful parameters, including drugs by class, demographics, diagnoses by category, and medical comorbidity index. Multiple post-discharge care settings were protective of psychiatric readmission, while

demographics and baseline psychiatric diagnoses were not significantly predictive. The medical comorbidity index was predictive of medical hospitalization but showed no significant prediction of psychiatric hospitalization. Notably, patients with psychotic disorders were comparatively more vulnerable to medical rehospitalization than patients with affective disorders. Conclusions: Our novel approach revealed clinically meaningful and potentially modifiable parameters that drive risk for psychiatric or medical readmission in a sample of psychiatrically and medically ill patients. We identify post-discharge living situation as protective of psychiatric rehospitalization, and we raise the question of how psychiatric diagnoses may inhibit medical admission. This study was supported by the NIH NCATS UCLA CTSI UL1TR001881 and NIH R03MH110877 (John Brooks, PhD, MD).

No. 161

Use of Long-Acting Injectable Antipsychotic in Inpatient Setting

Poster Presenter: Olaniyi O. Olayinka, M.D., M.P.H. Co-Authors: Ayotomide E. Oyelakin, M.D., M.P.H., Karthik Reddy Cherukupally, M.D., M.P.H., Inderpreet Singh Virk, M.D., Adesanmi A. Ojo, Patrice Ananie Fouron, D.O., Ayodeji Jolayemi, M.D., Tolulope A. Olupona, M.D.

SUMMARY:

Introduction Schizophrenia Spectrum Disorders include a group of persistent, unrelenting, debilitating psychotic illnesses that cause significant impairment in educational, occupational, and psychosocial functioning of sufferers. The clinical benefits of antipsychotic agents, particularly long-acting injectable antipsychotics (LAI) in the management of patients with schizophrenia spectrum disorders are well established. LAIs have been shown to lower disease relapse rate and decrease readmission rates among patients with schizophrenia. Recent studies have revealed a reduction in treatment failure, police arrest and incarceration among schizophrenics on LAIs, compared with those on oral antipsychotic medications. Hence, several guidelines have emerged recommending the use of LAIs for the treatment of chronic psychotic disorders. Despite these recommendations, the use of LAIs in the United States remains low with LAI prescription rates in clinical settings reported to be approximately 10% to 33%. This study aimed to determine the pattern of LAI prescription in psychiatric inpatients of a community hospital in Brooklyn, New York. Methods A retrospective review of the charts of patients admitted to the psychiatric units of the hospital from September 1, 2017 through September 30, 2017 was conducted. Extracted data was analyzed using SPSS version 24 Results Forty-four percent (19/43) of patients with schizophrenia received a LAI during the study period. The mean age of patients was 39 years. Most of the patients prescribed a LAI were male (84%), unemployed (95%), lived in private homes (53%), and hospitalized for between 11 to 20 days (47%). Sixty-eight percent of the patients were readmitted approximately two months after discharge. Age and living in a private home were significantly associated with being prescribed a LAI ($p<0.05$), while gender, length of hospital stay, and days to readmission were not. Conclusion LAI prescription rates at our hospital was above the national average during the study period. Patients who received an LAI had a lower average readmission rate which supports the potential benefit of LAIs in the treatment of schizophrenia.

No. 162

Accurate Reporting of Gun Ownership in the VA Psychiatric Inpatient Population: Results From a Quality Improvement Project

Poster Presenter: Melinda Armstead, M.D., M.S. Co-Authors: Samantha Salem, M.D., Junzhe Xu, M.D., Vincent Croglio, D.O.

SUMMARY:

This poster illustrates the results of a QI project that verifies the accuracy of self-reported gun ownership of psychiatric inpatients at the Buffalo VA Medical Center. A study published in The American Journal of Medicine in 2016, that compared 2010 mortality data, showed that the US had a firearm-arm related suicide rate eight times higher when compared to other high-income countries. Staff observation that incoming patients may be underreporting their access to firearms and increased concerns for acute lethality due to their inpatient status, highlighted the importance of acknowledging lapses in self-report of gun ownership. Upon initial interview, patients were

asked about their access to firearms. If said patient provided consent to contact family or friends to provide collateral information, access to firearms was verified, as it is already standard of care in the lethality assessment. An excel data sheet tallying patient's response was made. As in compliance with HIPPA laws, no identifying information is present. Three columns were made: "patient", "collateral yes" and "collateral no". Once data from the inpatient unit is fully collected, a study of the percentage of patient's underreporting will be performed to verify if there is actually an issue with self-reporting in this community. So far a total of 38 patients were included in the study of which 6 denied owning a firearm but collateral information differed. The results of this QI project may warrant future discussion and studies. Findings will be shared with the Chief Psychiatrist at other VA facilities if there is a concern that veterans are underreporting. This is a preliminary study that would require further investigation if significant underreporting is found. Future projects may lead to dissemination of a new best practice.

No. 163

Interim Assessment and Treatment: Preventing Hospital Admission in Dementia

Poster Presenter: Simon A. Vann Jones, M.B.B.S.
Co-Author: Sadir Altaan

SUMMARY:

Background. In the United Kingdom in recent years there has been increasing pressure on community mental health services for older people and inpatient psychiatric beds. This is largely due to a change in population demographics, compounded by a reduction in community resources, depletion of Social Services and ward closures. In Cornwall, there has been an increase in the number of admissions to the dementia inpatient unit within the past few years, and out-of-county admissions of dementia patients when no beds are available. Interim Assessment and Treatment (IAT) is a process where an application is made to access immediate funding which is used in order to identify an appropriate nursing home for elderly patients who require in-depth assessment and treatment for a limited period. This audit is the first IAT audit in our region. Aims and objectives: To assess clinical practice in the following areas: 1. Clinical assessment and treatment, in terms of physical health, cognitive functions, psychiatric symptoms, as well as risk assessment. 2. Communication of care plans to the local general practitioners, care homes, patients and their carer 3. The overall efficacy of the process in reducing hospital admissions and increasing savings. Methods. Through consensus within our multi-disciplinary team, a local standards and audit tool was developed that incorporated the aims and objectives of the process. We aimed to identify all the IAT placements that took place between April 2016 and April 2017. A list of 12 patients was identified from our IAT archive and archived MDT minutes. Electronic clinical records were used for data collection. Results. 83% of patients remained within our catchment area during the IAT period.Only one patient (8.3%) eventually required admission to an inpatient ward. All patients had a comprehensive biopsychosocial assessment and were reviewed by a consultant psychiatrist.All patients had their care plan updated to reflect interventions that arose from their assessment. 75% of patients had a care plan and risk assessment handed over to their new placement. 83% of patients were placed or remained in a suitable placement as a result of the IAT process. The average (mean) duration of IAT placement was 29 days versus 61 days for hospital admission. The average (mean) daily cost of an IAT placement was $286 compared to the average cost of a day on the inpatient ward of $578. The average (mean) distance from the patient's home to placement was 15 miles which compared favourably to the average distance of 30 miles to hospital. Conclusions IAT patients receive a bio-psycho-social management approach within a multidisciplinary team setting. The audit results suggest that continuity of care for patients was maintained for most of them. Our results suggest that the IAT process is effective in preventing admission to hospital, reducing costs and patient upheaval. Patient/carer feedback would be useful in further evaluating this.

No. 164

Dream Versus Reality: A Case Study on Sleep Related Dissociative Disorder

Poster Presenter: Fairouz Ali, M.B.B.Ch.

Co-Authors: Stephanie Carbone, D.O., James L. Megna, M.D., Ph.D.

SUMMARY:
Background: Sleep-related Psychogenic Dissociative Disorder is a new DSM5 diagnosis within the differential diagnosis for REM Sleep Behavior Disorder. It is a unique subcategory of parasomnias characterized by complex behaviors in the context of dissociative episodes. The symptoms are present during a well-defined period of wakefulness during the sleep period resulting in poor sleep quality, social and academic impairments. A history of early childhood trauma is a common precipitating factor. Nocturnal behavioral events are classified according to specific stage: sleep, wake, or transitions between these periods. Although the prevalence of nocturnal events decreases from 20 % in children to 4 % in adults, this still translates to millions of unrecognized, misdiagnosed or untreated cases worldwide, highlighting the need of further studies in this area. Method: We report a case of a 24-year-old woman who was admitted to the inpatient unit with depression and suicidal ideation. History revealed early childhood trauma, tic disorder and parasomnias. In addition to both sleep walking and talking, she experienced profoundly restless sleep characterized by frequent episodes of wakefulness, dissociation, and derealization. The patient described lucid episodes within her sleep periods in which she had conversations with people, both dead and alive. Although on presentation, it was reported that she outgrew the sleep-walking and talking, she still was experiencing the dissociative symptoms which appeared to be exacerbated by the loss of her step-father to cancer 2 years prior to admission. The patient denied any daytime dissociative symptoms, and reported keeping a diary of those conversations as a proof of wakefulness during these psychogenic episodes. Results: Results were obtained from a 2011 sleep study, which showed significantly abnormal results including multiple periods of wakefulness, vocalizations and episodes of hypopnea. As these results are not specific for other sleep disorders, the patient fell into a middle ground between wakeful dissociation and sleep parasomnias. She was ultimately diagnosed with sleep-related psychogenic dissociative disorder and treated with a trial of risperidone to mitigate sleep-related altered perceptions. Following administration, she reported improved sleep with less interruptions and dissociative episodes. It is yet unclear if improvement is confounded by the change of sleep environment or placebo effect. Conclusion: This case aims to shed light on the unique middle ground, defined in DSM-5, that now exists between dissociation and parasomnia: sleep related psychogenic dissociative disorder. This provides opportunities for future research with the potential for clarifying diagnostic and therapeutic guidelines that could affect the lives of millions of patients.

No. 165

A Case of Pedophilic Disorder

Poster Presenter: Xiaojing Shi, M.D.
Co-Authors: Chun Man Tong, M.D., Mary Kelleher

SUMMARY:
Introduction: Pedophilic disorder is perhaps the most stigmatized psychiatric disorder because people equate pedophilia with the sexual abuse of children.1 The DSM 5 in its definition of pedophilic disorder includes those who have acted on sexual urges for children with people who have had such desires but controlled them.2 Some have argued that the grouping of “hands-on” sexual offense against children with urges alone contributes to stigma associated with the label of pedophilia and may prevent people from getting treatment.3 In this report, we present a 25-year-old man with guilt and auditory hallucination related to pedophilia who never sexually abused children. Case report: A 25-year-old man without a past psychiatric or medical history was brought to the hospital by his family for auditory hallucinations. He reported browsing child pornographic websites and said for the prior week he had heard voices calling him a "child molester, a pedophile". He felt paranoid and thought people were trying to get him. He reported poor sleep and appetite for at least five days. But he denied depression or anxiety, visual hallucinations, suicidal and homicidal ideation, manic and hypomanic symptoms. He denied substance abuse. He was disorganized and circumstantial on interview. He was treated with risperidone 3 mg two times a day with good effect and diagnosed with a brief psychotic disorder. When his thoughts became more organized, he said at age 10, an 11-year-old boy

often asked him to have sex with him. The patient eventually agreed. The patient reported pedophilic urges since that encounter, and often visited child pornography websites. The patient, who identified as homosexual, reported sexual attraction to prepubescent boys as well as men his own age. He reported guilt about searching child pornography online and difficulty controlling such urges. He denied ever being sexually abused by an adult and denied ever having sexually abused children. Discussion: The patient meets DSM 5 criteria for pedophilic disorder because of his long history of sexual attraction to children, guilt about this and impairment in daily functioning. Although the patient never sexually abused a child, current DSM 5 criteria put him in the same category as those who have. About 50 percent of all individuals who sexually abuse children are pedophilic 4, but many people with pedophilic disorder have not done this. Research also shows individuals with no history of a hands-on sexual offense against a child who have accessed child pornography are at low risk of committing a "hands-on" sexual offense in the future.5 This case shows the need to better define pedophilic disorder and distinguish fantasies from "hands-on" sexual offense, to enable people in need of treatment to receive it while also protecting children from abuse.

No. 166

The Impact of Substance Misuse on Outcomes in a Specialized Treatment Program for Borderline Personality Disorder

Poster Presenter: Jonathan Lafontaine, M.D., Ph.D.
Co-Authors: Joel Paris, M.D., Ronald Fraser, M.D., Robert S. Biskin, M.D., M.Sc.

SUMMARY:

Background: Comorbidity between Borderline Personality Disorder (BPD) and Substance Use Disorder (SUD) is high and has a significant impact on treatment outcomes of both disorder. The current study aimed to assess the impact of substance misuse on BPD treatment outcomes in a specialized long-term treatment program for patients with BPD. Method: Participants were patients referred to a specialized treatment program for patients with severe personality disorders (PD) at the McGill University Health Center (MUHC). Participants had a current diagnosis of BPD or significant symptoms of BPD, as assessed using the Revised Diagnostic Interview for Borderlines (DIB-R), with a total score of 6 or more. 134 participants were referred to the program participated in this study. 87.8% were female and mean age was 35 years-old (SD =10). 36.9% reported having problems with substances or alcohol and this group was compared to those reporting no problematic substance use. Participants completed questionnaires measuring their symptoms, behaviors and use of substances, including the Symptom Checklist-90 Revised (SCL-90-R), the Barrett Impulsiveness Scale (BIS-11), the Beck Depression Inventory (BDI), the Difficulties in Emotion Regulation Scale (DERS), the Rosenberg Self-Esteem Scale (SES), the Self-Harm Behavior Questionnaire (SHBQ) and the Addiction Severity Index (ASI). Results: First, there was no significant difference in any symptoms measures at baseline when comparing participants with substance misuse, except that participants who reported having a problem with the use of drug had a significantly higher history of self-harm behaviors ($X2=6.756$, $p<0.05$). Second, participants reporting a problem with the use of drugs had a significantly higher drop-out rate than participants reporting no problem with the use of any drug ($X2=6.381$, $p<0.05$). Third, among completers of the program, use of drug significantly decreased at the end of the program compared to baseline ($X2=4.773$, $p<0.05$). Fourth, scores for participants with a SUD diagnosis at baseline improved significantly on the DIB ($t=8.194$, $p<0.001$), SCL-90-R ($t=2.650$, $p<0.05$), BDI ($t=4.875$, $p<0.001$), DERS ($t=3.767$, $p<0.01$) and SES ($t=-3.971$, $p<0.001$). Finally, there was no significant interaction between having a problem with the use of alcohol or any drug and improvement of symptoms on any scales except that participants reporting a problem with the use of drugs improved significantly less on the DIB score ($F=4.303$, $p<0.05$). Conclusion: Participants having a problem with the use of drugs had a higher dropout rate compared to participants with no problem with any drugs. However, among those who completed the treatment program, there was a significant decrease in the use of drugs along with significantly improvement terms of symptoms, with no difference between the groups on almost every symptom scales. These results are encouraging

for treating patients with SUD in specialized treatment programs for BPD.

No. 167

The Current Evidence for Psychopharmacology in Borderline Personality Disorder

Poster Presenter: Jasita Sachar, M.D.
Co-Authors: Andrew J. Ruege, M.D., Benjamin Griffeth

SUMMARY: Objective: The viability of pharmacotherapy in Borderline Personality Disorder remains unclear despite nearly a decade passing since the publication of a Cochrane Review on the subject. A literature review was conducted to elucidate the efficacy of psychotropics in treating the overall severity of Borderline Personality Disorder (BPD). Methods: A PUBMED search was conducted and a total of 127 articles were identified. The articles were then filtered based on inclusion and exclusion criteria. The inclusion criteria consisted of 1. Using at least one of five severity assessment tools (CGI-BPD, BSL, Zanarini rating scale, BEST, and BPDSI); 2. Meeting DSM criteria for BPD as assessed by SCID; and 3. An age requirement of 18 or greater. Articles were excluded if they included patients with 1. an active Axis 1 psychiatric disorder; 2. any substance dependence in the last 3 months; 3. a BMI <17; 4. active suicidal/homicidal ideation/intent; or 5. an active pregnancy. The chosen articles were then grouped and analyzed based on the 5 aforementioned severity assessment tools. Results: 17 articles involving 13 medications were analyzed. 2 drugs were long-acting injectable neuroleptics (risperidone, paliperidone); another 2 drugs had more than 1 dose range evaluated (quetiapine ER – 150 mg, 300 mg; olanzapine – 2.5-20 mg, 2.5 mg, 5-10 mg). Most of the results were scored via the Clinical Global Impression scale for BPD (CGI-BPD) or Zanarini, while another two testing modalities (BSL and BEST) yielded only 2 data points each. The 5 rating tools yielded somewhat different results. Of the 7 drugs evaluated by CGI-BPD, olanzapine had the largest (-14 points/12 weeks, p 0.029) and the only clinically significant improvement. Of the 2 evaluated by BSL, asenapine was the only drug that had a statistically significant improvement (-10.7/8 weeks, p 0.048). For the BPD Symptom Inventory, phenelzine had the largest improvement (-16.43/ 21 weeks, p <0.001) but had less of a change over time than that of duloxetine (-1.05/week compared to -0.78/week). Of the 4 drugs compared by an overall Zanarini score, quetiapine ER yielded the greatest change and rate of change; it is important to note that upon further analysis, its 150 mg dose was produced a larger effect on Zanarini scores than its 300 mg dose (-9.76/8 weeks, p 0.031 vs. -7.92/8 weeks, p 0.265). Lastly, only 1 drug (quetiapine ER) was evaluated using the BEST modality; just as before, the 150 mg dose was found to be superior to the 300 mg dose (-16.8 points/8 weeks, p 0.009 vs. -15.76/8 weeks, p 0.02, respectively). Conclusion: Based on our research, we were unable to elucidate a clear hierarchy of medications based on their treatment efficacy due to the high degree of variability in study design and screening modalities. Therefore, in the future, it would be helpful for more research to be done comparing medications side by side using a single, agreed-upon evidenced-based assessment modality.

No. 168

Attempted Self-Immolation in a Patient With Antisocial Personality Disorder: A Case Report

Poster Presenter: Michael Atkinson, M.D.
Co-Authors: Rosemarie Caskey, M.D., Birinder Mann, M.D., Jessie Katz

SUMMARY:

Abstract: Self-Immolation is a relatively uncommon method of suicide in Europe and Western countries although rates of self-immolation as a method of suicide can reach up to 70% in India, Iran, Afghanistan, and Sri Lanka [6,7]. The case fatality rate for self-immolation as a suicide attempt can be as high as 68%, whereas case fatality rates in European and Western countries are not well estimated [need citation, can't get it now b/c institutional access required]. We present the case of an American, Caucasian patient with Antisocial Personality Disorder who attempted suicide based on a premeditated decision of which suicide method would appear the most lethal and which would result in the longest administration of narcotics. Aggressive treatment of burn pain, primarily with IV opioids, are part of the standard of care in pain management for the treatment of third degree burns, conversely; oral Acetaminophen is the pain

management standard of care for first degree burns. In countries where self-immolation is a common method of suicide patients it is more common for both suicide attempts and completions to see a pattern of burns on the head, face, and chest [7]. The patient chose a method with high case fatality but took a different approach in where he poured fuel on himself in a specific manner as to simulate a serious suicidal act. The patient states "I wasn't meant to survive this attempt" and chose to do so in an outpatient mental health facility which would have a different amount of lethality if he had done so in a less-populated area. The patient has minimal burns on his face, hands, forearms, feet and genitals suggesting he avoid pouring fuel on these areas to preserve functionality. To obtain parenteral opioids the patient likely had understanding that third degree burns would be necessary and that burns of a large surface area are treated aggressively. The treatment of burn pain as a serious suicidal attempt with suspected Malingering should be treated with IV opioids augmented with IV Acetaminophen [8] and utilizing objective methods in dosing IV opioids. Behavioral actions by the patient to obtain more narcotic medications should avoid rewarding such behavior as the pattern may be difficult to break.

No. 169

Psychiatrists' Attitudes Toward Patients Diagnosed With Antisocial Personality Disorder

Poster Presenter: Sarah Keltz
Co-Author: Bipin Raj Subedi, M.D.

SUMMARY:

Research suggests that psychiatrists and other health care providers hold negative biases against patients who carry a personality disorder diagnosis (Black et al., 2011; Chartonas et al., 2017; Fraser & Gallop, 1993; Lewis & Appleby, 1988). While limited data exists on attitudes towards patients labeled with antisocial personality disorder (ASPD), British literature on provider reactions to incarcerated individuals with severe personality disorders have uncovered negative attitudes associated with organizational factors related to support systems and morale, individual factors related to knowledge and coping skills, and overall provider burnout and stress (Len Bowers, 2000; Freestone et al., 2015). Additional clinical and ethical issues are highlighted by ASPD's 'questionable' inter-rater reliability (kappa=.20-.39) (Regier et al., 2013) and approximately 50% prevalence in incarcerated males (Ogloff, 2006; Fazel & Danish, 2002). Given the above, we believe that more information on psychiatrists' attitudes towards individuals with the ASPD diagnosis is essential for navigating the risks and benefits of using the diagnosis in clinical and non-clinical settings. The Attitudes to Personality Disorder Questionnaire (APDQ) is a validated and reliable questionnaire with 37 affective statements (e.g. 'I like PD patients') put on a 6-item frequency scale that measures the degree of enjoyment, security, acceptance, purpose, and enthusiasm providers have when working with PD patients (Bowers, 2000; Bowers & Allan, 2006). We intend to present data on a pilot study pending IRB submission that uses a clinical vignette with variable diagnostic labels followed by an unlabeled APDQ (e.g. 'I like this patient'), as modeled by Chartonas et al., 2017, to assess clinician reactions to patients who have been previously diagnosed with ASPD. Our goal is to discuss the clinical implications of these findings as it relates to diagnostic reliability and treatment options for those who engage in antisocial behavior.

No. 170

Cannabinoids and Borderline Personality Disorder: Perspectives on Addiction, Symptom Attenuation and Implications for Pathophysiology

Poster Presenter: Christian Umfrid, M.D.

SUMMARY:

Ms. F, a 46-year-old woman with a diagnosis of borderline personality disorder, was admitted to an intensive day treatment program for marked impairment in interpersonal and professional functioning, attributed to anxiety refractory to long-term outpatient treatment. Her predominant symptoms included affective instability, a preoccupation with somatic symptoms and perceived flaws in appearance, sense of emptiness and anger, and severe and persistent anxiety principally related to rejection and abandonment. Ms. F exhibited a tendency to become anxiously overwhelmed which interfered in psychotherapeutic adherence, and she had a history of numerous medication trials which had been discontinued due to ineffectiveness and her sensitivity to side effects.

Ms. F self-initiated daily dosing of a cannabidiol (CBD)-rich hemp extract five months into treatment, in accordance with manufacturer's directions. She subsequently reported sustained relief from anxiety, decreased mood reactivity, improved distress tolerance, and became less anxiously preoccupied with perceived flaws in her appearance. Ms. F tolerated a significant reduction of her psychotropic regimen including discontinuation of lamotrigine and tapering of her long-term benzodiazepine use without an escalation of anxiety or mood symptoms. She reported no side effects from CBD use. This case is remarkable for improvement of treatment-refractory anxiety and mood symptoms directly associated with borderline personality disorder subsequent to administration of CBD. Cannabidiol is a phytocannabinoid found in the cannabis genus of plants, considered non-psychoactive and non-psychotomimetic, and currently FDA approved only for certain forms of epilepsy. An emerging body literature has begun to provide evidence for utility of CBD for psychotic symptomatology, as well as in anxiety, depressive and substance use disorders. Recent studies in humans and in animal models provide evidence for anxiolysis following CBD administration in patients with social anxiety disorder, changes in emotion processing with attenuated limbic response to negative affect, and have indicated that CBD may play a role in fear extinguishing, neuroplasticity and consolidation. While evidence for clinical utility of CBD exists, no studies of CBD effects in patient with borderline personality disorder have been found in the literature. This may be an important area of investigation for symptomatic management and augmentation of existing psychopharmacological and psychotherapeutic approaches in an often challenging-to-treat condition. This poster critically reviews the evidence for CBD use in anxiety and depressive disorders, and proposes a new area of study by examining potential neurophysiological correlates between borderline personality disorder and CBD activity.

No. 171

Exploring New Horizons: A Literature Review on the Role of Memantine in the Management of Obsessive-Compulsive Disorders

Poster Presenter: Swathi Parvataneni, M.D.

Co-Authors: Anuj Shukla, M.D., Miky Kaushal, M.D., Rebecca E. Pistorius, M.D., Lee Stevens, M.D., Karamjit Singh, M.D.

SUMMARY:

Introduction: Obsessive compulsive disorder (OCD) is represented by a diverse group of symptoms which include intrusive thoughts, compulsions, rituals and preoccupations that cause significant distress. A person with OCD recognizes the the irrationality of the obsessions and experiences both the obsession and compulsion as ego-dystonic. Glutamate is the most abundant excitatory neurotransmitter in the brain. There is growing evidence that disrupted neurotransmission of glutamate within corticostriatal–thalamocortical (CSTC) circuitry plays a role in OCD pathogenesis. The fronto-striatal circuits implicated in compulsivity and impulsivity are notable for their relatively rich glutamatergic receptor density. Neuroimaging studies have also confirmed that glutamatergic projections between the various frontal sub-regions and the striatum play a key role in the regulation of compulsive behaviors in humans. Methods: A combination of search terms which included "Obsessive-Compulsive disorder", "Memantine", and "OCD treatment" across three databases: PubMed, Google Scholar, and Clinicaltrials.gov over the past fifteen years yielded a total of 35 studies. After removing duplicates and screening for eligibility, 15 studies were found to meet the criteria for this review. Results: Memantine is an N-methyl-D-aspartate (NMDA) antagonist, clinically used as a 'cognitive enhancer, regulatory-approved for the treatment of Alzheimer's dementia in a number of countries. Several case reports and two recent open-label case series suggest that the addition of memantine to standard medication therapy can benefit both children and adults with OCD. Discussion: The only first-line pharmacological treatments recommended for obsessive-compulsive disorder (OCD) are serotonin reuptake inhibitors (SRIs). Many trials support the evidence that dysregulation of Serotonin is involved in the pathogenesis of OCD and serotonergic drugs have been found to be more effective in treating OCD symptoms. Serotonergic drugs combined with cognitive behavioral therapy have been most effective till now for symptoms relief in OCD. However, approximately one third of patients do not

experience a significant reduction in symptoms from these treatments or from established second-line interventions. Our aim is to provide a comprehensive literature review of the current understanding of glutamate and its role in the pathogenesis of obsessive compulsive disorder as well as explore the probability of a NMDA receptor antagonist as an alternative treatment for OCD symptoms.

No. 172

Challenges of Managing Geriatric Patients With OCD

Poster Presenter: Hector Cardiel Sam, M.D.
Co-Authors: Yasmine Deol, M.D., Asghar Hossain, M.D.

SUMMARY:
Obsessive Compulsive disorder (OCD) is one of the challenging diseases that has a bimodal onset and is often coexistent with other diseases. Epidemiological studies indicate the mean age at onset of idiopathic OCD is between 20 and 25 years and 15% of cases present after the age of 35. In younger people, it co-related with tic disorder whereas in elderly people it is related with depression and other anxiety diseases. According to the US census Bureau's 2017 report, the year 2030 marks a demographic turning point when all the baby boomers will be older than age 65. This shows that there will increase in the older population. Hence, the clinical burden of certain diseases will increase and also the challenges the physicians face in order to manage the older population. There is also limited research in this age group which can be attributed to different reasons. One being that older people are often negligent in seeking help for mental health and also, there is increased mortality and exclusion due to associated psychiatric and medical comorbidities. Due to this reason there is less generalizability of the results of available research results on the older population. Recent studies have also shown the overlap of OCD symptoms with early stages of Alzheimer dementia which can lead to misdiagnosis of either condition. The decrease in hepatic and renal function, also associated cardiovascular morbidity also limits the use of certain drugs or drugs at certain doses in this population. In this article, we have tried to collaborate the difficulties and the importance of more research in this area.

No. 173

Obsessive-Compulsive Disorder (OCD) in Geriatrics

Poster Presenter: Hector Cardiel Sam, M.D.
Co-Authors: Asghar Hossain, M.D., Linda Okoro

SUMMARY:
Obsessive Compulsive Disorder (OCD) is a Psychiatric disorder characterized by recurrent and persistent thoughts that are experienced as intrusive and inappropriate, causing marked anxiety and distress. In an attempt to suppress or neutralize such thoughts with other thoughts or action, Patients perform repetitive behaviors to respond to obsession. The average age of onset for OCD is between 20-25 years old. After age 40 only 8.6% of OCD has been noted. OCD is a highly disabling condition with frequent early onset. Adult/Adolescent OCD has been extensively investigated. However little is known about geriatric patients with OCD. It has been suggested that OCD is more among women than men, especially among elderly. OCD shows a later age at onset in the geriatric population compared with younger patients. OCD has also been noted to coexist with other psychiatric disorders such as depression in the elderly. Older adults are more likely to experience memory and other cognitive symptoms. It is still not clear whether memory problems results in checking behavior or checking behavior leads to poor confidence in memory. This case review aimed to assess OCD in a geriatric patient with depression, by evaluating her sex, age, social and mental functioning, socio-demographic and clinical presentation during multiple hospitalizations.

No. 174

A Case of OCD Complicated With a New Diagnosis of Prurigo Nodularis Secondary to Syphilis

Poster Presenter: Mahamaya Bhattacharyya, M.D.
Co-Authors: Zohaib Majid, M.D., Raj V. Addepalli, M.D., Michelle Salpi Izmirly, D.O.

SUMMARY:
We present a case of a 50 year old Hispanic woman, diagnosed with Major Depressive Disorder and Obsessive Compulsive Disorder, two past suicide

attempts, one remote hospitalization at age 17, past medical history of chronic obstructive pulmonary disease and hypertension, who was newly diagnosed with secondary syphilis. Patient had presented since 2015 with complaints of a generalized maculopapular rash all over her body and with uncontrollable urge to "scratch", which had led to compulsive scratching and intermittent worsening of the rash. Patient had multiple emergency department visits due to worsening rash and uncontrollable itching, and had been treated with topical agents including steroids and permethrin. In 2015, patient had reported a "bug infestation" at her house and had complained of insomnia due to itching. Patient reported that "she has been more nervous and continues to pick at her skin and at her hair" and this interferes with her social functioning. Fluvoxamine 25mg was started to target the obsessive-compulsive symptoms, and was titrated up to 150mg, with a partial remission of symptoms. Patient reported that but the compulsions improved after starting fluvoxamine. Patient also reported benefit from bupropion XL 400mg daily for depression and hydroxyzine 25mg as needed daily for anxiety and sleep. In 2017, patient was seen at Dermatology clinic as follow up of an emergency department visit for skin rashes. On exam, a morbilliform rash was observed on the trunk and papules were observed on the palms and soles. Patient was diagnosed with Prurigo Nodularis; laboratory tests revealed Syphilis Ab IgG reactive; MHATP reactive; RPR reactive titer 1:128 and biopsy revealed a mixed cell infiltrate with plasma cells, consistent with syphilis. Immunohistochemistry for T. pallidum was negative. Patient was treated with benzathine penicillin 2.4 million units and topical emollients. In February 2018 repeat RPR titer was found to be 1:1. Even after treatment and normalization of RPR titers, patient continues to complain of compulsions to scratch her lesions when she feels anxious, and reports benefit from fluvoxamine and hydroxyzine for anxious mood and compulsions. Although psychological factors such as repressing anger have been implicated in the etiology of chronic itching in Prurigo Nodularis, it would also be important to keep in mind other medical causes in the differential diagnosis while formulating cases. In this particular case it remains unclear if the persisting symptoms of itching even after treatment are psychiatric or if they related to her dermatological diagnosis. Here, we aim to review and discuss the diagnostic and therapeutic challenges in this case. We also aim to review potential psychological factors implicated in compulsive behaviors in the context of an organic dermatological illness.

No. 175

Postpartum Period Complicated by New-Onset OCD

Poster Presenter: Adam Hubert Schindzielorz, M.D.

SUMMARY:

Pregnancy-related psychiatric disturbances, in particular depression and psychosis, are common-place phenomena and are well described in the literature. However, little attention has been paid to the emergence and impact of anxiety disorders, though these symptoms are often comorbid with depression and may potentially confer a worse prognosis than postpartum depression alone. OCD is one such subtype, with upwards of a 2-3% life-time prevalence globally, and much higher, 4-11%, in the postpartum period. Postpartum OCD appears to be clinically distinct in its symptomatic pattern when compared to varieties found in the baseline population with many of the intrusive thoughts being related to contamination of the new-born or obsessive thoughts of harm – accidental or intentional to the infant. Additionally, because study of this disorder is fairly limited, our understanding of treatment is also limited to those modalities more classically utilized in OCD in the baseline population. We present a case of 22-year-old female who presented to the outpatient clinic as a referral from her obstetrician for evaluation of major depression after having initiated escitalopram 5mg daily. On further review the patient was notable for severe, new-onset, obsessive-compulsive symptoms. Symptoms at presentation included excessive worry that she would poison or contaminate her child and intrusive, violent, distressing imagery of intentionally harming the newborn. The severity of her symptoms prompted acute hospitalization for roughly one week after which she was managed with a combination of escitalopram, trazodone and aripiprazole. Over the course of roughly one year her aripiprazole was discontinued following full resolution of her symptoms. The postpartum period

is a time in which many women experience worsening of pre-existing or the emergence of new onset psychiatric conditions. Historically, the greatest focus has been on depressive and psychotic illnesses. However, given the relatively high prevalence and severity of impairment that postpartum OCD can cause, further research is warranted into the epidemiology of the illness and possible treatment avenues. Our study builds upon the current literature examining post-partum OCD by identifying a severe case of obsessive-compulsive disorder and following its course to resolution. Our study also helps to identify additional potential treatment methods, such as utilization of second-generation antipsychotics, particularly aripiprazole, as a means for symptomatic reduction in this illness.

No. 176

Suicidal for Cigarettes: The Case of Nicotine-Reinforced Obsessive Compulsive Disorder

Poster Presenter: Rosemarie Caskey, M.D.
Lead Author: Michael Atkinson, M.D.
Co-Authors: Jessie Katz, Birinder Mann, M.D., Rikinkumar S. Patel, M.D., M.P.H.

SUMMARY:

Tobacco smoking has a high prevalence in schizophrenia (62%) and bipolar disorder (37%) [1], but a prevalence estimate of tobacco smoking in patients with obsessive-compulsive disorder (OCD) is 14% compared with that in the general population (25%) [2]. Non-smokers became uneasy more frequently when urged than smokers with OCD. Also, non-smokers showed significant obsessive-compulsive personality disorder criteria as compared to the smokers [3]. None of these studies [2, 3] mentioned whether tobacco smoking was a compulsive action or not and there is a limited number of studies on suicidal behavior in OCD. We present the case of a 47 year old Caucasian female with a past psychiatric history of schizoaffective disorder and borderline personality disorder admitted to the inpatient unit for suicidal ideation without an attempt or plan. The patient states that she has an obsession with suicidal thoughts and is not able to get off those thoughts, and in response to this she has a compulsive act of cigarette smoking. She smokes up four-to-five packs daily and has compensatory behaviors for symptom relief when she can no longer purchase cigarettes. Patient reports anxiety and denies symptoms of depression, mania and psychosis. The patient was diagnosed with OCD. Suicide plays a role in our patient's psychopathology as due to lack of compensatory behaviors (smoking) she could not relieve obsessive symptoms of suicidality. The effects of nicotine on dopamine reward pathways also complicate the psychopathology of our patient in part by reinforcing the obsession to compulsion pathway which is mediated by nicotinic acetylcholine receptors (nAChR) stimulating portions of the mesocorticolimbic pathways [4]. The withdrawal effects of nicotine complete the vicious cycle by accelerating the transition between symptom relief and obsession, these effects are mediated in part by corticotropin-releasing factor (CRF) receptor antagonism and kappa-opioid receptor antagonism [5]. Suicide behavior is not a common phenomenon in OCD, but it should not be ignored, especially in patients with obsessive suicidality. Aggressive treatment of OCD symptoms should involve the management of comorbid tobacco smoking in order to modify the risk for suicide.

No. 177

A Case of a Delayed Presentation of Gastric Outlet Obstruction Due to a Trichobezoar

Poster Presenter: Joseph Ipacs, M.D.
Co-Author: Meghan E. Gaare, M.D., M.P.H.

SUMMARY:

We describe a case of a 12 year old girl with a history of trichotillomania who was hospitalized for gastric obstruction. She presented to the emergency room with one day of abdominal pain and more than five episodes of non-bloody, clear to yellowish emesis. She reported she was unable to drink water without having emesis. Physical examination revealed a palpable abdominal mass, which the patient and her parents noted had been present for at least one year. The patient and her family revealed that the patient had a history of trichotillomania and trichophagia, but stated that she had not had any symptoms for the past nine months. Furthermore, they reported that the patient had been suffering from recurrent bouts of emesis and abdominal pain for more than a year that were attributed to viral illness and constipation. A CT scan revealed a large

bezoar in the patient's stomach that extended into the duodenum. EGD confirmed the presence of a trichobezoar and laparotomy with gastrotomy was performed with successful removal of the large trichobezoar. This case is a rare example of a delayed presentation of gastric outlet obstruction secondary to a trichobezoar. Human hair is largely indigestible, and as a result this patient developed a gastric obstruction nearly a year after reported remission of her trichotillomania and trichophagia symptoms.

No. 178

Hoarding Disorder: A Disabling Illness With Impaired Quality of Life

Poster Presenter: Fatima Iqbal, M.D.
Co-Authors: Linda Okoro, Sailaja Devi Valiveti, M.D.

SUMMARY:

Hoarding Disorder (HD) is defined as the acquisition of large volume of possessions and persistent difficulty discarding or parting with possessions, regardless of their actual value. Hoarding is due to a perceived need to save the items and distress associated with discarding them, causing clinically significant distress or impairment in social, occupational, or other important areas of functioning, and creating an unsafe environment for self and others. According to current research, compulsive hoarding affects about 2–5% of the population. Hoarding behaviors was observed to surface at a subclinical level in early adolescence and worsens with each decade. It was noted that this disorder often becomes clinically significant only in middle-aged patients, with the distress associated to hoarding disorder being caused by the intervention of others, such as relatives or local authorities. Numerous psychiatric illnesses such as Major depression, Anxiety, Attention deficit hyperactive disorder are commonly co-morbid with HD leading to poor health outcome. Here we present a case of a 74 year old Caucasian male patient, unemployed with extensive history of Obsessive-Compulsive Disorder, Hoarding Disorder and Unspecified psychosis compliant with medication and follow-up. Reportedly patient suffers from severe hoarding disorder, leading to infestation of his house with bugs, with inability to care for his medical and social needs, ultimately impairing his quality of life. Patient expressed limited insight and judgement into his illness, leading to impairment in his level of functioning and getting essential medical care. The purpose of this case was to identify certain atypical features the patient reported with symptoms and delay in seeking appropriate treatment, which is commonly seen in HD leading to progressive worsening of the condition. Hoarding disorder is mainly treated with Cognitive behavioral therapy (CBT), including psycho education, motivational interviewing, classic cognitive techniques focused on dysfunctional beliefs, and exposures targeting sorting and discarding. Patients could also benefit with some pharmacological interventions such as selective serotonin reuptake inhibitors (SSRIs), selective nor-epinephrine reuptake inhibitors (SNRI). The purpose of this case review was to highlight certain important clinical aspects of HD which is a part of a discrete clinical syndrome with several associated features such as indecisiveness, perfectionism, procrastination, disorganization, and avoidance. These associated features have been found to be uniquely and significantly associated with hoarding symptom severity and impairment, particularly social impairment. In addition, many people with HD are quite slow in completing tasks, are frequently late for appointments, and show circumstantial, over inclusive language. Psychiatrist should identify and treat patients with disorder in a timely manner to assure better quality of life.

No. 179

Obsessive-Compulsive Disorder and Substance Use Disorder: A Case Study

Poster Presenter: Amvrine Ganguly, M.D.
Co-Author: Aviva Teitelbaum, M.D.

SUMMARY:

Background: Obsessive-compulsive disorder (OCD) is a disabling anxiety disorder characterized by intrusive thoughts and/or repetitive behaviors that interfere with a person's level of functioning. Despite high comorbidity rates between OCD and substance use disorders (SUDs), very little is known about the neurobiological underpinnings of this overlap. Although the orbito-frontal cortex (OFC) is believed to play a critical role both OCD and SUDs, it has been hypothesized that the activation pattern differs in both pathologies. OCD prevalence rates

among individuals receiving treatment for a substance use disorder range from 6% to 12%,two to six times higher than those found in the general population. Importantly, lifetime prevalence rates of SUDs in individuals treated at OCD specialty clinics range from 10% to 16%,slightly lower or comparable to SUD prevalence in the general population.Here we discuss a case of a woman with OCD and opioid use disorder (OUD), severe, on methadone maintenance treatment. Case: The patient is a 47 year old woman who carries a diagnosis of HIV, OCD, stimulant use disorder, severe, in sustained remission, and opioid use disorder, severe, in sustained remission, on methadone maintenance. Since childhood, the patient has struggled with chronic themes of self-doubt and obsessive thoughts, mostly surrounding fears of contamination, and resultant compulsive behaviors of repeated checking and excessive corporal washing. Her symptoms have vacillated in severity throughout her life, worsening in the setting of active drug use. Currently, the patient has been free from illicit substances for over 3 years, and is prescribed a medication regimen of sertraline and clonazepam for her anxiety symptoms, in addition to her standing methadone and an antiretroviral regimen. She describes her anxiety symptoms as significantly improved from prior points in her life, however continues to struggle with obsessions and compulsions on a daily basis, which appear to interfere with her level of functioning. Most recent OCD symptom severity was assessed with the Yale Brown Obsessive Compulsive Scale (Y-BOCS), on which she scored a 26, denoting a severe form of OCD. Conclusion: This case strengthens the proposed hypothesis of a single biological origin of OCD and SUDs: that is, hyperactivity in the OFC. The two pathologies differ, however, in that the OFC is generally stimulated by certain cues or triggers in an individual with a SUD, whereas OFC hyperactivity can be seen in an OCD patient without a clear environmental stimulus. This case also illustrates that by ingesting certain substances – in particular, stimulant drugs such as crack, cocaine or methamphetamine – there may be an exacerbation of OCD symptoms, while others (e.g. opiates) may potentially alleviate OCD symptoms. This patient's co-morbid HIV adds another dimension to her neurobiology and psychiatric comorbidity: an implication that needs further investigation.

No. 180

Phantosmia—the Unrelenting Smell of Rabbit Urine, a Suicide Attempt, and Management Questions: A Case Report and Investigation

Poster Presenter: Zev J. Zingher, M.D.
Co-Author: Carolina I. Retamero, M.D.

SUMMARY:
The patient is a 29-year-old female with a past psychiatric diagnosis of depression, psychotropic medication naive, who presented to the Crisis Response Center following an intentional overdose attempt due to unrelenting distress caused by an olfactory hallucination that she smells like rabbit urine and the belief that her friends and co-workers can smell her. The smell of rabbit urine pervaded her apartment 9 months earlier from her downstairs neighbor who had a rabbit. According to the patient's family, there was a slight smell of rabbit urine pervading her apartment initially, but this was quickly resolved after the rabbit was removed from downstairs. However, the patient began to believe she smelled of rabbit urine all the time and this belief and possible olfactory hallucination versus delusion led the patient to quit her job as she became paranoid co-workers thought she smelled of rabbit urine. After quitting her job she moved back home to live with her mother, could no longer care for her 10-year-old son who went to live with her ex-husband and ultimately became so despondent that she "lost the will to live" and attempted to OD on medication. Questions regarding olfactory hallucination differential diagnosis, work-up, potential causes and management were challenging and raised as she was a patient of ours on the inpatient psychiatric unit. This poster will discuss the questions raised by this case of olfactory hallucination versus delusional disorder versus obsessive-compulsive disorder versus olfactory reference syndrome versus psychotic disorder versus an infectious/organic etiology versus temporal lobe seizures and attempt to elucidate management approaches for such patients.

No. 181

Treatment-Resistant Tourette Disorder/Tic Disorder

Poster Presenter: Vandana Kethini, M.D.
Co-Author: Yasmine Deol, M.D.

SUMMARY:
Tourette disorder is a heritable neuropsychiatric disorder that is characterized by the presence of multiple motor tics and at least one vocal tic. A CDC study found that 1 of every 360 (0.3%) children 6 – 17 years of age in the US have been diagnosed with TS based on parent report; this is about 138,000 children. About 47% of the patients diagnosed with tic disorder in childhood become tic free after age 18. The pathophysiology of this disorder remains unknown; however, few studies have shown the relationship of various genetic factors related to this disorder and also from a defect in the cortical-basal ganglia- thalamo -cortical neuronal circuit. We have seen few patients who do not respond to the standard treatments and have severe tics, this need the focus of treatment shifted to newer treatment approaches. In this literature review, we reviewed the pathophysiology, rating scales and the standard treatments. In addition, we reviewed the newer treatment approaches to manage the patients with severe and treatment resistant tic disorder. These include the use of cannabinoids and deep brain stimulation. These treatment approaches are not routinely used but have provided positive outcomes in different studies. Our aim was to collaborate these findings and get an understanding of the available treatment approaches in the treatment resistant tic disorder.

No. 182
Treatment Strategies for Treatment-Resistant Tourette Syndrome and Related Comorbidities
Poster Presenter: david Schwartz
Lead Author: Vandana Kethini, M.D.
Co-Author: Yasmine Deol, M.D.

SUMMARY:
Abstract Tourette syndrome is a neurodevelopmental disorder that is characterized by the presence of multiple motor and at least one vocal tic for =1 year. The onset of this disorder is between 6-17 years of age. Among children diagnosed with TS, 86% have a co-diagnosis of at least one additional mental, behavioral, or developmental condition, Attention-deficit/hyperactivity disorder (ADHD)-63%; Anxiety problems-(49%); Autism spectrum disorder- 35%; Speech or language problem- 29%; Developmental delay- 28%. Depression- 25%; Learning disability-47%; Behavioral or conduct problems- 26%; Intellectual disability 12%, and more than one-third of people with TS also have obsessive-compulsive disorder. 42.6% have at least one co-occurring chronic health condition. These psychopathologies, if left untreated greatly affect the prognosis of the Tourette disorder. The presence of 2 or more comorbidities also increase the likelihood of developing Malignant tic disorder. Many studies have shown the possibility of common neurobiological origin or genetic relationship of ADHD, OCD and Tourette syndrome. This increases the clinical burden of this syndrome and makes the treatment complex. We here present a case of a 15-year-old Hispanic male with history of ADHD and OCD who presented with severe tics and worsening of OCD symptoms to the ER. This patient has shown minimal response to all the conventional pharmacotherapies in the past. In this case study, we discuss the prognostic factors and treatment strategies for the refractory tics and management of related comorbidities. Keywords: Tourette, tic, Refractory, malignant tic, ADHD and OCD

Poster Session 4

No. 1
Depression: What's Buprenorphine Got to Do With It?
Poster Presenter: Sean T. Lynch
Co-Authors: Ori-Michael J. Benhamou, M.D., Lidia Klepacz, M.D.

SUMMARY:
Background: Buprenorphine is an opiate medication typically prescribed for treating opioid addiction. It is a partial agonist of mu opioid receptors and an antagonist of kappa and delta opioid receptors. Literature demonstrates that in addition to treating opioid addiction, buprenorphine possesses antidepressant properties. This case report shows the benefits of using buprenorphine-naloxone as an adjunct to typical management of depressive symptoms and suicidality in a patient with Dual-Diagnosis. Case Description: We present a 47-year-

old Caucasian male with a history of depression and polysubstance abuse, including a significant history of opioid abuse, with multiple previous psychiatric hospitalizations and multiple prior suicide attempts who had presented at our facility many times for foreign body ingestions. On presentation to the emergency department, the patient reported feelings of anhedonia, hopelessness, and had suicidal ideation. Despite traditional pharmacotherapies he showed no improvement and did not engage with his treatment providers. He was evaluated and prescribed buprenorphine-naloxone 8mg/2mg-2mg/0.5mg-2mg/0.5mg to treat his opioid addiction and with the intention of ameliorating his mood. The patient showed an instantaneous change in behavior, attending groups on his own volition and becoming extremely outgoing and sociable. He engaged more with his providers and became involved in his own care, helping develop his aftercare plan. He was discharged from the inpatient unit with no suicidal ideation and was optimistic and goal-oriented. Discussion: This case demonstrates the ability of buprenorphine to treat both aspects of mental illness in patients with a dual-diagnosis of substance abuse and mood disorder. Buprenorphine provided our patient with the first step in symptom improvement and resulted in truly patient-centered care for the remainder of his stay. Current literature supports the efficacy of buprenorphine in relieving depressive symptoms, but further research is warranted to investigate its efficacy as a primary and/or adjunctive treatment for depression, both in patients with a dual-diagnosis and in the non-substance use population.

No. 2

Buprenorphine Treatment for Bipolar Depression With Suicidal Ideation

Poster Presenter: Ori-Michael J. Benhamou, M.D.
Co-Authors: Sean T. Lynch, Lidia Klepacz, M.D.

SUMMARY:

Background: Buprenorphine (BPN) is an opiate medication that is increasingly used in the management of Opioid Use Disorder and acute and chronic pain disorders. It has a high affinity for multiple opioid receptors and exhibits a partial agonist effect on μ-opioid and kappa-opioid receptors and an antagonist effect on ?-opioid receptors. This case report highlights the acute efficacy of using buprenorphine-naloxone (BPN-NAL) to reverse anhedonia and suicidal ideation in an individual with OUD, chronic pain and multiple severe suicide attempts. Case Description: We present a case of a 39 year old male with a history of bipolar disorder, several lethal suicide attempts and polysubstance abuse, who presented to the hospital after self-immolation, burning 45% total body surface area. He was admitted in critical condition to the burn unit, where he remained for nearly three months. During this time, he reported anhedonia, suicidal ideation, nightmares and flashbacks of seeing and feeling himself on fire. He also endorsed chronic pain and hopelessness. Upon transfer to the behavioral health unit, his symptoms persisted, despite trials of quetiapine, mirtazapine, methadone, oxycodone and prazosin, with only a reduction in flashbacks. On day seven of admission to the psychiatry unit, he was initiated on sublingual BPN-NAL 8mg-2mg treatment as a transition from methadone and for improved pain control; he immediately reported improvement in depressive symptoms and a reduction in pain. He was titrated on BPN-NAL and continued to report diminished pain and resolution of depression. Furthermore, his irritability was lessened and he newly cooperated with staff, participating in unit activities. In the ensuing days, he exhibited motivation for aftercare in a Mental Illness/Chemical Abuse (MICA) program. Upon discharge, he exhibited stable mood, adequate pain control and the elimination of suicidal thoughts as well as a proactive drive for substance abuse treatment. Discussion: This report describes the significance of BPN on relieving psychic pain and stabilizing mood in a chronically suicidal patient. We speculate that BPN reinstates the balance between reward and anti-reward circuitry in individuals who have a history of opiate abuse. BPN's pharmacokinetic properties, specifically MOR partial agonism and KOR antagonism, terminate the cycle of short term opioid-induced analgesia and hyper-dopaminergic euphoria with opioid withdrawal-induced hyperalgesia and hypo-dopaminergic dysphoria. This results in a steady treatment of pain, as well as maintaining the dopaminergic system, symptomatically translating to mood stabilization. The rapid antidepressant effect of BPN has previously been described; however, direct anti-

suicidal and mood stabilizing effects of BPN remain unclear. Further investigation is warranted to determine if this anti-suicidal effect is indeed present and, if so, to further elucidate the mechanism and establish treatment guidelines.

No. 3

Transcranial Magnetic Stimulation in Cancer Patients Who Have Depression and Anxiety

Poster Presenter: Minjoo Son
Co-Authors: Marko Mihailovic, Alfred Rademaker, Ph.D., Mehmet E. Dokucu, M.D., Ph.D.

SUMMARY:

Cancer patients are at increased risk for developing depression, whether it is during illness or in remission. Current first-line treatments for patients with depression include psychotherapy and antidepressant medications, such as Cognitive Behavioral Therapy (CBT) and Selective Serotonin Reuptake Inhibitors (SSRIs). However, these strategies may not be as applicable in cancer patients. Therefore, it is desirable to find alternative treatment options that are safe, well tolerated, and effective. A promising option is a relatively new technique called Transcranial Magnetic Stimulation (TMS) that has recently been established in treating depression in patients without physical illness. This non-invasive method stimulates the left and/or right dorsolateral prefrontal cortex (dlPFC) regions of the brain through magnetic pulses. This study investigates the use of both right and left sided TMS as a potential treatment for co-morbid depression in cancer patients. Twelve participants between the ages of 22 and 80 who have had cancer and are currently depressed were recruited for this randomized, two-arm, open-label study. Subjects were randomized to receive either low-frequency right-sided TMS or high-frequency left-sided TMS. Participants' depression, anxiety, personality traits, and side effects were evaluated using various scales at certain time points. After a total of 30 treatments, results showed that all subjects were responsive to treatment, defined as a decrease of at least 50% from baseline HAM-D24 score. Participants who received left-sided treatment had an average of 26.8 point decrease in HAM-D24 score, compared to an average of 19.8 point decrease for those who received right-sided treatment (p=0.025). This shows that high-frequency left-sided TMS may be more effective in lowering depression compared to low-frequency right-sided TMS. There was no statistical difference between left and right sided treatment for the other scales. There was no significant correlation between HAM-A at baseline and HAM-D24 at TX30 (r=-0.15, p=0.68). This shows that higher anxiety scores at baseline has no significant correlation with effect of TMS treatment in lowering depression.

No. 4

Electrophysiological Differences to Alcohol Challenge in Individuals Polymorphic at ADH1B Loci

Poster Presenter: Walid Aziz, M.D.

SUMMARY:

Background: The ADH Class 1 is the major group for metabolizing alcohol in humans. Subunits which constitute class 1 ADH are encoded by the three genes ADH1A, ADH1B, and ADH1C. Genetic polymorphisms, occur at ADH1B to give rise to ADH1B1, ADH1B2, and ADH1B3 subunits. Individuals with the ADH1B3 genotype appear to be more resistant to the stimulating effects of alcohol. The purpose of this study was to examine the effect of ADH1B polymorphisms on electroencephalography. We hypothesize that individuals heterozygous for the ADH1B3 allele will have lower alpha power in fronto-parietal electrodes, suggesting less relaxation effect during alcohol ingestion compared to those homozygous for ADH1B1. Method: A pilot sample of social drinkers (N=28) genotyped at the ADH1B locus received continuous EEG recording during infusion of alcohol. EEGLAB was used to analyze EEG data, which was preprocessed using FASTER, a plugin for Automated EEG artifact rejection. The power spectra were averaged over epochs and averaged amplitude peaks extracted. The estimates of power within the delta (1.5–3.2 Hz), theta (3.8– 7.02 Hz), alpha (7.8–12.5 Hz), and slow (13.2–18.75 Hz) and fast (19.5–39.8 Hz) beta frequency bands were computed. We analyzed results of alpha power 30 minutes following administration of alcohol. Results: Subjects with ADH1B1/1 have increased alpha power in CZ, FZ and PZ leads in their eye-closed resting EEG during alcohol exposure; with the greatest difference (between ADH1B1/1 and ADH1B1/3 observed in the CZ lead (P<0.009) and FZ lead (P<0.01) Discussion:

Based on rich evidence from neurophysiological studies, increased alpha power is indicative of hypoarousal; therefore, our data subjects more evidence for cortical hypoarousal in during alcohol challenge among individuals with ADH1B1/1 polymorphism. Although ADH1B*/3 groups have faster alcohol elimination rates than the ADH1B1/1 group, this did not reach significance at P<0.05 level. Therefore, it is logical to assume that the effects of ADH polymorphism on alcohol-induced neural activity may not be entirely due to its effect on rate of metabolism. This finding needs to be replicated in larger studies.

No. 5

Smoking Behavior and Psychological Status Related to Successful Smoking Cessation in Heavy Smokers

Poster Presenter: Kwak Chan Yong

Co-Author: Siekyeong Kim

SUMMARY: Objectives : The purpose of this study was to determine the factors affecting smoking cessation rate of heavy smokers. Methods : Typically, 81 participants enrolled in the smoking cessation camp at Chungbuk National University Hospital from April 2016 to November 2016 were included in the present study. The psychological factors related to group classification and the factors related to the success of smoking cessation were analyzed. Results : After 24 weeks of leaving the camp, 57 out of 81 participants successfully quit smoking and 24 failed in doing so. In the successful group, depression scale, stress scale, and various smoking-related factors exhibited intercorrelation and in the failure group, no significant correlation was observed. However, a comparison of correlation coefficients showed no significant difference. In addition, smoking cessation success rate was low when exhaled CO concentration was high at the time of admission when the smoking initiation age was juvenile, and when the smoking type was A (stimulus seeking type). Conclusion : Exhaled CO concentration at the time of admission, smoking initiation age, and smoking type A (stimulus seeking type) were associated with smoking cessation success.

No. 6

Willingness of People Who Inject Drugs in Miami to Utilize Syringe Access Program for Opioid Use Disorder Treatment and Preventative Health Services

Poster Presenter: Young Suhk Jo

SUMMARY:

Background: The opioid epidemic is a critical public health concern in the United States. People who inject drugs (PWID) are not only the most vulnerable to deaths via opioid overdose, they also have increased risk of becoming infected with HIV and HCV1. Although research on syringe access programs (SAPs) has shown effectiveness in reducing HIV infections and risky injection behavior, social and structural factors act as barriers in prevention and treatment of HIV as well as substance use disorder for PWID2. SAPs also provide a window of opportunity for a series of harm reduction interventions among PWID through the exchange of a sterile syringes and other services including: overdose treatment (Naloxone), referral to substance use disorder treatment, and HIV Pre-Exposure Prophylaxis (PrEP) medication. Methods: We sought to determine the willingness of PWID in Miami to access various preventive health services at a future SAP prior to the establishment of a five year pilot SAP in Miami (IDEA exchange). The data collection was done in 2015 as part of the National HIV Behavioral Surveillance research which recruited 521 eligible participants for the survey. A vast majority (94%) of this group reported injecting heroin in the last 12 months. Participants were asked questions in three domains: First: Likelihood to use SAP for various harm reduction measures. Second: Likelihood to take PrEP. Third: interactions with health care providers regarding injection drug use. Results: Our findings on willingness to access the new SAP in Miami demonstrated clear demand within the PWID community. While the use of SAP for exchange of syringes and other injection equipment was the most desired service, the other preventative services such as HIV/HCV screening, primary care, drug treatment referrals, and overdose reversal training/prevention were also desired at the potential SAP. We found significant overlap in participants interested in both PrEP and using SAP, if PrEP were provided at no cost. A concerning finding was that there is a significant lack of communication regarding injection drug use among our survey participants and health care providers. Less than half

reported having discussed medication assisted treatment for opioid use disorder. And of those, only half received the necessary prescription. Even more troubling was that only 7% of the surveyed reporting speaking to their providers regarding use of naloxone for overdose prevention. Seven out of the 521 ultimately received prescription for naloxone. Conclusion: Our results show that PWID have strong interest in improving their health outcomes in terms of HIV prevention via PrEP. It is imperative for health care providers to remove the stigma of injection drug use in order to foster discussions with PWID that may help to not only reduce opioid overdoses but also begin treating the opioid use disorders.

No. 7

Case Report: Diagnosis of Auto-Brewery Syndrome in Suspected Alcohol Use Disorder

Poster Presenter: Usman Ahmed, M.D., M.B.A.
Co-Authors: Rashi Aggarwal, M.D., Nadia Matin, M.D., Janice Smiell, M.D.

SUMMARY:

Background: Auto-Brewery syndrome (Gut fermentation syndrome or endogenous ethanol fermentation) is a rare disorder first described in the 1940s. The hallmark of this syndrome is evidence of alcohol intoxication without ingesting alcohol. Ethanol forms in the intestine through fermentation of consumed carbohydrates by yeast or bacteria. We discuss a patient with gut fermentation syndrome initially misdiagnosed with active alcohol use disorder. Case Report: A 63-yr-old married, Caucasian male, started showing clinical signs of intoxication when he was not consuming alcohol. Patient presented to the clinic for management of Major Depressive Disorder. During evaluation patient was noted to be intoxicated and alcohol dependence was suspected. Per obtained history, patient admitted to having quit stopping to drinking three years ago following a blackout after one glass of wine. Before this, he could consume a bottle of wine without getting intoxicated. A few months prior to this event, he returned from a Caribbean vacation with Giardiasis and was treated with a prolonged course of antibiotics. Collateral from wife, reported that patient showed clinical signs of intoxication: agitation, alteration in mentation, ataxia, slurring of speech, and even the smell of alcohol on his breath. With support from family and friends, patient put a tracker on his phone, bars in his town were asked not to serve him, and his car keys were taken away. Both his wife (a physician) and daughter (who was often at home with the patient) reported that he wasn't drinking. After extensive observation and work-up, it was noted that he showed clinical signs of intoxication 24-48 hours after ingestion of simple carbohydrates (sugars) or within a few hours of severe physical or emotional stress. An attempt to induce alcohol production utilizing a glucose challenge and serial BAC (Blood Alcohol Concentration) resulted in no levels over 3 hours. The diagnosis of intoxication was finally verified during a period of 12 hours continuous supervision and measurement by a DOT-approved Breathalyzer documenting a BAC of 0.24. Patient was put on Nystatin oral suspension QID, daily multivitamin/mineral supplements and a low carbohydrate (<5 gm added sugar per serving) diet. The frequency of positive BAC>0.06 has decreased from 5 times/week to once/month. Discussion: Auto-brewery syndrome is a rare condition and clinical consideration should be undertaken with substantial caution, given lack of validated mechanism linking endogenous alcohol production to blood alcohol level. Though treatment algorithm is not validated, judicious use of antibiotic, diet modification (carbohydrate control), antifungal therapy and vitamin/mineral supplements have been reported in literature. Keywords: Auto-Brewery, Gut Fermentation Syndrome, Endogenous ethanol fermentation

No. 8

Buprenorphine Self-Regulation for Harm Reduction in Opioid Use Disorder in Remission Without Regular Maintenance Therapy

Poster Presenter: Robert Rymowicz, D.O.
Co-Authors: Erin Zerbo, M.D., Pallavi Joshi, D.O., M.A., Ketan A. Hirapara, M.B.B.S., James Sherer, M.D.

SUMMARY:

Introduction Buprenorphine is a partial agonist of the μ-opioid receptor and a Schedule III controlled substance available for the treatment of opioid use disorder (OUD) as a sublingual liquid, tablet, film, depot injection, and implant. In the United States,

immediate-acting formulations are more commonly available as a combination medication including naloxone. Buprenorphine products are approved for detoxification and for maintenance treatment in OUD, with potentially indefinite duration and regularly scheduled dosing. Buprenorphine products are not prescribed for use on an as-needed basis, but in practice they are frequently used this way. A growing body of evidence supports emergency department-initiated buprenorphine/naloxone, with many patients failing to follow-up. Buprenorphine diversion is likely common and it is often available through the same channels as illicit opioids. Less is known about the pro re nata self-administration of buprenorphine by patients with OUDs in remission without maintenance therapy, but patient reports suggest that the practice is not uncommon. Methods A review of available literature was conducted using PubMed to determine if previous scholarly work has addressed as-needed buprenorphine administration for OUD in remission without regular maintenance therapy. In light of the small number of results it was not necessary to limit the scope of the search with exclusionary criteria. Methadone was later included in an attempt to yield additional information with the hope that relevant findings might be generalizable to buprenorphine. Results No results were found discussing the as needed administration of buprenorphine or methadone to patients with OUDs in remission without regular maintenance therapy. Discussion In the clinical experience of the authors and several colleagues, patients have occasionally reported using small doses of buprenorphine products on an irregular basis, as needed, to self-medicate in response to the psychological distress of cravings and to avoid potential relapse on illicit opioids. Patients reported success with this method of use. While buprenorphine use under such circumstances may well meet diagnostic criteria for OUD, it nonetheless appears to represent a successful harm-reduction strategy and may in fact predispose a patient to fewer adverse effects than maintenance therapy - a critical consideration for geriatric and medically-complicated populations. However, a pressing question is whether overdose risk is reduced with intermittent buprenorphine dosing, as has been robustly shown with regular dosing. Further studies are needed to determine whether such a strategy should be discouraged, condoned, or encouraged. It is the authors' opinion that patients who feel that they do not require frequent dosing should not be forced to choose between overmedication and side effects through maintenance therapy, or risk of relapse through detoxification and abstinence.

No. 9

Acute Clinical Presentation of Liquid Methamphetamine Intoxication

Poster Presenter: Ambika Kattula, M.B.B.S.
Co-Authors: Fei Cao, M.D., Ph.D., Jaskirat Singh Sidhu, M.D., Haitham Salem, M.D., Ph.D.

SUMMARY:

Mr. D is a 26 years old African-American male without significant medical history. Patient was brought by his mother to our Emergency room due to altered mental status. Per patient's mother's report, early on the same day, patient went out with friends to a party and ingested some unknown liquid. Then his friends brought him back home since patient had acute mental status change. At that time, patient was also reportedly having spastic, jerking movements with diaphoresis and was initially talking very minimally, repeating "I don't know what I took." He progressed and became very rigid, eyes fluttering, nonresponsive. His mother immediately took him to our ER. The time between when he ingested that unknown liquid and when he was sent to ER was within one hour. In ER, Mr. D was found to have SpO2 in 60s and HR in 180s. Then he received intubation immediately and maintained on Fentanyl and Propofol, but his SBP went down to 80s and then both Fentanyl and Propofol were stopped. He was admitted to ICU for further diagnosis and management. Within 24 hours after he arrived at ER, Mr. D developed multiple organ problems, including acute encephalopathy, status epilepticus, acute decompensated heart failure, acute NSTEMI, intractable hypotension, acute hypoxic respiratory failure, aspiration pneumonia, fulminant liver disease, acute renal failure, DIC, Rhabdomyolysis, hyperthermia. His UDS is positive with amphetamine. This poster will discuss clinical presentations of acute liquid methamphetamine intoxication.

No. 10

Cannabinoid Hyperemesis Syndrome (CHS) in a Pregnant Female: One of Six Pregnant CHS Cases in Literature

Poster Presenter: Waquar Siddiqui, M.D.
Co-Authors: Umang Shah, M.D., M.P.H., Naga Prasuna Vanipenta, M.D., Javeria Siddiqui

SUMMARY:
Cannabinoid hyperemesis syndrome (CHS) is a relatively new diagnosis and is often missed in patients presenting with cyclical vomiting, abdominal pain that is classically relieved by compulsive hot water bathing. We discuss one of six patients who was diagnosed with CHS while being pregnant in literature so far. A 21-year-old, 29 weeks pregnant, Caucasian female presented to emergency department with intractable vomiting, nausea and abdominal pain related to smoking cannabis. Patient was admitted to the medical floor and underwent labs, scopes, OBGYN & GI consults without much success in identifying the etiology of her presentation. Usual cocktail for nausea & vomiting was ineffective and she continued to have daily episodes of vomiting. Psychiatry team was consulted as she was bathing compulsively during her inpatient stay. Upon evaluation, it was revealed that she has been using cannabis since she was 15 years old, on a daily basis. She did not have a similar episode when she was pregnant the first time. She continued to smoke marijuana during this pregnancy but mid-pregnancy she tried to quit and then relapsed. The first time she relapsed, she started having vomiting and abdominal pain and she related it to additives to a bad batch of cannabis. The symptoms continued to worsen even when she changed marijuana, prompting her for ED presentation. Patient reports relief only when she took hot showers, and so we researched data on cyclical vomiting which showed that patients with hyperemesis related to cannabis are often related to hot bathing and the usual cocktail for nausea vomiting do not work on these patients. This is the 6th reported case of a patient who suffered from this syndrome during pregnancy. This condition is most often seen in people in their 20's. Symptoms are usually periodic and patients usually come to emergency department with severe epigastric pain, nausea and vomiting and get intravenous fluids, morphine and typical anti-emetics but they do not work and patient gets frustrated. Often patient want to go home and get more opioids for the severe pain, and in some cases, they will go back and resume smoking marijuana. There are no current guidelines due to the paucity of data and variable success with antipsychotics, and other agents but case reports have shown benefits with the use of olanzapine, haloperidol, hydroxyzine, and topical capsaicin. However, these agents only reduce the symptoms and so the only absolute treatment is cessation of using cannabis. There has been a recent increase in CHS presenting with this syndrome and this correlates with the increase in approval for use as medical and recreational use. There is a dire need to bring physicians up to speed with this syndrome, potentially saving unnecessary testing and decrease hospital stay.

No. 11

Kansas's Response to the Opioid Crisis: Implementation of an ECHO Model to Teach Providers in Urban and Rural Kansas

Poster Presenter: Vikram Panwar
Co-Authors: Roopa Sethi, M.D., Carla Deckert

SUMMARY: Objectives: Our SAMHSA-funded project uses ECHO technology to extend Opioid use disorder (OUD)treatment model to rural Kansas counties, and urban areas in Kansas to teach the providers about opioid use disorder and medication assisted treatment. Using secure videoconferencing, the Project ECHO co-management model links rural primary care providers with addiction psychiatrists and therapists for 1-hour accredited telementoring sessions, including de-identified cases and brief didactics. Methods: As one of the first psychopharmacology ECHOs in state of Kansas for opioid use disorder, the trial will summarize findings from surveys interviews and feedback forms provided to participants at the end of sessions. It described: 1. Developing an accredited curriculum and case format, leveraging community feedback as well as American Academy of Addiction Psychiatry (AAAP), American Psychiatric Association (APA) and American Society of Addiction Medicine (ASAM) practice standards to treat OUD with Medication assisted treatment (MAT); 2. Adapting training protocols, including reminders to follow HIPAA best practices; and 3. Recruiting/retaining sites. Results: Across eight 1-hour sessions, there were 220

registered participants and sites. An Average of 66 sites joined for each session (teams often joined together as one group for a session). Preliminary findings suggested credentials breakout of participants as Physicians: 40%, Nurse Practitioner & Physician Assistants: 5%, RN: 10%, Social Workers: 10%, Psychologists and Addiction Counselors: 15%, Pharmacists: 5%, Administrators and Others 10%. There was one didactics presenter and one case discussion per session. All elements of the national ECHO model were feasibly implemented. Finding a consistent meeting time across sites/expert panelists was the largest challenge. There were minimal challenges with the secure videoconferencing solution, likely due to ongoing technical support. Findings suggested that the greater the number of sessions attended, the greater impact on self-reported knowledge and confidence around best practices. Didactic topic areas of highest interest were setting up a buprenorphine clinic and medication assisted treatment for opioid use disorder. Satisfaction Scores from 287 participants requesting CE reported 43% found the sessions Extremely helpful, 46% Very helpful and 11% Somewhat helpful. Conclusions: The results indicate the MAT Psychopharmacology ECHO was feasible and well-received by rural/urban practitioners and the expert panel. Utilizing a quality improvement approach and the lessons learned strengthened upcoming ECHO series. Updates include: 1. Inviting a broader audience, including primary care, mental health providers, community mental health, insurance companies, Kansas department of Health and environment, SAMHSA and pain management team, 2. Linking ECHO telementoring with telemedicine follow-up; and 3. Linking participation in ECHO with patient outcomes.

No. 12

Tobacco and Substance Use Among Psychiatric Inpatients in a Community Hospital: Cessation Counselling, Correlates, and Patterns of Use

Poster Presenter: Oluwole Jegede, M.D.
Co-Authors: Olawale Ojo, M.D., Saad Ahmed, M.D., Kodjovi Kodjo, M.D., Inderpreet Singh Virk, M.D., Dina H. Rimawi, Ayodeji Jolayemi, M.D., Tolulope A. Olupona, M.D., Jason E. Hershberger, M.D.

SUMMARY:

Background: The disproportionately high prevalence of tobacco smoking in patients with mental illness has become a dire public health concern. Various epidemiological and experimental models describe the patterns of tobacco smoking in this group of patients. Despite concerted legislative and governmental efforts, the rate of Tobacco Treatment (TT) such as cessation counseling, nicotine replacement therapy and FDA approved non-nicotine medications in psychiatric inpatients, however remains low. The main objectives of this study are to determine the provision of TT strategies including counseling, nicotine replacement, and medications in a community teaching hospital serving a predominantly underserved African American population as well as to describe possible associations with demographic characteristic and other substance use. Methods: This study is designed as a retrospective review of all patients discharged from the inpatient psychiatric units of the community teaching hospital. Eight Hundred and thirty charts (830) charts were reviewed on a case by case basis to include all patients admitted between July and November, 2017. Results: 52.2% of the cohort described themselves as active smokers. Gender and psychiatric diagnosis were significantly associated with Tobacco smoking ($P<0.05$). Only 48.3% had a documented tobacco cessation counseling done at any period during their hospitalization. 52.4% were offered actual treatment for tobacco dependence. More than half of the 680 charts that had a urine toxicology report were positive (57.9%), of these, cannabis and cocaine were the most frequently used drugs (32.4% and 23.2%). Cocaine and Alcohol showed significant associations with the patients' psychiatric diagnosis $P = 0.001$ and $P = 0.023$, respectively. 12.5% of the participants had urine toxicology positive for more than one substance. Logistic regression revealed age, gender and urine toxicology (substance use) as the only significant predictors tobacco smoking among our cohort ($p=0.04$ and 0.29, respectively). Conclusions: Tobacco screening, cessation counseling and treatment continues to be a challenge in community psychiatric hospitals and needs increased focus in the comprehensive management of patients with psychiatric disorders. The strong association between tobacco smoking and substance use lends itself to the hypothesis that

tobacco smoking debut prevention may be an effective strategy for primary illicit drug use prevention.

No. 13

Availability of Alcohol-Based Hand Sanitizer in the Hospital Setting: A Potential Hazard for Ethanol Seekers

Poster Presenter: Shumaia Rahman, D.O., M.B.A.
Co-Authors: Brandon Jared Kale, Samir A. Sabbag, M.D.

SUMMARY:

Hand sanitizer has become increasingly abused by ethanol seekers while in controlled settings. The availability of alcohol-based hand sanitizers in the hospital setting can pose a unique challenge when treating substance use disorders. We report the case of a patient well known to our hospital system with a documented history of ingestion of hand sanitizer over 30 times during the span of several admissions. A 38-year-old Hispanic female with a past history of alcohol use disorder and hand sanitizer ingestion was admitted to the inpatient detoxification unit. She was brought in by police to the medical emergency department when she was found severely intoxicated with alcohol in the street. During her emergency department stay, she was found to have a high blood alcohol level, as well as hand sanitizer in a small cup hidden in her sheets. She denied ingestion. On the same day after being transferred, admitted to the detox unit and placed on a video monitored room, she was found obtunded in her bed with a hidden half-empty one-liter bag of ethanol-based hand sanitizer, leading her to be admitted to a medical unit. The necessity for the patient to be placed on a one-to-one observation for safety due to the risk of compulsive behavior was established. After her medical stabilization, the patient returned to the detox unit. Despite the continued one-to-one observation and contract for safety, she had an episode of intoxication attempt by shampoo ingestion the same day of her admission. Given her extensive history of hand sanitizer abuse, a petition for involuntary rehabilitation treatment was initiated for further provision of care. Presence of other psychiatric comorbidities such as obsessive compulsive disorder, impulse control disorder, delusional disorder and neurocognitive disorder were explored due to her persistent ingestion of hand sanitizer. When managing patients with multiple admissions due to alcohol use disorder and in-hospital alcohol use, a thorough history-gathering, multidisciplinary approach, and clear communication between and within treatment teams provide the best strategy for patient care. We report the strategies employed at our hospital, including limiting access to hand sanitizer, close observation of patients with unpredictable behavior, and effective communication within the entire staff in the unit and the different teams involved in the care of this patient. The approach to treatment of patients with complex substance use disorders is discussed.

No. 14

Madelung Disease: A Cannot Miss Physical Exam Finding in Alcoholism

Poster Presenter: Matthew T. Hunter, D.O.
Co-Author: Mark Stevens

SUMMARY:

Background: Madelung Disease (benign symmetric lipomatosis) is an uncommon disorder described by deposition of fat masses in the neck, upper trunk, and other locations. The etiology is not well understood, but it is thought to involve an error in fat metabolism. Approximately 90% of patients diagnosed with benign symmetric lipomatosis have a history alcohol abuse, which makes it an important physical finding in psychiatric practice. Case: We discuss the case of a 55 year old male who presented to an inpatient substance abuse treatment facility for Alcohol Use Disorder (AUD), Severe – and depressive symptoms. The patient endorsed his onset of depression and problematic drinking in 2012, with peak drinking of 750ml of liquor per day precipitated by a difficult divorce. This led to two suicide attempts that year involving drug overdose in the context of alcohol intoxication, requiring inpatient level psychiatric care each time. His drinking increased in 2017 after starting a new job, and by Aug 2018 the patient was drinking roughly one liter of liquor per day up to admission. The patient presented to the treatment facility after declining job performance over the prior several months, which culminated in him missing work. The patient identified withdrawals in the past

characterized by nausea, anxiety, sweating, and anorexia, but no history of tremors or seizures. His physical exam was remarkable for symmetrical subcutaneous fat masses in the supraclavicular region bilaterally. They measured roughly 5x5 cm and were mobile, non-tender, and non-erythematous. His laboratory evaluation was pertinent for new diagnosis of diabetes with a HbA1C of 7.2% and fasting HOMA-IR of 2.5, transaminitis with AST/ALT values of 190/156 U/L respectively, and a lipid panel revealing elevated cholesterol (240 mg/dl), elevated triglycerides (172 mg/dl), and elevated LDL direct (167 mg/dl). His synthetic liver function consisted of a normal PT/INR and mildly elevated APTT at 41.2 sec. GGT was elevated at 510 U/L and ETG/ETS was positive. Urine drug screen was negative. His exam findings were diagnosed clinically as Madelung's disease. Conclusion: Chronic alcohol abuse stigmata from resulting liver disease is well known, but many clinicians are unfamiliar with Madelung's disease in the context of alcoholism. This is an important exam finding that can help expand the differential diagnosis in clinical practice. Given this premise, assessing for Madelung disease needs to become a routine part of the physical exam for every psychiatrist in order to assist with a diagnosis of AUD that could alter the management of the patient. We hope to educate our peers and colleagues on recognizing these findings and their association with alcoholism, along with recommendations for management.

No. 15

Imaginary Cue Exposure Therapy for Treatment of Alcohol Use Disorder

Poster Presenter: Choyeon Park
Co-Authors: Hwa Yeon Jo, Dongjoo Kim

SUMMARY:

[introduction] Cue exposure therapy is bahavioristic psychological approach to treating alcohol use disorder. The effect of cue exposure therapy for anxiety disorder including PTSD is already proven in many studies, But there are few trials for addictive disorder. In recent studies, cue exposure therapy showed a small additional effect on total drinking score and a moderate additional effect on latency to relapse. Therefore, in this case, we would report cue exposure therapy trial for a patient who was struggling with craving for alcohol. [Case report] The patient was 48 aged male person who made a diagnosis of Bipolar I disorder and alcohol use disorder in 2010 and hospitalized twice after then. After discharge, he drank alcohol everyday and that resulted in poor drug compliance. He often experienced black-out after drinking, and faint out. So he wanted admission for control alcohol problem. We started medication therapy in hospitalization setting, and also cue exposure therapy for releif of craving for alcohol. He selected trigger factors(Cue) for application of cue exposure therapy and scored the level of urge from 0 to 100. And he also made hierarchie of trigger factors. In order of low rank of level of urge, He imagined the situation experiencing the trigger factor, then he could desensitized and reprocessed the urge. He made coping strategy when he was hard to overcome the urge and tried Imaginary exposure therapy again. After the treatment, the level of urge decreased about 30~40 points. And also the trigger factors interacted each other, relief of urge in one situation lead to lower level of urge in other situation. [Discussion] There are lots of suggestion about the effect of cue exposure therapy for alcohol use disorder, yet many trials need to be studied. We need futher exploration for long term effect, But we found that patient who had alcohol use disorder could find better copying strategy and reduce urge for alcohol itself after trial of imaginary cue exposure therapy

No. 16

Microdosing Psychedelics: A Survey-Based Exploration of Psychiatric Comorbidities and Substance Use Patterns

Poster Presenter: Cory Ross Weissman, M.D.
Co-Authors: Daniel Rosenbaum, Thomas Anderson, Rotem Petranker, Le-Anh Dinh-Williams, Katrina Hui, M.D., M.S., Emma Hapke

SUMMARY:

Background: There is increasing interest in the potential beneficial uses of psychedelic substances as treatments for psychiatric disorders. The phenomenon of microdosing psychedelics, taking sub-perceptual doses of these psychoactive substances, is now a cultural phenomenon for which there is little-to-no scientific

understanding. This study is an exploratory analysis into the relative prevalence of psychiatric disorders and substance use patterns in individuals microdosing psychedelic substances. Methods: We performed an anonymous online survey in which both microdosers and non-microdosers provided information on their psychiatric history, demographics, microdosing practices and perceived benefits and drawbacks. This report is an exploratory analysis specifically into the psychiatric diagnoses and the patterns of comorbid substance use in this sample drawn from the survey results. We performed odds ratio testing to compare relative prevalence of psychiatric disorders in microdosers versus non-microdosers across major DSM-5 diagnosis categories. Results: Data was available for 798 survey respondents (microdosers, N=559; non-microdosers, N=239). There was a significant higher odds of ADHD diagnosis (OR 1.63, 95% CI of 1.02 to 2.58) in microdosers compared to non-microdosers, and a significantly lower odds of anxiety (OR 0.68, 95% CI 0.48 to 0.97) and substance use disorder (SUD) diagnoses (OR 0.33, 95% CI of 0.14 to 0.81). There were no other significant differences between groups. Conclusion: Microdosing psychedelic drugs may be a common self-medication practice of patients with ADHD. Considering the emerging evidence for the safety of high-dose psychedelic drug administration for substance use disorders in therapeutic settings, the potential beneficial role of microdosing psychedelics should be further explored in patients suffering from ADHD and comorbid substance use in both observational and randomized trials.

No. 17

Trazodone-Induced Penile Erection Leading to Abuse: A Case Report

Poster Presenter: Ye-Ming J. Sun, M.D.

SUMMARY:

Trazodone is an antidepressant which acts as a potent serotonin 5-HT2A and norepinephrine a1-adrenergic receptor atagonist. Trazodone was initially approved to treat major depression but has also been used by clinician as an alternative in treatment of insomnia and has become one of the most frequently prescribed agents for insomnia. Another off-label use of trazodone is in treatment of erectile dysfunction, based on its antagonistic effect on a1-adrenergic receptor localized on the smooth muscle of cavernosal arteries and trabeculae in penis. The same mechanism is responsible for developing priapism; one of the rare but serious side-effects of trazodone. Here, we present a patient diagnosed as bipolar disorder, who had received trazodone in the past to help with his insomnia and had experienced prolonged penile erection on 150 mg of trazodone, which was a dose-dependent effect per patient's report – the higher dose, the longer lead to longer duration of erection. Patient presented this side-effect as pleasurable and requested the treatment team to provide this medication despite being warned about the potential threat of developing priapism. In this case report we are highlighting the abuse potential of trazodone. This sexual activation side-effect could lead to psychophysiological as well as social problem. Therefore, closer monitoring of sexual side-effects and educating patients who take trazodone is highly recommended. This accentuates the need for developing studies to screen abuse potentials due to sexual experiences in trazodone and other medications with similar side-effect.

No. 18

The Combination of Low Dose Topiramate and Quetiapine in the Treatment of Alcohol Use Disorder Resistant to FDA Approved Treatment

Poster Presenter: Khadija Siddiqui

Co-Authors: Asghar Hossain, M.D., Tahira Akbar, M.D., Maria Elena Saiz, M.D., Tahira Akbar, M.D.

SUMMARY:

Alcohol use disorder carries significant morbidity and mortality. Maintaining abstinence from alcohol use with both psychotherapeutic and pharmacotherapeutic interventions is the prime modality of management. This case report demonstrates safe and efficacious treatment in maintaining remission from resistant alcohol use disorder. The objective of this article is to report a case of alcohol use disorder that responded well with combination therapy of low dose topiramate (110mg) and quetiapine (150mg), enabling abstinence from alcohol use with significant reduction in frequency of cravings in the context of

inadequate response to FDA-approved medications, naltrexone, disulfiram, and acamprosate. In this case report, we observed the efficacy of low dose topiramate along with quetiapine and found the combination effective in ameliorating alcoholic cravings. This therapeutic regimen also treated the coexistent subtle symptoms of depression and anxiety. This combined psychotherapeutic intervention enabled us to highlight an alternate treatment modality in resistant cases of alcohol use disorder and enabled this patient to return to his functional status.

No. 19

MAT With Prayer: A Literature Review of Treating Opiate Use Disorder Through Faith-Based Organizations

Poster Presenter: Brant Thayer

SUMMARY: Objective: Opiate Use Disorder (OUD) represents an increasing cause of death in the United States (42,249 in 2016, up 200% since 2010) despite therapeutic options available to maintain sobriety. Also, a significant portion of those who suffer from OUD first seek care from a faith-based leader (25%). Faith-based leaders, especially in rural areas where faith-based organizations take a larger role in congregants health, have identified OUD treatment as the number 1 topic they would like to receive more training and education around (55 / 60 leaders in one survey). A systematic review was done to quantify the efficacy of OUD treatment through faith-based services that included Medication Assisted Treatment (MAT), such as methadone and buprenorphine. Methods: A literature review of Medline databases was conducted to identify articles published between August 31st, 1998 and September 1st, 2018. Inclusion criteria included treatment of any OUD through faith-based services. Results: 780 articles were reviewed, of which 3 met inclusion criteria for this study; 1 described Methadone Maintenance Therapy (MMT) and 2 that described Buprenorphine Maintenance Therapy (BMT) within the same population. MMT delivered at a mosque in Malaysia was associated with 80% retention rate with 9/10 individuals having negative Urine Drug Screens 1 year after the study began; associated improvement in social functioning and decrease in criminal activity was observed. BMT was associated with 60% reduction in police charges and 58.3% reduction in child protective cases in a remote First Nations People when overseen by First Nations counselors and healers; a follow-up study showed retention rate of 70% at two years and negative Urine Drug Screen for 84-90% of samples. All findings were statistically significant. As a comparison, an office based MAT program in Maryland showed a retention rate of 53% at one year. No studies were found that described faith-based treatment alone for OUD. Discussion: the studies that do exist support offering MAT through faith-based services for OUD, especially in rural areas where fewer psychiatrists and pain management specialists practice. The social support provided by faith-based organizations offering MAT could enhance sobriety when compared to office-based MAT alone. While research has described the impact of treating Alcohol Use Disorder, Cocaine Use Disorder, and Tobacco Use Disorder through faith-based organizations more research should be done to quantify the efficacy of leveraging faith-based organizations in conjunction with MAT to maintain sobriety from opiates.

No. 20

Underdiagnoses of Wernicke's Encephalopathy: A Case Study

Poster Presenter: John Doyle, M.D.
Co-Authors: Ateaya Ali Lima, M.D., Katherine Tsung, M.D.

SUMMARY:

Wernicke's encephalopathy (hereinafter WE) is a neurological complication resulting from thiamine deficiency. In the western world, this is usually the consequence of chronic alcoholism. Furthermore, WE is an acute syndrome that could eventually progress to chronic Korsakoff syndrome, coma, or death if not properly diagnosed with appropriate treatment of thiamine. Though laboratory studies and neuroimaging can provide valuable information, WE is primarily a clinical diagnosis. It is commonly recognized as presenting with the classic triad of gait ataxia, encephalopathy, and oculomotor dysfunction. However, only approximately one third of patients present with all components of said triad. In fact, the most common sign seen in these patients

is solely encephalopathy or confusion. As a result, WE is unfortunately underdiagnosed or misdiagnosed as another form of delirium since the typical patient presents vaguely with confusion, electrolyte disturbance, and multiple medical comorbidities as a result of chronic alcoholism, poor nutrition, and noncompliance with treatment. A high index of suspicion is required in order to make the appropriate diagnosis and treatment, effectively preventing potentially debilitating or lethal outcomes. We present a case of a 56 year old male, with a chronic history of alcohol use, who initially presented with confusion and agitation. He was diagnosed with delirium secondary to hyponatremia and was subsequently admitted and treated on the medical floors with intravenous fluids for sodium correction and oral thiamine 100mg daily. Psychiatry was consulted to assess for capacity to leave against medical advice before his hyponatremia could be corrected. In addition to confusion, the patient demonstrated horizontal nystagmus and gait ataxia on physical exam. The diagnosis of WE was made, and IV Thiamine 300mg TID was recommended/initiated. Within 3 days, the patient showed significant signs of improvement in mentation, particularly concentration and goal-oriented behavior for current and future treatment. Correct diagnosis and swift initiation of adequate treatment resulted in significant reversal of WE with improved prognosis.

No. 21

Alcohol Related Amnesia and Intimate Partner Violence: A Case Report

Poster Presenter: Soroush Pakniyat Jahromi
Lead Author: david Schwartz
Co-Authors: Shahan Sibtain, M.D., M. Hanif Ramay, M.D., Asghar Hossain, M.D.

SUMMARY:
Heavy alcohol consumption has been shown to cause amnesia and dissociative states. Alcohol-induced amnesia also known as “blackout” is a predictor of alcohol-related harm. Alcoholic blackouts may be complete or partial depending on severity of memory impairment.45 Criminal acts including murder, have been reported although there has been criticism stating that such behavior is exaggerated and a form of denial to avoid guilt. Alcohol consumption can cause variety of neurological effects, including amnesia and dissociative states. A dissociative state is the detachment of consciousness from a patient’s awareness, identity and perception and motor activity, which may present with amnesia of the episode. We present a case of 72 year old African American man was brought in by police after attacking and stabbing his wife and daughter multiple times without any recollection of these events. The case of patient suffering from alcohol-induced amnesia as well as major depression with homicidal behavior will be reviewed, demonstrating the role of alcohol in intimate partner violence. With review of similar case reports and further studies, prevention of homicidal behavior may be achieved.

No. 22

Post-Acute Withdrawal Syndrome From Cannabis Use

Poster Presenter: Soroush Pakniyat Jahromi

SUMMARY:
Cannabis is the most common drug of abuse in the USA and western world. The diagnosis of Cannabis Withdrawal Syndrome (CWS) was finally made official in DSM-5 due to the clinical significance of its symptoms and its impact on daily functioning. Major symptoms of cannabis withdrawal include irritability, aggression, anxiety, insomnia, decreased appetite, restlessness, and low mood. Patients with extensive history of Cannabis consumption may experince such sympotms after cessation of cannabis and these can last upto two years following cessation of Cannabis. This is a case report of a 27-year-old African American male, single, unemployed, living with his mother in New Jersey who came with symptoms of dysthymia, anxiety and negative thinking. He had been consuming Cannabis for past 15 years and he was court mandated to receive treatment for substance abuse since he got into several legal problems related to drug use. This case report validates CWS criteria and signifies the importance of considering substance use and withdrawal in diagnosis of such patients for better management.

No. 23

Hyperammonemia in Patients Being Treated With Valproate

Poster Presenter: Syed Salehuddin, M.D.
Co-Authors: Ahmad Jilani, Manoj Puthiyathu, M.D.

SUMMARY:
Valproate first came into medical use in 1962 due to its anticonvulsant properties [1]. Presently it is also used in the treatment of psychiatric disorders such as bipolar disorder, or as an adjunctive medication for schizophrenia [2]. FDA has concluded valproic acid to have a narrow therapeutic index [3], and as such potential for adverse effects to occur is relatively higher. One such adverse effect is rising ammonia levels in patients taking valproate. If not corrected, these rising ammonia levels may lead to encephalopathy. We looked at published works to identify the risk factors for hyperammonemia in the patients being treated with valproate. We further looked to identify any factors that may minimize the chances of hyperammonemia in such patients, and the efficacy of available modalities used in treatment of valproate associated hyperammonemia.

No. 24
A Case of Kratom Induced Psychosis
Poster Presenter: Joseph Ipacs, M.D.
Co-Author: Mudhasir Bashir, M.B.B.S.

SUMMARY:
Kratom (Mitragyna speciosa) is a psychoactive substance derived from a tree in Southeast Asia with both stimulant and narcotic properties. Kratom use remains legal in most states, and it is advertised by vendors as a safe treatment for pain and opioid withdrawal. Both the FDA and published literature have reported multiple adverse effects from the use of kratom including hepatotoxicity, psychosis, and overdoses resulting in death. We describe the case of a 36 year old man with a history of ADHD and cannabis use disorder who had two emergency room presentations in the span of four days with subsequent psychiatric hospitalization for psychosis after months of Kratom use. Per his wife's report, he had onset of hyper-religious preoccupation and paranoid concerns about secret societies coinciding with the use of Kratom. His behavior and speech became more bizarre and disorganized with increasing dosage. She reported that he was taking up to twelve 500mg capsules per day. The patient was also using cannabis, which his wife reported he had used for many years without any change in behavior. Interestingly, although he had psychotic symptoms while using Kratom, his psychosis became more severe after he abruptly discontinued use several days prior to his first emergency room visit. This case illustrates the potential for severe psychiatric symptoms secondary to Kratom usage and underscores the risk involved with use.

No. 25
Loperamide Abuse in Opioid Use Disorder
Poster Presenter: Nathan Alexander Chan, M.D.
Co-Author: Angela Camacho-Duran

SUMMARY:
Patients suffering from substance use disorder are often forced into creative solutions to manage their addiction and dependence. Some of these street remedies may be surprising or unexpected to an unknowing physician, but they can also be deadly. In this case presentation, one example of a lesser known drug of abuse, loperamide (commonly used for treatment of diarrhea), is explored in the clinical setting. Proper management of such cases is critical and possibly life-saving and may easily be overlooked without a high index of suspicion. A 45-year-old Caucasian male who is homeless with a history of severe opioid, stimulant, and alcohol use disorder presents to the emergency department voluntarily seeking detoxification. During the interview, the patient admits to abuse of multiple substances: cocaine, alcohol, and "anything I can get," including loperamide. Patient reports using up to 400mg of loperamide daily for the past 2 years, and he explains he takes this for the explicit purpose of mitigating opioid withdrawal. Laboratory results are notable for UDS positive for amphetamines and cocaine, ethyl alcohol level of 108, and a potassium of 3.2 in an otherwise unremarkable BMP. Incidentally, an EKG reveals a QTc of 602. Chart review reveals a two-year history of elevated QTc ranging from 518-564, with EKG prior to that date revealing a QTc of 482. Over the next couple months, patient is re-admitted to ED multiple times for detoxification during which treatment teams repeatedly explained that his continued use of loperamide could result in a life-threatening arrhythmia. Patient's use of loperamide decreases over time as evidenced by his EKGs. At the patient's

most recent visit for hip pain – rather than for detoxification – he does not endorse abuse of loperamide and his QTc normalized to 434. This case demonstrates a potentially life-threatening elongation of the QTc interval due to loperamide abuse in the context of opioid abuse and dependence. Loperamide acts via agonism of intestinal μ-opioid receptors and can be taken in extremely high doses to achieve a high or prevent withdrawal from opioids at the cost of life-threatening cardiac conditions. Knowledge of abuse of loperamide should guide clinicians toward proper screening and management of opioid dependence and should include routine EKG, screen for abuse of over-the-counter medications including loperamide, and a discussion of the dangers of taking supratherapeutic doses of cardiotoxic medications.

No. 26

Emerging Challenge in Addiction: A Case Report of Synthetic Cathinone-Induced Psychosis

Poster Presenter: Dilys Ngu, M.D.
Co-Author: Debbarma Swarnalata, M.D., M.P.H.

SUMMARY:

Emerging challenge in Addiction- A case report of synthetic cathinone induced psychosis Dilys Ngu, MD PGY-2; Debbarma Swarnalata, MG, MPH PGY-3 Introduction Effects of Cathinones are similar to those of other stimulants such as cocaine and methamphetamine, but more potent. Flakka is one of the newest synthetic Cathinones, and its use has increased substantially. In 2015, the use of Flakka increased to epidemic proportions in south Florida and spread to other parts of the country. Flakka is a potent, highly addictive stimulant drug. Most people use Flakka for the euphoric high, but symptoms of frightening delusions, paranoia, extreme agitation and altered mental states are observed. In rare cases, death has been observed. Although cases of Flakka intoxication are no longer frequent, there continue to be sporadic cases across the country, just as in the case with our patient. Case Description This case report is about a 28-year-old college student who was enrolled in college in Florida. Aside from being arrested for misconduct, he had no known past psychiatric or medical history. He presented to the hospital exhibiting signs and symptoms of bizarre behavior, agitation, and paranoia. He was noted to be elated, intrusive, paranoid, grandiose and disinhibited, with multiple episodes of running around naked. His speech was disorganized and pressured, with tangential thought processes and looseness of associations. His paranoia included believing that his family was programmed against him; his brother is possessed and that his father wanted to take control of his life. He reported previous use of both Flakka and Bath Salts, current regular use of marijuana with positive UDS. Inpatient Course: Depakote ER 500mg twice daily was initiated to help with mood lability and manic symptoms and Risperidone 1mg twice daily for psychotic symptoms. Improvement of his symptoms was observed with medications and patient was discharged after 4 days. He, however, presented to the ED one week later with auditory hallucinations Discussion: Further research is required to better understand the underlying mechanism of action of Flakka and Its long-term clinical manifestations including better treatment modalities. Public health concern: difficult to detect on UDS, ease of accessibility, relatively inexpensive

No. 27

Prevalence, Causal Factors and Health Effects Associated With Methamphetamine Use Among Youths and Adults in the U.S.

Poster Presenter: Mei Wai Lam, M.D., M.P.H.
Co-Authors: Son Nguyen, Daniel M. Grimes, M.D.

SUMMARY:

Introduction: Methamphetamine is a highly addictive substance that leads to various psychiatric and medical problems. The socioeconomic burden from methamphetamine use is also increasing. Objectives: The study aimed to find out 1) prevalence and pattern of use of methamphetamine in the U.S.; 2) the causal and protective factors associated with methamphetamine use; and 3) health effects associated with methamphetamine use Methods: The dataset of 2016 National Survey on Drug Use and Health (NSDUH) from SAMSHA was utilized. The analysis was stratified into youths (age 12-17, N= 14223) and adults (age 18 or above, N=42599). Logistic regression analysis was used. Results: Among youths, 0.36% (51 out of 14223) reported ever use of methamphetamine compared to 5.76% (2454/42599) of adults. The mean age of

first methamphetamine use was 21.14 among adults and mean age of first use was 14.42 among youths. The mean number of days of methamphetamine use in the past 12 months were 39.14 days among youths, while that for adults were 105.88 days. Risk factor that was significantly associated with methamphetamine use in both youths and adults included report of getting a real kick out of doing things that are a little dangerous ($p<0.00001$). Among adults, male gender and non-Hispanic White race were found to be significant risk factors of methamphetamine use when compared to female gender and Hispanic race respectively ($p<0.001$). Protective factors of methamphetamine use include education and religious belief. Adults who were college graduates were 50% less likely to report use of methamphetamine compared to adults who had less than high school education ($p<0.0001$). Compared to adults who disagreed that religious beliefs are a very important part of their life, those who strongly agreed that religious beliefs are very important were 49% less likely to report ever use of methamphetamine ($p<0.0001$). Methamphetamine use was associated with poorer health status including overall health and HIV status. Compared to youths who reported excellent health, youths who reported fair/poor health were 9.5 times more likely to have reported use of methamphetamine ($p<0.0001$). Similarly, compared to adults who reported excellent health, adults who reported fair/poor health were 3.4 times more likely to have reported use of methamphetamine ($p<0.0001$). Additionally, adults who were told that they had HIV or AIDS were 3.41 times more likely to have reported use of methamphetamine than those who did not have HIV or AIDS diagnosis ($p<0.0001$). Adults who stayed overnight or longer in a facility to receive mental health treatment were 3.3 times more likely to report ever use of methamphetamine than those who did not receive overnight mental health treatment. Conclusion: From the study results, methamphetamine use was found to be associated with various factors and poorer health status. Further study is warranted to guide preventative efforts of methamphetamine use.

No. 28

Gabapentin Misuse Among Psychiatric Patients: Should There Be Concern? A Case Study

Poster Presenter: Sandra D. Van Wyk, M.D.
Co-Author: Samantha Vogel

SUMMARY:
Ms. C. is a 48 year-old female employed as a legal clerk at a state agency with a history of bipolar I disorder with multiple hospitalizations, stimulant and opiate use disorder, both in remission, who presented to the resident clinic to establish care after a hospitalization for a bipolar mixed episode with psychotic features. She was seen in the clinic for 1.5 years, during which time she received gabapentin for anxiety and sleep with initially good efficacy but then exhibited symptoms concerning for gabapentin abuse, including requesting escalating doses and early refills, repeated reports that her medication had been stolen or lost, switching pharmacies and multiple prescribers. Despite attempts to curb her gabapentin use, she demonstrated an inability to use the medication as prescribed and decompensated when dose was tapered and access strictly monitored, necessitating another hospitalization during which her gabapentin was discontinued. No other substance abuse was suspected during this time. The popularity of the use of gabapentin for issues such as anxiety, insomnia, and alcohol abuse is partly driven by the commonly accepted idea that it has minimal abuse risks, especially in the non-opiate using population. However, according to a recent study, recreational gabapentin use has increased by nearly 3000% since 2008 and a 2018 study demonstrates a growing concern for misuse and abuse in the non-opiate using population. In this poster we present the evidence of prevalence and risks associated with gabapentin abuse and the need for heightened awareness of its abuse potential in opiate and non-opiate using patients with mental health diagnosis.

No. 29

Comprehensive Inpatient Substance Withdrawal Improvement Project

Poster Presenter: Ioana Maria Horotan-Enescu, D.O.
Co-Authors: Shram Dinesh Shukla, M.D., Courtney Elizabeth Kandler, M.D., Sherrell T. Lam, M.D., Robert J. DiFilippo, D.O.

SUMMARY:

Alcohol withdrawal accounts for a significant amount of hospital admissions. According to National Institute on Alcohol Abuse and Alcoholism 15.1 million adults had Alcohol use disorder and 88,000 people die from alcohol-related causes annually, making alcohol the third leading preventable cause of death in the United States. Alcohol dependence (DSM IV) accounts for approximately 20% of hospital admissions and approximately 39% of ICU admission. 5-10% of patients undergoing withdrawal symptoms may develop delirium tremens (DT's). Benzodiazepines, through their enhancement of GABA's inhibitory signaling are the drug of choice for the treatment of Alcohol Withdrawal Syndrome. Treatment is guided by the CIWA-Ar which expedites treatment and minimizes complications. A variety of benzodiazepines and specific administration protocols can be implemented based on institution guide lines and preferences. Hospitals and healthcare institutions strive for optimum medical management of patients and thus development of institute specific protocols, including medications, dosing, employee curricula and additional trainings for staff is of high interest. The poster will described the Comprehensive Inpatient Substance Withdrawal Inpatient Project (CISWIP) developed at Walter Reed National Military Medical Center which aimed to develop an internal medicine substance withdrawal unit with dedicated staff , develop an algorithm for the admission process (medicine versus psychiatric inpatient admission), the care teams involved , and finally a specific medication administration protocol that could be implemented across the hospital. Corresponding performance measures were developed, specifically the consultation process, documentation requirements, projected reduction of length of hospital stay and reduction of escalation of care.

No. 30

The Opioid Epidemic: Saving Lives by Educating Prescribers

Poster Presenter: Rohit P. Shah, M.D.
Co-Authors: Kari M. Wolf, M.D., Nicole Abbot, M.B.B.S., Talha John Baloch, M.D.

SUMMARY:

Background: Currently, 11.2% of people in the United States have chronic pain and about 3-4% of people use opioids long-term. The total "economic burden" of prescription opioid misuse alone in the United States is $78.5 billion a year, including the costs of healthcare, lost productivity, addiction treatment, and criminal justice involvement. Roughly 21 to 29% of patients prescribed opioids for chronic pain misuse them. Between 8 and 12% develop an opioid use disorder. An estimated 4 to 6 percent who misuse prescription opioids transition to heroin. About 80 percent of people who use heroin first misused prescription opioids. In 2016, 40% all opioid overdose deaths involved a prescription opioid. 115 Americans die every day from an opioid overdose. The Illinois Department of Human Services - Division of Alcoholism and Substance Abuse awarded a grant to Southern Illinois University School of Medicine (SIU SOM) for $249,757 for the development and implementation of a "Rural Opioid Prescriber Training Program" to train physicians, dentists, pharmacists, nurses, advanced practice providers, public health department staff, physician clinic staff, FQHCs, podiatrists, optometrists, and other opioid prescribers on best practices and prescription guidelines for opioids in the 66 counties within the SIU School of Medicine region. Methods: The presentations featured 5 live sessions that were recorded on prescribing guidelines, alternatives to opioids, opioid overdose prevention, and government regulations to address the opioid epidemic. A sixth session is to be determined, and will focus on educating veterinarians. The sessions were presented at various counties May-June 2018 throughout Illinois to target prescribers. A pre-test was given prior to the presentation, and post-test was administered afterwards. Results: Opioid prescribing has decreased in the United States by 22% from 2013 to 2017. In 2017, there were 5,307,583 opioid prescriptions in Illinois. However, the overdose rate on opioids in Illinois continues to increase, but at a slower rate. In 2017 there were 2,110 opioid related fatalities. The official data for 2018 Illinois opioid prescribing and opioid related deaths is still being collected and will be released at the beginning of 2019. The data on the pre-test and post-test is being reviewed and will be ready shortly. Conclusion: In this poster, we highlight the educational initiative of implementing a Rural Opioid

Prescriber Training Program to target the opioid epidemic under the support of a grant and discuss prescribing guidelines and statistics on the opioid epidemic. Opioid prescribing has decreased in Illinois, and awareness has increased; there has been a rise in medication assisted treatment providers and an increase in the number of registrants on Illinois Prescription Monitoring Program. This grant and the Rural Opioid Prescriber Training Program have inspired the development of additions to this series.

No. 31

Ibogaine in the Treatment of Opioid Addiction: A Review

Poster Presenter: David Marino, M.D.
Co-Authors: Aaron Wolfgang, M.D., Sabina Mishiyeva-Marino

SUMMARY:

HISTORICAL CONTEXT Iboga is a shrub native to West Africa that has been recognized for centuries by African tribes for its psychoactive properties, and is used in spiritual ceremonies. Derived from the roots of iboga, ibogaine is a psychedelic indole alkaloid that has been studied as an adjunct to psychotherapy since the 1950's. In more recent decades, it has received attention for its potential efficacy in treating substance abuse, particularly opiate addiction. However, it has been designated as a Schedule I substance in the United States and is illegal in many countries, creating legal barriers in its study. Its use is controversial, and it is used in alternative medicine clinics in often poorly regulated settings around the world. EFFECTS Ibogaine has a complex, poorly understood pharmacology that appears to be novel. It acts as a mild stimulant at low doses. Larger doses can lead to visions and an intense, dreamlike state. In the short term it decreases physiological withdrawal symptoms and drug cravings. It is thought to facilitate psychological growth, with subjects describing common themes of increased introspection, insight, and empathy. The altered-state experience of ibogaine may contribute to its therapeutic value, though its importance is uncertain. SAFETY There appear to be some cardiovascular risks; some life-threatening complications and sudden deaths have been attributed to ibogaine. This appears to be mitigated by using a lower dose, avoiding multiple doses over sequential days, proper medical supervision, and strict exclusion criteria. However, further research is warranted to better understand the potential risks. EFFICACY There is substantial evidence in humans supporting short-term efficacy in decreasing withdrawal symptoms, drug cravings, and aiding in opiate detoxification. Research on long-term treatment of opiate addiction has been limited, but two observational studies published in 2017 are promising. In one study of 30 subjects with opiate use disorder, a single dose led to significant decreases in a measure of drug use persisting through 12 months of follow-up ($p < .001$). In another, a single treatment of 14 subjects with opiate use disorder reduced the score on a measure of addiction severity by >80% after 12 months ($p = .004$). THE FUTURE The recent success of research on MDMA-assisted psychotherapy for PTSD, which has been designated as a Breakthrough Therapy and is being fast-tracked for FDA approval, highlights the need to fully explore the previously untapped therapeutic potential of psychedelic substances. Opioid abuse remains a huge burden on society and health care system in the United States, necessitating the exploration of more effective therapies. Ibogaine shows great promise in this area, and warrants further research in well-designed, controlled clinical trials to establish efficacy, better understand and manage potential risks, and transition its use to regulated and controlled settings.

No. 32

Delusional Parasitosis in a Patient With Probable Opioid-Induced Sedation Treated With Adderall

Poster Presenter: Elizabeth N. Holcomb, M.D.

SUMMARY:

Ms. M, a 40-year-old Caucasian female with history of PTSD, opiate use disorder (on buprenorphine-naloxone maintenance therapy), alcohol use disorder in full sustained remission, likely Borderline Personality Disorder, and Hepatitis C infection, initially presented to clinic to establish with a new buprenorphine prescriber after relocating. At her clinic intake appointment, the patient was deemed appropriate for continuation of buprenorphine treatment. Over a course of two months, she began

reporting increased fatigue and frequent napping, which was initially thought to be a side effect from treatment for Hepatitis C. The patient further reported increased dependence on buprenorphine to help with mood and energy. Her fatigue did not improve with conclusion of hepatitis C treatment, and she reported difficulty with her day to day functioning, including caring for her toddler son with special needs. She reported increased caffeine intake to combat fatigue. Although it was hypothesized that she could be suffering from opioid-induced endrocrinopathy or Addison's Disease, initial medical workup was negative. Patient was trialed on a short course of methylphenidate for suspected opioid-induced sedation after careful assessment of risks and benefits, given patient's addiction history. Her fatigue minimally responded to methylphenidate, and the patient reported side effects. A trial of dextroamphetamine/amphetamine was started. Within four months following the initiation of dextroamphetamine/amphetamine, she developed complaints of parasitic infestation. She brought samples to emergency department of what she believed to be cercariae larvae. Initial medical workup was inconclusive for parasitic infection and her psychiatrist stopped prescribing the stimulant. During multiple discussions in which providers suggested that stimulant medication was contributing to her belief of infection, the patient became upset and threatening. Over course of the next month, she had multiple presentations to emergency department, where she brought bottles and slides of samples from her body, which she believed to be parasitic in origin. Further medical work up was performed with no positive test confirming diagnosis. At follow up appointment, patient's mother, who was visiting from out of town, accompanied patient and expressed belief that she was also infected. In this poster, we discuss the challenges of managing adverse side effects of addiction treatments in patients, as well as treatment approach and challenges for managing a patient with medication-induced delusions.

No. 33

A Biological Argument for Combination Buprenorphine-Low Dose Naltrexone for Medication Assisted Therapy of Opioid Use Disorder and Chronic Pain

Poster Presenter: Terrence Yang

SUMMARY:

Buprenorphine (Bup) and Naltrexone (Ntx) are FDA-approved medications for the treatment of Opioid Use Disorder (OUD). Several patients suffering from OUD also suffer from chronic pain. Bup is a mixed partial opiate agonist/antagonist that has off-label anti-nociceptive effects. However, for those with OUD the pain relief from Bup is often subjectively insufficient. Given its strong opiate receptor affinity Bup can competitively outcompete other opiates, resulting in precipitated withdrawal. The addition of other opiates (e.g. oxycodone) to Bup offers little to no additional pain relief. Combination Bup-naloxone (Bup-Nx) currently exists to prevent diversion, but has limited oral bioavailablity. However, Ntx has increased oral bioavailability, and the use of low dose naltrexone (LDN) is currently a medication of interest in treating chronic pain. Few have studied the potential combination of Bup-LDN to treat patients suffering from both OUD and chronic pain. We will review the current available literature, and study the mechanism of action of these combined medications to argue their biological basis and feasibility as an effective medical-assisted treatment option for those with both OUD and chronic pain.

No. 34

Can You Get High on BC Powder ?

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

Co-Authors: Ngu Aung, M.D., Rajesh R. Tampi, M.D., M.S., Faiq Hamirani, Kripa Balaram, M.D., Joel Dey

SUMMARY:

Back ground: BC powder is made of Aspirin 845 mg, and Caffeine 65mg, prescribed as analgesic and has potential for addiction. Salicylates are commonly used by the elderly, long-term unsupervised use may lead to salicylate toxicity that can cause liver dysfunction, delirium. In the United States, BC and Goody's Headache Powders are widely marketed and used, and their overuse can produce salicylate intoxication. We report herein a case who has been abusing BC powder and in whom there has been an interesting background of chronic alcoholism and other substance use. Case presentation: A 63-year-old Caucasian women with history of Bipolar

disorder type I alcohol use disorder in sustained remission, Gambling disorder, who presented to the ED for altered mental status secondary to salicylate poisoning. Upon arrival her salicylate level was 49, her ABG's showed hypercapnic hypoxic respiratory failure, consequentially she had acquired aspiration pneumonia she was admitted to MICU for further management. She was treated with bicarb drip and antibiotics. Psychiatry was consulted for suicide risk assessment following intentional overdose on BC powder. On evaluation, she noted that she has started using BC powder for headaches eventually it was recreational use, she used about 4 – 5 grams for past 40 years. She reported that she has cravings for it, feels energetic on it but no withdrawal symptoms. She has history of alcohol use and is sober for past one year, also has gambling use disorder, spends most of her money every month in gambling. It appeared that the patient has addictive behavior and has been replacing ETOH and gambling lately, as she has presented to the ED 9 th time in past one year for salicylate poisoning. She was referred to several IOP and O/P support groups and she was receptive of the services for addiction and was prescribed Naltrexone. Discussion: Caffeine in BC powder causes dependence and therefore leading to abuse of BC powder which can cause salicylate toxicity. Psychostimulatory effects of caffeine may occur through blockade of the A2A adenosine receptor and weak activation of extracellular signal-regulated kinase (ERK) in the striatum. It has been studied that the dual-diagnosis population is also at greater risk of problematic engagement with comorbid addictive behaviors as seen in this patient who has been addicted to alcohol, gambling and BC powder. Conclusion: There has been very limited literature in regards to the BC powder addiction, but from the case report it is evident that the patient has cross addicted to BC powder after the alcohol and gambling addiction implying the addictive potential due to caffeine in it, however more research needs to be conducted to highlight the addictive potential of BC powder.

No. 35

A "Spiritual Journey" Beyond Intoxication: DMT-Induced Prolonged Psychosis in a 31-Year-Old Male With History of Chronic Synthetic Dimethyltryptamine Abuse

Poster Presenter: Jennifer D. Bellegarde, D.O., M.S.
Co-Author: Aleksandra Bacewicz, M.D., M.P.H.

SUMMARY:
The recreational use of synthetic N-N-dimethyltryptamine (DMT) has increased in recent years. We present a case illustrating the risks associated with abuse of this hallucinogen. Case Summary: A 31yo male with history of polysubstance abuse presented to the psychiatric ER, accompanied by police, after causing a domestic disturbance. He had smoked synthetic DMT a week prior and had since exhibited bizarre behaviors such as dancing naked around a fire while chanting nonsensically. At arrival, he was agitated, tangential, with elevated mood, and pressured speech. His urine toxicology was positive for cannabis. He was hypertensive with an elevated CPK, but was not tachycardic or febrile. His exam was otherwise unremarkable. He was admitted to the inpatient psychiatric unit. When not humming loudly in a meditative-like fashion, he spoke of telepathy, communing with G-d in a secret language, and the holiness of his pineal gland. His hospital course was complicated by recurrent need for seclusion and chemical restraints. He was trialed on a number of antipsychotics. His psychosis began to abate two weeks later. He was discharged on 400mg chlorpromazine daily with plan for IOP, but was subsequently lost to follow up. Discussion: DMT is a psychoactive compound found in plants. It acts as a serotonin 5-HT2A agonist producing effects similar to LSD and psilocybin. It is the main ingredient of Ayahuasca tea, which has been used in South American religious rituals for centuries. Reported effects such as feelings of serenity, heightened introspection, and synesthesia help convey the sense that one is having a deeply mystical or spiritual experience. Oral consumption has shown promising therapeutic benefit in the treatment of depression and is well-tolerated. However, recreational abuse of synthetic DMT has also been associated with adverse events such as agitation, psychosis, serotonin syndrome, rhabdomyolysis, seizures, and death. While most cases of psychosis are transient and occur during acute intoxication, there is increasing evidence that some individuals are at heightened risk for experiencing prolonged psychosis when using DMT. Risk factors include personal or family history of

either psychosis or bipolar disorder, history of substance abuse, and concurrent use of other psychoactive substances. Our poster will discuss emergency management, pharmacological treatment, and the importance of patient education.

No. 36

Seizure in Loperamide Abuse With Previous Opiate Addiction: A Case Report

Poster Presenter: Vivek Chandrakant Shah, M.D.
Co-Authors: Daniyal Arshad Bashir, Nazar Muhammad, M.D.

SUMMARY:

Abstract: Loperamide is a peripheral opioid mu-receptor agonist that is an anti-diarrheal agent, and has been misused by patients with newly-diagnosed and pre-existing Opioid Use Disorder. At high doses, it has an effect that is similar, yet weaker, to the euphoria experienced from opiates when used recreationally. It additionally has been used during the period of withdrawal from opiates to reduce symptoms. There is no gold-standard treatment approach for patients abusing loperamide, but a symptomatic review in the form of a case is useful in identifying and establishing a strong suspicion for the disorder in patients with a psychiatric history. Case Report: A 23 year-old male with a past psychiatric history of ADHD, depression, anxiety and opioid use disorder presents requesting detox from Imodium (loperamide). He was referred from a neighboring hospital for detoxification after a grand-mal seizure and for psychiatric consultation for assessment of dependence/overdose and optimization of medications. Our patient reported that he had been taking OTC Imodium for 3 years for GI distress such as diarrhea, which reportedly recurs when he does not take the medication. He reported tolerance to the medication and began taking approximately 50 pills/day for relief. Failed attempts to discontinue loperamide produced severe withdrawal symptoms including diaphoresis, anxiety, tremor, yawning, vomiting and diarrhea. Patient presented with tonic clonic seizure without urinary/bowel incontinence likely secondary to loperamide overdose. Pt was then brought to ER where a CT-head was negative, and the doctor was convinced the seizure was 2/2 to Imodium OD. He denied other current drug use but in the past patient reported he used cocaine and MDMA once or twice. Pt was diagnosed with ADHD at the age of 14 and started taking Adderall since the age of 18 and is currently taking Adderall 20mg/ day. Pt has a history of Vicodin abuse in remission after attending rehab in 2009, where he weaned after being given Suboxone. Discussion: Loperamide may be appealing to opioid users seeking either opioid replacement or euphoria for several reasons. Large quantities are readily available through retail and internet outlets. Loperamide can be abused at high doses for its opiate like effects. Patient can have seizure presentation and also documented cardiac manifestations as QTc prolongation, ventricular arrhythmias, syncope and sudden death. Physician should be aware of the risk of dependence and abuse of loperamide.

No. 37

Educational Video Intervention to Improve Medication Assisted Treatment Attitudes for Opioid Use Disorder in an Incarcerated Setting

Poster Presenter: Jeffrey Lam
Co-Authors: Hye In Sarah Lee, Ashley Truong, Alexandria Macmadu, Bradley Brockmann

SUMMARY:

Background: Opioid use disorder (OUD) and opioid-related overdose deaths are two of the largest public psychiatry challenges to date. Criminal justice (CJ) involved individuals have a substantially greater burden of OUD and overdose death following release. Current evidence indicates medication assisted treatment (MAT) is an effective way to address OUD and associated fatalities. Rhode Island is the first state to offer comprehensive MAT in an incarcerated setting; however, due to stigma and negative perceptions, MAT-eligible individuals may be reluctant to accept and initiate this evidence-based treatment. This study aims to 1) test the efficacy of a brief educational video intervention aimed at increasing MAT knowledge and attitudes and 2) characterize MAT-related attitudes in a general incarcerated population. Methods: Participants were recruited from 8 elective pre-release classes offered to all incarcerated individuals at the Rhode Island Department of Corrections. Participants watched an 8-minute video that featured 2 incarcerated individuals speaking about

their personal experiences using MAT. The educational video was designed specifically for the population with the goal of increasing knowledge of the MAT program and reducing MAT-related stigma. Participants were administered surveys prior to and following the video to assess changes in MAT knowledge (MAT-K) and MAT attitudes (MAT-A). Paired t-tests were run to assess changes in MAT-K and MAT-A. Additionally, linear regression methods were used to examine pre-video MAT-A and changes in MAT-A, controlling for demographics determined a priori. Results: This pre-test post-test educational intervention included 80 participants who were incarcerated (mean age = 36.2, 92.5% male, 39.25% white, and 30.4% black). Forty percent of participants indicated risky opioid use behavior 6 months prior to incarceration and 12.5% had previously used MAT. Significant improvements in MAT-K scores ($t(65)=-7.30$, $p < 0.00$) and MAT-A scores ($t(69) = -5.80$, $p < 0.00$) were detected. Significant associations were found between higher pre-video MAT-A scores and (a) higher pre-video MAT-K (ß = 0.42, CI = 0.08, 0.76) and (b) being incarcerated for less than one year (ß = 2.89, CI = 0.37, 5.41). Significant associations were also found between greater changes in MAT-A and (a) lower pre-video MAT-A scores (ß = -0.21, CI = -0.42, -0.01) and (b) identifying as black (ß = 2.85, CI = 0.61, 5.10). Conclusion: To our knowledge, this study is among the first studies to examine MAT-related attitudes in a CJ-involved population. The educational video improved both attitudes towards and knowledge of MAT, with changes in MAT attitudes being influenced by race. Future studies should examine if more positive MAT attitudes translates to an increased MAT uptake. These findings have the potential to inform future MAT programs in correctional facilities, thereby helping to reduce OUD-related morbidity and mortality.

No. 38

The Opioid Epidemic: Saving Lives by Educating Prescribers

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

SUMMARY:

Background: Currently, 11.2% of people in the United States have chronic pain and about 3-4% of people use opioids long-term. The total "economic burden" of prescription opioid misuse alone in the United States is $78.5 billion a year, including the costs of healthcare, lost productivity, addiction treatment, and criminal justice involvement. Roughly 21 to 29% of patients prescribed opioids for chronic pain misuse them. Between 8 and 12% develop an opioid use disorder. An estimated 4 to 6 percent who misuse prescription opioids transition to heroin. About 80 percent of people who use heroin first misused prescription opioids. In 2016, 40% all opioid overdose deaths involved a prescription opioid. 115 Americans die every day from an opioid overdose. The Illinois Department of Human Services - Division of Alcoholism and Substance Abuse awarded a grant to Southern Illinois University School of Medicine (SIU SOM) for $249,757 for the development and implementation of a “Rural Opioid Prescriber Training Program” to train physicians, dentists, pharmacists, nurses, advanced practice providers, public health department staff, physician clinic staff, FQHCs, podiatrists, optometrists, and other opioid prescribers on best practices and prescription guidelines for opioids in the 66 counties within the SIU School of Medicine region. Methods: The presentations featured 5 live sessions that were recorded on prescribing guidelines, alternatives to opioids, opioid overdose prevention, and government regulations to address the opioid epidemic. A sixth session is to be determined, and will focus on educating veterinarians. The sessions were presented at various counties May-June 2018 throughout Illinois to target prescribers. This poster highlights guidelines prescribers should follow on opioid prescribing and statistics on the opioid epidemic. Conclusion: In this poster, we highlight the educational initiative of implementing a Rural Opioid Prescriber Training Program to target the opioid epidemic under the support of a grant and discuss prescribing guidelines and statistics on the opioid epidemic. Opioid prescribing has decreased in Illinois. This grant and the Rural Opioid Prescriber Training Program have inspired the development of additions to this series.

No. 39

WITHDRAWN

No. 40

WITHDRAWN

No. 41
WITHDRAWN

No. 42
Application of Long-Acting Injectable Antipsychotics in Modulating Aggressive Behavior in Adolescents With Autism Spectrum Disorder
Poster Presenter: Mohammed Tashfiqul Islam, M.D.
Co-Authors: Edward George Hall, M.D., Danielle Seltzer, Ayesha Saleem Adil, M.D.

SUMMARY:
Autism spectrum disorder (ASD) is a neurodevelopmental disorder characterized by various impairments- as per the DSM-5, manifestations of this developmental disorder may include difficulties in communication, interaction with repetitive behaviors and other symptoms such as aggression which impact the ability of function in various settings such as school or work (1,7). Aggressive behavior impacts placement in residential treatment facilities, long-term independent functioning and development of interpersonal relationships of autistic individuals (7). Various treatments include behavioral, psychological and educational therapy- current consensus is that behavioral treatment modalities are considered first line (7). The nature of the behaviors themselves (specifically inflexibility) aspect often determine the level of support the patient needs (1). The use of pharmacological interventions may result in better responses to symptoms such as irritability, aggression, or other mood symptoms such as anxiety and depression. For irritability and aggression in autism, antipsychotics currently approved by the U.S. Food and Drug Administration (FDA) include risperidone and aripiprazole (2,5). Long acting injectable (LAI) versions of some of these medications have existed on the market for some time but have found approved indications mainly in adult population, but there is a dearth of evidence-based literature for indications in adolescents. We theorize that the use of LAIs in autistic individuals with aggression is an alternative to oral dosing specifically when various factors such as compliance, aggression (especially towards caregivers) is a concern amongst adolescents. Currently, there is only off-label use for LAI antipsychotics for indications such as psychosis and disruptive behavioral disorders (DBDs) (3). Fortea et al.'s research indicate that the use of these LAIs (namely risperidone, paliperidone and aripiprazole) are safe alternatives to use in cases of poor compliance to oral regimens/poor insight. As there is a current lack of approval for use in adolescents by the FDA and other agencies, it is prudent to obtain further studies to gauge the effectiveness and safety of these medication in adolescents (4). As there is a dearth of information about the use of LAI antipsychotics for managing aggressive behavior in adolescents with autism, it is important to look at existing use in similar populations. One such study found that use of long acting formulation of risperidone improved adherence and motivation for treatment in short term treatment spans such as six-weeks in adolescents with conduct disorder (6). As a result, expanding the use of LAI formulations of antipsychotics in managing the aggression of autistic adolescents can be an innovative approach in managing an already difficult to understand condition.

No. 43
Frozen: Management of Autistic Catatonia in a Patient With Down Syndrome
Poster Presenter: Rupal Ekeberg
Co-Author: Aruna Sahni

SUMMARY:
Mr. M.U., an 18 year old Caucasian male with Down syndrome, moderate intellectual disability(ID) and autism, was referred to the community ID psychiatry team due to severe behavioural disturbance and aggression. He presented with a history of episodes where he withdrew from his usual routines, stopped eating and drinking and 'was stuck' when initiating tasks, such as getting out of bed. The episodes lasted for several days before appearing to spontaneously resolve, before the cycle repeated itself again. The family reported three brief occasions when M.U. was witnessed to be slumped over, dribbling and unresponsive for several seconds. They also described occasions when M.U. appeared to stare for prolonged periods of time and appear 'vacant'. Following EEG, MRI head and neurology review , epilepsy was ruled out. At psychiatry assessment, we learned that in the months prior to the change in

behaviour, M.U. witnessed a teacher being attacked by another pupil. In addition, M.U. was himself assaulted by another pupil on the school bus and was noted to 'freeze' whilst being attacked. We considered whether he was depressed or psychotic, but the short nature of these episodes ruled either diagnosis out. We held off from regular medication, and he had an as required prescription of diazepam. We instead decided to work with our psychology colleagues. An individual and systemic family assessment was completed, following which the professional network met and formulated a diagnosis of autistic catatonia. M.U. responded well to environmental adaptations and art psychotherapy, which helped to build up his resilience to the environment, for example, being able to say no. He is currently attending college away from the family home, and back enjoying his regular activities. In this poster we highlight the importance of ruling out physical ill health in people with intellectual disability who present with behavioural change. We also discuss the aetiology and presentation of autistic catatonia in a patient with moderate intellectual disability and its possible links with trauma. We also present the multidisciplinary management plan which led to significant improvement in his presentation and quality of life.

No. 44

Equine-Assisted Activities and Therapies for Children With Autism Spectrum Disorder: A Promising Approach to Ameliorate Social Functioning

Poster Presenter: Francesca Cirulli
Co-Author: Marta Borgi

SUMMARY:
Autism Spectrum Disorder (ASD) is a lifelong condition with increased estimated prevalence and considerable impact and cost at the individual, familiar and societal level. Although different supports and therapeutic approaches exist, at present neither proven therapies nor preventive measures are available for the universal treatment of autism. Some surveys have shown that parents of children with ASD often choose complementary and alternative therapeutic approaches for their children in addition to, or in place of, conventional treatments, entering these programs with high expectations. In particular, therapeutic programs involving domestic animals - also known as Animal-Assisted Interventions (AAI) – have become a common practice and are the subject of a growing body of research. AAI with horses (Equine-Assisted Activities and Therapies, EAAT) involve grooming as well as mounted riding activities and are considered as one of the most effective animal-assisted rehabilitative approach to target core and psychiatric symptoms in children with ASD. Based on a review of the literature, we evaluate the effectiveness of EAAT for ASD population. Reported outcomes include improvements in different areas of functioning known to be impaired in ASD, namely socialization, engagement, and problem behaviors. Moreover, some studies point out encouraging—although still preliminary—effects of riding activities with horses on executive abilities and motor skills in children with ASD. The inclusion of horses in rehabilitation programs appears a promising approach for the management of autism, in particular to lessen the impact of symptoms on children's functioning and quality of life. EAAT can exert positive effects on social, emotional and physical domains. In this poster, we discuss the challenges and importance of promoting standardized research to validate EAAT programs for the ASD population and to help parents and professionals make educated judgments regarding both non-conventional and routine interventions.

No. 45

Naltrexone for Treatment of Self Injurious Behavior in Patient With Autism Spectrum Disorder and Multiple Comorbidities

Poster Presenter: Ovayoza Adeleye, M.D.
Co-Authors: Erin Campbell Fulchiero, M.D., Thomas Scheidemantel, M.D.

SUMMARY:
Patient A.H is a 28-year-old Caucasian female with Autism Spectrum Disorder (ASD), Obsessive Compulsive disorder (OCD), Pre-menstrual Dysphoric disorder (PMDD), stereotypic movement disorder vs. drug-induced induced akathisia, moderate intellectual disability, circadian rhythm sleep disorder and a past medical history of seizure disorder who presented with increased self-injurious

behavior (SIB). At the time of presentation, A.H was receiving the following oral psychotropic medications: ziprasidone 40mg qam, 80mg qhs, trazodone 150mg qhs and clonazepam 1.5mg qhs. This regimen was titrated primarily to target aggression, depression, impulsivity, OCD symptoms and irritability. Three months prior, a trial of escitalopram 5 mg daily resulted in apparent activation, and dosing was transitioned to morning administration. It was considered unlikely that SSRI therapy was related to increased self-injurious behavior as onset of SIB was sufficiently delayed from commencement of treatment. On initial evaluation for SIB one month prior, moderate self-injurious behavior was evidenced by chronic and acute bite marks on hand, daily frequent scratching and skin excoriation with extensive actively-bleeding self-inflicted injuries and scabs on bilateral forearms. At that time, a comprehensive metabolic panel was obtained and naltrexone 25mg PO daily initiated. Two weeks subsequently, the patient was taken to the ED wit persistent self-injury complicated by profuse bleeding from multiple excoriations. Given worsening SIB and absence of side effects, naltrexone was increased to 50mg PO daily. Over the course of two weeks, all self-injurious behavior resolved. At one-month clinic follow-up, the majority of excoriations were fully healed with other lesions in various stages of healing. Caretakers reported no recurrence of self-injury, excoriation or picking at scabs. Recommendation was made for continuation of naltrexone 50mg PO once daily and return for follow up in six months. This case illustrates the effectiveness of naltrexone for the treatment of SIB in a patient with intellectual disability, ASD, PMDD and OCD that was resistant to treatment with a selective serotonin re-uptake inhibitor, multiple antipsychotic, and benzodiazepines therapy. The opioid pathway has been implicated in self-injurious behavior due to habituation to high levels of endogenous opioids. Naltrexone, a competitive opioid antagonist, blocks the reward experienced with frequently utilized doses in a range of 25mg to 150mg PO daily. When SIB is refractory to behavioral interventions and first-line pharmacotherapy fails, naltrexone may be a viable alternative. Large-scale randomized control studies that examine the effect of naltrexone on SIB would be beneficial in providing clinical evidence for this practice.

No. 46

Clozapine Use and Other Psychopharmacological Interventions for Managing Aggressive Behavior Associated With Childhood Autism Spectrum Disorder

Poster Presenter: Anita Kulangara, M.D., M.S.
Co-Author: Edward George Hall, M.D.

SUMMARY:
Autistic Spectrum Disorder (ASD) is a disorder of socialization, language, and behavior in the developing child. Theories of its etiology encompass genetic and environmental causes. In severe types, precarious behaviors can arise, including aggression and self-injury, making it troublesome for caregivers to manage. Although available interventions (pharmacologic and psychotherapeutic) are being investigated for their efficacy and safety, many call for new drug development, avoiding traditional, effective agents. Clozapine (Clozaril) is one such underestimated atypical antipsychotic. It is infamous for its side effects, particularly its hematological ones. Hence, its efficacy has been overlooked. In this poster, we review literature examining interventions for aggression, including long-term Clozaril use, in pediatric treatment-refractory ASD. Future studies examining the safety and efficacy of Clozapine over longer periods will benefit youth with treatment-refractory ASD experiencing aggression.
Acknowledgements: Dr. Edward G. Hall, Dr. Asghar Hossain, Dr. Ulfat Shahzadi, Dr. Ayesha Shaheryar

No. 47

Buspirone Use and Other Interventions for Managing Challenging Behaviors Associated With Autism Spectrum Disorder in Adults

Poster Presenter: Anita Kulangara, M.D., M.S.
Co-Author: Asghar Hossain, M.D.

SUMMARY:
Autistic Spectrum Disorder (ASD) is a diagnosis that carries lifelong difficulties in socialization, communication, and behavior. It has been linked with frequent emergency room visits and hospital readmissions, which have increased over the past decade, underscoring the strain on resource utilization and the lack of optimization of therapies in this population. In severe forms of Adult ASD,

there are often concurrent psychiatric diagnoses. Although available interventions are being investigated for their efficacy and safety, Buspirone (Buspar) may be one such underestimated pharmacotherapy. It is an anxiolytic drug derived from azapirone, which affects the neuro-transmitter, serotonin (5-HT), via partial agonism on serotonin 5HT-1a receptors. Serotonin is unbalanced in anxiety, a symptom contributing to precarious behaviors in this group. Buspirone's established mechanism in anxiety may be a potential target for adulthood ASD pharmacological interventions. In this poster, we review literature examining treatment modalities, including the utilization of Buspirone, to manage challenging behaviors in adults with ASD. Further investigations evaluating the safety and efficacy of Buspirone over longer periods will be efficacious in the management of repetitive behaviors, maladaptive behaviors, and aggression in adults with autism.
Acknowledgements: Dr. Asghar Hossain, Dr. Arturo Archila, Sukaina Rizvi

No. 48

Buspirone Use for Managing Challenging Behaviors in an Adult With Autism Spectrum Disorder

Poster Presenter: Anita Kulangara, M.D., M.S.
Co-Author: Asghar Hossain, M.D.

SUMMARY:

Mr. P., a 20-year-old Caucasian male with a history of Autistic Spectrum Disorder, Global Developmental Delay and Bipolar 1 Disorder diagnoses, presented with manic symptoms including hyper-talkativeness, distractibility, decreased need for sleep, psychomotor agitation, engaging in dangerous behavior (i.e. burning his fingers with hot coals from the outdoor grill at home), and aggressive and assaultive behavior toward peers at his day program, relatives, and medical staff. He has a history of medication trials on Lithium Extended Release, Depakote, Klonopin, Paxil, Valium, Zyprexa, Vistaril, and Thorazine. In the acute psychiatric unit, he was stabilized on Depakote Delayed Release (DR) and Lithium; he was transferred to an intermediate care unit to arrange aftercare planning before going home. On the intermediate unit, the patient remained anxious with psychomotor agitation, and was pacing the hallways at night. He was reinitiated on his home medication of Klonopin 0.5mg twice daily and needed less frequent redirection. He was subsequently switched to Ativan 2mg every six hours as needed, after which he became increasingly disorganized and anxious, intrusive with other patients, stripping his clothes off at times, defecating on the unit floor, and needed more frequent redirection. At this time, he required constant observation and a higher level of care. He was transferred to an acute psychiatric unit with the Ativan discontinued, and was placed on Depakote 500mg every morning and 1000mg at bedtime, Trazodone 100mg at bedtime, and Seroquel 50mg in the morning and 150mg at bedtime. On the acute unit, the patient was found to still have unpredictable behavior and erratic sleeping patterns. His medication was adjusted to Seroquel 100mg in the morning and 200mg at night, Depakote 500mg in the morning and 1000mg at night, Klonopin 1mg twice daily, Trazodone 50mg at bedtime, and Buspar 20mg twice daily. After initiating Buspar, his level of functioning improved over the next week. Over the following weeks while his aftercare was arranged, the patient remained behaviorally controlled on the unit, was less anxious, required less frequent redirection, was no longer intrusive with other patients, was participating in recreational therapy, and was able to better adapt to changing environments on the unit. Buspar's established mechanism in anxiety may be a potential target for adulthood ASD pharmacological interventions. In this poster, we report successful treatment with minimal side effects of long-term Buspar in a case of treatment-refractory ASD in an adult with behavioral issues and bipolar comorbidity. Further investigations evaluating the safety and efficacy of Buspar over longer periods will be efficacious in the management of challenging behaviors in adults with autism. Acknowledgements: Dr. Asghar Hossain, Dr. Arturo Archila, Sukaina Rizvi

No. 49

Clozapine Use for Managing Aggressive Behavior in a Child With Autism Spectrum Disorder

Poster Presenter: Anita Kulangara, M.D., M.S.
Co-Author: Edward George Hall, M.D.

SUMMARY:

A 12-year-old Caucasian male has a history of Autistic Spectrum Disorder (ASD) and poor impulse control. His past medication trials included olanzapine, quetiapine, and ziprasidone, valproate, levetiracetam, and alpha-adrenergic blockers. He presented with foster parents for agitation. For one week, he exhibited irritability, aggression, mood lability, physical/verbal altercations, and poor redirection. He endorsed auditory hallucinations consisting of multiple voices (i.e. command and non-command type). He also experienced paranoid thoughts of someone following him or plotting against him, resulting in runaway behavior. He was ruminating, was poorly orientation to person, had grossly impaired impulse control, and demonstrated loose associations and flight of ideas. He was initiated on multiple antipsychotics, stimulants, anxiolytics, and mood stabilizers, which resulted in minimal improvements and required adjustments. He was diagnosed at this time with schizoaffective disorder, mixed type. Along with his adjusted medication regimen, he was later placed on Clozapine 350mg twice daily. His symptoms markedly improved, and post-hospitalization arrangements were made. He continued to follow-up with the inpatient attending psychiatrist in his private practice for the next 6 years, who last saw him at age 18, stabilized on Clozapine 350mg twice daily, with good compliance and response to medications, with no reported issues at home/school, and without significant adverse effects (i.e. agranulocytosis, extrapyramidal side effects, neutropenic episodes, infections, weight gain, syncope, seizures). Future studies examining the safety and efficacy of Clozapine over longer periods will benefit youth with treatment-refractory ASD experiencing aggression. Acknowledgements: Dr. Edward G. Hall, Dr. Asghar Hossain, Dr. Ulfat Shahzadi, Dr. Ayesha Shaheryar

No. 50

Substance Abuse in Autism Spectrum Disorder—Role of Health Care Providers: A Case Report

Poster Presenter: Santosh Ghimire, M.B.B.S.
Co-Authors: Harjasleen Bhullar Yadav, M.B.B.S., Shawn Singh Sandhu, M.D., Vamsi Chiguripati

SUMMARY:

Substance use in general is thought to be less common in autism spectrum population. The general thought is preference for low risk and avoidance of social situations means less drug use. However, there is conflicting report of the risk of substance abuse in this population. Screening for this co-occurrence is not generally done leading to worsening of their symptoms and/or an increase in drug abuse. Understanding the specific needs of people who have autistic tendencies and how they experience substance abuse can help in developing programs and options for treatment that are more likely to result in positive outcomes for this sensitive segment of the population. Case: Ms. G is a 19 years old white female with past psychiatric history of Autism spectrum disorder (initially diagnosed as having Asperger's Syndrome) who was admitted to in-pt psychiatric unit for agitation, aggressiveness and threatening to hurt family members and self after non-compliance with medications. Her urine toxicology was positive for cannabis and her past psychiatric history revealed she was being prescribed memantine, mirtazapine and medical marijuana by her pediatric neurodevelopmental specialist. She was taken off marijuana while in-pt and she got better on mirtazapine and buspirone. Ms. G had subsequent ED visits for aggression and she was found to be on buspirone, mirtazapine, lorazepam by out-pt psychiatrist. On both occasions, Ms. G was treated with medications that can be abused to 'calm' her down. As autism spectrum includes a wide range of symptoms, this group is difficult to study. Patients are frequently prescribed controlled substances with addictive potential to help them calm down. There is a greater need for looking into substance abuse in this population and risk of developing substance dependence due to drugs prescribed by physicians. It will serve to find out the real data of substance abuse in this population and if for a fact, there is decreased risk, the mechanism behind decreased use can be utilized in general population or in the population with high risk for substance abuse.

No. 51
WITHDRAWN

No. 52
WITHDRAWN

No. 53

New Advances in the Management of Treatment-Resistant Depression

Poster Presenter: Asghar Hossain, M.D.

SUMMARY:

Major Depressive Disorder is in the top tier of diseases that cause major disability and morbidity in one's life. Treatment-resistance is relatively common in cases of MDD. Rates of total remission following antidepressant treatment are only 50.4%. Treatment-resistant depression is a term given when the patient does not respond to the two adequate trials (one adequate trial-6-8 weeks) with the standard first line medication. The current standard and new treatments focus on monoaminergic pathways, glutamate pathways, cortical-sub-cortical connections. There is an urgent need for new faster acting anti-depressant, as severe depression is life-threatening, due to associated high risk of suicide in the patients. There have been various studies that have shown the benefits of using ketamine, ECT, rTMS, dTMS, vagus nerve stimulation in these patients. Few trials have also shown mild benefit from the use of Magnesium and Scopolamine. There are also ongoing clinical trials showing the use of different NMDA antagonists such as Rapastinel in the treatment of treatment resistant depression. In this literature review, we studied different mechanisms by which the treatments work. Also, we studied the benefits, potential side effects, and limitations of the use different treatments in the clinical setting.

No. 54

Postpartum Depression: Awareness Can Do Wonders

Poster Presenter: Asghar Hossain, M.D.

SUMMARY:

Primary Objective: Consequences of the Postpartum Depression in both mother and infant. Benefits of screening and early detection. Abstract: Childbirth is a difficult and exhausting process. A female goes through a lot of hormonal, physical, emotional, and psychological changes throughout pregnancy. Tremendous changes occur in the mother's familial and interpersonal world. A woman experiencing baby blues tend to recover quickly, PPD tends to be longer and severely affects women's ability to return to normal function. PPD affects the mother and her relationship with the infant. Maternal brain response and behavior are compromised in PPD. As many as half of PPD in new mothers go undiagnosed because of conflict in privacy and not wanting to disclose to close family members. There is also a stigma around new mothers in that disclosure may lead to abandonment and fear of lack of support. PPD is defined as a major depressive episode with the onset of pregnancy or within 4 weeks of delivery. Postpartum depression affects the mother, father, and infant. In mother it can lead to chronic depressive disorder if not treated on time. Even if treated, PPD can be a risk for future episodes of major depression. This can be a precipitating factor for depression in father as this will be the stressful event for the entire family. Children of mothers who have untreated depression can develop behavioral and emotional problems. More commonly seen are delays in language development. They can also suffer from will sleeping problems, eating difficulties, excessive crying, and attention-deficit/hyperactivity disorder (ADHD).Before delivery, many females who are at risk of developing PPD can be identified. These females, along with their families, should be provided with information and education regarding PPD prenatally. The information should be reinforced during postpartum hospitalization and after discharge. Childbirth education classes teach new mothers to seek help and support that they might need for the childbirth. By teaching women and their spouses about the signs and symptoms of PPD, educators can increase the chance that the woman suffering will receive proper management and treatment. Screening for depressive symptoms can be done during pregnancy. This screening can identify women who are at increased risk for developing PPD. Exclusive breastfeeding has a positive effect on reducing depressive symptoms from childbirth to 3 months.Postpartum depression can be prevented when parents are given positive parenting lessons and when the maternal-infant bond is promoted and increased. This can be achieved through social support from family and healthcare providers. Along with this, good maternal sleep can also help in preventing PPD.

No. 55

Severe Dental Loss With Use of Vivitrol for Treatment of Severe Opioid Use Disorder: A Case Report

Poster Presenter: Asghar Hossain, M.D.
Co-Authors: Maria Elena Saiz, M.D., Khadija Siddiqui

SUMMARY:
This is a case report of a patient who is a 32-year-old Caucasian male with a history of Opioid Use Disorder. He was started on monthly Vivitrol injections (380 mg intramuscular suspension, extended release) for assistance in prevention of opioid use. Shortly after initiating Vivitrol treatment, patient presented with toothache and dental pain. Patient has lost a total of 9 teeth. An extensive PubMed search was done using the keywords Vivitrol, naltrexone, dental abscess, dental loss, mechanism of action and side effects.

No. 56

A Critical Review on the Use of Glabellar Botulinum Toxin Injections in Major Depressive Disorder

Poster Presenter: Toren Stearns

SUMMARY: Objective: Glabellar injection of botulinum toxin A (BTA) provides a novel and interesting strategy to address shortcomings in the treatment of major depressive disorder (MDD). The aim of this study is to provide a critical appraisal of the primary clinical trials exploring the use of BTA in the treatment of MDD. Further, this review is an attempt to provide answers to some clinically-relevant questions along with future directions for research on this topic. Data Sources: A search in Pubmed, Scopus, and Google Scholar databases using specified search terms was performed in September 2017. Search terms included ("botulinum" OR "botox" OR "abobotulinumtoxin" OR "onabotulinum" OR "onabotulinumtoxin" OR "botulinumtoxin") AND ("antidepressant" OR "depression" OR "depressive" OR "depressed"). Study Selection: Studies were selected for review if they were found to be a primary clinical trial on the use of BTA for the treatment of MDD. Data Extraction: Six studies were identified and scored using a 5-point Jadad scoring system by the authors. Results: Three of the six studies were found to be of high quality with a Jadad score =3, with the remainder scoring poorly at a 1. Conclusions: In general, the results from the reviewed studies suggest that BTA may be a promising treatment for MDD. However, these findings need to be interpreted with caution due to several limitations with the reviewed studies such as lack of a priori hypotheses, limited sample sizes, large gender bias, and significant difficulty in ensuring blinding.

No. 57

A Case of Rapid Transition From Methadone to Buprenorphine for Opioid Use Disorder After Cardiac Arrest

Poster Presenter: Colleen McGavin Leitner, M.D.
Co-Author: Nassima Ait-Daoud, M.D.

SUMMARY:
Introduction: The increase in the rate of opioid misuse and overdose over the past few decades has resulted in a nationwide healthcare crisis. Medication-assisted therapies (MATs), including methadone (Schedule II), buprenorphine (Schedule III), and naltrexone, have shown to be cost-effective in helping patients recover from opioid addiction and reduce the risk of overdose. Methadone, a long acting opioid agonist, carries the risk of overdose and QT prolongation. Due to the pharmacological properties of buprenorphine and ceiling agonist effect demonstrated at high doses, buprenorphine is traditionally considered a safer alternative. When switching between therapies, common practice guidelines recommend a slow taper of methadone over weeks to months prior to starting buprenorphine. Here we discuss the case of a 27-year-old woman who required rapid transition from high dose methadone to buprenorphine after a cardiac arrest and was subsequently successfully maintained on buprenorphine. Case: The patient was a 27-year-old woman with a history of opioid use disorder who had been maintained on high doses of methadone (129 mg) at an outside clinic. She presented with QT prolongtation (qtc = 550-580 ms) which led to subsequent ventricular tachycardia, torsades de pointes, ventricular fibrillation, and cardiac arrest. She was defibrillated with return of circulation and admitted to the cardiac care unit. Her methadone was thought to be responsible for QT prolongation given absence of known cardiac risk factors, so it was abruptly discontinued.

Buprenorphine could not be immediately initiated given the high risk for induced withdrawal. A short acting opioid (oxycodone) was initiated to prevent withdrawal symptoms as methadone metabolized. The patient's tenuous cardiovascular status prohibited the use of alpha-2 agonists to treat withdrawal symptoms. Clinical course was complicated by a need for multiple procedures that delayed buprenorphine initiation, including premature ventricular contraction ablation and implantable cardioverter defibrillator (ICD) placement complicated by pneumothorax requiring chest tube placement. On day 7, oxycodone was withheld and buprenorphine induction was completed on day 8 with significant improvement in her Clinical Opiate Withdrawal Scale (COWS) score. Patient was discharged home the following day on 16 mg buprenorphine/naloxone. She was seen in follow up on a weekly basis for several months and continued to tolerate this dosing without significant opioid cravings or relapse. Conclusions: Both buprenorphine and methadone have strong evidence supporting their efficacy for the treatment of OUD. This case illustrates a safe method for switching patients quickly from methadone to buprenorphine when medically necessary. Further research is needed to establish the tolerability of rapid transition from agonist to partial agonist in a larger patient population.

No. 58

Impact of Depressive and Anxiety Symptomatology in Adults With Congenital Heart Disease: A 15-Year Retrospective Data Review Study

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

SUMMARY:

Introduction: Patients with congenital heart disease (CHD) are surviving into adulthood at rates as high as 90%. As children with CHD develop, the incidence of depression and anxiety continues to rise, and rates as high as 50% have been reported in adults with CHD. Depression and anxiety symptoms have been shown to impact overall quality of life and healthcare utilization in adults with CHD. Objective: The study was conducted to review de-identified data of adult patients with CHD to determine the prevalence of depression and anxiety symptomatology. 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 duration of hospitalization and healthcare costs. Methods: A literature review on depression and anxiety in congenital heart disease was conducted, and de-identified data was collected from the University of Virginia's Clinical Data Repository (CDR). Parameters included patients ages 18 and older with a diagnosis of CHD from the years 2003-2017 seen on an inpatient and outpatient basis. Subsets of patients with depression or anxiety were compared to the general adult CHD populations in terms of their impact on several available factors, including frequency of inpatient and outpatient visits, hospital length of stay, and hospital costs. Results: 24,077 patient encounters from 9176 adult patients with congenital heart disease were analyzed. Rates of depression and anxiety were lower than previous studies, at 12 percent. Adults with CHD and depression or anxiety had higher hospital costs ($p<0.001$) and a mean difference of 7.7 days in hospital length of stay ($p<0.001$). Conclusions: Depression and anxiety in patients with CHD was under-diagnosed in our adult patient population. These symptoms were associated with increased healthcare utilization in CHD. Further research is needed to address screening for these symptoms as well as their relationship with healthcare outcomes.

No. 59

L-Methylfolate and Treatment-Resistant Depression: A Case Report

Poster Presenter: Jordan Craig Calabrese, D.O.
Co-Author: Samuel Adam Neuhut, M.D.

SUMMARY:

Mr. K is a 39 year old male with a past psychiatric history of Major Depressive Disorder, who presents to the behavioral health clinic for feelings of lethargy, decreased sleep, and worsening depression. The patient also experiences chronic pain which contributes to his depressed state. The patient had last seen a psychiatrist in Los Angeles four years ago, where he was prescribed Wellbutrin XR and Cymbalta, which he still takes with minimal benefits. He has also tried Lexapro with little benefit.

Over the course of treatment, the patient was switched to Effexor XR and tapered up to 225 mg PO daily and Mirtazapine 15 mg for mood/sleep. He had also tried Trintellix and Abilify but discontinued both due to side-effects and lack of a response. Following using a genetic test which showed an impairment in his folic acid processing, we started the patient on L-Methylfolate 15 mg PO daily. His mood improved and his signs and symptoms of depression resolved. In the poster, we will discuss the use of L-Methylfolate for treatment-resistant depression.

No. 60

Ethnic, Gender, and Age Differences of Pre-Diabetes Condition in Adult With Depression: The National Health and Nutrition Examination Survey 2009–2010

Poster Presenter: Afifa Adiba, M.D.
Co-Author: Azad Bhuiyan

SUMMARY:

Background: According to CDC, the prevalence of depression among US adult is 8.1%. Depression co-morbid with other chronic diseases such as cardiovascular disease and diabetes. Some study has shown that depression is prevalent in people with type 2 diabetes. Other research shows that depressed people are prone to develop diabetes which increased mortalities. However, limited information is available on the prevalence of prediabetes among depressed individuals in the US general population. Purpose: The purpose of this study was to examine 1) the prevalence of depression and prediabetes among depressed individuals in the US adult general population 2) The prevalence of prediabetes by ethnicity/race, gender and age category among depressed individuals, which will guide the physician to the optimum way of treating this population. Methods: We analyzed data of 4,513 participants from the NHANES, 2009-2010, which is a multistage cluster sample design and represents non-institutionalized US population. Depression was assessed using Patient Health Questionnaire (PHQ-9). A total PHQ-9 =10 was considered as having a major depression symptom. Hemoglobin A1c was measured from fasting blood samples and levels of 5.7%-6.4% considered having prediabetes. Data were analyzed using SAS 9.4 version, proc survey procedure, the weighted sample was used, and the weighted percentage was reported. Results: In univariate analysis, results showed that 69.4% participants were whites, 13.7% Hispanic, 10.6 % African Americans and 6.3% were other races. Fifty percent of participants were females, and 73% were in the age limit of 18 to 54 years. The prevalence of depression and prediabetes was 7.7% with 95% Confidence Interval (CI): 6.4%-8.9% and 26.1 % (95% CI: 24.4%-27.9%) respectively in the general population. In the bivariate analysis, the prevalence of prediabetes among depression was 9.2% with 95% CI 7.3%-11.7%. After stratification by race gender and age category, data showed that among depressed subjects, the prevalence of prediabetes was 10.8% (95% CI: 7.1%-14.4%) for Hispanics, 8.6% (95% CI: 6.2%-10.8%) for whites, 10.7% (95% CI: 7.1%-14.2%) for African Americans and 8.9% (95% CI 3.1%-23.2%) for other races. The prevalence of prediabetes was 12.1% (95% CI: 8.5%-16.7%) among the female gender and 6.3 % (95% CI: 4.0%-9.6%) among male gender. The prevalence of prediabetes among younger age (18-54 years) was 11.0% (95% CI: 8.7%-13.3%) and 7.4% (95% CI: 4.7%-11.4%) for older age group (55 and above). Conclusion: The national data revealed that disparities in prediabetes exist among depression individuals. The clinicians should be concerned regarding the disparities in prediabetes condition while treating depression to ensure a better outcome. Additional studies of concurrent depression and pre-diabetic condition are imperative to perceive the potential influence perceive the potential influence of prediabetes in the management of depression.

No. 61

Relationship Between Depression and Disability in Adults With Arthritis: Analysis of 2015 BRFSS Data

Poster Presenter: Michael Delgado
Co-Authors: Cathy K. Ng, Randi Seidel, Grettel Castro, Noel Barengo

SUMMARY:

Background: Arthritis and other rheumatic conditions are some of the most common causes of musculoskeletal pain and disability. Comorbid conditions have been noted to be a predictor of poor prognosis among patients with rheumatic diseases. However, there is little research examining the effect

of comorbid physical and mental conditions on functional disability. Objectives: The objectives for the study were to determine whether there is an association between depressive symptoms and perceived arthritis-attributable limitations in social, occupational, and general functioning. Methods: This is a cross-sectional study using data from the 2015 Behavioral Risk Factor Surveillance System (BRFSS). The exposure of current major depression was assessed through our own composite measure based on the Patient Health Questionnaire-8 (PHQ-8) depression measure. Arthritis-attributable disability in social, occupational, and general functioning were assessed as outcome variables. Other covariates that were included in the study were age, sex, race/ethnicity, health care access, marital status, employment status, smoking status, physical activity participation, joint pain, and comorbid chronic conditions (besides arthritis and depression). Data was analyzed using Stata 15.0 software package, a software package designed to derive the correct standard errors for complex surveys like the BRFSS. Unadjusted and adjusted logistic regression models to test for associations. Odds ratios (OR) and 95% confidence intervals (CI) were calculated. Results: Of the 29,886 adults from our five states of interest who responded to the 2015 BRFSS, 11,711 (39.2%) reported having been diagnosed with arthritis or another rheumatic condition. Approximately 11.7% of arthritis patients in our sample met criteria for current major depression, based on the PHQ-8 measure, while 28.6% of our sample reported having a past history of depression. Arthritis patients with current major depression had significantly higher odds of reporting arthritis-attributable occupational disability, even after adjusting for employment status and lifetime history of depressive disorders (AOR 1.48, 95% CI 1.03–2.13). However, there were no significant associations between current depression and self-reported limitations in either social activities or general activities. Conclusions: Current major depression is associated with increased arthritis-attributable occupational disability. Depression is likely to worsen the disease profile among arthritis patients, and thus should be adequately managed and treated.

No. 62

The Role of Ketamine in Treatment-Resistant Depression

Poster Presenter: Ruma Mian

SUMMARY:

Approximately one-third of the patients suffering from Major Depressive Disorder (MDD) meet the criteria for treatment resistant depression (TRD) (1). TRD is associated with psychosocial impairment and poor social/occupational outcome. TRD is defined as a failure to respond to at least two different types of antidepressants for a period longer than four weeks at the maximum recommended dose. According to the monoamine hypothesis, depression is mainly a result of the deficit in the synaptic availability of monoamines. Most antidepressant drugs are believed to modulate these monoamine neurotransmitters such as norepinephrine, dopamine or serotonin (1). Given that glutamate, a non-competitive antagonist of the NMDA receptor plays a role in modulating mood, recent studies have shown it's efficacy in treating depression and TRD. Glutamate, in an excitatory amino acid, released from nerve cells in the central nervous system which plays an important role in many physiological processes and has been directly or indirectly implicated in mood and anxiety disorders, schizophrenia, substance abuse such as alcohol, hallucinogens and neurodegenerative disorders (1). Glutamate binds to it's receptors, and is removed by reuptake transporters. Most clinically relevant studies have focused on drugs that modulate glutamate function through NMDA receptors by the use of an anesthetic drug called ketamine(1). Ketamine, is a high-affinity NMDA receptor antagonist that binds to opioid and sigma receptors and has been reported to modulate dopamine transmission. The rapid and sustained antidepressant properties of ketamine have been documented by several case reports/series, prospective open label, double-blind placebo or active-controlled studies (1). In a randomized, double-blind crossover study of 73 patients with MDD were divided in two groups that were assigned either intranasal ketamine hydrochloride (50mg) or saline solution. The primary outcome measure was change in depression severity within 24 hours after ketamine infusion with a significant difference compare to placebo. A total of 14 RCTs in a meta-

analysis study showed that ketamine reduced depression significantly more than placebo beginning at 40 min, peaking at the 24th hour and loosing effects by days 10–12. Non-ketamine NMDAR antagonists were more effective than placebo only on days 5–8 (3). The study concluded that compared with placebo, ketamine led to a significantly greater response (40 min to day 7) and remission (80 min to days 3–5). Whereas, non-ketamine antagonists produced a higher response only at day two (3). Several studies concluded that Ketamine demonstrated a significant rapid antidepressant effect. However, further information regarding NMDA receptor modulation, response durability and safety is required before implementation on this novel intervention into clinical practice.

No. 63

Comparative Study of Noninferiority Between Esketamine and Ketamine in Treatment-Resistant Depression

Poster Presenter: Lucas Quarantini
Lead Author: Fernanda Correia-Melo
Co-Authors: Gustavo Leal, Guilherme Magnavita, Acioly Lacerda, Ana Paula De Jesus Nunes, Rodrigo Mello, Flávia Vieira

SUMMARY:
Background: In the last 2 decades there has been increasingly interest in the antidepressant action of ketamine and also its S(+)-enantiomer, esketamine. Both drugs have consistently shown a rapid-onset antidepressant effect, but the great majority of studies are focused in the racemic form, despite findings that esketamine might have a better tolerability profile. We conducted the first clinical trial to compare directly ketamine and esketamine in terms of efficacy and safety for treatment resistant depression. Methods and Design: The present study was a controlled, double-blind, noninferiority clinical trial. A total of 63 individuals diagnosed with treatment resistant major depressive disorder were randomly assigned to a single intravenous infusion lasting 40 minutes of either the two drugs: esketamine 0.25mg/kg (intervention) or ketamine 0.5mg/kg (control).Primary outcome was remission rates at 24h and 72h after intervention compared to baseline scores, using the Montgomery-A°sberg Depression Rating Scale (MADRS), with a noninferiority margin of 20%. Other efficacy endpoints included remission 7 days after intervention, therapeutic response rates, Global Clinical Impression (CGI) and raw MADRS scores at the three different time points. Dissociation, the main safety outcome, was measured with the Clinician-Administered Dissociative States Scale (CADSS). There was no serious side effect. The most common treatment-emergent adverse events were increased blood pressure and heart rate, nausea and dissociation. The study is registered at https://upload.umin.ac.jp (UMIN000032355). Results:Comparing from baseline to 24h and 72h the rates of remission in the esketamine group were, respectively, 29.4% and 35.5%, while in the ketamine group they were 24.1% and 39.3%, respectively. That represents a difference of 5.27% (95% CILB, -13.6) favoring esketamine at 24h and of 3.8% (95% CILB, -24.6) favoring ketamine at 72h. At 7 days, remission rate favored ketamine by 13.2% (95% CILB, -33.2). The rates of therapeutic response in the intervention group were 50% (24h), 48,2% (72h) and 43,7% (7 days) and 51,7% (24h), 57,1% (72h) and 62,1% (7 days) in the control group. The values of median (interquartile range) to CGI total scores decreased in both groups compared from baseline to all timepoints. CADSS mean scores were 14.9 for esketamine and 18.2 for ketamine, a difference of 3.1 points (95% CI, -11.4 – 5.1).Conclusions:Esketamine is noninferior to ketamine only at 24h, but not at 72h after administration. In the other endpoints, esketamine demonstrated lower efficacy than ketamine, including therapeutic response in all timepoints and the greatest difference is seen after 7 days. As regarding to dissociative symptoms, both drugs were equivalent. This project was supported by the Programa de Pesquisa para o SUS (PPSUS)-003/2017.

No. 64

Association Between Protein Intake and Depression: The Korea National Health and Nutrition Examination Survey (K-NHANES) 2014 and 2016

Poster Presenter: Lee Seon Gyu
Co-Authors: Oh Jihoon, Tae-Suk Kim

SUMMARY:

Background/Objectives: The association between dietary pattern and depression has been investigated for decades. Although it has been suggested that certain dietary patterns are related to the prevalence of depression, how the constitutions of diets (e.g. carbohydrate, protein and fat) are associated with depression in general population remains unknown. Thus, this study aimed to investigate how the odds for depression vary according to the proportion of dietary constitutions. Subjects/Methods: Data were collected from the sixth and eight Korea National Health and Nutrition Examination Survey of 2014 (K-NHANES VI; n = 7,550), and 2016 (K-NHANES VIII; n= 8,150). A total of 9,315 adults who were evaluated for depression included in the further analysis. With covariates of chronic illnesses (history of hypertension, diabetes, cerebral stroke and myocardial infarction), income status, body-mass index (BMI), age and gender, we performed the complex samples logisitic regression analysis between depression [measured by Patient Health Questionnaire 9 (PHQ-9)] and the proportion of dietary constitutions (calories of each constitution / total calories intake). Results: In all adults, as the percentage of calories consumed by the protein in the total calories increased by 10%, the odds of depression decreased by 0.73-fold (OR, 0.725; 95% CI, 0.531-0.990). However, the increase of the percentage of calories consumed by carbohydrates and fats did not show significant associations (Carbohydrates, OR, 1.015; 95% CI, 0.938-1.098; Fats, OR, 0.908; 95% CI, 0.803-1.026). Further analysis showed that these correlations were more pronounced in women (OR, 0.703; 95% CI, 0.523-0.944), but no significant correlation was observed in men (OR, 0.760; 95% CI, 0.389-1.486). Conclusion: We observed that as the protein intake increased, the prevalence of depression significantly decreased in Korean adults women. These findings suggest that mild increases of protein intake may be a protective factor for depression in Korean population.
Keywords: age; body mass index; depression; dietary; protein intake; K-NHANES

No. 65

What Factors Determine How Much Treatment Patients Get When They Are Referred to a Specialist Mood Program in a Tertiary Setting?

Poster Presenter: Kira Genise
Co-Authors: Sarah MacLean, Valerie Testa, Simon Hatcher

SUMMARY:

Background: There is little evidence describing what factors account for how much and what type of treatment depressed patients receive when they obtain specialized outpatient care. It has been suggested that symptom severity is not the most important predictor of service use. Objective: The primary objective of this study was to assess whether depression severity was associated with the amount and type of treatment people received in a mood and anxiety program at a specialized psychiatric centre. We also sought to describe the extent to which follow-up care received by participants varied according to their initial consulting psychiatrist. Methods: Depression severity and suicidal ideation was captured using the Patient Health Questionnaire (PHQ-9). Primary outcome measure was the number psychiatry visits following initial consultation. Secondary outcomes included the number of psychotherapy sessions received and the total number of follow-up visits with any of the following specialties: psychiatry, psychotherapy, occupational therapy, nursing and social work. Results: Ninety-five participants were originally recruited from the Mood and Anxiety waiting list into a randomized controlled trial assessing an e-therapy tool. Of the 72 participants that were seen in clinic, 51.4% received follow-up with a psychiatrist following initial consultation, 9.7 % received psychotherapy, and 54.2% received follow-up of any kind. In unadjusted bivariate analysis, PHQ-9 scores were not correlated with increased psychiatry (r= 0.34, p > 0.05), psychotherapy (r= 0.04, p > 0.05) or total (r=0.08, p > 0.05) follow-up visits. Suicidality was not associated with psychiatry (Mann Whitney U statistic = 715.5 Z= 0.809, p > 0.05), psychotherapy (Mann Whitney U statistic 737.0 Z=1.950, p > 0.05) or total (Mann Whitney U statistic U= 1027.00 Z=0.132, p >0.05) follow-up visits. In a linear regression model controlling for age, sex, depression severity and suicidality, initial consultation with a particular psychiatrist was associated with total follow-up

received (F (6,65) = 2.46, p > 0.05, R2 =.185). Conclusions: The majority of participants received one initial consulting appointment. Depression severity does not appear to be associated with quantity of follow-up care received. Consulting psychiatrist appears to influence the amount and type of treatment received. Additional studies are necessary to further characterize this relationship.

No. 66

The Role of Cognitive Behavior Therapy Along With Antidepressants for the Effective Treatment of Major Depression

Poster Presenter: Binu Chakkamparambil, M.D.
Co-Author: Chaitanya Ravi, M.D.

SUMMARY: Objective: The objective of this article is to identify how cognitive behavior therapy and antidepressant medication can be used effectively to treat depression to remission and to reduce risk of recurrence Method: A search of literature was carried out in PubMed/Medline (going back to 1964), Scopus (going back to 1960) and Cochrane (going back to 1996). The inclusion criteria for the articles selected for this review were (i) randomized controlled trials (RTC), where efficacy for treating major depression with antidepressant medication (ADM) is being compared with CBT; (ii) randomized controlled trials (RTC), where the comparative efficacy of ADM and CBT alone and in combination for treating major depression has been studied (iii) Meta analyses and reviews of studies that have examined the comparative efficacy of CBT and ADM alone and in combination for treating major depression; (iv) studies with adult subjects Results: Empirical studies have indicated that cognitive behavior therapy can be the preferred choice of treatment in cases of mild to moderate major depression. Moderating factors like personality disorders and experience of therapists have been found to impact outcome. In cases of more severe depression evidence suggests that combined treatment with cognitive behavior therapy and antidepressant medication is likely to be more effective than placebo, pharmacotherapy alone, CBT alone and the combination of CBT and placebo. Cognitive behavior therapy has an impact on long term outcome and it is important to incorporate it into treatment so that remission is maintained and there is reduction or elimination of relapse. Conclusions: CBT can be the first line of treatment in cases of mild to moderate depression. The combined use of CBT and ADM is more likely to bring about better outcome in cases of more severe and complex cases of depression in terms of remission and reduction/elimination of relapse.

No. 67

Mechanisms Underlying Treatment-Resistant Depression: A Literature Review

Poster Presenter: Aitzaz Munir, M.B.B.S.
Co-Authors: Christopher C. Montes, M.D., Muhammad Aadil, M.D.

SUMMARY:

CONTEXT: Major Depressive Disorder(MDD) causes significant disability, comorbidity, and financial burden if left untreated. There is a limited understanding regarding underlying mechanisms causing Treatment-Resistant Depression(TRD). Understanding the underlying mechanisms leading to the development of TRD will help to decide the best treatment approach as well as it will lay a platform for the development of new treatments. The objective of this study is to review the available literature and have a better understanding of the mechanisms underlying TRD. METHODS: We probed PubMed, Cochrane, Google Scholar, Medline, Embase, and Scopus for biomarker and pathophysiology studies published between 1997 to 2017, with the search words, “Treatment-resistant depression”, “Treatment-resistant depression pathophysiology”,“ Treatment-resistant depression mechanism,” and “treatment refractory depression”. Inclusion Criteria: We selected articles written in the English language that examined molecular, neurobiological and neurobehavioral markers of TRD in human subjects, if they included patients with antidepressant-responsive MDD and healthy subjects, as disease and normal controls. Exclusion Criteria: We excluded case reports, case series, and animal studies. RESULTS: Review of selected research studies on TRD revealed a disrupted functional connectivity(FC), decreased neural activity and neurodegeneration among TRD patients compared to TSD and HC. CONCLUSION: Pathophysiology underlying TRD is much complex

than MDD. It includes decreased functional connectivity between several pathways connecting major brain sites. These sites include but not limited to the Prefrontal cortex, hippocampus, putamen, amygdala and corpus callosum. It also includes decreased activity and neural degeneration in default mode networks(DMNs).

No. 68

Psychedelics for Treatment-Resistant Depression

Poster Presenter: Muhammad Aadil, M.D.
Co-Authors: Aitzaz Munir, M.B.B.S., Faisal Kagadkar, M.D., Saad Wasiq

SUMMARY:
Background: Psychiatric research in the 1950s and 1960s has shown promising results in the treatment of depression and anxiety. Physiologically safe drugs of choice include semi-synthesized LSD and naturally occurring psilocybin which has been studied more extensively. Psychedelics are a 5-HT2A agonist and a potential mechanism of action for treatment of resistant depression is through “brain resetting”. Around 35-55% of the patients who suffer from depression, fail to respond to any psychopharmacologic therapy. We aim to study the uses, efficacy, safety and adverse effects of the psychedelics for treatment-resistant depression. Method: Clinical trials (including randomized controlled trials (RCTs), quasi-randomized controlled trials, quasi-controlled trials, open-labeled trials, observational studies, and cohort pre- and post-treatment studies) and Case reports were searched from Medline, Cochrane Clinical Trials, Cochrane Database of Systemic Reviews and Embase. We used the terms (“psychedelics” OR “LSD” OR “psilocybin”) AND (“Depression” OR “Treatment-resistant depression”). No timeframe filter was applied so that old literature can be included. We identified 10 clinical trials and case reports for our literature review. Results Interestingly, most clinical trials and case reports have shown psychedelics to be efficacious in the treatment of drug-resistant depression. While most of these trials were conducted in the early 80s-90s, multiple research trials have been conducted in the last few years in an effort to evaluate the effectiveness of this mode of pharmacotherapy. The inhibitory effect on amygdala remains the biological basis of positive affective state with studies showing clinical improvement in Hamilton depression scale of 10 points in just one week in patients with treatment-resistant depression. Quick Inventory of Depressive Symptomatology also showed a significant reduction from baseline in 1 week to 3 weeks post-treatment. Though majority studies reported the participants to be 100% safe, some studies did report patients having an unpleasant experience, confusion, transient headache, and nausea. Major restrictions included limited participants, shorter duration of trials, comorbid conditions like personality disorders, and inability to maintain double blindness. Conclusion Given the reasonable safety profile of serotonergic hallucinogens in a controlled clinical environment, psychedelics could be a promising treatment option– especially for patients where other approaches have been ineffective. We propose additional double-blind placebo-controlled trials are needed to evaluate whether the presented results can be transferred into clinical practice.

No. 69

Don’t Stop Believing: Improving Quality of Life in a Case of Highly Treatment-Resistant Depression

Poster Presenter: Danielle B. Gomez, M.D.

SUMMARY:
This is the case of a 62-year-old male with a history of treatment-resistant major depressive disorder who presented to the outpatient, training clinic for ongoing psychiatric care with a history of 30 years of depressive and anxious symptoms. His psychomotor retardation, delayed speech, memory difficulty and hypersomnia were notable in addition to more typical depressive symptoms. He had been in psychiatric treatment since the onset of his symptoms and medication trials including SSRI's, SNRI's, Bupropion, TCAs, several mood stabilizers, an MAOI, benzodiazepines, typical and atypical antipsychotics had been trialed as monotherapy and in various combinations with little improvement. ECT was also administered previously and the patient received eight treatments without improvement. He had been evaluated by neurology for the cognitive symptoms without any organic explanation found. The patient’s current medications were: Paroxetine 30mg, Lamotrigine 200mg and Clonazepam 3mg daily. A multitude of laboratory tests were ordered,

and abnormal values included a low folate and elevated glucose. GeneSight testing was done to evaluate for variations in metabolism of psychotropic medications. GeneSight testing revealed polymorphisms in the Catechol-o-methyl transferase gene, in the adrenergic alpha-2A receptor (both suggest he would likely have a reduced response to stimulant medications) as well as a polymorphism in the MTHFR gene. Results were reviewed with the patient and newer treatments for depression such as ketamine treatment and TMS were discussed. We started L-methylfolate as an adjunct to his SSRI. After ten weeks he did report improvement in his concentration and attention. The remainder of his depressive symptoms remained unchanged and he reported erectile dysfunction as his most concerning complaint. The ED had been present for years and was no longer improved by Tadalafil. He agreed to slowly transition to Vortioxetine due to its lower risk of ED and agreed to slowly taper Clonazepam due to its potential contribution to ED. He was transitioned off Paroxetine and onto Vortioxetine over the course of twelve weeks and after another three weeks off the Paroxetine his ED resolved. He was able to decrease the Clonazepam to 2mg daily. He continues to meet criteria for major depressive disorder, however, experienced improvement in the quality of his life by adjusting medications to alleviate side effects. As physicians we want to cure not slightly improve. This makes the burden of chronic disease like treatment-resistant depression a heavy burden for the patient most significantly but also for the clinician. Physicians can have various responses to this helplessness including: blaming ourselves or the patient, cynicism and even attempts to extricate ourselves from their care. We may be able to decrease the isolation and frustration felt in these cases with increased discussion around management as well as considering redefining failure and success.

No. 70

The TRAL Study—Treatment-Resistant Depression in Latin America: Interim Analysis of the Cross-Sectional Phase of a Multicenter, Observational Study

Poster Presenter: Bernardo Soares

Co-Authors: Acioly Lacerda, Lina Maria Agudelo Baena, Gerardo Bonetto, Juan Luiz Vazquez, Patricia Cabrera

SUMMARY:

Rationale and Objectives: Major depressive disorder (MDD) is a disabling illness and a substantial proportion of cases is treatment-resistant. Treatment-Resistant Depression (TRD) is assumed as a failure to respond to = 2 antidepressants in the current episode, according to investigator assessments, although there is no global consensus. This abstract aims to present the results of: estimation on the prevalence of TRD among individuals diagnosed with MDD in Latin America (LA), to characterize the TRD patients, disease status and Montgomery-Asberg Depression Rating Scale (MADRS) for depression severity based on an interim descriptive analysis of the first study visit. Methods: The TRAL Study is prospective in nature, but here is reported only the baseline data. Outcomes are compared among MDD patients with and without TRD. Overall, 1,544 MDD patients were consecutively enrolled from psychiatric sites: 4 sites in Argentina, 11 sites in Brazil, 4 sites in Colombia and 14 sites in Mexico. Sample size calculation and subjects' distribution was based on a non-LA TRD prevalence report of 21.7% (a=0.05; ß=0.20). Adult subjects with documented MDD on the criteria defined in the Diagnostic and Statistical Manual of Mental Disorders, 4th Ed. (DSM-IV) and confirmed by MINI International Neuropsychiatric Interview v7.0.2 were included. Patients can be treated or untreated with new or ongoing depression episode and must be able to provide consent and complete assessments. Patients diagnosed with psychosis, schizophrenia, bipolar disorder, schizoaffective disorder, dementia, with severe chemical dependence or currently participating in another clinical trial were excluded. Results: In the baseline assessment, the prevalence of TRD in MDD patients in LA is 29.1%– 95%CI [26.8%; 31.4%], though the proportion varies greatly between countries (20.7%-40.4%). The proportion is higher in MDD patients treated in Private Psychiatric Institution with 56.5% [42.2%; 70.8%] and general hospital with 60.1% [52.5%; 67.8%]. TRD patients are older (p<.0001), with a higher proportion of divorced and widowed

(p=.0035). Also, descriptive analysis suggests a higher proportion of suicide thoughts/attempts (p <.0001) and depressive symptoms in disease status (p <.0001) in TRD compared to non-TRD patients. Depression severity as measured by MADRS is globally higher in the TRD group (M=29.36±SD) compared to the non-TRD (M=23.25±SD). Lastly, MADRS scores are higher in Mexico and Colombia in both TRD and non-TRD patients. Conclusion: Present findings suggest that the proportion of TRD in LA countries (29.1%) is consistent with that reported in other countries. TRD patients are typically older than non-TRD, with a higher proportion of suicide thoughts/attempts and the majority were symptomatic, displaying an active disease status. These findings highlight the importance of improving care among TRD patients in LA.

No. 71

Exploring the Comorbidity Between Borderline Personality Disorder and Major Depressive Disorder: A Literature Review

Poster Presenter: Steven Anthony Vayalumkal, M.D.
Co-Author: Asghar Hossain, M.D.

SUMMARY:

Borderline Personality Disorder (BPD) and Major Depressive Disorder (MDD) are two severe psychiatric conditions with frequent co-morbidity, with individuals with BPD endorsing more MDD manifestations as compared to the general population. Research over the years has postulated an overlapping symptomatology in both diagnoses in the context of emotional and affective dysregulation, which can be attributed to similar neurobiological phenomena. These biological changes include hyperreactivity of the amygdala and volumetric alterations in the cingulate cortex. There is also a well speculated role of serotonin imbalance pertaining to mood disturbances in both conditions. However, BPD has distinct features in terms of disruption of inter-personal relationships, affective lability and impulsivity; these features can account for its severity, persistence and negative symptoms. It is of significance as BPD can affect the prognostic outcome of patients with MDD. We herein present a literature review that illustrates the strong correlation between these two psychiatric conditions. In this review, we also aim to emphasize the multidisciplinary methodology needed to recognize and treat these conditions, as many times it is a challenge to diagnose and treat coexisting MDD and BPD. Such knowledge is helpful as it may lead to improved quality of life and better clinical outcomes for this patient population.

No. 72

Genetic Expression in Major Depression: A Case-Control Study Exploring Baseline Differences in Latin American Patients

Poster Presenter: Iram Rodriguez
Co-Authors: Marisol Ibarra, Sarai Gonzalez, Geovana Calvo, Jose Lugo, Laura Martínez, Sofia Luna

SUMMARY:

Background: The genetic expression of several molecular pathways associated with major depression (MD) have been studied in blood with promising results (1,2). In order to better understand their role in Latin American populations we investigated the expression in a group of treatment naïve depressed patients and compared them to healthy controls. A second phase of this study will test treatment response after 12 weeks of treatment. Material and Methods: We analyzed 50 MD cases vs 49 controls, recruited explicitly for this study, in a University Hospital in Monterrey, Mexico; paired for age and sex. We used the Patient Health Questionnaire (PHG-9), the Structured Clinical Interview (SCID for DSM-IV) and the Montgomery–Asberg Depression Rating Scale (MADRS) for severity. We tested mRNA expression in candidate genes of neuroplasticity (BDNF), inflammatory (IL-1b, IL-6, IL-7, IL-8, TNF-a, IL-10, MIF) and the Wnt canonical pathway (GSK3B, APC and TCF7L2). RNA was obtained from blood samples. Samples were processed on gene arrays, quality tested and essayed by triplication. Group differences in gene expression were investigated using univariable analyses to compare the mean mRNA expression of target genes. Results: Most of our participants were female (cases N=33 (66.0%), controls N=33 (67.3%)) with a mean age of 26.1 ±8.1 in cases and 26.2±7.5 in controls. Cases had a mean PHQ-9 of 17.5 ± 4.5 and MADRS of 31.7 ±8.0. Gene expression levels of the explored pathways were non-significantly different between cases and controls (Figure 1); with

the exception of GSK-3B with a mean expression in cases of 9.51 SE 0.01 vs. controls 10.07 SE 0.01, P= 0.017. Discussion: GSK-3B is an antagonist of the Wnt canonical pathway. It is critical in neural development and adult neurogenesis (3). GSK-3 has been involved in depression-related behavior and rodent models of GSK-3B mutations have shown antidepressant effects (4). Studies have found greater differences in expression when remitters and non-remitters are separated among the depression group (1,2); thus we will proceed to analyze our subjects accordingly once the second phase of this study is finalized. Larger replication investigations are needed to confirm the potential differences in genetic expression among populations; also, to explore the potential role of GSK-B as a baseline biomarker of treatment naïve depressed patients.

No. 73

Investigating Clinical and Demographic Variables of the Placebo Response in Antidepressant Trials in MDD: A Reanalysis of the Cipriani Data Set

Poster Presenter: Brett Jones, M.D.
Co-Authors: Cory Ross Weissman, M.D., Tya Vine, Jewel Karbi, Louise Mulsant, Dengdeng Yu, Jeff Daskalakis

SUMMARY:

Background: Consistently high response rates in placebo groups of antidepressant drug trials show the importance of considering the placebo response when determining the efficacy of new antidepressant drugs. However, ethical concerns of giving placebo to patients has led to the preference of comparison trials over placebo-controlled trials for depression. Little is know about which factors affect placebo response or whether placebo response rates can be anticipated based on key clinical factors. Methods: Based on the largest public dataset and references from a recent meta-analysis by Cipriani et al. (2018), data was collected from 302 randomized placebo-controlled trials of various antidepressant drugs. The data was then analyzed using weighted means and a multiple linear regression to explore clinical and demographic variables that predict response in placebo groups. Results: Overall data was collected on 24 945 patients across 20 different antidepressant trials. The mean placebo response (absolute reduction and percentage) for the respective scales were; the HAMD 17/21 (n=18 284) 9.0 ± 2 and 37.35% ±7.3; the HAMD 24 (n= 1689) 10.9± 2 and 37.25%; the HAMD 29 (n=233) 15.6 ± 1.7 and 46.89% ± 3.7; the MADRS (n=4739) 12.75± 1.6 and 40.81% ± 5.8. Further we completed a multiple linear regression to predict the mean percent placebo response using the most commonly available covariates. We found that our model was significant (P<0.05) with a multiple R-Squared of 0.4157. If a study was multi-center, there was a 6.97% increase in the placebo response (p<0.001), females had a 0.2% increased placebo response (p<0.001). Baseline depression severity did not contribute significantly to the placebo response, nor did therapeutic setting, the specific scale used, the study size, the age of the patients, the year of publication, or whether it was drug sponsored. Conclusions: This is the largest analysis of placebo response in both published and unpublished data. By combining the data from a large group of trials, we have been able to most accurately characterize the mean placebo response in antidepressant trials as well as attempt to understand predictors of placebo response. Currently it appears that multi-center trials and trials with more females have a higher placebo response. Future work from our group will include analysis of placebo response in treatment - resistant depression to understand how placebo response may differ in this patient population.

No. 74

Mood Disorders in MSA

Poster Presenter: Aamani Chava, M.D.
Co-Authors: Zargham Abbass, Asghar Hossain, M.D.

SUMMARY:

Multiple system atrophy (MSA) is a sporadic adult-onset neurodegenerative disorder with an unknown cause. MSA is characterized by autonomic dysfunction, cerebellar abnormalities, parkinsonism, and corticospinal degeneration. Neuropsychiatric symptoms (e.g. depression, irritability, anxiety, and apathy) are frequently found in MSA and can significantly affect patients' quality of life. Depression is the most extensively studied neuropsychiatric symptom in MSA. There is a depletion of multiple neurotransmitters noted in different brain regions of MSA patients. Here we

present a case report of a 67-year-old Asian American female with a history of MSA and depression brought to our care due to medication noncompliance, presented with increased agitation and aggressive behavior. Furthermore, we will discuss the incidence of depression, sleep disorders, and cognitive function in patients with MSA. The neurobiology of depression in association with MSA will also be discussed in this paper.

No. 75

Depression Due to Hormonal Contraceptives

Poster Presenter: Esther Bilenkis, D.O.

SUMMARY:

Introduction: Depression is the leading cause of disability worldwide and it is the primary cause for discontinuation of hormonal contraceptives (Kulkarni, 2007.) Hormonal contraceptives are composed of synthetic estrogen and progestin hormones that inhibit the body's natural hormone production to prevent pregnancy. The introduction of synthetic hormones in the body leads to a variety of downstream effects that are responsible for negative mood symptoms. Evaluation: There is a strong link between depression and synthetic hormones and the mechanisms responsible require further study. Research shows that synthetic hormones disrupt internal hormone production and cause significant inflammation, nutrient depletion, and worrisome brain changes related to negative mood symptoms. Many of these nutrients serve as cofactors for catecholamine synthesis so their depletion results in decreased key neurotransmitters implicated in depression. Treatment: It is encouraged to discontinue the hormonal contraceptive and recommend non-hormonal protection against pregnancy such as copper IUD, condoms, and fertility awareness devices. Upon discontinuation, it is important to follow up on hormones such as estradiol, testosterone and thyroid hormones, inflammatory markers such as CRP, and nutrient levels. In addition to replenishing missing micronutrients, it is vital to treat the inflammation imposed by the hormonal contraceptive which can be done using anti-inflammatory diet, prebiotics, and probiotics (Grajek et al. 2005.) Discussion: Millions of women worldwide use the combined oral contraceptive pill which has been shown to cause significant adverse mood effects (Kulkarni 2007.) Hormonal birth control users have a 40 percent greater risk of depression, compared to non-users (Scovlund et al 2016.) Hormone contraceptive use was shown to be associated with subsequent antidepressant use and first diagnosis of depression at a psychiatric hospital among women living in Denmark. Conclusion: Depression causes a significant public health burden and so the association observed between hormonal birth control and depression must be evaluated further. Depression secondary to hormonal contraceptives warrants a comprehensive workup and treatment plan. This information will help guide clinicians in their initial evaluation, treatment, and follow up in such cases.

No. 76

Subclinical Hypothyroidism and Incident Depression in Young and Middle Age Adults

Poster Presenter: Sang Woo Hahn

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 2 comprehensive health exams between January 1, 2011 and December 31, 2014. Thyroid-stimulating hormone (TSH), free triiodothyronine (FT3) and free thyroxin (FT4) levels were measured by an electrochemiluminescent immunoassay. The study outcome was incident depressive symptom defined as a CES-D score >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 depressive symptoms 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. 77

Proving Causal Relationships: A Crash Course on Understanding the Link Between Antidepressants and Suicidal Behavior

Poster Presenter: Josef Witt-Doerring

SUMMARY:

Shortly after fluoxetine, the first SSRI, entered the marketplace in the late 1980s, it was suggested that this medication could induce suicidal urges in some vulnerable patients. Early epidemiological studies and meta-analyses cast doubt on the link, and the possibility of a causal connection was largely dismissed by the medical community for over a decade. Despite the placement of a class-wide black box warning for suicidal thoughts and behaviors, the issue remains controversial to this day. This poster presentation will concisely review the strengths and limitations of the different types of evidence which have been generated to investigate this phenomenon. Further, we will discuss how causality between a drug and a suspected adverse event is approached.

No. 78

A Curious Case of Antibiomania

Poster Presenter: Gregory Scott Brown, M.D.

SUMMARY:

Mr. R, a 48 year-old executive, presented to the psychiatric emergency room for the third time in four days after a recent change in his behavior. He had no prior psychiatric history. His home medications consisted of clomiphene 100 mg po qDay, which he had been on for the past seven months. He had recently completed four days of a ten day course of amoxicillin/clavulanate 875 mg po BID for a neck infection. Mood dysregulation included three weeks of manic-type symptoms with psychotic features: decreased sleep, irritability, pressured speech, delusions of persecution, and grandiosity. Mr. R was referred for voluntary inpatient psychiatric hospitalization for stabilization and reconstituted after four days on olanzapine 10 mg po qHS. After following up in the outpatient psychiatric clinic, he rejected a bipolar diagnosis and attributed his manic episode to an antibiotic drug reaction. He did, however, agree to follow up in the outpatient psychiatric clinic off psychotropic medications for at least one year. Eight months after his manic episode, his mood remained stable, with no signs of mania or psychosis.

No. 79

Efficacy of Second-Generation Antipsychotics in the Treatment of Anorexia Nervosa: A Systematic Review and Meta-Analysis

Poster Presenter: Laura Sawka
Co-Author: Don Thiwanka Wijeratne, M.D., M.Sc.

SUMMARY:

Background: Anorexia nervosa (AN) is a feeding and eating disorder characterized by restricted energy intake, intense fear of weight gain; and distorted body image. There are currently no strong pharmacotherapy recommendations for the treatment of AN. There has been an increase in research about the role of second-generation antipsychotics (SGAs) in treating AN in the last decade, but the evidence remains inconsistent partly due to small study populations. This systematic review and meta-analysis synthesizes the most recent evidence and captures a larger population than individual studies alone. Methods: A literature search was carried out in EMBASE, MEDLINE, PsycINFO and Cochrane Register of Controlled Trials to identify randomized-controlled trials (RCTs) and observational studies comparing SGAs to no SGAs in addition to standard treatment for AN. The primary outcome was increase in BMI or weight. Secondary outcomes were improvements in comorbid anxiety, depression and symptoms of eating disorders using validated psychiatric measurement scales. Standard mean differences (SMDs) were used to compare outcomes between studies where pre- and post-treatment numerical data was reported to account for the use of different measurement tools. A random-effects model was used to account for clinical heterogeneity in standard treatment of AN. Results: 8 RCTs and 3 observational studies were included, capturing 418 individual patients (408 female, 10 male). The average age was 20.9 years. Six studies compared olanzapine to placebo, 2 compared quetiapine, 1 compared risperidone, 1 compared aripiprazole, and 1 independently

compared both olanzapine and aripiprazole. The range of treatment duration was from 8 weeks to 13 weeks, and the range of follow-up was from 8 weeks to 52 weeks. Out of the 11 studies, 9 reported pre- and post-study data for BMI or absolute weight, and 4 reported pre- and post-study data for each of anxiety, depression, and eating disorder symptoms. When combined, the SMD for the primary outcome was 0.13 [95% CI -0.08, 0.34; p=0.22] showing a non-significant trend favouring the control population. The SMD for anxiety was -0.38 [95% CI -0.87, 0.11; p=0.13] showing a non-significant trend favouring the SGA population. The SMD for depression was -0.22 [95% CI -0.87, 0.43; p=0.51] showing a non-significant trend favouring the SGA population. The SMD for eating disorder symptoms was -0.26 [95% CI -0.80, 0.29; p=0.36] showing a non-significant trend favouring the SGA population. Conclusion: Based on pooling of available evidence in this meta-analysis, SGAs are not associated with an increase in BMI or an improvement in psychiatric symptoms in patients with AN. These results may inform clinical practice in the treatment of individuals with AN. However, there is a still a deficit of research in this area and a large group, multi-centre RCT may be needed to further inform clinicians about the efficacy of SGAs in the treatment of AN.

No. 80

Interaction Between Lithium and Lisinopril and Renal Resilience in a Patient With Bipolar Disorder

Poster Presenter: Patricia Krisar-White, M.D.
Co-Author: Mujeeb Uddin Shad, M.D., M.S.

SUMMARY:

The interactions between lithium and thiazide diuretics are well documented. However, less is known about lithium interactions with antihypertensive drugs known as ACE Inhibitors (ACEI). The findings from few case reports that have documented interaction between lithium and an ACEI have not been consistent1. Most noticeable differences after addition of an ACEI were duration of exposure to develop lithium toxicity, clinical presentation of renal dysfunction, lithium dose, and more interestingly different ACEIs having differential effect on lithium clearance (1, 2). Lisinopril, an ACEI, may have higher risk than some of the other ACEIs as it is solely eliminated by kidneys and may accumulate over time in presence of lithium and/or renal dysfunction, (3) which also explains why it takes time for lithium toxicity to develop in most lisinopril cases. There does not appear to be a significant effect of gender on this interaction, but one needs to be extra careful in elderly population due to lower lithium clearance. (1) Although our case shares some of the earlier findings, there are some noticeable differences that add further complexity to this literature. The most unique observation in our patient was his renal resilience that despite multiple lithium toxicities and renal dysfunction over 30 years, he always returned to his baseline renal function even after lithium was restarted as he only responded to lithium. The latest incidence of lithium toxicity in our patient occurred only after 3 months of increasing lisinopril dose (20 mg/day to 40mg/day) after being on 20 mg/day of lisinopril for about 5 years without any effect on lithium clearance. In addition, despite having one of the lowest lithium doses (300 mg two times a day), our case experienced relatively severe renal dysfunction than observed in most previous case reports with significant increase in creatinine levels (2 mg/dL) and significant hyponatremia (as low as 132mEq/L). In contrast, some of the clinical findings in our patient were more consistent with previous reports including duration of exposure to ACEI to develop lithium toxicity, increase in creatinine and electrolyte imbalance.(1) As in the past, lithium had to be restarted to manage manic relapse without any renal impairment. We believe that this case will help clinicians understand the complex interplay between different pharmacotherapeutic agents in psychiatry and medicine and the need for a closer monitoring of renal function and lithium levels especially in the elderly patients treated with an ACEI, especially lisinopril.

No. 81

“Lithium Damaged My Spine” Might Not Be a Delusion After All

Poster Presenter: Muhammad Ali Zaidi, M.D.

SUMMARY:

Background Lithium remains to be the drug of choice for treating BPAD for the past few decades. There is extensive literature showing the effectiveness of Lithium when used as a mood stabilizing agent in

Bipolar spectrum disorders. However significant number of articles show that a third of the patients who receive lithium for their symptomology not only do not show any response but also may show deterioration of their clinical symptoms. (However, research shows that Lithium may negatively affect a third of the patients depending on various factors). The side effect profile of Lithium and especially its neurotoxic effects were discussed in depth in literature over the last decade. Although Lithium remains first choice as maintenance treatment for bipolar affective disorder, about half of all individuals may stop their treatment at some point, despite its proven benefits concerning the prevention of severe affective episodes and suicide. Methods The authors performed a systematic literature review to recognize the significance of negative effects of Lithium in a minority of patient population and also comment on the factors influencing patient compliance. We ran a literature search on Pubmed using the following terms: "Lithium" AND ("schizoaffective disorder [MeSH terms]" OR "Bipolar Affective disorder [MeSH terms]"). Our inclusion criteria were studies which have observed effects of Lithium in schizoaffective patient population or Bipolar affective patient population. Studies with other concurrent diagnoses were excluded. Case presentation We discuss a fifty nine year old male with a history of multiple admissions to a forensic hospital care setting. He initially endorsed a diagnosis of Psychotic disorder NOS which was later changed to Schizoaffective disorder during his subsequent admissions. He presented with affective psychotic features where his mood was labile shifting from melancholic to euphoric and a concurrent history of auditory verbal hallucinations. He displayed paranoid non-bizarre persecutory delusions and also alleged that one of his doctors had hated him and put him on Lithium as a form of punishment. He claims that Lithium, as a result, has significantly affected him negatively and also damaged his nerves. This led the authors to explore the significance of use of Lithium in people with Schizoaffective disorders and also Bipolar affective disorders. We also discuss the disease course in the patient and his clinical response to use of various psychotropic medications. Conclusions The case exemplifies the negative effects of Lithium when used as a mood stabilizer in patient population that is susceptible to its adverse effects due to various factors.

No. 82

A Case of Mania, Visual Hallucinations, and Suicidal Ideation in the Setting of Recent Implantation of Responsive Neurostimulator System Electrodes

Poster Presenter: Jonathan A. Greenberg, M.D.
Co-Authors: Thomas Kuczmarski, Barbara Wilson, M.D.

SUMMARY:

Ms. V, a 49 year-old female with history of bipolar I, post-traumatic stress disorder, prior suicide attempt, asthma, and epilepsy, was admitted to the hospital for worsening mania, visual hallucinations, and suicidal ideation in the setting of recent implantation of responsive neurostimulator system electrodes. Approximately one month prior to hospitalization, she underwent implantation of electrodes into the right insula (via a right frontal burr hole) and the right hippocampus (via right occipital burr hole) for management of medically refractory epilepsy that she had since childhood. Her manic symptoms began only days after the electrode placement and were characterized by hypersexuality, decreased need for sleep, increased energy, increased creativity, decreased interest in eating and drinking, increased irritability, and increase in risky behavior. She also endorsed visual hallucinations, which consisted of seeing spiders on the wall. The neurology service initially cared for her and considered the differential of post-ictal psychosis versus bipolar mania with psychotic features. Patient reported having approximately 4-5 seizures per week prior to the electrode implantation and believed that she had fewer seizures during the day and night after the electrode implantation. Neurology was unable to find any evidence of epileptic activity, and she was transferred to inpatient psychiatry for management of her manic symptoms and suicidal ideation. She was taking quetiapine, duloxetine, carbamazepine (which was measured at a therapeutic level) and zonisamide (which was mildly subtherapeutic) at the time of admission. During her hospitalization, she was started on valproic acid for additional mood stabilization. Her manic symptoms, visual hallucinations and suicidal ideation subsided by time of discharge on hospital day 8. In this poster, we

discuss the interplay between bipolar disorder and epileptic seizures, the possible protective effect of seizures on psychiatric illness, and an association between placement of a responsive neurostimulator system and the onset of bipolar mania. While numerous case studies have discussed the notion of forced normalization—the emergence of psychoses after control of seizures—there are relatively few, if any, cases discussing the emergence of bipolar mania after seizure control. We also highlight prior documented effects of neuro-implants (e.g. vagal nerve stimulators) on psychiatric illness and other possible causes of this patient's mania.

No. 83

Temporal Lobe Epilepsy as a Cause of Secondary Mania: A Case Report and Review

Poster Presenter: Jonathan Myrtil, M.D.
Co-Authors: France M. Leandre, M.D., Michael John Gower, M.D.

SUMMARY:
Bipolar disorder is the 18th leading cause of disability in the US with an estimated mean age of onset 18. Here we present the case of a 61-year-old Caucasian male with a past psychiatric history of major depressive disorder admitted due to suicidal ideation and aggressive behavior, presented with decreased need for sleep, pressured speech, flight of ideas, irritable mood, grandiosity and disorganized thought process. He had no history of mania or hypomania in the past. He was started on quetiapine which was titrated up to 500mg total. He remained manic requiring multiple emergency treatment orders. Quetiapine was switched to Haloperidol and Lorazepam with no improvement in patient's behavior. As this was an atypical presentation of bipolar disorder considering his age and symptoms, neurology was consulted. The electroencephalogram showed bi-temporal epileptiform activities suggestive of partial complex seizures. He was placed on lacosamide and subsequently became calm and cooperative with improvement of his manic symptoms. He was subsequently discharged on haloperidol 5mg twice a day, lacosamide 200mg twice a day and Haloperidol decanoate 50Mg/ML monthly Bipolar disorder and epilepsy share many similarities. Both are chronic debilitating diseases with multiple relapses and can be treated with antiepileptic medications. Although manic symptoms are relatively uncommon in patients with seizure disorders, this population does have an increased risk of developing mania. In patients with seizure disorders, partial complex seizures can be a cause of secondary mania and frank postictal psychosis. This can present [after?] several hours to days of clear sensorium and minimal symptoms following one or more seizures, consisting of hours to weeks of hallucinations, delusions, agitation, and occasionally violence. In this case, the patient had an atypical presentation as he had a late presentation of first time onset of mania and was not responding to antipsychotics. It is important to rule out secondary mania in patients with atypical presentation of manic symptoms (as in this case) in order to treat them appropriately

No. 84

Delirious Mania: A Phenotypic Variant or Severe Form of Bipolar Disorder?

Poster Presenter: Eric Li, M.D.
Co-Author: Faisal Akram, M.D.

SUMMARY:
Ms. W is a 68-year-old Caucasian female who presented to the emergency room with pressured speech, talkativeness, grandiosity, decreased sleep, and disorganized behavior. After initial psychiatric evaluation, a diagnosis of bipolar disorder, current episode manic, severe with psychotic feature was made and treatment with oral Olanzapine 10 mg daily was started. Symptoms of mania improved over the course of three days. On day 4, she developed altered mental status with worsening disorientation and urinary incontinence. Workup of delirium including electroencephalography was done which was unremarkable. As a result, a diagnosis of delirious mania was made. Further review of medical records revealed multiple similar episodes in the past. Kraepelin originally divided mania into acute, delusional, and delirious. However, delirious mania has failed to gain a formal diagnostic classification. Successful detection of delirious mania is important as it carries higher inpatient mortality rate. In addition, reports of moderate to severe delirious mania have indicated poor responses to antipsychotics and mood stabilizers. Alternatively,

they have demonstrated success with high-dose lorazepam and ECT.

No. 85

Differences in Psychopathology Between Offspring of Parents With Bipolar I Disorder and Those With Bipolar II Disorder: A Cross-Sectional Study

Poster Presenter: Sehoon Shim
Co-Authors: Jung Han Yong, Sang Woo Hahn, Jongchul Yang, M.D., Ph.D., Ji Sun Kim, Yeongsuk Lee, M.D., Il Hoon Lee, Mingyu Hwang

SUMMARY:
Introduction Differences in phenomenology of bipolar I disorder (BP-I) and bipolar II disorder (BP-II) have remained a subject of continuous research interest. Despite clinical implications, few previous studies have evaluated the psychopathology in offspring considering bipolar subtypes. The aim of this study was to evaluate differences in psychopathology between offspring of parents with BP-I and those with BP-II. Methods The sample included 201 children and adolescents between 6 and 17 years of age who had at least one parent with BP-I or BP-II. The offspring were diagnostically evaluated using the Korean Kiddie-Schedule for Affective Disorders and Schizophrenia-Present and Lifetime Version. Psychopathology and Clinical characteristics were evaluated, including DSM-5 main diagnosis, comorbidity, depression, anxiety, and childhood trauma. Differences of lifetime DSM-5 diagnoses between BP-I and BP-II were also compared between schoolchildren group aged 6 to 11 years and adolescent group aged 12 to 17 years. Results In DSM-5 primary and comorbid diagnosis, offspring of parents with BP-I had significantly higher rates of MDD and BP-I than offspring of parents with BP-II. Regarding different age groups, there were significant differences in prevalence of MDD, BP-I, and BP-II between offspring of parents with BP-I and those with BP-II for adolescent group. Regarding clinical characteristics, K-ARS score was significantly ($p = 0.034$) higher in offspring of parents with BP-I than that in offspring of parents with BP-II. The offspring of parents with BP-I had significantly ($p = 0.004$) higher scores in childhood trauma scale than those of offspring of parents with BP-II. Conclusion The present study suggests that BP-I and BP-II might be genetically and etiologically distinct. Our findings indicate that additional research related to offspring with parents with bipolar is needed to enhance understanding of multiple dimensional differences between BP-I and BP-II.

No. 86

Antidepressant Treatment of Major Depressive Disorder in Patients With Comorbid Alcohol Use Disorder: A Meta-Analysis of RCTs

Poster Presenter: Isaac Johnson
Co-Authors: Bridget Shovestul, Fenghua Li, Michael Howard Bloch, M.D.

SUMMARY: Objective: To examine the effects of antidepressant treatment compared with placebo on depression outcomes in randomized, placebo-controlled trials of patients with co-morbid Major Depressive Disorder (MDD) and Alcohol Use Disorder (AUD). The original trials for antidepressants typically excluded patients with AUD. AUD and MDD often co-occur and there is limited data on the use of antidepressants in this population. Previous meta-analyses have demonstrated that antidepressants are more effective than placebo in treating depression in patients with co-morbid AUD. When SSRIs are examined alone in these meta-analyses, they do not show statistically significant efficacy, when compared with placebo. Our current study attempts to account for publication bias more accurately than previous meta-analyses, improves on the statistical analysis by examining additional moderators, and includes more recent trials. Study Selection: Trials found by literature search on PubMed were included if they were: 1) a randomized placebo-controlled clinical trial, 2) examined the effects of an antidepressant medication in patients with co-morbid MDD and AUD, 3) and reported depression outcomes. Data Extraction: Our primary outcomes examining the effects of antidepressant treatment were standardized mean difference for continuous depression measures and risk ratio for dichotomous response outcomes using random effects meta-analysis. We also used stratified subgroup analysis to examine the moderating effects of type of antidepressant medication, whether a detoxification period took place before the initiation of antidepressant treatment, whether the patient received concomitant psychotherapy, what the

indication for this psychotherapy was, and whether the patient also received medication targeting alcohol use. Results: Nineteen distinct trial arms were included in this systemic review. In subjects with AUD, antidepressant medications significantly decreased depression severity, as compared with placebo. The type of antidepressant studied or whether participants participated in a detoxification period prior to antidepressant treatment were not significant moderators of the measured effects of antidepressant agents, compared with placebo. However, trials in which participants did not receive concomitant psychotherapy demonstrated a significantly greater measured benefit of antidepressant treatment, compared with placebo, than in trials where participants received concomitant psychotherapy. In addition, we did not demonstrate any significant moderating effects of the indication for psychotherapy, whether the patient received concomitant pharmacotherapy targeting alcohol use, participant age, or duration of antidepressant treatment. Conclusion: Contrary to prior meta-analyses, our findings suggest that antidepressant treatment is associated with a decrease in depression severity in patients with co-morbid AUD, regardless of the type of antidepressant studied.

No. 87

Mood Disorder Due to Hypothyroidism: A Case Report

Poster Presenter: Cesar Cardenas Jr., M.D.
Co-Author: Lillian J. Houston, M.D.

SUMMARY:
There is an established recognition of association between mood symptoms and thyroid dysfunction. Currently there are few reports connecting hypothyroidism and mania/manic episodes. This case report describes a 31 year old female patient with symptoms suggestive of a mood disorder due to a general medical condition such as hypothyroidism. Pt was initially seen in emergency room and admitted to inpatient psychiatric unit. Patient demonstrated improvement in symptoms with Levothyroxine and Zyprexa. Keywords: Mood disorder, Hypothyroidism

No. 88

Bupropion Induced Manic Switch With Catatonia and Psychosis: A Case Report

Poster Presenter: Deepti Bahl, M.D.
Co-Author: Rasha Elkady, M.D.

SUMMARY:
Patients with bipolar disorder can spend considerably more time in depressive rather than manic episodes. Selective serotonin reuptake inhibitor (SSRI) induced mania in patients has been well documented in the literature. Per literature review, bupropion is associated with low levels of antidepressant-induced mania. There is limited data regarding bupropion induced manic switch with catatonic features in adolescence. We present a case report of a 17-year-old male patient, who was admitted to the inpatient unit with depression and suicidal thoughts. The patient was medication naive, exhibited lack of motivation, psycho-motor retardation, and had no family history of mental health problems. The patient was treated with Bupropion XL 150 mg daily, discharged and then readmitted a week after the discharge from the inpatient unit with flight of ideas, irritability, agitation, decreased sleep, grandiosity, paranoia and concerns for visual hallucinations. The patient was noted to maintain abnormal postures and noted to stand in the hallways for an extended period of time. The patients' mania was treated with Depakote 1000mg at bedtime. The patient scored a 22 on the Busch Francis scale which improved to a 10 after a Lorazepam trial. The patient was started on lorazepam, which was titrated up to 9mg daily in 5 divided doses. The patient was given a trial of anti-psychotic when his catatonia improved to help with psychosis, which led to worsening of the catatonia. The patient had a long inpatient stay of 24 days and was discharged on Depakote 1000mg at bedtime and an Ativan taper at a dose of 2mg 4 times a day. The patient was referred to the outpatient psychiatry clinic and was followed up every 2 weeks for the Ativan taper. The patient's depression emerged as the catatonia improved and the patient was tapered off Depakote and started on Lamictal. He was seen biweekly, where he was completely tapered off Ativan and he is currently on Lamictal 125 mg daily with significant improvement of depressive symptoms. The patient was able to graduate high school and is currently employed. In

the absence of other causes of an episode of mania with psychosis and catatonic features, bupropion was thought to have unmasked an un-diagnosed underlying Bipolar Type 1 Disorder. This case report examines NDRI-induced switch from depression to mania with psychosis and catatonic features in an adolescent leading to the diagnosis of Bipolar Disorder Type 1. There is very limited data on Bupropion induced manic switch with catatonic features noted in adolescence which makes this case report unique.

No. 89

First-Episode Mania Triggered by Supratherapeutic Tacrolimus Levels in a 64-Year-Old Male on Chronic Immunosuppressive Therapy

Poster Presenter: Sindhura Vangala, M.D.
Co-Authors: Ganj Beebani, M.D., Mohan Gautam, D.O., M.S., Rachel Renee Thiem, M.D., Aimee Helen Dereczyk

SUMMARY:

Background: Calcineurin inhibitors are known to produce neurotoxic side effects such as headaches, tremors, and paresthesias. This is especially true for tacrolimus. A literature review using PubMed is limited to prior case reports of tacrolimus induced catatonia, paranoia, and mania-like psychosis. To our knowledge, there are no case reports of tacrolimus-induced mania presenting in a patient with no psychiatric history. Case Report: Mr. W is a 64 year old male with no psychiatric history and end stage renal disease s/p kidney transplant on tacrolimus for 5 years. Three weeks before admission, he took more Tacrolimus than prescribed due to concern that levels were low. Within one week, he was extremely irritable, not sleeping, verbally aggressive, and threatening to divorce his wife of 40 years. He was brought in by family to Henry Ford hospital. Urine toxicology was negative. FK 506 level was elevated at 25.9 at presentation after which the medication was held and levels decreased to 6.3. Neurological examination showed no focal deficits. MRI showed chronic mild white matter disease and T2 hyperintensity in the centrum ovale. CSF showed mildly elevated protein without pleocytosis but LP was otherwise unremarkable. Neurology team did not believe Mr.W's behavior could be explained by the MRI changes, an acute infectious process, or acute vascular phenomenon. On psychiatric evaluation, Mr.W met criteria for a severe manic episode (inability to sleep for 10 days, hyperverbal, grandiose and paranoid ideations, irritable mood, and impulsivity). He was started on Zyprexa 5 mg, but due to worsening blurry vision, he was cross titrated to Depakote 750 mg BID. He showed minimal improvement in five days. Tacrolimus was discontinued and replaced by Everolimus. The patient was medically cleared and transferred to inpatient psychiatry. Mr.W was continued on the same doses of medications and after two days showed marked improvement in symptoms. Discussion: Although calcineurin-induced neurotoxicity is a well established phenomenon, calcineurin (especially tacrolimus)-induced psychiatric syndromes is less well known. Though it is uncertain if the resolution of symptoms was due to discontinuation of Tacrolimus, initiation of psychotropics, or a combination of both; we think it is appropriate to start treatment to shorten the course of the symptoms. It is important to note that in the older patient population, side effects to medications may be prolonged and require more time to clear despite prompt discontinuation of the offending agent. Late onset bipolar disorder remains low on the differential given Mr.W's age and no personal or family psychiatric history. We believe patients with solid-organ transplant on immunosuppressants like tacrolimus should be carefully monitored for new onset psychiatric symptoms. Psychiatry should be involved early in care regardless of patient age and duration of immunosuppressant therapy.

No. 90

Bipolar Affective Disorder With Aphasia Presentation in a Patient With Cerebrovascular Accident History: A Case of Post-Stroke BAD?

Poster Presenter: André Franklin
Co-Authors: Tomaz Eugenio Abreu Silva, Juliana Izukaw, Thiago Brandão

SUMMARY:

Bipolar affective disorder is an underdiagnosed condition and its pathophysiology is still not fully understood. Studies have shown impairment of various areas of the brain including the amygdala,

hippocampus, thalamus and other structures that form the limbic system, as well as several neurotransmitters involved, which together - or combined - may be responsible for regulating the affective response. Post-stroke bipolar affective disorder is an even rarer condition, with several published case reports attempting to correlate the pathophysiology of the affected areas with the brain areas involved in primary bipolar affective disorder. This case report demonstrates a patient with a history of stroke in the left fronto-temporal region - territory of the left middle cerebral artery, with involvement of areas 44 and 45 of Brodmann. Years after the episode, the patient presented symptoms of mania and aphasia, being discarded the hypothesis of new stroke by imaging (CT and MRI). After treatment with mood stabilizers the patient improved both the mania and aphasia symptoms.

No. 91

Late-Onset Bipolar Disorder

Poster Presenter: Madia Majeed, M.D.
Co-Authors: Soroush Pakniyat Jahromi, Asghar Hossain, M.D., Madia Majeed, M.D.

SUMMARY:

Bipolar disorder (BD) is a brain disorder that causes unusual changes in mood and energy, leading to personal and social impairment. Late onset BD (LOBD) may be different in nature compared to early onset BD (EOBD), as the former is usually a result of cerebrovascular diseases, and the latter is highly associated with positive family history of affective disorder. In this case report we have discussed characteristics of LOBD, comorbidities involved in developing LOBD and some treatment options reported in different studies. LOBD is a multisystem disorder and patients with BD die an average of 10 years earlier due to cardiovascular and cerebrovascular comorbidities. Collaboration among psychiatrists and primary care physicians is highly desirable when it comes to LOBD, in order to screen for different comorbidities involved and for proper management of such patients to improve their quality of life. Our report signifies the importance of diagnosis and management of this understudied disorder and the accompanied challenges in the elder population. More large-scale studies can play a big role in better understanding of LOBD and to design better and more practical treatment guidelines for this growing population.

No. 92

Managing Pain Episodes in Patients on Methadone Maintenance

Poster Presenter: Madia Majeed, M.D.
Co-Author: Asghar Hossain, M.D.

SUMMARY:

It is a challenge to find a efficacious pain treatment for patients who are receiving chronic opioid therapy for addiction, malignancy or those abusing opioids for recreational purposes. The difficulty lies in psychiatric patient population with multiple overlapping pathologies such as addiction, depression and mood disorders. The challenge is overcoming opioid induced hyperalgesia, tolerance and central sensitization. The goal is managing acute pain in habitual opioid users is to prevent withdrawal while providing necessary analgesia. There are currently no official guidelines for managing patients on methadone in acute pain leaving the medical community to refer to expert opinion.

No. 93

Psychotic Mania Induced by Topical Ketamine in a Patient With Thoracic Spine Injury

Poster Presenter: Dana M. C. Valdez, M.D.
Co-Author: Michael Makhinson

SUMMARY:

Ketamine is an NMDA receptor antagonist widely used for surgical anesthesia, chronic pain, and is under investigation as an antidepressant. It is also a drug of abuse, causing feelings of euphoria. Ketamine is typically administered intravenously or intranasally, though topical use has been described in pain management settings. Ketamine is known to induce psychotic and manic symptoms, though previous reports have been from intravenous administration. We describe what we believe to be the first reported case of transdermal ketamine-induced psychotic mania. The patient is a 58-year-old Caucasian man with no psychiatric history who sustained a spinal injury; due to resultant neuropathic pain, he was prescribed a topical gel comprised of ketamine, baclofen, cyclobenzaprine,

diclofenac, gabapentin, and lidocaine. Reports of psychosis associated with baclofen, cyclobenzaprine, gabapentin, and lidocaine have been described, though these were administered orally with the exception of lidocaine, which was given intravenously. He gradually developed symptoms of mania with psychotic features—grandiose and paranoid delusions, decreased sleep, pressured speech, loosening of associations, and response to internal stimuli. He was hospitalized involuntarily several times and was eventually medicated with involuntarily olanzapine and lithium. Eventually, the topical ketamine gel compound was discontinued, with concomitant resolution of symptoms and no recurrence as of one year. Given increasing interest in topical ketamine for treatment of chronic pain and depression due to its lower systemic absorption, we believe that it is important for clinicians to be aware that, despite its route of administration, it still carries the risk of serious psychiatric side-effects.

No. 94

Inpatient Management of Catatonia

Poster Presenter: Vijay Chandran, M.D., M.B.A.
Co-Author: Joseph Sokpagna Soeung, M.D.

SUMMARY:

The incidence of catatonia has been estimated to be between 5-20 percent in inpatient psychiatric units. In DSM 5th edition, catatonia is not recognized as a separate diagnosis but rather a syndrome that may be found in medical and psychiatric disorders most commonly bipolar disorder. Catatonia was first described in 1874 by Karl Ludwig Kahlbaum. Since catatonia was first described various hypotheses have been postulated yet it remains unclear as to the true patho - physiology. In treating catatonia the provider is presented with unique challenges. One must be cognizant to the management of catatonia and underlying medical conditions. Acute management of catatonia can be categorized into non-malignant and malignant. Classically benzodiazepines have been first line agents to treat catatonia with management of the underlying medical condition taking precedence. Malignant catatonia currently is treated with benzodiazepines and electroconvulsive therapy concomitantly. Here we present Ms.V a 44 YO Haitian American F with a history of Bipolar with psychotic features and Uncontrolled Diabetes Mellitus. Ms. V was our admitted our inpatient medical service from a supervised residence after it was reported she was not leaving her room for 1 week in the context of medication noncompliance. Ms.V presented with extreme stupor, mute, negativism, not eating, non compliance with medication coupled with a tentative diagnosis of diabetic ketoacidosis. This case report intends to provide recommendations to the growing body of literature on the acute management of catatonia, with special considerations required when patients have medical conditions coupled with their catatonia in the non compliant patient.

No. 95

Can Music Induce Psychotic Symptoms Along With Emotional Reactivity in Bipolar Patients With Comorbid Extensive Physical and Mental Trauma?

Poster Presenter: Harjasleen Bhullar Yadav, M.B.B.S.
Co-Authors: Shawn Singh Sandhu, M.D., Santosh Ghimire, M.B.B.S., Seema Hashmi

SUMMARY:

Music has been vastly studied as a supportive therapy or treatment modality in psychiatric illnesses since 19th century. Most of the studies have highlighted the benefits, and the calming effects that music has, thus being increasingly used by our patient population as a way to cope up with the their stressors. We, on the contrary would like to look at the negative emotions and thoughts generated by listening to certain genre of music. Our patient, Ms. G, 21 YO biracial female, with past psychiatric history of bipolar disorder, PTSD, self reported history of ADHD, extensive trauma history in the form of physical, sexual abuse, and bullying at school, no prior psychiatric admissions, is currently in treatment for Bipolar Disorder. She has reported listening to “dark music” that often leads her to have increased irritability, and recent experience of psychotic symptoms in the form of auditory and visual hallucinations along with recurrent violent images. Emotional reactivity has been studied quite a bit using emotional induction, based on viewing a set of positive, negative or neutral pictures. It would be interesting to study emotional reactivity in addition to either exacerbation or even emergence

of psychotic symptoms on prolonged exposure to specific genre of music.

No. 96

Association Between Comorbidities and Suicidal Behaviors in 232,915 U.S. Adults With Bipolar Disorder

Poster Presenter: Shirin Vartak, D.O.
Lead Author: Rikinkumar S. Patel, M.D., M.P.H.
Co-Author: Hema Mekala, M.D.

SUMMARY:
Background: Bipolar disorder (BD) has a lifetime prevalence rate of 4.4% in the US adult population [1], and suicide rates in BD are approximately 20 to 30-fold greater than in general population [2]. However, the risk and the impact of psychiatric and medical comorbidities on the association of BD and suicidality is unknown. Objective: A cross-sectional study was used to explore the association between BD and suicidal behaviors and determine whether comorbidities modify this association in an inpatient cohort. Methods: Participants included in the study were 18 years or older, with hospital discharges in 2014 from the Nationwide Inpatient Sample database. BD, suicidal behaviors, and medical and psychiatric comorbidities were identified based on ICD-9 diagnosis codes. Logistic regression models were used to estimate odds ratios (OR) and 95% confidence intervals (CI). Results: 27,566,280 hospitalizations were included, of which .84% had a BD diagnosis and 39% of BD patients had a diagnosis of suicidal behaviors. BD patients had an 8.97-fold increased odds of suicidal behaviors (95%CI 8.75–9.19) compared with non-bipolar. We repeated analyses after stratifying by comorbidities. BD with anxiety disorder was associated with a 1000% increased odds of suicidal behaviors (95%CI 10.53–11.49). Among other psychiatric comorbidities, BD was associated with increased odds of suicidal behaviors with alcohol abuse (OR 7.87, 95%CI 7.45–8.32), obsessive-compulsive disorder (OR 4.10, 95%CI 3.26–5.16) and PTSD (OR 3.64, 95%CI 3.34–3.97). However, the odds of suicidal behaviors were not significant among BD hospitalizations with a borderline personality disorder (OR 1.08, 95%CI .96–1.23, P= .191). In stratified analyses, we noted that among BD hospitalizations with medical comorbidities, bipolar had highest odds of suicidal behaviors with comorbid diabetes (OR 15.51, 95%CI: 14.38–16.74), followed by asthma (OR 12.62, 95%CI 11.66–13.66), rheumatoid arthritis (OR 10.58, 95%CI: 8.49–13.17) and migraine (OR 10.55, 95%CI: 9.43–11.81). Conclusion: The study of risk factors and comorbidities in BD is important to help inform the approach to treatment. Previous retrospective analyses have looked into the most common medical comorbidities in US adults with bipolar disorder, finding women to have a higher medical comorbidity burden than men [3]. The presence of comorbidities influences associations of suicidal behaviors with bipolar patients in a national inpatient sample. Prompt diagnosis and treatment of psychiatric and medical comorbidities associated with bipolar disorder might be beneficial in reducing the suicidality and improving the prognosis.

No. 97

Safe Administration of Electroconvulsive Therapy in Patient With Pericardial Effusion

Poster Presenter: PhuongTam Nguyen, M.D.
Co-Authors: Uma Suryadevara, M.D., Dawn-Christi M. Bruijnzeel, M.D.

SUMMARY:
Background: Electroconvulsive therapy can be a fast and effective treatment for patients with acute mania that have not responded to other treatments. Although there are no absolute contraindications to ECT, certain medical conditions relating to the cardiovascular system may increase the mortality risk associated with ECT. Therefore, it is important to weigh the risks and benefits of ECT in a patient with significant cardiac history. Case: A 69 year-old male with a history of pericardial effusion, anemia, hypertension, bipolar 1 disorder presents under involuntary admission for aggression, disorganized behaviors in the context of medication noncompliance noted by his caregiver. On initial evaluation, patient was noted to be euphoric, illogical and expansive. Patient mentioned that he had not been able to sleep for an unspecified amount of time. He reported that he can read minds and "bend men into steal." He did not feel that he needed treatment because his mood was great. One year prior, patient was hospitalized for about 2.5 months for a similar presentation of mania. After failing on multiple antipsychotics and mood

stabilizers, ECT was pursued for his treatment-resistant mania. However, his chest x-ray on admission showed cardiomegaly and a follow-up echo showed a moderate pericardial effusion. Cardiology was consulted but did not indicate need for pericardiocentesis because he was hemodynamically stable. Nine ECT treatments were administered and patient showed much improvements and was discharged on Haloperidol and Trazodone. During this admission, he was restarted on Haloperidol for mood stabilization and was given Haldol Decanoate IM one week into hospitalization. Patient's symptoms continued even with the addition of a second antipsychotic, Olanzapine, so ECT was reconsidered. His most recent TTE before admission showed a stable, moderate pericardial effusion and a repeat TTE showed an effusion similar in size. Given limited available literature on pericardial effusion and ECT, Cardiology and Anesthesia were asked to further evaluate the patient for ECT. It was determined that he had no clinical evidence of hemodynamic compromise given that his blood pressure was on the hypertensive side and he was not tachycardic. Regarding any planned sedation or anesthesia with his effusion, adequate hydration was advised to avoid hypotension. Patient subsequently received 6 ECT treatments. He showed marked improvements and was discharge on Haloperidol Decanoate every 30 days given his history of medication noncompliance. Conclusion: Cardiovascular complications during ECT remain a cause of morbidity and mortality. At this point there is limited literature addressing the safety of ECT in patients with pericardial effusion. This case illustrates that with appropriate cardiac management and close monitoring for the development of hemodynamic instability, ECT can be given to patients with treatment-resistant mania and comorbid pericardial effusion.

No. 98

Self Harm Behavior With Penile Mutilation in a Patient With History of Trauma and Bipolar Disorder

Poster Presenter: Hitekshya Nepal, M.D.

SUMMARY:

Self harm, including suicide can occur in both manic and depressed phases of bipolar affective (BPAD) disorder, although it is much more common in depression. Trauma and traumatic events have also been associated with deliberate self harm. We present a 30 year old man Mr. A with one episode of mania in the past who was seen in the outpatient clinic for evaluation of depression. Detailed assessment revealed that Mr. A has a long history of major depression since early childhood with multiple inpatient psychiatric hospitalizations. Patient was recently admitted to the hospital due to suicidal ideation with a plan to run into traffic. He had consistent suicidal ideation since last 6 months. He had been planning about it since last few weeks. Mr. A had history of sexual abuse in childhood by an older man in the basement who was his teacher's husband. He also reported having ongoing feeling of emotional abuse by mother throughout his life. Patient reported that he was unsuccessful with his first romantic relationship. He was betrayed by partner for another man. He ended up longitudinally cutting on the shaft of his penis. As the memories worsen, he had many such attempts. Now when he looks at it, he gets increasingly anxious. He is worried that he would never be able to get intimate with anybody. He feels that he has urinary incontinence associated with increased anxiety. He feels that the fibrous tissue has led to penile contracture although there was no abnormality on genitourinary exam. Various forms of genital self-mutilation may occur in several psychiatric illnesses s but it rarely occurs with BPAD. Such condition requires immediate hospitalization including integrated collaboration among medical, surgical and psychiatric team. Psychiatrist and urologist should be watchful in every case of genital self - mutilation and employ the integrated effective management for such cases.

No. 99

The Significant Role of Psychological Pain in Suicidal Behaviors Among Patients Diagnosed With Bipolar Disorder

Poster Presenter: Shweta Kapoor
Co-Author: Dorian Lamis

SUMMARY: Objectives: Bipolar Disorder is associated with a significant morbidity and mortality

due to suicidal behaviors in context of a variety of psychosocial factors. Psychological pain is one such variable that has generated considerable attention and continues to be a primary construct examined as part of comprehensive suicide risk assessments. Even though psychological pain has been studied in a variety of populations, it has not been specifically examined in those with Bipolar Disorder. The goal of the present study was to investigate the impact of psychological pain on suicidal behaviors in individuals with Bipolar Disorder while controlling for other psychological factors that have been shown to be robust predictors of suicidality such as depression, thwarted belongingness, and perceived burdensomeness. Methods: A total of 122 low-income patients with Bipolar Disorder, primarily African Americans (N=88, 72%) and females (N=87, 71%) were enrolled in the study. The measures included Suicidal Behavior Questionnaire-Revised (suicidal behaviors), Psychache Scale (psychological pain), Beck Depression Inventory-II (depression), and Interpersonal Needs Questionnaire (perceived burdensomeness and thwarted belongingness). Hierarchical regression analysis was performed with patients' suicidal behaviors as the dependent variable. To evaluate the impact of psychological pain controlling for the other variables, the first three variables were entered on step 1 while psychological pain was entered on step 2. Data analysis was performed in SPSS v. 25. Results: The results of the hierarchical regression analysis indicated that the overall model was significant (R^2= .29, $F(4, 114) = 11.69$, $p<.001$). While depression significantly predicted suicidal behaviors on step 1 [ß=.41, $t(119) = 3.79$, $p < .001$], when psychological pain was added on step 2, depression was rendered insignificant and psychological pain emerged as the only significant predictor [ß=.30, $t(119) = 2.37$, $p = .02$]. Conclusions: Psychological pain emerged as a critical variable in context of suicidal behaviors in individuals with Bipolar Disorder. Given that suicidality impacts those with Bipolar Disorder in disproportionately greater rates than other serious mental illnesses, further examination of this important construct and interventions targeting emotional pain is warranted. Limitations and implications for future research and suicide prevention programs for patients with Bipolar Disorder will be further discussed.

No. 100

Cognitive Therapy Versus Antidepressants in the Treatment of Depression: A Literature Review

Poster Presenter: Sibin Nair
Co-Author: Amindeep Lail, M.D.

SUMMARY: Objectives: Depression is one of the leading causes of disability in the United States and the primary treatment for this mental illness is currently cognitive behavioral therapy adjunctive with medications like Selective Serotonin Reuptake Inhibitors. We are comparing research articles that will analyze the efficacy of Cognitive monotherapy vs. medications alone and look to plot the correlation via mixed or indirect treatment comparison between these two therapy approaches. We look at the data established in each of the studies that comply with our inclusion criteria and discuss the any possible statistically significant relationship that can be determined from the studies. Methods: This involves accessing research articles via credible sources like PubMed, JAMA Psychiatry, Taylor and Francis Online, Journal of Affective Disorders and Journal of Mental Health. By searching for articles via keywords like "cognitive monotherapy" and "antidepressants" and using the inclusion criteria to filter out the outlying studies, we hope to have a minimum of three or more articles that will provide enough data and statistics to determine a significant contrast between CBT vs medications in the treatment of MDD. This involves research on certain variables in each study including the lack of conflict of interest, the various scales of depression being used to analyze (i.e: HAM-D, MADRS, experience of the psychiatrists conducting the CBT, the trials being blinded and randomized to prevent any bias. Statistical analysis performed for each study will be analyzed and compared to each other. If the analysis involves CBT vs placebo or medications vs. placebo, this data is still valid to create an indirect contrast between CBT and medications. Results: The works of De Rubeis et al. (1982), Weissman and Markowitz (1994). We found a highly significant difference in favor of CT versus waiting-list or placebo. The average subject in CT is better of 29% than the average subject in the waiting-list or placebo. CT was superior to antidepressants. Driessen and his colleagues

(Driessen, 2010) summarized that CBT has found to work better than its absence and may well work for specific reasons. CBT seems to be as efficacious as other active treatments, including medications. March and his colleagues performed an Intention-to-treat analyses on the Children's Depression Rating Scale–Revised and identified a significant time × treatment interaction. Rate of response: 81% for fluoxetine therapy, and 81% for CBT at week 36. , Segal and his determined that in acute phase treatment, patients who received Cognitive therapy (CT) had lower chance of relapse than Anti-depressant (ADM) monotherapy. Conclusions: Out of the five articles researched, Weitz and her colleagues did not report any moderate differences between CBT and ADM. The other research articles suggest that CBT is a better alternative for mild and moderate depression with more enduring effects.

No. 101

Treatment-Resistant Depression—the Successful Substitution of Dextromethorphan/Fluoxetine Therapy for Ketamine: Case Report

Poster Presenter: Sibin Nair
Co-Author: Steven F. Kendell, M.D.

SUMMARY:

Background: Monoamine targeting antidepressants have been the mainstay of unipolar mood disorder treatment for more than 50 years. Despite multiple and varied combinations of these agents, however, approximately 33 percent of patients with major depressive disorder (MDD) remain refractory to treatment; such limitations in response mandate the exploration of new targets for treatment resistant depression (TRD). As a heterogeneous state, aberrations in multiple pathways –beyond monoamines- have been implicated in the etiology of MDD including: chronic stress, neurotrophins, the immune system, inflammatory pathways and the glutamate system. Glutamate is the principal excitatory neurotransmitter in the mammalian brain. Under normal conditions glutamate plays a central role in neuroplasticity and memory formation through the activation of synaptic NMDA receptors. Overflow glutamate, however, is neurotoxic as it activates extrasynaptic NMDA receptors impairing BDNF formation and synaptogenesis. Targeting excitotoxicity, the NMDA antagonist ketamine facilitates glutamate balance and reverses synaptic reductions. Despite ketamine's rapid action and favorable safety profile the social stigma associated with "special K" has largely limited its availability to I.V. ketamine clinics in large metropolitan areas. As a means for offering rural psychiatric patients with TRD the advantages of an NMDA antagonist we herein discuss the use of dextromethorphan (DXM), a ketamine analog, as an alternative NMDA antagonist for TRD. Case Presentation: 56 y/o white female with TRD exhibiting disruptive behavior triggered by a recent divorce was alerted to EMS. After receiving 300mg of IM ketamine, the patient experienced a rapid resolution of her agitation. In turn, the patient's sister noted that the IM ketamine had also resulted in a quick, clear and substantial improvement in her TRD. Despite the patient's improvements, however, approximately one week after receiving IM ketamine the patient's depression returned necessitating inpatient hospitalization. In consideration of her substantiated TRD and notable response to ketamine the patient was started on a combination of dextromethorphan (DXM) 15mg bid and 20mg of fluoxetine (a robust cyp2D6 inhibitor) qam. With titration of the DXM/SSRI combination the patient exhibited steady improvement in mood and affect with final doses of 60mg bid of DXM and 40mg qam of fluoxetine producing an improvement in the QIDS-C16 from 25 on admission to 15 at discharge. Conclusion: As an analog of ketamine, DXM paired with a potent cyp2D6 inhibitor proved to be an effective combination for TRD. In turn, the use of DXM/fluoxetine was well tolerated with no dissociative nor psychotic side effects. Although no medical literature –to date- has fully quantified milligram equivalents as clinical dosing targets for the use of NMDA antagonists in TRD; additional case studies and controlled trials should lead to developing such an instrument.

No. 102

Effect of Pharmacogenetics in Clozapine-Induced Agranulocytosis: A Literature Review

Poster Presenter: Sibin Nair
Co-Author: Hunter M. Caskey, M.D.

SUMMARY:

This literature review is written to illustrate the importance of pharmacogenetics as a test for

medication administration, in particular clozapine. Clozapine is an anti-psychotic typically used as therapy for treatment-resistant schizophrenia (TRS). However, there is hesitancy in prescribing Clozapine due to its significant side effects, particularly agranulocytosis. This is a hematological condition where neutrophil count (NC) is <500 cells/mm3 which makes patients susceptible to infections. This leads to more hesitancy in the prescription of Clozapine and explains the usage of Clozapine to be <5%. This review explores the idea of using genetic markers to identify Clozapine prescribed patients with a higher potential for agranulocytosis. Methods: This review initiated by looking for studies that were published via reputable sources like PubMed, JAMA and Google Scholar. Keywords searched included "genetic markers for clozapine-induced agranulocytosis," "clozapine side effects" and "pharmacogenetics tests for clozapine side effects." The search results included many research studies in particular 2 study trials conducted separately by Verbelen and Goldstein. These results are analyzed and discussed in this literature review as they were the largest and latest genetic marker studies conducted. Results: There is established genetic allele markers associated with Clozapine-induced agranulocytosis. The alleles of interest in both cases involve HLA DQB1 and HLA-B 158T. Both studies showed a framework of genetic expression via the involved alleles, there still requires more analysis to be done before clinical use as markers. Conclusions: In both cases, despite the definite evidence of correlation, the lack of sensitivity or specificity made it unsubstantial to determine their value as a true genetic marker. This will require further technological enhancements in the fields of genetic analysis and gene expression procedures. Keywords: Clozapine-induced agranulocytosis, genetic markers, HLA allele pharmacogenetics.

No. 103

Emotional Responses Causing Vaso-Occlusive Crises in Sickle Cell Patients: A Case Report and Literature Review

Poster Presenter: Patrick Warren Arthur
Co-Authors: Mohamed Wagdy Mohamed Elsayed, M.D., Ramaswamy Viswanathan, M.D., D.Sc.

SUMMARY:

A 36-year-old African American woman with no past psychiatric history had a medical history of sickle cell disease with recurrent episodes of vaso-occlusive crises (VOC). A psychiatric consultation was requested because of several medical hospitalizations. Evaluation revealed that she had multiple triggers leading to VOC. Of note, strong emotional events had precipitated several VOC over the course of her illness. These events could be negative in nature, such as being startled awake or upon receiving the bad news of a relative passing, or they could be from overwhelming positive emotions of happiness such as seeing a relative after a long period of absence at a family reunion. Some of the crises caused by these emotional episodes had been severe enough to require hospitalization. Literature review revealed that one theory of how emotional events could precipitate VOC in sickle cell disease is through sympathetic system-mediated vasoconstriction. Vasoconstriction in sickle cell patients has been known to cause vaso-occlusive crises. The sympathetic nervous system will cause vasoconstriction in response to intense emotions, an adaptive "flight-or-fight" response that shunts blood to the skeletal muscles. Recent literature shows that anticipation of forthcoming pain itself can cause vasoconstriction in sickle cell patients, and that alleviation of this pain anticipation through hypnosis can cause a protective vasodilation. In this presentation, we discuss the patient's history in further depth and our advice to her, and review the literature as it relates to strong emotions and vaso-occlusive crises.

No. 104

Premature Ventricular Contractions Masquerading as Panic Disorders

Poster Presenter: Judith Lone
Co-Authors: Hema Mekala, M.D., Irfan Ahmed, M.D., Adebanke Adekola, Asna Tasleem

SUMMARY:

Mr. D is a 52 y/o CM who was admitted from Norman Regional Hospital (NRH) for active SI with a plan to overdose. According to his medical records from NRH, he has a past self reported psychiatry history of anxiety and psychotic depression. He woke up with a panic attack and after recovering from the panic attack; took some Phentermine to end his life.

When asked in detail about the circumstances leading up to his current state, he responded that he had been having trouble holding a job and had a recent conflict with his sibling. Panic Attacks: According to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) criteria for panic attacks, there must be an abrupt surge of intense fear or intense discomfort that reaches a peak within minutes, and during which time =4 of the following 13 symptoms occur: (1) Palpitations, a pounding heart, or accelerated heart rate (2) Sweating (3) Trembling or shaking (4) Sensations of shortness of breath or smothering (5) A feeling of choking (6) Chest pain or discomfort (7) Nausea or abdominal distress (8) Feeling dizzy, unsteady, lightheaded, or faint (9) Feelings of unreality (derealisation) or being detached from oneself (depersonalization) (10) Fear of losing control or going crazy (11) Fear of dying (12) Numbness or tingling sensations (paresthesias) (13) Chills or hot flashes. PVC : Premature Ventricular Contractions (PVC) are the most common cardiac arrhythmias . The ventricular myocardium is stimulated to generate a PVC via multiple mechanisms including reentry, enhanced automaticity, and triggered activity. The most common symptom is palpitations due to the resulting hyper-contractility of a post-PVC beat. Occasionally, frequent PVCs can result in a pounding sensation in the neck, lightheadedness, or near syncope. Palpitations are also frequently associated with panic attacks. It often becomes difficult for the patient to discern if the feeling of panic preceded the palpitations or was a result of them. Furthermore, palpitations commonly result in anxiety that may in turn cause catecholamine surges and thus additional ectopy and palpitations. The patient continued to have panic attacks and anxiety related symptoms and due to his medical history of PVC, his implantable loop recorder (ILR) was interrogated. It reported: AF episodes=22, most recent episode was on Aug 8 2018; episodes of tachycardia and bradycardic episodes while asleep. In a report of 107 patients with documented reentrant supraventricular tachycardia, 67% percent of the patients also met the criteria for panic disorder. These findings suggest that a psychiatric diagnosis should not be accepted as the root cause of palpitations until arrhythmic etiologies have been excluded.

No. 105

Anxiety Disorder Management in a Patient With PLMD/RLS

Poster Presenter: John Azer, M.D.

SUMMARY:

It is well documented in the literature that antidepressant may induce or worsen RLS (Restless Leg Syndrome) and PLMD (Periodic Limb Movement Disorder). This co-morbidity can complicate the treatment in patients with anxiety disorders. This is a case of a 38 year old male with PLMD/RLS who originally presented with no underlying psychiatric illness, who seemed to have developed a substance-induced obsessive-compulsive disorder secondary to his Mirapex dose. He had been through multiple medication trials for his PLMD, and settled on a regimen of both Mirapex .375 once nightly and gabapentin 900 mg once nightly. He sought out psychiatric treatment as the elevation in his Mirapex seemed to correspond with obsessive thinking, reduced stress tolerance, physical restlessness, and irritability. These issues were ultimately addressed by the reduction in his Mirapex dose, however, this came with the consequence of worsening of his PLMD/RLS symptoms. This raises questions about the treatment projectory for those who are on Mirapex who have obsessive-compulsive side effects. During his course, the patient also appeared to develop an unspecified anxiety disorder. We initially attempted to address this using propranolol, however, this proved to be ineffective. We then attempted to use Buspar, with no evidence in the literature to suggests worsening of PLMD/RLS among the antidepressants, however, this worsened his sleep disorder symptoms. His case highlights the difficulties in managing psychiatric illness in the setting of patient's with PLMD and RLS co-morbidity. It is also the first written case of Buspar worsening PLMD/RLS symptoms.

No. 106

Challenges of Medical Management in Patients With Illness Anxiety Disorder

Poster Presenter: Hector Cardiel Sam, M.D.
Co-Authors: Fauzia Zubair Arain, Vandana Kethini, M.D., Asghar Hossain, M.D.

SUMMARY:

Patient is a 27 year old Black female with no past psychiatric history, presents to the psychiatric Emergency Room with recent onset of suicidal thoughts. Patient stated that since the death of her mother and grandmother (2 years ago), both due to lung cancer with brain metastases has been experiencing ongoing anxiety and depression related to worry that she will develop the same illness. She reported constantly worrying that she will develop same symptoms and is concerned that it will be discovered late as had happened with her mother and grandmother. She reported intermittently having symptoms of sad mood, anhedonia, and hopelessness. This has led to a manifestation of somatic symptoms with frequent primary care visits. In past few weeks she has made 5 ER visits to a local hospital secondary to somatic symptoms of weakness of her left side, pain and numbness in her limbs, dizziness, and feeling unsteady. Her physical examination and all lab tests were normal. Despite repeated assurance, one week earlier she reported having a panic attack with racing heart, shortness of breath and dizziness and was started on paxil by her primary care physician. She has visited local ER twice after this episode demanding for head CT and Ativan was given to her to relieve her anxiety as patient was convinced that she has a stroke. She has had passive thoughts that ending her life would be better than experiencing this pain and worry. No active suicidal/homicidal ideation, intent or plan reported. Patient was voluntarily admitted to the acute inpatient unit for management of her anxiety.

No. 107

Burning Within: Anxiety and Hwabyung in a Korean Female Married to an U.S. Military Servicemember

Poster Presenter: Zachery Soren Loud, D.O.
Co-Author: Michael Sieun Yang, D.O.

SUMMARY:

Mrs. C. is a 42-years-old Korean female whose husband is serving actively in the Army. Her chief complaint was having anxiety attacks that primarily consisted of feeling hot during the episode like she is burning. She had these attacks on average weekly but was severe enough to go to the nearest emergency department at one point. She complained of somatic symptoms such as leg numbness, chest heaviness and tightness, and mild upper abdominal pain. She admitted to feeling depressed, guilty towards her family, and agoraphobic. She had no psychiatric diagnosis or treatment prior to her encounter with a behavioral health clinic in a military treatment facility. She had been started on two trials of two different SSRI's, Sertraline and Citalopram, but had discontinued them because of furthering worsening of herself feeling hot. She had also received concurrently a prescription of lorazepam used as needed once in the evenings when she would most likely to have an anxiety attack. She then was started on mirtazapine which had helped with her baseline anxiety and somatic symptoms until it caused her weight gain to the point that she had discontinued the medication. She nonetheless had received weekly psychotherapy sessions with her psychiatrist even while off of a medication taken daily. During her sessions, she had talked about her relationship with her husband and children as well as her parents and in-laws. She was able to connect her increasing anxiety when it came to accommodating her in-laws and keeping in touch with her mother. She had admitted about the lack of intimacy between herself and her husband explained by her frustration about her anorgasmia during intercourse and the physical distance when they were together. She felt unsure if she can hold her role as a wife and a mother in the household as well as an outstanding member in her Korean church. After 11 months of treatment, she had become sure of herself and was able to assert her own desires and thoughts. She was able to be in crowds more comfortably, had less frequent somatic symptoms, and was able to have her husband express himself more intimately to her. The patient's primary psychiatric diagnosis on her electronic records was an unspecified anxiety disorder, but her ethnic background, somatic symptoms, and her internal preoccupations matched closer to a culture bound syndrome in Korea called Hwabyung. It is primarily presented initially through longstanding depression or anxiety with somatic symptoms. Patients are typically middle-aged women, and it stems from the Korean culture's emphasis on conformity, family integrity, and traditional gender roles originated in Confucianism. Treatment options are limited in the United States and even more so in the U.S. military due to a lack of awareness and Korean-speaking

providers. However, supportive-expressive dynamic psychotherapy as well as adherence to treatment can aid patient to improvement.

No. 108

Hyponatremia Mimicking Anxiety: A Case Report

Poster Presenter: Juan Sebastian Pimentel, M.D.
Co-Authors: Asghar Hossain, M.D., Maria Elena Saiz, M.D.

SUMMARY:

Can hyponatremia mimic the anxiety sign and symptoms. Here we report a case study of a female with hyponatremia presented with Anxiety sign and symptoms. Anxiety is a common disease and hyponatremia can be find in patients with anxiety due to polydipsia or can be due to the side effect of medications. Hyponatremia generally defined as a sodium concentration of less than 135 mmol/L (135 mEq/L). It is difficult to assess the symptoms are due to anxiety or hyponatremia as both have similar presentation. Hyponatremia might also present with psychiatric symptoms of anxiety, confusion and irritability.[1] Due to low sodium levels the brain cell swells and lead to the symptoms of irritability and confusion which closely mimics the anxiety episode, which include, lethargy, restlessness, behavioral changes, drowsiness, disorientation and confusion.(1) Polydipsia due to psychiatric problem might lead to hyponatremia, therefore a patient with a anxiety symptoms must be evaluated for the electrolyte abnormalities.(2) Use of SSRIs can also lead to hyponatremia therefore the electrolytes should be checked before prescribing medications to such patients.(3)

No. 109

Intubation in a Case of Panic Attacks?

Poster Presenter: Valery Tran
Co-Authors: Claire Svec, Joel Hachiya, Matthew K. Egbert, M.D., Ashish Sharma, M.D.

SUMMARY:

We present a case of a 41-year-old Caucasian male with a past medical history of hypertension, obstructive sleep apnea, asthma, obesity and prediabetes. His past psychiatric history was significant for depression, and anxiety. He presented to the ED with chest pain and shortness of breath that had not responded to oral alprazolam. Five days prior, he had presented with a similar presentation, at which time medical workup was negative for cardiac or pulmonary etiology. His symptoms did not respond to hydromorphone or lorazepam, however, and he was intubated given concerns for impending respiratory failure. He was ultimately stabilized on dexmedetomidine and discharged on PRN alprazolam. In the current admission, he was tachypneic to the 100s, tachycardic to the 120s, and alkalotic at 7.62 while maintaining O2 saturations in the high 90s. Medical workup was again negative for electrolyte derangement, pulmonary embolism or acute coronary syndrome; however, multiple 1 mg doses of alprazolam, 50 mg doses of fentanyl, one 1 mg dose of diazepam, and BiPAP were unsuccessful. A 160 mg bolus of ketamine was only successful in relieving symptoms for 20 minutes before resumption of tachypnea and chest pain, and he was transferred to the ICU on a dexmedetomidine drip and stabilized on higher doses of alprazolam, without subsequent need for BiPAP or intubation. Patients presenting with severe alkalosis and hyperventilation require a comprehensive medical workup to rule out non-psychiatric etiologies. However, panic attacks can also result in significant respiratory distress, and thus should remain on the differential diagnosis, regardless of prior psychiatric history, as a potential cause of worsening respiratory status. When no clear medical etiology is found, however, and symptomatology remains refractory to anxiolytic therapy in the face of respiratory decompensation, the clinician is faced with a diagnostic and management dilemma. In this poster, we discuss the appropriate work-up for patients presenting with unprovoked respiratory distress as well as a stepwise approach to the management of severe anxiety attacks.

No. 110

Cannabis Hyperemesis Syndrome: Importance of Screening Underlying Psychiatric Illness

Poster Presenter: Hussain Abdullah
Co-Author: Alexander C. L. Lerman, M.D.

SUMMARY:

Cannabis hyperemesis (CHS) syndrome is characterized by chronic cannabis use, cyclic episodes of nausea and vomiting and the learned

behavior of hot showers (1). Cannabis is the most commonly used illicit drug in the United States (2), but there are limited reported cases of CHS. Since most of the symptoms overlap, it is important to differentiate cyclic vomiting syndrome (CVS) from CHS with formal psychiatric evaluation for adequate management. This case report will focus on pharmacologic management of such a presentation, proposed pathophysiology of CHS and significance of formal psychiatric evaluation, for anxiety related disorders, before making CHS diagnosis. Mr. Z is 29-year-old male with no prior documented psychiatric and medical history other than three hospitalizations in the past year for consecutive episodes of intractable vomiting in the absence of any identifiable pathology. Mr. Z presented to the emergency room with nausea for the last three days followed by vomiting for a day. Inpatient medicine service consulted psychiatry on second day of hospitalization for the potential use of sedatives, like benzodiazepines, as patient was not responding to conventional anti-emetic treatment as promethazine and ondansetron. Mr. Z is an active user of marijuana for past six years and smokes a blunt almost every other day, denies cigarette smoking and alcohol consumption and use of any other illicit drugs. On further evaluation patient requested to talk private as absence of his mother. Mr. Z reported feeling anxious for the past year in context of "coming out of closet" and fear of expressing his sexual orientation to family. Mr. Z was started on lorazepam 1 mg IV every 6 hour for treatment of restlessness and to provide sedation along with Haloperidol 2.5 mg every 12 hours as per need for nausea and irritability. Haldol was selected as adjunct treatment. Dopamine D2 receptors are present with in the chemoreceptor trigger zone and their blockade can decrease input to the medullary vomiting center, therefore decreasing nausea and vomiting. The acute effects of THC can induce anxiety via effects on CB1 receptors in amygdala. The anti-emetic properties of THC are potentially dose dependent with high doses triggering emesis as shown in the animal models. Mr. Z responded well with resolution of vomiting and nausea on day three. CHS share overlapping symptoms with CVS and it is important to formally evaluate patient for any underlying psychiatric illness before diagnosing with CHS. The acute management remains the same but earlier use of anxiolytic and dopamine antagonist can minimize the length of stay and health care cost. Psychiatry follow-up with treatment and discontinuing cannabis use can help prevent the relapse.

No. 111

Neural Correlates of Deception: Current Advances and Future Perspectives

Poster Presenter: Hussain Abdullah
Co-Author: Alexander C. L. Lerman, M.D.

SUMMARY:

Deception is a complex phenomenon that involves psychological and social engagement where the deception executor implants a thought in mind of another person in a manner that one accepts what executor knows as not true. Biologically, deception is a cognitive process and involves executive system of the brain. Successful execution depends on executive functions including but not limited to decision making, risk taking, cognitive control and reward processing. As for the execution of any other intricate action, brain's executive system is merely involved to infer deception but not unique to it. Hence while framing and understanding neurobiology of deception, it is important to consider that any single biological response may not predict it, perhaps combination of indirect markers of complex neuro-circuits involved in the deception could help measure it indirectly. Deceptive behavior requires coordination and organization between sets of cognitive processes as cognitive inhibition and inhibitory control; attention control and working memory; planning and problem solving and reasoning. For ages, man has been trying to find ways to identify the clues linked to the deceptive behavior which are valid and accurate. The change in the human behavior, including non-verbal cues as physical expressions, body posture and pitch of the voice associated with lying has been extensively studied and utilized as deception measurement tools. In the past decade or so, there has been significant advancement in the imaging technologies. Such imaging modalities, including functional magnetic resonance imaging (fMRI) and positron emission topography (PET) scans, has been used extensively to trace neural correlates of deception. The principal area implicated in the executive

function is prefrontal cortex (PFC) of the brain, although there are convincing evidences that PFC alone is rather sensitive but not specific to deception. Studies have also reported anterior cingulate cortex (ACC) involvement in deception. Both the PFC and ACC are relatively large cortical regions and dorsolateral and ventro-lateral PFC are reported to be involved in maintenance and manipulation of information. Sub regions of ACC as dorsal and rostral-ventral regions are thought to be involved in cognitive and affective processing. But there is lack of evidence regarding deception related brain activity being localized and specific to them. The implications of neurobiology of deception can serve psychiatric practice, forensics and criminal law. The potential benefits include understanding the neurological processes involved in non-disclosing patients in the psychiatric practice and significant implications for judicial system in developing non-invasive methods serving interrogation for law enforcement and anti-terrorism programs. But the challenge, as with the conventional methods, remains there in terms of reliability and specificity of findings even with advanced imaging modalities.

No. 112

Neuropsychiatric Manifestations of Immunosuppressants: A Case Report of Tacrolimus Induced Catatonia in a Liver Transplant Recipient?

Poster Presenter: Lauren Davis, M.D.
Co-Author: Samidha Tripathi, M.D.

SUMMARY:
Neuropsychiatric manifestations resulting from organ transplantation have various etiologies. These may result from infections, metabolic or neurological complications, vitamin deficiencies, substance withdrawal, or medications such as immunosuppressive agents. Liver transplant recipients experience the highest rates of neuropsychiatric symptoms throughout various phases of the transplant process with estimates as high as 20-40% (1). Symptoms include delirium, akinetic mutism, posterior reversible encephalopathy syndrome (PRES), seizures, and catatonia (2). Identification and management of catatonia immediately postoperatively can be challenging considering the overlap of symptoms with delirium. We present the case of a middle-aged man who exhibited catatonic features six years post-transplant. This case will highlight the importance of monitoring for neuropsychiatric manifestations and drug-drug interactions in organ transplant recipients receiving the immunosuppressant tacrolimus.

No. 113

Moving Toward an Evidence-Based Protocol for Electroconvulsive Therapy

Poster Presenter: Jordan Emerson Stone, M.D.

SUMMARY: Objective: To suggest an evidence-based ECT treatment protocol that improves on variability within the current standard of care in the United States. Background: ECT has proven efficacy in the treatment of acute mood disorders, and there is growing evidence for its use as a maintenance treatment. However, there is substantial variation in the administration of ECT in terms of electrode placement, pulse width, utilization of stimulus dose titration, and frequency/duration of continuation and maintenance phase treatment. This leads to confusion in terms of best-practice and is problematic as patients transfer between institutions and clinicians. Protocolization is a potential method to address these discrepancies. Methods: PubMed literature review of English-language journal articles on ECT efficacy, technique, electrode placement, charge variables, seizure threshold differences, and treatment course, including index treatment and continuation/maintenance. Results: There is a large amount of heterogeneity in variables of ECT treatment between institutions, and even individual ECT practitioners. Conclusions: The current standard of ECT treatment delivery is highly variable. A feasible evidence-based ECT protocol is introduced that could lead to improved standard of care for patients, and strengths and weaknesses of such an approach are discussed.

No. 114

The Perfect Mimic: Factitious Disorder Posing as Hereditary Type III Angioedema

Poster Presenter: Marissa Witt-Doerring, M.D.
Co-Authors: Omar Ali, B.S., Ranjit Chacko, M.D.

SUMMARY:

A 36-year-old Caucasian female is undergoing treatment for angioedema crisis on an internal medicine service. She reported an atypical history of type III Hereditary Angioedema in 2009 followed by severe, recurrent angioedema crises resulting in frequent hospitalizations, intubations with ventilator requirements (over 20 according to the patient) and eventually tracheostomy placement. The patient also carries a history of recurrent deep vein thromboses and pulmonary embolisms resulting in chronic anticoagulation. She currently has a permanent pacemaker after several unsuccessful cardiac ablations for chronic atrial fibrillation in the setting of frequent episodes of endocarditis and bacteremia. The psychiatry consult-liaison service was consulted to explore the possibility of feigned symptoms when her reported angioedema crises persisted in an atypical pattern (only during night shift, beyond expected duration) despite adequate treatment. Confirmation of the primary team's suspicions of factitious disorder imposed on self was possible through a coordinated review of medical records from local hospitals and clinics combined with discussions with patient's past and current treatment providers. Hereditary Angioedema (HAE) is a rare condition that presents with recurrent episodes of angioedema affecting the skin, gastrointestinal tract, and upper airways without associated urticaria or pruritus. Type III HAE, unlike the more common types I and II, is not associated with any diagnostic biomarkers. It is a clinical diagnosis; the only objective signs such as bowel wall inflammation and/or laryngeal edema can be identified during acute crises. This patient made repeated complaints of ongoing paroxysms of upper airway tightness and chronic epigastric pain leading to her original diagnosis. Despite, multiple upper airway scopes and gastrointestinal imaging, no signs of angioedema were ever found. It is challenging to differentiate true type III HAE from those seeking to falsify symptoms. The inability to make this distinction can unnecessarily expose the patient to invasive procedures and treatments with significant side effects. Similar case reports have been described, underscoring a consideration of factitious angioedema for any case of refractory type III HAE. Through this patient's longitudinal history, we reflect on the challenges in the diagnosis of factitious disorder and address its severe iatrogenic sequelae. Furthermore, we will discuss the importance of interdisciplinary education in the recognition and treatment approach to factitious disorders.

No. 115

Don't Let the Bad Bugs Bite

Poster Presenter: Amit M. Mistry, M.D.
Co-Authors: Andrew Paul Waller, M.D., Irina V. Baranskaya, M.D.

SUMMARY:
Background: Delusional parasitosis is categorized as a somatic-type delusional disorder in which patients incorrectly believe they are infested with "bugs" including parasites, insects, or other organisms. Despite thorough evaluation by primary care, dermatologists, and other healthcare professionals, afflicted patients report formication or the sensation resembling bugs crawling on or under their skin. Patients are resistant to psychiatry involvement for the disconnection from reality but typically patients present for management of the associated psychological distress. Clinical case: Ms. M is a 70 year-old female with history of major depressive disorder, hypothyroidism, degenerative disc disease with neuropathy, and significant childhood trauma. Ms. M's mood was well controlled with bupropion and escitalopram for several years. She was referred to psychiatry one year after an initial onset of anxiety which had started after the passing of her pet dog presenting with a bug infestation of her home and sensation of bugs burrowing under her skin. She continues to report bug infestation in her home and under her skin despite three pest control sprayings at her home, two treatments with ivermectin from primary care, and dermatology evaluation including biopsy. Even though the two entomologists she consulted were unable to identify the organisms, she explains that eradication of the bugs is difficult due to their unique five-stage lifecycle. Ms. M complains of anxiety characterized by worrisome thoughts, trouble sleeping, and the continued perception that she "cannot get another dog until this problem has been addressed". Trials of several atypical antipsychotics including olanzapine, risperidone, and aripiprazole were ineffective due to her reports of dyspnea leading to self-discontinuation of the medications. Over the course of several rapport-building visits she is eventually

agreeable to a trial of haloperidol. Ms. M tolerates haloperidol well with minimal side effects and in subsequent visits reports that the "bugs are reduced" which she attributes to a new home cleaning method with salt. Discussion: This case demonstrates a classic presentation of delusional parasitosis in which patients often present to primary care or dermatology and are resistant to a psychiatric explanation for the symptoms. Improved awareness of the illness combined with good rapport and early involvement of psychiatry are the cornerstones of management for delusional parasitosis.

No. 116

Factitious Disorder Comorbid With Psychosis: A Case Presentation

Poster Presenter: Nekpen Sharon Ekure, M.B.B.S.
Co-Authors: Lioubov Leontieva, M.D., Ph.D., Elizabeth Akua Apraku, Mitchell Dean Arnovitz

SUMMARY:

Background: Factitious disorder is characterized by repeated healthcare shopping for unconfirmed medical, and or psychiatric conditions solely with the intention of assuming the sick role. One estimate puts the approximate cost of FD on the United States healthcare delivery system at about $40 million dollars annually. It is frequently co-morbid with the history of trauma and unprocessed emotional pain that unconsciously expressed as physical symptoms and a cry for emotional attention from the others. Thus, psychotherapy is very important as part of treatment along with not ordering invasive investigations and tests. The exaggerated healthcare-seeking behavior is sometimes so extreme as to expose the patient to considerable risk. Method: We report a case of a 25-year old woman with a recent history of physical aggression towards her parents in response to not getting what she wanted from them, who since the age of 14 has gone through several hospitals, and even hospice care seeking investigation and treatment for multiple medical conditions including autoimmune encephalitis, brain shunt placement, a PEG tube placement, all teeth removal, diagnosis of diabetes with insulin treatment, and a claim of having 44 different cancers. All laboratory and imaging studies of the brain were normal. Psychological testing revealed a borderline IQ of 77, which could account for rigid defenses and cognitive rigidity. Patient was not re-started on opioids and benzodiazepines which could have accounted for bowel paresis and a need of PEG tube placement in the past. The patient's family dynamic was marked by medicalization of her suffering rather than understanding the psychological mechanisms of her symptoms. The patient revealed a history of being abused by her father, which could have explained her regressed behavior and factitious symptoms. Results: The patient was diagnosed with factitious disorder comorbid with psychosis. Symptoms of psychosis were stabilized with low dose haloperidol; a discontinuation of unnecessary somatic medications led to physical improvement; the patient gained 12 pounds by eating through the mouth. However the patient and her family insisted her symptoms were medical in nature. Conclusion: This case highlights the complexities involved in the diagnosis and management of factitious disorder and recommends areas for further research.

No. 117

A Case of Conversion Disorder

Poster Presenter: Olalekan Olaolu, M.B.B.S., M.P.H.
Co-Authors: Karthik Reddy Cherukupally, M.D., M.P.H., Carolina D. Nisenoff, M.D., Adesanmi A. Ojo, Alexander Maksymenko, M.D., Peterson Rabel, M.D., Susmita Khadka, M.D., Ayesha Mahbub, M.B.B.S., Olusegun Adebisi Popoola, M.D., M.P.H.

SUMMARY:

Introduction: Conversion disorder is characterized by prevalence of neurological symptoms that cannot be explained by a neurological disease or other medical condition. Symptoms include weakness or paralysis, abnormal movements, and non-epileptic seizures. Due to the peculiar nature of this disorder, management can be painstaking, prolonged, and expensive. Clinical Presentation: We present a case of a 27-year-old Caucasian female with no known history of mental illness who was brought in by the EMS as an emotionally disturbed person causing disruption in the neighborhood. Patient presented with upper limbs muscle weakness, neurogenic bladder, and was adept at self-catheterization. She was admitted to the inpatient unit with a diagnosis of unspecified psychosis likely secondary to

traumatic brain injury and co-morbid seizure disorder. During admission, patient was managed by multiple specialties including medicine, orthopedics, and neurology involving several laboratory investigations, physical examinations, and imaging studies without findings supporting the neurological symptoms at presentation. Patient received mood stabilizers, anxiolytics, muscle relaxants, anticonvulsants, and an antipsychotic. After 2 weeks of inpatient admission, the reason for secondary gain together with significant history were discovered through collateral information. The details revealed the absence of a traumatic brain injury in the patient's past. Prior to discharge, anticonvulsants were discontinued, patient regained bladder control, full power and muscle tone in the upper limbs, and was able to move her lower limbs voluntarily. Discussion: The treatment of Conversion disorder is vital during the initial stage of patient admission to prevent extensive workup. Our patient has been admitted to many hospitals, has undergone many invasive tests and was on intermittent bladder catheterization which could have serious complications. Exploring the motive for secondary gain and underlying psychosocial factors with the patient are very useful pointers in the management of conversion disorder.

No. 118

"Don't Close the Door": A Tale of Anxiety

Poster Presenter: Sohail Imran Mohammad, M.D., M.P.H.

SUMMARY:

Somatic Symptom and Related Disorders (formerly Somatoform Disorders) comprise of disorders that are unified by the presence of physical symptoms and/or excessive concern regarding medical illnesses or symptoms. The DSM – 5 has shifted the emphasis on the absence of a medical explanation serving as an organizing principle for these disorders and instead focused on the associated distressing somatic symptoms and abnormal thoughts, feelings, and behaviors. The DSM – 5 Somatic Symptoms Disorders Work Group concluded that incorporating affective, cognitive, and behavioral components into the criteria improves the validity and clinical utility of the diagnostic criteria. With this change, individuals formerly diagnosed as Hypochondriasis will now be diagnosed as Somatic Symptom Disorder (for those with somatic symptoms) and Illness Anxiety Disorder (primarily an illness anxiety in the absence of somatic symptoms). The patient in this clinical case presentation has classic preoccupation with having or acquiring a serious and undiagnosed medical condition, and associated anxiety that is clearly excessive and disproportionate, affecting her quality of life and occupational and social functioning. The case highlights the typical presentation of Illness Anxiety Disorder and attempts to draw attention on the need for accurate diagnosis to offer the right management strategies including psychotherapy and pharmacotherapy. Ms. X is a 52-year-old African American female with chief complaint, "don't close the door". She is married but separated and is living with her sister and son. She has 12th grade education and is currently unemployed. On her initial visit she was apprehensive and insisted on keeping the door open. She takes her time to scan the environment and then sits on a chair and said, "you don't know me". She continues, "lot of things going on at home, with kids, people don't want to hear my opinion, my daughter get mad as I don't want to go out". She said, "At night time, I might get sick or something, so I sleep at day time….. as soon as day breaks up I go to bed….. [and then] up all night". She said she is afraid she might die and has been having these thoughts and feelings for "long time since I had heart attack, since 2009". Her reason for separation from her husband is "because I am not having sex and have a heart attack" and that she married him, so he can watch him "at night time, I might get sick or something, so I sleep at day time….so people can watch me". He maladaptive behaviors include: 1) keeping doors open – particularly bathroom door, 2) isolating, 3) not venturing out of home except for doctor's appointments, 4) multiple phones, at least five cell phones, 5) staying closer to hospitals, and 6) sleep-wake reversal to counter her intrusive thoughts of serious medical illness & death.

No. 119

Meditation-Induced Psychosis?

Poster Presenter: Geoffrey Talis, M.D.

SUMMARY:

The neurobiology and neurophysiology of meditation continues to be explored with the help of the functional MRI. Meditation is practiced by diverse groups of people with various cultural backgrounds, religious beliefs, used for various purposes to reduce stress and to generally improve a sense of well-being. This is a case-study looking at the presentation of a 22 year-old female who states she has “opened her third eye” through the practice of Kundalini meditation. This young woman reports that she progressed through the stages of Kundalini practice far too rapidly, without the appropriate supervision and “caused damage to my [the patient’s] structure.” The patient began to progressively experience involuntary jaw movements, shooting electrical sensations in her neck and jaw, and significant slowing of her movements. The patient’s condition with her mandible became so severe that the patient was no longer able to feed herself or walk around the house. The patient progressively deteriorated due to malnutrition, while her parents fed her protein shakes at home and a pureed diet to sustain her. The patient visited the ED multiple times for this same reported condition and received a complete medical and physical work-up, which was only significant for signs of malnutrition, fixation on the mandibular complaint, and psychomotor retardation. This case report has a few aims. One aim is to remind healthcare professionals the importance of being able to elicit information from the patient and the patient’s family, regardless of how different their cultural beliefs or practices may deviate from conventional, Western science. The other aim is to examine what meditation does to the neurophysiology of the brain and if there are indeed considerations to be made in treating a psychotic disorder through the same means of potentially developing one.

No. 120

Rethinking Restrictive Eating Disorders and Enhancing Treatment Modalities: Case Report and Literature Review

Poster Presenter: Rebecca Olufade, M.D.
Co-Author: Walter J. Kilpatrick III, D.O.

SUMMARY:

Introduction: Eating disorders are continually evolving, and remain difficult to treat. The following case reports highlight the multifaceted nature of this illness. These patients often require enhanced clinical treatment. Existing pharmacologic and psychotherapy based treatment options have shown limited efficacy. Though not utilized in the following case, could neuromodulation-based approaches such as transcranial magnetic stimulation be effective treatment modalities for this patient population? Case Report: Anorexia nervosa, restrictive type in the medical inpatient setting: A 26-year-old female with history of depression, anxiety, OCD, borderline personality disorder, IBS, and anorexia nervosa presented to the emergency department following evaluation by mobile crisis team in the setting of increased depression and suicidal ideation. She spent five weeks in the hospital. Ethics consultation service was involved, supporting the placement of a feeding tube despite her incapacitated refusal. Patient was ultimately transferred to an inpatient eating disorder unit. Discussion: Functional MRI has advanced our understanding of the neural differences that exist in patients with disordered eating behavior. Studies have revealed that different areas of the brain are affected in this psychiatric condition, primarily ventral and dorsal circuits regulating emotion. Overactive ‘top-down’ processes involving the dorsal circuit may lead to excessive regulation and self-control, thus contributing to behaviors such as food restriction (McClelland, Bozhilova, Campbell, and Schmidt, 2013). McClelland et al. (2013) postulate the benefits of neuromodulation when coupled with current therapeutic interventions.

No. 121

Developing an Outpatient Unit for Patients With Severe and Enduring Anorexia Nervosa

Poster Presenter: Jaana T. Suokas, M.D.

SUMMARY:

Pisara is a new outpatient unit for patients with severe and enduring anorexia nervosa at the HUS Helsinki University Hospital eating disorders unit in Helsinki, Finland. The treatment is flexible and patient-centered and focus on improving quality of life. It was founded in May 2017 and it is the first of its kind in Finland. Also to knowledge, one of the first

in Europe. The first 14 months at the Pisara unit will be described based on patient statistics as well as clinical experience. Patients with an illness duration of at least ten years, who previously have received specialized treatment for their eating disorder at least three times, can be treated at Pisara. Patients must be physically stable with a BMI > 12. The treatment aims to enhance quality of life, maintain somatic stability, and minimize harm in the presence of anorexia nervosa. During the first 14 months, 15 patients were referred to Pisara and all were women. Four patients were referred to other types of treatment based on their referral. Eleven patients came to Pisara for an evaluation, their ages ranged from 26 to 51 years (M = 36.54, SD = 7.06). After the evaluation, four patients were referred to other types of treatment. After the evaluation, individual treatment goals are set in collaboration with the patient. In treatment case management, specialist supportive clinical management, medical safety monitoring and cognitive behavioral therapy are used. Benefits and possible challenges of the treatment model will be reviewed. The treatment setting is flexible and includes video and phone sessions, as well as sessions in the patient's own environment. Contraindications for treatment include substance abuse, acute self-harm, severe personality disorders, and other severe psychiatric comorbidities.

No. 122

Case-Specific Flexible Delivery Schedule of Olanzapine to Successfully Treat Otherwise Treatment-Resistant Anorexia Nervosa

Poster Presenter: Gezel Saheli, M.D.
Co-Author: Nina Michelle Axiotakis

SUMMARY:
Olanzapine is a relatively well-explored medical treatment for anorexia nervosa as a once-daily dose before bedtime. It has been found to increase appetite and promote weight gain through its anti-histaminergic activity, suppress agitation through its anti-dopaminergic activity, as well as treat many common comorbidities of the disorder. This case report explores a novel approach to the dosing schedule of olanzapine in a treatment-resistant patient. Miss P. is a 26 year old white female with a past psychiatric history of major depressive disorder with attempted suicide, obsessive-compulsive disorder, and anorexia nervosa who presented to the ED for increasing frequency of binging and purging, up to 6-10 times daily. She was severely underweight and was admitted to the inpatient psychiatry service where she was initially started on a once-daily dose of olanzapine with 1:1 observation for 2 hours post-meal to prevent the stimulation of purging. However, it was noted that the patient was able to vomit shortly after eating without needing to use her fingers to induce herself, and therefore was not gaining weight. She was switched to 5 mg of olanzapine 30 minutes before each of three meals daily after which her episodes of vomiting decreased and then remitted entirely, she reported diminished feelings of euphoria after binging, and her weight dramatically increased. In this poster, we explore the potential benefits and unresolved questions regarding case-specific flexible dosing schedules of olanzapine for treatment-resistant anorexia nervosa.

No. 123

The Diagnostic Penumbra Between Anorexia Nervosa and Body Dysmorphic Disorder: A Case Report

Poster Presenter: Eric Zabriskie
Co-Author: Lioubov Leontieva, M.D., Ph.D.

SUMMARY:
BACKGROUND: A common feature between Body Dysmorphic Disorder (BDD) & Anorexia Nervosa (AN) is disturbed body image. People with AN fear appearing overweight even when they are underweight. People with BDD are preoccupied with their appearance, thinking that they look abnormal or deformed, when in fact they look normal. BDD, an Obsessive-Compulsive Spectrum Disorder, has a component of rituals that reduce the anxiety associated with the physical preoccupation. However, if the obsession is about the size of a body part and the ritual is food restriction, leading to a low BMI- is it appropriate to consider AN a subtype of BDD? The following case and discussion explore the crossover between these disorders. CASE REPORT: A 21-year-old woman with minimal psychiatric history presented to Upstate Hospital with suicidal ideation. Much of her distress revolved around body image issues, with obsessions focusing particularly on waist & arms. She feels obese with a

BMI of 19.5, which has been steadily decreasing. She stares in the mirror for hours, perceiving her waist & arms as obese. She restricts eating d/t her body image anxieties, and spends hours a day web-searching body images for comparison. Thus, she has features of an eating disorder: Believes she is fat when she is not; restricts food intake. She doesn't meet BMI criteria for AN, though it is trending down. She might be given a diagnosis of Other Specified Feeding and Eating Disorder, modified to Anorexia Nervosa if a BMI criterion is met. She also has features of BDD: She is preoccupied with the appearance of her waist & arms. She has anxiety reducing behaviors: Mirror checking, comparing, and restricting. Her preoccupation causes significant distress & functional impairment. BDD would be an equally viable diagnosis here. Because diagnosis dictates treatment, and effective treatment of an eating disorder differs substantially from BDD, this lack of diagnostic clarity is important. DISCUSSION: We review some of the similarities between BDD and AN, as well as their differences. The two disorders have some notable differences in demographics, pathophysiology of visual/perceptual disturbance, revealed through functional imaging studies, and in differing treatment responses. We also review the comorbidity rate between the disorders, noting that women with both disorders have been shown to be more severe, in the literature. CONCLUSION: These disorders overlap in intriguing ways, and in some cases are hard to differentiate such as in the patient presented in this report. The BDD exclusion criteria in DSM-V may lead clinicians to miss this dual diagnosis-once weight concerns are identified, as the clinician might not investigate further for other body image concerns to determine whether the additional diagnosis of BDD is appropriate. When BDD and AN co-occur, it's important to diagnose both of them because prior studies reveal women with both disorders are more severely ill than those with AN alone.

No. 124
WITHDRAWN

No. 125
Vampirism: Making of a Vegetarian
Poster Presenter: Madhusudan Patel
Co-Authors: Syed Mohyuddin, Jasir Nayati, Alan R. Hirsch, M.D.

SUMMARY:
Introduction: Vampire delusions have been described in psychiatric literature associated with schizophrenia [Jensen 2002][kayton 1974]. Residual vampire delusions, with change in diet converting to vegetarianism, has not heretofore been described. Such a case is presented. Methods: Case study: A 21 years-old, left-handed familial, male, presented with homicidal ideations and psychosis. He was manic, hyper-verbal, expressing that he was a vampire and, "Drinking blood rejuvenates my soul." He was arrested after an altercation with his brother in which the police stated that he wanted to take his brother to the woods and drink his blood. He drank blood according to a religion he created, in which he combined ideologies of many major religions. He keeps vials of his own blood for whenever he gets a craving and enjoys running in the woods at night, and has been found roaring in the street claiming to be a vampire. Results: Abnormalities in physical examination: General: bilateral palmar erythema, bilateral buccal mucosal scarring from biting. Neurological Examination: Mental Status Examination: Immediate Recall: 6 digits forward and 4 digits backward. Recent Recall: 0/4 objects in three minutes and 1/4 objects with reinforcement in three minutes. Cranial Nerve (CN) Examination: CN III: bilateral ptosis. CN IX, X: bilateral absent gag reflex.Motor Examination: Drift Testing: no evidence of pronator drift. Cerebellar examination: Bilateral dysmetria on heel to shin . Deep Tendon Reflexes: 0 throughout except Ankle jerk 1+ bilaterally. Hoffman Reflex: negative. Neuropsychological Testing: Go-No-Go Test: 6/6 (normal). Animal Fluency Test: 14 in one minute (abnormal). Clock Drawing Test: 3/4 (abnormal). Continuous performance paradigm: one error of omission. Repetition: 90%. Paired associate learning: 50%. New learning ability: Naming: colors, body parts, room objects, parts of objects: normal. Verbal calculations: 86%. Memory: no evidence of ideomotor or ideational apraxia. Number connection test: 29 (normal). Poppelreuter-gant's overlapping figures test: 4 (normal). Strub and black MSE: vocabulary 54% (abnormal). Higher cognitive functions: 47% (abnormal). Proverbs: 60% (abnormal). Similarities: 80% (normal). Judgment

testing: 100% (normal). Written mathematics: 50% (abnormal). Discussion: The conversion from drinking blood with vampirism to becoming a vegetarian may be a counter reaction to disgust of having hematophagia. Such a conversion may also be anticipated to be seen amongst people put in a state of cannibalism, as it occurs with acute states of food deprivation like plane crashes and other starvation situations. Over time, it is anticipated that such a defence mechanism may not persist. Similar, but less dramatic, precipitants for choosing a vegetarian lifestyle may exist among vegetarians; however, this has yet to be investigated. An investigation as to whether such precipitants function in nascent vegetarians is worthy of exploration.

No. 126

Utilizing University Student Health Services and Campus Resources for the Treatment of Eating Disorders

Poster Presenter: Aline Cenoz-Donati
Co-Author: Tracy L. Schillerstrom, M.D.

SUMMARY:
Mr. P is a 20-year-old Hispanic male attending a large state university who presents with worsening depression and anxiety to the University Student Counseling Center which provides both medication and counseling services. He has a psychiatric history of major depressive disorder (MDD), generalized anxiety disorder (GAD), and social anxiety disorder (SAD). Although he was treated as a child for these diagnoses, his treatment stopped at age 18 due to lack of insurance despite having inpatient psychiatric admissions. During the clinical interview, the patient also endorses obsessions with food, with weekly binge eating compulsions and calorie-restricting/avoidant behaviors. He is overweight with a BMI of >26. Although he had minimal treatment options in the community due to limited access to care, the university campus was able to provide a full range of biopsychosocial treatment options including medication management, therapy services, and fitness/nutritional/social resources. Patients with eating disorders often have complicated biopsychosocial needs. These issues are compounded in younger persons who often have no health insurance and limited access to care. However, this poster discusses the unique offerings of a university student health center that allows these students and patients to recover from these disorders which are often underdiagnosed, especially in males.

No. 127
WITHDRAWN

No. 128

Food and Mood: Pre-Operative Affective State and Postoperative Weight Loss

Poster Presenter: Raman Deep Krimpuri, M.D., M.B.A.
Co-Authors: Raman Marwaha, M.D., Amit Thour, M.B.B.S.

SUMMARY:
Bariatric surgery research has revealed mood state, particularly depression to be both a cause (emotional comfort eating) and a consequence (body image related self-dislike and self-criticism) of morbid obesity. Studies of pre-surgical depression reveal upwards of 40% of surgical patients have a lifetime history of major depression. Pre-surgical depressive disorder is associated with poorer outcome, higher probability of adverse events and can predict post-surgical depression. Present study evaluated the predictive value of psychological testing of depression, anxiety, anger and mood swings on bariatric outcome with particular emphasis on attempting to replicate the predictive ability of cognitive-affective symptoms on bariatric outcome. Subjects in this IRB approved study, were 220 patients who underwent psychological evaluation for bariatric surgery clearance in an inner city academic hospital. Their mean age was 44, 84% were female, 57% were minorities (49% African-American, 5% Hispanic and 3% Other), 43% were Caucasians and 71% received Roux-en-Y Gastric Bypass (26% gastric sleeve and 3% lap band). Bariatric affective state outcome predictor variables that were evaluated in the present study were depression (Beck Depression Inventory-II), anxiety (Beck Anxiety Inventory), anger (State-Trait Anger Expression Inventory) and mood swings (Mood Disorder Questionnaire). Cognitive-Affective items from the Beck Depression Inventory-II were selected from the study of Steer et. al. (1999). Post-operative

BMI was the outcome variable measured at one-year follow-up. A general linear regression model (controlling for age, race, gender and preoperative BMI) was used to conduct a comparative evaluation of potential affective state predictors of postoperative outcome. Results of the present study revealed that level of depression (total BDI-II score) was not a significant predictor of pre-operative or post-operative BMI but when test items were divided into cognitive-affective vs somatic symptoms, the cognitive-affective symptoms were significant predictors of BMI at 1 year after surgery. When all four tests of affective state were evaluated comparatively, the same results were found. Total depression score (BDI-II) was not a significant outcome predictor of pre-operative or post-operative BMI but when broken down into cognitive-affective vs somatic symptoms, the cognitive-affective symptoms were again predictive of bariatric patient BMI at one year after surgery. Patients with a BDI-II cognitive-affective symptom score under 10 had a better outcome (lower BMI) one year after surgery (M= 34.8) than patients with cognitive-affective symptom scores greater than or equal to 10 (M= 38.0), $t(216)= 1.935$, $p = 0.05$. Present evaluation of bariatric patient preoperative affective state (depression, anxiety, anger and mood swings) revealed that the cognitive-affective symptoms of depression appear to be promising predictors of bariatric surgery outcome.

No. 129

Frontotemporal Dementia, Alcohol-Induced, Is Presenting as Kleptomania

Poster Presenter: Nawfel Abdulameer, M.D.

SUMMARY:

Introduction: Alcohol is one of the drugs that is commonly used which induces a wide spectrum of effects on the Central Nervous System includes frontal lobes showing decreased frontal lobe glucose utilization, reduced blood flow and frontal lobe dysfunctions beside neuronal loss in superior frontal association cortex. Patients with collecting behavior had lesions in the prefrontal cortex. The literatures emphasize the hypothesis of primary frontal lobe damage in alcoholics, even in chronic alcoholics who appear clinically 'intact', because they present morphological abnormalities in the frontal lobes. Clinical case A 60-year-old Caucasian male who was admitted for fire setting and been stealing people' belongings. He has poor memory and struggles with personal hygiene. The urge of stealing had started couple of months ago. He had been able to maintain employment and complete ADLs prior to the death of his father. After his father's death, he began drinking heavily and daily. He was hospitalized for alcohol dependence and intoxication many time since his father's death. He subsequently was missing for more than a year and was found living in an abandoned building without electricity and water. His behavior and cognitive abilities have gradually declined as he exhibits memory impairment and difficulty with ADLs with noticeable social behaviors as he puts objects found on the ground into his mouth. Discussion The patient exhibits major neurocognitive disorder features per neuropsychology testing and has behavioral symptoms representative of Kleptomania. That said, it is difficult to know whether alcohol plays a role or frontotemporal syndrome most causative of deficits and behaviors. He endorses impulsivity, change personality and inhibition behavior. The patient exhibits these symptoms after he became a heavy alcoholic. The literature suggests that in clinical practice, tests for frontal lobe damage in alcoholics are seldom used. Thus, lesions in this area may well be overlooked. Kleptomania is an addictive form of impulse-control disorder from a neurologic perspective that reflects frontolimbic dysfunction. Epidemiological data suggest a relationship between kleptomania and substance use disorders with high rates in each direction. Conclusion The current case suggests that when an individual with history of alcohol use disorder present with kleptomania like picture, that fronto-temporal dementia should be suspected and appropriate work-up carried out.

No. 130

Two Cases of Traumatic Dementia Resembling FTD

Poster Presenter: Sung Il Woo
Co-Author: Mingyu Hwang

SUMMARY:

Introduction: Trauma related brain lesions are common and important cause of cognitive, emotional disturbances of modern people. Frontal and temporal lobes are the most commonly injured

brain regions in traffic and industrial accidents. We examined two cases of accident related frontotemporal damaged patients whose manifestations are similar to degenerative Frontotemporal dementia (FTD). We report here the cases in order to discuss the similarities and differences causing frontotemporal brain lesions by different mechanisms. Methods: Two cases were examined. Their clinical SSxs, neuropsychological test findings, and brain imaging findings were analyzed. Results: One patient is a male, 47 years old patient who shows frontotemporal brain injury. His main SSxs are personality change, memory disturbance, disinhibited behavior and difficulties in maintaining ADLs. The other patient is male, 54 year old patient who shows frontotemporal brain injury. His main SSxs are memory disturbance, disinhibited behavior and difficulties in maintaining ADLs. Conclusion: We confirmed that the location of brain lesions is the important factor of the similarity of clinical manifestations regardless of the mechanisms of the brain injury. We need to collect more patients to strengthen present findings.

No. 131

Differential Associations Between Volumes of Atrophic Cortical Brain Regions and Memory Performances in Mild Cognitive Impairment Patients

Poster Presenter: Min A. Ji
Co-Author: Dong Woo Kang

SUMMARY:

Background: Early and late mild cognitive impairment (MCI) patients have been reported to have a distinctive prognosis of converting to Alzheimer's disease. Objective: To explore the difference in gray matter volumes among healthy controls (HC) (n=37), early (n=30) and late mild cognitive impairment patients (n=35) and to evaluate a group by memory performances interaction for the gray matter volume. Methods: The difference of gray matter volume was evaluated by whole brain voxel-based morphometry, controlling age, gender, education and APOE genotype. The group by memory performances interaction for the gray matter volume was analyzed using multiple regression analysis. Results: The early MCI group showed a reduced gray matter volume in the right middle temporal gyrus compared with the HC group. The late MCI group displayed atrophy in right parahippocampal gyrus compared with the HC group. The late MCI exhibited a decreased gray matter volume in left fusiform gyrus compared with the early MCI group (Monte Carlo simulation corrected $p < 0.01$, Tukey post-hoc tests). Furthermore, an interaction between the HC and early MCI groups in the memory performances was shown in the cortical volume of the right middle temporal gyrus. The gray matter volume of the left fusiform gyrus showed an interaction between the early and late MCI groups in the memory performance ($p < 0.05$). Conclusions: Early and late MCI patients showed distinctive associations of gray matter volumes in compensatory brain regions with memory performances. Keywords: voxel-based morphometry, mild cognitive impairment, memory performance.

No. 132

Dementia and Clozapine Case Report

Poster Presenter: Ianna Hondros-McCarthy, D.O.
Co-Authors: Emily Ann Laurenzano, D.O., Walter J. Kilpatrick III, D.O.

SUMMARY:

According to the NIH, by 2030 there will be 8.5 million Americans with Alzheimer's Disease, the most common cause of dementia (Teodurescu, A). In certain populations of patients with dementia, up to 63% of patients experience delusions and up to 41% experience hallucinations (Kolaczkowski, M). Therefore clinicians are being called upon more and more to treat not only the disease itself, but its behavioral disturbance symptoms as well. While the atypical antipsychotics (especially risperidone and olanzapine) are commonly used, there is a growing body of literature looking at the use of clozapine when atypical antipsychotics aren't effective. A case reflecting this trend in the literature was a 76 year-old man with a diagnosis of dementia with behavioral disturbances and no known past psychiatric history, who was started on clozapine after many medication trials (including quetiapine, valproate, haloperidol and olanzapine). Clozapine managed his chronic behavioral and psychotic symptoms best (which included auditory and visual hallucinations, agitation, paranoia, anxiety, mood

instability and behavioral dysregulation). However, he reportedly had a seizure after being on clozapine for a couple months. He had no prior history of seizures, and clozapine is known for lowering seizure threshold. The dose was kept the same, with gabapentin and lacosamide added for seizure prophylaxis. Clozapine is not currently approved by the FDA for behavioral disturbances in dementia, yet there are growing numbers of case reports and cohort studies showing that it may have clinically significant efficacy. This presentation aims to review the current literature on the topic, the pathophysiology of psychotic symptoms in dementia, the mechanism in which clozapine affects that pathophysiology, and the potential side effects. As the use of clozapine for behavioral disturbances seen in dementia increases, it is important for clinicians to be aware of the benefits and risks of its use, and how to mitigate those risks. Methods: A thorough review of the literature on clozapine's use in people with dementia was conducted using PubMed, Cochrane Library Database, Embase, PsychINFO, CINAHL Complete, ClinicalTrials.gov, and Google Scholar. Results: Overall, clozapine has been shown to significantly alleviate psychotic symptoms in patients with dementia. However, the limitations to using it are not to be overlooked, such as increased mortality, barriers to treatment due to significant blood monitoring for neutropenia, and other adverse side effects including sedation, drooling, orthostatic hypotension and dizziness. Conclusions: Clozapine therapy seems to be beneficial when patients with behavioral disturbances in the setting of dementia are resistant to treatment with atypical antipsychotics. However, more studies are needed to confer safety as far as side effects of clozapine being more prevalent in the elderly, the population most often diagnosed with dementia.

No. 133

Traumatic Brain Injury With Violence: Case Series

Poster Presenter: Alejandra Sara Cattan, M.D.
Co-Authors: Mohamed H. Eldefrawi, M.D., Neda Motamedi

SUMMARY:

Traumatic brain injury represents a leading cause of morbidity and mortality worldwide. Boxer and mixed martial arts (MMA) fighters have repetitive cranial trauma. Twenty percent of professional boxers have Chronic traumatic brain injury (CTBI). These injuries are also commonly seen in regular gyms as well as in children. It is only recently that the sequelae of such injuries are being discussed hence the importance for neuropsychiatry to try and consistently characterize the consequences of such sports activities in order to educate society on the real risks on the central nervous system. Someone with CTE (chronic traumatic encephalopathy) will exhibit varied combinations of motor, cognitive and behavioral alterations. The diagnosis of CTE depends on documenting progressive encephalopathy that is consistent with the clinical symptoms of TBI explained by brain trauma rather than being attributable to an alternative pathophysiological process. Risk factors classically related to CTE include frequency of repeated exposure (career length , total number of fights, retirement age), technical supervision intensity ,sparring increase and Apo-lipoprotein genotype (APOE). Dementia pugilistica has been included among the acquired tauopathies , but the pathophysiology of CTE is still under scrutiny . Although it has been suggested that neuroinflammation can drive the association between tau hyper phosphorylation and dementia development following traumatic brain injury . We will be presenting 4 cases of Dementia with TBI evaluated in the Emergency Department (ED) and admitted to the inpatient psychiatric service. Three out of the four subjects were boxers and last case was a patient that had jumped out of a 8th story window. Case 1: This is a 52 year old African American male, former boxer, that presented to the ED with a seizure episode on top of chronic, progressive cognitive deficits. When agitated, he would throw punches and assaulted medical staff and eventually transferred to inpatient psychiatric unit. Case 2: Here we have an 80 year old Hispanic male , former boxer , residing in a nursing home, who presented to ED after attempting to rape his daughter, thinking she was his wife. There were also reports that he was sexually inappropriate with female nurses at the Geriatric institution. Case 3: A 55 year old Hispanic- male also a former boxer with history of seizure disorder who presented to the ED with aggressive behavior and paranoid delusions. Case 4: A 57 year old African American female with a

history of schizophrenia, living with her daughter was brought to the ED after threatening to hurt herself. She had a history of jumping from a 7th story window of her apartment. Conclusion: Given the frequency of TBI among adults and child/ adolescents alike, it is imperative that neuropsychiatrists understand the potential consequences of such sports activities to better educate society on the real risks to the central nervous system.

No. 134

When All Signs Point to Tardive Dyskinesia

Poster Presenter: Kathleen DeWyke, M.D.
Co-Author: Rehan A. Malik, M.D.

SUMMARY:

Here we report a case of HD with no family history reported to have inherited the Disease : A 59-year-old Pakistani male with no PMH presented to ED by EMS after being found wondering the streets in Elizabeth, NJ. Patient appeared confused, disorganized, and presented with what was thought as altered mental status (AMS)– speech fragmented, stating only that he "lived far away". Patient was admitted after ED evaluation for AMS. Further search into the patient's social history revealed time served at Riker's Island Maximum Security Prison, as well as Kirby Psychiatric Facility. As per Kirby's records in 2011 patient displayed "intermittent disorganized thinking, with slow and halting patterns, alert and oriented, but with blunted affect". While at Kirby Psychiatric facility patient was treated with Haldol (1mg titrated up to 10mg D), in which he later developed suicidal thoughts. He was then started on Escitalopram, inclusive of a trial of Aripiprazole 15mg D. The patient's past medication history was of importance, as the patient displayed what was initially thought to be Tardive Dyskinesia as patient exhibited involuntary movements. Family history was not significant for any form of neurocognitive disorders. Physical exam of significance included repetitive mouth movements and B/L spontaneous movement of limbs, choreiform in nature. Simple sentences were somewhat dysarthric, with the remaining Neurological exam intact. Laboratory findings including MRI and CT imaging remained unremarkable during his course of hospital stay. Furthermore, CBC, CMP, CRP, ESR, B12, Ammonia, TSH were all within normal limits. In addition, Tylenol, Salicylate levels, UDS, Blood/Urine cultures, ETOH level, rapid HIV all negative. UA was negative except for trace ketones. CPK was initially increased at 429, but trended down to 191 next day. Last, RPR was non-reactive. Of question, did this patient exhibit in fact Tardive dyskinesia status post Psychiatric care or could these findings be Neurodegenerative in nature? Psychiatry and Neurology were consulted. Patient was empirically started on Haldol 0.5mg TID – with presumptive diagnosis of Huntington's. The patient's chorea over the course of hospital stay dramatically improved with Haldol, furthermore increasing the suspicion of Huntington Disease. Confirmation of HD was performed with analysis for CAG repeats via PCR. It was then concluded that the patient did indeed carry the allele with 46 repeats. Although a family history of Huntington's Disease was not evident, the patient displayed full penetrance of the gene. Patient was informed of his diagnosis and told to follow up with Neurology for subsequent monitoring and treatment. HD without family history of genetic susceptibly may often be over shadowed by psychotropic medication trials and misdiagnosed as Tardive Dykinesia. This case highlights the importance of exploring rare possible causes of involuntary movements even despite significant family history.

No. 135

Early-Onset Dementia With Urinary Incontinence and Abnormal Gait: Could It Be Normal Pressure Hydrocephalus?

Poster Presenter: Rachel Kossack, M.D.
Co-Authors: Ahmad Jilani, Asghar Hossain, M.D.

SUMMARY:

Normal pressure hydrocephalus is often a difficult diagnosis to make. It is characterized by the triad of abnormal gait, urinary incontinence, and dementia. On CT scan or MRI abnormally enlarged ventricles may be seen [1], while the CSF tap test may show slightly elevated or even normal pressure. Diagnosis is especially challenging when atypical or incomplete picture exists. In such cases, brain MRI and tap test are valuable tools in assisting with the diagnosis [2]. It is important to diagnose normal pressure

hydrocephalus promptly since it is a potentially reversible condition. Here we discuss the case of a 44 year old female who presents with early-onset dementia, abnormal gait and urinary incontinence, with ventriculomegaly seen on head CT scan.

No. 136

A Case of Amantadine Induced Hypersexuality in a Patient With Anoxic Brain Injury

Poster Presenter: Xiaojing Shi, M.D.
Co-Authors: Chun Man Tong, M.D., Nissan Frager, Mary Kelleher

SUMMARY:

Introduction: Amantadine, first approved by the FDA in 1966 as an anti-influenza drug, is well-known for its role in the treatment of Parkinson disease (PD) and drug-induced extrapyramidal syndrome.1 Research also showed amantadine accelerated the pace of functional recovery in patients with post-traumatic disorders of consciousness 2 and improved motor and cognitive functions in anoxic brain injury patient.3 Adverse effects of amantadine on the CNS include nervousness, anxiety, agitation, insomnia, difficulty in concentrating, and exacerbations of pre-existing seizure disorders and psychiatric symptoms in patients with schizophrenia or Parkinson's disease. These adverse effects are thought to be associated with amantadine's dopaminergic, adrenergic, and to a lesser extent its anticholinergic activity in the central nervous system.1 We present a case of amantadine-induced hypersexuality in a patient with anoxic brain injury -- an uncommon and relatively unknown side effect. Case report: The patient is a 54 y.o. male with a past psychiatric history of alcohol use disorder and a past medical history of anoxic brain injury secondary to cardiac arrest in 2017, who was sent from Kessler for AMS and agitation.The patient presented disorganized, confused and disoriented to place and time, and he needed frequent redirection during the interview. Speech was slurred and thought process was disorganized, with poor attention, concentration and poor remote and recent memory. During the hospitalization, he was started on Seroquel titrated to 75mg at bedtime, which helped with sleep and agitation. The patient was less agitated but remained disoriented and confused. Amantadine 50 mg TID was added to accelerate functional recovery after anoxic brain injury. But the patient became sexually preoccupied after amantadine was started. He became very impulsive and tried to touch the female sitter's breast. He freely masturbated and removed all his clothes, requiring multiple people to redirect him. The patient's inappropriate sexual behavior stopped when amantadine was discontinued suggesting a drug-induced cause. Discussion: While the exact mechanism of action is not well understood, the hypersexuality could be related to amantadine's dopaminergic effect. There also have been studies showing amantadine use in rats, acutely and chronically, increases sexual behavior.4 Human studies are limited. Even more relevant is the fact that amantadine has been shown to help treat sexual dysfunction associated with SSRI usage 5. Patient with anoxic brain injury might be more vulnerable to amantadine's sexual side effects because of their baseline increased impulsivity and decreased inhibition. Conclusion: Clinicians need to be aware of hypersexuality as a possible side effect of amantadine, and recognize any such behavioral changes in patients with anoxic brain injury.

No. 137

Sex, Drugs, and Frontal Lobe Lesions: Two Cases of Risky Behaviors From Chronic Brain Infarcts

Poster Presenter: Emily Elizabeth Haas, M.D.
Co-Authors: Danae Nicole DiRocco, M.D., Anique K. Forrester, M.D.

SUMMARY:

Left frontal lobe brain infarcts can produce a variety of neurologic changes including motor weakness, speech and language deficits, executive dysfunction, and personality and behavior changes. Dysfunction of the frontal lobe can disrupt the inhibitory mechanisms of sexual behavior and risk taking resulting in non-compliance with socially accepted norms of behavior. We will describe two cases of chronic frontal lobe infarcts in two middle-aged men with previously high function that resulted in inappropriate sexual behaviors, impulsivity, subsequent loss of employment, and impaired social functioning. These patients presented to the psychiatry consult service with gradual behavior changes over the past 1-2 years, but no significant neurologic deficits. In one instance, the patient had personality changes and sexual disinhibition

culminating in watching pornography on a government office computer and being fired from a top security clearance level job. He subsequently developed obsessive thinking about his transgressions leading to suicidal thoughts and his presentation to the trauma center after a self-inflicted gunshot wound to the hand in an aborted suicide attempt. In the second case, an ex-physician presented to UMMC in cardiogenic shock with liver and kidney failure and was being evaluated for possible heart transplant when psychiatry was consulted to evaluate the patient's neurocognitive status. This patient had significant memory deficits and had been illegally practicing medicine despite having lost his license due to inappropriate prescribing. He had also been having sexual relations with women he was prescribing controlled substance medications to, resulting in the birth of a child. Brain imaging was recommended as part of the psychiatric evaluation of these patients. In both cases, magnetic resonance imaging demonstrated large left frontal lobe ex vacuo brain parenchyma loss consistent with chronic infarcts. These cases highlight the importance of brain imaging in psychiatric evaluations as neurologic deficits may be subtle or absent on exam despite large lesions.

No. 138

Frontotemporal Dementia Masquerading as Catatonia: A Case Report and Literature Review

Poster Presenter: Sonia Gera, D.O.
Co-Author: Kseniya Svyatets, D.O.

SUMMARY:

Introduction: Frontotemporal Dementia (FTD) is a progressive neurocognitive disorder marked by changes in language production, social cognition, and executive functioning. Current subsets of FTD include behavioral variant dementia (bvFTD), semantic dementia, and progressive nonfluent dementia. BvFTD is marked by decline in executive functioning, emotional reactivity, and interpersonal skills. Symptoms of stereotypies, mutism, echolalia seen in bvFTD can overlap with those of catatonia. We present a case of a male with symptoms of catatonia, found to have bvFTD and a literature review on the overlap of the two diagnoses. Case report: Mr. G was a 55 year old male, with a history of schizophrenia, on Abilify Maintena who was brought to the emergency department after he was found yelling incoherently in a bank. In the hospital, Mr. G had profound difficulty with speech production, and exhibited catalepsy, echolalia, and agitation. A diagnosis of Catatonia was made, and a Lorazepam trial was initiated, which did not result in an alleviation of symptoms. The psychiatric team then suspected that Mr. G was exhibiting symptoms of psychosis and Haldol was started without effect. Neurology was consulted, and a subsequent PET scan showed marked bilateral frontotemporal metabolism consistent with FTD. Discussion: Behavioral Variant FTD presents with a heterogeneity of symptoms, with significant overlap with catatonic sequelae. Prior MRI studies have demonstrated frontal dysfunction in patients with catatonia, suggesting neurological cause for overlap with FTD. Temporal progression can offer clues about the etiology of symptoms, as FTD is a progressive illness, while catatonic symptoms are of acute origin and fluctuating course. The Lorazepam challenge can serve as a diagnostic aid. We recommend consideration of neurocognitive disorder differentials in all patients in late middle age with new onset psychiatric symptoms.

No. 139

An Unusual Case of Progressive Supranuclear Palsy With Auditory Hallucinations

Poster Presenter: Dileep Sreedharan, D.O.

SUMMARY:

Progressive Supranuclear Palsy (PSP) is an uncommon neurodegenerative disease whose cardinal manifestations include vertical supranuclear gaze palsy, postural instability and falls, pseudobulbar palsy and parkinsonism. Neuropsychiatric symptoms of PSP frequently include personality changes, depression, behavioral disinhibition, apathy, impulsivity, sleep disturbances and primarily frontal lobe dysfunction. Overall, hallucinations and delusions are typically infrequent in PSP compared to Parkinson's Disease (PD).Visual hallucinations, when reported in PSP, predominate over auditory hallucinations. In this poster, we report an unusual case of PSP with auditory hallucinations. We encountered Ms. X, a 78 year old female, in our Consultation Psychiatry (CL) service when she was admitted to the trauma service due to

cervical fracture from a fall. Ms. X who was diagnosed with anxiety in the past developed initial PSP symptoms in her early 70's including some changes in her personality such as, per her family, uncharacteristically pulling out a drawer and not closing it or not hanging up her coat. She also started to report experiencing auditory hallucinations (AH). These "voices"were, at first, non-compelling. They then progressed to becoming aggressive and commanding in nature telling her to kill her husband. Due to the tormenting and incapacitating nature of the hallucinations, the patient was psychiatrically hospitalized. During this period patient was given multiple psychiatric diagnosis including Schizophrenia and Bipolar disorder. Around the same time patient also started to experience impaired balance, falls, hypophonia, and opthalmoplegia. After multiple neurologic evaluations, the patient was correctly given the diagnosis of PSP. The Neurology consultant noted that AH, which had progressed in severity to become threatening, persecutory and commanding, were extremely rare in PSP and suggested that a concomitant primary psychiatric illness was present. Multiple trials of neuroleptics including clozapine, did not provide significant relief from the AH. The voices continued to be almost constant, preoccupied the patient's attention, and caused her severe degrees of distress. The CL service was consulted to manage patient's AH and to manage the use of clozapine with which she was treated at the time. Based on our evaluation, we concluded that the probability of a late-onset schizophrenia with no previous signs or symptoms, starting in the context of neurodegenerative disorder was low. The patient's AH were better explained by PSP or a PSP variant. Our case is meaningful and unusual because the patient showed clear psychotic symptoms in her initial presentation prior to being diagnosed with a neurological disorder and was suspected to have a late onset primary psychiatric illness. Moreover, the importance of considering a neurologic disorder in patients presenting with atypical psychotic symptom is also highlighted in this case.

No. 140

Challenges in the Diagnosis and Treatment of Neurocognitive Disorders Presenting as Psychosis

Poster Presenter: Talya Shahal, M.D.

Co-Author: Samuel Wedes, M.D.

SUMMARY:

Ms. C is a 58 year old female with no past psychiatric history who was admitted to our mental health unit for bizarre paranoid and somatic delusions, and visual and auditory hallucinations such as seeing the walls moving and the floor detaching from them, and hearing electricity waves going through her body. As a result of her psychosis, she stopped showering and cooking, losing ten pounds in two months. She lost her job and became isolative. On assessment, she was euphoric, giggling inappropriately, and was noted to disrobe as she was concerned that someone was tampering with her body. The family had not noticed a cognitive decline, but an assessment using MOCA and EXIT-25 revealed cognitive impairment with deficits predominantly in executive function and delayed recall. MRI of the head demonstrated findings compatible with moderately extensive chronic microvascular ischemic changes. We diagnosed the patient with a major neurocognitive disorder (NCD), with differential diagnoses including vascular NCD with behavioral disturbances vs. frontotemporal NCD, based on her disinhibition, loss of empathy, and perseverative behavior, coupled with findings of bedside testing, bloodwork, and imaging. She was referred for a PET scan as outpatient to help further clarify the diagnosis. Based on the findings of our assessment, donepezil was started for cognitive decline and low-dose risperidone for psychosis. Her delusions and ADLs improved. Although psychosis frequently complicates NCDs, it is rare for psychosis to be the presenting symptom. Due to the patient's age and presenting symptoms, a diagnosis of late-onset schizophrenia or other primary psychotic disorder could have easily been made. Casting a wider net of differential diagnoses to include NCDs is crucial, as they have unique workup requirements and prognosis. Indeed, any late onset presentation of psychosis should warrant a detailed history (including collateral information when possible), cognitive testing, imaging, and bloodwork. Missing a diagnosis of NCD and treating it as a primary psychosis would exclude the important discussion of risks vs. benefits when using antipsychotics, especially with respect to the increased risk of mortality in dementia-related psychosis resulting in a

black box warning for all antipsychotics. Furthermore, correctly diagnosing the type of NCD could also affect the treatment. E.g., in Lewy-body NCD, one should generally avoid the use of high-potency antipsychotics so as not to worsen parkinsonian symptoms. Given that we suspected vascular or frontal NCD, we chose to use a higher potency antipsychotic to target her severe psychotic symptoms, albeit one with a relatively benign cardiac and cardiovascular profile, e.g., with respect to QT prolongation and orthostasis. In this poster, we discuss the challenges of assessing and treating psychosis as a presenting symptom in adults and the importance of including NCDs in the differential diagnosis.

No. 141

Mitochondrial Encephalopathy, Lactic Acidosis, and Stroke-Like Episodes (MELAS) and Difficulties in Medication Management

Poster Presenter: Patricia Ann Samaniego Calimlim, M.D.

SUMMARY:

MELAS is the most common maternally inherited mitochondrial disease. An A to G mutation in the tRNA gene at position 3243 of mitochondrial DNA accounts for most MELAS cases (80%). Due to the rarity, heterogeneity of presentation with its relapsing and remitting course, treatment has failed to keep up with advances in molecular genetics and has heavily relied on isolated cases of MELAS or adapting results from limited clinical trials. This clinical case is one of only a few of these isolated cases, and currently, no consensus criteria exist for treating MELAS syndrome.

No. 142

Provider Utilization of Pharmacogenetic Testing in a Child Psychiatry Clinic

Poster Presenter: Jaison Josekutty Nainaparampil, M.D.

SUMMARY: Objective: To assess provider utilization of pharmacogenomic testing (PGX) of genes involved in the metabolism of antidepressants (CYP2D6 and CYP2C19) in a child psychiatry clinic. Methods: 50 children and adolescents with depression, anxiety, or OCD who were starting a new medication or considering a change were randomized to receive PGX testing prior to starting/changing medications or to treatment as usual (and receiving PGX results after 12 weeks). The providers' response to the testing results and the quickness of utilization of the PGX results were examined. The amount of time it took for the results to become available was compared to the speed with which providers implemented the data. Differences in the availability of CYP2D6 and CYP2C19 results were also calculated. Results: 73 patients were referred for participation by 16 treatment providers. Of the 55 enrolled participants , 49 completed the study. The concordance between what was recommended by the PGX consult and the providers' execution of the recommendation was 64%. Providers mentioned the results of testing in their documentation for 57% of the cases (N=28); 4 patients were lost to follow-up. 32% of providers discussed the consult recommendation as well as the genotype results in their documentation, while 62% mentioned the genotype results only, 0% mentioned consult recommendations only, and 4% mentioned neither the results nor the recommendations explicitly, but referred to the PGX testing in another fashion. The results of CYP2D6 testing became available in 13 days on average (N=49). The results of CYP2C19 testing became available in 10 days on average (N=48). The consult note, which included testing results and recommendations, was made available for all providers to see 21 days on average after the PGX testing was ordered. The consult note was signed and completed 26 days on average after PGX testing was ordered. Within the implementation group, providers referred to the consult note 36 days on average after PGX testing was ordered. Within the control group, providers referred to the consult note 57 days on average after PGX testing was ordered. Conclusion: This pilot study shows that PGX testing is utilized by providers in a child psychiatry clinic. PGX testing results also guide providers' decisions about their treatment plan. However, larger samples are needed for a more accurate depiction of provider utilization of PGX testing.

No. 143

Schizophrenia and Mood Disorder in Digeorge Syndrome: A Case Report and Literature Review

Poster Presenter: Zachary Michael Lane, M.D.

Co-Authors: Asghar Hossain, M.D., Zargham Abbass, Rachel Kossack, M.D.

SUMMARY:
Introduction: The 22q11 deletion syndrome (DiGeorge syndrome) is the most frequent chromosomal microdeletion syndrome with an estimated frequency of 1:2000 to 1:4000 live births. Throughout the history of the syndrome, 22q11 has been identified by multiple clinical manifestations, most notably velo-cardio-facial syndrome (VCFS) and conotruncal anomalies. At least one psychiatric disorder is diagnosed in 73-90% of individuals with 22q11DS. Objective: The objective of this article is to report a case of 31-year-old Hispanic female with DiGeorge syndrome who developed psychotic illness in the context of major depressive disorder following medication non-compliance. We will also discuss the prevalence, etiology, and treatment options for psychiatric disorders associated with DiGeorge Syndrome. Case: The patient is a 31-year-old single Hispanic female with an extensive history of major depressive disorder with psychotic features and multiple inpatient hospitalizations. The patient presented with auditory hallucinations, persecutory delusions, disorganized behavior, agitation, and aggressive behavior towards her family. The patient has a history of depressed mood, anhedonia, hopelessness, helplessness, early insomnia, as well as paranoid persecutory delusions in the setting of chronic medication non-adherence. The patient was started on Risperdal 2mg twice daily leading to the improvement of her symptoms over the course of one week leading to discharge with follow up in a partial hospital program. Discussion: 22q11.2DS is the most frequent chromosomal microdeletion syndrome. Males and females of all races and ethnic groups are affected. Although schizophrenia is the neuropsychiatric manifestation most commonly associated with 22q11.2DS, the majority of patients meet the diagnostic criteria for other psychiatric disorders as well. Approximately 80-95% of the cases of psychiatric abnormalities in 22q11.2DS are due to de novo mutations. Prevalence rates for the major depressive disorder (MDD), bipolar disorder, and schizophrenia spectrum disorders increase with age in DiGeorge syndrome patients. While antipsychotics are commonly prescribed for individuals with 22q11.2DS with comorbid psychiatric conditions, little research exists documenting the relative safety and effectiveness of these medications.1 Psychotherapy, psychoeducation, and skill building provide additional evidence-based treatments options. Newer methods such as cognitive remediation (CR) are being investigated in patients with 22q11.2DS. Conclusion: 22q11.2DS is a common genetic disorder with high strong genetic linkage with comorbid psychiatric conditions. There is sparse literature documenting neuologic changes seen in these patients. This patient was successfully managed on Risperidone and Escitalopram in addition to psychotherapy sessions while in the unit. Further investigation of optimal treatment modalities would be highly beneficial for future research.

No. 144

Using Light to Unveil Depression: The Role of Optogenetics

Poster Presenter: Freddy Escobar
Co-Authors: Alan R. Hirsch, M.D., Marcela Pellegrini-Peçanha, Aurelio Diniz

SUMMARY:
Introduction: Major depressive disorder (MDD) is a highly prevalent and often debilitating condition with a vast impact on modern societies worldwide. Although it interferes significantly with functioning, MDD is frequently unresponsive to conventional treatment approaches and pharmacotherapy failure has been reported in approximately one third of patients. Current knowledge of the exact underlying disease mechanisms is insufficient, and may thus largely contribute to such therapeutic limitations. Optogenetics, a novel study field employing the expression of genetically-encodable light-sensitive proteins in specific cell types, circumvents the limitations of other forms of neuromodulation and enables temporally precise, bidirectional control of cellular activity in well-defined neuronal populations. This strategy has been used successfully to dissect neural pathways and circuitries involved in complex mental diseases such as MDD. Methods: A systematic literature search was conducted using the terms "Optogenetics", "Depression" and "Major depressive disorder" on the databases MEDLINE, LILACS, SciELO, Pubmed and BIREME. Inclusion criteria were adopted: articles published in the

English language from 1971 (description of bacteriorhodopsin as a light-activated regulator of transmembrane ion flow) to 2017 and articles based on experimental studies were selected. Results: By using highly validated animal models based on the exposure of phenotypically susceptible rodents to different forms of chronic stress, researchers have been able to reproduce the hallmark symptoms of Depression as well as the histopathological abnormalities found in human brain specimens post-mortem. Several brain regions and neuron populations involved in MDD have been identified by use of a variety of molecular resources including viral vectors, genetically engineered animals, multiple promoters and bacterial opsins. Important areas of dysfunction underlying depression including the medial prefrontal cortex, the ventral tegmental area, the nucleus accumbens, the hippocampus and the basolateral amygdala have been investigated by using optogenetic neuromodulation, yielding new insights into the pathological processes underlying MDD. Researchers have been able to pinpoint affected circuitries and employ time-precise light modulation to successfully revert symptoms of MDD, restoring normal function. It is important to highlight that although promising, studies using optogenetics are controversial, largely due to the variable set tools, models and tests employed in research. Conclusion: Light modulation using optogenetics has greatly aided to establish accurate models to unveil the neurobiological basis of Depression. Further research will continue to help build more complete pathophysiological constructs and pave the way for new treatment strategies. Keywords: Optogenetics, Neuromodulation, Depression, Major Depressive Disorder.

No. 145

Gun Violence and Mental Health: A Review of the Literature

Poster Presenter: Piali S. Samanta, M.D.
Co-Author: Ali Maher Haidar, M.D.

SUMMARY:

Introduction: Gun violence and regulation have always been a topic of debate and conversation in the United States. The increased media attention on mass shootings over the past years have further elevated this topic, particularly in relation to the role mental health plays in this discussion, with recent gun laws paying special focus to this specific population. Methods: We review the epidemiology of gun violence, its governing legislature and how mental health was first introduced into national conversations on gun control. We perform a review of the legal and mental health literature including recent publications, publicly available governmental resources, and gun control advocacy groups. Results/Discussion: We are able to identify several recent articles addressing the controversies raised after mass shootings as well as seminal papers on the topic. In our review we found that gun control conversations involving those with mental illness are predominantly targeted at preventing homicide whereas self harm and suicide, as per statistics, are the far more significant acts of gun violence committed by this population. This idea is perpetuated by the way in which the media addresses the aftermath of mass shootings despite the presence of directives on more conscientious reporting. The legislative efforts are then directed by this perspective created by the media. However we demonstrate how current research has shown that interpersonal violence is far less common than self inflicted violence in the mentally ill population, and the gaps within federal legislations targeting a sustainable national stance on this intersection. This new direction of gun control legislation also creates an added burden on mental health practitioners who find themselves often at the forefront of a battle to advocate for an already marginalized community. Conclusion: The direction of current research questions whether the legal restrictions being created to prevent firearm purchase by those with serious mental illness is in fact effective in preventing gun violence. The conversation surrounding gun control has led to more states creating so-called “red-flag laws,” laws allowing specific members of the community to remove a person’s access to firearms. Future research will be necessary to study the effects of such laws on prevention of gun violence by those adjudicated to be mentally ill.

No. 146

Excessive Daytime Sleepiness and Its Risk Factors for Commercial Bus Drivers in Korea

Poster Presenter: Seung-Chul Hong

SUMMARY:
Background and Objective Recent research has found the high prevalence of excessive daytime sleepiness (EDS) among commercial bus drivers which may induce serious physical injury and economic damages. However, there are limited data revealing the risk factors of EDS among these workers. Therefore, we investigated the EDS in commercial bus drivers and its risk factors. Methods Self-report questionnaires were given to 842 city bus drivers in Suwon, Korea, that included demographic characteristics, the Epworth Sleepiness Scale (ESS), Pittsburgh sleep quality index (PSQI), Insomnia Severity Index (ISI), and Berlin Questionnaire (BQ). The logistic regression analysis was conducted to investigate the risk factors of EDS among commercial bus drivers. Results The average of body mass index and total sleep time of 304 responding drivers were 24.7±3.2 kg/m2, 6.05±1.51 hours, respectively. Among them, 13.2% reported an Epworth sleepiness score >10. The majority of the responders reported suffering from poor sleep quality (68.4%) and 10.2% reported having a moderate to severe insomnia. The proportion of group with high risk for Obstructive sleep apnea (OSA) was 26.7%. In multivariate regression analysis, only three variables, including poor quality of sleep, insomnia, and high risk for OSA, were significantly associated with EDS. Conclusions This study has shown a high prevalence of EDS and insomnia, poor quality of sleep and high risk for OSA as risk factors of EDS among commercial bus drivers in Korea.

No. 147

Impact of Food Insecurity on Incident Depression in South Africa: A Panel and Geospatial Analysis of Nationally Representative Data, 2008–2015

Poster Presenter: Andrew Tomita
Co-Authors: Diego Cuadros, Benn Sartorius, Frank Tanser, Rob Slotow, Jonathan K. Burns

SUMMARY:
Background: Food insecurity is a persistent public health challenge in South Africa, but its long-term association with depression is not well-understood, particularly at a population-level. We investigated the impact of early exposure to food insecurity and its spatial heterogenity on incident depression in South Africa. Methods: Panel data from the South African National Income Dynamics Study (years 2008-2015), a nationally representative sample of households, were used. Our incident cohort consists of 8,801 adult participants who were depression free at baseline (i.e. year 2008). We then measured risk of depression onset over time between individuals exposed and unexposed to food insecurity at baseline. The main outcome, incident depression (risk), was assessed via a ten-item version of the Center for Epidemiologic Studies Depression Scale. Food insecurity measure was based on a three-point Likert scale on adequacy of household food needs. Geographical clusters ("hotpots") of food insecurity, were identified using a spatial scan statistic implemented in SaTScan. Generalized estimating equation (GEE) regression model(s), given the repeated measurements on individuals within households, were fitted using STATA 15 to assess the role of early exposure to food insecurity, and residing in food insecurity hotspot community on incident depression. The regression models were adjusted for socio-demographic variables (e.g. gender, race/ethnicity, age, marital status, educational attainment, employment status, income, and residence). Results: Substantial food insecurity hotspots were identified in South Africa ($p<0.001$), with significant high burden concentrated in KwaZulu-Natal province (which has the country's largest share of poverty). The regression model suggests that early exposure to inadequate household food security was significantly associated with higher subsequent incident depression risk (adjusted relative risk [aRR]=1.26, 95% CI: 1.09-1.46). In a separate regression model, we found that residing in a spatial cluster with high levels of food insecurity was significantly associated with greater incident depression (aRR=1.12, 95% CI: 1.02-1.23). Conclusion: For the first time, we identified spatial structuring of food insecurity at a national scale, with greater risk of incident depression among individuals residing in geographical hotspots of food insecure communities. While we recognize the long-term or persistent effect of early exposure to food insecurity at the individual-level, we also affirm the need for placed-based policy interventions that target communities vulnerable to food insecurity to prevent depression in South Africa.

No. 148

Trajectories of PTSD and Substance Use at a Community Integrated Health Clinic

Poster Presenter: Robert Marcus Fuchs
Co-Authors: Stephanie Tokarz, Tonya Hansel, Joy Osofsky, Howard Joseph Osofsky, M.D., Ph.D.

SUMMARY:

The integration of behavioral and somatic medicine is a critical component of mental health treatment, especially in regions prone to technological disasters. This study will evaluate change in patients with post-disaster posttraumatic stress disorder (PTSD) or substance use who were seen in a rural integrated care center. All patients to be included in the analysis are residents of southeastern Louisiana, an area with a high risk of hurricane and oil spill exposure. We have recorded integrated health data from patients receiving services at a community health clinic in Louisiana. Many of these individuals self-reported psychiatric symptoms consistent with PTSD, substance use, and other psychopathologies (e.g. psychosis) as part of an ongoing evaluation to study the effectiveness of integrated health. We have performed preliminary analyses demonstrating that exposure to natural disasters increases rates of PTSD and alcohol use in adults. We will extend these findings to these integrated health patients from disaster-prone regions by assessing how those who develop PTSD or substance use respond to psychiatric treatments including cognitive behavioral therapy, motivational interviewing, and medication management. Based on the design of our study, we plan to test for changes in PTSD and substance use over time using a 2-way ANOVA. Additionally, we will assess whether disaster exposure, substance use, or other presenting problem is associated with a trajectory of exacerbated PTSD via logistic regression. This work has implications for the long-term psychiatric treatment of technological disaster victims. Specifically, by characterizing the trajectories of PTSD and understanding the mechanisms of substance use in exacerbating these symptoms over time for residents of disaster-prone regions, this study will clarify the utility of behavioral health services in facilitating recovery from exposure to natural disasters.

No. 149

Lessons From the 2017 Atlantic Hurricanes Predict Increasing Risks for Psychopathology From Extreme Storms Throughout the 21st Century

Poster Presenter: Zelde Espinel, M.D.

SUMMARY:

Background. Potentially-traumatic direct exposures to hurricane hazards during the impact phase are well documented risks for storm-associated PTSD. Experiencing significant resource losses and adversities in the aftermath are predictors of major depression and anxiety. Added to new-onset disorders in storm-exposed survivors without previous psychiatric history, are storm-associated exacerbations and recurrences of pre-existing psychopathology. What makes the 2017 Atlantic hurricane season distinctive is that there was clear evidence that storm hazards are progressively worsening due to climate change and this fact significantly amplifies the risks for severe mental health outcomes. Methods. We are writing extensively in the peer-reviewed literature about the 2017 Atlantic storm season and the attendant public health and mental health consequences. Here we synthesize our findings regarding the evolving nature of exposures, losses, and life changes that carry implications for mental health consequences for storm survivors. Results. We will present findings in relation to hurricane hazards, human population vulnerabilities, community impacts, public health and mental health consequences, and issues of environmental injustice. All of these bear on mental health. First, the 2017 season showcased the role of climate drivers, including warming oceans and rising sea levels, in magnifying hurricane hazards such as peak wind speeds and precipitation rates. Climate change is causing storms to slow down as they pass over land, leading to extreme flood risks. These hazards will become progressively more severe over time. Second, island-based and coastal populations are increasingly vulnerable to storm surge and overtopping. Third, these powerful storms utterly destroyed power grids and crippled infrastructure, rendering affected populations wholly dependent on outside aid. Fourth, millions of survivors were subjected to unrelenting, life-threatening tropical heat in the aftermath. Caribbean residents were exposed to insect vectors for such infectious diseases as Zika and dengue. Staple crops were

destroyed, leading to food insecurity. Water supplies were contaminated with wastes and, in some cases, hazardous materials. Studies conducted in Puerto Rico revealed extremely high rates of post-storm mortality. Taken together, this litany of public health consequences predicts high rates of psychopathology and traumatic bereavement. Fifth, post-storm extremities prompted mass out-migration from storm-ravaged island states. Displacement carries a powerful psychological overlay. Environmental injustice comes into play insofar as storm-affected island-based and coastal populations bear disproportionate risks from climate-driven storms to which they contribute negligibly. Conclusions. The 2017 storms clarify the compelling needs to better anticipate and respond to the psychological consequences of increasingly-dangerous extreme weather events.

No. 150

A Portable Didactic Sports Psychiatry Curriculum for Medical Students, Residents, and Fellows

Poster Presenter: Vuong D Vu, M.D.
Co-Author: Claudia L. Reardon, M.D.

SUMMARY:

Background: Sports psychiatry is the informal sub-specialty within psychiatry largely focusing on diagnosis and treatment of psychiatric illness in athletes. While utilization of psychological approaches to enhance performance may also be part of the work of the sports psychiatrist, it tends to be less so as compared to addressing actual mental illness in this population. The work of sports psychiatry may also involve the use of exercise as a therapeutic or preventative intervention for mental illness. The field is relatively new, such that most medical schools and residency/fellowship programs do not have curricular offerings dedicated to the topic. Moreover, with the population of sports psychiatrists relatively small, and with a relatively small research base, when health care providers do deliver psychiatric care to athletes, they may do so without a full understanding of the diagnostic and therapeutic issues unique to this population. Purpose: The aim of this project was to develop an elective curriculum that enhances the knowledge base of physicians and physicians-to-be in the science of sports psychiatry, and to increase the skill with which these clinicians provide psychiatric health care to athlete populations. Methods: International Society for Sports Psychiatry (ISSP) members were surveyed as part of a needs assessment to ascertain interest in and potential content for a sports psychiatry curriculum. ISSP Education Committee members created a portable sports psychiatry elective curriculum, focused on reading and writing assignments and supervisor-led discussion groups. The curriculum was vetted by practicing sports psychiatrists, and piloted by trainees. An Accreditation Council for Graduate Medical Education Milestones-based evaluation form and surveys of learners were developed to accompany the curriculum. Results: The needs assessment of ISSP members revealed interest in a sports psychiatry elective curriculum and provided suggestions for content. Vetting by sports psychiatry experts and piloting by trainees has resulted in revisions to the curriculum. Discussion: An important factor in the success of this curriculum will be ongoing solicitation of learner feedback. Inclusion of advanced learning objectives, beyond primarily knowledge-based ones, and incorporation of an experiential component are being considered. Conclusions: This curriculum, for which there is need, shows promise in increasing knowledge and skills in sports psychiatry for learners with an interest in the field.

No. 151

The Residency Organizing Committee: A Collaborative Model for Residency Culture Change

Poster Presenter: Asha D. Martin, M.D.

SUMMARY:

Burnout has been described as a combination of " emotional exhaustion, depersonalization, and decreased personal accomplishment." Despite increasing awareness about burnout and new programs to address resiliency, the rates of burnout amongst healthcare professionals continues to rise. The burnout rate amongst psychiatry residents has been estimated to be around 40%. While this is not statistically significant from the rates amongst other medical specialties, research has shown that psychiatrists and psychiatry trainees have additional factors that contribute to burnout. In addition to long work hours, fear of retaliation, and lack of

perceived control, psychiatry trainees have cited "fear and exposure to patient violence and suicide" as major causes of burnout. To address this, systemic program and culture changes must take place. While the literature has described leadership collaboration and support as necessary steps to create a wellness culture, there has been little published models for its implementation. The purpose of this poster is to present a unique approach to addressing burnout. The Residency Organizing Committee (ROC) is a novel and collaborative model that was established in the New York University (NYU) psychiatry residency program in May 2018. The ROC seeks to promote culture change through regular meetings with leadership, task oriented workgroups, community building activities, and streamlined systems of communication. In this poster, the structure of ROC will be discussed as well as progress to date, challenges, and next steps. Through this discussion we hope to present a model for addressing burnout that can be implemented nationwide.

No. 152

Capgras Syndrome in Substance-Induced Psychosis

Poster Presenter: Bharat Reddy Sampathi
Co-Authors: Anna Sofine, M.D., John N. Alvarez, M.D., Robert G. Bota, M.D.

SUMMARY:

Delusional disorder refers to a condition in which an individual presents with fixed false beliefs, despite overwhelming counterevidence and improbability. A subcategory exists known as a Capgras Syndrome. A person affected with this syndrome will believe that a close associate has been replaced by an identical imposter. Induced delusional disorder, or Folie a deux, which has been removed from DSM-V, is described as a phenomenon seen when a delusional belief is transmitted from one individual to another. We report a case of a 23 year old female with no previous psychiatric diagnosis brought to the emergency department by her mother for extreme agitation. The patient reported the use of illicit substances during the previous night. On presentation, she was dysphoric, paranoid, endorsed auditory hallucinations, and demonstrated extreme suspicion of the family pictures on the walls of her parent's home. She repeatedly told her mother that "the pictures are not real", and directly referred to her family as imposters. She was started on Aripiprazole 10mg daily for psychosis and Clonazepam 0.5mg twice a day as needed for anxiety. Subsequently, Escitalopram 10mg daily for depression and Omega-3 fatty acids 1g daily for mood were added. She later endorsed that the night prior to admission, she used marijuana and methamphetamine with a man she met at a bar. After using, the man became paranoid and showed the patient a picture of himself on his phone, stating that the man in the picture was not him. Rather, it was an imposter. She then became paranoid regarding imposters of both herself and her family. It took several days of her medication regimen and daily visits from close family members to assuage her paranoia. While it has been documented that second generation antipsychotics have been effective in treating delusional disorder, it is unclear whether this patient's resolution of Capgras Syndrome was a result of the elimination of THC and methamphetamine from her body or the effect of Aripiprazole. It is postulated that a combination was required to elicit such profound dislodging of the fixed Capgras delusion. Further studies may investigate the effects of a variety of causes and treatments for Capgras Syndrome.

No. 153

Statistical Survey on the Reasons for Consultation at a Psychiatric Emergency Room

Poster Presenter: Vanesa Lazzaroni
Co-Author: Juan Manuel Gallo

SUMMARY:

The goal of this poster is to make evident in a practical and simple manner -through quantitative data- the different variables that lead a patient to make a consultation in a psychiatric institution. Therefore, a 2-year longitudinal study of 709 consultations (N) carried out in the psychiatric monovalent ward of Rosario, Santa Fe - Argentina (Clinica Avenida) is executed. We perform comparative statistics relating different variables: age, sex, first consultation or patients in previous treatment, season, significant dates, etc. This is how we try to reflect in this work, the main trends that motivate a ward consultation based on the parameters collected and later conclude the changes

the patiens experienced from one year to the next. In this way continue in the search for the best tools that allow us to improve the quality of care of our patients. Key-Words: Reason for Consultation; Statistics; Variables; New trends; Psychiatric Urgency

No. 154

Mental Status Examination of Théodore Géricault's Portrait Le Monomane Du Commandement Militaire

Poster Presenter: H. Yavuz Ince, M.D.

SUMMARY:

Psychiatrists, just like artists, should draw the patient and capture facial expressions as part of a mental status examination. The aim of this study is to use a portrait by Théodore Géricault (1791-1824), a well-known French painter, to teach third-year medical students about mental status examinations and delusional disorders. Géricault created ten portraits of mentally ill patients for Dr. Étienne-Jean Georget, a physician at Pitié-Salpêtrière Hospital, the neuropsychiatry hospital in Paris. The circumstances surrounding the execution of these portraits remain a complete mystery [1]. Only five of these paintings have survived, one of which is "A Man Suffering from Delusion of Military Command" (Am Römerholz, 1822, oil on canvas, 81 x 65 cm). The patient is a white male, approximately 60 years old. His face occupies the upper central portion of the frame; his head reaches near the top of the painting, while the bottom of the painting cuts off his body just below the elbows [1]. His gray hair is covered by a black garrison cap with a tassel on the left. His cheeks appear unevenly shaven. His face is thin, pale, and bony, and the bones of his cheeks are prominent. The corners of his lips are pointing down. He stares away from the painter, looking to his left. His eyes focus on a point on the ceiling—he looks spaced out. His body is frail and cachectic. He is wearing a white linen shirt with a button collar, a black military vest, and a dark gray cloak over his right shoulder. He has a shabby medal on a makeshift, worn string around his neck [2]. He looks apathetic. According to Géricault, the patient was suffering from grandiose delusions. Medical students reported that they learned about mental status examinations and delusional disorders through interactive discussion. Visual arts such as painting, photography, and sculpture can be educational and entertaining tools for psychiatry.

No. 155

Are Process Groups Still Relevant to Psychiatric Residency in the 21st Century? A Novel Approach Blending Physician Wellness and Experiential Learning

Poster Presenter: Anne Clark-Raymond, M.D.
Co-Author: Julie B. Penzner, M.D.

SUMMARY:

Process groups – also known as experiential groups, "e-groups" and "T-groups" – originated in the field of social psychology in the 1940s and became a fixture of many psychiatric residency programs by the 1970s during a heightened interest in group (particularly psychodynamic) psychotherapy as a primary therapeutic modality. By the 1990s, ~50% of psychiatric residency programs in the US offered process groups, citing fostering critical experiences in 1) learning group dynamics by immersion 2) learning psychodynamic process 3) providing support and cohesion in residency and finally, separately, 4) in the groups themselves being "therapeutic". However, programs surveyed who did not offer process groups cited perceived conflicts in these same objectives. Some cited a lack of emphasis in training in group and psychodynamic psychotherapy. Others cited undeniable conflicts in a residency process group being at once a learning experience and therapeutic. Residents in process groups cannot abide by boundaries of typical psychotherapy groups given their personal and professional relationships, plus likely varying expectations of the aims of the group. Yet how then can we understand process groups to be therapeutic? Is it simply via the support of the cohort, by examination of unconscious conflict promoting improved self-awareness, or perhaps via a more nuanced blend of factors promoting consolidation of personal and professional agency and identity? We propose a unique re-envisioning of the role of process groups for 21st century residents. Given the staggering rates of trainee burnout, cited as varying from 27-80%, we propose that the process group remains a more important fixture now than ever before for its potential role in addressing gaps in trainee wellness. In a novel initiative at the

New York Presbyterian-Weill Cornell Medicine psychiatry residency program, interns are guided by a chief resident in a year-long, six session foundation course prior to embarking in a traditional process group as PGY-2s. In this pilot program, interns are 1) introduced to the potential values of a process group 2) provided didactic introduction to basic elements of psychodynamic group process and contract setting 3) encouraged to begin to explore the competing demands of a residency process group and 4) supported in discussing emerging personal and professional identity via exercises in self-reflection and creation of self-narratives. Our pilot program addresses longstanding complexities and conflicts in the traditional residency process group. In doing so, our program may serve as a model to other residency programs who may have been dissuaded from previously offering process groups. To those with groups in place, our introductory series may assist in deepening the work of a nascent process group, introducing a reflection on identity, self-awareness and understanding - elements found to be deficient in trainees experiencing rapidly increasing rates of burnout.

No. 156

Chopped: A Case of Successfully Completed Upper-Extremity Self-Amputation in a Nonpsychotic, Non-Paraphilic Patient With Body Identity

Poster Presenter: Samuel Isaac Kohrman, M.D.
Co-Authors: Timur Suhail-Sindhu, M.D., Devendra Singh Thakur, M.D., James K. Rustad, M.D.

SUMMARY:
Mr. L, a 59-year-old Caucasian man with a past psychiatric history of major depressive disorder and an unremarkable past medical history, presented to the level-1 trauma center of an academic medical hospital following self-amputation of his left upper extremity proximal to the wrist joint; he used a recently purchased pneumatic wood splitter while intoxicated by both alcohol and prescription opioid pain medication. He refused the offer of replantation made by the orthopedic service, and due to the potentially life-threatening nature of the injury, the wound was closed within 1 hour of presentation. The psychiatry consultation-liaison service was soon alerted. On exam the patient reported that he felt "relieved." He presented bright and euthymic, not appearing to respond to internal stimuli or demonstrating paranoid or manic symptoms. He convincingly denied auditory and visual hallucinations, persecutory delusions, suicidal or homicidal ideations, compulsions, or sexual attraction to amputees. He was alert and oriented to person, place, time, and situation and appeared to have capacity to make medical decisions regarding his hand. Routine lab work (including CBC, BMP, HIV, Hep C, RPR, B12, Folate, TSH, ANA, Heavy Metal Screen, urinalysis and urine toxicology) was unremarkable, as was his MRI Brain without contrast. He identifies with "Body Integrity Identity Disorder," (BIID) a rare and controversial diagnosis listed as "other" in the DSM-V, used interchangeably with "apotemnophilia," and "xenomelia." His amputation was fueled by a long-standing feeling that his left hand and right lower leg, while attached to and part of his body, are inconsistent with his identity, leaving him feeling incomplete. He was voluntarily admitted to the inpatient psychiatric unit where he received supportive therapy, declining psychopharmacologic treatment. There are no other reported cases of successful voluntary self-amputation of the upper extremity in a non-psychotic, non-paraphilic patient. The literature lists these amputations as either emergent surgical procedures due to self-inflicted damage or as electively scheduled. In surgical emergencies, thorough psychiatric evaluations can be challenging to perform due to time constraints involved with the need for emergent procedural intervention, as is the determination of capacity for decision-making. The consultation-liaison psychiatry literature lacks consistent recommendations towards evaluating and managing non- psychotic, non- manic, non-paraphilic patients following self-amputation. In this poster, we discuss the literature's proposed diagnostic classification of as well as the psychiatric and neurobiological correlates for BIID. We discuss recommendations for managing such cases on both the surgical and psychiatric consultation services regarding capacity to make medical decisions. We also review psychopharmacologic and psychotherapeutic interventions for these individuals.

No. 157

What Happens When the Bus Crashes? A Case of Dissociation Secondary to Trimethoprim-Sulfamethoxazole Use

Poster Presenter: Samuel Isaac Kohrman, M.D.
Lead Author: Cybele Arsan, M.D.
Co-Authors: Oakland Cristian Walters, M.D., Devendra Singh Thakur, M.D.

SUMMARY:
Ms. R, a 59 year old female with a psychiatric history of Major Depressive Disorder and childhood trauma and medical history notable for DMII complicated by neuropathy and retinopathy, hypertension, cerebrovascular accident 6 years prior, and chronic pain syndrome, presented to an academic medical center after 3 unwitnessed falls within a 12 hour period, accompanied by acute onset of perceptual auditory and visual disturbances in the setting of a recent initiation of a trial of trimethoprim-sulfamethoxazole (TMP-SMX) for suspected osteomyelitis of the toe. The primary medical team reported that she was petting an invisible dog sitting next to her on the bed. Upon admission, WBC was unremarkable, hemoglobin and hematocrit were mildly decreased, AST, BUN, HgbA1c were mildly elevated. Urinalysis was positive for leukocyte esterase WBC and protein. CT of brain showed no acute process. On psychiatric consultation, she denied suicidal or homicidal ideations, and did not show evidence of paranoia, mania, or negative symptoms of psychosis. She appeared to respond to internal stimuli while remaining alert and oriented to person, place, time and situation. She reported that while she was intellectually aware that she was at the hospital, she felt that she was riding in a bus towards the scene of an accident that occurred 25 years ago in her home town. She voiced distress, wondering that if she were to die in this accident, would she also cease to exist in the hospital? She refused antipsychotic medication and involuntary administration was not deemed necessary. While CNS duration of TMP-SMX is unclear, given the t1/2 of <6-12 hours, it was expected to have been cleared. Over the course of her stay, she improved with supportive therapy and with cessation TMP-SMX and was safely discharged to home. This case posits that TMP-SMX is likely to be the offending agent, resulting in worsening perceptual disturbances in the context of PTSD symptoms of dissociation related to past trauma. Dissociation, particularly the dissociative subtype of PTSD and psychotic disorders, are commonly confused in both the hospital setting as well as on the psychiatric consultation service. Literature supports multiple cases of psychotic symptoms associated with antibiotic use; however, the evidence is limited in relation to dissociative symptoms. In this poster, we will present recommendations for differentiating between symptoms of dissociation and psychosis, as well as proposed mechanisms of action of TMP-SMX-induced dissociation.

No. 158

Resident Wellness Task Force: A Resident-Led Initiative to Combat Burnout and Enhance Wellness

Poster Presenter: Mena Mirhom, M.D.

SUMMARY:
Numerous studies have highlighted that the rates of depression and burnout are alarmingly high among residents and medical students. Studies have also shown how this begins to impact patient care and increases medical errors. Although the problem appears to be clearly defined, it's complexity has made it difficult to have a simple universal solution. Our training program decided to convene a task force that focused on three main categories that would reduce burnout and enhance wellness. The categories were a) workflow and non-clinical responsibilities b) work environment and culture c) call schedules and call responsibilities. The task force that was convened is led by residents and aimed to make direct recommendations to the program director and department chair. It is our hope that generating ideas from among the residents would more effective than implementing general wellness activities.

No. 159

Teaching Evidence-Based Spiritual Assessments to Psychiatry Residents

Poster Presenter: Mena Mirhom, M.D.

SUMMARY:
A variety of studies have shown a positive relationship between spirituality and well-being. In light of that, there have been a variety of methods taken across the country in order to teach psychiatry

residents the importance of spirituality in clinical care. In our training program, we have conducted an IRB approved quality improvement project that evaluated the barriers that clinicians have towards conducting a spiritual history. One identified barrier, was a lack of training. Therefore, a series of lectures were delivered to the residents on the topic in order to address that issue. The training included brief efficient evidence-based tools that enable the resident to conduct a spiritual history in their assessment. We then surveyed the residents again after the training to inquire about their barriers to conducting a spiritual history. We hope to show in this poster presentation that through brief training such as the one we provided, residents are able to conduct a spiritual history and apply the information obtained in a clinical context.

No. 160

Exploring the Role of Nepali Traditional Healers on Mental Well-Being: Pilot Project

Poster Presenter: Tony V. Pham, M.D.
Lead Author: Brandon Alan Kohrt, M.D., Ph.D.
Co-Author: Rishav Koirala, M.D.

SUMMARY:
Introduction: The purpose of this study was to collect preliminary evidence for determining whether and how Nepali traditional healers affect mental well-being. The researchers hypothesized that Nepali traditional healers affect mental well-being in a manner akin to modern psychotherapy, namely through meaning centered interventions that utilize symbolic healing and common therapeutic factors. Methods: The pilot project for this research took place in a small village known as Dumja during the summer of 2018. Dumja is in the Sindhuli District of south-eastern Nepal. The residents are mostly farmers whose lives can be characterized by poor access to electricity, clean water, and irrigation. 56 Community Members and 26 Traditional Healers were sampled. Participants took part in semi-structured in-depth interviews that were then recorded and transcribed for qualitative analysis using NVivo. Results: The following was the resultant mechanisms of actions model using the collected interview data – 1) Disease Etiology: Nepali mental distress may be biological, psychological, and/or sociological in origin. 2) Barriers: Given the presence of stigma, mental health illiteracy, and sociological oppression patients may redirect mental distress towards biological complaints. 3) Chief Complaint: To bypass these barriers certain psychiatric and sociological complaints are more easily expressed using culturally acceptable idioms of distress. 4) Pathways to Care: Patients will seek help either though the biomedical or magical-religious realms depending on illness severity and the chief complaint. 5) Diagnosis/Treatment: In general patients who present biological or psychiatric complaints generally present to either the biomedical realm (evidence based medicine) or magico-religious realm (common therapeutic factors/symbolic healing). On the other hand, patients who present their mental distress using idioms of distress generally present to the magico-religious realm. 6) Outcome: If the patient experiences partial resolution they may seek a secondary opinion from another medical provider or a traditional healer until they experience complete resolution. Discussion: Potential implications for this research include the creation of a more advanced referral work between Nepali biomedical providers and traditional healers. More advanced psycho-spiritual education could also be implemented among traditional healers and medical providers. As a result, medical providers may feel more comfortable with magico-religious beliefs and may even adopt cultural technologies to improve their practice. Furthermore, there may be applications to be extrapolated outside of Nepal. The follow-up to this pilot project will consider a similar analysis in more remote regions of Nepal while using other rigorous evaluation methods to look for other traditional healer traits from other specialties such as those of social workers or evidence based biomedical providers.

No. 161

Reducing Stigma Toward Psychiatry Among Medical Students: A Multicenter Controlled Trial

Poster Presenter: Doron Amsalem, M.D.
Co-Authors: Raz Gross, M.D., Doron Gothelf

SUMMARY: Objective: Stigma towards psychiatry and people with mental illness is prevalent among healthcare providers including medical students, which might adversely affect medical care. This

study examined the effect of anti-stigma interventions in medical students during rotation in psychiatry. Methods: Medical students were divided into intervention (n=57) and control (n=163) groups just before beginning the 6 weeks psychiatry rotation in eight hospitals during one academic year. The students completed the Attitudes to Psychiatry scale (ATP-30) and the Attitudes toward Mental Illness scale (AMI), at the beginning and end of their rotation. The anti-stigma interventions were designed to target prejudices and stigma by direct, informal yet supervised encounters with people with severe mental illness, during periods of remission and recovery. These encounters aimed to facilitate the students' exposure to the underlying personal human narrative of people with psychiatric diagnosis. Core components of the anti-stigma curriculum included small group discussions on salient topics such as liberty versus need in psychiatric care, evidence-based medicine in psychiatry, and the neuroscientific underpinnings of clinical psychiatry. Results: ATP-30 scores in the intervention group increased from 108.51±13.02 to 115.27±14.09 ($t = 2.65$, $df = 111$, $p < 0.01$), and the AMI scores from 73.51±7.40 to 76.93±5.95 ($t = 2.71$, $df = 111$, $p < 0.01$). A statistically significant reduction in the proportion of students endorsing stigmatic statements was found for core themes, which included views on people with mental illness, psychiatric knowledge, psychiatric treatment, psychiatry as a career choice, and psychiatrists. In the control group, significant change was found only for ATP-30 scores (107.99 ±13.45 to 111.28±14.87; $t = 2.07$, $df = 315$, $p < 0.04$). Conclusion: Implementing pre-designed anti-stigma interventions during psychiatry rotation could reduce medical students' stigmatic positions on people with mental illness and toward psychiatry as a profession. Key Words: stigma, medical students, psychiatric rotation, mental illness, intervention

No. 162

Single-Time Simulations Based Training Improves Communication and Psychiatric Skills of Medical Students

Poster Presenter: Doron Amsalem, M.D.
Co-Authors: Doron Gothelf, Raz Gross, M.D.

SUMMARY: Objective: Use of standardized (or simulated) patients (SP) is considered an effective teaching method for improving clinical and communication skills. The present study assessed the effect of a single SP training during psychiatry rotation on those skills. Methods: Study population was composed of 42 3rd year medical students from Tel-Aviv University and St. George University of London. Communication and basic skills in clinical psychiatry were evaluated using an adapted version of the Four Habit Coding Scale (4HCS) and the psychiatric interview coding scale, before and after SP training. An actual patient interview by the students one week after the training was evaluated by an attending psychiatrist who was blinded to the student performance and score at baseline, i.e., during the SP training. Self-report questionnaire regarding students' satisfaction from the training and their self-confidence was administered at the end of the training. Results: Mean score of the 4HCS increased from 33.9 before to 52.3 after training ($t = 11.5$, $df = 41$, $p < 0.001$). Mean score of the psychiatric interview coding scale increased from 4.33 to 5.36 ($t = 3.33$, $df = 41$, $p = 0.002$). The self-report questionnaire yielded a mean score of 4.21 on a 1-5 Likert scale, implicating high satisfaction and self-confidence. Conclusion: Even a single SP training of medical students could improve clinical and communication skills in psychiatric setting and enhance the subjective perception of those skills by students. More research on the long-term effect of similar formats of SP training is needed.

No. 163

Putting the Social Back in the Biopsychosocial: Residents as Advocates

Poster Presenter: Hyun Hee Kim, M.D.
Co-Author: Megan Elizabeth Pruette, M.D.

SUMMARY:
Although advocacy is a part of several ACGME milestones, few programs have dedicated electives or curriculum to explicitly teach residents what is advocacy or how to be an advocate. Physicians undoubtedly learn to be an advocate for their individual patients throughout their years of medical education, but education about healthcare systems, legislation, social determinants of health, and how to advocate for change on a on a larger level is varied

and often lacking. Even when there are noticeable gaps in the educational program, however, updating the official residency curriculum is long and bureaucratically involved. The rapidly changing nature of advocacy issues makes it difficult for such a curriculum to address the needs of current residents. With so much material to cover already, programs are pressed to find time for education on topics not directly concerning the clinical practice of psychiatry. Additionally, much of advocacy is about addressing the needs of a community, and requires understanding of local history, politics, and culture. This may hinder the development of a standardized national curriculum, yet smaller institutions may find it difficult to develop their own without expertise or support. We present the Physician Advocacy Interest Group at Duke University Psychiatry Residency as a potential model for teaching and promoting advocacy to interested residents, which may serve as a stand-alone self-directed advocacy curriculum or as a complement to an existing educational program. It also provides opportunity for peer mentoring, self-directed learning, and flexibility in specific topics covered, based on the interests of a particular cohort. A resident-driven initiative such as an interest group is an effective short-term way to address and explore educational gaps. It can also serve as a pilot for future curriculum changes.

No. 164

Effectiveness of an Interdepartmental Collaborative Chief Resident Council and Leadership Training for Chief Residents at an Academic Medical Center

Poster Presenter: Victoria Ashley Flynn, M.D.

SUMMARY:

Background: Research by Shanafelt et al has shown elements of social support and community at work, alignment of an individual's and organization's values and culture, and ability to find meaning in one's work improve both engagement and resilience. The opposite of engagement, burnout, is considered a threat not only to healthcare provider's wellbeing but also to patients as it has a direct impact on patient care and outcomes. Recent research proposes implementation of interventions at both the individual (e.g. mindfulness, exercise, hobbies, etc.) and organizational (dedicated protected time for work one finds meaningful, flexibility in schedules, coverage, community, etc.) levels to improve engagement. Support, community, autonomy, and environmental culture have increasingly been identified as key components in reducing burnout and improving wellness. After literature review, it became apparent that there has yet to be an interdepartmental, institution wide intervention aimed at improving collaboration and professional development in chief residents across all medical and surgical specialties. This project aims to address drivers of burnout versus engagement, improve professional and leadership development of chief residents, and enhance general resident physician resilience through an interdepartmental resident designed curriculum. Methods: An email invitation to participate was sent to all chief residents (n=42) in an academic institution. A needs assessment survey was included in this invitation and participants were asked to identify confidence levels in various leadership skills and which professional development topics they wished to further develop. A curriculum was then designed to incorporate these self-identified areas for improvement as well as basic leadership skills. Over this academic year, interdepartmental communication and relationship building will be encouraged through workshops, interdepartmental lectures, and social gatherings. Results: Of the 42 chief residents invited to participate in the chief resident council, 33 (78.57%) completed the pre-curriculum needs assessment. The following leadership and professional development topics were identified by chief residents as desired areas for additional resources and improvement: addressing conflict, providing feedback, negotiating faculty positions and educational research. Modules are currently being designed to address these needs. At the end of this academic year, a post-curriculum needs assessment will be performed to measure confidence levels. In addition, data will be collected on the number of interdepartmental lectures and residents' perspectives of collaboration. Conclusions: Based on work to date, it appears feasible to design and implement an interdepartmental chief resident leadership and professional development curriculum. With additional results, we hope to gain better insights on effectiveness of the curriculum and effects of interdepartmental collaboration.

No. 165

A Distinct Role of Complex Genetic Expression in Alcohol Use Disorder: A Literature Review

Poster Presenter: Mehwish Hina, M.D.
Co-Authors: Sukaina Rizvi, M.D., Asghar Hossain, M.D.

SUMMARY:

Alcohol use disorder (AUD) is a highly prevalent multifactorial mental condition with a crucial health concern affecting up to 240 million people worldwide. The pattern of alcohol consumption begins from habitual consumption to up to a point where it becomes bothersome with various behavioral and physical manifestations. Mesolimbic system is the site for alcohol action where it causes increased dopaminergic activity. It also acts on serotonin 5 HT 3, nicotinic receptors, gamma aminobutyric acid (GABA) and N-methyl-d-aspartic acid (NMDA). AUD is believed to occur as a result of complex neurobiological mechanisms and genetic interactions that control expression and under expression of certain alleles. This is a well-speculated fact that genetic factors play a significant role in development of AUD. This is further validated by various twin studies that have been published over the years. Some studies have suggested the variation in enzyme activities of aldehyde dehydrogenase (ALDH) and alcohol dehydrogenase (ADH), which are responsible for ultimate metabolism of alcohol. Both of these enzymes demonstrate genetic polymorphism influencing the conversion of alcohol to acetal aldehyde and acetal aldehyde to acetate. This emphasis that genetic polymorphism at ADH 2 and ADH 3 loci of alcohol dehydrogenase predisposes to AUD. Neurotransmitter genes have also demonstrated their role in alcohol addiction. Dopamine transmitter is notorious for alcohol dependence through its dopamine D2 receptor protein DRD2. Some genetic studies have demonstrated that genetic factors appear to operate in a similar way in men and women. We herein present a literature review to illustrate how an alteration in gene expression can increase vulnerability to alcohol use disorder.

No. 166

Role of Cognitive Remediation in Schizophrenia

Poster Presenter: Mehwish Hina, M.D.
Co-Authors: Asghar Hossain, M.D., Nozaina Mahmood, M.D.

SUMMARY:

Schizophrenia a chronic progressive neurodegenerative disease affecting one percent of the young adolescents resulting in cognitive decline. The main goal of treating schizophrenia is improvement of both cognitive and social functioning. Cognitive remediation therapies (CRT) have shown to be moderately improved cognitive functioning. Self-determination theory (SDT) reports intrinsic motivation as well as extrinsic motivation to augment learning and memory in healthy subject to a certain degree. For this reason, intrinsic motivation, such as pleasure or interest, play a key role in enhancing cognitive functions. In this paper we will discuss the implications of cognitive remediation in patients with schizophrenia. CRTs are psychosocial interventions directly inducing neuroplasticity thereby improving cognitive functions. Several studies have been performed to address the gradual decline in psychosocial functioning experienced as slow progressive cognitive decline by the patient. This progressive decline is supported by MRI studies showing gradual loss of white matter in schizophrenia. Identifying brain regions responding and reflecting changes to cognitive remediation are necessary to target brain areas Another form of CRT known as computer assisted CRT treatment involves 12 weeks intensive computerized training, including wide range of cognitive functions leading to improvement in learning, memory, psychomotor skills and verbal fluency. This directly targeted CRT showed increase in hippocampal volume as compared to other conventional CRTs in patients with schizophrenia. One possible mechanism is enhanced levels of brain-derived neurotropic factor (BDNF). Another CRT targeted mainly the Prefrontal cortex leading to enhanced working memory. Thus, CRTs prove to improve both cognition and functioning capacity of schizophrenia patients but still further studies are needed to suggest important neural targets for these interventions.

No. 167

Role of Disulfiram in Cocaine Use Disorder: A Literature Review

Poster Presenter: Mehwish Hina, M.D.
Co-Authors: Sameerah F. Akhtar, M.D., Yasmine Deol, M.D., Asghar Hossain, M.D.

SUMMARY:
Cocaine is the second most popular illicit recreational drug in US after Cannabis. According to the National Survey on Drug Use and Health (NSDUH) in 2012, nearly 4.7 million Americans aged 12 or older reported using cocaine in the past year, and almost 38 million reported ever using cocaine in their lifetime. Based on data from the combined 2014–2015 National Surveys on Drug Use and Health, 1.7 million young adults aged 18 to 25 in the United States used cocaine (4.98 percent of the young adult population). This equates to about 1 out of every 20 young adults across the nation using cocaine. This data tells should warn the physicians that after the heroin epidemic, cocaine epidemic may be on the rise. Cocaine is a very potent and highly addictive drug. In addition to the medical problems (e.g.- MI, aortic dissection) related to cocaine itself, there are various infectious diseases that spread due to its mode of administration like AIDS and Hepatitis B. This likely increases the clinical burden of the diseases related to cocaine. There is an unmet need for the availability of a drug that could be used for the cocaine abstinence. In comparison to the heroin, we don't have a FDA approved drug for the first line use in the treatment of cocaine abuse. Over the period of various years, there has been ongoing research with the drug Disulfiram (Antabuse), which gained popularity due to its effect on abstinence from cocaine, when used in patients with both cocaine and alcohol use disorder. There have been some clinical trials with the use of disulfiram in people with only cocaine use disorder. Dopamine is the primary neurotransmitter that is involved in the reward system and is also proven to be depleted in brain due to cocaine use. Disulfiram has effect on the dopamine beta hydroxylase activity. In this review, we studied the available literature in the last 10 years to help us understand the pathophysiology behind the cocaine use disorder and the invent of use of disulfiram in this cocaine use disorder.

No. 168

Psychology and Social Media: Ideal Selves, Social Comparison, and the Emergence of FOMO

Poster Presenter: Jamey Adirim, M.B.B.S., B.A.

SUMMARY:
Since the launch of ICQ and MSN Messenger in the late 1990s, social media's presence and penetrance into our lives has increased rapidly. It has become so ubiquitous, that it's difficult to remember life prior. Current statistics report 2.62 billion social network users worldwide, with 81% of the US population having a social media account. Media reports of late have speculated on social media's deleterious effects on mental health, as well as our larger society, yet worldwide social network users is estimated to continue growing, reaching a total of 3.02 billion by 2021. As such, an understanding of recent theoretical and clinical research findings is of utmost importance to the practicing mental health clinician. One theory that has been used to explain research findings is Festinger's social comparison theory, which explains that we have an innate desire to socially compare ourselves to others, and that when we do compare ourselves to others, particularly others who we feel are superior to ourselves, this lowers our self-regard. This becomes particularly problematic when socially comparing our online selves, as multiple studies have found that users present idealized versions of themselves on social media platforms. Another theory to consider is Dunbar's number, which refers to a cognitive limit to the number of people with whom one can maintain stable social relationships with. The idea is that a user's online social network has increased far and above a user's cognitive capabilities, which results in an increased use of heuristics, an in turn, an increased number of cognitive errors. Finally, a third theory to consider is the paradox of choice, which explains that people can be classified either as maximizers or satisficers, with maximizers looking to maximize outcomes, and satisficers satisfied with good enough outcomes. These theoretical underpinnings help explain recent deleterious correlations found between social media use and mental health, including a link between time spent on Facebook and depressive symptoms and the link between size of a user's Facebook network and cognitively distorted negative feelings of self. Taken together, these theories and findings help to

explain the emergence of a recent phenomenon known as FOMO, or, Fear of Missing Out. FOMO is thought to arise from the abundance of choices among experiences, coupled with uncertainty of which choice is 'best,' and anticipatory regret over the options not selected. Research has found that FOMO is negatively correlated with age, emotional and relationship well-being, and positively correlated with low need satisfaction, low mood, low life satisfaction, distracted driving, and degree of Facebook use. Given social media's increased presence in our lives, its positive correlational findings with mental illness indicators, as well as the recent announcement of 'gaming disorder' by ICD, it is of utmost importance that research continue into this area of mental health.

No. 169

Stigma Toward Depression in Medical Students: An Exploratory Study in Medical Students, Psychiatry Residents, and Attending Psychiatrists

Poster Presenter: Anindita Chakraborty, M.D.
Co-Authors: Cynthia Arfken, Eva Waineo, M.D., Mary Koshey Morreale, M.D.

SUMMARY:

Background Medical students experience higher rates of depression, burnout and suicide compared to age matched controls in the general public, yet they are less likely to seek treatment , despite easier access to care(1).Stigma has been identified as a key barrier to utilizing services as well as adherence to treatment in this population. One study revealed that only 22% of depressed medical students were receiving treatment and 30% cited stigma as a barrier to utilizing services(2). Another study found that medical students preferred to confide in family and friends before approaching a health professional due to stigma (3). Other studies found that most medical students agreed that it was suitable for doctors to self diagnose and self-prescribe antidepressants (4) While there is existing literature examining medical students' perceptions about psychiatric stigma in general, there are currently no studies available that examine how medical students, psychiatry residents and attending psychiatrists perceive depression in medical students. Objectives This is an exploratory study that aims to: 1)To measure levels of stigma, both perceived and personal, in medical students, psychiatry residents and attending psychiatrists, towards medical students with depression. 2)To explore if the measures of stigma differ between those respondents with depression (either self-reported ever or currently assessed by a symptom checklist) and those who deny depression.3)To compare levels of stigma between medical students, psychiatry residents and attending psychiatrists. Methods This is a cross-sectional study of medical students, psychiatry residents and attending psychiatrists at Wayne State University School of Medicine from August to November 2018. We have obtained IRB exemption and are in the process of gathering participants. Our survey is being announced to all groups at meetings, and invitations are being sent out by email. Respondents have been informed that participation is voluntary and anonymous, and completing the survey gives them a chance to enter a raffle to win a $200 gift card. The survey instrument includes 30 statements out of which 15 relate to perceived stigma and 15 relate to personal stigma, all scored on a Likert scale. Other items include a Patient Health Questionnaire-9 and whether the respondent has a history of depression in themselves or their loved ones. The scale is derived from validated scales and drawn from existing stigma literature. (1,5,6) The scale was designed specifically for the study as there are no existing validated scales that address the research question. Results Our study is ongoing and results will be available by November 2018 Conclusions Stigma is a major barrier to seeking mental health services in this vulnerable population. We hope that this study will help us better understand the stigmatizing culture in medical training and help us design appropriate interventions to address stigma in the medical community.

No. 170

WITHDRAWN

No. 171

Assessing Resident Awareness and Perceptions of Human Trafficking

Poster Presenter: Namrata Kulkarni, M.D.
Co-Author: Anthony Tobia

SUMMARY:

Background: Human trafficking, including labor and sex trafficking, is defined as the recruitment of an individual through coercion for the purpose of exploitation. Along with physical injuries and medical sequelae such as physical trauma and STDs, victims and survivors can also experience mental illnesses such as depression, PTSD, and substance abuse. According to a study by Lederer, an estimated 87.8% of victims encounter healthcare providers. More information is needed about victims encountering psychiatrists and psychiatrists' training in identifying and treating this population. As an initial step, our research aimed to assess the resident-psychiatrist's perspective on human trafficking and its relation to mental health, provide an introduction about this topic, and determine the willingness of residents to change their current or future practice. Methods: Psychiatry residents at Rutgers-RWJMS (PGY-I to PGY-IV) were provided a presentation titled "The role of psychiatrists in addressing human trafficking." As part of a Quality Improvement (QI) project, participants completed pre- and post-surveys that assessed residents' awareness, attitudes, and knowledge pertaining to the topic. Surveys included a Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The post-survey also included 3 questions to evaluate residents' knowledge of the topic. Results: Data were collected from surveys completed by 16 residents. In comparing pre- and post-survey data we used a paired t –test. The average scores for importance of awareness about human trafficking increased from 4.13 to 4.56 ($t(14)= 1.52$, $p = 0.15$). The average scores for strength of association between human trafficking and psychiatry increased from 4.31 to 4.75 ($t(14)= 2.70$, $p = 0.02$). The average scores for importance of screening for human trafficking increased from 3.38 to 4.31 ($t(14)= 1.70$, $p = 0.11$). In terms of the question about changes in current or future practice, 87.5% of residents selected 4 or 5 on Likert scale; 87.5% also responded 4 or 5 for asking questions regarding human trafficking during patient interviews if red flags were suspected. Finally, 75% of residents answered 4 or 5 for likelihood of calling the national hotline if trafficking was suspected. For identifying red flags, 87.5% of residents correctly identified all 4 red flags out of a selection of 7. Conclusion: Our presentation achieved its goal to introduce the topic of human trafficking to resident psychiatrists, but also to convey the importance of psychiatrists' potential to identify the victims/survivors of human trafficking and to consider its effects on the patients they care for. Although two of the three comparison questions did not return statistically significant differences, the small sample size may be contributory. Screening for human trafficking yielded a statistically significant change, demonstrating that residents considered it important to know this aspect of a patient's life.

No. 172

Bedside Therapy: A Quality Improvement Initiative to Integrate Psychotherapy and Practice on a Inpatient Psychiatric Unit

Poster Presenter: Morgan Hardy, M.D., M.P.H.
Co-Author: James Patrick Bossmann, M.D.

SUMMARY:

Purpose: Decrease burn-out among psychiatry residents rotating on a busy military inpatient psychiatric unit while simultaneously improving quality of patient care and resident education. Setting: 20-bed inpatient psychiatric unit at San Antonio Military Medical Center (SAMMC) in San Antonio, Texas. Intervention: Resident-directed short therapy sessions with patients daily. Based on principles of logotherapy and the biopsychosocial model of care, sessions are designed to help patients find meaning in their life and current hospitalization. Residents also receive formalized didactics on introductory psychotherapy, and participate in weekly process group meetings to discuss psychotherapy sessions and receive feedback. Outcomes measured via an ACGME-developed burnout inventory administered pre- and post-intervention. Results: During the pilot phase of the program (January to June 2018), 7 residents participated. Preliminary results from the first 6-months of the program showed an average improvement of 26% in ACGME inventory scores. Improvements were seen across each of the inventory subscores, including a decrease in burnout (-45%) and an increase in meaning (+14%), vitality (+27%), and perceived learning environment (+24%). Anecdotally, the program has also increased patient satisfaction and been well-received by supervising faculty. Conclusions: Bedside therapy has shown to be a viable quality improvement initiative that is

effective for reducing resident burnout and improving the quality of patient care and resident education. The program has been approved to continue through 2019 and is being further expanded and integrated into the residency curriculum.

No. 173
Teaching Gun Violence: Speaking to Students and Residents
Poster Presenter: Gregory Leslie Hestla, M.D.

SUMMARY:
The Psychiatry department was contacted to provide input into a series of medical student lectures on gun violence for the Medical School as part of a five lecture series that would encompass trauma surgery viewpoints, community input, psychiatry viewpoints, and a review of known statistics of gun violence. This lecture series was requested by the medical student class as part of a program where the class can identify and request additional training in areas they feel represent weaknesses in their training. The lecture series was very well attended with excellent interaction during sessions from the students who reported the material engaging and new to them. During the creation and presentation of this course material several areas of interest were uncovered and addressed in ways that could be of benefit for others seeking to teach their medical students and residents about gun violence. One of these issues was the lack of widespread curriculum standardization on how to evaluate and teach the evaluation of gun violence during a clinical interview, both in reference to homicidal ideation and suicidal ideation. Another issue was how the reaction from medical students tended to be strongly emotional with significant personal descriptions of witnessed and experienced events, which changed the quality of the lecture in interesting ways that were able to be made use of during the session itself. Another issue of note for those seeking to adopt a similar lecture series or course content was the difficulty in addressing the material in a way that was accurate and evidence based while respecting the wide variety of political opinions on this topic present among the medical students and presenters. Using historical cases where the full details of the events leading to and after the gun violence event was helpful due to there being less ambiguity compared to more recent events. This allowed for a more accurate discussion of the factors that might have led to gun violence, and the interventions that clinicians can take to modify these factors.

No. 174
Get the Restraints
Poster Presenter: Sherry S. Chandy, M.B.B.S.

SUMMARY:
Aggressive and violent incidents are common on child and adolescent units. Current evidence suggests that improvement in de-escalation techniques training and staff shortages will improve staff's ability to de-escalate violent and aggressive behaviour and improve safety in practice. De-escalation techniques are a complex intervention, which has been overlooked by rigorous research, and is given only cursory mention in the resident curriculum. While de-escalation is not a new tool, the current psychiatry residency curriculum does not place adequate emphasis and training at the resident level. Used a video based simulation, where the physician demonstrates verbal de-escalation. De-escalation is highly effective and has been identified as the preferred intervention in calming a person experiencing agitation. This technique is also key to avoiding seclusion and restraint, which can be traumatizing to both patients and staff. The goal in verbal de-escalation is to help the person regain control so that he or she can better communicate needs with health care providers. Current evidence suggests seven themes with respect to de-escalation. The first three describe staff skills namely, characteristics of effective de-escalators, maintaining personal control, and the remaining four were verbal and non-verbal skills such as engaging with the patient, when to intervene, ensuring safe conditions for de-escalation, and strategies for de-escalation.

No. 175
Cognitive Biases: Friend or Foe?
Poster Presenter: Sherry S. Chandy, M.B.B.S.

SUMMARY:
A knowledge of cognitive biases helps you understand the thinking caveats that are part of

human nature, both your own, and especially others'. It promotes tolerance for a wide range of differences in beliefs and perceptions among people; and for preventing the divisions and animosities that can brew without this understanding. It helps us recognize our own and modify illusions and generalizations we fall prey to. Physicians respond differently to patients with psychiatric illness because of their estimation of pretest probability of disease rather than bias. Past psychiatric history influences physicians' estimation of disease presence and willingness to order tests. Overconfidence, the anchoring effect, information and availability bias, and tolerance to risk may be associated with diagnostic inaccuracies or suboptimal management. Knowing yourself is one of the keys to counter cognitive biases in healthcare. A difficult truth for both patients and caregivers: An openness to believing that you could be wrong or could be missing something important.This applies to anyone.

No. 176

A Descriptive Study of Occupational Stress as Indicated by Perceived Stress Scale Scores Among Staff of a Neuropsychiatric Unit in 2016

Poster Presenter: Alexandra Jean Catindig Palis, M.D.

SUMMARY:

Background: Stress is a reaction of the body to a perceived or actual threat on physical or physiological homeostasis of the body. Occupational stress was investigated in this study with aims to document the presence of stress among staff of a high-risk unit in Makati Medical Center, the Neuropsychiatry unit. Methodology: The Perceived Stress Scale developed by Cohen in 1983 was the tool used, a ten-item , self-administered questionnaire that measures perceived stress levels of respondents. Perceived stress levels may be lower than average, slightly lower than average, average, slightly higher than average, or much higher than average. Demographic characteristics of respondents were likewise determined. Respondents were comprised of the Neuropsychiatry unit staff. Results: The Neuropsychiatry unit staff generally presented with perceived stress levels of slightly higher than average. Most of the staff were female, aged thirty years old and below, single, with at least college level education. Birth order, the presence of night shifts, eight-hour shifts, length of service in years, and varying job designation in the unit were also identified. Majority of the respondents had not had any previous consultation with a mental health professional, and viewed having a support group in the workplace to be beneficial. Conclusion: The staff members of the Neuropsychiatry unit perceived stress to be slightly higher than average.

No. 177

WITHDRAWN

No. 178

Improving Medical Student Education, Communication, and Clinical Readiness for LGBT Populations

Poster Presenter: Matthew C. Fadus, M.D.
Co-Author: Neal Peterson

SUMMARY:

Background: A deficit currently exists in LGBT healthcare and medical education; studies have indicated that medical education does not adequately prepare students for LGBT-related care and communication. Students often indicate discomfort when discussing sexuality or topics related to LGBT health, and providers can report feeling lost or unsure of what to do for some of the healthcare concerns that LGBT patients may present with. As a result of educational gaps, communication in the medical setting can be marginalizing and stigmatizing for patients who identify as LGBT, which can diminish trust and lead to adverse outcomes. Despite perceived discomfort in LGBT topics and issues related to sexuality, medical students are often receptive, engaged, and benefit greatly from the implementation of LGBT educational experiences, which improve communication and attitudes towards patients who identify as LGBT. Methods: During the psychiatry clerkship, third-year medical students participated in small-group lecture and group discussion focused on communicating with patients who identify as LGBT. The lecture reviewed definitions of gender expression and gender identity among other LGBT topics, and primarily focused on the use of affirmative and inclusive language choices in clinical and non-clinical settings. Students responded to a

nine-question survey before and after the lecture, which asked students to evaluate their own comfort in LGBT topics such as gender fluidity, gender-neutral pronouns, sexual orientation, and LGBT health disparities, among other topics. Survey questions were completed on a scale of (0-100), with 0 representing an answer of strongly disagree, and 100 representing an answer of strongly agree.
Results: Student responses were favorable in all nine questions when comparing the results of pre and post-surveys. Students demonstrated improvements in self-assessment of their abilities to navigate conversations regarding gender identity and sexual orientation (+26.6), use neutral language when discussing sexual and romantic relationships (+23.4), and appreciate the healthcare barriers and disparities that LGBT patients may experience (+19.4). Students indicated a shift in their understanding of gender as fluid rather than binary (+17.1), and felt strongly that learning about LGBT health and communication was relevant to clinical practice.
Conclusion: Consistent with previous studies, students respond favorably to education centered around LGBT topics. Improving LGBT education empowers students to use affirming and inclusive communication; reducing their own discomfort and avoidance all while creating a more validating environment for patients. Equipping trainees with the skills to discuss gender identity, preferred names and pronouns, family structures, and other LGBT topics will allow them to establish a strong therapeutic alliance with a vulnerable and marginalized patient population.

No. 179

Transgender and Countertransference: Insights From a Case Report

Poster Presenter: Samantha Salem, M.D.
Co-Authors: Jeffery Jerome Grace, M.D., Eileen Trigoboff

SUMMARY:
This Case Report illustrates the treatment of a 25-year-old transgender female patient with a history of Schizoaffective Disorder, Bipolar type; mild Cannabis and Alcohol Use Disorder, Borderline Personality Disorder, and mild-moderate Intellectual Disability. This patient presented to a PCP appointment where she disclosed command auditory hallucinations of homicidal and suicidal ideation. She had attempted to cut her wrist and received about seven sutures before being evaluated by the psychiatric emergency department. At this point, the patient had not disclosed her gender preference. She was admitted to the psychiatric unit for acute stabilization and later transferred to a state psychiatric center for further treatment. A few weeks into her hospitalization, about 4 months after total hospitalization, she disclosed to staff that she identified as a female. Support from LGBTQ peer specialists visited the hospital to provide support. However, materials regarding a violent attempt on transgender community members was brought and as a consequence, this patient feared returning to the community repeatedly sabotaging her own discharge. Also diagnosed, as a child, with a seizure disorder, she refused her medications for 48 hours which led to a seizure and continued hospitalization. When she was screened for local housing, she would often report auditory command hallucinations of HI and SI that did not demonstrate the phenomenological appearance of perceptual disturbance. Further contributing to challenges faced in treatment, this patient's non-conforming gender appearance (choosing not to shave facial hair at times and also variable appearance of breasts) increased negative countertransference as staff described patient as "confused" or "just wanting special treatment." This contributed to patient's acting out behavior and extending inpatient hospitalization due to concerns for safety. Literature available from the Health Care Quality Index recently released indicate that over 70% of transgendered individuals cannot find sensitive and appropriate health care. This poster details how gender identity can contribute to significant challenges in treatment and how it may be addressed.

No. 180

Hidden in Plain Sight: A Literature Review of Intimate Partner Violence (IPV) in Same Sex Couples

Poster Presenter: Amilcar A. Tirado, M.D., M.B.A.

SUMMARY:
This poster will summarize how IPV in same-sex couples impacts the medical and mental health of

the victim. It will also explore issues, barriers, and challenges gay and lesbian individuals face when attempting to report an incident of IPV. Domestic Violence (DV), also referred to as IPV, is defined as a pattern of behaviors utilized by one partner (the batterer or abuser) to exert and maintain control over another person (the survivor or victim) where there exists an intimate and/or dependent relationship (1,2,3,4). The term DV and IPV will be used interchangeably. Law enforcement, government agencies, and the general population acknowledge that domestic violence is a serious public health problem (3,4,5). The most commonly understood type of abuse involves partners of the opposite gender engaging in behavior that is both physically and mentally harmful, with the victim, typically being the female (2). Research concerning IPV began in the 1970s in response to the women's movement and traditionally studies focused on women abused by men in opposite-sex relationships (2). Less universally recognized is the occurrence of IPV among partners of the same sex (2,3,4,5). IPV occurs at least as frequently, and likely even more so, between same-sex couples compared to opposite-sex couples (2). Although one would assume that the laws concerning IPV would protect everyone, this is sadly not the case (2). In many states, laws have been enacted to make it difficult for victims of same-sex IPV to get the protection they need (5). IPV in same-sex couples is vastly underreported, unacknowledged, and often reported as something other than IPV/DV (3,4,5). Longitudinal studies are needed to establish the causal pathway between IPV and adverse health outcomes, substance use, and sexual risk behaviors (7,8,9,10,11,12). The concepts of BPV, common in the literature on IPV, should be taken into consideration in future research (7,8,9,10,11,12). It is evident that healthcare professionals need to be aware that IPV and BPV is a problem in same-sex couples, and need to assess for these and refer affected individuals to appropriate support services in the community (7,8,9,10,11,12). Victims of same-sex IPV face added challenges when attempting to receive help (3). Survivors of same-sex IPV can receive the recognition and help they need with further research, better training for law enforcement officials, and more funding for relevant programs (3).

No. 181

Transgender Identity, Trauma, and Borderline Personality Disorder: A Case Study Emphasizing Diagnostic Precision in Marginalized Populations

Poster Presenter: Michelle Rabowsky Heare, M.D.
Co-Authors: Christy A. Meyer, Swati Rao, Laura E. Kenkel, M.D.

SUMMARY:

Historically, Borderline Personality Disorder (BPD) has been more frequently diagnosed in people who identify as transgender than in other populations. Review of the literature revealed that some case reports estimated up to 66% of patients who identified as transgender could be diagnosed with a personality disorder; a much higher prevalence than in the general population (1). In the 1980s, some authors went as far as to conceptualize gender identity disorder as a variant of BPD (2). Gender nonconformity was thus seen as near-synonymous with pathology; however recent studies have not shown any increased prevalence of personality disorders in transgender and gender-nonconforming (TGGN) populations (3). Nevertheless, the legacy of recent thought still carries weight in many clinicians' minds and so demands the question: How do we explain the over-diagnosis of personality disorders and specifically BPD in the TGGN population? This case report helps demonstrate how many symptoms formerly conceptualized as part of BPD can be better explained by a lifelong experience of invalidation and trauma. Gender Minority Stress Theory (GMST) helps us understand why a transgender individual may present with symptoms that are listed as diagnostic criteria for BPD. GMST, which is based on Meyer's Minority Stress Theory, explains that TGGN populations experience high rates of rejection, discrimination and violence (4). These experiences, as described by Meyer, result in environmental stress, increased vigilance in expectation of these stressors, and internalization of society's prejudices and invalidation (5). Clinical presentations of emotional dysregulation in transgender populations can be understood as a natural consequence of the traumatic life experiences described by GMST (6). Additionally, research has shown that suicidality in TGGN populations is related to gender-based victimization and that these rates are higher in TGGN populations independent of mental health disorders

(7,8). Our case is that of a transgender patient who initially presented with symptoms of affective instability, self-harm, repeated dramatic suicide attempts, and transient stress-related paranoid ideation. Based on these symptoms, our team's initial working diagnosis was BPD; however further evaluation and collateral information was not supportive of a lifelong pattern of behavior which would be required for diagnosis of BPD. We came to understand our patient's clinical picture as arising from her lived experience as a transgender individual combined with recent sexual trauma and a separate incidence of physical trauma which made her feel disfigured. Her symptoms and maladaptive coping mechanisms, though on the surface consistent with BPD, only emerged subsequent to these traumatic experiences. This case acts as a reminder that, when working with TGGN patients, it is critical to consider the social context that may be driving maladaptive coping skills before diagnosing BPD.

No. 182

A Survey Study on Residents' Perspective on the LGBTQ+ Community and the Associated Barriers in Medical Management

Poster Presenter: France M. Leandre, M.D.
Co-Authors: Virmarie Diaz Fernandez, M.D., Almari Ginory, D.O.

SUMMARY:

In 2016, About 10 million of US inhabitants identified themselves as part of the LGBTQ+ community. This represents a significant increase from the 8.3 million in 2012. Although this population is continuously becoming more open about their gender identity and sexual orientation, this continues to be a controversial topic in the United States. The LGBTQ+ community faces numerous barriers to health care, including poor communication, presumptions, clinicians' lack of knowledge about their health needs, and poor provision of care. For a number of LGBTQ+ people, living as a stigmatized minority can cause excessive stress, leading to mood disorders, suicidal ideation and unhealthy coping behaviors, including unsafe sex or substance abuse, at a higher prevalence than the general population. Suicide is the leading cause of death among LGBTQ+ youth nationally; around 30% of LGBTQ+ youth attempt suicide near the age of 15. It is becoming increasingly important as to why providers should become comfortable with this population. ACGME requires residents to demonstrate sensitivity and responsiveness to a diverse patient population which include diversity in gender, age, culture, race, religion, disabilities, and sexual orientation. However, there are no guideline as to how such training should be provided and to assure that residents are competent when they graduate from a residency program. In addition, there has very little research to evaluate why provider may feel uncomfortable with managing that population. We are therefore currently conducting a survey to evaluate residents' and medical students' perspective on the LGBTQ+ community. We hypothesize that the discomfort may be due to the lack of education provided by residency programs about the LGBTQ+ community and possibly due to their personal religious/cultural views. Our goal is to recognize the comfort level and provide the necessary tool to engage with these patients in order to minimize any health disparities.

Monday, May 20, 2019

Poster Session 5

No. 1

Stable, Low-Dose Quetiapine Causing Neuroleptic Malignant Syndrome in an Elderly Patient

Poster Presenter: Garrett Dunn
Co-Author: Tarak Vasavada, M.D.

SUMMARY:

Case Presentation: 72-year-old male nursing home resident with past medical history of vascular dementia, depression with previous suicide attempt, and anxiety who was previously easily redirected and reoriented, presented with worsening agitating and confusion, unable to follow commands for 2 days. Psychiatric medications included memantine 20mg twice daily, levomilnacipran ER 80mg daily, mirtazapine 15mg daily, quetiapine 25mg twice daily, and oxcarbazepine 150mg twice daily. These medications were started at a hospitalization 1 month prior for alerted mental status except for the quetiapine which he had been taking 25mg at bedtime for five months with the dose increased at last admission. On physical exam, he appeared

agitated and confused, unable to follow commands. His temperature was 106.8?F, blood pressure 117/102, pulse 150, and respirations 29. Neurologic exam included oriented x0 with nonverbal speech, non-purposeful movement to all four extremities, no rigidity noted, down-going plantar response bilaterally without clonus, and 1+ deep tendon reflexes throughout. Oral mucosa was extremely dry. Remainder of physical exam was within normal limits. Significant labs included WBC of 14.54, hemoglobin 10.5, platelets 260, MCV 80, RDW 16.3, sodium 145, potassium 5.4, anion gap 23, bicarb 20, creatinine 1.8, glucose 70, CPK 2611, lactate 4.5, ferritin of 262, TIBC of 190, and iron saturation of 8%. UA was positive for nitrites, WBC's, and bacteria, with final urine cultures growing ESBL-Klebsiella pneumoniae. Patient was admitted to the ICU for NMS with acute rhabdomyolysis, AKI, and complicated UTI. Psychiatric medications were held, antibiotic therapy initiated, and supportive care continued with mechanical ventilation. He was started on bromocriptine 2.5mg PO every 6 hours. Respiratory and mental status then gradually improved, and, after 5 days on the ventilator, he was extubated on day 8 with continued return to baseline mental status Discussion: The incidence of neuroleptic malignant syndrome (NMS) is 0.02 to 0.03 percent in patients taking dopamine antagonist, with the vast majority of cases involving high-potency, first-generation antipsychotics, and few in patients on atypical antipsychotics, such as quetiapine, with even fewer in patients on low doses of these medications.[1],[2] The only dopamine antagonist medication implicated in causing NMS in our patient was quetiapine, which he had been taking for 5 months prior to presentation with an increase in dose by 25mg one week prior. Atypical antipsychotics, such as quetiapine, have fewer case reports of causing NMS as well as a less severe presentation of symptoms as opposed to the typical, first generation antipsychotics.[3] It is important to recognize and be aware of the risk, although small, associated with these medications as early recognition and supportive treatment is key to reducing rates of associated mortality.

No. 2

Improving Mental Health Competencies Among Army Primary Care Providers

Poster Presenter: Mary Thomas
Co-Author: Rohul Amin, M.D.

SUMMARY:

Background: Depression and anxiety are highly prevalent conditions. Almost 7% of Americans suffer from depression. Only 55% receive treatment, and 27% of those receive adequate treatment. Common gaps in psychiatric care provided by non-psychiatrists include under-dosing, inappropriate duration of treatment, and lack of follow up. Mental illness is the first and fourth leading cause of combat medical evacuations among female and male military service members respectively. Methods: We attempted to address this gap through a single 3-hour didactic training with the aid of a psychotropic decision tool. The topics included behavioral management of sleep and prescribing skills to treat anxiety and depression in the primary care setting. The trainees included a US Army Infantry Division's assigned physicians and PAs. The trainees were given a computer-based medication prescribing and titration decision tool developed by one of the authors. Immediate pre/post-training and six-month evaluations were done using surveys. Descriptive statistics and an independent-T test were done to quantify effects of the training on learner's perceptions and behaviors. Results: Immediate post-training evaluations showed significant improvements in several outcomes: confidence levels in selecting optimal psychotropic medications improved from before training confidence scores (3.27 ± 0.827) to (4.0 ± 0.522), $t(35) = -3.509$, $p < 0.001$, $d=1.05$. Confidence levels in changing dose of psychotropics improved from before training confidence scores (3.24 ± 0.889) to (4.09 ± 0.668), $t(37) = -3.554$, $p < 0.001$, $d=1.08$. Confidence in prescribing behavioral sleep interventions improved from before training confidence scores (3.38 ± 1.024) to (4.04 ± 0.562), $t(30) = -2.626$, $p < 0.01$, $d=0.8$. The six-month follow-up surveys showed significant perceived behavioral improvements in several outcomes: trainees reported they were more likely to adjust medications for anxiety or depression due to the training, with change in perceived behavior scores from (3.30 ± 1.059) to (3.90 ± 0.004), $t(9) = -2.714$, $p < 0.02$, $d=0.58$. Trainees also reported they were more likely to start a new medication for anxiety or depression due to the

training, with change in perceived behavior scores from (3.10 ± 1.059) to (3.90 ± 0.004), t(9) = -2.449, p < 0.03, d=0.65. Other positive outcomes are also reported including the effects of using the computer-based psychotropic decision tool. Conclusions: A single didactics-based training to treat anxiety, depression and insomnia was rapidly delivered to a large number of providers with minimal time or resource expenditures. The immediate (large ES) and six-month (moderate ES) follow-up shows improved perceived confidence and management behaviors of important psychiatric conditions by primary care providers. Similar training and tools can be used across the US Army and other healthcare organizations to enhance access to behavioral health care via the primary care setting.

No. 3

Catatonia as a Manifestation of Lithium Toxicity

Poster Presenter: Nidhi Shah

Co-Author: Walter Piddoubny, M.D.

SUMMARY:

A 52-year-old Caucasian female with a past psychiatric history notable for bipolar I disorder, who had been on lithium for 25 years, additionally on venlafaxine, olanzapine, and clonazepam, presented to the emergency room with worsening generalized weakness, unsteady gait, and slowed speech over the past five months as well as an acute onset of altered mental status. The patient's neurological exam was notable for tongue fasciculations, anisocoria, left eye ptosis, dysdiadochokinesia, dysmetria, and bilateral upper extremity tremors. The patient's lithium level was found to be supratherapeutic at 2.0 mEq/L. MRI brain revealed moderate cerebral cortical atrophy and mild cerebellar atrophy advanced for the patient's age, but no acute pathology. The consultation and liaison psychiatry team evaluated the patient and determined that, in addition to acute kidney injury and metabolic acidosis, the patient's predominance of neurologic symptoms lasting for several months followed by several days of altered mental status was consistent with acute-on-chronic lithium toxicity. The patient was started on IV fluids, monitored on the Clinical Institute Withdrawal Assessment (CIWA) protocol, and all psychotropic medications were held. The patient's lithium level normalized by day 2 of her hospitalization and by day 4, she became minimally responsive, immobile, and stuporous. The patient was evaluated with the Bush-Francis Catatonia Rating Scale (BFCRS) and her presentation was consistent with retarded catatonia. The patient was started on steadily increasing doses of lorazepam as first-line treatment for catatonia. Five days after the initial presentation of catatonia, the patient's catatonic symptoms were consistently scoring between 7-11 on the BFCRS despite reaching 8 mg total daily of lorazepam. At this point, the patient was deemed a candidate for electroconvulsive therapy (ECT). Catatonic symptoms resolved after six treatments of ECT. The delayed onset of catatonia despite normalization of lithium levels was attributed to the fact that clinical manifestations of lithium toxicity typically lag behind changes in serum lithium concentration. While lithium is notable for its narrow therapeutic index and predilection for causing toxicity, retarded catatonia is not a well-known consequence of lithium toxicity and has only been reported in two prior incidents. This case demonstrates another association between lithium toxicity and catatonia and to our knowledge, the second reported case in an adult.

No. 4

Prevention of Clozapine-Induced Granulocytosis With G-CSF: A Case Report of Concurrent Dosing of Clozapine and Filgastrim on a Third Trial

Poster Presenter: Krushen Pillay, D.O.

Co-Author: George Gettys, M.D., M.P.H.

SUMMARY:

Clozapine is an atypical antipsychotic with a superior efficacy for the management of treatment resistant schizophrenia but one which is underutilized. A 59-year-old veteran was transferred from the long term care unit to the inpatient psychiatric unit due to suicidality with plan to hang himself by his pajama bottoms. He was noted as having a longstanding history of psychosis with significant referential and paranoid delusions. The patient had experienced two prior trials of clozapine; while he had significant response in the past, both trials ended in neutropenia and absolute neutrophil count < 500 cells/ uL. Using a protocol for clozapine initiation that included methods for neutropenia management

and prevention, he has been able to be safely restarted on clozapine and maintained on this regimen for six months without similar drops in neutrophil count.

No. 5

Cannabidiol (CBD): Can Patients Benefit From It?

Poster Presenter: Gaurav Kumar, M.D.

SUMMARY:

Cannabis, also known as marijuana, is a psychoactive drug derived from the Cannabis plant which is used widely for medicinal and recreational purposes. Over one hundred compounds, termed cannabinoids, have been identified in cannabis. These include the two more commonly known cannabinoids THC (delta-9 tetrahydrocannabinol) and CBD (Cannabidiol). THC is the main psychoactive constituent of cannabis, responsible for the "high" when cannabis is consumed. CBD is also a major cannabinoid, accounting for up to 40% of the plant's extract. Unlike THC, CBD does not produce euphoria or intoxication. CBD is widely available in health food stores and used for anxiety, depression, epilepsy, chronic pain, post traumatic stress disorder, high blood pressure, among other health issues. Research done with cell cultures and animal models as well as small studies in humans suggest CBD may have potential medical benefits. CBD has shown to have a range of effects that may be therapeutically useful including anti- seizure, antioxidant, neuroprotective, anti-inflammatory, analgesic, anti-tumor, anti-psychotic, and anti-anxiety properties.

No. 6

Sural Nerve Neuropathy Induced by Phenytoin Leads to Lethal Suicide: A Case Report

Poster Presenter: Nazar Muhammad, M.D.
Co-Author: Guitelle St.Victor, M.D.

SUMMARY:

Background Depression and anxiety can be seen with medical conditions such as phenytoin-induced sural nerve neuropathy (SNN). Phenytoin is one of the most commonly used anti-seizure medications in the United States. Phenytoin acts by blocks sodium and calcium influxes into neurons prolonging their refractory period (Pandey 2012). After chronic phenytoin use, there is axonal shrinkage due to de-myelination and re-myelination which causes a decrease in nerve conduction leading to peripheral neuropathy. After discontinuation of phenytoin, the neuropathy can be reversed via the regeneration of normal myelin (Ramirez 1980). Case Discussion: We present a case of 55-year-old Caucasian female domiciled at a group home with reported past medical history of Peptic Ulcer Disease, Seizure disorder controlled with Phenytoin and Carbamazepine for over 20 years, and a 1-year history of phenytoin-induced SNN. The patient also has a past psychiatric history of bipolar disorder controlled with lithium. She was brought into the medical emergency department by EMS after a suicide attempt with ingestion of wood polish and lighting her hair on fire causing left temporal burn. When medically stable, she was admitted to the psychiatric inpatient unit for stabilization and started on Citalopram, Lithium Carbonate and Risperidone. Neurology was consulted for her seizure disorder and recommended continuation of Carbamazepine and discontinuation of Phenytoin due to worsening of SNN. Due to sepsis she was transferred to the medical floor where our Consultation-Liaison Psychiatry followed. On initial evaluation, she admitted to being depressed for 3 months due to her inability to walk or live independently. This culminated in her suicide attempt and was regretful of her failed attempt. With titration of her regimen, she slowly improved, participated in physical therapy and made good progress off Phenytoin. Conclusion This case illustrates how the phenytoin-induced SNN was the main contributing factor to this patient's depression and her lethal suicide attempt. We recommend regular screening for depression in patients on long-term phenytoin therapy specially if they have signs of SNN because although fatal, it is reversible.

No. 7

Bradycardia and Hypotension Due to Co-Administration of Intramuscular Olanzapine and Lorazepam in a Schizophrenic Patient

Poster Presenter: Jaskirat Singh Sidhu, M.D.
Co-Authors: Fei Cao, M.D., Ph.D., Waquar Siddiqui, M.D., Ambika Kattula, M.B.B.S.

SUMMARY:

Introduction: Agitation is a common sight in psychiatry units, emergency departments and long term care facilities. Widely used treatment for such patients includes using antipsychotics and benzodiazepines. Addition of benzodiazepines to antipsychotics have not consistently shown improved control of agitation and increases the risk of side effects, including over sedation and respiratory depression. Common side effects of olanzapine include sedation, weight gain, increased appetite, low blood pressure, dizziness, muscle stiffness, restlessness, constipation, dry mouth, and tremor. Manufacturers have warned against using olanzapine and benzodiazepines together. We reviewed the literature and best to our knowledge, we found only one case report mentioning hypotension from co-administration of intramuscular olanzapine and lorazepam. We present a case of a 60-year-old male who suffered from hypotension and bradycardia after administration of intramuscular olanzapine and lorazepam, at the same time. They were given for severe agitation. Case Report: Patient is a 60-year-old male with history of schizophrenia with extensive history of inpatient admission in the past. Patient was brought to emergency department for altered mental status and worsening psychosis. He does not have any significant medical issues, his urine drug screen and blood alcohol failed to show anything. Patient was given olanzapine 10mg and lorazepam 2mg intramuscularly for his agitation and was transferred to behavioral health inpatient unit. After coming to the behavioral health unit, he started to have bradycardia and became hypotensive. He was sent back to emergency department where his heart rate was in the 40's and BP was ~80's/40's, EKG showed marked sinus bradycardia. Patient received 2L NS bolus after which his blood pressure improved to ~100/60. Poison control were contacted by the ED team and state that olanzapine and lorazepam combination is likely the cause of his presentation. Cardiology were contacted after his Troponin came back elevated at > 0.04. His second Troponin was also elevated at > 0.04. Cardiology recommended trending troponin and EKG's and recommended against starting heparin unless his troponin continues to trend up. He became much stable although still very psychotic and agitated but pressures normalized. Cardiology also did an Echo due to his persistent low pressures in spite of given intravenous fluids, which showed trace located pericardial with normal ejection fraction. Discussion: Olanzapine and benzodiazepines combinations are well known to cause cardiorespiratory depression. Clinicians should be thorough when prescribing this combination and administration should be followed with careful evaluation of side effects, which in some case reports have proven to be lethal. Until further research is conducted, clinicians must rely on available data and post marketing surveillance as a reflection of drug safety.

No. 8

Long-Acting Paliperidone-Induced Severe Hypothermia in an Elderly Patient

Poster Presenter: Adnan Syed, M.D., M.S.
Co-Authors: Alissa Peterson, M.D., Jessica A. Ross, M.D., Ph.D., Caroline Tsai

SUMMARY:
Mr. R, a 79-year-old Asian American male with past psychiatric history of schizoaffective disorder, depressive type, mild cognitive impairment, and remote CVA, is admitted to inpatient psychiatry for paranoid delusions of being persecuted resulting in his barricading his door and avoiding sleep, refusing all medications, and not eating or drinking for several days. The patient was previously stable on fluphenazine decanoate and valproic acid for 15 years, but in the past year was transitioned to paliperidone palmitate at both 234-mg and more recently 156-mg monthly doses. Given his poorly controlled symptoms of psychosis and historical tolerance of higher dosing, he received paliperidone palmitate 234-mg IM, additional oral risperidone, and his home dose of valproic acid on the inpatient unit. During the following 48 hours, he developed waxing and waning alertness, and increasing disorganization and restlessness, consistent with delirium. Three days after administration of his long-acting injectable, Mr. R was found to have isolated hypothermia of 33.6°C that subsequently fell to 30.3°C (rectal) within a few hours. At low core temperatures, autonomic dysfunction including hypotension and bradycardia was also present. He required supportive care in the ICU including extended rewarming, the use of three pressors, and

intubation. An extensive work-up was conducted and, once all alternative causes ruled out, hypothermia was determined to be induced by long-acting paliperidone. The patient continued to require ICU support for two weeks given persistent hypothermia that approximated the expected period of elevated paliperidone plasma levels. With supportive care, he subsequently recovered, and was successfully extubated and returned to a locked psychiatric unit with eventual discharge to home. To our knowledge, this is the first reported case of paliperidone palmitate-induced hypothermia requiring ICU intervention. In this poster, we discuss our management approach to hypothermia due to long-acting injectables. We also speak to concerns of safety of long-acting injectable use in geriatric patients, even if previously tolerated.

No. 9

Treatment With Olanzapine Associated With Conversion to Atrial Fibrillation: A Literature Review and Case Series

Poster Presenter: Winifred Mary Wolfe, M.D.
Co-Authors: Andrea Chapman Bennett, M.D., Gabriela Cristina Marranzini, M.D., Jordan Harrison Rosen, M.D.

SUMMARY:

Background: Atrial fibrillation is among the most common cardiac arrhythmias and is associated with serious morbidity and mortality related to decreased cardiac output and thrombus formation. Antipsychotics have a well-known association with cardiac arrhythmias; however, concern is typically focused on long QT syndrome or other ventricular arrhythmias. We describe two cases of atrial fibrillation in association with the use of olanzapine occurring within two weeks of each other, while discussing the current literature on this topic. Case 1: Mr. M is a 69 year old male with a history of post traumatic stress disorder, congestive heart failure, hypertension, end stage renal disease on hemodialysis, type two diabetes mellitus, hepatitis C virus, and atrial fibrillation. He initially presented to the emergency department with worsening symptoms of his known post traumatic stress disorder but was ultimately diagnosed with mania. Therapy with olanzapine was initiated to target manic symptoms. During his regularly scheduled hemodialysis during admission, he developed tachycardia and became unresponsive. At that time, repeat EKG was significant for atrial fibrillation with RVR. Case 2: Ms. W is 72 year old female with no known psychiatric or cardiac history other than a subjective report of palpitations and a PMH of asthma and chronic inflammatory pulmonary disease. She initially presented to the ED with two weeks of manic symptoms in the context of prednisone therapy. She was initiated on olanzapine. Three hours after the second dose, she developed hypotension, light-headedness, and tachycardia. EKG showed atrial fibrillation with RVR. Discussion: Several case reports and one case control study have implicated antipsychotics as potential inciting agents for atrial arrhythmias. Olanzapine, specifically, has been found to have a higher risk (OR = 1.8) of conversion to atrial fibrillation than most other antipsychotic agents (with clozapine, fluphenazine, and chlorpromazine being the exceptions). This risk appears related to the medications' anticholinergic receptor profile. In one of our cases, olanzapine had a likely contribution to the onset of atrial fibrillation. In the other case, other factors may have been more causal. Conclusion: In patients with a history of atrial fibrillation, other antipsychotics should take priority as first-line therapy.

No. 10

Gynecomastia Associated With Citalopram Use

Poster Presenter: Peter George Karalis, M.D.
Co-Authors: Magdoline Daas, M.D., Ok Ji, Jillian Condon

SUMMARY:

Introduction: Gynecomastia is the benign enlargement of breast tissue secondary to an increase in the estrogen-to-testosterone ratio. Development of gynecomastia can be distressing for male patients. This undesired side effect may cause decrease in compliance to treatment as well as worsening of symptoms such as depression and anxiety. This case report will explore how Citalopram used in the treatment of anxiety disorder resulted in gynecomastia and the pathophysiology behind this reaction. Objective: To describe a case of bilateral gynecomastia which developed during the treatment of chronic anxiety disorder when Citalopram, was added to the patient’s medication regimen. Case

Report: Mr. Z., a 44-year-old Caucasian male with a past psychiatric history of alcohol use disorder and generalized anxiety disorder was referred to the outpatient psychiatric service for treatment of generalized anxiety disorder in context of medication-associated gynecomastia. Previously, the patient was started on citalopram 10mg daily for chronic anxiety during his inpatient treatment of alcohol induced pancreatitis. Over time, dose was optimized to 20mg by his PCP, and his symptoms were well controlled. After five months of treatment with citalopram 20mg, he presented to his PCP complaining of right nipple pain with palpable mass, decreased libido and erectile dysfunction. A mammogram was ordered which showed bilateral gynecomastia, more pronounced on the right side. The PCP suspected the gynecomastia was due to the citalopram, but patient was reluctant to be taken off this medication due to fear of recurrent anxiety. Patient was then referred to the psychiatry service for management. At that time patient had decreased the dosage of his citalopram to 10mg on his own. The change in dosage resulted in some improvement of the breast pain. Citalopram was discontinued, and escitalopram was started at 10mg daily. At the one month follow up, he reported that his gynecomastia resolved, breast pain decreased, and libido increased. Discussion: Gynecomastia in patient's taking SSRIs can be attributed to disturbances of the hypothalamic-pituitary-testis (HPT) axis resulting in an increase in the estrogen-to-testosterone ratio. Although the etiology is still unclear regarding how this class of medications causes this effect, there have been studies which show that patient's taking SSRIs have significantly lower levels of LH, FSH, and testosterone in comparison to healthy patients not taking SSRIs. The gynecomastia improved when Citalopram was discontinued. Conclusion: Citalopram and other SSRIs may cause gynecomastia which can be an additional source of distress for patients undergoing treatment. In this case the side effects seemed to be dose dependent. Though the mechanisms is unclear at this time, physicians should be aware of this side effect and be able to properly educate their patients while appropriately screening them for such symptoms.

No. 11

When Lorazepam and ECT Fail: The Role of NMDA Receptor Antagonists in Catatonia

Poster Presenter: Faisal Kagadkar, M.D.
Co-Authors: Aitzaz Munir, M.B.B.S., Muhammad Aadil, M.D., Abdullah Bin Mahfodh, M.D.

SUMMARY:
Background: Catatonia is a commonly encountered syndrome with an inability of normal movement and can be seen in the context of psychiatric and medical disorders. Depending on the sub-type of catatonia, first-line treatment is intravenous lorazepam or Electroconvulsive therapy (ECT). While the use of these interventions do show response in the majority of patients, many have partial or no-response. Moreover, the use of these interventions may be limited due to co-morbid conditions, unavailability or stigma. In such circumstances, alternate agents such as NMDA receptor antagonists may be useful. Methods: A search of PubMed with the terms ("catatonia" OR "catatonic") AND ("NMDA antagonist" OR "glutamate antagonist" OR "amantadine" OR "memantine" OR "ketamine") was carried out. Results: 84 articles were identified and reviewed. Most articles included were case reports with the use of amantadine or memantine. These agents showed resolution either as monotherapy, as was often seen with amantadine or in combination, as was seen with memantine. Altogether, NMDA receptor antagonists have a large number of articles supporting their effectiveness and safety in the treatment of catatonia. Conclusion: Glutamatergic dysfunction suggested in catatonia could explain the resolution noted with the use of NMDA receptor antagonists. These agents appear to be a safe, alternative option in patients when first line treatment with lorazepam and/or ECT fails or is unavailable.

No. 12

Internet Gaming Disorder: A Systematic Literature Review of Neuroimaging Studies

Poster Presenter: Cassandra Boduch

SUMMARY:
Internet gaming disorder (IGD) is a new disorder currently positioned in the appendix of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V). Research over the

past decade has strongly suggested that excessive Internet Gaming can lead to the development of a behavioral addiction. As such, IGD (DSM-V) is a serious threat to mental health with multiple negative psychosocial consequences. Clinical studies have illustrated this disorder through neuroimaging studies, distinguishing particular brain regions involved in the development and maintenance of addiction. The aim of this systematic review was to assess current knowledge of neuroimaging techniques to better comprehend this emerging mental health problem. A literature search was conducted utilizing the following search databases: Academic Search Premier, MEDLINE, PubMed, PsychINFO, ScienceDirect, and Google Scholar to identify all available research evidence on neuroimaging of IGD (DSM-V). Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines were followed during design, search, and reporting stages of this review. These studies provide compelling evidence for the similarities between different types of addictions, particularly substance-related addictions and Internet gaming addiction on a molecular, neuronal, behavioral, and psychosocial level. The paper shows that by understanding the neuronal correlates associated with the development of IGD (DSM-V), the importance and severity of this condition will be highlighted, giving credence to the disorder and promote future research into other behavioral addictive disorders.

No. 13

Ibogaine-Induced Catatonia in a Patient Self-Detoxifying From Buprenorphine

Poster Presenter: Rober Aziz, M.D.
Co-Authors: Erin Zerbo, M.D., Rashi Aggarwal, M.D.

SUMMARY:

Introduction: In the United States, many patients are prescribed buprenorphine for treatment of opioid use disorder. However, due to side effects or the desire to avoid maintenance medication, a number of patients wish to taper off buprenorphine. Left without an FDA-approved option, many of these patients have turned to Ibogaine, a Schedule I controlled substance in the United States. Patients go to “treatment centers” in other countries or obtain it through the “dark web” and treat themselves at home. We present a case of a patient on buprenorphine with a previous history of anxiety, depression, and opioid/cocaine/MDMA/cannabis/PCP use disorders who presented with suspected Ibogaine-induced catatonia. Case Presentation: A 29-year-old Caucasian man was brought into the hospital accompanied by his family because he was awake but not verbally responsive. On interview, the patient was awake and responsive to questions by gesturing, but remained mute. His vital signs were stable. History was obtained from his girlfriend. He had a prior diagnosis of anxiety and depression and one prior psychiatric hospitalization at the age of 21 for cocaine use. He had a history of abusing oxycodone, heroin, cocaine, ecstasy, PCP and marijuana. He smoked ½ a pack of cigarettes a day for the past 11 years. The patient was most recently prescribed bupropion, sertraline and clonazepam. Over a period of 15 years, he had trials of escitalopram, aripiprazole, and fluoxetine. He started taking Ibogaine 4 days prior to presentation due to his desire to avoid maintenance medication. In the hospital, he was started on lorazepam 1mg PO TID and the symptoms entirely resolved the next day. On follow up, he reported that he ordered and received Ibogaine from the internet. After taking Ibogaine on the first day, he felt opiate withdrawals for 3 hours but they suddenly stopped. The patient went to the hospital after taking a booster dose on the fourth day. He does not remember most of what happened in the hospital but does remember receiving Ativan and regaining his speech. Since being discharged, the patient has remained sober and has not had any cravings. In addition, he is no longer on any medications and only uses marijuana once every few weeks. He is now motivated to improve his life and is applying for jobs in the community. Conclusions: Despite having some safe medication choices for opioid maintenance and detoxification treatment, patients sometimes use illegal or off the counter medications to treat themselves. It is important for psychiatrist to be aware of these alternative treatments like Ibogaine and their potential side effects.

No. 14

Misuse of Ethanol-Based Hand Sanitizer by a Veteran With Alcohol Use Disorder

Poster Presenter: Elizabeth Soyeon Ahn, M.D.
Co-Authors: Josepha A. Cheong, M.D., Tarik Ksaibati, D.O.

SUMMARY:
Alcohol based hand sanitizers are widely used in the U.S. health care system for being more effective than hand washing in preventing transmission of microorganisms. However, the ubiquitous presence of these agents around at-risk population may create some hazard, especially among military veterans who are more likely and heavily to use alcohol compared to non-veteran population. Herein, we report a case of intentional ingestion of ethanol-based hand sanitizer in a veteran with severe alcohol use disorder. A 38-year-old never married Hispanic male veteran with severe alcohol use disorder presented to the emergency room by VA police after having been found sleeping on a hospital bench with an empty Purell bottle and attempting to drink more Purell in front of police. Initial blood alcohol level was 264 mg/dL with urine drug screen positive for cannabinoids at the ED. Patient was admitted to medicine for acute alcohol intoxication under Marchman Act and 1:1 observation. The Hal S. Marchman Alcohol and Other Drug Services Act of 1993 is an emergency and temporary detention of individuals in the state of Florida which allows evaluation and treatment of their potential substance use disorder(s). The following day, per sitter, the patient was caught drinking Purell in bathroom again. In late morning, a physician found another half empty 1L Purell bottle inside patient's room, which was immediately confiscated. In the afternoon, hand sanitizer in wall mounted dispensers around patient's room were also found empty. Repeat blood alcohol level trended down to 96 mg/dL, however, and patient had minimal withdrawal symptoms including stable vital signs and without tremor. Level of observation was increased with special precautions to remove all hand sanitizer bottles from patient's surroundings and to not refill the wall dispensers while patient is on the floor. Patient was transferred to psychiatric floor 3 days after admission, and his repeat blood alcohol level was found to have further trended down to <10 mg/dL. Patient stayed inpatient for about 10 days during which both disulfiram and naltrexone injection were initiated. Patient declined residential treatment programs and was discharged home with family and plans to enroll in intensive outpatient therapy. Since discharge, the patient relapsed and underwent 2 more admission and discharges for acute alcohol intoxication. For the past 3 months, however, the patient has been followed by Substance Abuse Treatment Team in the outpatient setting and has not returned to inpatient psychiatric unit. Hand sanitizers contain much higher alcohol concentration than traditional forms of alcohol. For example, Purell hand sanitizer contains 62% ethanol by weight compared to 5% alcohol in beer, 12% in wine, and 40% in liquor. Particularly in veteran population where alcohol use disorder is a significant burden, routine restriction of access to alcohol-based hand sanitizers is warranted in health care facilities.

No. 15
1,4-Dichlorobenze Inhalation Use Disorder
Poster Presenter: Kyle Ward, D.O.

SUMMARY:
Ms. F is a 47-year-old female with no significant past psychiatric history and a past medical history of iron deficiency anemia who presented to the Emergency Department with syncope and progressive decline in functional status for one year's duration. Other reported symptoms were gait abnormalities, memory problems, tremors, and difficulty holding a conversation. Consult Liaison psychiatry was consulted for depression and child-like behaviors. A chemical odor was evident before entering Ms. F's room and a white powdery substance was noticed around her mouth and nose. During the initial interview, Ms. F exhibited a childlike quality and pseudobulbar affect. When asked about the odor and white powdery substance, she reluctantly admitted to inhaling, and sometimes ingesting, mothballs which was occurring for many years' duration. Many modern mothballs are made with 1,4-Dichlorobenze (1,4-DCB), due to naphthalene's flammability. The lipophilic nature of 1,4-DCB allows for accumulation in adipose tissue, and likely the CNS. Neurological examination of Ms. F revealed poor recall, decreased power in all 4 limbs, bilateral dysmetria, lower limb hyperreflexia, horizontal gaze dysfunction and positive Romberg sign. MRI was obtained that exhibited leukoencephalopathy

predominately in the supratentorial white matter, brainstem, and bilateral middle cerebellar peduncles suggestive of a toxic/metabolic process. This case illustrates the importance of screening for substance use when it comes to common household items as they have the potential for misuse. If it wasn't for the overt odor and observable white powder, we may have missed the diagnosis of inhalation disorder. We as psychiatrist should routinely screen for all forms of substance abuse, as many patient's will not understand that even household items have the potential for harm and are not entirely benign.

No. 16

A Narrative Review of Portrayal of Alcohol Use in Art

Poster Presenter: Ayotunde Ayobello, M.D.
Co-Authors: Badr Ratnakaran, M.B.B.S., Thomas David Joseph, M.D., Tricia Lemelle, M.D., M.B.A., Nina Meletiche, M.D.

SUMMARY:

Background: Alcohol, the context surrounding it and its vices have been an important theme in art. Scenes of alcohol use and associated maladaptive emotions have also been depicted in famous paintings. Objective: To identify important paintings depicting alcohol use and themes related to it. Method: A literature search was done on the depictions of problematic alcohol use in famous paintings and various experts interested in the field of art and psychiatry were contacted for their opinions on 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. The paintings were selected and a narrative review was done by the authors. Results: 25 famous paintings were identified that depicted various presentations of alcohol use. The paintings, mainly belonged to the Western culture, ranging from the Renaissance, neoclassicism to romanticism. The settings of alcohol use have been depicted from Greek mythology to early 20th century Europe. The themes depicted have been in a state of intoxication, drinking alone or in company of other people and personal losses due to increased alcohol use. Conclusion: The depictions of alcohol and their context help us in understanding the various perspectives of alcohol use in different cultures and eras in history.

No. 17

The Habitual Obsession Versus Pathological Addiction of Virtual Reality: A Case Report

Poster Presenter: Brooke R. Mastroianni, M.D.
Co-Author: Samantha Wildeman

SUMMARY:

The DSM 5 defines a substance use disorder as a cluster of cognitive, behavioral, and physiological symptoms indicating that the individual continues using the substance despite significant substance-related problems. Internet Gaming Disorder is already a topic of conversation for the next update of the DSM, particularly considering the ever-shifting role in technology in everyday life. Internet gaming disorder is mentioned in the DSM 5 under "Conditions for Further Study", with proposed symptoms including the following criteria, requiring 5 or more to be present for diagnosis: preoccupation with gaming, withdrawal symptoms when unable to partake in gaming, tolerance (needing to spend more time gaming), inability to reduce time spent gaming, loss of interest in previous activities, continuing to game despite negative consequences, deceiving others about time spent gaming, using gaming to relieve negative moods, and risk taking due to gaming (loss of job or relationships). However, there is considerable debate regarding the diagnosis of a gaming disorder, as there are key differences between an individual who is an enthusiastic gamer and uses habitual gaming as a tool of engagement, versus an individual who has a pathological addiction to gaming. This is a case report of a 25-year-old US Marine Corps Veteran seen in the Behavioral Health Specialty Clinic as a referral from Primary Care due to suspected depression and a gaming disorder. Since returning home from his honorable military discharge one year ago, he has become immersed in gaming, and specifically in virtual reality (VR). For the last six months, he has spent twelve to eighteen hours per day in the virtual reality world, engaged in both social conversation and playing games. In the last year, he has manifested behaviors including

decreased time spent with family, a lack of motivation to find a job to support himself financially, inability to identify life goals, inability to procure friendships outside of the virtual reality friends he's made, and a reactive mood that appears dictated by events occurring inside of the virtual reality world he games in. While his behavior and noted symptoms appear similar to that of depression, interestingly, this Veteran would identify problems with depression only in relation to dysfunctional relationships within the context of his virtual reality world. In this case report, we explore the potential of Internet Gaming Disorder with consideration of virtual reality gaming and relationship building that could begin to gain popularity, and thus, potentially lead to a myriad of psychiatric disorders in the years to come.

No. 18

The Legal Opioid, Kratom-Induced Seizures: A Case Report

Poster Presenter: Hasnain Afzal, M.D.
Co-Authors: Sabreen Rahman, D.O., Michael Esang, MB.Ch.B., M.P.H.

SUMMARY:

Kratom or mitragna speciose is a botanical product sold as a dietary supplement for pain and stress relief. Two active ingredients are mitragynine and 7-hydroxymitragynine which bind to the opioid mu-receptor producing excitation and sedation as with other opioids. Kratom is easily available over the Internet and its use is increasing in the USA. It is currently being studied by the DEA as a drug of concern and is banned by the FDA in six states (Alabama, Arkansas, Indiana, Tennessee, Wisconsin, and Vermont). Although its safety profile needs additional research, Kratom can cause hypothyroidism, secondary hypogonadism, hyperprolactinemia, psychosis, seizures, and respiratory depression. We report a case of Kratom-induced tonic-clonic seizures in a 27-year-old Caucasian male with a past psychiatric history of Anxiety, ADHD, Benzodiazepine and Opioid Use disorder. He was hospitalized after a witnessed tonic-clonic seizure. There was no significant metabolic abnormality on laboratory testing. Spinal cord and brain imaging were unremarkable, while his urine toxicology was positive for opioids only. He was evaluated by the Psychosomatic Medicine team for psychotic symptoms. On evaluation the patient's psychosis had resolved, but he endorsed racing thoughts, significant anxiety, and insomnia. He admitted to drinking three to four 8 ml bottles of Kratom daily for one-and-a-half years to self-medicate his anxiety, after losing his health insurance. In the hospital, he was treated with anxiolytics, counseled to abstain from Kratom use, and was referred for substance use disorder treatment. This case highlights the life-threatening complications of this legal opioid that is easily accessible online.

No. 19

Benefits Versus Risks of Using Kratom for Opioid Detoxification

Poster Presenter: Maria Elena Saiz, M.D.
Co-Author: Asghar Hossain, M.D.

SUMMARY:

Opioid Use Disorder (OUD) is increasing at an alarming rate. From 2002-2017 there was a 4.1-fold increase in the total number of opioid overdose deaths. 1 On October 26, 2017, the opioid crisis was declared a public health emergency in the United States.6 In recent years, Kratom, the tropical plant with opioid agonist activity, has made its way to the United States and has opened a discussion about its advantages, disadvantages, and its possible use for opioid detoxification. Due to its opioid receptor activity, the DEA announced in August 2016 that it would temporarily reclassify kratom as a Schedule I drug. This action was met with a strong backlash, including public demonstrations, petitions, and calls by Congress to overrule the decision. This resulted in the DEA withdrawing its decision in October 2016 until further research is completed.7 The compound is still currently being investigated and remains an unscheduled substance without strict regulation. Kratom (Mitragyna speciosa) is a tropical plant that contains many different compounds. The key psychoactive compounds are the alkaloids mitragynine and 7-hydroxymitragynine (7-MHG).5 These are thought to act on opioid receptors, a2-adrenergic receptors, and 5-HT2A receptors.3 The teas brewed from their leaves have been used for centuries in parts of Africa and Southeast Asia for its stimulant and sedative effects. 2By the mid-

twentieth century, it has also been used as an opioid substitute for pain management and to alleviate opioid withdrawal. In the present day, kratom is consumed throughout the world in form of tea, chewed, smoked, or ingested in capsules an is relatively accessible without strict regulation. The potential severe side effects of kratom may show that risk is greater than benefit. However, that may be due to the fact that kratom currently remains an unscheduled substance without strict regulation and without supervised medical care. More studies are needed to evaluate the different compounds of kratom and the properties of each at different dosages to determine if there is an optimal dose in which benefit may outweigh risk, and potentially help alleviate the opioid crisis by providing an alternate option for pain management and opioid withdrawal.

No. 20

Agitation, Aggressive Behavior, and Polysubstance Use: A Case Report Highlighting the Challenges of Treatment for Nasal Insufflation of Bupropion

Poster Presenter: Mohammed Tashfiqul Islam, M.D.
Co-Authors: Manoj Puthiyathu, M.D., Pooja Raha Sarkar, Zachary Michael Lane, M.D.

SUMMARY:

Bupropion is a widely used antidepressant and smoking cessation aid that has in recent years developed substantial abuse potential. A dopamine agonist, bupropion has been documented to have mild amphetamine-like activity, posing risks in patient populations who have previously used cocaine. Recreational ingestion, IV injection and nasal insufflation of crushed tablets have been catalogued in the past and a mild “high” can be achieved from abuse of even a single 400 mg tablet. Here we describe Ms. X, a 41 year old Caucasian female, with a past history of polysubstance use including opiates, cannabinoids, amphetamines and anxiolytics, who was recently treated at our facility. The patient has a history of multiple inpatient psychiatric hospitalizations and has been previously diagnosed with major depressive disorder as well as unspecified schizophrenia spectrum and other psychotic disorder. Moreover, she had been diagnosed with hypertension, hepatitis C and primary progressive multiple sclerosis. She is familiar to our service, and was brought in involuntarily on this occasion by local police after she called them herself, claiming her partner was withholding her bupropion. Prior to admission, the patient had been increasingly aggressive, assaulted her partner and had been snorting upwards of 3000 mg of bupropion a day by filling multiple prescriptions (in amounts of 75, 150 and 300 mg) from various providers in the area. The goal of this case is to highlight the dangerous abuse potential of bupropion. Bupropion, known for its ability to lower seizure threshold, can be fatal if abused. Thus, it is important for providers to remain vigilant when prescribing this medication, and to monitor patients whom they suspect may be at risk for abuse. Furthermore, it brings to mind potential solutions that may be utilized in the future for other clinicians. One prudent approach would be to consider reformulation of the drug to minimize the amount abused and discourage its abuse long term. Another approach is to consider a standard detox protocol (much like for opiates, alcohol or benzodiazepines) to minimize risk to the patient, including for seizures. Our case also highlights the challenges in managing a such a patient on an inpatient unit. In our particular case, the multiple medical comorbidities including the diagnosis of primary progressive multiple sclerosis as well as the polysubstance use presented additional considerations when formulating a treatment plan on the inpatient unit, as well as after discharge. While the use of a tapering protocol for benzodiazepines addressed the risk of seizures, the patient nevertheless was monitored for any acute changes. A long-term solution may be to consider putting this medication on a prescription monitoring program to restrict abuse and prevent inappropriate prescriptions.

No. 21

Stimulant-Induced Psychosis Precipitated by Traumatic Brain Injury

Poster Presenter: Madia Majeed, M.D.
Co-Authors: Soroush Pakniyat Jahromi, Asghar Hossain, M.D.

SUMMARY:

Psychosis is a condition that affects the mind, resulting in loss of contact with reality. There is a debate whether stimulant drugs such as cocaine and

cannabis alone can develop psychosis in consumers; however, we are confident that these classes of drugs can precipitate psychosis in individuals with family or personal history of Schizophrenia. The purpose of this care report is to explore the role of stimulant use in a young male who sustained traumatic brain injury in a motor vehicle accident resulting in acute agitation and aggressive behavior. The police brought a 21-year-old male into the emergency department as he presented with delusions of persecution plus aggressive and assaultive behavior where he was to run over his mother with his car. About four months prior patient ended up sustaining a head injury in a motor vehicle accident and since then has been more irritable and aggressive. On urine toxicology he was found to be positive for cocaine and cannabis. In this review the role of cocaine, cannabis, and traumatic brain injury (TBI) in development of psychosis will be discussed. It is important to differentiate TBI related psychosis from other causes, as management could be different in most cases. In such cases concomitant presence of substance abuse and history of TBI could make diagnosis and treatment challenging. More controlled clinical trials could improve management in TBI related psychotic patients, with the goal of improving the quality of life and decreasing the burden on society.

No. 22

Case of a 21-Year-Old Woman With Adult-Onset Psychosis and Celiac Disease

Poster Presenter: Ladan Khazai

SUMMARY:

Introduction: Neuropsychiatric disease is one of the clinic manifestations of celiac disease. While several reports have described an association between neurologic or psychiatric symptoms such as headache, peripheral neuropathy, ataxia, depression, dysthymia, anxiety and epilepsy, psychosis is less commonly reported. Case Report: Twenty one year old white navy recruit female who was admitted at the Captain James A. Lovell Federal Health Care Center psychiatric inpatient unit for management of first episode psychosis as evidenced by severe anxiety due to auditory hallucinations, paranoid/persecutory delusions and ideas of reference in the context of entering boot camp and acute exposure to the military related stressors. In physical examination, patient was found to have short stature, low BMI, underdeveloped and anemia. Initial laboratory abnormal findings revealed iron deficiency anemia, low Vitamin D levels and high Cholesterol/LDL. In addition, patient frequently complained of abdominal pain. Following endocrinology recommendations, any patient with evidence for impaired growth and low vitamin D should be evaluated for celiac disease regardless of presence of gastrointestinal symptoms. In addition, iron deficiency and dyslipidemia were other findings which are also commonly seen in celiac disease. Celiac panel was ordered and serologic findings showed positive tissue transglutaminase and IgA antibodies indicative of celiac disease. Conclusion: Psychosis may be seen as one of the psychiatric manifestations of celiac disease. Clinicians should be mindful about ruling out celiac disease and gluten-related disorders in patients with psychosis and evidence for impaired growth and low vitamin D levels.

No. 23

Analysis of Evolution and Attitude to Medication in Schizophrenic Sample During One Year of Treatment With Long-Acting Palmitate Paliperidone

Poster Presenter: Adolfo Benito

SUMMARY:

Background: Non adherente is a mayor problem in the treatment of schizophrenia. It´s 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. Objective: To assess the clinical evolution 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 39 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 neuroleptic. A series of

demographic variables were recorded, the DAI-30 (Drugs Attitude Inventary) scale was used to evaluate the attitudes to medication, PANSS scale was used to to identify the presence and severity of psychopathology symptoms finallly the CGI scale was used to assess the severity of the symptoms 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. Results: N=41 patients (27 males and 14 females), with a mean age of 36.6 years. There were 3 dropouts during the year of follow-up. The results showed an improvement in PANSS 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 11,4 (SD 2,3), 11,8 three months (DS 2,4), six months 12,1 (SD 2.3) and 12 months 12,7 (SD 2,1). Finally results shows an improvment in CGI score during the 12 months, manifesting from the third month (ANOVA $p<0.05$) 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 a reduction of severity of psychopathology symptoms.

No. 24

Delusional Misidentification Syndrome: "Modern-Day" Presentation of Intermetamorphosis

Poster Presenter: Yi Hang Tay

SUMMARY:

Characterised by holding a fixed, false belief that an imposter has replaced a spouse, friend or other person, Capgras syndrome is a rare disorder, but the most common delusional misidentification syndrome. On the other hand, a person with Fregoli syndrome has a delusional belief that a single, often malevolent, person is masquerading as several other people. Often regarded as a combination of both syndromes is intermetamorphosis, seen in one who perceives that an individual has transformed both psychologically and physically into another person or other people. The following is a case of a patient who developed intermetamorphosis in the context of using mobile text messaging, highlighting the intriguing possibility that our modern-day form of communication could be a catalyst for this rare disorder. Ms. K, a 36-year-old lady with a past psychiatric history of post-partum psychosis, presented to our psychiatry clinic with a seven-month history of believing that her husband and friends had traded identities and transformed into one another. Ms. K's delusions originated from and were initially limited to text messages that she had received in her mobile phone. She believed that some of her contacts had switched identities when chatting with her via mobile text messages. She described how subtle differences in their diction, use of textspeak and emojis gave them away, although this was denied by her loved ones when she had confronted them. After several months, this evolved into delusions that her husband and friends' identities were replaced in person by one another's identities. These identity swaps involved at least ten people that she knew, and sometimes happened all at one go, with all of her friends transforming amongst themselves, and acting and behaving like the respective persons that they had transformed into, when she had met up with them as a group. These mostly happened temporarily, which is characteristic of intermetamorphosis. Unlike a number of cases of delusional misidentification syndromes though, Ms. K was not violent. She became more reserved around her husband, and also stopped meeting up with her friends. She also experienced thought insertion and had delusions of reference. She was diagnosed with schizophrenia and started on risperidone at 1mg at night. Fortunately, she responded well and these delusions of misidentification disappeared. The emergence of this rare disorder of intermetamorphosis stemming from mobile text messaging is a unique event that has not been previously reported. As nuances in textspeak between individuals could bring about heightened paranoia particularly in those predisposed to psychosis, we could be witnessing a shift in the presentation and maybe even epidemiology of intermetamorphosis in our modern-day context, a possible phenomenon that is best investigated by further studies of this disorder. In

this poster, the range of delusional misidentification syndromes is revisited along with this case.

No. 25

Case Report: Schizoaffective Disorder and Narcolepsy Without Cataplexy: An Uncommon Co-Occurrence

Poster Presenter: Claire Chappuis
Co-Author: Matej Bajzer, M.D., Ph.D.

SUMMARY:
Illnesses comorbid with schizophrenia spectrum disorders often complicate diagnosis and delay initiation of treatment. Narcolepsy presents an especially difficult case because hallucinations in this disorder can arise from non-psychotic processes and symptoms can mimic psychosis. Additionally, common treatment strategies have the side effect of inducing psychosis. While there are several case reports of narcolepsy type 1 (narcolepsy with cataplexy) and schizophrenia spectrum illnesses, there is no known case report of schizoaffective disorder and narcolepsy type 2 (narcolepsy without cataplexy). Not only is this case a rare presentation, it also highlights the unique challenges of diagnosis and medication management for patients with these comorbid conditions.

No. 26

Postictal Psychosis Treated With Electroconvulsive Therapy

Poster Presenter: Alex K. Doering
Co-Authors: Erica K. Gotow, M.D., Barbara Wilson, M.D.

SUMMARY:
Mrs. R, a 48 y.o. female with a history of epilepsy, MDD, PTSD, and OCD, presents to the hospital with delusions, ideas of reference, paranoia and command auditory hallucinations. Specifically, Mrs. R believed she was getting phone calls in the hospital telling her she would be arrested, a guardian angel was telling her she was making many mistakes and a voice told her to cut off her own finger in order to get to heaven. Symptoms began after a seizure 4 months prior to admission. After a thorough work up rules out a neurological cause for these delusions (interictal psychosis), she was admitted to inpatient psychiatry. While on the floor, she endorsed visions of having harmed others, overwhelming anxiety, and command auditory hallucinations telling her to kill herself. Antipsychotic medications started in the hospital were ineffective in controlling symptoms, even at high doses. Electroconvulsive therapy (ECT) was initiated, with almost immediate attenuation of symptoms. In this poster, we will discuss the relationship between epilepsy and psychosis, standard treatments for post- and interictal psychosis, and the use of ECT in treatment resistant patients.

No. 27

Case Report: The Prominent Role of Clozapine in Improving Tics Behavior in Chronic Schizophrenics

Poster Presenter: Saba Mughal
Lead Author: Shahan Sibtain, M.D.
Co-Authors: Fatima Iqbal, M.D., Sukaina Rizvi, M.D., Vandana Kethini, M.D., Asghar Hossain, M.D.

SUMMARY:
Clozapine is a second-generation atypical antipsychotic with strong affinity for serotonin 5-HT2A/2C and D4 receptors and weak affinity for D2 receptors which accounts for most of its clinical role. There is a well-documented role of clozapine in treatment resistant schizophrenia but it is rarely reported in literature how clozapine through its weak D2 antagonism improves tics. We herein present a unique case of a 39-year old woman with chronic history of schizophrenia along with concomitant diagnosis of Intellectual disability. It was noticed that patient was noncommunicative and demonstrated repeated spitting behavior. Patient's father, who is her primary caregiver endorsed chronic spitting behavior in patient for many years which was aggravated by agitation and aggression. Patient was started on clozapine after trials of multiple antipsychotics failed to improve patient's psychosis. It was evident that patient showed improvement not only in terms of psychotic symptoms but also her spitting behavior was noticeably improved. In this poster we discuss a case of schizophrenia with probable diagnosis of chronic persistent tic disorder which responded well to clozapine and demonstrated improvement in terms of aggressive behavior, psychotic symptoms and significant reduction in tic severity as well. This opens new doors for researchers and clinicians to

further explore the complex mechanisms involved that led to amelioration of sudden, nonrhythmic movements in schizophrenic patient.

No. 28

A Case Report of Comorbid Schizophrenia and Gaucher's Disease: Clinical Considerations

Poster Presenter: Faisal Akram, M.D.

SUMMARY:

Mr. M is a 43 year-old Caucasian male of Jewish ancestry, who presented with loud speech, paranoid ideations, somatic and grandiose delusions, irritable mood, easy bruising and resting tremors of upper limbs. His health problems started in early 1990s when he had frequent episodes of epistaxis, thrombocytopenia and hepatosplenomegaly. Bone marrow biopsy reveled macrophages with wrinkled paper appearance, positive for PAS stain. Subsequent ß-glucocerebrosidase level assay confirmed the diagnosis of Type 1 Gaucher's disease (mild, adult onset). His psychiatric symptoms started in late 1990s and review of medical records revealed a diagnosis of schizophrenia with similar presentations of predominant grandiose and somatic delusions, loud speech, affective lability and poor impulse control. Throughout the course of mental illness, Mr. M has responded best to low doses of Haloperidol while showing heightened sensitivity to extrapyramidal motor symptoms, which have been controlled with Benztropine 2 mg/day. The concurrence of Schizophrenia and Gaucher's disease is unusual, however, mutations in GBA1, a mutated gene in Gaucher's disease, is a known genetic risk factor for Parkinson's disease and Lewy Body Dementia. Caution must be maintained while prescribing antipsychotics with strong dopaminergic blockade in individuals with Gaucher's disease. Further research may elucidate the role of GBA1 gene in dopaminergic transmission and provide new insights into complex neuropsychiatric disorders such as Schizophrenia.

No. 29

Cognitive Behavior Therapy for Auditory Hallucination in Pregnancy

Poster Presenter: Dongjoo Kim

Co-Authors: Hwa Yeon Jo, Choyeon Park, Seok Hyeon Kim

SUMMARY:

It is already known that cognitive-behavioral therapy is effective in both positive and negative symptoms in addition to medication in patients with Schizophrenia. In addition, cognitive behavioral therapy may increase patient insight, help in social rehabilitation, improve drug compliance and prevent recurrence of patients and improve clinical outcomes. Recently, the use of antipsychotic drugs in pregnancy has increased. However, the use of medication is cautious because of the influence still on the fetus, and many patients and caregivers have a feeling of rejection of the medicine. We report a case of CBT treatment in a patient with auditory hallucination after stopping antipsychotic medication due to pregnancy. Patient A was a 29-year-old woman who was hospitalized with Schizophrenia 8 years and 4 years ago. After the last discharge, she went to the outpatient clinic and kept taking medicines. However, six months ago, she has been reluctant to take psychiatric medication and stopped medication and has not come to the hospital. Two months later, she found out she was pregnant with her boyfriend and married her husband, and she started to hear someone's voice. The content was to observe or direct the patient, but gradually changed into a threat to the pregnant fetus. From 1 month before hospital visit, the patient was screamed or angered in response to auditory hallucination. The patient was at the time an IUP of 27 wk and the patient and her husband decided to proceed with CBT at the outpatient clinic because they did not want the medication because of the adverse effects on the fetus. CBT was conducted for 40 minutes once a week for outpatient visits using Cognitive behavioural therapy for psychotic symptoms: a therapist's manual(2003), resulting in a total of 11 sessions.The goal of the treatment is 'to reduce the discomfort to the conversation or questions that are heard at the honeymoon home'. The rate of achievement of treatment goals was calculated at each session, from 0% in the first session to 70% in the fourth session and to 95% in the 11th session. Changes before and after treatment were the decreased number and size of voices, decreased negative auditory hallucination, decreased anxiety about auditory hallucination, and decreased response to auditory hallucination.

No. 30

Navigating the Evaluation and Treatment of Newly Diagnosed Hallucinations and Dementia With Multiple Barriers in Place: A Lit Review and Case Study

Poster Presenter: Marie F. Rodriguez, M.D.

SUMMARY:

Introduction: How do you diagnose and treat a patient with hallucinations who doesn't remember meeting you? Evaluation and treatment of comorbid schizophrenia and dementia is difficult by itself, but if the patient is new to both diagnoses, then the standard of care becomes more complicated. Objectives: The interaction between psychosis and cognitive decline has been shown in various interactions and studies, but it requires further investigation in the elderly population and late onset schizophrenia. This literature review aims to identify the current standards of care for evaluating and treating late onset psychosis and behavioral manifestations in someone presenting with comorbid worsening cognitive function and memory loss, and to discuss treatment options available when multiple barriers to proper evaluation and treatment are present. Methods: A retrospective chart review was completed, in addition to a PubMed search using the terms "schizophrenia" "psychosis," and "dementia." Results: A 61 y/o Caucasian female presented to an outpatient psychiatric mental health facility after referral from outpatient neurology for worsening auditory hallucinations and delusions. It was uncovered after several visits to psychiatry that the patient frequently had ongoing verbal conversations with "other beings" throughout the day. These "other beings" were unable to be visualized or heard by friends of this client. The client complained of various gangs, villainous ministers from across the street attacking her friends, and feared them threatening nefarious things towards her. At one point, she became so afraid that something may happen, that she packed up all her belongings, wore a winter coat in the summer, and left her apartment, dog in tow. Friends later had to track her down wandering around the neighbor. The client was unable to function properly independently, as she was mostly home bound, with friends assisting with cooking meals, transportation, and handling her finances. This was due to severe deficits in short term memory. Her hallucinations and verbal conversations continued but the patient had no mood fluctuations or episodes of extreme irritability. When brain imagining, and collateral were attempted to be obtained, there were multiple barriers in obtaining this information, delaying the evaluation and eventual treatment of this patient in respect to both her hallucinations and memory loss. Discussion: A review of the literature showed standard of care for evaluation of late onset schizophrenia was clinical evaluation; however the diagnosis was obstructed due to not being able to obtain collateral from several sources, and their were barriers to diagnostic tools such as imaging. Conclusion: Severe cognitive deficiencies complicate the course of evaluation and treatment for late onset psychosis and dementia. More research and studies need to be conducted for proper guidelines in evaluating and treating this population.

No. 31

Delusions and the Anomalous Affective Experience

Poster Presenter: Marco Fierro

SUMMARY:

It has been proposed that delusions are an explanation of experience. They are rational responses to abnormal experiences. By exploring delusions with phenomenology if was found that the narratives identified as delusions by the psychiatrist correspond to linguistic elaborations that give meaning and make comprehensible to the patient himself and to others the underlying anomalous affective experiences. Based on the predominant subjective experience, it was possible to identify five types of delusion: persecutory, grandiose, of hopelessness, mystical, and somatic. This explanation was called "theory of anomalous affective experience". According to this theory, the delusions are constituted in 3 stages. This is not a voluntary, circumscribed to thought, and explicitly reflective process. Instead, it is rather involuntary, implicit, and affective at first. The stages are: 1. Emergence of an anomalous affective experience. 2. Implementation of a specific cognitive style. 3. Formation of a narrative that gives meaning to the experience. 1. Emergence of an anomalous

experience. This experience is affective (a mood), and it is specific for each kind of delusion, as follows: • Persecutory delusion: Inter-subjective intense fear and distrust. • Grandiose delusion: Huge self-confidence and self reliance. • Delusion of hopelessness: Deep emotional and bodily dampening. • Mystical delusion: Extraordinary serenity and mental lucidity. • Somatic delusion: Anomalous perceptual experience of a specific part of or the whole body. 2. Implementation of a particular style of cognitive processing (cognitive style) aimed at specific goals, as follows: • Persecutory delusion: Detecting, avoiding and/or dealing with danger. • Grandiose delusion: Displaying and showing great skills, talents, qualities, wealth, and power possessed. • Delusion of hopelessness: Knowing the implications of the current insolvable situation and preventing worse consequences. • Mystical delusion: Enjoying the new state, understanding its scope and sometimes trying to share it with others. • Somatic delusion: Identifying what is wrong in one's own body. 3. In the final stage, a narrative is formed, which confers a more elaborated sense to what is experienced, making it understandable for oneself and others. This narrative makes it possible to express in words the lived experience. The themes of the narrative are linked with the anomalous experience, and for that reason the following predominate: • Persecutory delusion: 'They are persecuting me', 'they bewitched me', 'they know my thoughts', etc. • Grandiose delusion: 'I am rich', 'I am the president', 'I am famous', 'I am god', etc. • Delusion of hopelessness: 'I am dead', 'the world ended', 'I am rotten inside', etc. • Mystical delusion: 'I've found the human ideal state', 'I've found wisdom', etc. • Somatic delusion: 'I have a vacuum inside my head', 'an electric shock goes up and down all over my body', etc.

No. 32

A Case Report: Complexity of Treating Severe Schizophrenia in an Adolescent Patient

Poster Presenter: Eric Christopher Wilson

SUMMARY:

JW is a 17-year-old African-American male with a past psychiatric history of PTSD, bipolar disorder and schizophrenia who involuntarily presents to the inpatient psychiatric facility for paranoia, aggression and threatening to get violent. Additionally, JW has history of significant cannabis use, multiple previous involuntary psychiatric hospitalizations, and family history of bipolar disorder and schizophrenia on the paternal side. Developmentally, JW was exposed to domestic violence and experienced neglect, emotional and physical abuse in childhood. Through the course of multiple admissions, the treatment team experienced difficulties in establishing an effective plan that addressed JW's violent, aggressive and threatening behaviors at home in addition to his poor ADLs due to various factors. His mother wanted to pursue holistic treatments so she refused the residential placement as recommended by the treatment team, and consequently removed the patient from inpatient facility against medical advice during one of the admissions. While receiving care in the inpatient unit at other times, JW failed to respond to adequate trials of several antipsychotic medications. Aripiprazole was ineffective in reducing the psychotic symptoms; quetiapine and olanzapine both led to disinhibition and JW became hypersexual and more aggressive towards the staff. During one of the involuntary hospitalizations triggered by aggressive and violent behaviors, an inpatient psychiatrist ordered a combination of olanzapine and haloperidol for JW. Shortly after receiving these medications, JW displayed dystonic reaction, had serum CK of ~1000 and was transferred to a local hospital for suspected treatment of NMS. In this poster, we will discuss some unique challenges that psychiatrists face when treating adolescents with severe mental health illness including addressing the role of childhood abuse in current presentation of symptoms, impact of ongoing substance use on brain development, parental disagreement with the treatment team, and increased susceptibility to developing adverse reactions from the use of psychotropic medications. We will present some strategies that treatment team providers can use to manage chronic and severe mental health disorders in young patients.

No. 33

Association Between Gestational Diabetes Mellitus in Mothers and Attention Deficit/Hyperactivity Disorder in Their Offspring

Poster Presenter: Pathamabhorn Thongsookdee

SUMMARY: Objectives: This study examined the association between gestational diabetes mellitus (GDM) in mothers and attention deficit/hyperactivity disorder (ADHD) in their offspring among Thai population. Materials and Methods: This case-control study recruited 132 mother-child pairs, 66 mothers with ADHD in offspring (ADHD group) and 66 mothers without ADHD in offspring (no ADHD group). Demographic data and obstetric history affecting ADHD in offspring were obtained from mothers and corresponding children seeking treatment from child and adolescent psychiatric unit and general child disease unit of a University hospital. The maternal GDM history was obtained by interviewing. The ADHD in offspring was diagnosed by certified child and adolescent psychiatrists. Results: We found most mother-child pair located at Northern Thailand (90.9%). The ratio of male vs. female children in ADHD group and in no ADHD group were 2.882:1 and 2:1 respectively (P=0.34). Demographic and obstetric characteristics were not significantly different between groups. Maternal GDM was found in seven mothers of the ADHD group (10.61%) and two mothers of the no ADHD group (3.03%). Comparison with mothers who had GDM, mothers with GDM increased risk to have offspring with ADHD (OR=4.93, 95%CI=0.946-25.688, P=0.0582). Moreover, Thus, GDM in mothers had a tendency to increase the risk of ADHD in their offspring. There should do the research had more participants in the future. So, Children born to these mothers should be closely monitored for ADHD.

No. 34
WITHDRAWN

No. 35
Medium Dose Quetiapine-Induced Extrapyramidal Symptoms in a Non-Naïve Patient
Poster Presenter: David Mauricio Martinez Garza, M.D.
Co-Author: D. Jeffrey Newport, M.D.

SUMMARY:
Patient is a 24 year old male that had been treated with quetiapine 100 mg PO QHS for insomnia for over 3 years. He presented to the psychiatry emergency department after he had a brief psychotic disorder (possibly drug-induced), for which he was given 400 mg PO of quetiapine. After this, patient exhibited signs and symptoms of acute dystonia and parkinsonism, including laryngeal spasms, tongue fasciculation, upper extremity rigidity, jaw locking, bradykinesia, and cogwheel rigidity. Patient was admitted, quetiapine was discontinued and his extrapyramidal symptoms (EPS) were resolved with standard doses of anticholinergic medication. Quetiapine is a well-known and used atypical antipsychotic with interesting characteristics that targets different receptors at different doses that makes it FDA approved for many mood and psychotic disorders. Even though it is not FDA approved for insomnia, it is many times used to treat insomnia in patients with other comorbidities or even as monotherapy at low doses for insomnia alone. Within the atypicals, quetiapine is noted for causing little to non EPS given the rapid dissociation from the D2 receptor and the high affinity and potency of its metabolite (norquetiapine) to block 5HT2A receptors. Nonetheless, EPS is a multifactorial side effect that not necessarily follows a dose-dependent increase in risk (for quetiapine and clozapine). Even though EPS is a well-documented side effect when using typical antipsychotics, even when we use atypicals, we must not stop screening for it. EPS is a side effect that can still happen, even at low doses, in susceptible patients.

No. 36
Triple Threat With Chronic Cannabis Use: A Rare Case of Psychosis, Catatonia, and Abnormal Gait
Poster Presenter: Sagarika Ray, M.D.
Lead Author: Pooja Yudhishthir Palkar, M.B.B.S.
Co-Author: Krishen Persaud

SUMMARY:
Growing evidence suggests an association between cannabis and psychosis. Cannabis use is said to precipitate schizophrenia in vulnerable individuals and that it can exacerbate existing psychosis. There is paucity of knowledge about emergence of catatonia and abnormal gait with cannabis use. Cannabis withdrawal has been reported to cause catatonia due to gamma-aminobutyric acid (GABA)/glutamate imbalance. Cannabinoid receptors are located in movement-related brain regions and cannabis use is linked to long-lasting changes in open-chain elements of gait. We present a unique

case of a 16 year old Hispanic male with no known past medical history or past psychiatric history who was brought in to the hospital for decreased oral intake, depressed mood, bizarre and disorganized behavior. Patient presented in a catatonic state with mutism, grimacing, waxy flexibility, abnormal posturing, catalepsy and scored 31/69 on Bush-Francis Catatonia Rating scale (BFCRS). Urine toxicology screen on admission was positive for cannabinoids and all neurological workup was unremarkable. Patient had a good pre-morbid functioning and there was no evidence for any genetic loading for psychiatric illness. Patient was successfully treated with Risperidone for psychosis and Lorazepam for catatonia and his BCFRS score diminished to 0/69. Patient admitted to heavy cannabis use since the age of 13 years until 3 weeks prior to admission. He endorsed possibility of using synthetic cannabinoids unknowingly. This poster highlights an atypical presentation of psychosis, catatonia and abnormal gait in an adolescent using cannabis. Recreational and medicinal cannabis use has gained widespread popularity and thus psychiatrists should be cognizant about the risks of developing a major psychotic illness when evaluating a young patient abusing cannabis presenting with acute onset psychosis and catatonia.

No. 37

New Onset Skin Picking With Introduction of Stimulants in the Treatment of ADHD

Poster Presenter: Sagarika Ray, M.D.
Lead Author: Krishen Persaud
Co-Authors: Mansi Shah, Leena Mohan, M.D.

SUMMARY:

Attention Deficit Hyperactivity Disorder (ADHD) is classified as a neuropsychiatric disorder involving a potentially lifelong pattern of inattentiveness, hyperactivity or impulsivity that interferes with functioning or development. Treatment includes medication, psychotherapy and education. The treatment standard for ADHD is psychostimulants via increase of dopamine and norepinephrine in the brain, which play essential roles in thinking and attention. The most commonly associated or well-known adverse effects with psychostimulants include appetite suppression, weight loss, insomnia, headaches, abdominal pain, elevated blood pressure or tachycardia. Dermatillomania or excoriation disorder is characterized as recurrent skin picking resulting in skin lesions that cause clinically significant distress or impairment in social, occupational, or other important areas of functioning despite repeated attempts to stop such behavior, as per the Diagnostic and Statistical Manual of Mental Disorder, Fifth Edition. We present a case which highlights the unique adverse reaction of skin picking in a six years old boy with ADHD after treatment with a stimulant. The patient had no prior history of skin picking or obsessive compulsive behavior. Complete resolution of symptoms was noted with discontinuation of the stimulant. The symptoms of skin picking recurred after re-challenge with a stimulant of a separate category demonstrating a causative link with use of stimulants. Although the mechanism which leads to this reaction is currently unknown, the case outlines the need for continued surveillance of unique adverse reactions while treating children having symptoms of ADHD with stimulants.

No. 38

Multimorbidity Among Adults With Intellectual or Developmental Disability

Poster Presenter: Henry D. Heisey, M.D., M.P.H.
Lead Author: Suzanne Holroyd, M.D.
Co-Authors: Makenzie Elizabeth Hatfield Kresch, M.D., Oluwadamilare Ajayi, M.D.

SUMMARY:

Background Medical comorbidities are very common among patients with intellectual or developmental disability (IDD). While 45% of all adults in the US are estimated to have two or more chronic health conditions (i.e., multimorbidity), the prevalence of multimorbidity among adults with IDD is likely to be considerably higher. Multimorbidity compounds the burden of disease, leading to decreased quality of life, functional decline, and increased healthcare utilization. It also tends to worsen with age, with a prevalence of about 66% among adults in the general population over age 50. The extent and characteristics of multimorbidity among US adults with IDD is not well described. Methods This is a retrospective chart review of 113 patients with IDD seen in an outpatient psychiatric clinic located in the Appalachian United States. Chi-square and ANOVA

are used for comparison of descriptive variables and relevant medical factors between patients with and without multimorbidity. Findings/Results In this sample of adults with IDD, the overall prevalence of multimorbidity is 63% and prevalence among patients age >50 is 85%. Patients with multimorbidity are significantly older (mean 49 years) compared to those without multimorbidity (mean difference 12, confidence interval 6.2-19.9). Prevalence of multimorbidity is similar across all severities of IDD, genders, psychiatric conditions, and psychiatric medications. Patients with the following medical conditions demonstrate significantly higher prevalence of multimorbidity compared to those without the conditions: obesity (83%, p<0.001), gastroesophageal reflux disease (85.7%, p=0.001), and epilepsy (87.8%, p<0.001); in this sample none of these medical conditions vary with age. Conclusions/Implications Multimorbidity is highly prevalent among adults with IDD, and it is more common among older patients. Disorders associated with multimorbidity among adults with IDD include obesity, gastroesophageal reflux disease, and epilepsy. Future study should prospectively describe chronic health issues and evaluate relevant preventive interventions among adults with IDD. List of key words Intellectual Developmental Disability Multimorbidity Comorbidity

No. 39

An Atypical Presentation of Depression Mimicking Anorexia Nervosa

Poster Presenter: Karen Ding, M.D.
Co-Authors: Rebecca Beyda, Iram F. Kazimi, M.D., Cristian Zeni, M.D., Ph.D.

SUMMARY:
This case report endeavors to highlight the importance of recognizing cultural influences on the presentation, diagnosis, and treatment of psychiatric conditions in an adolescent of African origin living in the USA. A recent immigrant female of Congolese descent presented initially to gastroenterology due to unintentional weight loss of 20 pounds. She was treated erroneously for anorexia nervosa and hospitalized 7 times before undergoing psychiatric treatment with fluoxetine and psychotherapy. Initial medical visits focused on her symptoms as direct consequences of medical etiology, reflecting how patients of non-Western backgrounds frequently present with somatic symptoms more often than with mood symptoms. In her culture, people with mental illness do not deserve to improve, so the patient denied herself food to live her punishment. Communication coordination between physical and behavioral health teams allowed identification of the patient's illness and enabled the physicians to understand the presentation of physical and emotional symptoms and provide proper treatment. An awareness of patients' cultural backgrounds results in a more wholesome approach to patient care. Not delving into the nuances of how culture impacts disease carries a high risk of misunderstanding. This patient's BMI has been restored to 19, and she is stable with fluoxetine and continued psychotherapy.

No. 40

Slow and Steady, With Seroquel, Wins the Race Against Developing Dystonia in an Adolescent With Post-TBI Psychosis

Poster Presenter: Kerry Marie Sheahan, D.O.
Co-Author: Stephanie M. Daly, M.D.

SUMMARY:
Background: Onset of psychosis after a traumatic brain injury (TBI) is typically delayed by 1-4 years. Limited evidence is available for pharmacological management in these patients, especially in children. Despite being first line treatment for psychosis, Antipsychotics use in adult patients after TBI has led to higher rates of EPS. Thus there are concerns about what considerations should there be for the child population. We will use this poster to focus on possible pharmacological management of suspected psychosis after TBI in children and adolescents. Case Report: M.S. is 13 y/o female who experienced a severe TBI at age 10 resulting in intubation and a PICU stay. Her head CT showed bilateral subarachnoid hemorrhages, a subdural hematoma, and a significant midline shift. She reportedly had full recovery and no reports of cognitive impairment or personality changes. Then at age 13 she started reporting visual hallucinations, auditory hallucinations to hurt others and her, and significant delusions that she was being tortured leading to psychiatric crisis. The patient was seen initially in the ED and was treated with Olanzapine and Haldol for

agitation but after administration with this combination she developed stiffness in her arm and Oromandibular dystonia. Her family's concern about this adverse event led to discontinuation of both upon arrival to her inpatient hospitalization. She was then treated with Risperidone and then Ziprasidone, both of which also led to significant EPS with cogwheel rigidity, hand tremor, upper body stiffness, decreased arm swing and flattened affect. We then attempted to treat psychosis with Quetiapine, originally avoided for parental concerns for sedation/weight gain, because of its lower risk profile of EPS. She was able to tolerate this with and had improvement but not yet resolution of symptoms. Results: Our patient had already failed 3 prior antipsychotics related to development of EPS, highlighting that children who have post psychosis TBI may benefit from first line treatment of Antipsychotics with lowest risk of EPS. Literature review showed a paucity of information on how to appropriately manage psychosis after TBI in children and what, if any, particular risks they may have when considering pharmacology. Conclusion: In this poster we will highlight the importance of monitoring for EPS during treatment with antipsychotics for TBI patients who develop psychosis, which is 1% of the TBI patients, and if it occurs to consider first line treatment with Quetiapine. This is only one limited case report, but it gives evidence towards a potential future consideration of increased EPS effects from antipsychotics in both adults and children after TBIs. Moving forward, additional case studies for patients with this presentation may be helpful to guide clinicians and decrease need for multiple failed medication trials as this delays symptom relief and increases length of stay.

No. 41

Detecting Pediatric Delirium: A Case Report

Poster Presenter: Corina Ponce

SUMMARY:

A 13-year-old female patient with no history of psychiatric disease presented with a 2-week history of fever and asthenia. Routine investigations were normal. She rapidly deteriorated and demonstrated behavior changes which included irritability, confusion, agitation, aggression towards staff, visual hallucinations, and sexual disinhibition. She had poor eye contact and a markedly disturbed pattern of behavior, sleeping during the day but hyperkinetic and with behavioral abnormalities throughout the night. She was treated with risperidone 2mg daily without response. Seizure-like activity was noted as were prominent orofacial dyskinetic movements. An electroencephalogram (EEG) showed non-specific slowing and CSF showed leucocytosis. Soon afterwards she developed autonomic instability and status epilepticus. Immunomediated encephalitis was suspected. Anti-NMDA-receptor antibody test was positive and on treatment with intravenous immunoglobulin (IVIg) and steroids she gradually improved and was discharged. The immunomediated encephalitis, such as anti-NMDAR encephalitis, are charaterized by an onset with psychiatric disturbances followed by seizures. Delirium is the presenting syndrome. Treating the cause of the delirium improves the clinical features. The use of anti-psychotic drugs in delirium associated with anti-NMDAR encephalitis is controversial.

No. 42

Efficacy and Long Term Clinical Outcome of Reminder Focus Positive Psychiatry

Poster Presenter: Naser Ahmadi, M.D., Ph.D.

SUMMARY: Objectives: Recent-studies revealed that positive-psychiatry(PP) can decrease psychopathology and increase well-being in youth. This study investigates the long-term clinical-outcome of reminder-focused (RFPP) in adolescents with comorbid attention-deficit-hyperactive-disorder(ADHD) and posttraumatic-stress-disorder(PTSD). Methods: Eleven adolescents(age:11±3yo(range:10-15yo):50þmale), after obtaining informed-consent/assent, randomized to: group-RFPP(n=5) or group-cognitive-behavioral-therapy(CBT)(n=6). 8 participants(RFPP:n=4,CBT:n=4) completed twice-weekly intervention for 6-weeks-trial. Vascular-function, C reactive protein(CRP), homocysteine, and neuropsychiatric-measures (i.e. SNAP-questionnaire,PERMA,gratitude,posttraumatic-growth-inventory,Connor–Davidson resilience-scale, Clinician-Administered-PTSD-Scale children&adolescent-version (CAPS-CA) were

measured. Subjects were followed for 12-months. The group-RFPP-interventions include Posttraumatic-Growth,Resilience,Gratitude,Optimism,Self-compassion,Growth-mindset,connectedness. Results: A significant-decrease in Homocysteine,CRP, and increase in vascular-function in both group, especially with RFPP group, was noted($p<0.05$). At 12-months follow-up, no psychiatry-hospitalization or suicide-ideation in both-groups reported. A continuation of significant-improvement in CAPS-CA and SNAP in both-groups was noted, that was more-robust in RFPP-group($p<0.05$). Similarly, a continuation of significant-increase in PERMA,gratitude,resilience and posttraumatic-growth-inventory-scores in RFPP-group, but not in CBT-group, was noted($P<0.05$). A direct-relation between increase in PERMA,gratitude,resilience,posttraumatic growth-inventory and decrease in CAPS-CA and SANP noted($P<0.05$). The most-robust improvement was in positive-connectedness,resilience and gratitude($p<0.05$). Conclusions: The current-findings reveal that RFPP is associated with the long-term favorable-effects in improving PTSD and ADHD symptoms, as well as increase in wellbeing and vascular-function in adolescent with comorbid ADHD and PTSD. This highlights the importance the dual-role RFPP in addressing vulnerable-symptoms as well as enhancing-wellbeing in youth with ADHD and PTSD.

No. 43

A Multimodal Approach to Maladaptive Video Game Behaviors: A Case Series

Poster Presenter: Tarek Aly, M.D.
Co-Author: Martha J. Ignaszewski, M.D.

SUMMARY:
Video games have become a prevalent factor in adolescent culture. They provide an element of social need, a competitive forum, a psychological trial for competence, and a source of distraction from whatever stressors the child or adolescent may be facing. The growth of gaming in adolescents is increasing significantly along with the overall average time played per week according to multiple studies. Findings vary in how much gamers play with reports of "dedicated" gamers (who comprise around 7% of the total gaming community) playing more than 20 hours per week. Furthermore, there continues to be a massive surge in mobile gaming, with increasingly difficult to precisely calculate the amount of time spent gaming on cell phones or other mobile devices (excluding watching videos about gaming which drastically increases related time spent). We present a case series who represent the most common maladaptive video game behaviors reported in the literature and outline a novel multi-modal approach of CBT modalities, Parental Guidance, and a Biofeedback-based approach to address them.

No. 44

ROHHAD: A Rare Cause of Neuropsychiatric Decompensation With ADHD-Like Presentation

Poster Presenter: Tarek Aly, M.D.
Co-Authors: Martha J. Ignaszewski, M.D., Chase Samsel

SUMMARY:
We present the case of a 3 year old male with a diagnosis of Rapid-Onset obesity with hypothalamic dysfunction, hypoventilation, and autonomic dysregulation (ROHHAD) who was hospitalized for resection of a ganglioneuroma. Psychiatry was consulted for ADHD-like presentation associated with impulsive, behavioral dysregulation around parental attempts at limiting oral intake given morbid obesity. Treatment efforts have included psychopharmacologic management for impulsivity, aggression and ADHD, sensory distraction including engaging in play therapy and tactile comfort, and supporting effective parenting and limit setting. ROHHAD is a rare syndrome that affects seemingly normal children and presents with insatiable appetite and rapid onset weight gain – due to the rarity of the condition and limited public and medical awareness, diagnosis and treatment are frequently delayed. Multidisciplinary involvement is usually necessary for accurate diagnosis and subsequent treatment, with collaborative management to evaluate for respiratory deterioration. Authors have suggested that it is imperative for psychiatrists to become familiar with the diagnosis and care of children with ROHHAD due to the psychiatric phenotypic presentation and necessary integrated care across all disciplines. The risk of hypoventilation

and apnea includes significant behavioral issues, such as mood issues, anxiety, insomnia, hallucinations and neurocognitive deterioration relating to cerebral hypoxia. We offer a case based discussion and review of the literature to increase psychiatric awareness about this potentially life-threatening condition.

No. 45

Emotional Processing in Depressed and Anxious Youth at High-Risk for Bipolar Disorder

Poster Presenter: Sarthak Angal
Co-Authors: Melissa Delbello, Akua Nimarko, Corrina Fonseca, Max Tallman, Sara Leslie, Kyle Hinman, Isheeta Zalpuri, Yvonne Lu, Kaitlyn Bruns, Thomas Blom, M.S., Mary Melissa Packer, Esther Rah, Whitney Tang, Michelle Goldsmith, Jeffrey R. Strawn, M.D., Manpreet Singh, M.D.

SUMMARY:
Background: Youth with a familial risk for developing bipolar I disorder (BD) who have anxiety and depression symptoms are often difficult to treat due to the risk of developing serious antidepressant-related adverse events. The underlying mechanisms that predispose these youth toward adverse events are not well understood. Dysregulation of emotional processing may be an important contributor. This study used task-based functional magnetic resonance imaging (fMRI) to characterize emotion processing in depressed and anxious youth with a familial risk for bipolar disorder compared to typically developing healthy controls. Methods: 40 unmedicated youth aged 12-17 with moderate to severe depression and/or anxiety and with a first degree relative with BD-I (high-risk) were recruited at Stanford University and at the University of Cincinnati. They were compared to 20 healthy controls also from these two sites with no first- or second-degree relatives with mood or psychotic disorders. Depression and anxiety severity were assessed using the Children's Depression Rating Scale-Revised (CDRS-R) and Pediatric Anxiety Rating Scale (PARS) respectively. All participants completed an fMRI scan while performing a continuous performance task with emotional and neutral distractors (CPT-END), during which they were asked to distinguish between circles, squares, and emotional distractors, which included emotionally neutral and emotionally disturbing images. A whole brain voxel-wise analysis was conducted to compare neural activation during the presentation of neutral and emotional stimuli between the high-risk and healthy control groups. Results: The high-risk group had greater left amygdala, left hippocampus, left ventrolateral prefrontal cortex (VLPFC), and right thalamus activation in response to emotional stimuli than the healthy control group while processing emotional vs neutral pictures. Greater activation of the left amygdala in the high-risk group was positively correlated with higher depression severity ($r(39)= .366$; $p = .020$). Greater activation in the left hippocampus ($r(39)= .513$; $p = .001$) and left VLPFC ($r(39)= .372$; $p = .018$) correlated with higher anxiety severity. Conclusion: The amygdala, hippocampus, VLPFC, and thalamus are components of the limbic system, which is key for emotional processing. Dysregulation of this system correlates with depression and anxiety severity in high-risk compared to healthy youth. Intervention studies evaluating the effects of antidepressants on emotion processing neural circuitry will provide more insights into the underlying neural mechanisms that influence treatment tolerability in this population.

No. 46

Use of Motivational Interviewing in Adolescents With Substance Misuse in the Inpatient Setting and How to Implement It, Review of Current Research

Poster Presenter: Christine K. Au
Co-Authors: Nicole Christina Rouse, D.O., Maher Kozman

SUMMARY:
Motivational Interviewing (MI) has been largely accredited for its role in substance and behavioral changes in various demographics of the psychiatric population. Focusing primarily on adolescent addiction and MI, there is a great amount of research that demonstrates its efficacy in encouraging change in terms of substance use and eliciting self-reflection in a non-threatening manner. MI provides a basis for treatment of adolescents that emphasizes patient-centered approaches that enhance collaboration and supporting autonomy, which then ultimately encourages adolescents to reach their maximum potential. There is a role for both the relational and technical components of MI

when working with adolescents as it creates a platform for change talk, and supports the patients' desire to be autonomous. It explores the patients' drive towards a healthier lifestyle, rather than imparting new information or skills. MI can be used in brief forms and is useful in the inpatient setting as well. Recent research suggests that there is benefit from introducing the "See One, Do One, Order One" model which includes healthcare providers being trained in MI, MI intervention under "bedside" supervision, and requesting Consult Liaison Clinicians to do MI. While some studies and critics of MI have shown that this method only has marginal benefit in regards to prevention of binge drinking, or other alcohol related risky behaviors, MI is regarded as one of the more easily applicable treatment modalities in adolescents with substance misuse. Several aspects of MI make it ideal for adolescents because this treatment requires trained therapists, and otherwise low cost of treatment as well as having no known noteworthy adverse effects. MI has shown to be efficacious across numerous substance use outcomes including alcohol marijuana, tobacco, and other illicit drug use. In addition, MI can be used as either a brief or a platform to incorporate other treatment modalities. We will present data on the use of MI in Adolescents in the inpatient setting, including its use in substance misuse among several substances.

No. 47

Diagnosing and Treating a 16-Year-Old Female With Down Syndrome, Regression, and Catatonia

Poster Presenter: Sara Bachani

SUMMARY:

Down Syndrome patients have fluctuating life course regarding emotional stability and mental health diagnoses as co-morbidity. A lesser recognized phenomenon in these patients is regression after a stressful life event. Case series of 4-30 patients each have shown development of such symptoms. At an urban tertiary care hospital's child and adolescent inpatient psychiatry unit, we cared for a 16-year-old Caucasian female with Down Syndrome and no past psychiatric history. She presented to the Emergency Department due to decreased oral intake and inability to complete ADLs independently. She was previously a happy, healthy, self-sufficient teenager, who spoke in full sentences, performed ADLs, and ate independently. She was affectionate, well-liked, on the cheerleading team and active in school at 1st-2nd grade level. In October 2017, without any emotional preparation, her mother started work after being at home full time since patient's birth. Patient gradually became sad, less vocal, demotivated, had decline in independence of ADLs, refused school for 2 months, and was observed responding to internal stimuli. She was prescribed citalopram, risperidone, and alprazolam by her outpatient psychiatrist. Risperidone was discontinued due to weight gain; citalopram was discontinued, and alprazolam dose was decreased due to poor response. After her brother left for college in fall 2018, she had acute decline: poor sleep, lack of appetite, incontinence and significant psycho-motor retardation. She would sit/lay in place for hours and act inappropriately, for e.g. undress publicly. Trazodone was started for sleep without benefit. On admission, she was placed on one to one supervision, where she made brief eye contact, only ate and performed ADLs with assistance, was awake through most nights and remained in one position for extended periods of time. She had a normal EEG and no active medical concerns. Fluoxetine was started, targeting debilitating depression (5 mg, increased to 10 mg daily). It was discontinued due to lack of improvement and father noticing worsening. Lorazepam challenge was then initiated for catatonia, titrated up from 1.5 mg to 7.5 mg daily in 3 divided doses. Patient demonstrated improved mood, speech, movement, sleep, appetite and performed ADLs independently. She responded to verbal directives/prompts, started attending groups and school, enjoyed activities and, as per her parents, was almost back to baseline. She was able to express stressors and learn coping tools, after which she was discharged with diagnosis of catatonia. Further research for diagnosis, treatment and formal guidelines on catatonia in the context of Down Syndrome are required in the future.

No. 48

Psychiatric Presentation and Management of N-Methyl-D-Aspartate Receptor Antibody Encephalitis at the Children's Hospital of Philadelphia

Poster Presenter: Azka Bilal, M.D.

Co-Authors: Shivani Jain, Alexander M. Scharko, M.D., Annisa Ahmed

SUMMARY:
BACKGROUND N-methyl-D-aspartate receptor antibody encephalitis (NMDARE) is a rare form of autoimmune encephalitis affecting both females and males along a wide age range and presents with neurologic and psychiatric manifestations. Psychotropic medications are commonly used for the management of psychiatric symptoms seen with this disease. However, the use of these medications is often based on clinical judgment due to a lack of evidence regarding the best use of psychotropic medications in treating these symptoms, and relationship to the disease process. The goal of this study is to review the current practice at The Children's Hospital of Philadelphia (CHOP) in managing the psychiatric symptoms in patients with NMDARE, and also to determine the relationship between the use of psychotropic medications and symptom improvement. METHODS This is an ongoing study in which a retrospective chart review will be completed for 46 patients admitted at CHOP with a diagnosis of NMDARE between 2008 and 2018. At present, data has been collected on n=27 patients of which 8 patients were excluded due to lack of sufficient information in the electronic record. Variables to be abstracted include patient age at presentation, sex, race, symptoms on presentation and length of stay. Psychotropic medications reviewed are benzodiazepines and antipsychotics, commonly used for symptom management in NMDARE To determine and standardize symptom severity and improvement, Clinical Global Improvement-Severity (CGI-S) scales on admission and discharge, as well as Clinical Global Improvement-Improvement (CGI-I) scale will be used. RESULTS Data was collected from 19 patient charts, age range 4 to 27 (mean age = 12.4, SD = 4.45), of which 80% were female and 20% were male. Ethnicity of this population varied with 52.63% Caucasian, 26.31% African American, 10.53% Asian, and 10.53% Other. Antipsychotic medications used during hospital course were: quetiapine 21.05%, ziprasidone 5.26%, haloperidol 15.79%, olanzapine 52.63% and risperidone 5.26%. Benzodiazepines used were: lorazepam 63.16%, clonazepam 36.84%, diazepam 31.58% and midazolam 10.53%. Average length of stay for patients was 122.29 days (SD=215.24). The mean CGI-S on admission was found to be 5.88 (SD=0.67), mean CGI-S on discharge was 4.5 (SD=1.14) and mean CGI-I improvement was 2.93 (SD=1.04). DISCUSSION This study highlights the trends of psychotropic medications used in the management of psychiatric symptoms of NMDARE. We will be focusing our discussion on the pathophysiology of the psychiatric symptoms in NMDARE, rationale for the use of antipsychotics and benzodiazepines, individual differences in the use of different classes of medications and their relationship to length of stay, symptoms severity and improvement. In addition, we will also focus on the sex differences in symptom presentation, treatment and improvement.

No. 49

Impact of Social Media Use on Depression and Suicidality in Adolescents

Poster Presenter: Matthew Bonn
Co-Authors: Nicole Christina Rouse, D.O., Maher Kozman

SUMMARY:
Social media is an integral part of many adolescents' lives. Their social interactions increasingly occur via platforms such as Facebook, Twitter, Instagram, text messaging, and more. While these remote interactions are clearly different from in-person socialization in many regards, the impact these differences have on users' mental health is poorly understood. However, there is a growing body of evidence that social media use is correlated with depression and suicidality. Given that adolescents' brains are still developing, they may be particularly susceptible to these influences. Therefore, it is important to take social media use in to consideration when evaluating and treating adolescents with psychiatric disorders. Some researchers theorize that increased connectedness with others through social media may provide emotional benefits. However, a 2018 study by Primack et. al showed that social media use is correlated with increased depressive symptoms. Negativity bias may play a role, by which negative social media experiences have a greater impact on depressive symptoms than do positive ones. Social media use has also been linked to increased suicide

risk. There are many reasons why this relationship exists, however cyberbullying is of particular concern. A survey of approximately 2000 middle-school students by Hinduja and Patchin found that victims of cyberbullying were almost twice as likely to have attempted suicide than non-victims. Social media platforms are complex and constantly evolving, as are the ways in which users choose to interact with them. While the impact that social media has on adults is an important question, it is perhaps even more pressing to evaluate its impact on adolescents, as their brains are still developing, and they may not be able to fully appreciate potential health consequences of their social media use. In this paper, we discuss existing evidence of the impact of social media use on depression and suicidality as well as the importance of assessing social media use in adolescents in the context of mental health. We also propose a new method for assessing the severity of social media use in adolescents in the inpatient psychiatric setting.

No. 50

Efficacy of Psychoeducational "SICAM Teacher Training Course": Assessing Teachers' Knowledge and Attitudes Toward ADHD

Poster Presenter: Weeranee Charoenwongsak, M.D.

SUMMARY:

Background Primary school teachers are one of the most important persons in the life of children with ADHD as they are the crucial element in children academic success and are also often the first person to detect disruptive behaviors that stem from the disorder. However, a majority of teachers in Thailand had very little or no formal ADHD training during their education. Southern Institute of Child and Adolescent Mental Health has developed SICAM Teacher Training Course in an attempt to improve teacher's knowledge of children psychiatric disorders. Objective The aim of this study is to evaluate the efficacy of this psychoeducational course in improving teachers' knowledge and attitudes toward children with ADHD. Methods A total of 48 primary school teachers in the province Surat Thani, Thailand participated in this study. Half of the teachers attended a 5 days in-training psychoeducational course, while the other half did not attend. Teachers' knowledge and attitudes toward children with ADHD were then assessed using two questionnaires, The Knowledge of Attention Deficit Disorders Scale (KADDS) and Teachers' Attitudes toward Children with ADHD Scale (TACAS), respectively. Results Statistical analysis showed significant mean difference in scores of both KADDS ($p < 0.001$) and TACAS ($p < 0.001$) between those who participated in the course and those who did not. We also found a positive correlation between participating in the course and higher scores on both KADDS ($p < 0.05$) and TAS ($p < 0.05$) after controlling for confounding factors such as teachers' sex, age, educational, perception of self-efficacy and prior ADHD-related training. Conclusions Results suggest that SCIAM Teacher Training Course is effective in increasing teachers' knowledge and attitudes toward children with ADHD. So this particular psychoeducational course can serve as a potential practical solution to help improve shortcoming or lacking ADHD training in teacher education.

No. 51

Sexually Transmitted Infection Among Adolescents and Young Adults With Attention-Deficit Hyperactivity Disorder: A Nationwide Longitudinal Study

Poster Presenter: Muhong Chen

SUMMARY:

Background: Previous studies suggested that ADHD was related to risky sexual behaviors, which have been regarded as a major risk factor of sexually transmitted infection (STI). However, the association between ADHD and subsequent STIs remained unknown. Methods: Using the Taiwan National Health Insurance Research Database, 17898 adolescents and young adults who were diagnosed with ADHD by psychiatrists and 71592 age-/sex-matched non-ADHD comparisons were enrolled between 2001 and 2009 and followed up to the end of 2011 in our study. Subjects who developed any STI during the follow-up period were identified. Cox regression analysis was performed to examine the risk of STIs between patients with ADHD and non-ADHD comparisons. Results: Patients with ADHD were prone to developing any STI (hazard ratio [HR]: 3.36, 95% confidence interval [CI]: 2.69~4.21) after adjusting for demographic data, psychiatric

comorbidities, and ADHD medications compared with the comparison group. Substance use disorders (HR: 1.94, 95% CI: 1.27~2.98) were also associated with the STI risk. Both short-term use (0.70, 95% CI: 0.53~0.94) of and long-term use (HR: 0.59, 95% CI: 0.37~0.93) of ADHD medications were related to a reduced risk of subsequent STIs. However, an association between substance use disorders and STIs was observed only in women. By contrast, the effect of ADHD medications on the reduction of STI risk was observed only in men. Discussion: Adolescents and young adults with ADHD had an elevated risk of developing any STI later in life compared with the non-ADHD comparisons. Patients with ADHD who also had substance use disorders were at the highest risk of subsequent STIs. Treatment of ADHD medications was associated with a reduced risk of subsequent STIs.

No. 52

Traumatic Brain Injury in Early Childhood and Risk of Attention-Deficit Hyperactivity Disorder and Autism Spectrum Disorder

Poster Presenter: Muhong Chen

SUMMARY: Objective: Early childhood (<3 years of age) is a critical period for neurodevelopment. This study investigated the correlation between early childhood traumatic brain injury (TBI) and subsequent risk of attention-deficit hyperactivity disorder (ADHD), autism spectrum disorder (ASD), and developmental delay (DD) by analyzing a national-scale cohort. Methods: Data from the National Health Insurance Research Database (NHIRD), which comprises healthcare information from >99% of the Taiwanese population, were analyzed. Children with TBI in their early childhood were enrolled, and the incidence of subsequent ADHD, ASD, or DD was assessed and compared with controls without TBI. Patients' age, repeated TBI, and TBI severity were investigated for the risk of ADHD, ASD, or DD. Results: A total of 7801 and 31,204 children were enrolled in the TBI and control cohorts, respectively. The TBI cohort exhibited a higher incidence of subsequent ADHD, ASD, or DD than the controls (all $p < 0.001$). Diagnoses of ADHD, ASD, or DD in the TBI cohort were at a younger age compared with the controls. Cox regression demonstrated the highest hazard ratios (HRs) of ADHD, ASD, or DD with repeated TBI events, severe TBI, and TBI events before 1 year of age, with the exception that the HR of ASD did not significantly increase after repeated TBI ($p=0.335$). In addition, cumulative HRs (>10 years) of ADHD, ASD, or DD were increased after TBI (all $p < 0.001$). Conclusion: Data suggested that the incidence of ADHD, ASD, and DD significantly increased after TBI events in the early childhood (<3 years of age). The risk factors include severe TBI, repeated TBI events, and TBI at a younger age. The long-term follow-up demonstrated an increased cumulative risk of ADHD, ASD, and DD after TBI.

No. 53

Childhood Adversity Is Associated With the Risk for Substance Use Disorders and Their Severity in Young Adulthood

Poster Presenter: Ann Cheney
Co-Authors: Evan Joshua Trager, M.D., Madeline Saavedra, Shaokui Ge, Howard Barry Moss, M.D., Deborah Deas, M.D., M.P.H.

SUMMARY:

Background: It is well-established that adverse childhood experiences (ACEs) such as abuse, neglect, trauma, and repeated exposure to domestic violence can have negative effects on successful adolescent development including problematic involvement with substances. However, few studies have examined the impact of ACEs on specific Substance Use Disorders (SUDs) in young adulthood and their severity. Methods: Prospective data was analyzed from the National Longitudinal Study of Adolescent to Adult Health (Add Health). Add Health is a nationally presentative longitudinal study of a sample of adolescents in grades 7-12 in the U.S. started during the 1994-95 school year. This cohort has been followed into young adulthood with four in-home interviews. The most recent wave was in 2008, when the sample were young adults aged 24-32. ACE scores were computed from Add Health items derived from the CDC-Kaiser Permanente Adverse Childhood Experiences study as a template. DSM-V Alcohol Use Disorder (AUD), Tobacco Use Disorder (TUD) and Cannabis Use Disorder (CUD) diagnoses were derived from Add Health items originally based on DSM-IV criteria. Consistent with DSM-V, SUD severity was assessed by symptom

counts binned into “mild”, “moderate”, and “severe” groupings. Analyses were conducted using survey-based logistic regression models adjusted for socio-demographics and risks are reported as odds ratios (OR) relative to those with no ACE exposure. Results: Subjects who had at least two ACEs, had significantly greater odds of developing an AUD (OR=1.42; p<.05), and those having four or more ACEs had greater risk (OR= 2.0; p<0.05). Mild and moderate AUD were not associated with ACE scores, however severe AUD was significantly associated with having more than one ACE, and those with four or more ACEs had the highest odds for severe AUD (OR=3.64; p=.006). For TUD, young adults who experienced one ACE or more were at significant risk for a TUD, with the largest risk being associated with having four or more ACEs (OR=2.47; p<.001). In terms of TUD severity, the greatest risk for severe TUD was associated with having three ACEs (OR= 5.05; p<.0001). For CUD, again, those with one ACE (OR=1.75; p<.001) or more had significantly elevated risk peaking at an OR=2.84 (p<.001) for those who experienced three ACEs. In terms of CUD severity, the risk for the most severe forms of CUD were found among those with three (OR=4.76; P<.001) and four or more ACEs (OR=5.40; p<.001). Conclusions: The results replicate and extend prior research on the developmental impact of childhood adversity. We found that young adults who were exposed to significant childhood adversity displayed heighten risk and severity for AUD, TUD, and CUD. Future research is needed to determine whether specific interventions can attenuate the impact of childhood adversity on the subsequent development of SUDs.

No. 54

Response to a Novel Digital Treatment for Pediatric ADHD in Patients With Primarily Inattentive Versus Combined Presentation

Poster Presenter: Ann C. Childress, M.D.
Lead Author: Robert Lawrence Findling, M.D., M.B.A.
Co-Authors: Jacqueline Lutz, Ph.D., Elena Canadas, Ph.D., Denton DeLoss, Ph.D.

SUMMARY:

Background: Given the heterogeneity of ADHD, treatments might differentially affect patients with different ADHD presentations. AKL-T01 is an investigational digital treatment, delivered through a video game interface, targeting neural networks involved in attention and cognitive control. In a previously reported double-blind, controlled trial (STARS-ADHD), AKL-T01 showed statistically significant improvement over an active digital control in the primary endpoint, an objective measure of attention and inhibitory control, from baseline to post-treatment. Secondary endpoints improved in both groups with no statistically significant difference between AKL-T01 and active control. Given the heterogeneity of ADHD, we explored how outcomes in AKL-T01 differed between patients with primarily inattentive or combined (inattentive-hyperactive/impulsive) presentations. Methods: In the STARS-ADHD trial, children (8-12 years) diagnosed with ADHD were randomized to AKL-T01 (n= 180) or an active digital control (n = 168). The primary endpoint was the TOVA® Attention Performance Index (API). We compared AKL-T01 treatment effects on the primary endpoint in the group of primarily inattentive ADHD presentation (n=48) with the group of combined (inattentive-hyperactive/ impulsive) ADHD presentation (n= 124) post-hoc, using Wilcoxon rank-sum tests. We further compared the groups in the following secondary endpoints: IRS, ADHD-RS, ADHD-RS-I, ADHD-RS-H, BRIEF-Parent and CGI-I. Results: Comparing AKL-T01 treatment effects between children with combined versus predominantly inattentive ADHD presentations showed no significant differences in any endpoint: API (between-group, p=0.301); IRS (p=0.211); ADHD-RS (p=0.263); ADHD-RS-I (p=0.051); ADHD-RS-H (p=0.966); CGI-I (p=0.378); BRIEF-Parent Working Memory Percentile (p=0.189; BRIEF-Parent Inhibit Percentile (p=0.418). Conclusions: Measures of attention and functioning demonstrated significant clinical response to treatment with AKL-T01, and AKL-T01 seemed similarly effective in patients with primarily inattentive and combined presentations of ADHD. This work was supported by Akili Interactive Labs, Inc.

No. 55

The Coping Skills Project

Poster Presenter: Lucy Chisler

SUMMARY:

On my inpatient child and adolescent psychiatry unit, I frequently discussed the importance of finding healthy coping skills. When I told teenagers about one of my coping skills (folding origami), I would be met with the same refrain - "Lucy, you're just saying that" and "you don't really need to use coping skills." Out of those skepticism-filled conversations, I created The Coping Skills Project. I set out to show patients that everyone needs skills to work through tough emotions and stressful situations. I wrote letters to notable people all over the world asking them to fill out a postcard to share a coping skill that they use. I was surprised by the candid responses and inspiring ideas sent our way, from the US Supreme Court to film sets in Australia and everywhere in between. I made posters full of the replies and hung them up around the unit - the postcards are sources of new ways to cope and reminders that everyone experiences hardships and stress in their lives. In this poster, I would be presenting a selection of the replies that I received for my project.

No. 56

Providing Mental Health Care Access to Rural Pediatric Providers Through a Telephonic Model

Poster Presenter: John Nathan Copeland, M.D.

SUMMARY:

North Carolina is among the ten most populous states, and among these states, it has the second largest rural population with nearly 4 million citizens living in rural communities. There are 65 counties in North Carolina that do not have a child psychiatrist, all of which are rural. This information is underscored by the fact that in 2017 the state reported that there were 250,000 children with mental health conditions with Medicaid coverage but only 64% were receiving any services. To address this challenge, in February of 2018, the North Carolina Pediatric Access Line (NC-PAL) was launched by Duke Integrated Pediatric Mental Health through a partnership with Cardinal Innovations, a state Medicaid behavioral Managed Care Organization. This program targeted six rural counties in North Carolina containing about 60,000 children and adolescents and used a telephonic model to provide real-time mental health consultations to providers seeing children in their community and including in-person educational presentations. In the first 6 months, the team conducted outreach to 49 child-serving practices in these counties. Within 2 months, the program was averaging ~30 calls a month including calls related to developmental disabilities such as autism and medication management for conditions including ADHD, depression, and anxiety. Providers from over 20 clinics have utilized the service for a total of 150 calls. Of 16 initial provider follow-up surveys, 70% indicated that they had an increased comfort level in treating childhood mental health conditions following consultation and 63% indicated that consultation decreased the immediate need for a mental health specialist or higher level of care. NC-PAL is able to provide education in pediatric mental health to rural pediatric providers, increase pediatric provider comfort in treating mental illness, reduce estimated need for specialty referral and higher-levels of care, and extend mental health expertise to communities in need.

No. 57

Prevalence of Tic Disorders Among School-Aged Children and Adolescents in the Community-Based Project to Learn About Youth-Mental Health Jacksonville

Poster Presenter: Steven Paul Cuffe, M.D.
Co-Authors: Kitty Leung, M.D., Gregory Mark Gale, M.D., Luka Sogorovic, D.O.

SUMMARY:

Background: There has been a wide range of estimates for prevalence of tic disorders. Prior studies report prevalence of Tourette syndrome (TS) from 0.26 to 5%, Chronic Motor Tic Disorders from 0.03 to 6%, and 1% or less for Chronic Vocal Tic Disorders. This study estimates the prevalence of tic disorders among school-aged children and adolescents using a population-based three-stage study design. Methods: In screening Stage 1, participating teachers completed the Strengths and Difficulties Questionnaire (SDQ), the Behavior Assessment System for Children-2 Behavioral and Emotional Screening System (BASC-2-BESS), and 2 tic screening questions to classify elementary, middle, and high school students (n=5744) as having high or low risk for externalizing/internalizing problems or tics. Children were stratified based on risk status,

sex, and school level, and sampled for participation in a Stage 2 interview with their parents. In Stage 2, parents (n=293) completed the Description of Tic Symptoms (DoTS) and the Diagnostic Interview Schedule for Children-IV (DISC-IV) to determine whether their child met criteria for tics, externalizing (ADHD, oppositional defiant disorder, conduct disorder) or internalizing disorders (generalized anxiety disorder, social phobia, separation anxiety disorder, obsessive-compulsive disorder, agoraphobia, post-traumatic stress disorder, major depressive disorder/dysthymic disorder, mania/hypomania). Children identified as having possible tic disorder on the DoTS were invited for a clinical interview (n=50) using the K-SADS tic disorders module, a semi-structured interview conducted by a child psychiatrist. Results: Prevalence of current TS is 4.01% (n=12; 95CI 0.33-7.69), and 1.95% (1.17-4.25) with impairment, with weighted percent 53.9% male, 64.8% Black, mean age 15.2. Persistent motor tic prevalence is 6.32% (n=14; 2.65-11.55) and 0.32% (0.00-0.83) with impairment, with 60.5% male, 32.8% Black, mean age 16.3. Persistent vocal tic prevalence is 1.37% (n=3; 0.00-3.22), with 41.6% male, 41.6% White, 58.3% other, mean age 16.9. Only 3 of the children had symptoms warranting referral for treatment. Conclusions: Tics are common in childhood; however, the majority of these children show low levels of impairment, and none of the children had received treatment for tics. The prevalence in this study is significantly higher than most prior studies, but is consistent with studies using similar methods.

No. 58

Shared Characteristics in Gender Diverse Youth With and Without Autism Diagnosis: Baseline Characterization of a Hospital-Based Gender Clinic Cohort

Poster Presenter: Amy Elizabeth Curtis, M.D.
Co-Authors: Rachel Earl, Kym Ahrens, Felice Orlich

SUMMARY:

Background: Emerging evidence supports higher rates of Autism Spectrum Disorder (ASD) and autism characteristics in gender diverse (GD) individuals, as well as more frequent GD-identification among those with ASD. With diagnoses of ASD and gender dysphoria independently associated with risk factors for increased distress and mental health needs, it is important to consider the specific challenges that may result from the complex interplay of gender diversity and neurodiversity. Methods: Patients presenting for intake at a hospital-based gender clinic were enrolled in a prospective study to measure demographic, mental health, and psychosocial factors at intake and at 3-month follow-up intervals. Patients were classified as having ASD if there was documented DSM-5/ICD-10 diagnosis prior to initial visit. Psychosocial measures and a social pragmatics screening for autism characteristics (Autism-Spectrum Quotient (AQ-10)) were completed at each visit. Baseline data for 113 GD patients (ages 8-20, Mean=15.4, SD=2.1) were analyzed via ANOVA and regression statistics. Group comparisons of mental health status and quality of life included those with and without ASD diagnosis, as well as those considered high and low-risk for ASD (HR-ASD vs. LR-ASD) based on AQ-10 score suggesting possible ASD. Results: Mean AQ-10 score overall was 4.5, with mean PHQ-9 and GAD-7 scores of 12.4 and 10.7, respectively. 20.4% of youth met criteria for HR-ASD, while only 8.0% carried a known diagnosis of ASD. Only 2/9 youth with previous ASD diagnosis met criteria for HR-ASD based on the AQ-10 cutoffs. Common co-occurring disorders with HR-ASD youth included MDD (44%), anxiety disorders (57%), and ADHD (22%). MDD diagnosis before intake significantly predicted ASD history, PHQ-9 score, quality of life scores, anxiety history, and self-harm history. Formal ASD diagnosis was negatively predictive of having self-harm history, while those with broader autism characteristics (HR-ASD) were significantly more likely to report self-harm (vs. LR-ASD). Conclusion: Preliminary analyses indicate that GD youth with and without a formal ASD diagnosis may present with similar risk for autism characteristics. This is consistent with prior studies suggesting increased risk of ASD symptoms and social communication deficits in GD youth that are often not reflected in diagnostic history. Notably, higher prevalence of previous self-harm in youth with autism characteristics (HR-ASD group) compared to LR-ASD youth suggests that youth with autism characteristics may have unique risk for psychological distress and insufficient coping strategies. This is an important consideration for clinical providers and researchers moving forward.

Data collection and analyses for follow-up time points are forthcoming, with plans to include longitudinal follow-up of treatment trajectories, medical and psychiatric course, autism measures, mental health markers, and qualitative data from parent and youth reports.

No. 59

PHQ-9M Item 9 and CDRS-R Item 13 Correlates With C-SSRS for Suicide Risk in Adolescents

Poster Presenter: Jinal Desai
Co-Authors: Aiswarya Lakshmi Nandakumar, Paul E. Croarkin, D.O., Jennifer Vande Voort

SUMMARY:
Background: The 9-Item Patient Health Questionnaire Modified (PHQ-9M) and 17-Item Children's Depression Rating Scale-Revised (CDRS-R) are depression severity rating scales commonly used in clinical practice and research settings. The Columbia-Suicide Severity Rating Scale (C-SSRS) is a valid and reliable questionnaire used to distinguish the domains of suicidal ideation and suicidal behavior. Despite the wide use of the PHQ-9M in clinical settings, there is minimal evidence regarding its validity as a screening tool for suicidal risk. Therefore, this study aims to compare scores from suicidality measures of PHQ-9M (Item 9) and CDRS-R (Item 13) with C-SSRS intensity scores. Methods: Item 9 of the PHQ-9M has been used as a brief screening measure for suicide risk. It specifically asks over the last 2 weeks, "How often have you had thoughts that you would be better off dead, or of hurting yourself in some way?" Item 13 of the CDRS-R specifically investigates suicidality with a rating of 1 being "understands the word suicide, but does not apply the term to himself/herself" and a rating of 7 being "has made a suicide attempt within the last month or is actively suicidal." The scores from PHQ-9M Item 9 and CDRS-R Item 13 were compared with C-SSRS intensity of ideation, total intensity and composite scores using Pearson correlation. Additionally, scores from Item 9 of PHQ-9M and Item 13 of CDRS-R were also compared using the Pearson correlation. Results: The Pearson correlation coefficient with PHQ-9M Item 9 was 0.15 ($p=0.045$) when compared with C-SSRS intensity of ideation, 0.31 ($p<0.001$) when compared with C-SSRS intensity total score, and 0.30 ($p<0.001$) when compared with C-SSRS composite score. The Pearson correlation coefficient with CDRS-R Item 13 was 0.60 ($p<0.001$) when compared with C-SSRS intensity of ideation, 0.73 ($p<0.001$) when compared with C-SSRS intensity total score, and 0.76 ($p<0.001$) when compared with C-SSRS composite score. Finally, the Pearson correlation coefficient with PHQ-9M Item 9 was 0.25 ($p=0.001$) with CDRS-R Item 13. Conclusion: The PHQ-9M Item 9 and CDRS-R Item 13 scores both showed a statistically significant positive correlation with C-SSRS intensity of ideation, total intensity, and composite scores. However, CDRS-R Item 13 showed a stronger correlation compared to PHQ-9M Item 9. The PHQ-9M Item 9 and CDRS-R Item 13 scores showed a statistically significant positive correlation with each other but to a lesser extent. Thus, suicidality measures of CDRS-R and PHQ-9M can potentially contribute to assessing suicidal risk and be helpful as an outcome measure to monitor treatment response in various clinical settings. Further studies comparing sensitivity and specificity of suicidality items of PHQ-9M and CDRS-R are required for effective implementation in clinical practice.

No. 60

Reintroduction of Clozapine in an Adolescent With Prior Bowel Obstruction

Poster Presenter: Erica Everest, M.D.

SUMMARY:
Gastrointestinal hypomotility (GIHM) is a serious but underemphasized complication of clozapine. It may take the form of constipation or ileus, with resulting complications such as bowel obstruction and bowel ischemia. Clozapine use in children and adolescents is less common than in adults, but this superior antipsychotic medication often serves a vital role in patients with early onset schizophrenia. We present a case of a teen patient in a state hospital who required clozapine for treatment-resistant schizophrenia. She had two small bowel obstructions at low doses with little warning. She was restarted on clozapine with much caution for further constipation. The patient has had no further obstructions on prophylaxis that includes careful monitoring, polyethylene glycol, senna, docusate, and donepezil. We provide suggestions for symptom monitoring and medication management of

clozapine-induced GIHM based on the existing limited evidence. We also emphasize the importance of not overlooking this common, potentially serious, side-effect.

No. 61

Validation of the NDDIE as a Depression Screener for Youth With Epilepsy

Poster Presenter: Anjali Dagar, M.B.B.S.
Co-Authors: Tatiana A. Falcone, M.D., Elia Pestana Knight, Krystel Tossone, Diane Zemba, Jane Timmons-Mitchell

SUMMARY:
Background: The Neurological Disorders Depression Inventory for Epilepsy (NDDI-E) is widely accepted as a useful screening tool for patients with epilepsy. Depression screening is indicated because patients with epilepsy exhibit psychiatric comorbidities. The NDDI-E has been validated for adults; Wagner et al (2016) have validated the NDDI-E-Y for youth. However, the NDDI-E-Y includes 12 items whereas the NDDI-E is comprised of 6 items. Since patients with epilepsy may have decreased attention abilities, a validated, briefer scale may contribute to ease of depression screening in youth with epilepsy. Objectives: Our aim was to validate the NDDI-E for youth by correlating results with the CES-DC (Center for Epidemiological Studies Depression Scale for Children). We expected that there would be a strong relationship between the NDDI-E and the CES-DC. Methods: In a study of youth with epilepsy, 107 children and youth with epilepsy (CYE) completed the NDDI-E, the CES-DC (Center for Epidemiological Studies. Depression Scale for Children), the ASQ (Asking Suicide Questions), and the SCARED (Screen for Child Anxiety Related Disorders). Analysis: Summary statistics for each scale (NDDI-E, CES-DC, SCARED, and ASQ) are reported (N = 107). Bivariate associations were conducted between gender and total scores on the NDDI-E, CES-DC, SCARED, and SCARED sub-scales. Three Pearson's Product Moment Correlation (R) analyses were conducted between the NDDI-E, CES-DC, and SCARED scales. Cronbach's alpha was conducted on the NDDI-E, CES-DC, and SCARED. Results: The average score (standard deviation) for each scale is as follows: NDDI-E 11.35 (3.85); CES-DC 14.40 (10.08); and SCARED 19.65 (14.87). The mean CES-DC score is below the cutoff score of 15 for depression. Females (n = 58) report higher CES-DC scores than males (n = 49; z = -2.06, p = .04). There are two cutoff scores for the SCARED: 25 for children and youth diagnosed with ADD and 17 for those who are not. The observed mean score of 19.65 is above the cutoff for youth not diagnosed with ADD but below the cutoff for those who are so diagnosed. Pearson's correlation between all three pairs of scales indicated strong positive correlations: NDDI-E and CES-DC R = .74, p < .0001; SCARED and CES-DC R = .62, p < .0001; and SCARED and NDDI-E R = .65 p < .0001. Cronbach's alpha indicated excellent internal consistency for the CES-DC (a = .90), excellent internal consistency for the SCARED (a = .94), and good internal consistency for the NDDI-E (a = .84). Seven (6.5%) scored at least one on the ASQ, which can indicate suicide concern; this compares with the population suicide ideation rate for youth of 17.2% for middle and high school youth, and the suicide ideation rate for youth with epilepsy, 20.3% . Conclusions: The NDDI-E was strongly related to the CES-DC, indicating that the 6 item version may be appropriate for depression screening in children and youth with epilepsy

No. 62

Current Status and Future Perspectives for Child and Adolescent Psychiatry in Mexico

Poster Presenter: Diana Patricia Guizar-Sanchez
Lead Author: Gerhard Heinze
Co-Author: Napoleon Bernard

SUMMARY: Objectives: We will provide an update on advances in children's mental health care in Mexico and the current data on the number and geographic location of child and adolescent psychiatrists (CAPs) in Mexico in order to descriptive and cross-sectional study, we examine how the current children's mental health system operates in Mexico, including recent changes in mental healthcare policy and the need of a national mental health plan for children and adolescents that should be well-integrated with the existing national health and mental health plans. Several sources available in Mexico were consulted, such as the Mexican Child and Adolescent Psychiatric Association, health care institutions, universities, and telephone directories, among several others, to locate CAP and to identify

where and what kind of practice they have. Results: Prevalence rates of mental disorders among young people are up in Mexico to twice as high as the U.S. and Canadian rates. Child and adolescent mental health services in Mexico are delivered through an underfunded, underresourced, and uncoordinated network of institutional providers isolated from the larger health care system. The infrastructure in Mexico is extremely deficient, lacking in both material and human resources. The psychiatric workforce is literally insufficient to meet the need. There are only 234 CAPs in Mexico, or 0.62 CAP per 100,000 children. There are 1.8 male CAPs for every female CAP. Among the CAPs in Mexico, 56% practiced in Mexico City. Only 40% of the CAPS in Mexico are certified by the specialty board. Conclusions: Future perspectives for the field are discussed in terms of funding, research priorities, and research resources, and we emphasize the importance of developing better mental health professionals with a knowledge of public administration, particularly in well-known strategies such as strategic planning. The number of CAPs in Mexico seems to be insufficient to cover the needs of the country. Psychiatrists were found to be grouped in urban areas of the country. Building a society that guarantees the right to mental health, adequate treatment, and rehabilitation are part of our present challenges. know if the mental health needs of the country are being met, and to learn more about how medical practice is managed in Mexico. Methods: Using a

No. 63
WITHDRAWN

No. 64
Understanding the Influence of Sibling Support Group Facilitation on Mental Health Trainee Views and Skills of Family-Centered Care
Poster Presenter: Eileen A. Huttlin, M.D.
Lead Author: Emily Rubin, M.A.
Co-Authors: Emily Lauer, M.P.H., Swathi Damodaran, M.D., M.P.H.

SUMMARY: Objectives: Prior research suggests that family-centered interventions are among the least taught yet most needed skills for practicing psychiatry. In this study, we sought to evaluate whether having mental health trainees lead a sibling support group could serve as a method to promote family-centered care among trainees. Methods: All trainees in Psychiatry, Psychology, and Social Work were invited to participate as sibling support group facilitators. Both participants and non-participants were then surveyed (Trainee Comparison Survey) using a questionnaire inquiring about exposure to family-centered care, comfort level in providing family-centered care, attitudes regarding the importance of family-centered care, and desire to provide family-centered care in the future. A second survey (Group Facilitator Survey) was administered to the facilitators to assess their perceptions of the sibling group leader experience. Results: Trainees who participated as sibling group facilitators were more likely to have responded that they engaged in family-centered activities during training than non-participants ($p<0.05$), more likely to have expressed greater confidence in their family-centered care skills ($p<0.05$), and more likely to have responded that they will practice in a family-centered way ($p<0.05$). Trainees who participated were overwhelmingly positive about their experience with the Sibling Support Program. Conclusions: Facilitating a sibling support group may be an effective way for mental health trainees to gain skills and confidence in delivering family-centered care. Mental health training programs that aim to imbue trainees with the importance of family-centered care may consider creating opportunities for trainees to facilitate sibling support groups.

No. 65
School Violence Threat Assessment: Treatment Perspective From Inpatient Psychiatric Service
Poster Presenter: Martha J. Ignaszewski, M.D.
Co-Authors: Lauren View, Tamar Katz, Eleni Maneta

SUMMARY:
Background: Homicide is the second leading cause of death among youth aged 15-24 (1). In 2018, there have been 329 mass shootings in the United States (2), 94 of which occurred within schools. The rise in gun violence in schools is placing increased pressure on mental health providers to recognize high risk youth and intervene early. Despite the availability of several validated risk assessment tools that are described in the literature and identified risk factors,

prediction of risk continues to be a challenge from the acute stabilization setting. Acute assessment is complex, relying on identification and evaluation of static and dynamic risk factors, and focuses on thought processes and actions to determine level of progression from thought to action. Resolution of imminent violent thoughts does not always mitigate risk of future acts. The available literature has few concrete answers for accurate identification of future risk for violence, and for comprehensive methods of assessment and treatment for high risk individuals, particularly for youth. Using a case based approach, we highlight the complexities of violence risk assessment, supported by literature review and expert consultation. Methods: We present a case of an adolescent who threated mass school violence and was subsequently psychiatrically hospitalized at a teaching hospital. Treatment required multidisciplinary team involvement and collaboration with community supports and local and federal law enforcement. Management strategies are supported to a literature review utilizing PubMed and Medline. Results: We will present the case of a 15 year old male with a history of NVLD, who was admitted to an inpatient psychiatric hospital for homicidal ideation with detailed plan and a written manifesto threatening to shoot his peers and bomb his school. The complexities of this case, including risk assessment and disposition planning, in collaboration with community resources will be utilized as a platform for the presentation themes. We will explore the challenges associated with accurate diagnosis, risk assessment, and safety planning, including discharge readiness and reintegration into the community. Through a detailed literature review regarding risk assessment for violence and mass murder, prevalence of mental illness in mass homicide perpetrators, and school violence, we will explore the available evidence to guide clinical decision making. Treatment considerations and reintegration into the community will be addressed through the lens of psychiatrist as specialist, medicolegal and ethical framework, and around school considerations. Conclusions: The recent rise in school violence highlights the need for better understanding of thorough risk assessment to establish an appropriate management plan, when presented with youth with homicidal ideation. Practitioners will benefit from an understanding of acute stabilization for mass homicide/school violence threats.

No. 66

Study of Psychiatric Morbidity in Children and Adolescents Visiting a Child Guidance Clinic in a South Indian City and Its Implications

Poster Presenter: Vishal Indla, M.D.

SUMMARY:

Background: Children below 18 years of age constitute about 41% of India's population. Estimating the prevalence of mental disorders in this population is critical to providing the mental health services and planning mental health resources. As per our knowledge, this is the first Indian study that used DSM 5 diagnostic criteria to study child psychiatric morbidity. Objective: The aim of this study was to study the clinical and epidemiological profile of children and adolescents who presented at a child guidance clinic and to understand the prevalence of mental disorders in this population and its implications on service delivery. Methodology: Data of 100 children and their family members were abstracted. All diagnoses were based on DSM 5 diagnostic criteria. Results: A total of 100 children aged 2 to 18 years, with a mean age of 13.03 ± 4.17 years were included in the study. Most of the children (68%) were =12 years of age. Study population showed male preponderance with 59% boys. Most of the subjects (78%) belonged to middle socio-economic class. Most of the children in the study hailed from urban areas (62%). As per the DSM5 criteria, study subjects were diagnosed to have a host of psychiatric conditions including neurodevelopmental disorders (48%), schizophrenia spectrum disorders (3%); bipolar and related disorders (2%); major depressive disorder (6%); anxiety disorder (5%), obsessive compulsive disorder (OCD) (3%), trauma and stressor related disorders (adjustment disorders) (14%), elimination disorder (1%); disruptive and conduct disorders (7%) and others (11%). Intellectual disabilities with or without associated behavioral/seizure disorder was the single most common diagnosis in the sample. Conclusions: Neurodevelopmental disorders were the most common diagnosis amongst children who visited the child guidance clinic. Adjustment

disorders, especially in response to academic stress was another prominent diagnosis in the study sample highlighting the vulnerability children face to academic stress and the need for developing strategies to improve coping mechanisms in children. These findings provide a direction towards which mental health resources should be channeled. Limitations: The sample size was small. The study was carried out in a child guidance clinic attached to a psychiatric hospital, which may not necessarily represent the general population.

No. 67

Case of a Child With Sweating Blood (Hematohidrosis)

Poster Presenter: Vishal Indla, M.D.

SUMMARY:

Hematohidrosis is a very rare condition of sweating blood. A child's case who presented to us with hematohidrosis is reported. There are only a few reports of this in the literature. A 10-year-old boy presented to our hospital with a history of repeated episodes of oozing of blood from navel, eyes, ear lobules, and nose. These episodes occurred while he was at home as well as in school. The episodes of bleeding from various parts of the body, especially the eyes were preceded by issues such as upcoming exams, fight with parents, and parents not satisfying his demands. Due to this, parents stopped sending him to school and he was being taken to various doctors. During the examination, it disappeared as soon as it was mopped leaving behind no sign of trauma only to reappear within a few seconds. The child was thoroughly investigated for all types of blood dyscrasias and all investigations were found to be normal. A detailed psychiatric evaluation also revealed diagnosis of Oppositional Defiant Disorder. Patient was diagnosed with hematohidrosis and oppositional defiant disorder clinically. The child was managed by a combination of pharmacotherapy and non pharmacological methods of treatment. The main focus of our treatment was non pharmacological management that consisted of behavioral interventions for the child and counseling and psychoeducation to the parents, as it was clear that the stress precipitated episodes of bleeding from orifices. In this poster, we discuss the etiopathogenesis of hematohidrosis and its link to emotional factors along with its comprehensive management including both pharmacological and non pharmacological methods

No. 68

Stuttering Priapism in a 19-Year-Old African-American Male With Sickle Cell Trait, Induced by Psychotropic Medication/s: A Case Study

Poster Presenter: Sultana Jahan, M.D.

SUMMARY:

Study objectives: To learn about: priapism, stuttering priapism, priapism in patients who have sickle cell disease (SCD)/traits, how to best manage patients with sickle cell disease/trait before prescribing psychotropic medications. Introduction: Priapism is defined as persistent penile erection that is not related to sexual interest or desire. Stuttering priapism (also called recurrent ischemic priapism [RIP]) is a variant of ischemic priapism characterized by brief, recurrent episodes of transient, self-limited priapism. Priapism typically becomes a more significant clinical problem after puberty. The median age of onset is in the teenage years. In a series from a pediatric urology clinic that included 155 boys with SCD, priapism occurred in 10 (6.5 percent). Method: Patient X is a 19 year-old African-American male who was placed at Division of Youth Services (DYS) more than 2 years ago. Patient's medical history is insignificant, other than a past history of priapism which was induced by trazodone about a year back. Recently he was prescribed quetiapine, starting dose was 25 mg at bedtime, a week later it was increased to 50 mg at bedtime for mood stabilization. Within a few days after he started taking the higher dose of quetiapine he developed stuttering priapism which was occurring in the mornings, it did not last for long time and was somewhat painful. His last episode of priapism lasted for more than 4 hours and it was very painful. At this time patient was taken to the emergency room and gradually priapism subsided on its own while he was at the ER. During this ER visit different labs were drawn and it was found out that he has sickle cell trait. Result: 19 year-old African-American young male with no prior diagnosis of sickle cell trait or disease who developed priapism with trazodone and then subsequently he developed priapism with quetiapine and at that time he was also diagnosed

with sickle cell trait for the first time. In this case it was identified that the same patient with sickle cell trait had a tendency to develop priapism with different group of psychotropic medication. One was an antidepressant medication the other one was a typical antipsychotic medication. Conclusion: It is observed that patient with sickle cell disease/trait are prone to develop priapism due to structural abnormalities of the hemoglobin molecule. In this case the most important learning objective is that an African-American male with sickle cell trait developed priapism with one prior medication, should we be more careful before prescribing other psychotropic medication? Should we inquire about whether or not patient/family history is positive for sickle cell trait/disease? Open discussion about likelihood of developing priapism and its presenting symptoms and management, especially in young patients with history of sickle cell disease/ trait, can be very helpful before prescribing psychotropic medication.

No. 69

The Effect of School-Based Short-Term Mental Health Education

Poster Presenter: Park Ji Yoon

SUMMARY:

Introduction The purpose of this study was to improve the mental health awareness and early detection and to prevent of mental health problems by providing short-term mental health education for adolescents to solve prejudice against mental disorders and to induce positive attitude change. Method The Short-term mental health education was conducted for 199 students in the second grade of a junior high school in Busan for 45 minutes for two sessions. The education program was produced through consultation between mental health specialists, mental health specialists, and school teachers. In the first session, understanding of the mental disorder, and in the second session, the subject of the mental disorder and the dissolution of the prejudice against the mental disorder person was carried out. We allocated the time according to the needs of the school site. Before the start of the teaching, participants were asked to use the questionnaire for psychiatric prejudice questionnaire, and the questionnaire of mental health prevalence questionnaire and mental health questionnaire. Paired t-test was used for comparison of pre- and post-test results, and the effect size was calculated as Cohen's d. Linear regression was used to identify variables that were expected to influence the results of post-test. Result The mean score of the mental health perception scale before and after the short-term mental health education decreased from 60.72 to 54.93 ($p < 0.01$). There were significant differences in prejudice against psychiatric patients, prejudice against psychiatric treatment, and prejudice to psychiatric hospitals. There were no significant factors in analyzing factors affecting the results of post-test in participants' personal information and perception of mental health. Conclusion Adolescents experiencing short-term mental health education have improved prejudice against mental disorders, psychiatric treatment, and mental hospitals. This study has significant policy implications for the development and application of more effective education programs for improving mental health and awareness of adolescents. Key Words: Mental Health Education • Schools • Youth • Psychiatric Disorders • prejudice.

No. 70

Moderating Effect of ADHD on Problematic Internet Use in Children and Adolescents With Adverse Childhood Experiences

Poster Presenter: YeongSeon Jo

Lead Author: Soo-Young Bhang

Co-Authors: Sanyeowool Oh, Yong-Sil Kweon

SUMMARY: Objective: The purpose of this study was to evaluate the moderating effect of attention deficit hyperactivity disorder (ADHD) on adverse childhood experiences (ACEs), problematic internet use, and depressive symptoms. Methods: In this research, we used data from a community addiction management center. Path analysis was performed to measure the relationship among ACEs, depressive symptoms, problematic internet use and ADHD. The study participants were 180 students between the ages of 7 and 18. Results: The effect of ADHD in the trajectory of ACEs drives a process from problematic internet use (S.E.=0.14, C.R.=0.83, P=0.40) to depressive symptoms (S.E.=0.48, C.R.=3.14, P=0.01). ADHD can be a potentially aggravating factor of depressive symptoms in children and adolescents

with ACEs. Conclusions: There is a significant need to monitor the depressive symptoms of children and adolescents with ACEs and ADHD.
Acknowledgement: This study was supported by a grant from the Korean Healthcare Technology R&D Project, Ministry of Health and Welfare, Republic of Korea(HM14C2603) and the Korean Mental Health Technology R&D Project, Ministry of Health & Welfare, Republic of Korea (HM15C1058).

No. 71

Clozapine-Induced Toxic Megacolon: A Case Study in a 22-Year-Old Male

Poster Presenter: Tarik Ksaibati, D.O.
Co-Authors: Khurshid A. Khurshid, M.D., Gerald Richardson

SUMMARY:

Clozapine is a second-generation antipsychotic prescribed for treatment-resistant schizophrenia(1). Constipation is well documented in patients on clozapine, but toxic mega colon is less well known(2). However, despite its high risk of mortality, among the five black box warnings for Clozapine, constipation is not one of them. In this case, a 22-year-old male developed toxic megacolon resulting in a total colectomy with multiple post-operative complications including sepsis and neuroleptic malignant syndrome (NMS). The purpose of this case study is to highlight the potential life threatening and preventable adverse effect of toxic megacolon during clozapine therapy. 22-year-old Asian male with history of Schizoaffective disorder bipolar type presents three weeks post total colectomy with ileostomy creation secondary to toxic megacolon to the psychiatric inpatient unit for psychiatric stabilization. According to outside records from the assisted living facility the patient's psychotic symptoms were refractory to multiple antipsychotics over the last five months. The patient's clozapine was titrated to 450mg while he remained on therapeutic dosages of two other antipsychotics (haloperidol and ziprasidone) and two mood stabilizers (lithium and oxcarbazepine). In addition, the patient was given agents known to cause constipation including benztropine for prevention of extrapyramidal symptoms, glycopyrrolate for sialorrhea, loperamide as needed for diarrhea and diphenhydramine as needed for sleep. The patient was given haloperidol post colectomy and developed NMS which resolved with dantrolene treatment. While awaiting court approval for ECT, the patient's symptoms resolved on a slow titration of aripiprazole, clonazepam, and Lithium. The patient was discharged to family's care. This case highlights the importance of a preventative bowel regimen and clinical monitoring of a patient on clozapine therapy. Additionally, when prescribing clozapine, drug interactions should be evaluated as to avoid common constipating agents such as other anticholinergics. Clozapine prescribing should be accompanied by regular physical exam monitoring by clinicians with prophylactic, as needed laxative medications prescribed for all patients (i.e. stool softeners, promotility agents)(3). Research on clozapine-associated toxic megacolon is scarce and the exact mechanism is unclear, but the anticholinergic and serotonergic effects of clozapine have been attributed to the disease (2,4).

No. 72

A Systematic Review: The Influence of Social Media on the Incidence of Depression, Anxiety, and Psychological Distress in Adolescents

Poster Presenter: Betul Keles

SUMMARY:

Social media has become inextricable to our daily lives. However, social media are blamed for an increase in mental health problems in young people. The purpose of this systematic review paper is to review and evaluate the impact of social media on the incidence of depression, anxiety and psychological distress in adolescents. A systematic search of a multi-database including PsychInfo, Medline, Embase, CINAHL and SSC was undertaken. Eligible studies were reviewed with the NIH quality assessment tool for observational cohort and cross-sectional studies, followed by narrative synthesis. Thirteen studies were eligible for inclusion. Critical appraisal revealed poor to fair quality in included studies regarding their methods, design and sampling. Results of studies were classified into four main domains of exposure to social media: time spent, activity, investment and addiction. Findings showed that all domains were correlated with depression, anxiety and psychological distress in adolescents. Some studies found that insomnia and

rumination mediated the relationship between social media addiction and depression. Overall, this review found indicative evidence that social media use related to the increased risk of depression, anxiety and psychological distress, although there are considerable caveats due to the methodological limitations of cross-sectional studies and use of self-report questionnaires. Underlying mechanisms in this putative causal relationship should be explored in future research, with longitudinal studies to measure the longer-term effects of social media on mental health.

No. 73

Sexual Attraction and Mental Health Service Use Among Puerto Rican Early Adolescents

Poster Presenter: Jaimie Klotz, M.P.H.
Co-Authors: Clara Sanahuja, M.D., Ana Ortin Peralta, Ph.D., Thomas Corbeil, M.P.H., Milton Leonard Wainberg, M.D., Katherine Elkington, Ph.D., Hector Bird, M.D., Glorisa Canino, Ph.D., Cristiane Duarte, Ph.D., M.P.H.

SUMMARY:
Background: Compared to heterosexual adolescents and adults, sexual minority individuals receive more mental health services (MHS), even in the absence of psychiatric disorders. Belonging to an ethnic group with strong roots in traditional gender roles, such as the Latino culture, can be a source of stress for individuals with same-sex orientation. We examine whether high rates of MHS use are already present among Latino youth with same sex sexual attraction in early adolescence, when the feelings of sexual attraction emerge. We further examine whether same sex attraction among early adolescents both with and without a psychiatric disorder is related to elevated MHS use. Methods: The analytic sample was 758 Puerto Rican children from the Boricua Youth Study (N= 2,491), ages 11-13 at baseline, assessed yearly over three waves. Early adolescents were classified into two groups based on their reports at each wave: "ever same sex" or "only opposite sex" (if they reported opposite sex sexual attraction at every wave or by wave 3 after previously being uncertain or reporting attraction to neither sex). MHS use (at Wave 3) was defined as children's receipt of any past year inpatient, outpatient, or school services due to emotional, behavioral, or substance use problems, as reported by parents. Psychiatric disorders (i.e., mood, anxiety and disruptive behavior disorders) were assessed with the Diagnostic Interview Schedule for Children-IV. Site was defined as place of recruitment: the South Bronx, New York (43.2%) or Puerto Rico (56.8%). Results: Among early adolescents, 11.9% reported "ever same sex" and 79.4% reported "only opposite sex" sexual attraction. Logistic regression analysis showed that early adolescents with "ever same sex" attraction were over 2 times more likely to use MHS than those with "only opposite sex" attraction, adjusting for any psychiatric disorders, gender, site and propensity scores. The association between ever having same sex attraction and using MHS was present among those without psychiatric disorders but not among those with any psychiatric disorders, although the interaction between psychiatric disorders and sexual attraction was not significant (ß = -0.83; p= .21) Conclusion: Our findings indicate that the greater MHS use by sexual minority individuals compared to those of heterosexual orientation in late adolescence and adulthood is already present in early adolescence. Being raised in an ethnic group with traditional cultural values (e.g., machismo, respeto, religion, and familism) might be challenging for Latino early adolescents as they become aware of their same sex sexual attraction, and may lead to early use of MHS, regardless of the presence of a psychiatric disorder. Prevention strategies that promote psychoeducation within families and the community can help to identify early adolescents in distress and provide culturally sensitive interventions when needed.

No. 74

Shared Pleasure in Early Mother Infant Interactions: A Study of Mentally Ill Mothers and Babies in South Africa

Poster Presenter: Anusha Lachman
Co-Author: Dana Niehaus

SUMMARY:
Background: Infant mental health is strongly connected to an infant's relationship with a responsive, warm, and available caregiver (Mantymaa 2015). Infants instinctively strive for social interaction. The infant has a limited ability to regulate its own emotional as well as physical needs

after birth, and a caregiving adult is responsible for what is called mutual regulation (Stern, 1995). The infants' skills for interaction include initiation and maintenance of eye contact, the ability to vocalize and use facial expressions, and head and body movements to engage the caregiver in mutual interaction (Trevarthen & Aitken, 2001). Sharing emotions enables infants to regulate their interactions. However, maternal mental illnesses reduces a mother's ability to detect and respond to changes in her infant's expressions and communication, which may have important consequences of infant attachment and emotion regulation. Researchers at Tampere University (Finland) hypothesized that the sharing of a smile or laugh with simultaneous direct gaze contact between a mother and her infant represents a marker of high intensity positive affectivity and named this paradigm "Shared Pleasure (SP)" (Puura et al 2005;).Shared Pleasure (SP) is considered to be a possible screening marker for early identification of at risk dyads. However, a paucity of data exists for SP moments as a measurable paradigm developing countries. Aim: To evaluate the Shared Pleasure Paradigm using women attending a tertiary psychiatric maternal mental health clinic in Cape Town, South Africa. Methods: A sample of mothers (N=78) and young infants (2-6months old) attending a Maternal Mental Health Clinic were assessed for SP moments using video recordings of the dyad in free play. Results: SP moments occurred in only 20.5% of the sample. SP moments were more frequent in younger babies (under 3 months of age). There were significantly more SP moments in dyads where mothers had no mental illnesses (p=0.021) or were married (p=0.016). Black African mothers also experienced significantly more SP moments with their babies (p=0.033) than their Caucasian or colored counterparts. Conclusions: This study used a language and culture free paradigm the "Shared Pleasure moment" to assess reciprocal positive interaction in a group of dyads. In developing world settings, high rates of maternal mental illnesses, coupled with adverse social conditions compromises the capacity of caregivers to provide the kind of empathic care that would promote secure attachment in infancy and by extension, good developmental outcomes in childhood (Tomlinson, Cooper & Murray, 2005).Tracking SP moments in a larger sample of culturally diverse, at risk and, mentally ill population of mothers and their infants could be a simple measure to identify at risk dyads.

No. 75

Effect of Age on the Association of Migratory Separation From Parents and Impaired Verbal Comprehension in Chinese Left-Behind Children

Poster Presenter: Xianbin Li

SUMMARY: Objective: Cognitive abilities are essential for human beings, yet the connection between migratory separation and the cognitive abilities of Chinese left-behind children (LBC) remains unclear. In this study, we aimed to explore the association between migratory separation and cognitive performance in Chinese LBC, and to determine if the association was age-dependent. Methods: For this study, 148 children were recruited from a junior high school and primary school in the Anhui Province of China. The LBC were selected, along with the same number of age- and gender-matched non-left-behind children (NLBC). The cognitive performance of the children was assessed using the 4th Edition Wechsler Intelligence Scale for Children (WISC-IV). We compared the cognitive performance between the LBC and NLBC in three age groups, including the low age group (6-11 years), high age group (12-15 years), and the entire age group (6-15 years). Results: In the entire age group, the LBC scored lower than NLBC in both verbal comprehension (mean difference [MD]= -3.595, p= 0.013) and total WISC-IV scores (MD= -6.151, p=0.019). In the low age group, the LBC performed worse than NLBC in verbal comprehension (MD= -4.957, p= 0.004) and total WISC-IV scores (MD= -9.337, p= 0.008). However, the high age group showed no significant differences in the scores of the four scales or the total scores between the LBC and NLBC. Conclusion: Migratory separation is likely associated with impaired verbal comprehension in Chinese LBC during childhood (6-11 years), yet this association disappears by early adolescence (12-15 years). This is the first report showing that Chinese LBC have impaired verbal comprehension, which self-corrects as the LBC enter into early adolescence.

No. 76

A Literature Review of Mental Health Disparities in Lesbian, Gay, Bisexual, and Questioning Youth Populations

Poster Presenter: Cristina Romaniello
Co-Authors: Robert Mullin, Nihit Gupta, M.D.

SUMMARY:
Background: It is well-documented in literature that youth who identify as lesbian, gay, bisexual, or questioning (LGBQ) exhibit significantly higher rates of mental illnesses, including anxiety, depression, suicidal ideation, and self-harming behavior compared to their heterosexual peers. Although there have been many recent improvements to ensure that LGBQ populations have equal access to quality medical and psychiatric care, few studies have looked beyond the surface and examined mental illness present in each lesbian, gay, bisexual, and questioning sector independently. In particular, bisexual individuals are often excluded from these studies all together despite data from public surveys suggesting there are more people in the United States who identify as bisexual than as gay or lesbian. Methods: We present a literature review comparing and contrasting the findings from various recent studies that have attempted to fill in this knowledge gap in mental health. Results: Although sexual minorities are at higher risk for behavioral health issues in general, it was found that certain subgroups were at higher risk than others. This highlights the fact that the behavioral health issues most prevalent in each subgroup of the LGBQ population are different and unique. Conclusion: This highlights the importance of physicians being sensitive to the unique differences in mental health across LGBQ youth. In doing so, patients of all ages are more likely to feel safe and welcomed enough to open up to discussions regarding their sexual identity and orientation preferences.

No. 77

A Biopsychosociolegal Approach to a Case of Atypical Catatonia in an Adolescent

Poster Presenter: Keeban C. Nam, M.D.
Co-Author: Amanda R. Suzuki, M.D.

SUMMARY:
We present the case of a 16 year-old Hispanic male with catatonia secondary to major depression, with exploration of the biological, psychological, sociocultural, and legal facets involved in his care. The report will review the patient's history, highlighting the symptomatology that was consistent with and suggestive for atypical catatonia. We will discuss the challenges in implementing recommended treatment modalities, including the lack of substantial improvement on benzodiazepines, the uncommon diagnostic approach to the etiology of catatonia through the use of sodium amobarbital interview, and the obstacles faced in the legal sector in obtaining authorization for electroconvulsive therapy for an adolescent. In the process, we will present a literature review summarizing the use of sodium amobarbital and electroconvulsive therapy in adolescents. Finally we will examine the psychological and cultural implications involved in the case conceptualization and obstacles to treatment approaches.

No. 78

Difficulty of Finding Adequate Management for Transitioning Adolescents With Prader Willi Syndrome

Poster Presenter: Sohail Amar Nibras, M.D.
Co-Authors: Alicia A. Barnes, D.O., Mana Yacim

SUMMARY:
Background: Prader Willi syndrome is a disorder that is characterized by symptoms including hypothalamic hypofunction, learning disabilities, and behavioral problems.1 Individuals with Prader Willi syndrome display a discrepancy between their biological and chronological age. During adolescence, there may be child-like outbursts that inhibit social relationships.2 However, verbal fluency, visual-spatial skills, and verbal and nonverbal memory skills are intact. It is common for individuals with Prader Willi syndrome to display hypotonia and generalized cognitive impairments with visual-spatial/visual processing skills.3 This case report highlights the unique challenges of a vulnerable adolescent with Prada Willi transitioning into adulthood. Ms. Z is a 17-year-old, African American female, domiciled with her guardian, paternal grandmother. She has a history of intrauterine exposure to teratogens, Prader Willi syndrome confirmed using chromosomal microarray, and Bipolar disorder. She also has grown up in foster

care system since elementary school. She has presents to outpatient psychiatric care with low mood, and emotional and behavioral difficulties, frequent disagreements with peers and authority, mostly about food, anger outburst for not getting her way. She has a previous history of self-harming behaviors. She has a hard time establishing and maintaining friendships with her peers because of marked immaturity problems and issues associated with understanding common sense social situations. Neuropsychological highlighted deficits regarding receptive and expressive vocabulary skills, visual-motor integration, and certain executive functions that include initiation, processing speed, behavioral and emotional regulation, and planning/organizing skills. Conclusion: Transitional youth with a history of developmental disabilities and limited resources deserve special consideration in coordination of care. First consideration of autonomy and the need for guardianship of individuals with mild to moderate intellectual disability. Second is access to care moving into adulthood for a child previously covered by Medicaid can present unique challenges. Finally coordinating the transition from school to vocational training and life skills support. This case highlights and explores these unique challenges.

No. 79

Internet-Delivered Cognitive Behavior Therapy Versus Internet-Delivered Support and Counseling for Youth With SAD: A Randomized Controlled Trial

Poster Presenter: Martina Nord
Co-Authors: Tove Wahlund, Maral Jolstedt, Sarah Vigerland, Eva Serlachius, David Mataix-Cols, Jens Högström

SUMMARY:
Background: Social anxiety disorder (SAD) is prevalent in children and adolescents and causes significant impairment in the lives of those affected. Cognitive behavior therapy (CBT) is the most effective treatment for SAD but many young people do not have access to good-quality CBT. A growing body of research suggests that Internet-delivered CBT (ICBT) for youth anxiety disorders is effective and has the potential to bridge the treatment-gap. Also, a recent pilot trial showed that ICBT for adolescents with SAD is feasible and efficacious. However, still little is known about the efficacy of ICBT for SAD in youth, especially when compared to an active control treatment. Method: The objective of this randomized controlled trial was to test the efficacy and cost-effectiveness of ICBT for children and adolescents with SAD in comparison to an active control treatment. Participants (N = 103; 10 – 17 years) were randomized to 10 weeks of either therapist-guided ICBT or therapist-guided internet-delivered support and counseling (ISupport). Both treatments were delivered online and included ten internet-delivered modules and three video conference sessions for the youth and five modules for the parents. The online modules included texts, video- and audio clips, illustrations and written exercises. Youth and parents had weekly written contact with a therapist online, as well as every third week through the video conferencing sessions. External clinicians blind to treatment allocation conducted assessments at post-treatment and at a 3-month follow-up (the primary endpoint). Participants randomized to ISupport were offered ICBT after the 3-month follow-up. The primary outcome measure was the Clinician Severity Rating (CSR) derived from the Anxiety Disorders Interview Schedule for Children (ADIS-C). Secondary outcome measures included child- and parent rated measures of the child's social anxiety, symptoms of depression, level of functioning and health-related costs. During the treatment, participants also responded to measures of hypothesized mediating variables, such as pre- and post-event processing, safety behaviors and self-focus. Results: At present, all participants have been included in the trial and the sample was found to have moderately severe social anxiety (CSR; m = 5.0, sd = 0.95), a mean age of 14.5 years (sd = 2.16) and a mean duration time of 4 years (sd = 2.80). Almost 40% of the sample had one or more comorbid disorders, such as depression, generalized anxiety disorder and specific phobia. The primary endpoint will be reached in April 2019 for all participants and preliminary results will be presented on the poster. Discussion: ICBT has the potential to increase availability to evidence-based treatments, but little is known about ICBT for youth with SAD. The findings from this trial may contribute with important information about efficacy, cost-effectiveness and mediating variables when treating SAD in youth with ICBT.

No. 80

Meta-Analysis to Assess the Safety/Tolerability of Antipsychotics for the Treatment of Child and Adolescent Patients With Schizophrenia

Poster Presenter: Tadashi Nosaka
Lead Author: Katsuhiko Hagi
Co-Author: Andrei A. Pikalov, M.D., Ph.D.

SUMMARY:

Background: Early-onset schizophrenia is a serious debilitating disorder associated with considerable morbidity and a reduced life expectancy. While antipsychotic medications play an integral role in the treatment and management of schizophrenia in children and adolescents, the nature of adverse effects that can follow first exposure occurs during a vulnerable phase of physical growth and brain development, and at a time when young people may be particularly vulnerable to rapid weight gain and disturbances to the cardiometabolic system, bone growth and sexual development. Such health risks raise important public health concerns given the widespread use of antipsychotics. This study aimed to explore the relative safety/tolerability of atypical antipsychotics used in the treatment of child and adolescent patients with schizophrenia. Methods: A systematic literature searches of the PubMed, EMBASE, Scopus, and Cochrane databases (last search Sep 2018) was conducted to identify studies that reported randomized placebo-controlled trials (RCTs) comparing adverse events between child and adolescent patients receiving antipsychotic or a placebo for the treatment of schizophrenia or related disorders. The primary outcome of interest was all cause discontinuation. Secondary outcomes include lipid parameter levels, akathisia and somnolence. Results: Nine studies were included in the evidence synthesis, comprising 2,165 patients across eight active interventions (aripiprazole, asenapine, lurasidone, olanzapine, paliperidone, quetiapine, risperidone, and ziprasidone) and placebo. All treatments, except for aripiprazole and asenapine, were associated with a statistically significant reduction in all cause discontinuation [risk difference (RD) = -0.25 to -0.08) at week 6 compared with placebo. Aripiprazole, lurasidone, olanzapine, paliperidone, quetiapine, and risperidone showed statistically significant increase in body weight compared with placebo [weighted mean difference (WMD) = 0.90 to 4.20]. Asenapine, olanzapine, paliperidone, and quetiapine were associated with significantly higher risk for more than 7% weight gain compared with placebo (RD = 0.07 to 0.31). Asenapine, lurasidone, paliperidone, and risperidone had significantly higher risk for akathisia compared with placebo (RD=0.04 to 0.09). All treatments, except for lurasdone had significantly higher risk for somnolence compared with placebo (RD = 0.10 to 0.22) Conclusion: Results from this meta-analysis illustrate significant differences in body weight, incidence of akathisia and somnolence among antipsychotics in the treatment of child and adolescent patients with schizophrenia. Varying results for safety outcome measures demonstrate a need to balance efficacy with side-effect profiles.
This study was sponsored by Sumitomo Dainippon Pharma Co., Ltd., Tokyo, Japan.

No. 81

Catatonia Secondary to Acute Stress Disorder in a Young Adult

Poster Presenter: Sochima Isioma Ochije, M.D.
Lead Author: Vanesa Del Pilar Disla, M.D.
Co-Author: Matthew W. Grover, M.D.

SUMMARY:

Catatonia is a clinical syndrome characterized by a broad range of motor abnormalities that can be medically harmful or even life threatening. It occurs in the context of mood and psychotic disorders, developmental disorders, and medical or neurologic conditions. Even though is less commonly encountered in the pediatric population it is nevertheless managed in a similar manner as it is in the adult patient. In rare cases, catatonia can develop in the context of Acute Stress Disorder and Post Traumatic Stress Disorder, where almost half of catatonic attacks begin with a depressive phase and these patients tend to have a better prognosis. Acute Stress Disorder is a trauma related mental health condition in which the individual is exposed to one or more traumatic events, which is followed by symptoms from any of the five categories of intrusion, negative mood, dissociation, avoidance, and arousal, beginning or worsening after the traumatic event. For a period of 3 days to a month after the trauma exposure. We present a 21 year old young Female from Ghana with no known

psychiatric history that develops an episode of catatonia after the traumatic death of her brother, in the context of Acute Stress Disorder. Where the cultural beliefs of the patient, may portray the situation as something spiritual, alienating the mental health component. Therefore, making it difficult for the patient to seek further treatment and have good insight into her condition

No. 82

Validating of Semi-Structured Diagnostic Interview for Internet Addiction Scale (DIA) for Clinical Samples in Korean Children and Adolescents

Poster Presenter: Sanyeowool Oh
Lead Author: Soo-Young Bhang
Co-Authors: YeongSeon Jo, Yong-Sil Kweon

SUMMARY:

Background and aims: This study aimed to develop a semi-structured interview scale to measure internet/game/smartphone addiction. Inspired by the 9-item DSM-5 internet gaming disorder diagnostic criteria, we developed 10-item Diagnostic interview for Internet Addiction (DIA) (i.e., cognitive salience, withdrawal, tolerance, difficulty in regulation, decrease in other activities, persistent use despite negative consequences, lying about internet/game/SNS use, use of internet/game/SNS for mood modification, significantly impaired role function, and craving.) Methods: The subjects were students who were referred to as having internet addiction problem. Children aged 7 to 18 years (n=177, 73.4% boys, M=13.08; SD=2.46) were included in this study. DIA scale, Korean internet addiction scale (K-scale, Young-scale), smartphone addiction scale (SAS-SV, S), Internet addiction Proneness scale (children and adolescents) questionnaire were conducted. Exploratory factor analysis and correlation analysis were performed to verify the validity of DIA. Based on results of exploratory analysis, Confirmatory factor analysis (CFA) was performed utilizing Structural Equation Modeling (SEM) in Amos 19. Results: Results indicated that the DIA highly correlated with the scores of the K scale($r = .361$, $p < .01$), Young internet addiction test($r = .282$, $p < .01$), Internet Addiction Proneness Scale for Children($r = .555$, $p < .01$), Internet Addiction Proneness Scale for adolescents($r = .311$, $p < .01$). Factor analysis of the DIA revealed two factors. Factor 1 were 'cognitive salience', 'withdrawal', 'difficulty in regulation', 'persistent use despite negative consequences', 'significantly impaired role function'. Factor 2 were 'tolerance', 'decrease in other activities', 'lying about internet/game/SNS use', 'use of internet/game/SNS for mood modification', 'craving'. Results from the CFA indicated that the two-factor model demonstrated good model fit: TLI=0.919, CFI=0.950, RMSEA=0.058. Conclusions: The DIA scale appears to be a valid diagnostic scale for screening children and adolescents who are at risk of internet and smartphone addiction. This study was supported by a grant of the Korean Mental Health Technology R&D Project, Ministry of Health & Welfare, Republic of Korea(HM14C2603).

No. 83

Telephone Survey on Management of Aggression and Agitation in Inpatient Child and Adolescent Psychiatric Units Across U.S.

Poster Presenter: Zeynep Ozinci, M.D.
Co-Authors: Ema Saito, Christine Michelle Grosso

SUMMARY:

Background: Agitation and aggression are commonly experienced on inpatient psychiatric child and adolescent units, as they often caused by multiple psychiatric conditions requiring hospitalization (i.e. affective disorders, psychotic disorders, neurodevelopmental disorders and disruptive, impulse control and conduct disorders) or can arise in the context of being in a hospital environment itself. The management of aggression and agitation often becomes priority to limit the duration of an already in progress outburst/aggression/agitation, to prevent further escalation and potentially dangerous situations; and subsequently maintain the safety of the patients and others. It involves singly or a combination of behavioral interventions, use of psychotropic pro re nata (PRN) medication, seclusion, or mechanical restraints. According to a chart review study among 408 adolescent inpatients, it has been shown that although pharmacological interventions are first-line treatment (95.6%), seclusion (strict seclusion or quiet room) or restraints (sheet restraint, four-point restraint, wrist restraint, mittens) continued to be used in adolescent inpatient care at least once in 59.4% in

the management of aggressive events requiring an intervention. Objectives: We conduct a phone survey to take a snap shot of variable clinical approaches to the management of aggression and agitation in inpatient child and adolescent psychiatric units across the United States. We aim to examine practice among health professionals, and provide recommendations on future direction of improvement and research. Methods: Telephone survey is conducted among directors of inpatient child and adolescent units across the U.S. Contact information of directors are provided by the Inpatient Committee of the American Academy of Child and Adolescent Psychiatry (AACAP). The potential participants are informed via e-mails of this survey and also are given actual questionnaires prior to actual phone interview. Our survey includes questions about the size of units, length of hospital stay, age range of patients, common diagnoses, diagnostic procedures of the unit, unit philosophy, de-escalation procedures, unit staffing, indications and side effects of PRN medication use, commonly used oral and IM PRN medications, measurement of effectiveness of PRN medication use and ways of tracking restraints. No identifiable information related to patients will be collected. IRB approval has been granted to conduct the project. Statistics: Descriptive analysis will be conducted. Conclusion: There is still big need for further research studies and comprehensive evidence-based guidelines on safely and effectively managing agitation and aggression in child and adolescent inpatient units. Our phone survey study will provide more in depth information to the clinicians as well as make recommendations regarding practices and future research.

No. 84

Clozapine in Treatment Resistance Adolescent Psychosis

Poster Presenter: Monish Parmar, M.D.
Co-Author: Bipin Laljibhai Patel, M.D.

SUMMARY:

Background: Clozapine has a well-documented track record in treating Schizophrenia with better efficacy than other anti-psychotics (1). CUtLASS 2 demonstrated that Clozapine produced significant improvements in adult psychotic patients who failed to respond to 2 or more anti-psychotic medications (2). The evidence for the utilization of Clozapine in Adolescents is also quite strong (3). However, only about 5 percent of patients with Psychosis are treated with Clozapine in America (1). This is in stark contrast to Japan, China, and Australia--where it is utilized in more than 30 percent of Psychotic patients. Practitioners hesitate to prescribe the medication because of the inconvenience that comes with regular blood draws. Additionally, the medication has many notorious side effects. Despite these valid concerns, it is clearly a disservice to the patient to not make this medicine more readily available. Our case will demonstrate a robust response to Clozapine, in an adolescent patient, that dramatically altered the trajectory of her life. Case: 17 year old Hispanic girl who was hospitalized for Psychosis for the first time 9 months prior to the start of Clozapine. Of note, the patient had a family history of an Aunt who had a similar presentation to the patients' and was shackled to a bed in Mexico for her entire life. During this 9 month period of time, the patient was hospitalized on 6 different occasions at two separate local teaching hospitals for a total of 88 days. She presented with severe paranoia, Capgras Syndrome, disorganized thoughts, flat affect, hallucinations, catatonia, and a complete lack of self-care. The severity of her symptoms were getting significantly worse despite treatment with a variety of Psychotropic medications. She failed adequate trials of Risperidone 4 mg twice daily, Olanzapine 20 mg twice daily, and Perphenazine 12 mg twice daily. She also was treated with Valproic Acid for associated mood impairments, Trazodone for insomnia, Propranolol for Akathisia, and Benztropine for Extrapyramidal Symptoms. Clozapine was utilized on the patient with dramatic effect at a dose of 50 mg in the morning and 100 mg at night. She required no other Psychotropics. The only other medications she needed were Docusate 200 mg BID and Polyethylene Glycol 17 grams daily for constipation. She had an "awakening" on Clozapine and was able to return to school. Her parents reported that this was the best they had seen their daughter in 2 years. Discussion: Not all patients are going to be great candidates for Clozapine. Our patient wanted to feel better and was bothered by her Psychosis. She allowed for an initial blood draw and as her thinking became clearer with

Clozapine, she understood the rationale and importance of getting her blood drawn weekly and did not resist. She is no longer having paranoia, aggression, or hallucinations. She is currently in grade 12, exercising/eating healthy, and living life to her fullest potential.

No. 85

Mindfulness Court-Side: The Effects of Eight-Week Mindfulness Training on Adolescent Volleyball Athletes

Poster Presenter: Jessica J. Patrizi

SUMMARY:

Introduction: Since Kabat-Zinn's introduction of mindfulness to Western thought, there has been an outpouring of research identifying all the benefits to mindfulness training. What began as a treatment option for chronic pain patients has now shown efficacy for reductions in clinical anxiety, depression, and improvements to overall quality of life. The future of mindfulness implementation remains an area of opportunity both clinically and non-clinically. In sport, mindfulness interventions with elite athletes have shown lasting effects including reductions in anxiety and sport-related injury, improvements in confidence, sleep, and potential for performance enhancement. Positive results with mindfulness intervention in the school setting suggest that mindfulness training for adolescent athletes has potential to provide similar benefits such as promotion of behavioral coping skills, improved self-esteem, formation of healthy social relationships, and improved sport performance. The purpose of this study is therefore to perform a pilot study to examine the relationship between mindfulness, anxiety, confidence, and performance in adolescent female volleyball athletes. It is hypothesized that such training will improve overall mindfulness, anxiety, confidence, and performance in these adolescent athletes. Methods/Design: The study is a pilot trial designed to evaluate the effects of the novel, 8-week Mindfulness Training for Volleyball-Adolescents (MTV-A) program on overall mindfulness, sport-related anxiety, confidence, and sport performance among female adolescent volleyball players. The study was conducted at a local volleyball facility, "The Luke," and recruited 12-14 year old athletes from Upward Stars Upstate Volleyball club teams. Athletes participated in 30-minute mindfulness interventions once weekly for 8 weeks before or after practice. Assessments including the Child and Adolescent Mindfulness Measure (CAMM), Trait Sports Confidence Inventory (TSCI), Sport Anxiety Scale-2 (SAS-2), and subjective performance evaluations were obtained at baseline, 4 weeks into the intervention, and at the completion of the intervention (8 weeks). Conclusions: Data collection is currently ongoing and results will be presented on the poster. It is expected that the study will provide insight into the effect of mindfulness intervention with adolescent athletes on overall mindfulness, sport-related anxiety, sports confidence, and performance. The training program can additionally promote mental health awareness among adolescent athletes and may inform future research on this important topic.

No. 86

Indian-American Adolescents With Psychotic Symptoms: Case Series Highlighting Delay in Seeking Treatment and Strategies to Overcome Cultural Barriers

Poster Presenter: Manasi Rana

SUMMARY:

Introduction: Psychotic symptoms in Indian-American adolescents present treatment challenges including delay in seeking care, skepticism of diagnoses, seeking an underlying physical diagnosis for psychiatric condition, suspicion of western medicine, stigma around mental health, feelings of guilt/shame, seeking multiple opinions. Here we explore these issues in 3 representative cases. Case presentation: Case #1: 12 yr old with 8-month history of paranoia, selective mutism, disorganized behavior, insomnia, anorexia, poor grooming. Parents sought 4 subsequent opinions (two in India and two in the United States), Medication switches due to lack of parental acceptance led to repeated hospitalizations. Challenges included: lack of parental acceptance, delays in seeking care, multiple providers changing medications. The patient was diagnosed with Autism Spectrum Disorder and Schizophrenia, alliance maintained through frequent contact, validating parents and repeated

psychoeducation. The patient had a total of 6 hospitalizations, stabilized on a combination of clozapine and lithium. Case #2: 17 yr old presented after a year of progressive symptoms including paranoia, anxiety, migraines, hallucinations, photophobia, phonophobia. Patient required 24-hour care by parents who resisted early referrals to psychiatry. Interdisciplinary treatment team approach including neurologist, pediatrician, nephrologist and psychiatrist, frequent contact helped establish alliance and reduced frequency of medication changes. Parents continue to struggle with perceived side effects, diagnosis and instituting a behavior plan. Patient continues on quetiapine and sertraline for psychosis and anxiety with some improvement. Case # 3: 16 yr old with disorganized speech, behavior, delusional thinking, paranoia, auditory and visual hallucinations and history of hospitalization. Parents had contacted psychiatry at age 14 (moodiness, anger issues, difficulty completing assignments) and age 15 (anger outbursts, anxiety). Both times patient lost to follow-up. Diagnosed with bipolar disorder with psychotic symptoms and prescribed olanzapine, lorazepam and lithium. Parents skeptical of diagnosis, questioned need for medication. Mother asked that psychiatric diagnoses not be shared with the patient (predicting more depression from stigma), focused on return to school and decreasing medication. Alliance maintained through frequent contact, psychoeducation and support. Patient decompensated when olanzapine was cross tapered to risperidone prematurely at parent request (due to weight gain) but has remained stable on risperidone and lithium. Discussion: Families needed high level of engagement (often >2 contacts per week initially) psychoeducation, frequent treatment team meetings, flexibility on the part of treating team, understanding of cultural issues including perceived stigma, resistance to psychiatric diagnoses, mistrust of Western medicine to increase treatment compliance.

No. 87

Attitudes of High School Students About Depression

Poster Presenter: David M. Roane, M.D.
Co-Authors: Alexa Krugel, Lisa Botticelli

SUMMARY:
Background: Depression is a mental health disorder that affects approximately 3.1 million adolescents in the United States (12.8%) from the ages of 12-17 each year. Despite this high prevalence, 70% of adolescents do not receive treatment. This study aimed to explore how high school students perceive depression and if there is a stigma surrounding mental illness that accounts for the low percentage of teens that receive treatment. Methods: A 12-question survey, previously used to assess attitudes about depression in medical residents, was adapted for high school students. The survey was administered via smartphone to sophomore students during mandatory Health Class. Other information obtained included gender and hours per night spent on homework. Relationships between items were analyzed using Chi Square and ANOVA. Results: Of the 100 students enrolled in the five Health classes, 73 students participated in this study. Participants included 28 males and 45 females. A majority of 67.1% of respondents agreed that students who would seek treatment for allergies or asthma would not seek care for depression or anxiety, and, 69.9 disagreed that seeking mental health treatment is a sign of strength; whereas, 35.6% agreed that colleges would be less likely to accept a student with a documented history of treatment. Students indicated that the most common response to depression (67.1%) is to 'cope with it alone'. The number one reason for delaying treatment, according to students (52.1%), is the 'stigma surrounding depression'. With regards to the stress of grades and work load, boys were more likely than girls to state, 'I can handle it' as opposed to experiencing negative thoughts: $X^2 (12) = 20.70$, $p = .05$ and $F (1, 71) = 7.92$, $p < .01$. Students who spent less hours studying were more likely to report they would talk with friends about mental health issues compared to students who studied more, who were more likely to approach adults (parents, guidance counselors or mental health professionals): $X^2 (24) = 46.63$, $p < .01$. Conclusion: Based on the responses of the 73 high school sophomores, it appears that stigma may be an important reason that high school students with depression have a low rate of mental health treatment. Factors including gender and hours per night spent on homework can

influence students' stress levels and how they respond to the symptoms of mental illness.

No. 88

Impact of Training on Attitudes and Practices of Brief Screening, Interviewing, Intervention and Referral for Use and Abuse of Marijuana in Adolescent

Poster Presenter: Sudhakar K. Shenoy, M.D.
Co-Authors: Sohail Amar Nibras, M.D., Ayame Takahashi, M.D.

SUMMARY:

The recent legalization of recreational marijuana in multiple states across the country has somewhat created a tendency to undermine the ill-effects of marijuana usage and a gradual reduction of the perceived harm. Among adolescents, marijuana continues to be the most highly used illicit substance in USA. The Monitoring and Future surveys done annually by the NIDA provides further evidence to this trend. Growing base of evidence-based literature shows that only few providers feel knowledgeable about the health risks of marijuana, and most providers lack confidence in discussing this topic with patients and families. Epidemic proportions of marijuana usage have necessitated talking about screening, brief intervention, referral and monitoring at the primary care level.There is an imminent and growing need to educate primary care physicians about potential harm of exposure to cannabis in adolescence, its neuropsychiatric outcomes and adult sequelae. In determining the need for this project, preliminary meetings with the training directors of pediatrics, family practice and psychiatry were held in liaison with the training director of child and adolescent psychiatry fellowship at the institutional level and affirmative responses were received. It was also noted that although there is some training, there is a lack of a formal, hands-on training with intervention through brief Motivational Interviewing for residents if they were to detect substance misuse in adolescents. The objectives of our research is to educate and enhance knowledge of residents in primary care specialties including family practice and pediatrics with regards to recent trends and new research in marijuana use and abuse in adolescents; to develop a 3-hour workshop to educate attendees' to improve knowledge and develop skills for brief screening, brief motivational interviewing techniques and intervention, and learn of resources available locally and nationally for referral; and to measure the knowledge and attitudes of primary care specialties' residents pre- and post- workshop towards early substance use in adolescents.

No. 89

Catatonia in Pediatric Population: Case Report and Literature Review

Poster Presenter: Shivanshu Vijaykumar Shrivastava, M.B.B.S.
Co-Authors: Raul Johan Poulsen, Nicole Mavrides, Raul Johan Poulsen

SUMMARY:

Background - Pediatric catatonia is believed to be a rare condition, challenges in recognition and variability in presentation may lead to underdiagnosis. Case- 12 yo male with past psychiatric history of ADHD, treated with Vyvanse was brought in for Bizzare behavior and acting paranoid. Per family, patient went to see a football game with his aunt and upon arrival he " Was not himself. He was hearing voices and seeing things." He has a history of preterm birth and achieved milestones on time. Maternal history of drug use and no personal history of drug use. Upon arrival the patient was not engaged in evaluation, appeared delirious, was tachycardic. Labs including Lumbar Puncture and Urine Drug Screen were normal. Patient denied using any drugs at the game. He was also kept under pediatric observation for one day for Altered Mental Status and then medically cleared. Patient was monitored on the unit for potential drug induced change in behaviour. The following day he become unresponsive to verbal commands and appeared internally preoccupied, not showering or eating. He was started on low dose Risperdal for questionable psychosis. He tolerated Risperdal well but his condition did not improve. Pediatric Neurology was also consulted for questionable Seizure and they planned a Electroencephalogram (EEG) . Computed tomography head and Magnetic resonance imaging brain were found to be normal. He remained isolated with poor self care. Since he was exhibiting signs of catatonia team decided to give him a test dose of Ativan. He tolerated Ativan

well and was seen to be more responsive to stimuli and engaging in evaluation after receiving first dose. He was then started on low dose Ativan and he drastically improved. He started participating in groups, was showering and maintained good hygiene. Denied any auditory or visual hallucinations. Denied any trauma and was then discharged back to family. EEG was discontinued. Discussion and Literature Review -Catatonia was first described in the early1900s.Catatonia occurs in children and adolescents with associated psychotic, affective, drug-induced, or medical disorders; with autistic, developmental, and tic disorders, and occasionally in children with no identifiable medical or psychiatric conditions (1,2) . Wing and Shah (3) report that 17% of a large referred sample of adolescents and young adults with autism satisfied criteria for catatonia and that stressful events often preceded the onset of catatonia. Treatment protocols today call for test doses of Diazepam or Lorazepam.If they fail then one can use Electroconvulsive therapy. Conclusion - Early identification and treatment of catatonia is critical given the significant morbidity and mortality associated with catatonia. Psychiatrists should be aware of the presentation, diagnosis and management of pediatric catatonia.

No. 90

Case Report: A 14-Year-Old's Obsession With Columbine High School Shooting

Poster Presenter: Gobindpreet S. Sohi, M.D.
Co-Authors: Alessandra Santamaria, Ammar Yasser Ahmad, M.D., Manoj Puthiyathu, M.D., Nozaina Mahmood, M.D.

SUMMARY:

Introduction: School shootings have become a reoccurring issue. Each time they arise, they draw attention from all social media platforms. It is speculated that broadcasting of events is a perpetration factor. Access to the Internet provides the resources needed for individuals who are planning on such attacks – whether events are current or not. This case report reviews a patient preoccupied with a school shooting that took place well before he was even born. Case: A 14-year-old boy presented to the ED with his mother after making terroristic threats at school. Per mother, he has periods where he becomes "obsessed" with mass shootings in schools. His preoccupation is influenced by his own circumstances – being bullied. His mother describes him as "socially awkward" - having difficulty making friends despite relentless attempts. Since school began, he is preoccupied with the Columbine shooting of 1999. A large portion of his time is spent researching the incident, believing the shooting was carried because of bullying. Upon evaluation, he denies he will carry out such shootings but does report a "sense of relief" when thinking of them. This report presents a patient infatuated with school shootings, admitting to a "sense of relief" specifically with one event occurring prior to his birth. This patient is an outlier as he is less influenced by current events often "glorified" in the eyes of a vulnerable subsection of the population due to extensive media coverage. Therefore, he presents a challenge due to the difficulty in targeting of mental health services to such patients.

No. 91

Pre- and Post-Intervention Study to Assess Parent Awareness About Bullying Involvement in Relation to Physician Practices and Family Characteristics

Poster Presenter: Saurabh Somvanshi, M.D.
Co-Authors: Tarika Nagi, M.D., Ankit Jain, M.D., Amit Jagtiani, M.D.

SUMMARY:

Background: Bullying is a complex abusive behavior with potentially serious consequences. Persons who bully and those who are bullied have consistently been found to have higher levels of depression, suicidal ideation, physical injury, distractibility, somatic problems, anxiety, poor self-esteem, and school absenteeism than those not involved with bullying1-2. Objectives: To our knowledge, no study has compared physician's practices of bullying prevention across different hospital settings and effect of these practices on Parent's level of awareness. This study represents phase I and II of inter-departmental quality improvement project for comparing practices of health care professionals regarding bullying prevention between pediatric outpatient clinic and Child & adolescent psychiatry outpatient clinic, parent's awareness about provider's anti-bullying practices. Methods: Phase I

was conducted as a cross-sectional study with target population of adolescents (age 12-17yrs) and corresponding guardians, seeking care from healthcare providers (residents, fellows and attendings) in Child & adolescent outpatient psychiatry clinic and Pediatric outpatient clinic. It targeted both clients and providers, with adolescents/guardians completing questionnaire about bullying experiences, physician's anti- bullying practices during past healthcare visits and adolescent Peer Relations Instrument. Providers answered questions about bullying assessing practices, level of self-preparedness and limitations. Intervention was performed as grand round as well as hospital wide outreach with Physician education flyer and patient education flyers and Phase II was conducted to evaluated change in Parent and physician awareness about Bullying. Results: Data were analyzed in SAS 9.2 and SPSS and Chi-square tests were used for analyses of variables, and cross-comparing results for particular subsets. Total 150 questionnaires were distributed. Among the provider surveys, self-reported level of preparedness (on a scale of 1-5; 1- least, 5-most) for assessing bullying was more in Psychiatry providers (Median 4, Mean 4.1) as compared to Pediatric providers (Median 3, Mean 2.9). In the first evaluation, very unprepared, unprepared and neutral (1, 2, 3) responses were contrasted with prepared to very prepared responses (4,5). The second evaluation excludes the neutral responses (3) and tests responses for the unprepared group (1,2) with the prepared group (4,5). The first evaluation resulted in Chi Squared = 6.810, significant at p = 0.05and second evaluation resulted in Chi squared = 4.774, also significant at p= 0.05. Phase II data analysis to assess post intervention changes in awareness is statistically significant. Conclusions: This study identifies differences in healthcare professional's anti-bullying practices and helps in identifying limiting factors as well as developing interventional strategies to improve assessment of bullying situations across specialties

No. 92

Transdermal Cannabidiol (CBD) Gel for the Treatment of Fragile X Syndrome (FXS)

Poster Presenter: Donna Gutterman

Co-Authors: Nancy Tich, Jonathan Cohen, Natalie Silove, Marcel Bonn-Miller

SUMMARY:

FXS is a genetic condition caused by a mutation in the Fragile X mental retardation 1 (FMR1) gene located on the X chromosome. Mutations in the FMR1 gene silence the expression of the Fragile X mental retardation protein (FMRP), a protein essential for normal synaptic function, synaptic plasticity, and neuronal connections during brain maturation. Dysregulation of the endocannabinoid pathways in the CNS is central to clinical abnormalities seen in FXS. CBD may attenuate the loss of endogenous endocannabinoid signaling in FXS, bypassing the FMRP deficiency. Anxiety and social avoidance are core features of FXS. Parent/caregiver feedback suggests the most challenging symptoms to manage in FXS are anxiety, difficulties related to social interaction, avoidance, isolation, and aggressive behavior. Methods-This open-label study evaluated the safety, tolerability and efficacy of ZYN002 (transdermal CBD gel) for the treatment of childhood/adolescent FXS behavioral and emotional symptoms. During the first 6 weeks, patients were titrated from an initial daily dose of CBD 50mg up to a maximum of 250mg CBD daily. Patients were maintained on a maximum of 250mg CBD daily for the remaining 6 weeks of the study. Two key endpoints are the Anxiety, Depression, and Mood Scale (ADAMS) and Aberrant Behavior Checklist (ABC-CFXS). Following the 12-week OL study, patients were allowed to roll into a 2-year OLE study. Results-Twenty patients (mean age=10.4,SD=3.9) were enrolled for the 12-week treatment period. Significant gains from baseline were observed across all outcome measures. Average improvement over baseline in overall anxiety and depression (ADAMS Total Score) reached 46% ($p<0.0001$), with benefit observed for General Anxiety (54%; $p<0.0001$), Social Avoidance (53%; p=0.0002), and Compulsive Behavior subscales (50%; p=0.0262). Additionally, improvements as high as 59% (Stereotypy subscale; p=0.0006) were observed for aberrant behavior (as measured by ABC-CFXS), with Social Avoidance (55%; p=0.0005), Social Unresponsiveness/Lethargy subscales (53%; p=0.0034) and Irritability (42%; p=0.0096) each also improving during the treatment period.Thirteen

(72%) of the 18 patients who completed the initial 12-week study rolled into the open-label extension. While the open-label study is ongoing, data through Month 12 is being reported. Results from the OLE study demonstrate continued gains in two measures collected (ADAMS and ABC-CFXS). ZYN002 was well tolerated. No serious adverse events were reported and no clinically meaningful trends in vital signs, ECG or labs. The most common treatment-emergent adverse events are mild-moderate gastroenteritis and upper respiratory infections. Conclusion These open-label findings highlight both thethe short-and long-term positive impact of ZYN002 on emotional and behavioral symptoms experienced by children and adolescents with FXS. A randomized, double blind, placebo-controlled trial to extend these findings is ongoing.

No. 93

Comparative Risks of Childhood Adversity and Foster Care on Young Adult Mental Illness

Poster Presenter: Evan Joshua Trager, M.D.
Co-Authors: Madeline Saavedra, Richard J. Lee, M.D., Takesha J. Cooper, M.D., M.S., Howard Barry Moss, M.D., Deborah Deas, M.D., M.P.H.

SUMMARY:

Background: The U.S foster care system places youth whose parents are abusive, neglectful, absent, or are otherwise unable to maintain a safe home environment, into a more secure environment. Prior research suggests that youth with histories of foster care placement have higher rates of mental illness and/or substance use compared to youth without such histories. We sought to examine whether Adverse Childhood Experiences (ACEs), that quantify exposure to abuse, neglect, and other traumatic experiences that also has been shown to predict higher rates of psychopathology, might further clarify this association in a large prospective and representative survey of youth. Methods: Prospective data was analyzed from the National Longitudinal Study of Adolescent to Adult Health (Add Health). Add Health is a longitudinal study of a nationally representative sample of adolescents in grades 7-12 in the United States during the 1994-95 school year. This cohort has been followed into young adulthood with four in-home interviews. The most recent wave was in 2008, when the sample were young adults aged 24-32. ACE scores were derived from Add Health items using the CDC-Kaiser Permanente Adverse Childhood Experiences study as a template. Psychiatric diagnoses were derived from Add Health self-report items endorsing any history of depression (MDD), attention deficit hyperactivity disorder (ADHD), post-traumatic stress disorder (PTSD), and anxiety or panic disorder (ANX). Analyses were conducted using survey-based logistic regression models adjusted for demographics and risks are reported as odds ratios (OR). Results: Subjects with histories of foster care placement had a greater risk for a lifetime diagnosis of ADHD (OR=1.74; p=0.04) and ANX (OR=3.40; p=.003), but not for MDD (OR=1.30; n.s.) or PTSD (OR=1.13; n.s.). The odds of having each of these diagnoses increased with the number of endorsed ACEs. For subjects endorsing 4 or more ACEs in contrast to those with no ACEs, the risk was significantly elevated for MDD (OR=4.37; p<.0001), PTSD (OR=4.20; p<.0001), ADHD (OR= 2.41; p<0.001), and ANX (OR= 2.58; p=.003). Those subjects who reported multiple lifetime psychiatric diagnoses and had a history of foster care had higher odds of reporting three or more lifetime mental disorders than traditionally homed youth (OR= 2.62, p=0.02), with increasing odds associated with more endorsed ACEs. Subjects with four or more ACEs, had very high odds of reporting three or more of the above mental disorders (OR= 7.53, p<0.0001). Conclusions: Former foster youth were at greater risk for ADHD and ANX, they were also at increased odds of reporting multiple psychiatric disorders. Subjects with multiple ACEs had an even greater risk for specific psychiatric disorders. The results expand the body of research examining the impact of the foster care experience and childhood adversity on psychopathology in later life.

No. 94

Current Situation of Chilean Education and a Way to Prevent Desertion and Delinquency Based on Mental Health

Poster Presenter: Francisca Vargas Ramirez
Co-Authors: Begoña Martinez C., Javier Rojas Zapata, Arturo Grau, Francisca Vargas Ramirez

SUMMARY:

Primary education in Chile is provided primarily by public funds and regulated by the Ministry of Education. There is also a minority percentage of the population, corresponding to 7% and coming from more affluent sectors, that access a private education, this being of a higher quality, creating, in this way, a great inequality between these two worlds. Despite being historically one of the most valued systems in Latin America, it is currently suffering a severe crisis. According to a recent report within OECD countries, Chile is the country where the socio-economic context has the greatest influence on the quality of education, creating and perpetuating social segregation. On the other hand, the same report shows that Chileans currently have the worst levels of literacy, calculation and understanding of basic sciences, at all educational levels evaluated. Results like these are added to dropout and school lag numbers that remain at worrying levels, reaching 10.4% in 2015 among young people aged 15 to 19 years. School dropout has been linked to increased crime and other risk behaviors in children and adolescents in Chile and is associated with high numbers of mental health disorders. It is estimated that of young offenders between 14 and 17 years of age, 67% have a mental health disorder, with attention deficit hyperactivity disorder accounting for 12.2% and problematic drug use for 58%. Our line of work is based on the inference that our children drop out happens when they do not learn and when they do not learn, they get discouraged. Chilean education, whose foundations were established in the 1980s and have not been modified since then, no longer understands the needs of children and young people, their diversity of thinking and personal characteristics both psychic and environmental. We visualize that a break is made in this peremptory way in the current model, achieving, rather than a dialogue, a fusion between health and education. We propose an integrating educational system in these two areas, where the individual capacities and personal motivations of each child are managed, to achieve a possible, practical and applicable education in all the realities of our heterogeneous country. The intervention has begun in a municipal school in the commune of Lo Barnechea, with 36 children in permanent threat of failure in the traditional school system but still with the possibility of an emotionally adaptive rescue, in a multi-level educational system, considering as a goal therapeutic his reintegration school, family and social. It is carried out through activities in an integrating classroom with children from 7 to 12 years old, and then the preparation for transition to professional technical education, with activities that develop thought, level and homogenize knowledge. Its objective is to achieve reading, writing and calculation as the main axis, complementing it with the use of technology, bilingualism, art and sport.

No. 95

Concordance of SCARED Anxiety Questionnaire Responses in UVA Child and Family Psychiatry Clinic Patients and Their Guardians

Poster Presenter: Christine Vincent
Co-Author: Vishal Madaan, M.D.

SUMMARY:

INTRODUCTION/STUDY QUESTION: Pediatric anxiety disorders are widely prevalent but often under-diagnosed and misdiagnosed. In the past, most psychiatrists only used parental reports as the basis of a diagnosis, but recent studies show the importance of taking children's reports into account as well. However, there is usually low concordance between child and parent reports, making diagnosis difficult with multiple informants. My particular study analyzed variables relating to family demographics and child's medical history to discern correlation with child versus parent survey response concordance. The hypothesis was that child age would have a positive correlation with parent versus child response concordance, and other factors may show a correlation with unknown directionality. METHODS: Child and parent versions of the Screen for Child Anxiety Related Disorders (SCARED) were distributed via intake packets to 62 pairs of patients and guardians who came into the UVA Child and Family Psychiatry Clinic for intake (124 participants). Child participants had to be between ages 5 and 18, and participants had to speak enough English to understand the survey. All surveys were analyzed using translational variables on SPSS, yielding a total percent concordance between the two versions. Researchers then analyzed the impact of different variables such as child age, child gender, parent marital status, child previous diagnosis, and child

medication status on these discrepancies in informant reporting. RESULTS: In mostly all participant pairs, there was significant discrepancy between parents' and childrens' answers. Results demonstrated that no variables showed statistical significance in terms of their correlation with child-parent response concordance, yet a literature review revealed multiple past studies showing that child age -- and maybe child gender -- has an effect on informant agreement. CONCLUSION/DISCUSSION: Disagreement with the literature review may be due to limitations such as narrow time frame and number of surveys collected. Since no statistical significance was found, no conclusions can be drawn about informant report accuracy. Future research should focus on better understanding the reasons for poor concordance between informant reports. This research should target future education efforts by identifying factors that correspond with an inaccurate parent perception of the child's illness or inaccurate child self-reporting, and therefore which report(s) should be given more weight when using multiple informants. These future findings can increase the effectiveness, accuracy, and timeliness of diagnosis of pediatric anxiety disorders, ensuring ethically sound care for all patients.

No. 96

A Systematic Review of Stimulant Medication and Induced Suicidality in Children and Youth With ADHD

Poster Presenter: Karen Wang, M.D.

SUMMARY:

Attention-deficit/hyperactivity disorder is a disorder that emerges during childhood and is expressed by inattention and/or hyperactivity. ADHD is prevalent in 5.4% of children and youth in Ontario, Canada. Seventy percent of children and youth with ADHD are prescribed medication – stimulant medication being the most popular for treatment of ADHD. In 2015, Health Canada released a black box warning for increased risk of suicidal thoughts and behavior on stimulant medications used to treat ADHD. This has serious implications as physicians may be reluctant to prescribe medications and parents may not seek treatment for their children's ADHD. This systematic review intends to determine whether there is an association between stimulant medication use in ADHD youth and increased suicidality. We hypothesize that there is not enough evidence to warrant a black box warning on ADHD medications. A comprehensive literature was completed on four databases (MEDLINE, Embase, Cochrane, CRCT, PsycINFO) with keywords related to stimulants and suicidality. Unpublished literature including theses, conferences, and clinical trial registries were also included. Inclusion and exclusion criteria were used to analyze the title and abstract of the 3619 results. A total of 144 articles were included in the second phase of review. Independent reviewers analyzed the 144 articles with a coding template and identified a total of 33 articles that entered Phase 3 review. Conclusion: Majority of studies did not show any increase in suicidal thinking, gestures, or attempts. There is very limited evidence that stimulant medications increase suicidality in youth with ADHD. Most of the evidence is in case studies and often involves comorbid disorders or environmental factors that may have impacted findings. The majority of these patients had a prolonged period of stability on stimulant medication and became destabilized several years later with the onset of depression. It remains unclear whether the depressive episode led to worsening suicidal thoughts and gestures rather than the stimulant medication causing increased suicidality. There is some evidence that stimulant medications in open label trials and population registries pointed to reduced aggression and suicidality.

No. 97

Acute Dystonia and Oculogyric Crisis in a Pediatric Patient With Poland Syndrome: A Case Report

Poster Presenter: Marguerite Maguire, M.D.
Co-Author: Ryan Nicholas Ruppert

SUMMARY:

Background Poland Syndrome is a rare condition characterized by a congenital absence or hypoplasia of a unilateral pectoral muscle as well as ipsilateral brachydactyly and/or syndactyly (Fokin, 2009). It is not known to be associated with psychiatric comorbidities or sensitivities to neuroleptic medications. Here we present the case of a pediatric patient with Poland Syndrome who was given neuroleptics and developed dystonia and oculogyric crisis. Oculogyric crisis (OGC) is a rare but recognized

manifestation of dystonia that involves locked, bilateral, usually upward gaze deviation and is associated with focal brain lesions, neurodegenerative processes, hereditary conditions such as Wilson's Disease and Chediak-Higashi (Lee, 1999; FitzGerald, 1990) and medication administration, most commonly dopamine antagonists (Barow, 2016). OGC may also be accompanied by autonomic changes such as shifts in blood pressure, heart rate, and sweating. Young age and male sex are known risk factors (Divac, 1990) for developing OGC in response to neuroleptics. Case Presentation We present the case of a 13-year-old boy with a history of Poland Syndrome who presented on a psychiatric hold for danger to self. His father who is his primary caretaker, asked the patient to take off his shoes and told him he could not have juice which caused the patient to lose his temper, run out into the street, hit and kick his dad and then make statements that he wanted to die. Upon arrival at the Emergency Room, patient was agitated at not being able to leave. He attempted to elope and was emergently given intramuscular (IM) injection of haldol 5mg. Approximately 16 hours later he was noted to have tachycardia (to 120's), diaphoresis, dystonia of the neck with head deviated to the left, and a locked upward deviation of gaze. Though he appeared to be struggling to breath, taking loud, short, gasping breaths, his respiratory rate and oxygen saturation were normal (16 breaths/minute, 99%) and dystonia of the laryngeal muscles was not a concern. He was given 50mg of IM diphenhydramine and his dystonic symptoms resolved. Conclusions To our knowledge this is the only case report of a patient with Poland Syndrome and psychiatric comorbidities presenting with OGC; it is conceivable that his Poland Syndrome gives him a propensity to develop OCG given that other hereditary conditions are known to be associated with OGC. It is also conceivable that the connection is instead between his Poland Syndrome and psychiatric comorbidities, which led him to require neuroleptics. It may also be that there is no connection between Poland syndrome and this patient's psychiatric comorbidities or his OGC. While many hereditary conditions are associated with OGC (Barow, 2016), Poland Syndrome is not known to be one of them.

No. 98

Unmet Need for Electroconvulsive Therapy in a County-Based Outpatient Population

Poster Presenter: Marguerite Maguire, M.D.
Co-Authors: Ryan Nicholas Ruppert, Isabel T. Lagomasino, M.D.

SUMMARY:

Background: Electroconvulsive therapy (ECT) has been well established as an effective treatment for severe depression, psychosis, and bipolar disorder (Lisanby, 2007), diseases that profoundly affect our outpatient, county-based population and incur significant suffering, morbidity, mortality, and healthcare utilization. Despite its efficacy, ECT is under-utilized (Wilkinson, 2017). Many of our patients would likely benefit from ECT; however, at present, none is available. The purpose of this study is to delineate the number and characteristics of patients that would benefit from ECT and analyze the barriers that exist to implementing an ECT program. Methods: Residents in our adult outpatient psychiatry clinic were surveyed about the number of their patients who would benefit from ECT. These patients' charts were reviewed and general characteristics were extracted to better characterize the type and disease severity of patients' illnesses. Finally, key faculty/administrators were given a semi-structured narrative interview to understand barriers to implementing a county-based ECT program Results: 16.7% of patients in our clinic had a diagnosis for which ECT was an appropriate treatment yet none was referred. These patients were severely mentally ill by many measures. Lack of ECT availability was the main reason cited for not referring patients. Barriers to starting county-based ECT practice include: lack of trained staff, lack of patient volume, lack of Medicare coverage, poor Medi-Cal reimbursement for ECT, lack of space, cost of the ECT machine, lack of patient transportation, difficulties in coordination of care between specialties, and the multiple evaluations mandated by California state law. Discussion: Residents perceive a need for ECT yet rarely refer patients, primarily because they know no avenue for obtaining ECT. Many patients within the county system would benefit from ECT and they are often the most severely ill. Barriers to starting an ECT program include a lack of patient volume that likely

stems from poor referrals. Future studies should examine whether increased education around ECT improves ECT referral.

No. 99

Chronic Dextromethorphan Use and Acute Intoxication Leads to Autoenucleation: Importance of Considering Dextromethorphan in Drug-Induced Psychoses

Poster Presenter: David Albert, M.D.
Co-Author: Maryann Julia Popiel, M.D.

SUMMARY:

Ms. A is a 37-year-old single woman of Dominican background without significant psychiatric history, who was brought in by ambulance to a large urban emergency department as a level 1 trauma after stabbing herself in the right eye. She presented as labile and psychotic, actively talking to herself in clanging speech. She disclosed that she attempted to cut out her eye after ingesting approximately 1400 mg of dextromethorphan (DXM), which is 5 times the recommended daily dose, over the course of 3 days. Her intent was to experience an altered state of consciousness. However this level of DXM intoxication resulted in profound psychosis, with grandiose and somatic delusions as well as auditory hallucinations. She revealed that prior to admission she had been abusing DXM for 5 years because of its antidepressant qualities. After 3 days on the surgical service she was medically cleared and transferred to inpatient psychiatry for treatment of depression and emerging symptoms of acute stress disorder. To our knowledge this is the first case of autoenucleation resulting from DXM-induced psychosis. Dextromethorphan ingestion at the high end of toxicity can cause violence to oneself and others, even in those previously without any history of such behaviors. In this poster the dangers of DXM abuse and toxicity are highlighted. The complex pharmacology of dextromethorphan which acts on at least 4 neuroreceptor sites is reviewed. The history of dextromethorphan use in the US is discussed, as are the very loose regulations governing its sale. Addiction experts and emergency room clinicians have been warning of the dangers associated with DXM abuse for many years as its abuse has been connected to homicide, suicide, and other harmful behaviors. While early warnings focused primarily on an epidemic of teenagers looking for an easy way to get high, more recent reports reveal that DXM abuse does not discriminate by age. The medical community must become increasingly informed about this easily obtainable drug, which has now become a serious public safety issue. Routine substance abuse assessments should now include consideration of DXM. Further review of existing regulations on the sale of DXM is warranted. This case highlights the importance of assessing potential DXM use when evaluating patients with possible drug-induced psychosis.

No. 100

QTC Prolongation and PRN Antipsychotic Selection

Poster Presenter: Abena Dufie Apraku, M.D.
Co-Authors: Lindsey Harvilla, D.O., Mark Joseph Messih, M.D., M.Sc.

SUMMARY:

PRN antipsychotics are frequently ordered as PRNs for agitation when a patient is admitted to an inpatient unit. Given the association between prolonged QT interval and antipsychotic medications, we sought out literature to guide best practices and medication selection when admitting patients. In a study of 495 health US patients and 101 healthy reference individuals, 8% of patients demonstrated QTc prolongation greater than 456ms. Higher doses of antipsychotic medication are also associated with QTC prolongation. 23% of 111 Patients receiving a median daily dose of 600mg chlorpromazine equivalents of antipsychotic medication demonstrated QTC interval greater than 420 compared to 2% of unmedicated controls. Existing data also suggests that age impacts likelihood of developing QTc prolongation with patients over 70 at increased risk of cardiac sequeala with medications that do not cause QTc prolongation on average, such as haloperidol. Based on review of the literature regarding ECG monitoring and safety profiles of antipsychotics in our formulary, a 3 tier PRN protocol was developed to reduce risk of QTc prolongation. Considerations include patient's cardiac history, additional medications, history of exposure to psychotropic medications and medical comorbidities. All patients receive a baseline ECG as part of the initial evaluation. If there is no evidence of additional risk

of prolonged QTc then no existing data suggests additional monitoring is indicated. Moving forward one option to monitor efficacy of this protocol may be to obtain a discharge ECG in patients who received PRN antipsychotics to assess correlation in further depth.

No. 101

The Stanford Proxy Test for Delirium (S-PTD)—an Innovative Delirium Screening Tool: A Large Multicenter Validation Study

Poster Presenter: Mario Benitez-Lopez
Lead Author: Jose R. Maldonado, M.D.
Co-Author: Fahad Dakheel Alosaimi, M.D.

SUMMARY:
Background: Delirium is a significant psychiatric disorder secondary to significant organic disease in many hospitalized patients. There is an increased risk of mortality as well as general worse outcomes in patients who have delirium, although delirium continues to be a commonly underdiagnosed and misdiagnosed disorder. The S-PTD is a nurse administered screening tool developed to address the deficiencies in current delirium screening tools and has advantages such as evaluating a patient in multiple time points, not requiring patient interaction, and being more comprehensive. Methods: Using data from two previous validation studies of the S-PTD in two different medical centers (Stanford University Hospital and King Khalid University Hospital), we compared the diagnostic sensitivity and specificity of the S-PTD with a complete neuropsychiatric assessment based on DSM-5. Both studies were performed similarly, all patients admitted to the selected clinical units were approached for recruitment and were independently screened using the S-PTD and evaluated by a psychiatrist for the presence of delirium. The same group of patients were also evaluated with the CAM and CAM-ICU to use as a comparison. Results: A total of 194 patients from Stanford University Hospital and 282 patients from King Khalid University Hospital were included in the combined analysis of 476 patients. The follow-up resulted in a total of 167 days of delirium and 535 non-delirious days. Demographic data analysis showed that delirious patients were on average older than the non-delirious patients. The S-PTD had a sensitivity of 78% and a specificity of 93%. This significantly outperformed the CAM, which held a sensitivity of 46% and a specificity of 98%. Conclusion: This large multicenter validation study demonstrates that the S-PTD is superior to current delirium screening tools. Its ease of use and comprehensiveness will allow a significant improvement in delirium screening if adapted to current hospital practice.

No. 102

Validation of the Quick Stanford Proxy Test for Delirium (Qs-PTD), a Highly Effective and Straightforward Screening Tool for Delirium

Poster Presenter: Mario Benitez-Lopez
Lead Author: Jose R. Maldonado, M.D.
Co-Author: Fahad Dakheel Alosaimi, M.D.

SUMMARY:
Background: Delirium is a very commonly overlooked psychiatric syndrome in hospitalized patients. Rates of misdiagnosis is high, and current delirium screening tools have significant caveats that limit their effectivity. The qS-PTD is a shorter version of the previously developed Stanford Proxy Test for Delirium (S-PTD) that uses highly predictive prompts and age to predict delirium in both the ICU and non-ICU setting. Methods: The qS-PTD was developed using data from the S-PTD validation study at Stanford, in an effort to increase predictive power, we performed a stepwise regression analysis to identify which of the twelve prompts from the S-PTD were the most predictive for delirium. We confirmed our model using bootstrapping, resulting in a tool that retains six of the original twelve prompts as well as age. The new tool was then validated using additional data from a second S-PTD validation study performed in King Saud University Hospital in Saudi Arabia. In both studies, all patients from specified clinical units were approached for recruitment with three daily independent assessments: the S-PTD, the CAM/CAM-ICU, and a neuropsychiatric assessment using DSM-5 criteria, which served as the reference. Results: The results from the model built using 194 patients from Stanford University Hospital resulted in a sensitivity of 78% and a specificity of 92%. By applying the same model to the data of 282 patients in King Saud University Hospital, we obtained a sensitivity of 92% and a specificity of 90%. When combined, this results in a sensitivity of 84% and a

specificity of 90% for the qS-PTD. This is superior to the CAM, which demonstrated a sensitivity of 46% and a specificity of 98% in our study. Conclusion: The qS-PTD is an innovative screening tool that has proven to be highly effective in detecting delirium in both ICU and non-ICU patients. The S-PTD is considerably more effective than the CAM and CAM-ICU, which would potentially make it the most effective delirium screening tool currently available. Unlike other screening tools, the qS-PTD is simple to use, requires no patient interaction, and can be effectively used by nursing staff. Adaptation of the qS-PTD to current medical practice has the potential to reduce morbidity and mortality of the delirium through early detection and opportune treatment.

No. 103

A Rare Case of Osmotic Demyelination Causing Pseudo Bulbar Affect

Poster Presenter: Sailaja Bysani, M.D.
Co-Authors: Andrew Gabriel Resnik, M.D., Bob Sobule

SUMMARY:

Mr. S, a 61-year-old male with a history of DM2, HTN, and nephrolithiasis, was transferred due to repeated falls, severe hyponatremia, and sepsis secondary to a urinary tract infection. His prior labs showed a sodium level of 96 mmol/L. He recently had a ureteral stent placed and was started on a diuretic, HCTZ for urolithiasis. At the time, he had been given IV 3% saline which rapidly improved his sodium. At first, he would repeatedly ask nurses for already administered medicines and would constantly flush the bathroom toilet subsequently flooding the bathroom. Psychiatric evaluation showed extreme confusion, but he denied depressive or sad feelings. During the interview, he exhibited repeated spontaneous crying 2-3 minute episodes. His affect was incongruent with his stated mood. The differential diagnosis included: Hyponatremia secondary to Thiazide-induced hyponatremia, Delirium, Stroke, Seizure, Dementia (Alzheimer disease Vs Parkinsonian disease), Major depression, Pseudobulbar affect etc. His frequent bouts of inappropriate crying prompted the consideration of pseudobulbar affect (PBA). MRI findings were suggestive of pontine and extra-pontine myelinolysis most likely due to rapid correction of sodium. His outside records noted that sodium levels increased from 96 to 111 mmol/L in less than 24 hours, which caused extra-pontine myelinolysis. This, the MRI findings, and clinical presentation showed his symptoms were consistent with PBA caused by extra-pontine myelonolysis. Amitriptyline 25 mg q a day was started. He improved over 7-10 days and was discharged. Discussion: Symptoms of PBA are high frequency, exaggerated, and uncontrollable episodes of crying and/or laughing independent of the patient's internal emotional state or social awareness. This may lead to decreased public interactions, which can lead to social isolation as well as a poor quality of life. Prevalence rates ranged from 9.4% to 37.5%, with an estimated 1.8-7.1 million affected in the USA. One theory suggests that the cerebellum moderates the motor control of emotions and acts as a gate control mechanism. When interrupted, loss of control over emotional expression results in pathological crying or emotional outbursts. CONCLUSIONS: PBA is largely unrecognized and treated as depression. It can occur secondary to brain injury or neurological conditions seen in stroke, dementia, multiple sclerosis, head injury and rarely central pontine and extra pontine myelinolysis. Rapid correction of sodium in the setting of hyponatremia or hypernatremia results in demyelination of pontine and extra pontine structures. Clinicians understand the rare association of PBA with osmotic demyelination syndrome (ODS) in the setting of rapid correction of Na. The psychiatric, medical, and neurological conditions pose challenges for accurate diagnosis and management. Little is known about the long-term consequence of ODS thus further research is warranted.

No. 104

Proactive Consultation-Liaison Psychiatry: A Review of the New Model of Preemptive Psychiatric Care in Medical Settings

Poster Presenter: Khushminder Chahal

SUMMARY:

Two thirds of deaths attributable to mental disorders are due to natural causes. It has been well documented that persons with mental illness are at higher risk for comorbid medical conditions and have worse outcomes from these conditions than those

without mental illness. It is estimated that 1 in 3 patients in hospital medical settings have psychiatric illness, although this number is likely higher due to literature that has demonstrated the underdiagnosing of mental illness by primary medical teams. Traditional psychiatric consultation models have been shown to enhance care for these patients. Yet gaps in care do remain as the reactive nature of traditional psychiatric consultation models gives rise to delays in care delivery and intervention mostly in times when cases have already escalated to crisis. However, a new model of psychiatric consultation is emerging which aims to screen and preemptively intervene so that psychiatric care can be provided to more patients who need it, in a more timely manner and before escalation to crisis. This is the proactive psychiatric consultation model and in recent years, studies have been published to demonstrate its effectiveness and advantages to the traditional model. This review provides an overview of these studies. The method of proactive consultation screening and care delivery will be explored. Comparisons between tradition and proactive models will be explained. Evidence of the benefits of the proactive model will be summarized. Discussion will include the value of implementing this new model and possible directions for the future.

No. 105

Psychosis Emerging During Sickle Cell Crisis

Poster Presenter: Rebecca D. Chou
Co-Author: Samuel Oliver Sostre, M.D.

SUMMARY:

Purpose: The sudden emergence of psychotic symptoms in any patient with no psychiatric history should prompt a search for secondary causes. Common clinical manifestations during sickle cell crises include vaso-occlusive crisis, acute chest syndrome, gallstones, priapism, hemorrhagic stroke, and multisystem organ failure. While the pathophysiology is not well understood, several case reports documenting psychosis in the midst of a sickle cell crisis have been published. Methods: We present a case of suspected psychotic illness emerging as a result of a sickle cell crisis in a patient without pre-existing psychiatric illness. Results: A 29 year old male with no diagnosed psychiatric illness was admitted for evaluation and treatment of sickle cell crisis and acute chest syndrome. A psychiatry consult was requested to evaluate for possible diagnosis of psychiatric illness as he insisted on leaving against medical advice due to belief that he and his family were being threatened. On examination he was noted to be alert and oriented. He was clear on the events that led up to his admission, and believed he was part of a sacrifice and people were cutting him up. Despite his beliefs that his life was in danger, he denied suicidal and homicidal ideations. He denied affective symptoms or the use of substances. His mother was contacted to obtain collateral diagnostic information. She confirmed his lack of personal psychiatric illness. She noted behavior change characterized by disorganized speech and impaired sleep. She reported similar episodes only originating in the context of sickle cell crisis and described him without affective or psychotic symptoms between episodes. Review of the chart reviewed that he had been seen for paranoia 2 years prior and symptoms attributed to delirium given a rapid resolution. CT and MRI imaging of the head, B12, folate, RPR, and TSH were normal. Urine toxicology was positive for opioids administered in the hospital. He was started on aripiprazole and symptoms of psychosis gradually declined as pain crisis continued to be effectively managed. Towards the end of his hospitalization, the antipsychotic medications were withdrawn without recurrent of symptoms. Conclusions: Sickle cell crises usually do not present with psychiatric symptoms. Our patient exhibited significant psychosis. Given that he had only experienced psychotic symptoms in the context of a sickle cell crisis, leads us to believe that his presentation is SCD related. This disease commonly exhibits neurological involvement, thus intracerebral involvement leading to psychotic symptoms is highly probable. Silent brain infarcts can occur due to the sickling of red blood cells in the cerebral vasculature.

No. 106

WITHDRAWN

No. 107

A Study on the Psychosocial Characteristics and Quality of Life in Functional Gastrointestinal Disorders

Poster Presenter: SeungHo Jang
Co-Authors: Sang-Yeol Lee, M.D., Kyu-Sic Hwang

SUMMARY: Objectives This study aimed to compare the psychosocial characteristics among patients with functional gastrointestinal disorder (FGID), adults with functional gastrointestinal symptoms, and healthy control group and investigate factors related to quality of life (QoL) of FGID patients. Methods 65 patients diagnosed with FGID were selected. 79 adults were selected as healthy control group based on the Rome ? diagnostic criteria, and 88 adults who showed functional gastrointestinal symptoms were selected as “FGID positive group”. Demographic factors were investigated. Psychosocial factors were evaluated using the Korean-Beck Depression Inventory-II, Korean-Beck Anxiety Inventory, Korean-Childhood Trauma Questionnaire, Multi-dimensional Scale of Perceived Social Support, Connor-Davidson Resilience Scale and WHO Quality of Life Assessment Instrument Brief Form. A one-way ANOVA was used to compare differences among groups. Pearson correlation test was used to analyze correlations between QoL and psychosocial factors in patients with FGID. Results There were group differences in the education level. Depression (F=29.012, p<.001), anxiety (F=27.954, p<.001) and childhood trauma (F=7.748, p<.001) were significantly higher in FGID patient group than in both FGID-positive and normal control group. Social support (F=5.123, p<.001), resilience (F=9.623, p<.001) and QoL (F=35.991, p<.001) were significantly lower in the FGID patient group than in others. QoL of FGID patients showed a positive correlation with resilience(r=.475, p<.01), and showed a negative correlation with depression(r=-.641, p<.01), anxiety(r=-.641, p<.01), and childhood trauma(r=-. 278, p<.05). Conclusion FGID patients have distinctive psychosocial factors compared to the both FGID-positive and normal control group. Therefore, the active interventions for psychosocial factors are required in the treatment of patients with FGID.

No. 108
Readmission Rates of Patients With Schizophrenia Treated With Oral Antipsychotics Versus Depot Antipsychotics
Poster Presenter: Eduardo Espiridion, M.D.

SUMMARY:
Abstract: Objective: To perform a pilot study comparing the thirty and sixty day relapse rates for schizophrenic patients treated with long-acting injectable anti psychotics versus traditional oral anti-psychotics in the community hospital setting Methods: This pilot study was performed as a retrospective cohort analysis of schizophrenic patients treated at Frederick Memorial Hospital. To meet the inclusion criteria subjects have to be diagnosed with schizophrenia and treated as inpatients at Frederick Memorial Hospital between January 2016 to March 2018. In addition they must have been treated during this admission with either an oral or long acting injectable anti-psychotics. There were 278 patients met this criteria, 178 male and 100 female patients. These patients were divided into two groups, those treated with oral anti-psychotics (193), and those treated with long acting injectable anti-psychotics (85). The top three oral anti-psychotics were Olanzapine (Zyprexa), Risperidone (Risperdal), and Quetiapine (Seroquel). The three long acting anti-psychotics used were Invega Sustenna,69, Abilify maintena,14, and Haloperidol decanoate , 2. We then investigated the number of behavioral health unit readmission among these patients at both 30 and 60 days. Emergency departments and non-behavioral health visits were not included, unless they lead to a behavioral health admission. The number of admissions for the long acting group was compared to the oral group and relative risk reduction, and number to treat were all calculated for both the 30 and 60 day readmissions. Results: Among the 193 patients treated with oral anti-psychotics, 29 (15.0%) relapsed within 30 days. An additional 24 (12.4%) patients relapsed between 30 and 60 days, making a total of 53 (27.5%) 60 day relapses. For the 85 patients treated with long acting injectable anti-psychotics, 7 (8.2%) relapsed within 30 days. Another 7 (8.2%) relapsed between 30 and 60 days, making a total of 14 (16.5%) 60 day relapses. Using this data, we calculated an absolute risk reduction for long acting anti-psychotics versus oral anti-psychotics of 6.8% at 30 days, and 11% at 60 days. Relative risk between the two groups at 30 days was calculated to be 0.55 with a 95% confidence interval of 0.25-1.20 (p+0.133). At 60 days, the relative risk was calculated to be 0.60 with a confidence interval

of 0.35-1.01 (p=0.059). Number needed to treat was calculated at 14.7 for 30 days and 9.1 for 60 days. Conclusion: Due to this being a pilot study, our sample size was too small to draw any conclusions. However, the data suggests that relapse rates may be better with long acting injectable anti-psychotics. A bigger sample size is needed to obtain statistically significant results. We recommend further studies with a larger sample sizes to determine if long acting injectable anti-psychotics reduce 30 and 60 day relapse rates in the community hospital setting

No. 109

Global Psychosomatic Medicine and Consultation-Liaison Psychiatry: Different? Accepted? Certified?

Poster Presenter: Hoyle Leigh, M.D.

SUMMARY:

Background: What is the difference between psychosomatic medicine (PSM) and consultation-liaison psychiatry (CL) world wide? In US, the psychiatric subspecialty of PSM renamed itself CL in 2018. Methods: Experts in the field of psychosomatic medicine (PSM) and consultation-liaison psychiatry (CL) representing twenty countries across the world completed questionnaires consisting of ten questions on the nature of the fields, training in them, and the certification status. In addition, the significance of indigenous complementary and alternative medicine (CAM) was queried. Results: A majority (65%) felt that PSM and CL were different, and that PSM was more psychotherapy oriented. Forty percent felt PSM was more research oriented. Half of the respondents had a Department of PSM in their country, and in 10%, teaching of PSM in medical schools was required by law or regulation. In 90% of the countries, there is a CL Service in health care facilities. In 40% of the countries, there is special certification for PSM (Japan, China, Latvia, Germany) or CL (S. Africa, Japan, India, Australia, UK, Germany, US). In Latvia and Germany, PSM is an independent medical specialty, while in Greece and France, PSM is an independent non-medical discipline. PSM is a subspecialty of Internal Medicine in China. In the rest, CL is a subspecialty of psychiatry. There are professional organizations for PSM and/or CL in 65% of the countries. In a majority (65%) of countries, there is formal training in PSM/CL . The training occurs in medical school (60%), residency (60%), and during fellowship in 30% of the countries. As for CAM, a formal certification process exists in 35%. CAM is considered insignificant in 40%, but 40% responded that some subgroups practice CAM, and it was considered the most prevalent healing method used in Egypt and China. Conclusions: CL is vibrant in the English-speaking countries (UK, Australia, South Africa, Canada, US) Some indigenous populations utilize CAM often in conjunction with modern medicine. PSM, which is more psychotherapy-oriented seems dominant in continental Europe, especially in Germany and France. In Germany, the law requires the teaching of PSM and establishes independent PSM departments, representing post WW II revival of psychoanalytic thought. Thus, the orientation and approaches of the psychosomatic departments seem to be clearly psychodynamic in contrast to traditional biologically oriented psychiatry departments. In countries that emerged recently from Communist rule (Poland, Baltic States), PSM seems heavily influenced by the German school, together with extensive CL activity. Asian and African countries seem to place increasing importance in CL while integrating some indigenous PSM. Globally, CL psychiatry is widely accepted.

No. 110

The Value of Early Interdisciplinary Assessment and Management in a Challenging Case of Autoimmune Encephalitis

Poster Presenter: Joseph C. Ikekwere, M.D., M.P.H.
Co-Authors: Nasuh Malas, Bernard J. Biermann, M.D., Ph.D.

SUMMARY:

Since Dalmau et al's description of the first case series of anti-NMDAR encephalitis in 2007, there has been a robust increase in awareness of autoimmune encephalitis as a significant diagnostic consideration in the patient with acute onset altered mental status. Anti-NMDAR encephalitis is by far the most common non-infectious cause of encephalitis, yet there are many other causes of autoimmune encephalitis that garner less attention but are important to be mindful of in the course of diagnostic evaluation. Although there is a growing literature exploring the early identification, evaluation and management of autoimmune

encephalitis, and specifically anti-NMDAR encephalitis, there is much we still do not know about autoimmune encephalitis. We present the case of a 16-year-old male of Asian descent with no previous medical, developmental or psychiatric history who developed a brief prodrome with subsequent psychosis, delirium and sudden onset seizure disorder. He rapidly decompensated and required intensive care, extended intubation and mechanical ventilation, use of multiple antiepileptics, considerable sedation with dexmedetomidine and midazolam. His workup was completely negative including a cerebrospinal fluid encephalitis panel. He was presumptively treated very early in his course with intravenous immunoglobulin and intravenous high dose steroids and received several courses of these therapies. He also received plasmapheresis given the severity of his presentation and persistence of seizure, agitation and altered mental status. The patient recovered full cognitive, psychiatric and physical functioning within 2 months of hospitalization and rehabilitation with mild impairments in memory, attention, processing speed and executive functioning. This case highlights the critical importance of having autoimmune encephalitis on the differential early and presumptively treating when suspicion is high for this disorder. In this patient's case, his cerebrospinal fluid studies did not confirm autoimmune encephalitis, but his clinical course was highly suggestive and the decision to treat early and aggressively with immunosuppressive therapies may have dramatically improved the patient's outcome. This case also demonstrates the importance of interdisciplinary care and the potential to manage severe agitation and psychosis with minimal psychotropic use with close and coordinated management of the underlying disease and environment, coupled with behavioral planning and supports.

No. 111

Psychiatric Manifestations of Antiphospholipid Antibody Syndrome: A Case Report and Review of Literature

Poster Presenter: Antonio Leandro Carvalho de Almeida Nascimento, M.D.

SUMMARY:

Introduction: Antiphospholipid Antibody Syndrome (APS) is an autoimmune disorder characterized by recurrent thrombosis and/or pregnancy loss and the presence of antiphospholipid antibodies. APS exists as an primary disorder and may also be present in the context of other rheumathologic or autoimmune illnesses, especially Systemic Lupus Erithematosus (SLE). Although the literature on psychiatric manifestations of APS in patients without SLE is scarce, primary APS has been associated to delusions, hallucinations, mood disorders, cognitive disturbances, agitation, sleep disturbances and a several neurological symptoms. Case Report: We present the case of a 28-year-old man who suffered strokes at the age of 16 and 17. Over the next years, the patient developed apathy and occasional moments of agitation, but he managed to write two books and enter law school, which he could not finish. Twelve years after the first stroke, the patient developed delusions, formal thought disorder and agitation. During these years, the patient was thoroughly investigated for SLE, but diagnostic criteria for this disease were never fulfilled, so he was diagnosed with primary APS. He was treated with haloperidol (up to 10mg/day), methylprednisolone (1000mg IV for five days) and cyclophosphamide (900mg IV for one day) without response. His treatment was then changed for Olanzapine (up to 10mg/day) and Intravenous Immunoglobulin Therapy (200mg IV for five days) and cyclophosphamide (1000mg IV for one day). The patient was discharged after two months of hospitalization with psychotic symptoms in full remission. Literature Review: We reviewed the PubMed database with the keywords "Antiphospholipid Syndrome"[Mesh] AND Psychiatric. We selected articles written in English. Among the articles selected, we found 2 systematic reviews, 5 narrative reviews, 3 case series and 2 opinion articles, 10 case reports and 1 transversal study. The case reports described the association of APS with psychotic symptoms (5 articles), depression (2 articles), mania, bipolar disorder, catatonia and obsessive-compulsive behavior (1 article each). Discussion: There is a growing literature on the relationship of APS and psychiatric symptoms. Although the initial studies did not separate patients with SLE and APS of patients with primary APS, the most recent studies are investigating patients with

primary APS. The current literature is still scarce, one study evaluated the prevalence of dementia in patients with APS, but the most articles are case reports, which are valuable for the symptoms they describe, however, there are no transversal studies reporting the prevalence of psychiatric symptoms (other than dementia) in patients with APS or describing the efficacy of different treatments for these symptoms. Conclusion: APS might be associated with psychiatric symptoms. Further studies are necessary to evaluate which psychiatric symptoms are part of APS and the best treatments for these patients.

No. 112

Cannabinoid Hyperemesis Syndrome in Pregnancy: A Unique Case Report and Review of Literature

Poster Presenter: Sachidanand R. Peteru, M.D.
Co-Author: Amanda Varughese

SUMMARY:

Background: Cannabis is the most widely used illicit drug around the world4,5. Although it can be used for its antiemetic properties, long term use has been associated to Cannabinoid Hyperemesis Syndrome (CHS). The term Cannabinoid Hyperemesis Syndrome was coined in 2004 by Allen et al and is associated with long term use of cannabis and recurrent episodes of nausea, vomiting, and abdominal pain1. Resolution of symptoms is often obtained cessation of cannabis use or by taking hot showers and baths. Because Cannabinoid Hyperemesis Syndrome shares similar presentations Cyclic Vomiting Syndrome and Hyperemesis Gravidarum, it is often misdiagnosed or underdiagnosed. Cyclic vomiting syndrome is characterized by recurrent episodes of severe nausea and vomiting without a known cause3. These episodes can last for a few hours or days with symptom free periods in between. Episodes tend to occur at the same time each day for individual patients3. Hyperemesis Gravidarum is characterized by severe persistent nausea and vomiting during pregnancy that is caused by rapidly increasing levels of estrogen and human chorionic gonadotropin2. It can often lead to dehydration, weight loss, and electrolyte imbalances but typically resolves as the pregnancy progresses2. Case Presentation: We present a case of a 28-year old pregnant female that was admitted to our institution for management and treatment of recurrent nausea and vomiting due to Cannabinoid Hyperemesis Syndrome. The patient has been smoking marijuana since the age of 17 and has been using it on a daily basis. She has had multiple episodes of Cannabinoid Hyperemesis Syndrome over the past ten years for which she has had to be hospitalized. The patient was evaluated by our Consultation & Liaison team for a psychiatric evaluation and a thorough history was taken. She was medically managed and referred to outpatient rehabilitation for substance abuse. Objectives: 1. Learn diagnostic features of Cannabinoid Hyperemesis Syndrome and other differentials. 2. Management options for Cannabinoid Hyperemesis Syndrome. 3. Etiopathogenesis of Cannabinoid Hyperemesis. Conclusion: This is an interesting case for obstetricians, gynecologists, psychiatrists, therapists and trainees to learn how to identify Cannabinoid Hyperemesis Syndrome and differentiate between other diagnoses' with similar presentations. Keywords Cannabinoid Hyperemesis Syndrome; Cannabinoids; Cannabis; Cyclic Vomiting Syndrome; Hyperemesis Gravidarum; Marijuana; Nausea; Vomiting

No. 113

Utilization of Mental Health by Immigrant Population: A Pilot Study

Poster Presenter: Sachidanand R. Peteru, M.D.
Co-Author: Manu Dhawan, M.D.

SUMMARY:

Histories of American Immigrants dates back to colonial periods (European and British Colonies), Mid Nineteenth centuries, turn of the 20th century and in post 1965 era. Among the immigrants, persons at risk of mental illness are those who abandon their native culture but fail to be assimilated or acculturated especially those who lose their sense of identity or purpose in life. Barriers to help seeking might include access to care and problems experienced in previous treatment, clinician patient relationship due to perceived racism, language barrier, and cultural differences etc. which negatively affect the compliance. The knowledge of cultural factors in the etiopathogenesis, diagnoses, treatment, outcome and prognosis of mental conditions broadens the outlook of every clinician. Culturally based modalities of help- seeking,

explanatory models of illness and idiosyncratic patterns of management, including the fostering of resiliency are getting specific attention (1). Cultural Formulation Interview (CFI) introduced in DSM-V focuses on the cultural identity, perception of cause, context and support, factors affecting self-coping and past and current help seeking behavior. Prior to the DSM 4, Cultural formulation was nonexistent. DSM-IV introduced Outline for Cultural Formulation (OCF) which was modified in DSM V to CFI (2). Upon literature review only one study was found which compared the use of mental health services between recent immigrants and non-immigrants and results showed lower use of mental health services by recent immigrants(3). Our pilot study aimed to understand the utilization of mental health services by Immigrant population; data was collected from medical and surgical floors during consultation services. 813 pts were seen during 2 months period and 103 patients met the inclusion criteria; IRB approved our questionnaire for gathering information regarding the patients' socio-cultural characteristics and mental health conditions. Our objective was to identify the differences in compliance rate with psychiatric recommendations between different generations of the immigrants' population and other psycho social characteristics. Results showed that 1st generation and 3rd generation immigrants had good compliance rate as compared to 2nd generation. It was shown that Asians as well as the African Americans have equally good show rate followed by Latinos and Caucasians. Most common psychiatric diagnoses included are uni-polar depression, delirium/dementia, bipolar, adjustment disorder followed by psychosis and anxiety disorder in that order.

No. 114

Aphonia, Aphasia, or Conversion Disorder: A Unique Case Report

Poster Presenter: Sachidanand R. Peteru, M.D.
Co-Author: Rassam Khan

SUMMARY:

Introduction and Background An individual's vocal quality depends on anatomical and functional features, psychological traits, and social aspects. We are presenting a case that was seen in the C&L services in a medical emergency room. Aphonia is complete loss of voice. It relates to the loss of a person's voice due to contributing factors that have put an outside stress on the vocal chords. A primary cause of aphonia is bilateral disruption of the recurrent laryngeal nerve, which supplies nearly all the muscles in the larynx. Aphasia's most commonly caused by brain injury, stroke, or progressive neurological disorder. In psychogenic dysphonia, family or professional conflicts are often identified and periods of normal voice alternate with periods of aphonia or dysphonia. We present a case with possible multiple etiological factors in causing loss of voice. C&L psychiatrist in collaboration with neurologist and medical emergency room physicians come to an accurate diagnosis leading to the complete recovery of the case. Case Report A 53 year old male was brought in by the EMS with complains of seizures and unable to speak from the restaurant. As per EMS, patient had witnessed multiple seizures in a span of 30 minutes and was given midazolam at the site. C&L was called for evaluation and rule out functional neurological symptom disorder. In the ER, patient was drowsy and non-verbal. Upon reviewing the chart, lab findings showed normal blood work but CT scan of brain showed an infarct of unspecified age. CT showed Left temporal parietal cortical abnormality related to subacute ischemia. CT of brain also showed 1.3-x1.6x1.6 cm dense lesion within the posterior left frontal subcortical region. The patient was gesturing pointing towards his neck. The patient continued to suffer from loss of voice but upon further encouragement he drew a picture of a bone. Then CT of the neck was ordered and also ENT consult was recommended. Discussion We present an interesting case with possible multiple etiological factors for loss of voice and we strongly believed that it was aphonia rather than aphasia in contrast to the neurologist and medical ER physicians. Another CT scan (neck) showed 4.5 cm chicken bone in R piriform recess. During the evaluation of the patient, was found anxious to speak. Lorazepam was recommended. The ENT doctors removed the bone. In functional neurological symptom disorder, there will be a stressor severe enough to cause neurological symptoms. However, patient has stressors of limited psychosocial supports. Brain trauma to the temporal lobe causes Wernicke's aphasia; stroke in the temporoparietal area, frontal

lobe and arcuate fasciculus can cause aphasia. After ENT dislodged the chicken bone, patient was NPO for 5 days and made consisting improvement in his speech leading to complete recovery. Lorazepam was discontinued and patient was discharged with ENT and neurology follow up.

No. 115

Risk of Mortality and Major Adverse Cardiovascular Events Associated With Bipolar Disorder

Poster Presenter: Laura Suarez, M.D.
Co-Authors: Moein Foroughi, M.D., Mark Andrew Frye, M.D., Robert Morgan, M.D.

SUMMARY:

Background: Bipolar disorder (BD) is associated with increased all-cause mortality compared to the general population. Prior research assessing BD-related risk of cardiovascular events and mortality has primarily been in European registries and has been limited by lack of clinical validation of bipolar disorder cases and adjustment for cardiovascular risk factors. We hypothesized that a population of US adults with BD, compared to controls (Con) in the general population, would have an increased risk of the composite outcome of major adverse cardiovascular events (MACE) defined as: nonfatal myocardial infarction; nonfatal stroke; percutaneous coronary intervention; coronary artery bypass grafting; and death. Methods: We conducted a retrospective cohort study using the Rochester Epidemiology Project, a community-based record linkage system for Southeast MN, to identify primary care seekers from 1998-2000. Inclusion criteria were age >= 30 and no prior MACE event, atrial fibrillation, or heart failure. BD diagnosis was validated by a board-certified psychiatrist based on DSM-IV. Cox proportional hazards regression modeling controlled for age, sex, smoking status, diabetes (DM), chronic kidney disease (CKD), hypertension (HTN), HDL cholesterol, alcohol use disorder (AUD), other substance use disorders (SUD), and major depression (MDD). Results: The total cohort included 35614 subjects (BD: 288, Con 35326). Mean age±SD: BD 47.7±10.9; Con 49.8±13.3; Male: BD 43.1%, Con 46.2%; Median follow-up: 16.2±2.7 years. 5636 MACE events occurred during follow-up (BD: 59, Con: 5577). Univariate analysis indicated increased hazard ratios (HR) for MACE associated with: age, male sex, HTN, smoking, DM, AUD ($p<0.0001$ for all), BD ($p=.03$), and MDD ($p=.01$). Multivariate analysis controlling for age and sex yielded a significant association between BD and MACE (HR: 1.93; 95% CI: 1.43-2.52; $p<.0001$). Further controlling for smoking, DM, HTN, HDL, and BMI maintained this association (HR: 1.66; 95% CI 1.17-2.28; $p=.006$) as did controlling for AUD, SUD, and MDD (HR: 1.56; 95% CI 1.09-2.14; $p=.01$). Additional sensitivity analysis excluding deaths by homicide and suicide resulted in similar findings (HR: 1.58; 95% CI 1.12-2.23; $p=0.009$). Conclusion: In this population, BD was associated with an increased risk of MACE, and this risk remained significant when controlling for well-described cardiovascular risk factors, SUDs, and MDD. These data suggest that BD is an independent risk factor for MACE. This cohort's advantages include: US adults, clinical validation of BD subjects, and comprehensive cardiovascular risk factor adjustment.

No. 116

The Mystery Chemical: A Case of Designer Benzodiazepine Intoxication Resulting in Hyperactive Delirium

Poster Presenter: Shariff F. Tanious, M.D.

SUMMARY:

Increased attention has been given to benzodiazepines, in part due to the ongoing opioid crisis, driving health care providers to be more cognizant of the long-term risks of prescribing these medications. As a result, prescription rates of benzodiazepines have fallen over the past several years. However, this type of procedural prohibition has resulted in some unintended consequences, namely the rise of the availability of "designer benzodiazepines" or "novel psychoactive substances". These chemicals are analogues of known medications, though they exist in a legal grey area with respect to their controlled substance status. Readily available through a variety of internet sources both domestically and internationally, these substances have disparate pharmacological effects. Standard laboratory urine toxicology does not generally identify these substances, posing a unique clinical problem to health care providers. This case looks at a 31-year-old male who presented for 3 admissions in a one-month period with acute

agitation and altered mental status consistent with hyperactive delirium. He has a long history of polysubstance abuse, namely opiate and alcohol use disorders, though was negative for these substances on admission. He required management with physical and chemical restraints due to agitation, visual hallucinations, and paranoia. His initial urine toxicology screen was positive for benzodiazepines, but the confirmatory liquid chromatography-mass spectrometry (LC-MS) was negative for seven common benzodiazepine metabolites. When his mentation cleared, generally within 24-48 hours of presentation, he would request discharge against medical advice. During his second hospitalization, he revealed that he had purchased clonazolam, a high-potency "research chemical" benzodiazepine, over the internet, and that it had been shipped to him from a domestic location. He used this in response to no longer being prescribed benzodiazepines from his physician. He was subsequently admitted one additional time after this disclosure with a similar clinical presentation. He eventually entered outpatient substance use treatment and has not presented for admission with similar symptoms since that time. With the rise of availability of "novel psychoactive substances", patients are frequently turning to the internet for access and information. Given the nearly infinite number of chemical structures, it becomes necessary for health care providers to be extra vigilant when treating patients who present with concerning symptoms of toxidrome, even in the face of negative urine toxicology screening. Providers should consider screening for these types of substances as part of their substance use history, especially in patients at high risk. This case highlights an alarming trend and potentially unanticipated consequence of more restrictive prescribing practices and may represent a coming phase in the management of substance use disorders.

No. 117

Navigating the Bermuda Triangle: A Case of Delirious Mania With Conversion to Malignant Catatonia

Poster Presenter: Lana S. Weber, M.D.
Co-Author: Thomas A. Veeder, M.D.

SUMMARY:

A rare and difficult to treat condition, delirious mania (also called Bell's mania), is described in case reports as having frequent overlap with catatonia and delirium, with higher rates of morbidity/mortality and a positive response to Electroconvulsive Therapy (ECT). Herein, we present a case of a 39-year-old Caucasian woman with bipolar I disorder who eventually developed the syndrome of delirious mania and then later malignant catatonia after initially being admitted to our community inpatient psychiatric unit with the abrupt onset of agitation, thought and speech disorganization, denudativeness, and urinary/fecal incontinence. She was initially admitted and treated for decompensated bipolar I disorder with manic and psychotic features for which scheduled risperidone and PRN antipsychotics were utilized. However, by the second week of her admission, she began to exhibit fluctuating symptoms of delirium, mania, and catatonia. Thus, the treatment consisted of limiting antipsychotics and providing escalating doses of lorazepam (up to 24 mg per day). She had an initial profound response to treatment with significant reduction in her Bush-Francis Rating Scale (BFCRS). However, the patient became progressively more delirious and her catatonia was only minimally responsive to lorazepam. She remained in nearly constant motion, disrobing, and at times stuporous, labile, and agitated. She presented as a fall risk, necessitating frequent locked-seclusion for her safety. Eventually, the patient went greater than 72 hours without oral/fluid intake and her vital signs were significant for vital instability with prolonged tachycardia and marked hypertension, leukocytosis, and lead-pipe rigidity throughout all of her extremities. She was diagnosed with malignant catatonia and transferred to a tertiary medical center intensive care unit (ICU) for further emergency stabilization. Following six treatments of emergent, bitemporal ECT, the patient's condition improved such that she was transferred back to our inpatient psychiatric unit, in near stable condition. This case illustrates the challenges in recognizing, diagnosing, and managing unstable manic delirium and malignant catatonia in the community mental health setting, with particular emphasis on the difficulty in obtaining life-saving and emergent ECT.

No. 118

Managing Atypical Neuroleptic Malignant Syndrome Caused by Long-Acting Injecting Aripiprazole Maintena: A Case Study and Literature Review.

Poster Presenter: Richard Hadi, D.O.
Co-Author: Munaza Khan, M.D.

SUMMARY:

Mr. L. is a 47-year-old Caucasian male with a past psychiatric history of Bipolar I disorder admitted to the hospital for a fall. Psychiatry was consulted to evaluate the patient for altered mental status and agitation. Upon arriving bedside, the patient was found to be acutely dystonic in his extremities while exhibiting severe lead pipe rigidity. Additionally, he was found to be autonomically unstable as he urinated through his hospital gown and onto his bed while drinking out of an imaginary glass of water. Initially, the patient was given lorazepam and tylenol as a differential between Neuroleptic Malignant Syndrome, Toxic Metabolic Encephalopathy and Sepsis were considered. Despite this, the patient's fever that averaged over 40C persisted. We engaged and included the patient's prescribing outpatient provider who endorsed that the patient had been compliant and stable on an aripiprazole maintena long-acting injectable for several months. In addition, he confirmed the patient's depot injection schedule with the most recent injection administered two days prior to hospitalization. Due to the lethality of Neuroleptic Malignant Syndrome, the patient was upgraded to the Intensive Care Unit and given bromocriptine and dantrolene after which his acetaminophen resistant fever, autonomic instability and rigidity improved. In this poster, we will discuss the complexity of managing an individual presenting with Neuroleptic Malignant Syndrome due to a depot monthly long-acting injectable including the unique challenges it presented. These included the inability the remove the offending agent and, resultantly, a need to innovate a treatment protocol length that weighted not only the benefits of treatment but also the risks associated with an extended hospital admission.

No. 119

Complexities in Managing a Patient With Tardive Dyskinesia and Restless Legs Syndrome

Poster Presenter: Richard Hadi, D.O.
Co-Author: Munaza Khan, M.D.

SUMMARY:

Ms. M, a 70 year old Caucasian female with past psychiatric history of Mild Neurocognitive Disorder, Restless Leg Syndrome (RLS) and Tardive Dyskinesia (TD) resultant from chronic prochlorperazine use, was admitted to the inpatient medical service for acute on chronic heart failure exacerbation. The primary medical team requested a psychiatry consult initially for her worsened TD but also for input on treatment options considering the patient's unique presentation. Upon interview, the cause of the worsening TD was evaluated and attributed to her increased anxiety. Therefore, treating the patient required treating the symptoms that were worsening her anxiety --- mainly her RLS and TD. Complicating this case was that the first-line agents for restless leg syndrome are dopamine agonists such as pramipexole that may worsen her TD as the hypothesized pathophysiology of TD is due to dopamine receptor hypersensitivity. The option of deutetrabenazine, a vesicular monoamine transporter inhibitor, was considered for the patient. However, due to the dopamine depleting properties of deutetrabenazine, it would exacerbate her RLS and anxiety. Due to her age and medical comorbidities, Gabapentin was used as the initial innovative agent to treat her symptoms as it has been shown not only to be efficacious in RLS, but also to have anxiolytic effects on mood. Over the course of her hospital stay, patient endorsed a positive response to the gabapentin with decreasing extents of lower extremity movements and levels of anxiety. Clinically we observed that once her anxiety was more well controlled, the magnitude of her tardive dyskinesia movements lessened. We hypothesized it may have worsened due to her mood. Upon discharge, we included and engaged her outpatient primary team and educated them on her clinical progress and the beneficial effects of Gabapentin. This case reflects the challenges one can face when treating two diseases processes with opposing dopamine related pathophysiology. In this case, the use of gabapentin addressed all her clinical concerns (RLS, TD, Anxiety) and showed good long-term progress as per our follow-up with her primary care physician.

No. 120

Integrating Mental Health Care Into the Center for Transgender Care at Northwell

Poster Presenter: Allison Hand
Co-Author: Shervin Shadianloo, M.D.

SUMMARY:

The lack of access to gender-affirming health care and the prevalence of mental health issues among transgender, gender non-conforming, and non-binary individuals are well established in the literature (Valentine and Shipherd, 2018). However, studies have found that mental health outcomes of trans patients improve after receiving gender-affirming care (Dhejne et al., 2016). Mental health providers can play a key role in not only treating the coexisting psychiatric conditions of transgender patients, but also in facilitating steps of the transition process, psychoeducation, improving family support, and assisting in making decisions in complex situations. The Center for Transgender Care is an evaluation and consultation clinic working with a non-centralized larger team of primary care and specialty service providers through various sites at Northwell Health. The team includes a psychiatrist, psychologist, two case managers, and a medical director. Mental health screenings are part of the patient intake process and are taken into consideration in further consult and formulation of the comprehensive transition plan. The services and recommendations provided are based on the updated research and guidelines of organizations such as American Psychiatric Association (APA), American Academy of Child & Adolescent Psychiatry (AACAP) and the World Professional Association for Transgender Health (WPATH). A structural flow chart will present data on the interactions between patients and mental health providers as well as accounts of service quality and barriers to care. We are going to report the percentage of our patients who have had a psychiatric consultation at the center and the types of mental health services and referrals they have received from July 2016 until January 2019. This will be differentiated based on age as all minors were evaluated by our child psychiatrist. Our poster will present the benefits and challenges of integrating mental health care into transgender care at the Center for Transgender Care at Northwell. Our poster will also present on patient referrals to primary psychiatric services and the creation of a line of transgender care at Zucker Hillside outpatient clinic, a major psychiatric site at Northwell. The integration of care from initial intake management, intake visit and starting group therapy will be presented.

No. 121

Trials and Tribulations of Implementing an Integrated Model of Care

Poster Presenter: Michael Thomas Ingram, M.D.
Co-Authors: John Luo, M.D., Jeannie D. Lochhead, M.D.

SUMMARY:

Nationally, there is a growing shortage of psychiatrists, particularly in public mental health systems. The collaborative care model promoted by the American Psychiatric Association and the Academy of Consultation Liaison Psychiatry is a promising solution to the growing mental health demands of a nation supplied with an inadequate number of mental health providers. California has less than half of the psychiatrists needed to adequately serve the nation's most populous state. To address this workforce need, the UCR School of Medicine has partnered with the Public Mental Health System in Riverside County to develop a longitudinal integrated care curriculum for forth year psychiatry residents utilizing the collaborative care model. The practice gap that this curriculum addresses is the severe shortage of physicians in most specialties, with particularly critical deficiencies in primary care specialties and psychiatry. This curriculum is an example of how to improve quality of care and access to treatment through an educational program and provides educational experiences in community-based care, resource management, patient safety, and professional development. The program embraces the values and principles of California's Mental Health Services Act, including community collaboration, cultural competence, resilience, wellness, recovery and integrated service experiences. The forth year rotation includes placement in a large family care center that integrates behavioral health and primary care, the completion of the American Psychiatric Association integrated care module, a year-long lecture series on integrated care, and a supervised

quality improvement project with a poster presentation at the American Psychiatric Association Annual Meeting. In this poster, we provide an overview of the collaborative care model, explain the longitudinal integrated care curriculum we developed, and discuss the trials and tribulations of implementing this novel integrative approach in an established primary care center.

No. 122

Preexisting Depression Among Newly Diagnosed Dyslipidemia Patients and Cardiovascular Disease Risk

Poster Presenter: Jihoon Kim, M.D.
Lead Author: Sang Min Park
Co-Authors: Seulggie Choi, Daein Choi

SUMMARY:
Backgrounds: Previous studies have shown that depression is a risk factor for cardiovascular disease (CVD) among the general population. However, whether this association is consistent among dyslipidemia patients is yet unclear. This population-based retrospective cohort study investigated the association of pre-existing depression on CVD among newly diagnosed dyslipidemia patients. Methods: The study population consisted of 70,592 newly diagnosed dyslipidemia patients during 2003-2012 from the National Health Insurance Service – Health Screening Cohort of South Korea. Newly diagnosed dyslipidemia patients were then detected for pre-existing depression within 3 years before dyslipidemia diagnosis. Starting from the diagnosis date, the patients were followed up for CVD until 2015. With pre-existing depression being the exposure, the main outcome measures were adjusted hazard ratios (aHRs) and 95% confidence intervals (CIs) for CVD by Cox proportional hazards regression. Results: Compared to dyslipidemia patients without depression, those with depression had a higher risk for CVD (aHR 1.26, 95% CI 1.11-1.44). Similarly, pre-existing depression was associated with increased risk of stroke (aHR 1.25, 95% CI 1.04-1.50). The risk for CVD among depressed dyslipidemia patients for high (aHR 1.42, 95% CI 1.06-1.90), medium (aHR 1.17, 95% CI 0.91-1.52), and low (aHR 1.25, 95% CI 1.05-1.50) statin compliance patients tended to be increased compared to patients without pre-existing dyslipidemia. The risk-elevating effect of depression on CVD tended to be preserved regardless of subgroups of smoking, alcohol consumption physical activity, and body mass index. Conclusion: Dyslipidemia patients with pre-existing depression had an increased risk for CVD. Assessment and management of depression upon dyslipidemia diagnosis may be necessary to reduce CVD risk.

No. 123

Improved Participation in Evidence-Based Treatment Following Implementation of a Shared Decision Making Mechanism in an Outpatient PTSD Setting

Poster Presenter: Bindu R. Shanmugham, M.D.
Co-Authors: Monet Fairley, Steven Evans Lindley, M.D., Ph.D., Joan Smith

SUMMARY:
Since its inception, Mental Health treatment has been fundamentally rooted in the client-provider relationship. With renewed emphasis on Client-Centered Care within modern healthcare systems, there has been a greater sense of importance placed on creating opportunities for clients to participate more fully in choosing interventions and treatment planning. However, the manner in which this concept is implemented in contemporary settings, and its impact on treatment outcomes remains relatively unclear. The purpose of this study is to examine how introducing a shared-decision making mechanism (SDM) impacts access to care and participation in treatment in an outpatient Veteran's Affairs PTSD treatment program. Archival data from 530 clients, who were referred to PTSD treatment prior to and after the implementation of a 30-minute SDM group, was analyzed. Results showed that individuals who participated in the SDM group were slightly more likely to access care, and were significantly more likely to participate in an evidenced-based treatment for PTSD. This may suggest, that the implementation of an SDM group does not create barriers to care, and may have a slight positive impact on an individual's likelihood to engage in treatment. Additionally, the results may indicate that when individuals actively make choices about their care, they are more likely to participate in evidenced-based psychotherapies as their treatment progresses.

No. 124

"Caring About Me" Framework: A Constructivist Grounded Theory Study to Understand Patient-Centered Care Experience in Integrated Care

Poster Presenter: Alaa Youssef
Co-Authors: Sanjeev Sockalingam, M.D., Maria Mylopoulos, David Wiljer, Robert Gordon Maunder, M.D.

SUMMARY:

Background: Collaborative and fully integrated care models (ICM) embrace a patient-centered care approach, which the Institute of Medicine (2001) defines as "respectful of and responsive to individual patient preferences, needs, and values", and in which "patient values guide all clinical decisions". However, there is a paucity of literature examining the process through which patients' experience care within the ICM. Objective: We aimed to explore patients' perspective on the process by which ICMs support a patient-centered care experience in these integrated care settings. Methods: Using the constructivist grounded theory approach, we conducted (n=12) semi-structured interviews with a purposeful sample of patients with co-morbid mental and physical conditions at 2 integrated care sites in Toronto, Canada between 2017-2018. Throughout data collection and analysis, we considered the theoretical plausibility, direction, centrality, and adequacy of the collected data to inform theory construction. Results: Our analysis yielded 4 categories that help explain the process of patient-centeredness in integrated care settings from the patients' perspectives. These categories are: A) Caring about Me; B) Collaborating with Me; C) Helping Me Understand and Self-Manage My Care; D) Personalizing Care to Address My Needs. Patients' experience of care was primarily shaped bypositive interactions in care settings with the care providers and care-team members. These positive interactions were facilitated by integrated care processes and infrastructure that consequently enhanced patient access to care, promoted long-term support, helped patients understand their illness, and supported the care-team to personalize treatment plans to address individuals' unique care needs. Conclusion: Integrated care models have the potential to provide patients struggling with comorbid mental and physical conditionsaccess care that is respectful and responsive to their complex care needs.

No. 125

Residents Teaching Residents: Using the ECHO Model to Build Inter-Professional Relationships and Increase Specialty Specific Knowledge

Poster Presenter: Justin Zeppieri, M.D.
Co-Authors: Jasita Sachar, M.D., Daniel Lampignano, M.D., Eve Samuels Fields, M.D.

SUMMARY:

Technology is a useful tool in the de-monopolization of medical knowledge amongst medical specialties. Project ECHO (Extension for Community Healthcare Outcomes) is an example whose use of video technology enables dissemination of specialist knowledge to community primary care providers (PCPs). Through internet based tele-video conferencing (TeleECHO clinics), a 'hub and spoke' model is used where PCPs (spokes) present cases to specialists (hub) who in turn provide consultation on assessment and management of a variety of diagnoses, thus increasing community PCP knowledge and confidence in treating complex medical conditions. The ECHO model also serves to build inter- professional networks between PCPs and specialists. This model has proven effective and is being widely adopted in medical and other fields. Given its efficacy, ECHO is a unique tool that can be harnessed in residency medical education. To date, no literature has been published on the use of the ECHO model in medical residency education as it pertains to its use in one specific residency department educating others. The departments of psychiatry, IM and FM at USCSOM-GVL have developed an ECHO clinic to provide psychiatric specialty education to primary care residents and to build inter-professional relationships between psychiatry, IM and FM residents. This use of ECHO allows maximum reach of specialty training, introduces early career physicians to an emerging area of continuing medical education and use of technology, and allows for structured forums to practice shared patient care. Over the 2018-19 academic year, 8 individual ECHO sessions will be led by 3 PGY4 psychiatry residents acting as the 'hub', and IM/FM residents acting as 'spokes.' Each hour

long session will consist of: a behavioral health case presentation by an IM/FM resident on an active clinic patient, a discussion about the case with recommendations formulated by the hub with input from spokes, a didactic on a mental health topic presented by a psychiatry resident, and a review of a psychiatric medication presented by a psychiatry resident. Mental health didactic topics and psychiatric medications were chosen after review of IM/FM residency program curriculum objectives in psychiatry, in collaboration with their residency program directors. Summary of the case and specific recommendations will be sent to participants shortly after each ECHO. A survey tool will be completed by all IM/FM residents after each ECHO to ascertain self-reported knowledge and self-efficacy in treating psychiatric diagnoses pre- and post- ECHO clinic participation. This survey will provide necessary feedback to improve on this new educational collaborative. In this poster we discuss the ECHO model, its unique adaptation for psychiatry and IM/FM residency programs, and our survey methods.

No. 126

Community Coalitions Versus Program Technical Support for Implementing Depression Quality Improvement: Sub-Analyses for Black and Latino Adults

Poster Presenter: Nicolas E. Barcelo, M.D.
Lead Author: Kenneth Brooks Wells, M.D., M.P.H.
Co-Authors: Felica Jones, Elizabeth Dixon, Jeanne Miranda, Lingqi Tang, Enrico Guanzon Castillo, M.D., Bowen Chung, M.D., Curley L. Bonds, M.D.

SUMMARY: Objective: Under-resourced communities of color experience health and healthcare disparities in depression1. Community Partners in Care (CPIC) is a community-partnered, group-randomized study of two implementation interventions for depression care quality improvement (QI) in under-resourced, urban communities: Community Engagement and Planning (CEP) for multi-sector coalitions, and Resources for Services (RS) for program technical assistance2. At 6 months, CEP versus RS improved client mental health-related quality of life (MHRQL), and community-prioritized outcomes of mental wellness, physical activity, and risk factors for homelessness. Specific intervention effects for Blacks and Latinos are unknown but could inform future research and care delivery addressing disparities within unique marginalized communities3. Methods: This study conducts exploratory sub-analyses of Latino and Black participants in Community Partners in Care (CPIC). From 93 randomized programs, 4440 clients were screened using the 8-item Patient Health Questionnaire (PHQ-8), 1322 clients were found to have depression (PHQ >= 10) and were willing to provide contact information for follow-up. Ultimately, 1246 enrolled in the study, and 1018 clients in 90 programs completed baseline or 6-month follow-up. This group included 409 Latinos and 488 Blacks (non-Latino) by self-report. Analyses use linear regression for continuous variables, logistic regression for binary variables, or Poisson regression for count variables with multiple imputation, response weights, and covariates to estimate intervention effects on primary (poor MHRQL, depression by PHQ-8) and community-prioritized (mental wellness, physical activity, risk factors for homelessness) outcomes at 6-months. Results: Baseline characteristics did not differ significantly by intervention status for Blacks or Latinos. CEP relative to RS for Blacks lowered probability of poor MHRQL (41.8%, 95% CI=34.5-49.1 versus 53.4%, 46.1-60.0, P=0.028) with a trend for reducing multiple homelessness risk factors (31.5%, 23.6-39.4 versus 42.0, 33.4-50.5, p<0.10) at 6 months; and for Latinos at 6-months greater probability of mental wellness (48.1%, 39.7-56.6 versus 35.0%, 26.8-43.3, p=.034) and a trend for being at least fairly physically active (51.8%, 44.4-59.2 versus 42.4, 31.4-53.4, p<.10). Conclusions: Exploratory analyses of outcomes under the CEP versus RS interventions for implementing depression quality improvement across sectors, suggest some 6-month benefits in mental health outcomes for Blacks (MHRQL, primary outcome) and Latinos (mental wellness, community-prioritized outcome), with trends for improvements in social outcomes (reduced homelessness risk for Blacks, increased physical activity for Latinos). Findings may inform future research on the effectiveness of multi-sector coalition interventions and potential mediating factors, such as depression management self-efficacy, in Black and Latino urban adults.

No. 127

Assessing Need for a Medical Legal Partnership in an Urban Intensive Case Management Clinic

Poster Presenter: Eric Chan, M.D.
Co-Authors: Jacob Michael Izenberg, Brooke Rosen, M.D., Kara Wang, Carrie Melissa Cunningham, M.D.

SUMMARY: Objectives: The UCSF/Division of Citywide Case Management provides care to over 1200 of San Francisco's high risk mentally ill adults. Our goal is to help these individuals maintain stable and fulfilling lives in the community, while decreasing their need for acute or institutional care. A recent initiative at Citywide has sought to implement a Medical Legal Partnership (MLP), an established model involving a formal partnership between a clinical organization and attorneys providing civil legal aid, thus allowing the clinic better identify and address the social determinants of health affecting our clients. These needs include eviction/housing, employment, immigration, entitlements, and family law matters. As part of the implementation process, we conducted a needs assessment in our clinic with the goal of understanding the potential role an MLP could play in supporting our case management staff and addressing the health-harming civil legal needs of our clinic clients. Methods: Based on an early focus group of case managers from several of the clinic's case management teams, an 8-item survey was developed and sent out to all case managers (n=39) from the various case management teams. All case managers ultimately responded to the surveys. The surveys were anonymous and included questions about the number of clients in case managers' panels, the types of civil legal needs facing those clients, the time spent addressing each legal need, as well as potential barriers to adequately addressing these needs. The surveys also allowed for qualitative open-ended responses on what concerns or benefits case managers perceived from establishing an MLP. Results: The vast majority (90%) of the case managers reported screening for civil legal needs among clients, with eviction and housing being the most frequent domains of legal need. Barriers to addressing clients' civil legal needs included lack of knowledge regarding who contact for help (90%), lack of time (64%), and lack of system to screen for legal needs (33%). Qualitative data revealed strong support from the case managers for establishing an MLP. Anticipated benefits included more comprehensive access to legal services, reduced delay for appointments, and less time wasted by both the client and the providers. Conclusions: Citywide case managers report the need for stronger legal partnerships in order to provide the best legal need care that harms the health of their patients. Providing a consistent in-house contact through the MLP will possibly help improve patient outcomes while improving the efficiency of time and funds spent by Citywide providers.

No. 128

Nearly 50 Years of Institutionalization: Case Report of a Patient With Schizophrenia Who Spent the Majority of His Life in a Psychiatric Facility

Poster Presenter: Kanida Charuworn, M.D.

SUMMARY:
The patient is a 65-year-old Caucasian male with a documented history of schizophrenia. As a child, he was raised by his grandmother who was hospitalized at the same state hospital several times for mental illness. He was noted to have a normal childhood development. However, towards the beginning of his teenage years, he started to be withdrawn and later demonstrated irrational behaviors. Subsequently, in August 1970, he was admitted to the state psychiatric hospital. On admission, the patient was responding to internal stimuli. He heard voices which were superimposed over the television. He described that his brain was siphoning information from the environment. He also believed that other people could read his mind. The patient demonstrated poor insight and was diagnosed with Schizophrenia. From 1971 to 1976, he spent most of his time in the state hospital with several months of home visits. He showed minimal improvement but with persistent hallucination and violent outbursts. Since May 1976, the patient continued to be institutionalized at the state psychiatric hospital. Over the years, several antipsychotic medications were prescribed, some at very high dosage. On one point, he was taking Haldol 160 mg daily combined with Haldol decanoate 100 mg weekly. Additionally, he has been prescribed multiple combinations of medications. Psychotherapy sessions and behavior modifications were attempted with negligible

improvement. In 2003, Clozapine was titrated up to 800 mg per day. Still, the patient did not gain much improvement. In the past years, the hospital social worker made several attempts to place the patient in nursing homes, and even in the hospital for the chronically ill. However, this was unsuccessful primarily due to concern regarding the patient's hostility and inappropriate behaviors. The patient has, therefore, remained at the state hospital. He is currently on a waiting list for group home but with no pending plans for discharge. Discussion: The patient has been hospitalized to the state hospital for almost 50 years with no discharge plan in the near future. This patient both provides an example of the need for deinstitutionalization and in marked contrast to its implementation. Beginning in the 1950s, deinstitutionalization of the chronically mentally ill was begun. This idea was driven by the idea that every patient has the right to receive treatment within the least restrictive environment. In 2008, the U.S. Department of Justice (DOJ) launched an investigation into the treatment of individuals with mental illness at Delaware state hospital. DOJ found that, in violation of the American with Disability Act, individuals were unnecessarily institutionalized. The state of Delaware agreed to institute protocols to provide treatment in the least restrictive setting possible. In this particular case, the effort of Delaware state hospital to release the patient to community mental health providers has been unsuccessful.

No. 129

Impact of Nutrition Education and Cooking Demonstration in the Severe Mental Illness Population: Lessons From a Community Intervention Program

Poster Presenter: Amy Cheung
Co-Authors: Domenico Lombardi, Xiaoduo Fan, M.D.

SUMMARY:
Background: People with severe mental illness (SMI) such as schizophrenia and bipolar disorder have a 10-20 year reduced life expectancy compared to the general population [1,2]. Cardiovascular disease is the most common cause of death, stemming from genetic and modifiable lifestyle factors. Poor diet may result in metabolic abnormalities including obesity, hypertension, and dyslipidemia, and contribute to excess mortality from cardiovascular disease [3]. Additionally, consumption of convenient foods and lack of cooking knowledge serve as barriers to improving diet quality [4]. Methods: Community Intervention Program - Severe Mental Illness (CIP-SMI) is a community initiative that supports functional recovery and positive long-term outcomes in the SMI population through healthier living practices. A nutrition education and cooking demonstration event open to group home clients (n=37) living in Worcester, MA was conducted to introduce nutrition knowledge and teach participants how to prepare a healthier version of a favorite group home-cooked dish. A post-event survey that included both quantitative measures (behavior modification, attitudes using Likert scales) and qualitative measures (barriers to change, practices related to healthy eating) was used to evaluate the impact of the event. Results: 62.2% of participants rated the event with the highest satisfaction description ("Excellent"). 51.4% and 54.1% of participants chose the highest response category ("Very Important" and "Very Confident") for the importance of and motivation to changing eating habits, respectively. 86.5% of participants were interested in attending another cooking demonstration. Responses to the challenges in making changes in daily eating habits included lack of access to and preference for nutritious foods, and constraints in finances and time. Participants also reported that feasible plans to make changes in their diets included eating smaller portions and incorporating more fruits, vegetables, and proteins. Conclusions: Individuals with SMI are interested in healthy eating, however, lack of knowledge and resources limit their engagement in this lifestyle intervention. Addressing the need for nutrition promotion and education in the SMI community may be a critical step toward reducing cardiovascular consequences.

No. 130

Contributing Factors to the Differences in Outcomes of Primary Intervention in Three High Schools in Staten Island

Poster Presenter: Nikita K. Shah, D.O.
Co-Authors: Peng Pang, M.D., Michael Jeannette, Jeannine Brooks

SUMMARY:

Background: As a part of the community outreach primary prevention program piloted in the Department of Psychiatry, workshops were conducted for parents at three Staten Island high schools (HS). This originated from observations that most adolescents presenting for acute psychiatric emergency room visits had longstanding mental health issues and prior underreported risky behaviors. Hypotheses were: (1) caregivers did not recognize adolescent mental health needs prior to crisis visits due to stigma; (2) lack of parent–adolescent communication contributed to risky behaviors and emotional disturbances in adolescents [1,2]. This study aims to analyze differences in interactions with stakeholders and to identify, advocate for, and encourage professional services for adolescent mental health needs. Methods: We observed our interactions with parents and HS administrations through different steps in outreach and combined these with workshop survey data analyses to identify critical areas in carrying out community primary prevention. Based on student recruitment data, the three HS were categorized as academic or general. We compared differences in parental recruitment processes, participation and responses. Comparisons of outcomes between two types of schools were analyzed using Chi square. Spearman correlation was adopted to evaluate association between risk factors. Results: Among 78 parents of freshmen from three HSs, 51 were from academic HS and 27 from general HS. The attending parent/student ratio rate between the groups was 51/391 (academic HS) : 27/1172 (general HS) = 1: 5.6 [3]. The academic HS administration was proactive in organizing workshops; it took extended efforts for the general HS administration to do so. There were statistically significant differences in parents across HS types having: (1) no prior exposure to information on adolescent mental health (P=0.01); (2) children with mental illness (P<0.001); (3) teens with individualized educational plans (IEP) (P=0.005); (4) mental illness (P=0.02); (5) beliefs that teens share information with them (P=0.03). Post-workshop, both groups gained similar views on allowing their children to receive mental health interventions and on the prevalence of mental health issues in high-achieving students, and both requested future workshops. Significant correlations were also present among adolescents "with mental illness" and who had "an IEP" (r=0.41; P<0.01); "parents with mental illness" (r=0.38; P<0.01); and "other family members with mental illness" (r=0.24; P=0.04). Conclusions: Mental health prevention workshops successfully raises parental awareness, teach attendees to provide early and appropriate emotional and social support, and promote timely professional referrals [4]. HS administrations play significant roles in bridging community access to mental health services. Overall this pilot program has helped us better define needs for preventive intervention in this community.

No. 131

Prevalence, Correlates, and Comorbidity Related to Attention-Deficit Hyperactivity Disorder Symptoms Among Korean College Students

Poster Presenter: Hangoeunbi Kang
Lead Author: Bo-Hyun Yoon
Co-Authors: Kyungmim Kim, Haran Jung, Yuran Jeong, Hyunju Yun, M.D.

SUMMARY:

Background: Despite the growing literature on adult ADHD, there is relatively little research on the prevalence and correlates of adult ADHD. The aim of this study was to assess the prevalence of ADHD symptoms, the correlates, and the comorbidity among Korean college students. Methods: A total of 2,593 college students participated in the study. Their mean age was 20.00±3.84 years and number of female college students was 1,421 (54.8%). Socio-demographic and clinical data were collected, as well as results from the Adult ADHD Self-Report Scale-Version 1.1 (ASRS-v1.1), the Center for Epidemiologic Studies Depression Scale (CES-D), the Korean version of the Mood Disorder (K-MDQ), a modified Korean version of the 16-item Prodromal Questionnaire (mKPQ-16), and the Alcohol Use Disorders Identification Test (AUDIT). Results: ADHD symptoms were found in 4.7% of the participating college students. Univariate analysis revealed that female students had higher rates of ADHD symptoms than males (p<0.001). We found significant associations between ADHD symptoms and parental marital status, self-reported socioeconomic status, depression, bipolarity, psychosis risk, and problematic alcohol use (p<0.001, respectively).

Multivariate analysis revealed that ADHD symptoms in college students were significantly associated with depression (OR =5.85; 95% CI 3.61-9.50; p<0.001), psychosis risk (OR =3.79; 95% CI 2.29-5.96; p<0.001), bipolarity (OR =2.18; 95% CI 1.03-4.59; p=0.041), and problematic alcohol use (OR =2.11, 95% CI 1.30-3.29; p=0.001), after controlling for sex and age. Conclusion: Our study found that the proportion of college students with ADHD symptoms was 4.7%. This figure was similar to the prevalence of current adult ADHD estimated in a previous study. In addition, ADHD symptoms in adults were associated with several psychiatric comorbidities. These results suggested the need of early detection of ADHD symptoms in college students and emphasized the importance of implementing early psychiatric intervention to assess problems such as depression, psychosis risk, bipolarity, and problematic alcohol use in young adults with ADHD symptoms.

No. 132

The Efficacy of Depression Prevention Program for Community Dwelling Elderly in Korea

Poster Presenter: Kyungmim Kim
Lead Author: Bo-Hyun Yoon
Co-Authors: Haran Jung, Hangoeunbi Kang, Hyunju Yun, M.D., Yuran Jeong

SUMMARY: Objectives: Depression is one of the most common mental disorders in Korean elderly. The aim of this study was to examine the efficacy of depression prevention program for community dwelling elderly. Method: A total of 905 community dwelling elderly (man=126, woman=779) were recruited from 22 cities in Jeollanam-do (the southwest province in Korea). The depression prevention program was consisted of a set of 10-visiting sessions conducted by community mental health center professionals. We evaluated sociodemographic factors and 5 scales using self-reporting questionnaire: Geriatric Depression Scale Short Form Korean Version (SGDS), Suicidal Ideational Scale (SIS), Korean version of the General Health Questionale-12(GHQ-12), Multi-dimensional scale of perceived social support (MSPSS) and Satisfaction with Life scale (SWLS). Outcomes were measured at baseline and after completion of the program. Three groups were divided according to their baseline scores: 1) depression high-risk group (SGDS>8), 2) potential high-risk group (SGDS <8 and bottom 25% of both MSPSS and SWLS scores), and 3) the low-risk group (SGDS <8 and top 75% of either MSPSS or SWLS scores). Data were compared by repeated measures of ANOVA. Result: There were significant group by time effect in all 5 scales (p<0.001 in all scales). In the depression high-risk group (n=225, 24.9%), all 5 scales showed significant differences. While SGDS (10.26±1.88 vs. 6.09±3.77; p<0.001), SIS (6.36±2.14 vs. 5.73±1.36; p<0.001) and GHQ-12 (5.48±2.80 vs. 4.06±2.70; p<0.001) were significantly decreased, MSPSS (39.16±9.42 vs. 41.21±8.85; p=0.001) and SWLS (16.61±6.26 vs. 19.38±6.70; p<0.001) were increased. In the potential high-risk group (n=77, 8.5%), the SGDS score showed no significant difference (4.30±1.93 vs. 3.88±2.92; p=0.228). The changes of other 4 scales showed similar patterns to those of depression high-risk group; SIS (5.81±1.51 vs. 5.38±0.84; p=0.020) and GHQ-12 (4.16±2.05 vs. 3.29±2.18; p=0.005) were significantly decreased, MSPSS (34.77±4.33 vs. 42.44±7.67; p<0.001) and SWLS (13.92±4.13 vs. 19.26±67.36; p<0.001) were increased. In the low-risk group (n=603, 66.6%), there were relatively opposite changes compare to other groups in the score of each scale. The SIS score showed no significant difference (5.28±0.81 vs. 5.29±0.94; p=0.713). While SGDS (2.61±2.17, 2.94±2.91; p=0.007) and GHQ-12 (2.35±1.97, 2.58±2.30; p=0.031) were significantly increased, MSPSS (46.87±7.40 vs. 45.36±7.80; p<0.001) and SWLS (24.84±6.09 vs. 23.95±6.15; P=0.001) were decreased. Conclusion: The results showed that the depression prevention programs done by community mental health center professionals practically improved mental health conditions in high- and potential-risk elderly groups and had no effect on the low-risk group. This implies that even if not specialized and skillful programs, just simple visiting and caring of community dwelling elderly may help to enhance their mental health conditions.

No. 133

The Impact of Loneliness on Health-Related Quality of Life, Mental Health and Health Habits in a General Population Sample

Poster Presenter: Mei Wai Lam, M.D., M.P.H.
Co-Authors: Alexia Wolf, M.P.H., Gerard Gallucci, M.D.

SUMMARY:
Background: Loneliness is associated with worse health outcomes and increase in health expenditures especially among elderly population. Little is known about loneliness and its relation to health status in general population. This study examined these factors among general population in Delaware. Methods: Data were analyzed from 1962 respondents who completed state add-on questions of loneliness in 2017 Delaware Behavioral Risk Factor Surveillance System (BRFSS) survey. Loneliness was measured using the UCLA Loneliness Scale short form. Information obtained from BRFSS survey include self-reported health status, depressive disorder, alcohol use, cigarette use, healthy habits and sociodemographic variables. Multivariate logistic regression analysis was used to examine the association between variables. Results: The mean loneliness score was 3.93 among the 1962 respondents. In the model adjusted for sociodemographic factors, loneliness was associated with significantly higher odds of poor health, depression, cigarette use and not adopting healthy habits. Compared to respondents that were not lonely, respondents with moderate loneliness were 3.98 times more likely to report poor or fair health while respondents with severe loneliness were 7.07 times more likely to report poor or fair health ($p<0.0001$). Compared to respondents that were not lonely, respondents with moderate loneliness were 4.16 times more likely to have a depressive disorder while respondents with severe loneliness were 19.69 times more likely to have a depressive disorder ($p<0.0001$). Compared to respondents that were not lonely, respondents with severe loneliness were 3.10 times more likely to be current smoker ($p<0.0001$). There was no significant association between loneliness and binge drinking in the adjusted model. Regarding healthy habits, respondents who were moderately lonely were 36% less likely to exercise while respondents who were severely lonely were 52% less likely to exercise compared to respondents who were not lonely ($p=0.006$ and $p=0.004$ respectively). Respondents who were severely lonely were 54% less likely to consume fruit once or more times per day compared to respondents who were not lonely ($p=0.002$). There was no significant association between loneliness and daily vegetable consumption in the adjusted model. Conclusion: Loneliness is associated with higher odds of poor health status, depression, cigarette use and decreased odds of healthy habits among the general population in Delaware.

No. 134

Aggressive Behavior in a State Psychiatric Hospital: Clinical Predictors and Patient Characteristics

Poster Presenter: John MacKenzie
Co-Authors: Evaristo O. Akerele, M.D., Steven Jay Schleifer, M.D., Yeshuschandra Dhaibar

SUMMARY:
BACKGROUND: Aggressive behavior is a significant challenge in psychiatric hospitals. Long-term facilities, such as our 500-bed state hospital, tend to have a disproportionate number of patients with incompletely controlled aggression. In this study, the nature, distribution, and predictors of violent behavior over a three year period were examined. METHODS: Nursing generated incident reports for aggressive events, a subset of 15,833 hospital incident reports for 2015-2017, were investigated for patients hospitalized at any time during the three years (n=1665). Aggressive incidents were categorized in the nursing reports by severity and type (assault, property damage and self-harm vs nonviolent events). Event frequencies for each patient were adjusted to generate annualized violent event (aVE) rates. Demographic and clinical predictor variables were chart-derived. Analyses utilized ANOVA and regression analyses (SPSS version 25). RESULTS: The patient population was 47.0% female, mean age 47.0+16 (range 17-89 years), and median length of stay was 277 days. 77.7% of patients had a chart diagnosis of a psychotic disorder, 10.2% a history of developmental disability (DD), and 29.0% a history of neurologic disorder. Mean aVE was 5.8+10.6 events. 60.7% of patients (n=1011) had at least one reported aggressive event. Regression analyses on aVE including age, sex, DD, and neurologic disorders revealed highly significant independent predictive effects for younger age as well as for DD and neurologic disorder ($p<0.001$). Adding variables reflecting other behavioral and medical disorders revealed further independent effects for impulsive disorder diagnoses and endocrine disorders

(p<0.001). The 10% of patients (of 1494 patients in hospital at least 30 days) with the highest frequency of aggression had a mean aVE of 29.5+15.8 events (vs 3.5+5.2 events for the remaining patients) and were significantly younger (40.2 vs 48.0 years, p<0.001); 39% of this subgroup had DD (vs. 8% of the remaining patients); 47% (vs 29%) had a neurologic disorder; 30% (vs 5%) had an impulse disorder diagnosis; 53% (vs 32%) had an endocrine disorder (all differences p<0.05). Patients who perpetrated serious assault (n=187) had a mean aVE of serious assault events of 1.5+2.3 events. Regression analyses revealed that younger age (p=0.012), male sex (p<0.001), impulse disorder diagnosis (p=0.032), neurologic disorder (p=0.007), and a higher rate of minor violence (p<0.001) were predictive of serious assault. CONCLUSION: The data suggest that predictors of serious and more minor aggressive events are largely similar in long term psychiatric inpatients. Male sex, however, may be a stronger predictor of more serious aggressive acts. The contribution of medical disorders to aggression in psychiatric patients requires further exploration.

No. 135

"RAFAEL": A Quality Improvement Project to Revive the Community Curiosity About Psychiatry

Poster Presenter: Lama Muhammad, M.D.

SUMMARY:

Background: In the first 12 weeks of 2018, 17 school shootings took place in United States. That averages out to 1.4 shootings a week. Even data on the factors associated with school shootings in the USA are limited; the prejudiced prevailing trend blames mental illness for school shooting disasters and other violent behaviors in the community, which increases the already significant stigma of mental illness. All of above deserve attention to psychiatry education in communities. Method: The presenter will introduce novel quality improvement project "RAFAEL": "Residents and Fellows as Educators Live" in the community as a dignified coordinated initiative to improve collaboration between psychiatry residency program and community in an unprecedented way of fighting stigma of mental illness. The presenter will describe, using actual examples, the application of this project into the academic psychiatry facilities and communities. Results: With the aim to improve mental health awareness and fight stigma of psychiatric illness in the community: Fourteen psychiatric residents and fellows - to date- voluntary participated and provided educational talks in the community. With the use of the FADE Model intervention one hundred anonymous evaluations' sheets were filled by attendees, with 98 ones reporting significant improvement of attendees psychiatric knowledge. Discussion: Psychiatric disorders become the only politically sane place to discuss gun control. Meanwhile, the significant stigma of psychiatric illness, the lack of psychiatric education in communities, and poor emotional hygiene remain not adequately expressed. There is a central assumption that mental illness causes violence, which can be true in particular cases; However, it shouldn't be used to stigmatize psychiatric disorders. Our children in schools and their families hear half part of the story, and few of them have any education about mental illnesses' sufferings and symptoms. "RAFAEL "is the abbreviation for "Residents and Fellows as Educators Live" in the community. RAFAEL is also the name for an ancient Syrian angel of medicine and healing which serves the goal of the project. The leader of the project will arrange for psychiatric residents and fellows to voluntarily provide talks to many places in the community and to schools, this helps in spreading psychiatric education and fighting stigma. Conclusion: To date, there is a noticeable decrease in research that has looked at how to fight the stigma of mental illness, disrupt the insane media view of psychiatry, and innovate emotional hygiene culture in communities and schools. RAFAEL project is one of the best solutions to revive the community curiosity about psychiatry.

No. 136

Overcoming Barriers to Research on an Approach to Reducing Stigma in a Chinese Speaking Community Setting

Poster Presenter: Peter Jongho Na, M.D., M.P.H.
Co-Authors: Rebecca Lubin, Xufei Guo, Yuanruo Xu, Naomi M. Simon, M.D.

SUMMARY:

Background: Asian American older adults (AAOA) are one of the fastest growing minority groups and

estimated to comprise 7.8% of the total U.S. elderly population by 2050. The prevalence of mood and anxiety disorders is as high as 40% in AAOA (Mui et al., 2006). However, only 25% of AA with a psychiatric diagnosis utilized mental health (MH) services (Lee at al., 2015). Stigma towards mental illness has been identified as a key barrier to this under-utilization (Clement et al., 2015). Method: We developed a brief, culturally adaptive 10-session anti-stigma group intervention protocol aimed at reducing stigma and enhancing engagement in MH care for Chinese speaking AAOA seen in a community setting as part of a project funded by the APA SAMHSA Fellowship Program aimed to reduce MH disparities by enhancing knowledge and capabilities of culturally competent MH providers. This poster will present key factors that posed challenges to the development of a community based research protocol with AAOA, and solutions to enable this research intervention design. Results: Core barriers identified included both practical challenges, such as language barriers, as well as related constructs such as overcoming potential barriers to engagement, participation, and adherence to research. Detailed key challenges, options and decisions supporting the implementation of this community based research design will be presented. The most salient barrier was language. In NYC, the most commonly used Chinese dialects are Mandarin and Cantonese. Given high clinical demands and a limited research budget, recruiting a qualified Chinese speaking clinician fluent in both Mandarin and Cantonese was challenging. Similarly, recruiting an adequate number of study participants and assigning them to study group according to their dialect created a challenge to the design. Further, many of the Chinese speaking only AAOA were not able to read written Chinese, which was another major challenge in the process of assuring detailed and appropriate informed consent. This barrier was addressed with appropriate staff research training and approvals. Lastly, the majority of AAOA were not familiar with the concepts of group psychotherapy and clinical trials which was a potential barrier to recruitment, engagement and adherence. Providing culturally sensitive psychoeducation about research and the intervention, as well as small ethically appropriate incentives to study participants were amongst the proposed solutions. More detailed study development and initial experience will be presented. Conclusions: Research relevant to underserved minority populations addressing stigma and engagement in MH care is critically needed. Factors related to research design are critical to consider in the protocol development stage. Language, literacy, and unfamiliarity with research alongside the need for culturally sensitive solutions in a constrained financial budget were the most significant barriers.

No. 137

No Man Is an Island: Sociodemographic Attributes of the Boroughs Where Patients Live in, and Possible Links to Psychiatric Admissions

Poster Presenter: Miguel Nascimento, M.D.
Co-Authors: Beatriz Lourenço, M.D., Mariana Silva, M.D., Mariana Lázaro, Violeta Nogueira, Inês Coelho, Joana Aguiar, Sandra Maria Teles Nascimento, Pedro Costa, Alice Nobre

SUMMARY:
Many social and environmental variables have been interrelated to the development of multiple psychiatric disorders, as well as eventual relapses. For this, it is considered that not only genetic and family factors are relevant, but also the areas where patients spend part of their days. The authors' aim was to investigate if there were possible relationships regarding admission at a psychiatric ward (voluntary and compulsory ones) and socio-demographical variables of those boroughs. The authors gathered the following three variables, regarding all patients living in Lisbon (Portugal) and followed in Psychiatry at Centro Hospitalar Psiquiátrico de Lisboa, in 2017: admission at the acute psychiatric ward that year, compulsory admissions to the same ward, and the census subsection where these patients lived in the city, according to the National 2011's census data (this way, also preventing the specific patient identification, guaranteeing the confidentiality of the data gathered). For each patient, the authors created a 250 meter radius buffer (about a five minute walk, each side), and calculated the average values of all the census data inside those buffers, also at a subsection level. Other variables were then calculated with those results, including population

density, average of each gender, percentage of underage (under 18 years old) and elderly citizens, different degrees of education, percentage of pensioners, building density and percentage of residential and non-residential buildings. Results showed a total of 5161 patients observed by a psychiatrist in 2017, in which 10.0% of them were admitted in the psychiatric acute ward, and 34.5 % of those against their will (181 patients). The admitted patients lived in boroughs with a higher average of the percentage of men (p-0.001) and underage citizens, was well as building density (including non-residential); but lower average on the other variables, including of pensioners (p-0.012) elders (p-0.065) and people who completed 4 years of school (p-0.058, p-0.059 when considering 9 school years). Compared to the compulsory admissions, the voluntarily admitted patients lived in boroughs with a higher percentage of people with 9 years of school (p-0.016), higher average of women, elders and pensioners, as well as a higher average of residential density (with lower results for the other variables). The authors conclude that socio-demographical variables may be useful not only to understand possible environmental factors regarding psychiatric disease management, but also to serve as a starting point for the creation and development of targeted and optimized community efforts towards prevention of psychiatric disorders and relapses.

No. 138

Racial/Ethnic Disparities in Use of Acute Psychiatric Services in Large California Counties

Poster Presenter: Martha Shumway
Co-Author: Jay Unick

SUMMARY:

Background: Racial/ethnic disparities in use of acute psychiatric services (inpatient and emergency services) have been consistently documented. Data from past decades showed that African Americans were overrepresented in acute services and underrepresented in outpatient services. Asians and Latinos appeared to be underrepresented in all psychiatric services. However, these disparities have been not reexamined in the current system of care and relationships between use of outpatient and acute services have not been systematically considered. Methods: This study used Medicaid MAX claims data from 2005-2011 for 401,775 beneficiaries who used mental health services, received diagnoses of mood, anxiety, bipolar, or psychotic disorders, and lived in 12 large, diverse California counties. General estimating equation (GEE) models were used to compare racial/ethnic groups on use of any outpatient services, any acute services, and outpatient services prior to and after use of acute services. Covariates included gender, age, comorbid, psychiatric diagnoses, county, and year. Results: Beneficiaries came from diverse racial/ethnic backgrounds (20% African American, 9% Asian, 30% Latino, 32% white, and 10% other). 68% were female and the average age was 37 years. 42% had a primary diagnosis of depression, 22% schizophrenia, 22% anxiety, and 14% bipolar disorder. Relative to whites, African Americans (OR=.82, p<.001) and Latinos (OR=.77, p<.001) had lower odds of outpatient service use and higher odds of acute service use (OR=1.03, p<.01 and OR=1.11, p<.001). Asians had higher odds of outpatient service use (OR=1.05, p<.001) and lower odds of acute service use (OR=.70, p<.001). Compared to whites, African Americans (OR=.82, p<.001 and OR=.81, p<.001) and Latinos (OR=.88, p<.001 and OR=.90, p<.001) had lower odds of outpatient service use before and after acute service use. Asians had higher odds of outpatient service use before (OR=1.28, p<.001) and after (OR=1.38, p<.001) acute service use. Conclusion: For African Americans, recent data show a similar pattern of disparities as past data, characterized by overrepresentation in acute services and underrepresentation in outpatient services. Relative to past data, distinct service use patterns emerge for Latinos and Asians, with Latinos having a service use pattern similar to that of African Americans and Asians having a more desirable pattern characterized by more use of outpatient services and less use of acute services. Disparities in outpatient service use appear to contribute to disparities in acute service use. This study was supported by grant R01 MD007669 from the National Institute on Minority Health and Health Disparities.

No. 139

Factor Analysis of a Newly Developed Knowledge, Attitudes and Practices (KAP) Survey for Transitional Age Youth (TAY) Males

Poster Presenter: Thomas P. Tarshis, M.D., M.P.H.
Co-Authors: Shelly Tran, M.D., Aparna Atluru, M.D., Anita Rani Kishore, M.D.

SUMMARY:
Background: Suicide is the second leading cause of death in transitional-age youth (TAY) males. In order to implement community based interventions to address this public health epidemic, information on the knowledge, attitudes and practices (KAP) of TAY males with respect to mental health is needed. KAP surveys reveal misconceptions or misunderstandings that may represent obstacles to program implementation and potential barriers to behavior change. Method: As part of the Suicide Prevention through Outreach (SPOt) grant, a new KAP survey was developed. Development of the initial questions were based on a focus group, literature review and expert opinion of four child psychiatrists. The questionnaire included demographics, four knowledge questions, and fifty-five questions on attitudes and practices regarding mental well-being. The survey was administered via tablet/computer. Participants were males aged 18-26 who were residents of Santa Clara County, California. Factor analysis and preliminary statistical testing were performed. Results Data from 1167 questionnaires were analyzed. Demographics of the study population included: Age: 22.1 ± 2.3. Sexual Orientation: 991 (84.9%) Heterosexual, 77 (6.6%) Homosexual, 65 (5.6%) Bisexual, 21 (1.8%) Something else, 5 (.4%) Unsure, 8 (.7%) Prefer not to answer. Ethnicity: 592 (51.3%) White, 189 (16.4%) Asian, 170 (14.7%) Black, 141 (12.2%) Hispanic, 21 (1.8%) Middle Eastern, 20, (1.7%) Pacific Islander, 16 (1.4%) American Indian, 6 (0.5%) Other. With respect to knowledge questions, 145 (12.4%) got all correct, 421 (36.1%) got 3 correct, 423 (36.2%) got 2 correct, 124 (10.6%) got 1 correct and 54 (4.6%) got none correct. Initial factor analysis of the survey is presented herein, and reveals a three-factor solution regarding the attitude and practices questions. Conclusion: The SPOt KAP survey is the first questionnaire designed to assess mental well-being in TAY male youth. Given the lack of evidence regarding attitudes and practices for young adult males, this survey is the first step towards developing and implementing a suicide prevention program for this high-risk group. After refinement from the factor analysis, administering the questionnaire in other geographic regions will help inform specific suicide prevention programs depending on attitudes and practices of the TAYs in each region.

No. 140

A KAP Survey on Mental Health in Male TAY in Silicon Valley: Differences in Measures of Well-Being and Barriers to Help-Seeking Practices

Poster Presenter: Shelly Tran, M.D.
Co-Authors: Aparna Atluru, M.D., Anita Rani Kishore, M.D., Thomas P. Tarshis, M.D., M.P.H.

SUMMARY:
Background: Suicide remains the second leading cause of death in transitional-age male youth, despite increasing efforts for earlier detection and mitigation of disease progression. Examples include public psychoeducation on warning signs, broadening access to support (e.g. crisis texting, phone apps), and establishing guidelines for responsible media reporting of suicide. This study aims to gather evidence to inform preventive interventions to promote well-being, first by examining measures of well-being and barriers to help-seeking practices as defined by this demographic. Methods: We developed a Knowledge, Attitudes, and Practices (KAP) survey regarding mental health and well-being based on a focus group, literature review and expert opinion of four child psychiatrists. The questionnaire, administered via tablet/computer, included demographics, four knowledge questions, and fifty-five questions on attitudes and practices regarding mental well-being. There were 9 measures for well-being characterized as sources of happiness/satisfaction, and 14 items for barriers to seeking help. Participants were male residents of Santa Clara County, CA, ages 18-26, divided into two groups, younger (ages 18-22, n=631) and older (ages 23-26, n=536), for comparison. Results: Data from 1167 questionnaires were analyzed. Average age was 22.1 ± 2.3. Subjects were split into two groups based on age (18-22 vs. 23-26). Under sources of satisfaction/happiness, younger males assigned significantly more value to friendships (80.1 ± 15.4 vs 77.6 ± 15.1, t=2.69, p = 0.0073), whereas older males assigned significantly more value to: romantic/sexual relationships (70.8 ±

21.4 vs 78.1 ± 17.6, t=6.30, p<0.0001), work (63.7 ± 21.7 vs 76.5 ± 16.8, t=7.031, p<0.0001), money (67.8 ± 20.4 vs 73.5 ± 17.6, t=5.46, p<0.0001), and sports (60.6 ± 26.0 vs 64.6 ± 24.0, t=2.76, p=0.0059). There were no statistically significant differences in ratings for family, hobbies, academic/work achievements, and success. Regarding barriers to seeking mental health support, the older group rated all 14 items significantly greater. The top 3 barriers for the older group were lack of time, skepticism, and embarrassment/shame and for the younger group, school responsibilities, skepticism, and cost. Conclusion: The SPOt KAP survey is the first questionnaire designed to assess mental well-being in TAY male youth. Significant findings may be applied to develop programs that 1) better align with the values of this population to cultivate engagement in mental well-being fortifying practices and 2) circumvent barriers, pragmatic and attitude-driven, to facilitate help-seeking practices early on to prevent onset or abate progression of conditions that may increase risks for suicide. Given the lack of evidence regarding attitudes and practices for young adult males, this survey is the first step towards developing and implementing a suicide prevention program for this high-risk group.

No. 141

A Student-Run Mental Health Workshop at Free Community Health Fairs: An Examination of Mental Health Consciousness in Asian Americans

Poster Presenter: Diane Zhao
Co-Author: Benjamin K. Woo, M.D.

SUMMARY: Objective: In this study, we examine the creation and implementation of three mental health workshop at two free community health fairs held by undergraduate students in Asian Pacific Health Corps (APHC) at UCLA, a non-profit organization. Asian Americans have lower rates of utilization of mental health due to cultural barriers and social stigma surrounding the topic. Methods: The workshop was held at two different health fairs, with one session in Koreatown and two sessions in Rosemead in Los Angeles. The workshop was created and presented by APHC members, all of whom were undergraduates at UCLA. Together, they research online to create the PowerPoint presentation and pamphlets that are given to service recipients at each health fair. At each of the health fairs, the presentation was accompanied by the appropriate translations for the target population. APHC members provided Chinese translations in Rosemead and Korean translations in Koreatown. The topics covered in the workshop include depression, anxiety disorder, autism, and ADHD, as well as each disease's symptoms, causes, risk factors, treatments, and prevention methods. Here we are reporting descriptive statistics from the three workshops. Results: The workshops occured in 2018 on April 28th for Rosemead and May 19th for Koreatown. The former had overall 171 service recipients, and 25 (14.62%) attended the workshop. The latter had overall 84 service recipients, and 14 (16.67%) attended the workshop. For the Rosemead workshop, 1 out of the 25 recipients explicitly asked for a consultation from a psychiatrist. All the recipients expressed that they had learned something new from the workshop. Conclusion: The program received positive feedbacks from the recipients, all of whom had felt they benefited from the presentation. Mental health is not commonly discussed in the Asian and Pacific Islander (API) community, so we aim to bring awareness to its importance through workshops like this and promote healthier coping mechanisms. Furthermore, this study highlights the stigma surrounding mental health in the API community even today. However, we aim to show through our study that programs as described can open up the discussion and advocate for the importance of mental health.

No. 142

HIV Testing and Counseling in U.S. Substance Abuse Facilities Serving People With Comorbid Mental Illness: An Opportunity for Care Integration

Poster Presenter: Hannah Michelle Borowsky
Co-Authors: Nicholas Riano, James Walkup, Emily Arnold, Eric Vittinghoff, Stephen Crystal, Christina V. Mangurian, M.D.

SUMMARY:
Background: Individuals with serious mental illnesses (SMI; i.e. schizophrenia, bipolar disorder) are 10 times more likely to have HIV than the general population (1). Further, nearly half of people with SMI have comorbid substance use disorders, and

approximately 34% regularly use intravenous drugs (2). Studies show that despite increased risk, only 7% of people with SMI served in specialty mental health clinics in California received HIV testing (3). Since a substantial percentage of people with SMI are publicly insured, and therefore have access to substance use treatment facilities (4), this setting represents a prime opportunity for HIV testing and counseling (5). The CDC's 2006 recommendation to increase HIV testing at health care sites has been variably successful, especially in substance use treatment facilities (6). Previous studies show that utilization of on-site rapid HIV testing at opioid treatment programs is particularly poor (7). Our study aims to examine the current status of HIV testing and counseling offered in U.S. substance abuse treatment facilities that specifically offer services to people with comorbid mental illness. Methods: This cross-sectional cohort study used the most recent (2017) National Survey of Substance Abuse Treatment Services (N-SSATS) dataset published by SAMHSA (n=13,585 facilities). Our primary outcome is availability of HIV testing at these facilities. Secondary outcomes include availability of HIV counseling and availability of both HIV testing and counseling at the same site. In our analyses, we will describe differences in outcome variables by availability of mental health services at the facility, geography, state HIV prevalence, and facility funding source (federal vs private). Results: Preliminary analyses reveal that 28% of substance use centers offer HIV testing and 54% offer HIV counseling. We saw differences by state with the highest percentages of facilities offering HIV testing in Nevada, Washington D.C., South Carolina, Louisiana, and Georgia; and the highest percentages of facilities offering HIV counseling in Mississippi, Alabama, Washington D.C., Massachusetts, and Vermont. Not surprisingly, we found a significant positive correlation between HIV testing and state prevalence of HIV. We are in the process of performing further analyses to determine if there are differences in HIV testing based on whether or not the facility offers mental health treatment. These will be completed for presentation of final results at the APA conference in May of 2019. Conclusions: This study contributes to our understanding of HIV services available for people with SMI across the U.S. It highlights the potential for substance use facilities that offer treatment for people with comorbid mental illness to play an important role in providing needed HIV services to a population that, all too often, our health care system fails to adequately serve. This study was supported by NIH/NIMH R01MH112.

No. 143

HIV-Related Stigma and Suicidality in a Spanish-Speaking Population

Poster Presenter: Mousa Botros, M.D.
Co-Authors: Dominique L. Musselman, M.D., Maria Echenique, Elizabeth A. Deckler

SUMMARY:

Background: • HIV-related stigma is common amongst people living with HIV regardless of gender, race, ethnicity and sexual orientation • According to the CDC, in 2015, Hispanics/Latinos accounted for 24% (9,798) of the 40,040 new diagnoses of HIV infection in the United States. Of those, 87% (8,563) were men, and 12% (1,223) were women. Among all Hispanics/Latinos living with HIV in 2014 (an estimated 235,600), 58% received HIV medical care in 2014, and about 17% were living with undiagnosed HIV. Poverty, migration patterns, lower educational level, and language barriers may make it harder for Hispanics/Latinos to get HIV testing and care. • We hypothesized HIV-related stigma in a Spanish-speaking population of low socioeconomic status is associated with clinically significant symptoms of depression and/or suicidality and HIV-related biological variables. Methods: The study was conducted from August 2012 to 2013 at a specialty HIV mental health care clinic in an inner-city, municipally-funded healthcare system. We administered the Berger Stigma Scale, Beck's Depression Inventory and the short acculturation scale to 101 Spanish-speaking, HIV positive men and women above the age of 18 (mean age of 54 years). Statistical Analysis • Step 1: A hierarchal multiple regression was conducted determining depressive symptoms significantly correlate with HIV stigma, number of years in the US, CD4 count, Viral load, age, and amount of years since diagnosis (R²=0.22, R²=.15, p<.01). • Step 2: Incorporating the acculturation variables (using the Short Acculturation Scale for Hispanics), depressive symptoms were significantly better predicted

(R²=0.32, R²=.25, p<.001). Results: • Using Chi-Square tests, the Berger's subscale negative self-image was noted to be significantly associated with higher suicidality on the Beck's Depression Inventory suicide category (P = 0.018). • The Berger's subscales negative self-image and personalized stigma were also significantly associated with higher scores on the Beck's depression inventory indicating a greater level of depression (P = 0.009 and 0.029 respectively). Future directions: • Because HIV-related stigma is associated with depressive symptoms and suicidality, randomized controlled studies treating HIV-related stigma to examine the psychiatric and biological variables.

No. 144

HIV Testing Rates Among Medicaid Recipients With Schizophrenia: A National Cohort Study

Poster Presenter: Stephen Crystal
Co-Author: Richard Hermida

SUMMARY:

Background: People with serious mental illnesses, like schizophrenia, have a prevalence of HIV that is estimated to be up to 10 times greater than the general population (Hughes, et al., 2015). In addition, HIV testing rates among people with severe mental illness are low (Senn and Carey, 2009). Because effective treatments are widely available in the US, a lack of testing is a missed prevention opportunity to detect HIV early in the course of illness, reduce the risk of disease progression to AIDS, and prevent the spread of HIV. This study aims to determine national testing rates for people living with schizophrenia, and explore changes in testing trends from 2000-2012. Methods: This retrospective cohort study utilizes a national longitudinal data set of Medicaid claims data between 2000 and 2012. We defined our cohort as all patients with at least one inpatient claim, or two outpatient claims, for schizophrenia (ICD-9 295.xx). We will examine the rates of HIV testing nationally among this cohort, determining whether certain factors influence testing (e.g., race/ethnicity, co-morbid substance use, states with high HIV prevalence). Additionally, we will track HIV testing trends over time, and determine whether testing is influenced by funding and/or policy. We will compare testing rates to frequency matched controls that are matched by age, gender, race/ethnicity, and state of residence. Results: Our preliminary analysis has found that among the cohort of people with schizophrenia only about 6% of the population are tested for HIV annually, which is consistent with our prior findings in California. We are in the process of gathering HIV testing data and performing statistical analyses. This data will be completed in time for presentation of final results at the APA conference in May of 2019. Conclusions: Despite their increased risk, we hypothesize that people with schizophrenia will have a lower rate of HIV testing when compared to controls. We also hypothesize that people with co-morbid substance abuse and states with HIV epicenters (e.g., New York, California) will have higher testing rates. Overall, our findings should influence policymakers to expand their health care efforts for this population from beyond to include infectious disease.

No. 145

Post-Training Support for an Evidence-Based HIV Prevention Intervention: Usability of Web-Based Support for Personalized Cognitive Counseling

Poster Presenter: James Willis Dilley, M.D.
Co-Authors: Peter Loeb, Tim Allen, Robert Marks, Martha Shumway

SUMMARY:

Background: Personalized Cognitive Counseling (PCC) is a single-session behavioral intervention that multiple randomized trials have shown to reduce HIV transmission risk among men who have sex with men (MSM). The Centers for Disease Control have designated PCC as a High Impact Prevention intervention and promote its use through a national training program. However, counselors working in community settings often have difficulty delivering PCC after completing training. In preparation for a larger study of post-training support, this study evaluated the usability of two scalable web-based post-training support strategies--person to person and video support--designed to help diverse counselors in varied settings deliver PCC. Methods: Two cohorts of ten counselors were recruited following CDC-sponsored PCC trainings. One cohort participated in person-to-person (P2P) support (three 30-45 minute consultations with a PCC expert

via telephone) that focused on the counselor's individual questions and concerns. The second cohort viewed six videos that included demonstrations of PCC delivery and of expert supervision and feedback. All participants completed online surveys at baseline, at the end of support, and 3 months later that included demographic data, the System Usability Scale (SUS), standardized measures of PCC self-efficacy, counseling skills, and comfort talking about sexual issues, and open ended questions about support. Results: All participants worked in community agencies. They were racially/ethnically diverse (80% non-white). Over 60% had a 4-year college degree. On the main outcome, usability of support, participants rated both P2P and video support in the top 10% of possible scores on the SUS, which is associated with the key usability outcome of "recommending a product to a friend." Although the usability testing samples were too small for statistical comparison, a consistent pattern of increases in PCC self-efficacy and counseling skill were observed with both types of support. Recruitment data, however, suggested that video support was initially more appealing to newly trained counselors than P2P. Novice counselors seemed concerned about talking individually with an unfamiliar consultant. Conclusions: Usability testing suggests that both types of web-based support--P2P and video--are feasible and acceptable to counselors newly trained to deliver PCC. Both types of support were associated with promising trends towards increased self-efficacy related to PCC and counseling in general. Video support appears to be more appealing to novice counselors and it seems desirable to offer video support before, or in combination with, P2P. The study was supported by NIMH grant R43 MH099917.

No. 146

Assessing Functional Ability and Cognition Through Technology in Older HIV-Positive Adults

Poster Presenter: Samir A. Sabbag, M.D.
Co-Author: Andrew Wawrzyniak

SUMMARY:

Background: People living with HIV have seen an increase in longevity due to the effectiveness and tolerability of ART. Neurocognitive dysfunction is found at higher rates in this population relative to their younger counterparts and non-infected individuals. This decline could impair their ability to engage in activities that maintain independent living, therefore decreasing their ability to age successfully. Previous research in this area used standardized neuropsychological measures of cognition which correlate with everyday task performance but do not capture the complexity of these real world activities. This study examined the impact of HIV on everyday task performance by obtaining information on the ability of older HIV-infected adults to perform everyday activities through the use of novel technological measures and comparing their performance to uninfected older adults. Methods: Computer-based simulations assessing medication management (Prescription Refill Task[PRT]), financial management (ATM Task), and physician instructions comprehension (Doctor's Task) were delivered to 40 HIV-infected (27 virologically suppressed) and 28 uninfected participants (ages 50-72 [45.6% female, 75% Black, 11.8% Hispanic]). Standard cognitive assessments and functional assessment tools were delivered (HVLT, Trail Making, Digit Symbol, and UPSA-B). Results: Computerized task performance was compared between the two groups, which were of comparable age, education and Geriatric Depression Scale Scores. No statistical differences were observed on the ATM and PRT. Uninfected participants had a greater percentage of correct responses (p=.044) and fewer errors (p=.041) on the Doctor's Task; total time was similar in both groups. HIV-positive participants had lower HVLT-total recall ($F(2.65)=4.11$, p=.021) and HVLT-delayed recall scores ($F(2,65)=3.62$, p=.032) but similar Digit Symbol Substitution scores. There were no significant differences between groups for the Trail Making nor the Digit Symbol tasks. No differences were found between the groups for the UPSA Financial Skills, however, uninfected participants had significantly higher UPSA Communication Skills scores (7.21 + 1.03) compared to those with HIV and were suppressed (6.04 + 1.84, p = .019) and those with HIV and not suppressed (7.21 + 1.03, p = .034; $F(2,66) = 5.27$, p = .007). Conclusion: Older HIV-infected people may not have problems with tasks that require speed, but with those that rely on memory. Poorer performance on Doctor's Task may contribute to medication non-adherence, potentially

worsening the impact of HIV in non-suppressed patients. Expanding the scope of the study can guide the development of tailored interventions to enhance effective utilization of technology to improve independence in this population. This study was funded by a Miami Center for AIDS Research Developmental Award at the University of Miami (P30A1073961).

No. 147

Attentional Circuits in People Living With HIV and Apathy: Differential Alterartions

Poster Presenter: Martín Javier Mazzoglio Y. Nabar, M.D.

Co-Authors: Elba Tornese, Emmanuel Leidi Terren, Monica Iturry

SUMMARY:

Introduction: Depressive symptoms are prevalent and of great importance, with high negative impact of the quality of life of people dealing with chronic diseases. People living with HIV (PLHIV) present some specific characteristics in their depressive mood disorders: increased apathy, pharmacological resistance, sub-diagnosis, unfinished treatments, higher suicidality rates and neurocognitive alterations Objetive: Determine alterations in the attentional domain in PLHIV diagnosed with Depression Disorder with and without apathy in order to determine differential parameters Materials y methods: 38 PLHIV with undetectable viral load were studied. The sample included members of both genders (9 women and 29 men) with depressive disorder (F32.9-DSM IV), 17 diagnosed with apathy and 21 who were not, in HAART (Highly Active Antiretroviral Treatment) without therapeutic failure in the past two (2) years and not using protease inhibitors; no psychopharmacological treatment (with the exception of ansiolitic medication) or HIV induced dementia (American Academy of Neurology) or infectious comorbilities (Hepatitis C, Central Nervous System infections or Central Vascular infections). The intruments used were MINI-International Neuropsychiatric Interview, Hamilton Depression Rating Scale, Apathy Evaluation Scale clinical version y Neuropsychiatric Inventory as well as several neuropsychological assessment tools (Stroop Color Word Test, Trail Making Test Part A and B, WAIS Digit-Symbol Coding, Digit Span and Vocabulary, BTS-1 and BTS-3). Statistical assessment were applied and all legal and ethical measures were taken into account according to Helsinki declaration. Results: PLHIV presented high prevalence of apathy. In patients who presented apathy, higher statistical alterations were found, according to decreasing differential affectation, in both sustained and divided attention. Processing speed was found to be slower, with no significative difference with the group who presented apathy. Selective attention was not found to be significantly altered between both groups. Conclusions: Apathy in People living with HIV and depression disorders present specific and differential alterations in the attentional domain. Attentional disfunctions of sustained and divided attention were specific of this group, with affectation in the anterior attentional circuit and would be related with the latter cognitive disruption as a prodrome. Key words: HIV. Depression. Apathy. Attention.

No. 148

Clinical Pharmacology of Hyperammonemia by Sodium Valproate and Carbamazepine in People Living With HIV

Poster Presenter: Martín Javier Mazzoglio Y. Nabar, M.D.

Co-Authors: Milagros Muniz, Schraier Gabriel, Matias Garcia, Alexis Mejias de la Mano, Santiago Munoz

SUMMARY:

Introduction: Hyperammonaemia (HA) is observed in decompensated liver disease. The picture of hyperammonemic encephalopathy in non-cirrhotic patients is rare, potentially fatal, and was reported mostly associated with valproic acid. The clinical symptoms are wide ranging from vomiting to seizures and coma. In people living with HIV (PLHIV) this picture associated with the virus or the immune response was not reported. There are few reports of hyperammonemia in PLHIV and they are associated with other comorbidities and few with antiretrovirals, but not as adverse drug reactions associated with psychotropic drugs. Objective: Report of cases of PLHIV in antiretroviral treatment with hyperammonemia, its clinical impact and ammonium levels. Materials and methods: We report 67 PLHIV in treatment with HAART, negative viral loads, psychopharmacological treatment with

valproic acid (n=45) or carbamazepine (n=22). Exclusion criteria were = HCV, HBV and alcohol consumption disorder (current or recent history) and decompensated liver pathology. We apply scales to evaluate: side effects (UKU), subjective adherence (DAI), daily life activities (Barthel Index), liver severity (Child-Pugh Classification) and degrees of hepatic encephalopathy (West Haven Scale). The ethical-legal requirements were met. Results: 26.86% presented hyperammonemia, among which 38.88% was symptomatic. The clinical presentation was heterogeneous with a higher prevalence of gastrointestinal and cognitive alterations; the most severe cases presented alterations of the sensorium and 1 case of convulsions. We recorded a greater symptomatic severity with carbamazepine (average ammonia = 104.4 pmol/L), but a higher prevalence of non-symptomatic hyperammonemia with valproic acid (62.3 pmol/L). The time of onset of symptoms was lower with carbamazepine, but the time until its decrease was higher with valproic acid. Conclusions: We observed a higher prevalence of hyperammonemia and associated symptomatology in PLHIV with HAART medicated with carbamazepine. The significant percentage of this adverse drug reaction suggests a biochemical, perhaps preventive, control. Keywords: HIV. Hyperammonemia Divalproate sodium Carbamazepine Antiretrovirals

No. 149

Playbased Learning in Anatomy: Impact in Cadaveric Affronting and Cultural Conceptions in Medical Students

Poster Presenter: Martín Javier Mazzoglio Y. Nabar, M.D.

Co-Authors: Ruben Daniel Algieri, Rosalia Mondelo, Cristina Alcon Alvarez, Emmanuel Leidi Terren, Elba Tornese

SUMMARY:

Background: The act of playing is as ancient as humanity itself, yet Huizinga was the one who re-signified the concept of “ludic” as a didactive resource related to culture. Play-based learning was developed as a didactic strategy by the forerunners of the New School. Several Authors (Brunner, Frebel, Decroly, Montessori, Cossettini and Freire) have analyzed its pedagogy projections and stressed the impact and formative value in the cognitive strategies involved in problem solving tasks, attention and memory development, as well it’s motivational and creativity elements. The object of the present work is to evaluate the impact of these didactic interventions in the cultural and conceptual conceptions of the students related to cadaveric material in the course of practical working during anatomy classes. Materials and methods: Observational and transversal study through a questionnaire applied to 658 medical students (2016, n = 198; 2017, n= 228; 2018 n=232) which included a Modified Templer Death Anxiety Scale, population questions (age, gender, place of birth, situation regarding the subject, work-related aspects, former studies, motivations related to career choice). Terminology related to “cadaveric material” and “anatomic piece” was investigated with Bernard’s free-listing and lot-drawing techniques in order to investigate cultural and imaginary conceptions and groups of conceptual dimensions. The class structure divides the students in two different ckassrooms, in order to evaluate difference with the inclusion of play-based activities in one of them. The results were processed using tests of descriptive and inferencial statistics (SPSS and dendrogram making), to evaluate the terminological analysis, Visual Anthropac Freelists versión: 1.0.1.36 and Visual Anthropac Pilesorts versión: 1.0.2.60. The present research takes into account all current ethical and legal norms. Results: It has been observed that terms such as “cadaveric material” and “anatomic piece” were associated mainly with repugnancy, disgust, fear and study material. It was observed, in the group of student using play based techniques, a lesser number of negative terminology, as well as conceptual dimensions related with the material as a didactic and instructional resource instead of a distress factor. Conclusions: Implementation of play-based techniques in the learning process of the Anatomy coursework was positively associated with a lesser negative impact in both associated terminology and in conceptual dimensions related to cadaveric material. Such an impact is of particular importance in the context of teaching and it would relate with the decrease of negative factors in cadaveric affronting. Key Words: Anatomy. Cadaveric Affronting. Play-based learning

No. 150

Prevalence and Course of Subthreshold Anxiety Disorder in the General Population: A Three-Year Follow-Up Study

Poster Presenter: Renske Bosman

SUMMARY:

Background: This study examined the prevalence, course and risk indicators of subthreshold anxiety disorder to determine the necessity and possible risk indicators for interventions. Methods: Data were derived from the 'Netherlands Mental Health Survey and Incidence Study-2' (NEMESIS-2), a psychiatric epidemiological cohort study among the general population (n=4528). This study assessed prevalence, characteristics, and three-year course of subthreshold anxiety disorder (n=521) in adults, and compared them to a no anxiety group (n=3832) and an anxiety disorder group (n=175). Risk indicators for persistent and progressive subthreshold anxiety disorder were also explored, including socio-demographics, vulnerability factors, psychopathology, physical health and functioning. Results: The three-year prevalence of subthreshold anxiety disorder was 11.4%. At three-year follow-up, 57.3% had improved, 29.0% had persistent subthreshold anxiety disorder and 13.8% had progressed to a full-blown anxiety disorder. Prevalence, characteristics and course of subthreshold anxiety disorder were in between both comparison groups. Risk indicators for persistent course partly overlapped with those for progressive course and included vulnerability and psychopathological factors, and diminished functioning. Limitations: Course analysis were restricted to the development of anxiety disorders, other mental disorders were not assessed. Moreover, due to the naturalistic design of the study the impact of treatment on course cannot be assessed. Conclusions: Subthreshold anxiety disorder is relatively prevalent and at three-year follow-up a substantial part of respondents experienced persistent symptoms or had progressed into an anxiety disorder. Risk indicators like reduced functioning may help to identify these persons for (preventative) treatment and hence reduce functional limitations and disease burden.

No. 151

MDMA-Assisted Psychotherapy for Treatment of Anxiety Related to Life-Threatening Illnesses

Poster Presenter: Alli Feduccia

Co-Authors: Lisa Jerome, Berra Yazar-Klosinski, Michael C. Mithoefer, M.D.

SUMMARY:

Background: Before MDMA (commonly known as "Ecstasy") was classified as a Schedule 1 controlled substance in 1985, there were published reports of its use as an adjunct to psychotherapy. However, no controlled research was done at that time. The nonprofit organization the Multidisciplinary Association for Psychedelic Studies (MAPS) sponsored six Phase 2 clinical trials from 2004-2017 using MDMA-assisted psychotherapy for treatment of PTSD. The significant efficacy results and favorable safety profile led the FDA to grant Breakthrough Therapy designation in 2017 for this promising treatment for PTSD. These studies have prompted interest in investigating other anxiety-related conditions that could possibly benefit from MDMA-assisted psychotherapy. Here we present results from a double-blind, randomized Phase 2 trial of MDMA-assisted psychotherapy for anxiety related to life-threatening illnesses (LTI). Methods: Participants with anxiety from an LTI were randomized in a double-blind study to receive MDMA (125 mg, n=13) or placebo (n=5) during two 8-hour psychotherapy sessions. Non-drug therapy sessions were conducted prior to and after experimental sessions. The primary outcome was change from baseline in State-Trait Anxiety Inventory (STAI) Trait scores at one month post the second experimental session. After the blind was broken, participants in the MDMA group had an additional open-label MDMA session, and placebo participants crossed over to receive three open-label MDMA sessions. The treatment period lasted from 4-6 months with long-term follow-up assessments six and twelve months after the final MDMA session. Outcomes: For the primary outcome, the MDMA group had the largest mean (SD) drop in STAI-Trait scores -23.5 (13.2) indicating less anxiety compared to placebo group -8.8 (14.7), with results trending towards significant group differences (p=0.056). Cohen's d between group effect size was 1.7 (CI: -0.30, 3.65), indicating a large treatment effect. At

the six- and twelve-month follow-ups, most domains of psychological functioning were markedly improved compared to baseline, including anxiety (STAI State and Trait, p<0.0001), depression (BDI-II and MADRS, p<0.0001), sleep quality (PSQI, p<0.001), and global functioning (p<0.001). MDMA was well-tolerated in this population with a good safety profile in terms of adverse event rates and transient increases in vital signs after MDMA administration. Conclusion: Few treatments available adequately address psychological symptoms that often accompany physical illnesses. Initial safety and efficacy data from this pilot study support the expansion of clinical trials of MDMA-assisted psychotherapy into a larger sample of individuals with anxiety associated with life-threatening illnesses. Funding: Multidisciplinary Association for Psychedelic Studies (MAPS) Trial Registration: clinicaltrials.gov Identifier: NCT02427568

No. 152

Posttraumatic Stress Disorder and Alterations in Resting Heart Rate Variability: A Systematic Review and Meta-Analysis

Poster Presenter: Fenfen Ge

SUMMARY: Objective: The functions of both the central and peripheral autonomic nervous system (ANS), indexed by heart rate variability (HRV), are affected by psychology and physiology. In this study, HRV parameters were compared between individuals with posttraumatic stress disorder (PTSD) and healthy controls. Methods: Eligible studies were identified through literature searches of the EMBASE, Medline, PubMed and Web of Science databases. A random effects model was used, and standardized mean differences for high-frequency HRV, low-frequency HRV and the root mean square of successive R-R interval differences (RMSSD) were calculated. Results: Nineteen studies were included. Significant effects were found for high-frequency HRV (P<0.0001, Z=4.18; Hedges' g=-1.58, 95% CI [-2.32, -0.84]; k=14) and RMSSD (P<0.00001, Z=4.80; Hedges' g=-1.96, 95% CI [-2.76, -1.16]; k=9). Considerable heterogeneity was revealed, but main effects for high-frequency HRV and RMSSD were robust in subsequent metaregression and subgroup analyses. Conclusion: Given the relationships among low vagal state, inflammation, and alterations in brain structure and function, including executive function and emotion regulation, reduced HRV may be regarded as an endophenotype in PTSD research.

No. 153

Susto: A Rare Culture Bound Syndrome in Latin American Cultures

Poster Presenter: Sherina Langdon
Co-Author: Ayodeji Jolayemi, M.D.

SUMMARY:

Susto, is a cultural bound anxiety disorder found in Latin American cultures. It is characterized by a combination of physiological and cognitive symptoms of anxiety, dissociative symptoms and disorganized motor behavior. It is much rarer and poorly understood than other Latin American culture bound syndromes such as Ataque De Nervios. Its pathophysiology, epidemiology and management are poorly understood with few literature reporting the same. We present the case of a 32 yr old Hispanic American female who was admitted for disorganized motor activity initially presumed to be seizures. She reported concurrent anxiety symptoms and dissociative feelings during her episodes of screaming uncontrollably with excessive shakes lasting for hours on end. These symptoms usually emerged following recollections of a traumatic surgical procedure and death of family members. Medical work up did not reveal any acute organic etiology. Her symptoms did not meet criteria for acute stress disorder or a post-traumatic stress disorder. A diagnosis of "Susto" was made and management was symptomatic for this patient. We discuss the pathophysiology and complex management of this case. The implications are explored in terms of characterizing the diagnosis and management of this rare culture bound syndrome.

No. 154

Reliability and Validity of the Korean Version of Health Anxiety Questionnaire

Poster Presenter: Sang-Yeol Lee, M.D.
Co-Authors: Hye Jin Lee, SeungHo Jang

SUMMARY: Objective: Health anxiety can be defined by concern about health in the absence of a pathology. The Health Anxiety Questionnaire (HAQ)

based on the cognitive-behavioral model can be useful for evaluating the severity and the structure of health anxiety. This study aims to verify the reliability and validity of Korean version of HAQ (K-HAQ). Methods: For reliability, test-retest reliability and internal consistency were analyzed. For construct validity, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were conducted. Receiver Operating Characteristic (ROC) analysis was performed to identify the optimal cut-off score. Results: Cronbach's alpha was .92, and r value of test-retest reliability was .84. In the EFA, 4- and 5-factor model showed cumulative percentile of variance of 60% or more. In the CFA, the 4-factor model was found to be the most appropriate and simplest (?2 = 397.33, df = 187, CFI = 0.909, TLI = 0.888, RMSEA = 0.077). In the ROC analysis, the cut-off score was 20 points. Conclusion: It is expected that K-HAQ can be helpful to evaluate the severity of health anxiety and make therapeutic plans because K-HAQ can help explore the cognitive, emotional, and behavioral structure of health anxiety by each factor.

No. 155

Clinical Characteristics of Patients With Panic Disorder in Korea

Poster Presenter: Hyunjoo Lee

SUMMARY:

Introduction Panic disorder is an anxiety disorder characterized by panic attacks. Panic attacks cause individual problem and social burden because of the severe symptoms. In general, patients go around a variety of clinicians, spend a lot of medical costs, and delay appropriate therapeutic interventions. 1) In Korea, the number of patients with panic disorder is increasing rapidly, and public health importance is increasing. 2) Given the nature of a disease that focuses on a catastrophic interpretation of the body sense, it is considered very important for a country to identify 3) the form of expression, trigger factors, and medical approach of panic disorder, as cultural differences can affect the appearance of a disease. The purpose of this study was to investigate various clinical features such as types of symptoms, stress factors associated with onset, and therapeutic approach, and to discuss its implications. Method This study was conducted by a total of 12 institutions in Korea with retrospective medical records research. From September 1, 2007 to August 31, 2017, patients with DSM-IV criteria panic disorder were screened among adult patients over 20 years of age who visited the outpatient department of psychiatry. We reviewed basic sociodemographic data, internal and external and psychiatric comorbidities through a review of selected patients' medical records. Participants visited the hospital to categorize the chief complaints and to investigate the time and the process of visiting the psychiatric department after the first symptom. Risk factors such as stress, drinking, and insomnia experienced before the onset of panic symptoms were examined. Result A total of 814 participants were included in the study. Cardiovascular symptoms were observed in 63.9% of all patients, and the time to visit the psychiatric department was shorter. Before the first onset of panic attack, 108 patients (13.2%) had a history of continuous drinking with significant differences between men and women. Also, just before the first episode of panic attack, 210 (25.6%) of all participants experienced sleep changes or more than one stress event in 607 (74.2%) of the all participants. Discussion The study was conducted by 12 organizations across the country to identify the clinical manifestations that are characteristic of Korean panic disorder patients. The results of this study have shown that Cardiovascular and respiratory symptoms are most common among Koreans with panic disorder, and that many patients experience a lack of sleep right before the onset or an increase in the exceptional amount of alcohol, and that the stress incidents are highly related. Conclusion The results of this study are meaningful in that multiple institutions participated to identify important clinical characteristics of patients with panic disorder in Korea.

No. 156

The Innovative Use of Osteopathic Manual Medicine as an Adjunctive Treatment for Patients With GAD: A Small Feasibility Study

Poster Presenter: Dave Peyok, D.O.

SUMMARY:

Background: Generalized anxiety disorder occurs when a patient has an excessive worry about many different items that interferes with the patient's

daily activities. This fear must be present more days than not for longer than six months and should not be due to a substance/medicine, a general medical condition or better described by another diagnosis. There are many physical manifestations of anxiety, such as muscle tension, restlessness, fatigue and sleep difficulties, which can cause or worsen somatic dysfunction. Thus if left untreated, somatic dysfunction can perpetuate the physical symptoms of anxiety and trick the patient's mind into feeling the mental symptoms of anxiety. In the United States about 2 per cent of the population experiences Generalized Anxiety. Methods: New adult patients to the outpatient psychiatric clinic who were diagnosed with GAD and consented to Osteopathic evaluation and treatment were enrolled in the study until ten (10) patients had been recruited. The ages of the patients ranged from 22 to 67 years old and were predominantly female (8), with males (2). Anxiety symptoms were assessed using the GAD-7 and GAD-2 tools. On the day of service the patients would see their psychiatrist for the standard of care management (medication and therapy) and then would see the osteopathic manual medicine physician for evaluation and treatment of somatic dysfunction. The patient's anxiety was evaluated by their psychiatrist using the GAD-7 and the osteopathic medicine physician would assess the patient's anxiety pre and post treatment using the GAD-2 tool, over a 12 week period. Results: This study included 10 patients presenting in the outpatient clinic and given a new diagnosis of Generalized Anxiety Disorder. Study discontinuation rates were 50% for males and 12.5% for females. Based on change from baseline to week 12 in GAD-7 total score and GAD-2 scores pre and post treatment show a reduction of GAD-7 mean score from 19 at initiation to 11 at week 12. GAD-2 pre treatment average score was 6 and post treatment mean score was 2. Conclusion: In adult outpatient clinic patients with Generalized Anxiety Disorder whom consented to osteopathic evaluation and treatment of somatic dysfunction saw a 57.8 % reduction in GAD-7 scores over a 12 week period and a 33% reduction in anxiety immediately after osteopathic treatment. These results may inform the design of future clinical trials of adjunctive osteopathic treatment in patients with Generalized Anxiety. This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

No. 157

Selective Sound Sensitivity (Misophonia) in an Online Sample

Poster Presenter: Michael Van Ameringen, M.D.
Co-Authors: Beth Patterson, Jasmine Turna, William Simpson

SUMMARY:

Purpose: Misophonia, meaning "hatred of sound", is a term describing a chronic, neuropsychiatric condition involving decreased tolerance to specific sounds. Typically, the individual feels intense discomfort or anger in response to the sound, which is accompanied by muscle tension and a desire to escape the situation. In fact, it has been suggested that the trigger sound engages the autonomic nervous system, producing a fight or flight response. Misophonia was once thought to be a rare phenomenon, but recent investigations in online, undergraduate samples have reported prevalence rates as high as 17% - 20%. Fewer than 100 articles have been published on the subject; most of which are single patient case studies. Misophonia is a newly recognized psychiatric phenomenon with no official diagnostic criteria. The purpose of this study was to elucidate the characteristics of Misophonia by examining its prevalence, spectrum of symptoms and relationship to known psychiatric disorders in an online sample who self-identify as having "sound sensitivity". Method: An online survey was posted on the MacAnxiety Research Centre website. The survey included a battery consisting of the Misophonia Questionnaire (MQ), the Misophonia Checklist, the Misophonia Impact Scale (MIS) and a series of self-report measures to examine the prevalence of comorbid conditions: ASRS-v1.1 for ADHD, GAD-7 for Generalized Anxiety Disorder, PHQ-9 for Depression, OCI-R for Obsessive-Compulsive Disorder, PCL-5 for Post-Traumatic Stress Disorder, Mini-SPIN for Social Anxiety Disorder, and SQ for synesthesia. Results: Of the 97 respondents (mean age 31.6 ± 13.1; 77% female), 90/97 (93%) met criteria for misophonia according to the MQ (mean score 9.1 ± 2.2). The most common sound sensitivities which people identified as being extremely bothered by were eating sounds (87%), breathing sounds (84%) or

other mouth sounds (83%). Common visual triggers included open mouth chewing (87%) and leg jiggling (61%); 10% denied having visual triggers. Leaving the environment(70%) and avoiding environments (62%) with potential triggers were the most common behavioural responses. While becoming anxious, distressed or annoyed were the most common emotional responses (91%). Individuals with misophonia (n=90) reported their symptoms as being severely interfering 8.5 ± 4.9 (MIS). High rates of comorbidity found: social anxiety disorder (68%), generalized anxiety disorder (52%) and synesthesia (51%) were highest. Conclusions: Most respondents who self-identified as having sound sensitivity met MQ criteria for Misophonia. Mouth sounds were the most common triggers and resulted in extreme interference and changes in behaviour. High rates of comorbidity were also found, however, the nature of this relationship warrants further investigation to determine whether misophonia is a psychiatric symptom or discrete disorder. Larger population-based samples are needed

No. 158

Effects of Tai Chi on Stress and Cardiovascular Function in Patients With Coronary Heart Disease and/or Hypertension: A Randomized Controlled Trial

Poster Presenter: Emily Guoyan Yang

SUMMARY:

Background: Cardiovascular disease is the leading cause of morbidity and mortality worldwide [1]. Stress, anxiety and depression are independent risk factors of the development of cardiovascular disease [2-6]. Patients with coronary heart disease often suffer from stress, anxiety and depression which are frequently ignored in planning treatments. This study aimed to investigate the effects of Tai Chi on stress, anxiety, depression and cardiovascular function in patients with coronary heart disease and/or hypertension. Methods: In this randomised controlled trial, 120 participants with coronary heart disease and/or hypertension, recruited from Beijing (n=80) and Sydney (n=40), were randomly assigned to a Tai Chi or waitlist groups (each n=60). Participants in the treatment group received a standardised 24-week program consisting of 2-hour Tai Chi class twice weekly for the first 12 weeks and once weekly for the rest 12 weeks. The primary measure is Perceived Stress Scale-10 (PSS-10). The secondary measures include Zung Self-Rating Anxiety Scale, Beck Depression Inventory-II, blood pressure, heart rate, heart rate variability, lipid and glucose profiles, C-reactive protein, 36-Item Short Form Healthy Survey and 6-Minute Walk Test. All measures were assessed at baseline, 12 and 24 weeks. Results: Of 120 randomised participants (mean age, 64.3 years), 102 (85.0%) completed the trial. Using a linear mixed model, the Tai Chi group demonstrated a significant reduction in PSS-10 scores at week 24 (Mean, 10.44; 95% confidence interval (CI), 8.86 to 12.03) compared with the waitlist group (Mean, 11.71; 95% CI, 10.01 to 13.34) (P=0.009). The mean walking distance during 6-minute walk increased from 494.77 (95% CI, 470.82 to 518.71) meters at baseline to 552.81 meters at 24 weeks in the Tai Chi group, while from 518.83 to 519.63 meters in the waitlist group. The difference between the two groups is statistically significant (P<0.001). Significant differences were also detected between the two groups in depression, diastolic blood pressure, and quality of life. No adverse events related to Tai Chi were reported. Conclusion: A 24-week standardised Tai Chi intervention resulted in statistically significant improvements in stress and fitness in patients with coronary heart disease and/or hypertension compared with those in the waitlist control group. This study was supported by Western Sydney University. The first author (GYY) was a recipient of the International Postgraduate Research Scholarship (IPRS) and Australian Postgraduate Award (International) from Western Sydney University.

No. 159

WITHDRAWN

No. 160

Somatoform Disorders: Do ICD-10 and DSM-5 Match?

Poster Presenter: Pedro Cabral Barata
Co-Author: Raquel Serrano

SUMMARY:

Background/Objectives Somatoform disorders have been defined as physical symptoms suggestive of physical disease for which no “organic” findings exist

nor physiological mechanisms are known to explain it, together with a strong evidence (or presumption) of a link between the existing symptoms and psychological conflicts (1). DSM-5 reconceptualized the concept of somatoform disorders, putting terms like somatization disorder, undifferentiated somatoform disorder and hypochondriasis into somatic symptom and related disorders, and considering medical inexplicability of symptoms to no longer be of relevance. Comparisons between DSM-5 and ICD-10 diagnostic these concepts have shown that show some overlap and similarities, but capture significantly different subgroups of patients (2). We aim to directly compare the different existing concepts of Somatoform disorders between DSM-5 and ICD-10, in order to facilitate diagnostic conversion from one criteria to another and to summarily check the differences in concepts. Methods Non-systematic literature review of the literature: article search in Pubmed/MEDLINE database (articles in English; keywords: ICD-10, DSM-5, somatoform disorders, diagnostic criteria) and use of DSM-5 and ICD-10 diagnostic criteria. Results/Conclusion Diagnostics identified in ICD-10 (3): - Conversion disorder with motor symptom or deficit (F44.4), with seizures or convulsions (F44.5), with sensory symptom or deficit (F44.6) and with mixed symptom presentation (F44.7) - Undifferentiated Somatoform Disorder (F45.1) - Hypochondriasis (F45.21) - Somatoform autonomic dysfunction (F45.3) - Persistent Somatoform Pain Disorder (F45.4) - Other Somatoform Disorders (F45.8) - Somatoform disorder, unspecified (F45.9) - Neurasthenia (F48.0) - Psychological and behavioural factors associated with disorders or diseases classified elsewhere (F54) - Factitious disorder (F68.1) Diagnostics identified in DSM-5 (4): - Conversion Disorder – Functional Neurological Symptom Disorder (300.11) - Somatic Symptom Disorder (300.82) - Illness Anxiety Disorder (300.7) - Somatic Symptom Disorder (300.82) with persistent pain - Other Specified Somatic Symptom and Related Disorder (300.89) - Unspecified Somatic Symptom and Related Disorder (300.82) - Psychological Factors Affecting Other Medical Conditions (316) - Factitious Disorder (300.19) Most Somatoform Disorders concepts in ICD-10 have a correspondence in DSM-5, with the exceptions of Somatization Disorder (where the Undifferentiated Somatoform Disorder takes place as the equivalent of the “new” Somatic Symptom Disorder), Somatoform Autonomic Disorder and Neurasthenia. A complete diagnostic correspondence would be beneficial to ease the communication between professional using different diagnostic criteria; what is more, the inexistence of correspondences in DSM-5 to diagnosis like Somatoform Autonomic Disorder and Neurasthenia reveals the path yet to be walked on the unification of such criteria.

No. 161

Relationship Between Melatonergic and Thyroid Systems in Depression

Poster Presenter: Fabrice Duval, M.D.

SUMMARY:

Background: Although melatonergic and thyroid system dysregulations are often observed in depression, it remains largely unknown whether these abnormalities are interrelated. Methods: Plasma melatonin concentrations were evaluated between 9 PM and 8 AM in 12 DSM-5 depressed inpatients; light (2,000 lx) was administered at midnight for one hour with a portable light device. On the following day, TSH responses to 8 AM and 11 PM TRH tests were measured. Results: Melatonin profiles exhibited a wide interindividual variability. Light induced a reduction in melatonin concentrations ($p < 0.005$); lowest values were observed at 1:13 AM ± 30 minutes (SD). Melatonin suppression (MT-S) values (expressed as percentage of change between concentration at midnight and lowest concentration after light) were correlated with 11 PM-?TSH (rho = 0.60; p = 0.04) and ??TSH values (difference between 11 PM-?TSH and 8 AM-?TSH; rho = 0.64; p = 0.03). Post-light rise in melatonin (MT-PLR) values (expressed as percentage of change between lowest concentration after light and concentration at 4 AM) were correlated with 11 PM-?TSH (rho = 0.78; p = 0.004) and ??TSH values (rho = 0.59; $p < 0.05$). Moreover, patients with reduced ??TSH values (< 2 µU/ml) showed a tendency towards lower MT-S and MT-PLR values (both p=0.07) compared to patients without thyroid abnormality. Conclusions: Our preliminary results suggest that melatonergic and thyroid systems are interrelated. In depression, a downward trend in nocturnal responses of melatonin (to light) and TSH

(to TRH) could possibly result from the weakened output of the endogenous oscillator.

No. 162

Neuroendocrine Assessment of Dopaminergic Functionduring Antidepressant Treatment in Major Depressed Patients

Poster Presenter: Fabrice Duval, M.D.

SUMMARY:

Background: The effects of antidepressant drugs on dopamine (DA) receptor sensitivity in the mesolimbic-hypothalamic system have yielded contradictory results. Methods: The postsynaptic DA-D2 receptor function was evaluated by the cortisol response to apomorphine (APO; 0.75 mg SC) in 16 drug-free DSM-5 major depressed inpatients and 18 healthy hospitalized controls. Furthermore, cortisol response to dexamethasone suppression test (DST) was also measured. After 2 and 4 weeks of antidepressant treatment (venlafaxine, n=8; tianeptine, n=8) the DST and APO tests were repeated in all patients. Antidepressant response was evaluated after 6 weeks of treatment. Results: Cortisol response to APO (?COR) was not influenced by the hypothalamic-pituitary-adrenal (HPA) axis activity, as assessed by the DST. At baseline, ?COR values did not differ significantly between patients and controls. After antidepressant treatment ?COR values were lower than in controls at week 2 (p = 0.01) and week 4 (p = 0.0003). ?COR values at week 4 were correlated with Hamilton Depression Rating Scale scores at week 4 (rho = 0.62; p = 0.01) and 6 (rho = 0.67; p = 0.004). After 4 weeks' treatment, among the 8 patients who had blunted ?COR values, 7 were subsequent remitters, while among the 8 patients who had normal ?COR values, 7 were non-remitters (p=0.01). Conclusions: Our study suggests that following chronic antidepressant treatment desensitization of postsynaptic DA-D2 receptors connected with the regulation of the HPA axis at the hypothalamic level is associated with clinical remission. These results could reflect increased DA levels in the mesolimbic pathway.

No. 163

A Mitochondrial Heath Index in Major Depression: Associations With Telomerase Activity and Oxidative Stress

Poster Presenter: Johan Fernström
Lead Author: Daniel Lindqvist, M.D., Ph.D.
Co-Authors: Owen Mark Wolkowitz, M.D., Åsa Westrin, M.D., Ph.D., Francesco Saverio Bersani, Synthia Mellon, Ph.D., Victor Ivar Reus, M.D., Martin Picard, Christina Hough, Brenton Nier

SUMMARY:

INTRODUCTION. Mitochondrial (MT) dysfunction is implicated in stress-related conditions and psychiatric illnesses. Recently, a mitochondrial health index (MHI) estimating mitochondrial respiratory enzymatic activity on a per mitochondrion basis was found to inversely correlate with negative affect in stressed caregivers (1). Here, we report the first application of this metric to major depressive disorder (MDD) as well as its relationship to putative indices of cellular protection (telomerase activity [TA]) or oxidative stress (8-OHdG, and glutathione peroxidase [GPx]). METHODS. 46 medication-free MDD subjects, and 49 healthy controls were studied. Depression severity was assessed with the HDRS, and lifetime chronicity of depression was estimated via semi-structured interview. Frozen PBMCs were assayed for TA and for activity of MT enzymes (COX, SDH) as well as for mtDNA copy number (mtDNAcn). The MHI was adapted from (1) and calculated as (COX+SDH)/mtDNAcn. PBMC TA was assayed by TRAP assay, plasma 8-OHdG was assayed by HPLC/MS and GPx using a colorimetric assay (2). RESULTS. MDD and controls did not differ significantly on age, gender or ethnicity. There was no significant between-group difference in the MHI (p=0.95) and MHI was not significantly correlated with HDRS ratings (p=0.76). Surprisingly, MHI was positively correlated with depression chronicity (rho=0.43, p=0.003; covarying for age). In the MDD group (rho=0.39, p=0.07), but not in the controls (rho=0.10, p=0.48), MHI was positively correlated with TA. On the contrary, in the control group, MHI was negatively correlated with 8-OHdG (rho=-0.33, p=.02) and positively correlated with GPx (rho=0.34, p=0.023); neither was significantly correlated with MHI in the MDD group (8-OHdG: (rho=-0.10, p=0.52), GPx: rho=-0.17, p=0.27). DISCUSSION. MDD subjects in the present study did not evidence differences in the MHI compared to controls. Unexpectedly, chronicity of depression was

positively correlated with MHI. This, plus the significant positive correlation between TA and MHI in the MDD group, raise the possibility that telomerase upregulation in MDD counteracts potentially detrimental cellular effects, as previously suggested in MDD (3) and in clinically depressed caregivers (4). Under conditions of increased oxidative stress, telomerase shuttles from the nucleus to the MT specifically to preserve MT function (5). We hypothesize that MT function is relatively preserved in MDD in proportion to the cell's ability to shuttle TA to the MT by this mechanism. This hypothesis is supported by our finding that MHI was inversely associated with oxidative stress in the controls but not MDDs. Despite the preservation of "mitochondrial health" in this sample of MDD, we cannot rule out long-term maladaptive consequences of this protective activity. The data support intrinsic cellular protective or compensatory actions sparing MT functioning, especially in chronic cases of MDD.

No. 164

Interoceptive Accuracy Varies With Attachment Style

Poster Presenter: Amruthur Gita Ramamurthy, M.D.
Co-Author: Benjamin Milczarski

SUMMARY:

Introduction: Interoceptive input (i.e. visceral sensory information) flows up the vagal nerve to be processed in brain areas including the brainstem, the thalamus, and the cortex – especially the insula, anterior cingulate and prefrontal cortex. Input from limbic areas (e.g. amygdala, striatum) is integrated with interoceptive information. These nodes and pathways are the basis for an integrated neural network subserving awareness of affect and interoceptive experience. The function of this network can be assessed with performance on heartbeat perception tasks. Little is known about interoceptive accuracy in psychiatric inpatients or its relationship to attachment style. Secure Attachment is characterized by emotional receptivity and CNS responsiveness to social threats (insula activation) and rewards (striatal activation). Dismissive Attachment correlates with emotional avoidance and CNS hypo-responsiveness to social cues. Individuals with Preoccupied Attachment typically are emotional hypervigilant and have CNS/psychophysiological hyper-responsiveness. The neural networks processing attachment, emotion and interoception overlap considerably. Thus, we expected interoceptive accuracy to correlate directly with levels of Secure and Preoccupied Attachment, but inversely with levels of Dismissive Attachment. Methods: 26 psychiatric inpatients performed a heartbeat discrimination task and completed the Attachment Styles Questionnaire (and other validated psychological scales) several times during their hospital stay. Results: To reduce the difficulty achieving statistical significance with multiple correlations, we employed Principal Components Analysis (PCA) on the psychological variables tested. PCA identified two principal components. Only one had a near significant correlation ($p=0.034$, threshold p of 0.025) with interoceptive accuracy. Secure and Dismissive Attachment loaded onto this principal component and correlated with interoceptive accuracy. As predicted, interoceptive accuracy correlated directly with levels of Secure Attachment ($r = 0.25$, $p < 0.05$), and inversely with levels of Dismissive Attachment ($r = 0.24$, $p < 0.05$). Unexpectedly, interoceptive accuracy did not correlate with levels of Preoccupied Attachment. Conclusions: Secure Attachment is associated with interoceptive accuracy. We would hypothesize that repeated childhood experiences of emotionally available parents facilitate CNS attunement to interoceptive and emotional signals among securely attached adults. Emotionally unresponsive parenting during childhood may impede that attunement in dismissively attached adults, leading to impaired interoceptive accuracy. Evidence suggests that improved interoception mediates improvement in alexithymia during mindfulness meditation. Whether Dismissive Attachment improves with similar methods should be explored.

No. 165

Plasma Zonulin, a Gut Permeability Marker, Is Low in Major Depressive Disorder

Poster Presenter: Gustav Söderberg
Co-Authors: Daniel Lindqvist, M.D., Ph.D., Owen Mark Wolkowitz, M.D., Victor Ivar Reus, M.D., Åsa Westrin, M.D., Ph.D., Ryan Rampersaud, Synthia Mellon, Ph.D., Klas Sjöberg

SUMMARY:

Background Gut permeability alterations may be involved in Major Depressive Disorder (MDD). The mechanisms are not fully understood but may involve a stress-induced imbalance in gut microbiota. A “leaky gut” trigger biological pathways suspected of involvement in MDD including inflammation. Zonulin is a protein involved in modulating gut permeability and has been shown to weaken the tight junctions between cells of the small intestine. Higher plasma zonulin may reflect greater gut permeability, although paradoxically low levels could reflect loss of gut epithelial cells. Low zonulin has been associated with suicidality in psychiatric patients and with poorer medical outcomes in HIV. The aims were to i) investigate plasma zonulin in MDD, and ii) relate zonulin to stress as well as to high-sensitivity C-reactive protein (hs-CRP). Methods Zonulin and hs-CRP was quantified in plasma samples from 46 unmedicated and somatically healthy MDD subjects and 53 healthy controls (HC). Perceived stress was assessed using the Perceived Stress Scale (PSS) and depression severity with the 17-item Hamilton Depression Rating Scale (HDRS). Results Zonulin was significantly lower in MDD subjects compared to HCs ($p<0.001$). Hs-CRP was not significantly different between MDD subjects and HCs ($p=0.97$), but plasma zonulin was positively correlated with hs-CRP in all subjects ($r=0.27$, $p<0.01$; similar in MDDs and HCs). Zonulin was negatively correlated with PSS in all subjects ($r=-0.35$, $p<0.001$). This correlation was negative and at trend level in MDD ($r=-0.27$, $p=0.07$), but positive in controls ($r=0.18$, $p=0.21$). The two correlation coefficients were statistically different ($p=0.03$). Zonulin was not significantly correlated with HDRS scores ($p=0.81$). Discussion Low plasma zonulin levels are associated with MDD, although results might differ in samples with higher levels of inflammation than were seen in our study, since CRP was positively correlated with zonulin. Low zonulin was associated with more perceived stress, and this was more pronounced in the MDD group. Our results are in line with previous findings of lower zonulin in suicide attempters (1), while others reported high zonulin in MDD (2). The reasons for these divergent findings are unknown. Viable gut epithelial cells express zonulin, which disassembles intracellular tight junctions, thereby increasing permeability. If replicated, our findings of lower zonulin levels in MDD could suggest greater gut epithelial cell death in MDD, as suggested in other populations (3, 4), since zonulin is produced by viable gut epithelial cells. Our finding of a direct correlation between zonulin and peripheral inflammation is in line with previous reports (5). Zonulin levels are being ascertained in studies in gastrointestinal diseases as a measure of gut permeability, although other markers also exist. Our data, while preliminary, add to the growing literature on a disturbed gut-brain axis in MDD.

No. 166

Low Total Cholesterol and Low-Density Lipoprotein Associated With Aggression and Hostility in Recent Suicide Attempters

Poster Presenter: Klara Suneson
Co-Authors: Marie Asp, Lil Träskman-Bendz, Åsa Westrin, M.D., Ph.D., Livia Ambrus, Daniel Lindqvist, M.D., Ph.D.

SUMMARY:

Low cholesterol levels have been correlated with both suicidal and aggressive behavior in psychiatric patients (Golomb et al., 1998). Few studies have investigated associations between serum lipid profiles and both aggressive state and trait. Moreover, It has been suggested that aggressive symptoms and personality traits may be key features of certain “suicidal endophenotypes” (Courtet et al., 2011). A better understanding of the biology behind aggressive personality traits and symptoms in suicidal individuals could open up for improved preventive and therapeutic strategies. Fifty-two psychiatric inpatients were included in this study after a suicide attempt. State aggression was negatively correlated with total cholesterol (TC) and low-density lipoprotein (LDL), both significantly ($p=0.002$ and $p=0.001$ respectively). Trait aggression was also significantly and negatively correlated with LDL ($p=0.04$), but not TC. There were small but significant mediation effects of severity of anxiety symptoms on the relationship between state aggression and TC as well as LDL. Future mechanistic studies are warranted to better understand the relationship between low cholesterol and high aggression in suicide attempters, as well as a potential clinical impact.

No. 167

Trauma's Aftermath: Do Biological Stress Markers Correlate With Neurocognitive Measures?

Poster Presenter: Phebe Mary Tucker, M.D.
Co-Authors: Sarah E. Johnston, M.S., Eleanor Lastrapes, M.D., Daniel Zhao, Ph.D.

SUMMARY:

Introduction: Research shows that trauma survivors have diverse abnormalities in biological stress markers, such as various cytokines and heart rate variability, and in neurocognitive measures, as well as increased symptoms of depression and PTSD. We explored relocated Katrina survivors' psychiatric symptoms and disorders, biological and neurocognitive measures and their associations with each other. These factors could complicate recovery efforts and affect health and mental health. Methods: Adult Katrina survivors and demographically-matched controls were assessed for baseline symptoms of depression (BDI-II) and PTSD (CAPS), psychiatric diagnoses (SCID), serum levels of immunologic Interleukin-2 (IL-2) and pro-inflammatory and pleiotropic IL-6 (IL-6), and power spectral analysis heart rate variability (HRV). Neurocognitive functioning was measured by Trail Making Test Part A (TMT-A) (processing speed) and Trail Making Test Part B (TMT-B) (mental flexibility), Connors Continuous Performance Test (CPT-2) (sustained attention), and Rey Auditory-Verbal Learning Test (RAVLT) (learning and memory). T tests, univariate analysis of variances and Spearman correlation coefficients analyzed data. Results: Survivors compared to controls had higher symptom levels of depression and PTSD, lower parasympathetic and higher sympathetic HRV activity, and deficits in cognitive processing (TMT-A), mental flexibility (TMT-B) and sustained attention (CPT-2). Groups did not differ in IL-2 or IL-6. Among survivors with depression, increased sympathetic HRV activity correlated with deficits in mental flexibility (TMT-B). Depressed survivors' PTSD re-experiencing symptoms (CAPSB) correlated with lower immunologic IL-2. Among survivors with any psychiatric diagnosis, lower parasympathetic activity was associated with mental flexibility deficits, and IL-6 was linked with learning and memory deficits (RAVLT). Survivors with any psychiatric diagnosis also had an association of delayed recall (RAVLT) with IL-6. Unexpectedly, survivors with PTSD alone lacked associations of neurocognitive measures with HRV and cytokines. Conclusions: Relocated hurricane survivors with depression and with any psychiatric diagnosis, but not with PTSD alone, had some correlations of neurocognitive deficits with HRV and IL-6. Co-occurring neurocognitive and neurobiological stress measures may complicate recovery, and may contribute to health or mental health problems. These associations may also support a common pathway in pathophysiology of stress responses.

No. 168

WITHDRAWN

No. 169

Analysis of Job Stress, Interpersonal Conflict, Job Neglect, and Turnover Intention: A Comparative Study in Health Sector

Poster Presenter: Yasin Bez, M.D.
Lead Author: Necmi Arslan
Co-Authors: Aykut Tongur, Mehme Halis Tanrivierdi, Abdurrahim Emhan

SUMMARY:

Background: One of the most important antecedents of job neglect and turnover intention is the stressful job environment and interpersonal conflict (Porter and Steers 1973; Withey and Cooper, 1989; Griffeth et.al., 2000; Naus, et.al., 2007; Rahim, 2010). Job neglect and turnover intention are considered as important antecedents and consequences that have to be considered seriously by organizations. Aim of this study is to analyze the relationship between job stress, interpersonal conflict, job neglect, and turnover intention in health sector. Methods: Valid and reliable scales to measure occupational stress, interpersonal conflict, job neglect, and turnover intention were used in addition to a semi-structured data collection sheet to collect demographic and job related variables. In order to increase the validity and generalizability of the results the study was designed as quasi-panel longitudinal, meaning employees of the same hospitals filled the study questionnaires at two different time periods 2 years apart (June 2016 and May 2018). A total of 538 surveys were collected from the state and private

hospitals in a metropolitan city located in Southeastern Turkey. To analyze the collected data, Structural Equation Modeling method was used by taking advantage of AMOS 18.0 software. Results: Job stress and job neglect scores of employees working in private hospitals are higher than scores of employees working in public hospitals; interpersonal conflict scores of employees working in emergencies and intensive care units are higher than employees working in other units; negligence scores of male employees are higher than female employees; turnover intention scores of employees over age 40 are lower than scores of employees under age 40; employees working overtime 16 hours and more in a week report higher job stress scores than scores of employees working overtime 5 hours or less in a week; employees working in administrative units of hospital have lower turnover intention scores than scores of employees working in units like emergency, intensive care, and diagnosis-examination. Finally, higher levels of job stress and interpersonal conflict are related with higher job neglect and turnover intention. Conclusion: Job stress and interpersonal conflict seem to be contributing to job neglect and turnover intention among health care providers. Individual differences exist between different subgroups based on the type of the hospital (state vs private), demographical variables, years of job experience, assigned units, and amount of overtime work hours. Keywords: job stress, job neglect, interpersonal conflict, turnover intention, health sector, hospital

No. 170

Olanzapine-Induced Neutropenia and Guidelines for Blood Cell Monitoring Among Pediatric Patients on Antipsychotics

Poster Presenter: Tamar Katz
Co-Authors: Martha J. Ignaszewski, M.D., Eleni Maneta

SUMMARY:
Background: Neutropenia is a known side effect of many psychiatric medications, most notably clozapine where strict guidelines exist for Complete-Blood-Count (CBC) monitoring. However neutropenia is also associated with other antipsychotic medications, specifically olanzapine, which has been in use for almost 3 decades and has widespread use for treatment of schizophrenia and bipolar disorder in children though this side effect is rarely monitored. Clinicians who prescribe olanzapine are encouraged to perform regular monitoring for metabolic side effects and extrapyramidal symptoms, though no clear guidelines exist for regular White Blood Count (WBC) and Absolute Neutrophil Count (ANC) monitoring, despite neutropenia being a potentially dangerous adverse outcome. Additionally, the interpretation of a CBC differential in patients with comorbid hematological conditions on olanzapine can be complicated and is also poorly understood by many psychiatric providers. Case History: Here we present the case of a14 year old boy with benign ethnic neutropenia (BEN), a severe trauma history, Autism, ADHD, and aggression treated with multiple antipsychotics, who presented with new onset psychotic symptoms. The patient was cross-tapered from risperidone to olanzapine, following which he developed worsening neutropenia. We will discuss the pharmacological mechanism by which olanzapine may cause neutropenia, the interaction with his comorbid benign ethnic neutropenia, interactions with other medications, and the protocol that was undertaken on our inpatient unit for blood monitoring and interpretation of results. Additionally, a thorough literature review of antipsychotic induced blood dyscrasias will be presented. Conclusion: Olanzapine induced neutropenia is a rare but potentially dangerous adverse medication effect. The relationship between olanzapine, medication induced neutropenia, and other medical factors such as polypharmacy or comorbid medical conditions (including hematologic conditions) can be complicated for clinicians prescribing antipsychotic medications, and no formal guidelines exist for CBC or ANC monitoring. Using this case and a thorough literature review we will demonstrate the need for more standardized monitoring as well as inform clinicians of neutropenia as a possible side effect when considering the use of olanzapine in addition to other antipsychotic medications.

No. 171

An Interdisciplinary Approach to ICU Delirium: A Mixed Methods Study

Poster Presenter: Alëna A. Balasanova, M.D.

Co-Author: Dongchan Park, M.D.

SUMMARY:
Background: Delirium is a common and costly complication of critical illness in hospitalized patients. An innovative approach to delirium prevention and management is to include and engage the interdisciplinary expertise of patients' primary and consulting treatment teams. As front line providers of patient care, nurses (RNs) are in a unique position to inform policies and interventions to improve ICU patient outcomes. Methods: A questionnaire was developed and administered to evaluate RN attitudes and knowledge about ICU delirium and its assessment in an urban academic medical center. Quantitative measures were 15 closed-ended questions on a Likert Scale and 6 demographic questions. Seven knowledge questions were recoded as binary and combined to create a continuous variable knowledge score (KS) which was compared across a range of categorical measures. Two open-ended questions served as qualitative measures and a conventional approach to content analysis was used to identify descriptive themes. Results: Quantitative: 91 out of 297 RNs (31%) completed the survey and 46 out of 91 (51%) answered 1-2 optional questions. 96% were female with median age 40-49 years and 64.8% had worked in clinical nursing > 15 years. 70% felt confident or very confident in their delirium-assessment skills and 85% agreed or strongly agreed that additional education and training would further increase confidence in their skills. More than half (=65%) of RNs scored 'high knowledge' on individual knowledge measures except in response to question of "most cases of ICU delirium can be identified by observing patients for agitation as part of routine daily care," on which 90% scored 'low knowledge.' Relationship of KS to years in clinical nursing was not statistically significant (p=0.827). Qualitative: 28% of comments concerned perceptions of assessment tools and 25% addressed educational factors. Collaboration with medical team was cited as the biggest barrier (42%) to caring for patients with delirium, subcategorized into undermedicating (34%), insufficient physician training/skills (33%) and MD responsiveness to RN concerns (29%). Conclusion: No significant relationships were found between KS and study demographic variables, attitudes, or self-efficacy measures. Normally distributed KS suggests an average base knowledge with varying degrees of deficits among all respondents with one striking exception. Delirium was perceived mainly in terms of hyperactive behaviors which triangulated with qualitative results of concerns for prompt medication. We posit a knowledge gap of limited awareness of hypoactive delirium. Amidst the landscape of influences on delirium diagnosis and management, our findings provide perspective on current clinical practices and offer a platform for innovative interdisciplinary problem-solving. The Boston Medical Center Department of Psychiatry supported this study.

No. 172
Calm Before the Storm
Poster Presenter: Durim Bozhdaraj, 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. 173

A Comparison Study of the Turnaround Time for Telepsychiatry Versus Face-to-Face Consultations in General Hospital Nonpsychiatric Emergency Rooms

Poster Presenter: Ronald Brenner, M.D.
Co-Authors: Subramoniam Madhusoodanan, M.D., Gina Castell, Jennifer Logiudice, Todd MacKenzie, Patrick O'Shaughnessy

SUMMARY:
Background: Psychiatric consultation services particularly for emergencies are limited in many parts of the country. Telepsychiatry services are helping to bridge the gap and gaining acceptance and popularity. There is paucity of publications regarding comparison of turnaround time for consultations between video conferencing and traditional face-to-face psychiatric consultations in general hospital non-psychiatric emergency rooms. Our study aims to address turnaround time and patient satisfaction. Methods: Data regarding the turnaround time for Emergency psychiatric consultations using Telepsychiatry in general hospital emergency rooms was collected retrospectively and compared with the time for face-to-face traditional consultations. A patient satisfaction survey was also conducted post the Telepsychiatrist consultation. Statistical analysis of the data was done after completion of the study. Results: analysis of the Telepsychiatry group included 206 subjects and the control group 186. There was an 84% reduction in the turnaround time for Telepsychiatry consults. (95% CI of 81% to 86%). Patient satisfaction survey showed 94% satisfaction with Telepsychiatry services. Gender and age did not modify the effect of Telepyschiatry on time to consult, p>0.10. Conclusion: The reduction in the turnaround time and improved patient satisfaction indicate that the Telepsychiatry services can improve the quality of care for these patients in need of emergency services.

No. 174

Case Studies in Treating the Acutely Manic and Aggressive Patient: Achieving Rapid Symptom Improvement by Restoring Sleep Quality and Duration

Poster Presenter: Michael T. Guppenberger, M.D.

SUMMARY:
There is a well-known link between sleep disturbance and all phases of Bipolar Disorder. Circadian rhythm dysfunction is present in all phases of Bipolar Disorder, showing increased REM density, more variable sleep patterns, longer time to sleep onset, lower sleep efficiency and quality, and reduced daily activity. Despite ample research examining the relationship between sleep-disturbance and Bipolar Disorder, Galynker et al. (2016) notes that there is limited research that "assess the temporal relationship between sleep restoration and resolution of mania" (p.2). Nowlin-Finch et al. (1994) found that rapid responders--those patients experiencing a rapid improvement in symptoms of mania--were more likely to experience more sleep the first night of hospitalization versus non-rapid responders. Galynker et al. (2016) proposed that full resolution of a manic episode is not possible without restoration of sleep first, which justifies "aggressive treatment, despite symptomatic improvement" (p.2). In their retrospective chart review they found sleep improvement preceded and predicted improvement in manic and psychotic symptoms. Further, improvements in symptoms were not necessarily associated with duration of sleep, but may be due to quality of sleep (Galynker et al., 2016). Another potential complication is a mania-associated agitated state, with an increased risk for aggression and violence. On our Psychiatric Intensive Care Unit (PICU) data gathered from May 2015 to October 2016 indicate that patients with mania versus Schizophrenia had almost twice as many aggressive incidents. They were also more likely to become aggressive without provocation, target staff members, use hands (fists) in their violence, cause the target to feel threatened, and require seclusion. Our PICU adopted a treatment strategy to aggressively treat acute mania by inducing and sustaining sleep through use of antipsychotic medication. A young man and woman who presented with acute mania and aggression were assertively treated with Chlorpormazine upon admission to the PICU. Both patients voluntarily took the medication; however intramuscular injections

were used for imminent risk situations. Compared to previous admissions, both patients achieved quicker restoration of sleep (=6 hours per night), a more rapid reduction in violence risk scores (Brocet Violent Checklist), and less aggressive behavior. Their more rapid improvement in symptoms led to more meaningful engagement in unit activities. These patients also spent less time on the PICU and were transferred back to a regular inpatient unit. Our PICU now regularly utilizes this treatment strategy with acutely manic and aggressive patients, with good effect. Adoption of this treatment strategy may lead to more rapid symptom improvement, reduced suffering for patients, less aggression, and shorter hospital stays. This poster will explore theory, available evidence, case studies, and conclusions.

No. 175

Improving Safe Prescribing of Opioids for Patients Admitted to Inpatient Psychiatry

Poster Presenter: Alyssa M. Lucker, D.O.

SUMMARY:

Opioid-related deaths have increased over the years, prompting the CDC to issue newer guidelines on safe opioid prescribing. The purpose of this project is to apply key areas of these recommendations, via a standardized screening and discharge checklist for opioid risk, to an inpatient psychiatric setting. This study is designed to compare rates of compliance with these CDC recommendations before and after utilizing the new checklist specific to patients on opioid medications. Total sample included 136 patients, 86 prior to the implementation of the opioid checklist, 50 patients in the post implementation group. The goal is to utilize a systematic, multidisciplinary approach to help mitigate, to the best extent to possible, overdose risk from opioids in our local community and help these patients connect to available community resources at discharge from an inpatient psychiatric hospitalization. The introduction of a standardized opioid checklist for discharge, along with staff training resulted in several significant improvement in various areas, a few of which were: change in PDMP checking, in reducing concomitant prescriptions of opioids and benzodiazepines at same or higher doses at discharge, discussion of drug risk/benefits specific to opioids, in contacting outpatient prescribers of opioids at discharge, in getting UDS collected in first 24 hours, and reducing or eliminating opioid prescriptions at discharge.

No. 176

"You Guys Can Help Other Families, but Mine's Different": Clinician and Family Factors Associated With Engagement in Wraparound Services

Poster Presenter: Robert Mendenhall, M.D.
Co-Authors: Marina Tolou-Shams, Ph.D., Doriana Bailey, Andrea Elser, James Willis Dilley, M.D., Christina V. Mangurian, M.D.

SUMMARY:

Background: Mental health care is frequently inaccessible to those who need it, with only about half of children and adolescents with mental illness receiving care. When families seek mental health treatment for their children, exorbitant wait times create significant barriers to care and allow existing problems to worsen. Even if patients are able to make contact with mental health services, providers are often unable to keep patients engaged. These issues are exacerbated for children who come from racial/ethnic minority groups and disadvantaged socioeconomic backgrounds. These barriers to care and engagement are salient to the Family Mosaic Project (FMP), a wraparound mental health clinic serving a youth safety-net population in San Francisco. This study examined existing FMP clinical care data to elucidate the pathway to clinic services and identify both patient and provider factors that are associated with engagement in services.
Methods: This mixed methods study entails: 1) medical chart review of 59 patients receiving services at FMP between November 2018 and April 2019 and 2) qualitative interviews with 11 care coordinators who serve as the primary contact for FMP services. Appointment data gathered during the chart review will include time to first in-person appointment and time frame to engagement (defined as time to three in-person appointments). Families will be divided into "engagers" (attended three or more appointments) and "non-engagers" (attended less than three appointments). Non/engager groups will be compared via chi-squared tests across youth and caregiver demographics, symptoms, and strengths/challenges,

as reported in their clinician's Child and Adolescent Needs and Strengths (CANS) assessment. Chart review will also describe the outreach methods used by their clinician (phone calls, letters, and/or warm hand-offs). Identified outreach methods will be incorporated into the individual interview discussion guide regarding care coordinator approaches, practices, and perceived trends in family engagement. Results: Patients are majority self-identified male (66.1%), in the 12-16 year age range (47.5%) and over half identify as Black/African American (25.4%) and Hispanic/Latino (32.2%). Preliminary care coordinator data suggest that phone calls are the most commonly used outreach tool. Engagement data collection and analysis is ongoing and will be completed in time for presentation of final results at the APA Annual Meeting in May 2019. Conclusion: This study aims to discover what factors, in terms of both clinicians and patients, are associated with varying levels of wraparound service engagement. This information will then inform institutional and clinical practices—by helping clinicians predict which families may be more challenging to engage, and evaluate their approach to these families—to ultimately better connect their services with families in need.

No. 177

Utilizing Mobile Units to Conduct Outreach Activities in Riverside County to Increase Mental Health Awareness (Fiscal Year 2016?2017)

Poster Presenter: Shalin Rajesh Patel, M.D.
Co-Authors: Julia Luu Hoang, M.D., Richard J. Lee, M.D., Emma Girard

SUMMARY:
Introduction: Utilizing mobile units is an approach to provide mental health care services and outreach to rural and under-severed communities. Targeted families are often limited to services due to transportation issues, geographical barriers, or due to the fact that their concerns do not meet mental health clinic criteria. Previous study from Geller et all noted in a national survey of mobile crisis services that although respondents reported that use of mobile crisis services is associated with favorable outcomes for patients and families and with lower hospitalization rates, the survey found that few service systems collect evaluative data on the effectiveness of these surveys.(1) The Prevention and Early Intervention Mobile Services (PEIMS) project received initial start up funding from the Mental Health Services ACT (MHSA) Prop 63, passed on the California ballot in 2004. Since that time a variety of innovative approaches to improve access of care for the Riverside county population have been able to be implemented and data has been able to be gathered. Methods: 3 Riverside County mobile units provide mental health services, Parent and Child Interactive Therapy (PCIT), and a variety of prevention interventions to families in Riverside County. The mobile units attend and conduct outreach activities such as presentations, community meetings, and health fairs throughout Riverside County, to promote their services, educate parents and teachers, and reduce mental health stigma in the community. The date, location, activity, and population demographics are recorded to document outreach activities. Outreach in the form of health fairs, public events, and presentations is accompanied by a sign in sheet to accurately determine who received information about services in the mobile unit. Results: The mobile units recorded attending a total of 11 outreach events in the community. Most outreach was in the form of public events n= 8. The public events (which included NAMI Walk, mental health resource fairs, and outreach at community churches) reached 529 people. Community meetings and presentations reached 93 people. Topics mainly included parenting, mobile services provided, and PCIT. 18% of the outreach efforts targeted parents of young children and another 18% targeted the uninsured community. 46% of the outreach events were for the community at large. 73% of the outreach efforts focused on the community at large and 27% focused on the needs specifically for the Hispanic/Latino community. Discussion: Mobile clinics can be utilized to serve vulnerable populations, encourages prevention, and promote high quality care that would not have been received otherwise. By traveling to these communities, mobile clinics remove logistical constraints such as transportation issues, difficulties making appointments, long wait times, complex administrative processes, and financial barriers such as health insurance requirements and copayment. (2)

No. 178

The Impact of an Internet-Based, Self-Directed, Performance Improvement Module on Assessment, Treatment, and Outcomes in Patients With MDD

Poster Presenter: Ted Singer
Lead Author: Kirk Tacka

SUMMARY:

Internet-based, self-directed performance improvement modules (PIMs) provide a convenient, low-cost method for physicians to satisfy the requirements for maintenance of certification (MOC) Part IV-- Improvement in Medical Practice. Based on validated quality measures, self-directed PIMs encourage alignment with practice guidelines and provide opportunities for autonomous learning tailored to individual needs and patient populations. A recent self-directed PIM endorsed by the American Board of Psychiatry and Neurology, the American Board of Family Physicians, and the American Board of Internal Medicine focused on the assessment, treatment, and outcomes of patients with major depressive disorder (MDD). A total of 140 psychiatrists and primary care physicians enrolled in the activity and completed chart audits for =10 patients with MDD prior to completing the PIM. The audits assessed compliance with NQF-endorsed quality measures for MDD assessment, treatment, and patient outcomes. Physicians received comparative feedback on their results versus national quality benchmarks and also received a series of interactive questionnaires and planning tools to support the development of a practice improvement plan. Physicians had 3-6 months to implement practice improvements and were prompted to audit another set of patient charts using the same set of quality measures to assess changes in practice patterns and patient outcomes. A total of 35 (40%) physicians completed chart audits for =10 patients following completion of the PIM. Key findings revealed clinically significant improvements in several performance measures and patient outcomes. There was a 6% increase in patients assessed for the presence of prior or current symptoms of MDD and/or behaviors associated with mania or hypomania, increasing from 92% at baseline to 98% following completion of the PIM. At baseline, only 53% of physicians administered the PHQ-9 or QIDS-16 to their patients at least once during treatment. This rose to 86% after completion of the PIM. There was a 7% increase in the percentage of physicians who treated patients with antidepressant therapy and/or psychotherapy for =12 weeks during the acute phase of therapy, increasing from 89% pre-PIM to 96% post-PIM. The PIM also increased physician adherence to MDD-related quality measures for 90-100% of patients, a surrogate for best-practice medicine. These increases were observed for utilization of recommended measures associated with assessment and diagnosis (77% pre vs 91% post), treatment (60% pre vs 89% post) and monitoring (31% pre vs 77% post) of patients with MDD. These findings suggest that self-directed PIMs are associated with clinically meaningful improvements in practice that may result in greater physician adherence to NQF-endorsed quality measures for MDD assessment, treatment, and patient outcomes. Controlled trials with a greater number of participants are necessary to confirm these results.

No. 179

Systematic Review of Interventions to Increase Rates of Metabolic Monitoring for Patients Prescribed Antipsychotic Medications

Poster Presenter: Levent Sipahi, M.D., Ph.D.
Co-Authors: Takahiro Soda, M.D., Ph.D., Bradley Neil Gaynes, M.D., Nathaniel Sowa, M.D., Ph.D.

SUMMARY:

Background: Metabolic syndrome accounts for the majority of early mortality in people with severe mental illness who take antipsychotic medications. Although regular monitoring is now considered the standard of care, rates of metabolic monitoring in patients who take antipsychotic medications remain low. Numerous QI, RCT, and case-control studies have reported the results of interventions to improve monitoring, but no comparative research exists to systematically assess this literature to determine how best to improve metabolic monitoring rates. Here, we present the results of a systematic review of interventions to increase rates of metabolic monitoring for patients prescribed antipsychotics. Methods: A prospectively registered, systematic review of studies that implemented an intervention to improve metabolic monitoring rates

in patient taking antipsychotic medications was completed. Unique citations were identified through searches of Medline, PsychInfo, and Scopus. Abstract and full text review were dually completed by two independent researchers using the Cincinnati Children's Legend Tools to ensure appropriateness for inclusion. Data extraction was completed dually to ensure completeness and accuracy. Qualitative analysis was completed, given diversity of study design, number, and quality of selected articles precluded quantitative meta-analysis. Results: Of 2250 unique citations identified, 22 articles were selected for data extraction and qualitative analysis.18 of 22 studies reported positive findings of increased rates of metabolic monitoring, with an average increased rate of monitoring of 35%; of these, 13 were supported by statistical analysis. Analyzed studies were diverse with regard to clinical setting, patient population, intervention type, and monitoring standards. Trends in effective intervention types were revealed by organizing interventions into four categories on the basis of whom/what was the active agent in the intervention: "patient-driven", "physician-driven", "third-party-driven", and "technology/system-driven". Intervention types that were "technology/system-driven" (live reminders, scheduled monitoring dates) and "third-party-driven" (nursing/pharmacy/case-management led interventions) were most likely (92%) to result in statistically significant increases in monitoring rates. In contrast, interventions that required patients and physicians to actively intervene (patient education, physician education, protocol creation, and auditing) were less likely (31%) to result in significantly improved monitoring rates. Conclusions: Interventions to improve rates of metabolic monitoring in patients prescribed antipsychotic medications were most likely to be successful when targeted at changing technology and systems-level processes; interventions that relied on education and feedback were less likely to lead to significant improvements. The authors report no biomedical financial interests or potential conflicts of interest.

No. 180

The Association of Oral Stimulant Medication Adherence With Work Productivity Among Adults With Attention-Deficit/Hyperactivity Disorder

Poster Presenter: William M. Spalding, M.S.
Co-Authors: Sepehr Farahbakhshian, Martine Maculaitis, Eugenia Peck, Amir Goren

SUMMARY:
Introduction: Adult attention-deficit/hyperactivity disorder (ADHD) can be associated with reduced work productivity. However, the relationship between adherence to oral stimulant pharmacotherapy and work productivity among US adults has not yet been well characterized. Objective: To assess the association between adherence to oral stimulant pharmacotherapy and work productivity and related indirect costs among US adults with ADHD. Methods: Adults (>=18 years old) who self-reported being diagnosed with ADHD by a healthcare provider and currently treated with oral stimulants for >=3 months participated in this noninterventional, online, cross-sectional survey. The survey took approximately 20 minutes to complete and gathered information on sociodemographic and health characteristics, medication adherence using the Medication Adherence Reasons Scale (MAR-Scale), work productivity and activity impairment using the Work Productivity and Activity Impairment–General Health (WPAI-GH) questionnaire, and ADHD symptom score using the Adult ADHD Self-Report Scale version 1.1 (ASRS-v1.1) Symptom Checklist. Respondents were dichotomized based on medication adherence level (low/medium adherence [LMA] group: MAR-Scale total score >=1; high adherence [HA] group: MAR-Scale total score of 0). Data are reported as mean ± standard deviation. Between-group differences were examined using 2-sided independent samples t-tests (statistical significance, P<0.05). Results: A total of 602 respondents (LMA group, n=395; HA group, n=207) participated in the survey. Most respondents were female (LMA, 78.5% [310/395]; HA, 74.4% [154/207]) and employed (LMA, 66.6% [263/395]; HA, 61.8% [128/207]). Age was significantly lower in the LMA versus the HA group (37.80±13.83 vs 44.97±14.64 years, P<0.05). Among respondents in the LMA group, the most frequently reported reason for nonadherence was forgetfulness (68.1% [269/395]). On the WPAI-GH, respondents in the LMA versus the HA group reported significantly greater absenteeism (10.62%±21.64% vs 4.55%±13.19% P<0.05), presenteeism

(38.63%±28.57% vs 29.66%±27.61% P<0.05), overall work productivity loss (48.15%±38.29% vs 33.96%±32.39% P<0.05), and activity impairment (47.29%±31.38% vs 40.77%±31.12% P<0.05). Moreover, respondents in the LMA versus the HA group reported significantly greater mean absenteeism-related indirect costs ($3,669.33±$10,491.35 vs $1,359.42±$4,068.61, P<0.05) and total indirect costs ($15,401.40±$16,304.66 vs $10,790.17±$11,919.97, P<0.05). ASRS-v1.1 Symptom Checklist scores were significantly greater (ie, symptom levels were higher) in the LMA versus the HA group (10.64±4.79 vs 8.55±5.04, P<0.05). Conclusions: In adults with a self-reported ADHD diagnosis currently taking an oral stimulant medication, lower medication adherence was associated with significantly greater work productivity loss, activity impairment, and indirect costs. (Sponsored by Shire Development LLC, Lexington, MA)

No. 181

Lifestyle Balance Program for Veterans With Serious Mental Illness: Nutrition and Exercise Counseling Effect on Smoking Cessation

Poster Presenter: Donna Ames

SUMMARY:

Individuals with serious mental illness (SMI) tend to die about 25 years earlier than the general population, a risk which is exacerbated by modifiable risk factors such as obesity and cigarette smoking. It is estimated that about half of all cigarettes are consumed by patients with a psychiatric diagnosis, underscoring the public health burden of smoking in individuals with SMI. The prevalence of tobacco use disorder is two to four times higher in individuals with SMI compared to those without, and those who smoked had a four-time higher death rate compared to non-smokers with SMI. Moreover, smoking interferes with maintaining stable levels of some psychiatric medications. Rates of smoking are particularly elevated in U.S. Veterans. A major obstacle to reducing the burden of smoking in individuals with SMI is that these smokers have only about half the success rate at smoking cessation during a quit attempt compared to smokers with no mental illness. Given current smoking cessation treatments are not as effective for smokers with SMI compared to smokers without SMI and there is a lack of tobacco treatment programs that address this population, there exists an urgent need to improve smoking cessation programs in patients with SMI. Our research group developed a comprehensive Lifestyle Balance (LB) behavioral weight management program for patients with SMI. It is adapted from the Diabetes Prevention Program (DPP) that encouraged behavioral changes in individuals at risk for diabetes. LB is multi-modal, as prescribed by the U.S. Preventive Services Task Force. Modified to include material specifically designed to address cognitive and behavioral challenges unique to the SMI population, LB has 16 sessions that include information on healthy nutrition, physical activity, stress management and staying motivated. Sessions concluded with individual nutrition counseling with a registered dietitian. Participants maintained food and exercise diaries and received small rewards to incentivize participation in exercise. Pedometers were given to participants to document steps walked. In two VA Merit Review trials, LB demonstrated superiority to Usual Care (UC) control, in terms of reducing the burden of obesity in people with SMI. Veterans also improved in overall well-being. Interestingly, 18% of the 58 patients enrolled in the LB arm quit smoking entirely compared to 0% of 57 patients enrolled in usual care for weight loss, though LB only focused on exercise and nutrition. This is significant (Chi^2(1)=6.02, p=.014), and suggests there is considerable promise in adapting the LB program as an adjunctive treatment modality for individuals with SMI who are seeking treatment for tobacco dependence. Incorporating healthy nutrition and exercise as an adjunct to smoking cessation interventions is critical given that quitting smoking is associated with increased weight gain, and concern about weight gain can limit adherence to smoking abstinence.

No. 182

Examining the Referral Process for a Vocational Training Program for Youth With Mental Health Needs

Poster Presenter: David Grunwald, M.D.

Co-Authors: Marina Tolou-Shams, Ph.D., Doriana Bailey, Andrea Elser, James Willis Dilley, M.D., Christina V. Mangurian, M.D.

SUMMARY:
Background Youth with psychiatric symptoms who are transitioning into adulthood often have challenges finding employment. Supported employment interventions can greatly improve outcomes, including finding a job, working more hours, keeping a job longer, and less reliance on public assistance. Literature suggests that these supported employment services are often underutilized and outcomes have been studied primarily in first-episode psychosis populations. Less is known about utilization and outcomes of these interventions for youth with other psychiatric needs. Thus, this study aims to understand access to and utilization of supported employment services for youth in a wraparound community mental health clinic that partners with an occupational therapy and vocational training program. Specifically, we will examine who gets referred, how and why they are referred and assess barriers to and facilitators of referral. Methods Sample. Youth participants include 75, 11-18 year-old patients receiving mental health services from 2017-2018. Staff participants include 8 clinic care coordinators, behavioral support staff, and managers and 2 vocational program staff. Measures and Procedures. This mixed methods study will utilize: 1) quantitative, chart review data to describe the patient sample (number referred, demographics, and psychiatric symptom data from Child and Adolescent Needs and Strengths (CANS) assessment) and 2) qualitative data from stakeholder interviews to inform understanding of the referral process, including reasons for and facilitators of referral, as well as system referral policies. Using basic thematic analysis, we will draw common themes from stakeholder interviews and triangulate these with quantitative data. Results From 2017-2018, 11 youth were referred to vocational programming (of 24 openings) and 9 received services. Of the 2 that did not receive services, one was discharged into residential treatment and the other family declined vocational services. Examples of preliminary reasons identified by stakeholders for barriers to referral include limited vocational program knowledge among staff and limited policy related to referral for vocational needs. Data collection and analysis is ongoing and will be completed in time for presentation of final results at the 2019 APA Annual Meeting. Conclusions This study will illuminate the patient-specific factors influencing referrals to youth vocational training and improve understanding of the knowledge, attitudes and experiences of staff at a mental health clinic and partner vocational training program. Results will inform recommendations for clinic policy and ideas for intervention development to support youth vocational programming, access and linkage.

Poster Session 6

No. 1

The Use of Gabapentin to Improve Drinking Behaviors and Cravings in Alcohol Dependence: A Meta-Analysis

Poster Presenter: Albert Nguyen, D.O.
Co-Authors: Benjamin Ehrenreich, M.D., Shane Verhoef, M.D.

SUMMARY:
Introduction: Alcohol Use Disorder continues to be a public health problem despite decades of research into different pharmacologic interventions. Although there are multiple medications approved by the FDA for treatment of alcohol dependence, they are not effective in all patients, thus warranting continued research in novel agents. Gabapentin has emerged as a potential treatment due to its effect on GABA activation, which has been associated with alcohol dependence. The aim of this meta-analysis is to assess the efficacy of gabapentin on improving alcohol dependence. Methods: English-language articles from January 1980 to September 2017 were searched in the electronic databases of PubMed and PsychInfo. The following were used as search terms for this meta-analysis: alcohol-related disorders, ethanol, alcohol dependence, alcohol use disorder, alcohol detoxification, craving, alcoholism, alcohol withdrawal, alcohol, gabapentin, Neurontin. Studies that met criteria for inclusion were randomized clinical trials that compared any study that used gabapentin, monotherapy or with other agents, compared to standard placebo in studying efficacy in alcohol dependence with outcome measures of drinking that included: percentage of days abstinent, drinks per drinking days, days of heavy drinking or cravings in patients not currently in acute alcohol withdrawal. Results: Search of Pubmed and

Psychinfo yielded 6 studies that met our inclusion criteria. All six studies were randomized controlled trials comparing gabapentin with controlled placebo with a total of 408 participants and 317 participants who completed trials. Three of the six studies showed positive results with gabapentin over placebo. Two of the six studies had used gabapentin with another agent, one study used naltrexone and another used flumazenil. Of all the analyses, gabapentin only appeared to have significant higher efficacy over placebo when measuring drinks per drinking days with SMD -0.327 (p = 0.044) showing a small treatment effect size. Gabapentin had higher efficacy over placebo in decreasing cravings with SMD -0.262 (p=0.034) showing a small effect size. There was no statistical improvement of gabapentin over placebo in percentage days abstinent or percentage of heavy drinking days. Discussion: To our knowledge, this is the second meta-analysis studying gabapentin in alcohol dependence. Studies with gabapentin are mixed, which may be attributed to the small study size of the trials and having only a few randomized clinical trials that studied gabapentin monotherapy. There was a small effect size of improved efficacy of gabapentin compared to placebo for reducing drinks per drinking days. More research with gabapentin as monotherapy treatment, with large RCTs and fewer limitations, will need to be completed before any conclusions can be drawn regarding gabapentin's efficacy in treating alcohol dependence.

No. 2

Internet Addiction and Associated Lifestyle Variables Among Military Medical Students and Medical Professionals

Poster Presenter: Gerald D. Schmidt, M.D.

SUMMARY:

Problematic use of video games, social media, and internet-related activities is associated with sleep deprivation, social isolation, mood disorders, and poor work performance. The Internet Addiction Test was given to military medical and nursing students and housestaff to assess Internet Addiction (IA). Nursing and medical students from Uniformed Services University of the Health Sciences and housestaff from Naval Medical Center San Diego were emailed (n=1000) a survey that included the Internet Addiction Test as well as questions asking about other lifestyle variables, some of which were hypothesized to be negatively impacted by problematic internet use. Participants who received an Internet Addiction Score (IAS) >50 were identified as likely experiencing harmful effects of IA. In total, 330 surveys were completed. The rates of Internet use were found to be towards the lower end of global addiction rates of IA. Rates further decreased between groups of residents and housestaff. Multiple variables, such as increased videogame use, decreased self-reported scholastic performance, and social media use during sleeping hours were found to be significantly correlated with IA. This paper explores IA amongst military nursing and medical trainees and how problematic Internet use may affect force readiness and work performance.

No. 3

A Retrospective Study of Hospital Recidivism Among Patients With Alcohol Use Disorders Treated With Intramuscular Vivitrol

Poster Presenter: Eduardo Espiridion, M.D.

SUMMARY: Objective: Compare rates of hospital recidivism in patients with alcohol use disorders after treatment with Vivitrol (intramuscular naltrexone) versus standard of care (inpatient detoxification). Design: Retrospective cohort study Setting: A community hospital serving a metropolitan population in Maryland Patients: Inclusion criteria: Alcohol Abuse Dependence (defined by APR DRG coding system) as a primary diagnosis: Vivitrol patient population: Discharged inpatient encounters from 7/1/2016 to 10/31/2017, who received 380 mg IM Vivitril injection during the patient stay (n=35). Control group: Discharged inpatient encounters from 7/1/2016 to 10/31/2017, where treatment consisted of alcohol detoxification without IM Vivitrol injection (n=358). Exclusion criteria: 1. Significant comorbidities listed as diagnoses which could act as confounding factors. 2. Patients with alcohol use disorders who were treated with other pharmacological modalities (acamprosate, disulfiram). Results: Patients diagnosed with Alcohol Abuse Dependence are at a significant decreased risk for readmission if treated with IM Vivitrol (odds ratio [OR] 8.5%; 95% confidence Interval [CI] 0.0115, 0.6300; p= .0159

Conclusions: This study showed that treating patients admitted due to Alcohol Abuse Dependence with IM Vivitrol is an effective treatment to reduce hospital readmission. Additional studies are warranted to clarify and establish optimal treatment strategies.

No. 4

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 common (1–3), reports indicate that cannabis withdrawal symptoms can severely disrupt daily living (4,5) and are positively associated with both relapse to cannabis use (6–9) and with cannabis dependence (10–12). 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-5 (13). With cannabis use increasing among U.S. adults, information is needed about the prevalence and correlates of DSM-5 CWS in the general population. This study presents nationally representative findings on the prevalence, sociodemographic and clinical correlates of DSM-5 CWS among U.S. Methods: Participants =18 years were interviewed in the National Epidemiologic Survey on Alcohol and Related Conditions-III (NESARC-III) in 2012-2013. Among the sub-sample of frequent cannabis users in the prior 12 months (=3 times a week; N=1,527), the prevalence, demographic and clinical correlates of DSM-5 CWS were examined. A cannabis withdrawal variable was constructed, consistent with criterion B of the DSM-5 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 and disability measures. Results: In frequent cannabis users, the prevalence of CWS was 12.1%. The most common withdrawal symptoms among those with CWS were nervousness/anxiety (76.3%), hostility (71.9%), sleep difficulty (68.2%) and depressed mood (58.9%). CWS was associated with significant disability ($p<0.001$), and with mood disorders (adjusted odds ratios [aOR]=1.9-2.6), anxiety disorders (aOR=2.4-2.5), personality disorders (aOR=1.7-2.2) and family history of depression (aOR=2.5) but not personal history of other substance use disorders or family history of substance use problems. Conclusions and Implications: To our knowledge, this study provides the first nationally representative large-scale report on the DSM-5 cannabis withdrawal syndrome. Our findings suggest that CWS is highly comorbid and disabling. Its shared symptoms with depressive and anxiety disorders call for clinician awareness of CWS and the factors associated with it to promote more effective treatment among frequent cannabis users.

No. 5

The Association Between Lifetime Cannabis Use and Dysthymia Across Six Birth Cohorts

Poster Presenter: Ofir Livne
Co-Authors: Deborah Hasin, Ph.D., Shaul Lev-Ran

SUMMARY:

Background: In recent decades, rates of cannabis use have been rising (1,2), with the prevalence of past-year cannabis use more than doubling in a decade from 4.1% in 2001-2002 to 9.5% in 2012-2013 (3). Alongside the increased rates of cannabis use among the general population in recent decades, rates of depression have also been on the rise (4-7). 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 the National Epidemiologic Survey on Alcohol and Related Conditions-III (NESARC-III; 2012-2013, N=36,309). 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. Conclusions and Implications: This study's findings are important as they emphasize the high rates of co-occurring psychiatric and substance use disorders among dysthymic individuals who use cannabis. Furthermore, they indicate a change in the level of association between cannabis use and dysthymia across time and birth cohorts. Social and legislative changes leading to increased availability of cannabis as well as more normative use of cannabis may affect the population exposed to this substance. Accordingly, this may affect the prevalence of disorders which are associated with its use. Our findings highlight the need for further research examining changes over time in the relationship between cannabis use and associated psychiatric disorders.

No. 6

Amotivation Among Frequent Cannabis Users: 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: Diminished motivation, commonly known as amotivation has been reported repeatedly by heavy cannabis users for several decades (1). Its core manifestation involves a lack in goal and achievement-oriented behavior (2,3). A growing number of pre-clinical (4–6) and clinical studies (7–14) demonstrate a significant association between amotivation and cannabis use, specifically heavy cannabis use. Amotivation may act as a potential mediator of the relationship between cannabis use and its detrimental effects, such as psychiatric disorders, lower personal and educational achievements, and decrease in role functioning. The current study addresses numerous shortcomings of previous studies that supported the association between amotivation and cannabis use; this study is a current, large scale population-based survey reporting the prevalence of amotivation among cannabis users in the general population and examining its association with a wide range of clinical correlates, while controlling for sociodemographic and clinical confounders. Methods: Participants =18 years were interviewed in the National Epidemiologic Survey on Alcohol and Related Conditions-III (NESARC-III) in 2012-2013. Among the sub-sample of frequent cannabis users in the prior 12 months (=3 times a week; N=1,527), the prevalence, demographic and clinical correlates of amotivation were examined. The NESARC-III assessment of amotivation was based on the following question: "Have you had difficulty setting realistic goals in your personal life, career plans or other important aspects of your life?". Participants were coded as reporting amotivation if they answered this question positively, and in a follow-up question, reported these feelings to be troubling or causing problems at work, school, or with their family or other people. We calculated the weighted prevalence of amotivation experienced by participants in the sample. Odds ratios were calculated to examine the association between amotivation and sociodemographic characteristics, psychiatric comorbidities, suicide attempts, substance use disorders, and functional role impairment. Results: In frequent cannabis users, the prevalence of amotivation was 11.9%. Amotivation was associated with age, race, marital status, personal income (adjusted odds ratios [aOR]=1.9-10.6), numerous psychiatric disorders (aOR=2.1-14.8), and significant mental disability ($p<0.001$). Conclusions and Implications: This study provides findings from a nationally representative large-scale study on amotivation among 12-month frequent cannabis users. Study results demonstrate that

amotivation is more prevalent than previously reported among these individuals and is highly comorbid and disabling; these findings suggest that clinicians should consider screening cannabis users with diminished motivation for various psychiatric disorders in order to promote treatment and prevent further worsening of these disorders.

No. 7

Occurrence of Trauma and Substance Use in College Students Who Were Hospitalized in an Inpatient Unit or Emergency Department

Poster Presenter: Jamie Gannon

SUMMARY:

Background:The link between substance use and trauma histories in college populations remains understudied. With drinking habits typically peaking in the college years, it has been found that US college students drink more when compared to their non-college attending peers (Johnson 2012). In a sample of 27,409 students at 119 colleges, 5% of students had poor mental health and 81.7 % of students reported using alcohol as a method of coping (Weitzman 2004). While some have proposed that individuals self-medicate with substances in order to manage PTSD symptoms (Epstein 1998), others have argued that the use of substances may increase their likelihood of experiencing a traumatic event leading to PTSD (Howard 2003).This study examines the percentage of positive drug/alcohol screens and histories of trauma in college patients who were hospitalized in an emergency department (ED) or inpatient psychiatric unit (IPU). Methods: For the academic year (Oct 2017-June 2018) we tracked all students who were reported to receive at least one ED or IPU hospitalization at one public west-coast university (enrollment ?36,000). Case management teams were instructed to notify the college mental health coordinator (CC) of the ED or IPU encounter; trauma history was prompted by a specific field in the electronic medical record. We report the demographics, most common primary and secondary reason for the ED or IPU encounter, frequency of alcohol/drug screen and reported history of trauma. Ultimately, our aim is to further elucidate how substance use and trauma history in college students impact the utilization of ED and IPU services. Results: Records identified 95 unique students (median age=22; 53% female) and a total of 111 encounters. Preliminary analyses showed the most common primary reasons for an encounter were suicidal thinking and behaviors (69%) and psychosis (14%). Most common secondary reasons were anxiety (36%), alcohol/substance problem (14%) and psychosis (13%). Seventy-three percent of documented encounters showed drug and/or alcohol testing. Of these, 80% tested negative on a standard urine screen of 9 substances. Of the total sample, only 14% tested positive for alcohol or marijuana; the majority of these (87%) testing positive for marijuana only. Trauma history was endorsed by 42.5% of students, denied by 40.5% and not recorded, or ambiguous in 17% of students. Conclusion: During the first academic year of this project, 95 psychiatrically distressed students received treatment via an ED or IPU admission (0.26% of the student body). The most common reasons for treatment included suicidal thinking and behaviors, anxiety, psychosis and alcohol/substance problem. Forty-two percent endorsed psychological, physical or sexual trauma; marijuana and alcohol rates were much lower than expected based on the published literature in college students. Of note, 27% of encounters did not document alcohol/drug screening and 10% did not record trauma history.

No. 8

Developing and Implementing a Mobile App for Clinician-Supported Buprenorphine Self-Induction: A Pilot, Proof-of-Concept Project

Poster Presenter: Theddeus I. Iheanacho, M.D.
Co-Author: David Rosenthal

SUMMARY:

Opioid use disorder is a national epidemic and has been declared a public health emergency by the United States government. A key component of treatment for opioid use disorder(OUD) is medication assisted treatment (MAT) with buprenorphine office-based agonist therapy. Treatment “Induction” with buprenorphine is the initial step in starting agonist treatment. Buprenorphine Induction can be safely done in the doctor’s office/clinic or at home by the patient usually with written or verbal instruction (clinician-supported self-induction). A common barrier to initiating buprenorphine, a potentially life-saving

medication, is reluctance of physicians to complete induction in their offices due 1) the office induction period being “too demanding”, 2) stigma and concerns about other patients who may be present. Physicians also feel uncomfortable allowing home induction due to concerns about patients’ inability to follow verbal or written paper instructions at home thus necessitating multiple call backs from the patients about the induction instructions. At the present, although more than half of buprenorphine inductions happen at home, to the best of our teams’ knowledge, there are no mobile apps in App stores for home-based buprenorphine induction. We developed a mobile app for clinician-supported buprenorphine self-induction (Self, Home-induction App (SHAPP)) that is patient-centered, patient-driven, and physician-supported. SHAPP incorporates current buprenorphine home induction instructions and guidelines while adding visual aids, timer, clinical symptoms checklist and a step-wise buprenorphine dosing algorithm that is user friendly, clear, concise and easy to follow. SHAPP will be available for download on the Apple App store and Google Play store. It will minimize the need for office-based buprenorphine induction and ease physicians concerns about their clients forgetting the induction instructions. For added value, the SHAPP app can include direct links to local emergency rooms, urgent care centers, pharmacies and self-help meetings. Ours is the first mobile app developed specifically for home-based, self, buprenorphine induction. With wide spread use of smartphone and mobile devices, we believe the SHAPP app will be very scalable to clinicians and patients locally, nationwide and internationally Currently, we have completed initial “wireframe” and “webAPP” which was reviewed by patients in a “human-center design” iterative process. The final native mobile app is in development with a proposed launch date mid-October 2018. Key outcomes include 1. Adoption of the SHAPP app as a clinical tool by clinicians, community health centers and hospitals. 2. Acceptance: rate of download and use by patients receiving services through these clinics, community health centers and hospitals. 3. Clinical utility: effectiveness in supporting buprenorphine induction.

No. 9

Understanding Predictors of Improvement in Risky Drinking in a U.S. Multisite, Prospective, Longitudinal Cohort Study of Transgender Individuals

Poster Presenter: Jeremy Douglas Kidd, M.D., M.P.H.
Co-Authors: Frances Rudnick Levin, M.D., Curtis Dolezal, Walter O. Bockting, Ph.D., Tonda Hughes

SUMMARY:
Background: Transgender people have a gender identity and/or expression different from the sex that they were assigned at birth [1]. Compared to the general population, rates of risky drinking are disproportionately higher among transgender individuals, yet no studies have examined predictors of change in risky drinking over time [2,3]. Objective: We examined predictors of improvement in risky drinking among transgender individuals. Methods: We conducted this secondary analysis using data from a multi-site, prospective longitudinal cohort study of transgender individuals (N=286). Participants were recruited using purposive, venue-based recruitment and quota sampling to ensure diversity. Data were obtained via semi-structured interview and included demographic characteristics, enacted and felt stigma, gender transition healthcare, duration of social transition (time spent living as their gender), transgender congruence (degree to which gender expression matches identity), identity processing orientation (how one receives/integrates internal and external information to arrive at a self-concept), and risky alcohol use (AUDIT-C score). After comparing risky versus non-risky drinkers at baseline, we restricted the sample to those who reported baseline risky drinking. We conducted bivariate comparisons between those who continued to screen positive for risky drinking at 1-year follow-up (n=68) and those who screened negative (n=38). Informed by these results, we examined predictors of improvement in risky drinking using multivariable logistic regression. Results: Baseline risky drinking was reported by 39.5% of the sample. Risky-drinking individuals were more likely to have been assigned female at birth (60.4% vs 45.6%, p=0.01) but were otherwise demographically similar to non-risky drinking participants. In multivariate analyses, controlling for demographic covariates, enacted stigma was associated with lower odds of improvement in risky

drinking (OR 0.72; 95%CI 0.57-0.92). Felt stigma (OR 3.31; 95%CI 1.49-7.37), social transition of 1-4.9 years (OR 7.09; 95%CI 2.03-24.84), and "diffuse-avoidant" identity processing orientation (OR 3.78; 95%CI 1.43-10.00) were associated with greater odds of improvement in risky drinking. Conclusions: This is the first study to examine factors associated with improvement in risky drinking among transgender individuals. Findings indicate that interventions to promote resilience and coping with discrimination may decrease alcohol-related risk. Further research is needed to understand the relationship between felt stigma and diffuse-avoidant identity processing, which were related to persistent risky drinking but which may interact to differentially affect drinking behaviors over time. These findings can inform efforts to develop culturally-tailored alcohol-related prevention and treatment efforts for this at-risk and marginalized population.

No. 10

Early Prediction of High-Risk Patients Is an Opportunity for Early Intervention

Poster Presenter: Heather Shapiro
Co-Authors: Kirsten Smayda, Hilary Luderer, Ph.D., Yuri Maricich, M.D., M.B.A.

SUMMARY: Objective: Patient dropout is a major challenge limiting the effectiveness of treatment for patients with substance use disorder (SUD)[1-3]. Prescription digital therapeutics (PDT) may afford a unique opportunity for early intervention by predicting patients at risk of dropout. We tested the predictive nature of early engagement with a PDT on downstream PDT engagement and treatment dropout. Design: Data was collected from 249 SUD patients undergoing 12-week treatment with the reSET® PDT (academic name Therapeutic Education System). The PDT was used by 119 (47%) for the duration of treatment (defined by PDT engagement during week 12). To identify early signals of dropout, we extracted engagement features from week 1 of treatment and built a statistical model to predict if a patient remained in treatment for the study duration (a random forest model using an 80%-20% train-test ratio). Results: Five early engagement features measured within week 1 were predictive of therapeutic retention: number of days that a patient engaged with the PDT, average proficiency on PDT assessments, consistency of PDT usage, total number of lessons completed, and total anxiety score on the pre-treatment questionnaire. We predicted patient dropout outcomes with 70% accuracy. Conclusion: By leveraging the data-rich characteristics of a PDT, we can identify high-risk patients as early as one week into treatment. This type of prediction can be a powerful method for identifying SUD patients who might warrant early outreach and greater support. With early intervention, more patients may complete the 12-week duration reSET treatment and benefit from remaining in treatment.

No. 11

Kratom, a Naturally-Occurring New Psychoactive Substance: A Case Report

Poster Presenter: Christabel Thng
Co-Authors: Melvin Wu, Kim Eng Wong

SUMMARY:
Kratom (Mitragyna speciosa) is a tropical tree indigenous to parts of Southeast Asia, including Malaysia, Thailand, Philippines, Myanmar, New Guinea, and some parts of Africa. Its use dates back to the 1940s in Thailand where it was used as an opium substitute and to ease opioid withdrawal symptoms, after the costs of opium soared following the Greater East Asia War in 1942. It was also taken by manual laborers to ease fatigue, used at cultural performances and tea shops, and used as a drink alternative for those who could not consume alcohol for religious reasons. Today, Kratom's popularity has expanded overseas and it is frequently marketed for treatment of opioid withdrawal symptoms and its other psychoactive effects. It can be obtained via internet distributers, head shops and kava bars. It has been recognised by the United Nations Office on Drugs and Crime as a 'New Psychoactive Substance'. Case description: In July 2018, a 19 year old adolescent male presented to the Institute of Mental Health National Addictions Management Service clinic in Singapore. He reported using Kratom for the past 1.5 years, since enlisting in the army. It was tiredness that first led his friends in Malaysia to introduce him to this substance. He consumed it by boiling its leaves to make tea, then mixing it with cough syrup and coca cola to make it more

palatable. It made him feel energetic and relieved his muscle cramps. When stressed, consuming it made him feel relaxed. Over time, he developed symptoms of dependence – increased use, tolerance, strong cravings and withdrawal symptoms such as body aches, rhinorrhoea and irritability. He is currently still on follow up with our clinic and attending counselling sessions to help with his addiction. Discussion: This is the first such case that has presented to our clinic. In recent years, there has been an increasing number of internet articles and published reports on Kratom, signifying its growing popularity worldwide. Still, literature is limited and relatively little is known about it. This case report aims to increase awareness on Kratom and highlight its addictive potential. Among the 25 alkaloids that have been identified in Kratom leaves, mitragynine and 7-hydroxymitragynine are believed to be the primary active ones. At higher doses, opiate effects predominate, largely mediated by activity at μ and d-type opioid receptors. Mitragynine is suggested as being 13 times as potent as morphine in regards to its opioid-like effects. At lower doses, stimulant effects predominate, via stimulation of postsynaptic alpha-2 adrenergic receptors. Effects are also strain-dependent, likely because the proportion of alkaloids differs between strains. Drug detection is a challenge as methods are expensive and not widely available. To date, Kratom has been made illegal in only some parts of the world.

No. 12

Overdose and Suicidal Motivation in Adults With Opioid Use Disorder

Poster Presenter: Roger Douglas Weiss, M.D.
Co-Authors: R. Kathryn McHugh, Margaret Griffin, Ph.D., Nadine Taghian, Hilary S. Connery, M.D., Ph.D.

SUMMARY:
Background: In 2017, more than 49,000 individuals died by opioid overdose. Suicide and overdose are both common among people with opioid use disorder (OUD); however, little is known about the role of suicidal motivation in those who overdose on opioids. The aim of this study is to identify correlates of opioid overdose and to assess the extent of suicidal motivation prior to opioid overdose in treatment-seeking patients with OUD. Methods: Adults with OUD on an inpatient treatment unit (N=120) completed a battery of self-report measures. Those who had experienced an opioid overdose (i.e., requiring emergency medical intervention and/or resulting in naloxone rescue) were asked about the degree to which they had wanted to die prior to their most recent overdose (rated from 0-10). Results: Forty-five percent (54/120) of those with OUD had overdosed at least once. Those who had overdosed were more likely to have a co-occurring psychiatric disorder (72% vs. 50%, p<.01) and to use heroin and/or fentanyl (81% vs. 55%, p<.001); they reported higher levels of craving (mean, sd=6.0, 2.3 vs. 4.5, 2.8, p<.01) and more admissions for detoxification (mean, sd=9.3, 8.4 vs. 3.5, 4.5, p<.001). Participants endorsed a low to moderate desire to die (mean, sd=3.8, 4.1) before their most recent overdose. Some desire to die was reported by most participants (58%), 36% reported a strong desire to die (>7/10), and 21% reported a score of 10/10. Conclusion: Suicidal motivation is common prior to opioid overdose and may be an important target for treatments to reduce the risk of overdose.

No. 13

Variability in Chronic Pain in a 3.5-Year Post-Treatment Naturalistic Follow-Up Study of Prescription Opioid Dependence

Poster Presenter: Margaret Griffin, Ph.D.
Co-Author: Roger Douglas Weiss, M.D.

SUMMARY: Objective: The natural course of chronic pain in treatment-seeking patients with prescription opioid use disorder has not been examined in longitudinal studies. The current study examined the course of chronic pain over time following a treatment trial for prescription opioid dependence. Methods: Following the multi-site Prescription Opioid Addiction Treatment Study, telephone interviews were conducted at 18, 30, and 42 months after treatment entry (N=338/653 completed a baseline assessment and 1-3 follow-up assessments). Chronic pain was defined as pain beyond the usual aches and pains, lasting =3 months, excluding pain from withdrawal. In this exploratory, naturalistic study, variability in chronic pain over time was examined and compared to opioid abstinence and treatment. Results: Patients with chronic pain at baseline reported pain lasting 2-4 years on average;

42% reported constant pain. Presence of chronic pain was not associated with gender, race, employment, years of education, prior treatment, heroin use, or years of opioid use. Those with chronic pain were significantly older, less likely never married, less likely to have attended self-help groups, and had worse scores for physical pain (SF-36), compared to patients without chronic pain. Overall, 62% of patients reported chronic pain at =1 of the assessments. At baseline, 43% of patients reported chronic pain, with prevalence rates lower at follow-up: 34%, 28%, and 26% at months 18, 30, and 42, respectively. Interestingly, 36% of patients reporting chronic pain at baseline did not report it during follow-up; and 33% of patients reporting no chronic pain at baseline reported it at follow-up. Half (50%) reported variability in chronic pain, 12% reported chronic pain consistently, and 38% consistently reported no chronic pain. Most patients reported consistent abstinence (24%) or consistent opioid use (39%) during follow-up, with 37% reporting a mix of opioid use and abstinence. At each follow-up, those reporting chronic pain were more likely to use opioids: 65% vs. 42% at month 18, 58% vs. 28% at month 30, and 58% vs. 32% at month 42 ($p<.001$). Post-treatment rates of participation in opioid agonist treatment were steady (32%-38% at each time); chronic pain was not associated with receiving this treatment at follow-up. Conclusion: Chronic pain among patients with prescription opioid dependence is quite common but varies over time. The presence of chronic pain post-treatment was associated with opioid use.

No. 14
WITHDRAWN

No. 15
Case Study of the BRIDGE Device, an Effective Treatment of Opioid Withdrawal
Poster Presenter: Aaiza Malik, M.D.
Co-Authors: Julie E. Teater, M.D., Julie A. Niedermier, M.D.

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. Over the years several medication-assisted therapies have been approved for treatment of opioid use disorder including Suboxone, Subutex, methadone, and naltrexone. However, many of these medication-assisted therapies require partial or full detoxification from opiates, which patients frequently complain is the most difficult part of the entire process. In response to patient complaints about the difficulty of the detoxification process, the BRIDGE device was developed to reduce symptoms of opioid withdrawal. Methods: The BRIDGE is a gentle neuro-stimulation system device that attaches to the patient's earlobe. It typically takes 15 minutes for a qualified provider to fit it behind the patient's ear and to correctly place the needle arrays at specific points on the earlobe (low risk, minimally invasive). The BRIDGE device is applied to branches of CN V, VII, IX, X, and occipital nerves. It works by sending gentle electrical impulses to brain and branches of nerves going to spinal cord via percutaneously implanted electrodes near nerve endings found around the ear. It aids in reduction of opioid withdrawal in as little as 10 minutes. Once attached, the patient typically wears the BRIDGE detox for the 4-to-5-day period of greatest, most acute withdrawal, usually a maximum of 96 to 120 hours. Data: At a Midwestern academic medical center, The BRIDGE device has been successfully utilized for two patients, reducing withdrawal symptoms and subsequently easing the transition onto medication-assisted therapy. Both patients complained of insomnia, hot and cold sweats, stomach cramps, nausea, vomiting, loss of appetite, anxiety, restlessness, and irritability prior to application of the BRIDGE device. One patient had used opioids 40 hours prior to presentation (COWS score=15) and the other patient had used 9 hours prior to presentation (COWS score=6). Results: Both patients noted an improvement in withdrawal symptoms and COWS score less than 30 minutes after device placement. Patient 1's COWS score decreased from 15 to 2, while Patient 2 decreased from 6 to 3. Patient 1 also experienced a decrease in blood pressure from 154/115 to 132/63 and pain from 5/10 to 2/10. Patient 1 was successfully transitioned onto naltrexone 5 days after application of the BRIDGE device. Conclusions: Although in the early stages of implementing the BRIDGE device for treatment of opiate withdrawal, the results with

these two patients is promising. One patient has been successfully transitioned onto medication-assisted therapy and has continued to receive outpatient care for approximately two months. Our academic medical center is looking at cost/benefit analyses and is looking to expand use of the device for appropriate patients.

No. 16

Patterns of Substance Use Disorders Among Different Age Groups in Riverside County

Poster Presenter: Kevin Simonson, M.D.
Co-Authors: Julia Luu Hoang, M.D., Takesha J. Cooper, M.D., M.S.

SUMMARY:

Introduction: Substance Use Disorder has been on the rise in the United States. In 2014, the National Institute on Drug Abuse (NIDA) reported that an estimated 24.6 million Americans over the age of 12 had used an illicit drug during the last month. According to SAMHSA data, in 2014 marijuana is the most used drug after alcohol and tobacco. People between the ages of 12 and 49 report first using the drug at an average age of 18.5 (1). Older adults who misuse opioids is projected to double from 2004 to 2020, from 1.2% to 2.4%. (2). It is predicted that Opiate diagnosis is more likely in older adults due to higher rates of debilitating pain with increasing age. Objective: This study investigates substance use patterns in particular age groups (<18 yrs, 18-59 yrs, and 60+ years) within the county population. Methods: Riverside University Health Systems - Behavioral Health collects data annually on patient's ethnicity, age, gender, and diagnosis. Data on diagnosis was analyzed from ICD-10 most recent primary diagnosis recorded in the electronic health record for substance abuse cases. Results: In fiscal year 2017-2018, a total of 7,775 consumers were served through detoxification, residential services, outpatient substance abuse treatment services, and intensive half day treatment program (e.g., drug court, MOMs). Overall, most substance abuse consumers (34%) had an Opiate diagnosis. A significant proportion (33.1%) had an Amphetamine diagnosis. This pattern differed among the age groups. About 57.5% of youth <18 yrs had a marijuana diagnosis, followed by 6.3% having an Amphetamine diagnosis. Fewer youth (4.2%) had an alcohol diagnosis compared to adults (20.4%) and older adults (19.3%). About 36.5% of adults ages 18-59 yrs had an Amphetamine diagnosis, next followed by Opiates, and finally alcohol. The overwhelming majority (70.6%) of older adults ages 60+ had an Opiate diagnosis followed by Alcohol. Discussion: While the dangers of substance abuse is becoming increasingly apparent, this knowledge has failed to act as a deterrent. Patterns among different demographic groups with substance use disorders are frequently changing over time. For example, according to the Centers for Disease Control and Prevention (CDC), the gaps in heroin use between men and women and rich and poor have narrowed throughout the 21st century (3). Differences in type of substance use in certain age groups may be due to accessibility, co-morbid mental illness/medical issues such as pain, and sources of stress/anxiety. It is important to pay attention to these trends, as it may be the first step to targeting prevention and reducing substance abuse in particular age groups.

No. 17

A Randomized Controlled Trial of Psilocybin for Alcohol Dependence: Protocol and Preliminary Data

Poster Presenter: Kelley Clark O'Donnell, M.D., Ph.D.
Co-Authors: Sarah Mennenga, Michael Parks Bogenschutz, M.D.

SUMMARY:

Several lines of evidence suggest that classic psychedelics (5-HT2A receptor agonists or partial agonists) such as psilocybin might facilitate behavior change in individuals with substance use disorders. We are conducting a multi-site, double-blind, randomized controlled trial to assess the effects of psilocybin-assisted psychotherapy on alcohol-dependent subjects (n=180). The psychotherapy framework combines an evidence-based, manualized approach to substance use with a supportive context for the medication sessions. Participants are randomly assigned to receive psilocybin or diphenhydramine in two dosing sessions. In the first dosing session, subjects receive either psilocybin (25mg/70kg; 0.36mg/kg) or diphenhydramine (50mg). For each medication session, within-session and short-term persisting effects of the study drugs are assessed. The dose may be increased in the second session based on

subjective response in the first. The duration of treatment in the double-blind period is 12 weeks, followed by longitudinal assessment of drinking outcomes and changes in several potential mediators of treatment effect. The primary outcome measure will be percent heavy drinking days in the preceding three months, as measured by the Timeline Follow-back at Week 36. Within the context of a robust psychotherapy platform, we will characterize the tolerability, acute effects, and clinical efficacy of oral psilocybin in alcohol-dependent participants. This study is the first to use modern clinical trial design to study the effects of a classic hallucinogen in alcohol-dependent subjects. Here we present a full description of the protocol, as well as baseline demographic information and preliminary results comparing Week 12 drinking behavior and alcohol craving in the fifty-six participants who have completed the follow-up period. The participants (32 male, 24 female) had a mean age of 46.0+11.7 (range: 25.0-65.0) and a fairly high education level (years of education = 16.9+3.3; range: 11.0-26.0). Although the blind has not been broken, for this preliminary analysis we divided participants into two groups, High-MEQ (HMEQ) and Low-MEQ (LMEQ), based on the median score from the Mystical Experience Questionnaire (MEQ) after the first medication session (median=0.26). At baseline, there was no difference between the groups in percent drinking days (HMEQ: 64.58+6.17, LMEQ: 69.23+6.17, p=0.56) or number of drinks per drinking day (HMEQ: 5.25+1.05, LMEQ: 5.49+1.05, p=0.87). However, at Week 12, after two medication sessions, the HMEQ group reported fewer percent drinking days (HMEQ: 18.73+6.17, LMEQ: 40.47+6.17, p<0.05), fewer drinks per drinking day (HMEQ: 2.63+1.05, LMEQ: 7.01+1.05, p<0.01), and lower craving (HMEQ: 8.43+1.15, LMEQ: 13.86+1.15, p<0.01) than the LMEQ group. These preliminary results suggest that experiences rich in mystical content, such as those seen following administration of psilocybin, can facilitate reductions in drinking and alcohol craving.

No. 18

Depression Mediating the Effect of Social Support and Alcohol Anonymous on Alcohol Use Disorder Recovery in Korea: A Two-Year Longitudinal Study

Poster Presenter: Il Ho Park

Lead Author: Jeong Seok Seo
Co-Authors: WonMi Jung, SooBi Lee

SUMMARY:

Purpose In order to understand the factors contributing to the course of alcohol use disorder in South Korea, we conducted a nation-wide longitudinal follow-up study of alcohol use disorder in South Korea. The mediating effect of depression on factors influencing the recovery of alcohol use disorder was examined in this study. Methods Biannual survey and clinical follow-up were conducted in patients with alcohol use disorder from the hospitals/clinics and community mental health centers representing 6 districts in South Korea between 2016 and 2017. Data of 120 individuals who complete all four surveys were analyzed. Path analysis was conducted with duration of AA participation and extent of social support system from the 1st survey as predictor variables, depression score from the Patient Health Questionnaire (PHQ-9) as the mediating variable, and Alcohol Use Disorders Identification Test (AUDIT-C) score as the dependent variable. Results The degree of social support system establishment from the 1st survey negatively correlated with the depression severity in the 3rd survey. Moreover, the duration in AA from the 1st survey and the degree of depression from the 3rd survey correlated with the severity of alcohol problem from the 4th survey. The model's goodness of fit (?2=12.927, df=10, P=0.228, IFI=0.926, CFI=0.898, RMSEA=0.050 (90% CI: [0.0000-0.117])) satisfied the acceptance criteria proposed by Hu & Bentler (1999). The regression coefficient from this model show that the degree of depression from the 3rd survey is decreased as the degree of social support system establishment from the 1st survey increases (ß=-3.186, P<0.01). Increased severity of depression, resulting from weak social support system, increased the severity of alcohol problem (ß=0.152, P<0.01). Increases in the duration in AA decreased severity of alcohol problem without the mediation of depression (ß=-0.039, P<0.05). Among the control variables, the alcohol problem severity from the 1st survey showed positive auto-regression effect (ß=0.311, P<0.01). When the auto-regression effect by alcohol problem was controlled, the degree of social support system establishment from the 1st survey affected later alcohol problem

through the mediation of depression. Conclusion Adequate social support system relieves depression and improvement in depression helps the recovery process of patients with alcohol use disorder. Longer participation in AA can have a persisting effect on alleviating alcohol problem. Therefore, combining support for establishing sufficient social support system and psychosocial interventions, such as AA, is important for the recovery of alcohol use disorder. Particularly, screening and providing treatment for patients who are at high risk for depression are needed in order to achieve a successful recovery.

No. 19

Risk Factors for Opioid Use Disorder Related Mortality in a 4-Year Retrospective Study of 182 Military Veterans

Poster Presenter: Fe Erlita Diolazo Festin, M.D.
Co-Authors: Kevin Jaijin Li, M.D., Lynn E. De Lisi, M.D.

SUMMARY:

The opioid crisis in the United States has spread exponentially with opioid use disorder (OUD) related overdoses increasing by 200% since 2000, accounting for 66% of all drug overdoses in the USA. The National Institute on Drug Abuse (NIDA) estimates mortality rates range between 4-6% per year in patients with OUD. Medication assisted treatments (MAT), including buprenorphine, naltrexone, and methadone, are commonly utilized treatments for OUD. Similarly, residential rehabilitation (RR) is often offered as a bridge from a recent relapse to long-term abstinence, typically including a mixture of group therapy, individual therapy, 12-step program, MAT, and case management. Herein, we present an evaluation of the effects of both MAT and RR, alone and combined, on OUD related mortality. Additionally, other static and dynamic risk factors for mortality were examined. We retrospectively examined the electronic medical record of all patients admitted to the Boston Veterans Health Administration (VHA) in 2015 for opiate detoxification (n=182) and followed their outcomes through October 2018. Preliminary data show a 4-year all-cause mortality rate of 18.4% (n=34) with 61.8% (n=21) of deaths directly related to opiate use. These 34 deceased patients were matched 1:1 with living patients from the original 182 patients based on age and gender. Preliminary analysis was completed on these 64 patients in using multi-linear regression in a step-wise fashion, firstly accounting for psychiatric comorbidities then accounting for concurrent non-opioid drug use. Preliminary regression showed that completion of RR correlated to lower predicted mortality (ß= -8.21, p=0.03). In contrast, attending RR but not completing correlated to higher predicted mortality rate (ß= 6.51, p=0.046). Concurrent benzodiazepine use (ß=8.99, p=0.047), generalized anxiety (ß=7.13, p=0.03), and major depression (ß=5.44, p=0.04) were harmful risk factors. Any MAT exposure did show a trending but non-significant protective factor (ß= -5.21, p=0.09). Both RR and MAT appear to have protective effects on mortality in Veterans with OUD.

No. 20

Provider Attitudes Comparisons Across the U.S. and Switzerland on Agonist Medication Assisted Treatment for Opioid Use Disorder

Poster Presenter: Daniel Scalise, M.D.
Co-Authors: Felipe Castillo, M.D., Rahul Gupta, Andres Ricardo Schneeberger, M.D.

SUMMARY:

Background: The United States (US) and Switzerland (CH) are among the wealthiest countries in the world and both have undergone a significant surge in opiate use disorder (OUD) cases in the past decades, yet the responses have been varied. Starting in 1994 with the “PROVE” trail, Switzerland has been using heroin assisted treatment (HAT) as a treatment for OUD alongside other medication assisted treatments (MAT). Meanwhile, in the United States heroin has remained a schedule I drug and HAT has not been implemented, and the available versions of MAT are generally more restrictive than in Switzerland. Methods: We conducted a survey to study if attitudes differed between mental health practitioners in the US and CH towards the use of HAT for OUD. The study was conducted at two sites: Psychiatrische Dienste Graubünden (PDGR), located in the Canton of Grabunden in CH and in the departments of Psychiatry and Behavioral Sciences of Montefiore Medical Center (MMC), located in the Bronx, New York. Surveys were distributed electronically to staff at PDGR and MMC. Participation was voluntary, and there was no

monetary compensation for completing the survey. We developed a survey instrument with 10 demographic questions and 19 questions inquiring about beliefs and attitudes towards agonist medication treatment for opioid use disorder, including benefits, risks and cost-effectiveness. Attitudes were measured using 5-point scale questions, measuring level of agreement or disagreement with a statement. Results: The analysis included 79 respondents at PDGR (mean age =43.2, %women 59.5, % with previous exposure to MAT= 65.8, %of clientele with SUD diagnosis =45) and at MMC mean age = 44.7, %women 63.4, % with previous exposure to MAT= 63.4, %of clientele with SUD diagnosis = 49). The groups showed no difference in confidence to treat people with OUD, alcohol use disorder, schizophrenia or other psychotic disorders, affective disorders, or personality disorder. After performing chi-square analysis, the groups exhibited significant differences when comparing attitudes towards the role of heroin assisted treatment (likelihood coefficient 31.74 p<.001) and the stigma such treatment imparts (likelihood coefficient 10.78 p<.02). Discussion: This study reveals there is a difference in attitudes toward HAT among demographically matched and equivalently experienced mental health practitioners treating OUDs. Responses across the two cohorts demonstrates that there is an overall positive attitude towards HAT at both sites, however the PDGR sample has a more robust attitude. The Swiss experience with HAT may serve as a useful model in advancing substance use disorder treatments and could inform policy as the United States considers changes to how it addresses the morbidity and mortality associated with OUD.

No. 21

The Study of Nonoral Administration of Prescription Stimulants (SNAPS): A Six-City Study of Use, Misuse and Diversion Among 10-17-Year-Olds

Poster Presenter: Micah Johnson
Lead Author: Linda Cottler
Co-Authors: Piyush Chaudhari, Yiyang Liu, Nathan Smith, Krishna Vaddiparti, Catherine Striley

SUMMARY:
Aim. Non-medical stimulant use is once again increasing and this use can lead to cardiac problems including an irregular heartbeat, heart failure, and seizures. Repeated misuse of prescription stimulants can cause psychosis, anger, paranoia, and other adverse health outcomes. To effectively reduce harm, comprehensive research on use, misuse and diversion is needed. However, very few studies have examined use, misuse, and diversion among adolescents as young as 10. The purpose of this study was a systematic and rigorous surveillance of prescription stimulant use, misuse, and diversion among youth. Methods. The Study of Non-Oral Administration of Prescription Stimulants (SNAPS), fielded in September 2018) recruited 1,777 youth 10 to 17 years of age from urban, rural and suburban areas in six US cities across the 3 most populous states in the US (California, Texas, Florida) using an entertainment venue intercept approach. Results. The proportion of the total SNAPS sample that used prescription stimulants lifetime was 11%; 7.6% used in the past 30 days. Among those who used stimulants, 30.1% reported any non-medical use. Of these non-medical users, 45.8% reported any non-oral use: 32.2% snorted or sniffed, 13.6% smoked, 1.7% injected them and 3.4% used them some other way. Among all youth, 11.9% met criteria for any diversion; 5.1% met criteria for outgoing diversion only, 2.9% met criteria for incoming diversion only and 3.9% met criteria for both. As expected, rates among stimulant users were much higher than among non-users; 48% of users reported any diversion behavior compared to 7.4% of non-users. Nearly one-third (32.1%) of youth reported up to 3 diversions vs 6.6% of non-users. Conclusion. This study advances the literature by building on the landmark N-MAPSS study and provides data on youth use, misuse, and diversion in the critical moment of emerging stimulant misuse. These findings suggest that interrupting prescription stimulant diversion should include interventions for non-users as well as users. This study was funded by Arbor Pharmaceuticals LLC.

No. 22

Pilot Outcomes From a Harm-Reduction Street Psychiatry Buprenorphine Treatment Program

Poster Presenter: Kate Benham, M.D.
Co-Authors: Marina Tolou-Shams, Ph.D., Jeffrey Seal, M.D., Andrea Elser, James Willis Dilley, M.D., Christina V. Mangurian, M.D.

SUMMARY:
Background: Opioid overdose deaths in the US are at an all-time high and homeless individuals are particularly vulnerable to overdose. These deaths could be prevented through medication-assisted treatment (MAT) such as buprenorphine, but office-based buprenorphine treatment presents multiple barriers to access for homeless individuals. Street psychiatry programs may be a promising approach to addressing substance use and psychiatric needs in homeless populations; however, evaluation of their use for increasing access to MAT among homeless populations is nascent. This project will demonstrate feasibility, acceptability, and preliminary outcomes of a street-based buprenorphine pilot project. Methods: Participants: The Street Psychiatry program (established in April 2018) focuses on four encampments in the Bay Area, and serves a primarily homeless population. Unlike office visits, the program model of field-based outreach presents challenges to systematically obtaining diagnostic data; however, field observations suggest extremely high rates of substance use and mental illness. The program has successfully outreached 126 people (67% male, 22% non-Hispanic, White). Those who express interest in buprenorphine are offered an evaluation and a prescription that day. Measures: Data on preliminary patient outcomes are collected via self-report at every follow-up visit from November 2018 to April 2019. Self-report data include adverse events (precipitated withdrawal and incorrect self-dosage), harm reduction outcomes (soft tissue infections, mode of drug use and overdose reversals), health promotion benefits (decreased hospitalizations, overdoses, emergency room visits, and linkage to other services), and substance use outcomes (heroin or other substance use and medication non-adherence). Pharmacy data is collected to determine if prescription was filled. Results: Since program inception, thirteen people have been given an initial prescription of buprenorphine of which 69% filled their initial prescription. At the time of writing, four individuals receive on-going buprenorphine treatment in the street. One person filled more than several weeks of prescriptions and transitioned to care at the clinic. There have been no adverse outcomes among those started on buprenorphine. It was feasible to implement the program thus far, and data collection on outcomes and barriers is ongoing and will be complete in time for the 2019 APA Annual Meeting. Conclusions: This pilot study will provide preliminary evidence regarding buprenorphine safety when delivered in homeless encampments and harm reduction outcomes for this high-risk population. These results will have broad policy implications, as they may demonstrate the feasibility, acceptability, and safety of harm reduction strategies for MAT among homeless populations.

No. 23

Persecutory Delusion Secondary to Substance Use Disorder

Poster Presenter: Chloe L. Yeung, D.O.
Co-Author: Joshua Raven

SUMMARY:
Case: Patient is a 60 year old Caucasian, married, disabled male, admitted to the psychiatric unit with persecutory delusion and no past psychiatric history. Patient started having visual hallucination of men outside his windows holding pictures of birds with their tongues pulled out and cut. On one day, the men came into his house and the patient ran and hid in an empty shed. He fired his guns out of the shed and nearly hit another man from across the street. The patient was arrested by police, and he asked to be voluntarily admitted to the Medical Center after being evaluated at Lifeskill. Patient has a history of substance use as does his brother. Patient admitted to using marijuana as a teenager but quit over 20 years ago. He had a DUI 5-6 years ago. Collaboration from his wife revealed more than just marijuana. Patient admitted to using marijuana, cocaine, and methamphetamines 10 days ago. Urine drug screen showed amphetamine, methamphetamine, and marijuana. Patient was admitted for 3 days. His delusion cleared on the 2nd day of admission, and he was discharged with outpatient follow-up with Lifeskill. Discussion: Geriatric patients with substance use are hard to identified due to low suspicion of healthcare professionals, stigma and shame surrounding substance use, and general low awareness of this social problem from the community. Data from SAMHSA revealed majority of admissions originated from patients or families and criminal justice system rather than health care

providers and community organizations. Awareness is needed to be raised in places that have the most contact with the elderly, including pharmacies, senior centers, home health services, visiting nurses, social workers, and assisted living personnel. Screening should be utilized when the elderly visit their primary care office, such as with the Florida Brief Intervention and Treatment for Elders (BRITE) or an urine drug screen. Hopefully, this poster raises awareness and leads to a decrease in geriatric substance use admissions to hospital due to early prevention. In addition, this poster shifts a higher percentage of admissions from health care providers and community organizations instead of criminal justice system.

No. 24

Managing Opioid Use Disorder Patients With Concurrent Abuse of Benzodiazepines

Poster Presenter: Anchana Dominic
Co-Author: Roopa Sethi, M.D.

SUMMARY:

According to the National Institute of Drug Abuse, more than 115 people in the United States die each day after overdosing on opioids. Coincidentally, more than 30% of overdoses involving opioids also involve benzodiazepines. This concurrent abuse of opioids and benzodiazepines is commonly seen in clinical practice. Several reasons for this concurrent abuse is suggested in the literature (Jones JD, 2012). Anxiety and insomnia are commonly associated with opioid withdrawal and individuals may use benzodiazepines to self-medicate these symptoms. Another reason is the recreational use of benzodiazepines to enhance opioid intoxication or "high." This combination of concurrent substance abuse has negative consequences for overdose lethality. Although there are serious risks with combining these medicines, excluding patients from MAT or discharging patients from treatment because of their concurrent substance use is not likely to stop them from using these drugs together. Instead, the combined use may continue outside the treatment setting, which could result in more severe outcomes. In this poster presentation, the prevalence of concurrent abuse of opioids and benzodiazepines, the importance of clinical assessment for concurrent abuse of these substances, and the pharmacological interactions between the two that increase risk of death will be teased out. The clinical challenges in managing Opioid Use Disorder patients who also use benzodiazepines will be pointed out. The role of Medication Assisted Treatment (MAT) in managing these patients and its effect on decreasing mortality will also be discussed.

No. 25

Tianeptine Abuse Leading to an Episode of Psychosis: A Case Report and Literature Review

Poster Presenter: Asif Karim
Co-Author: Constantine Ioannou, M.D.

SUMMARY:

Background: Tianeptine is an atypical antidepressant, not FDA approved in the United States. Although studies are limited, its appeal in the treatment of major depressive episodes lies in its efficacy and tolerability along with fast onset of action. On the other hand, Tianeptine has a potential for abuse. We present a case where a patient developed symptoms of psychosis in the context of Tianeptine misuse. Methods: We present a case report and an extensive PubMed literature search. Case Presentation: A 28-year-old female with a history of schizoaffective disorder had been maintained on Invega Sustenna for irritable mood and psychosis. Despite adherence with her monthly injection, she presented to the psychiatric emergency room with psychotic symptoms including somatic delusions, aggressively disorganized behavior, and disorganized speech. Her urine toxicology was negative for substances of abuse; serum studies were within normal limits. On subsequent inpatient admission, patient's symptoms of psychosis resolved, prior to her next dose of Invega Sustenna. She reported outpatient use of Tianeptine, at supratherapeutic doses, which she obtains without a prescription. Per collateral, patient uses Tianeptine in order to alleviate symptoms of depression and anxiety, but takes more than what the manufacturers have recommended, leading to episodes of aggression so marked that her family members claim the ability to use her behavior alone as an indicator of Tianeptine misuse. She had not been using any other substances in the month prior to hospitalization. Conclusion: Tianeptine has generated significant concern among clinicians due

to its potential for abuse. Many cited cases of Tianeptine abuse and dependence describe opiate-like withdrawal effects, with a few describing irritability or agitation. The mechanisms of Tianeptine abuse and dependence involve increased dopaminergic transmission in the nucleus accumbens, with high levels of withdrawal anxiety and agitation possibly linked to NMDA receptor activation in the locus coeruleus. Our patient's psychotic symptoms developed in the context of Tianeptine abuse, as her symptoms resolved with abstinence from Tianeptine, and there was no history of medication nonadherence or evidence of other substance use or metabolic abnormalities. This is, to our knowledge, the first documented case of Tianeptine misuse leading to psychosis, likely through increase in dopaminergic transmission in the nucleus accumbens, an important part of the mesolimbic dopamine pathway thought to have a key role in positive symptoms of psychosis. This underscores the importance of psychiatric inquiry into all supplements taken by patients who present with symptoms of psychosis.

No. 26

Medical Cannabis: Assessing Attitudes, Perceived Knowledge, and the Educational Needs of Resident Physicians

Poster Presenter: Asfand Khan, M.D.
Co-Authors: Nuzhat Hussain, M.D., Tuna Hasoglu, M.D., Aisha Waheed, M.D.

SUMMARY:
Background: In April 2016 Pennsylvania passed the Medical Marijuana Act joining 30 other States in the medicalization of cannabis. Physicians are at the forefront of certifying patients, thus it is crucial to assess their attitudes, perceived knowledge, and educational needs. Our purpose is to assess if resident physicians feel prepared to address relevant clinical issues regarding medical cannabis (MC) and preferences for the acquisition of knowledge. We also looked for a possible correlation between the attitudes and perceived knowledge of residents and their future likelihood of certifying patients. Methods: We surveyed 123 resident physicians at Penn State Hershey Medical Center in the Departments of Neurology, Internal Medicine, Psychiatry, Pediatrics, and Family Medicine. The survey was comprised of 25 questions including demographic data and Likert scale based questions. Descriptive statistics, Spearman's correlation, nonparametric tests (Mann-Whitney U Test and Kruskal-Wallis H Test) were used to analyze data on IBM SPSS Statistics 21.0. Results: A significant majority of residents (94.3%) did not perceive themselves as knowledgeable regarding treatment planning, and 72.4% did not feel able to initiate discussions, address risks versus benefits and safety concerns related to the use of MC. However, a greater percentage felt comfortable regarding their ability to identify patients likely to benefit (53.7%), at high risk of misuse (78.1%), and likely to suffer from medical and psychiatric complications (64.2%). There was a positive association between perceived knowledge and future likelihood of certifying patients ($p<.05$). A positive correlation was also found between subjects' likelihood of certifying patients and favorable attitude regarding decriminalization ($p<.001$), legalization ($p=.006$) and their consideration of recreational use ($p<.05$). No significant association was seen between residents' attitudes towards cannabis while growing up and their future likelihood of certifying patients. No significant difference was found in the perceived knowledge of residents across different specialties and levels of training. Online CME, peer-reviewed literature and grand round speakers were the most preferred methods of acquiring knowledge of MC. Discussion: The results of our study reveal that residents with favorable attitudes toward decriminalization, legalization and medical use of cannabis are more likely to certify patients in the future. Although a small number, residents with higher perceived knowledge had a positive outlook regarding certifying patients. We also found significant gaps in the perceived knowledge of resident physicians despite the trend toward medicalization. This view was independent of specialty or experience. This may be attributed to a lack of adequate coverage of medical cannabis in graduate medical education [1,2] and therefore highlights a need to modify curricula to include this important topic.

No. 27

Malingering by Animal Proxy as Part of Substance Use Disorder: A Case Report

Poster Presenter: Bushra Rizwan, M.D.
Co-Author: Victoria C. Kelly, M.D.

SUMMARY:
Ms M, a 60-year-old Caucasian female with past medical history significant for alcohol use disorder (in remission), benzodiazepine use disorder, major depressive disorder, and anxiety symptoms, was referred to the adult outpatient psychiatry clinic for assessment and management of her conditions. She had failed multiple attempts at tapering her benzodiazepines, undertaken in the outpatient setting by her primary care physician and past treatment providers. In addition to Clonazepam 1mg BID, she reported using her dog's Alprazolam 5mg tablets, which had been prescribed to her dog for anxiety. The patient was placed on a treatment plan which included addressing her psychiatric symptoms, accountability to the veterinarian, a benzodiazepine taper regimen, monitoring benzodiazepine use through OARRS and urine toxicology screens, enrollment in an intensive outpatient substance use disorders program, and close monitoring with frequent follow up appointments. In this poster, we discuss the importance of recognizing and managing diversion of benzodiazepines intended for veterinary use, in addition to a discussion of the challenges posed to pharmacists, veterinarians, and physicians by this patient population.

No. 28

Impact on All-Cause Mortality of a Direct-to-Consumer Education Brochure (EB) Intervention to Reduce Benzodiazepine (BZD) Prescribing in Older Veteran

Poster Presenter: Peter Hauser, M.D.

SUMMARY:
BACKGROUND: Benzodiazepines (BZD) are commonly prescribed in the USA and studies suggest that adults over the age of 65 may be more likely to receive BZD than younger adults. In older adults, BZD use has been associated with adverse events including cognitive decline, dementia, falls and consequent fractures, and adverse respiratory outcomes. In a previously published quality improvement project (QIP) that used a direct-to-consumer education intervention, we showed significant reductions in BZD use for Veterans who received an educational brochure (EB) prior to an appointment with their BZD prescribing provider than a comparison group of Veterans who did not receive an EB. The purpose of this follow-up QIP was to explore whether receiving an EB impacted mortality outcomes and emergency department/urgent care (ED/UC) visits.
METHODOLOGY: A retrospective cohort design was used to evaluate the associations between Veterans receiving an EB and all-cause mortality and ED/UC visits. Veterans from VISN (Veterans Integrated Service Network) 22 that implemented the EB program (EB+ group) between December 2014 to August 2015 (index date) were matched using propensity score methods to Veterans from an adjacent VISN (VISN 21) that did not receive EB (EB- group). Clinical outcomes were compared between EB+ and EB- groups 12 and18 months after the index date. Logistic and Poisson regression models were used to evaluate the associations between EB exposure and clinical outcomes. Results were presented as odds ratio for binary outcome data and incidence rate ratio (IRR) for count data with corresponding 95% confidence intervals (CI).
RESULTS: After the propensity score matching, there were 1,316 patients in each cohort with no statistically significant clinical differences at baseline. According to the logistic regression results, the EB+ group had a 4% reduction in the odds of mortality compared to the EB- group (OR=0.96; 95% CI: 0.66, 1.38) at 12 months, but this was not significant. Similarly, at 18 months, the EB+ group was associated with a 13% reduction in the odds of mortality compared to the EB- group (OR=0.87; 95% CI: 0.64, 1.18), but again this was not significant. According to the Poisson model results, the EB+ group had a 73% higher incident rate of an ED visit compared to the EB- group (IRR=1.73; 95% CI: 1.41, 2.14) at 12 months. Similar findings were reported at 18 months (IRR=1.80; 95% CI: 1.41, 2.14).
CONCLUSIONS: Veterans who received direct to consumer EB had a modest but non-significant reduction in all-cause mortality as compared with Veterans who did not receive an EB at 12 and 18 months. However, Veterans who received the EB had significantly higher ED/UC utilization during the 12- and 18-month observation periods. These results suggest benefits but also higher clinic utilization. This

was a VA quality improvement project and not funded.

No. 29

Is There a Value of Including Individuals With Depression and or Anxiety in Smoking Cessations Studies?

Poster Presenter: Ahmad Hameed, M.D.
Co-Author: Usman Hameed, M.D.

SUMMARY:

Background: Nicotine use and dependence are major public health concerns. The data suggests that patients with complex psychiatric histories are often smoking more cigarettes compared to the general population. These psychiatric patients also find it very difficult to quit smoking. Some studies suggest that the more active the psychiatric symptoms are, the more difficult it is for patients to quit smoking. The majority of the studies on smoking cessation and nicotine dependence are done in a nonpsychiatric patient population or are done in a cohort where questions about their mental health disorders are not asked. In our study to review the quit rates, we looked at secondary analysis on the prevalence of depression and or anxiety versus absence of any depression or anxiety in our participants. Method: We invited individuals who were smokers to participate in a study. These individuals were asked to call into a Call Routing Screener (CRS). We received a total of 4,668 responses from individuals who were interested in participating in the study. 3,826 of those respondents consented to be asked additional questions. These additional questions included date of birth, gender, ability to understand English, educational level and number of cigarettes smoked per day. Additionally, they were asked if they had ever suffered from depression/anxiety and if they had ever received treatment, counseling or medications for depression/anxiety disorders. Results: Participants included in this analysis (n=3826) had a mean age of 41.1 (SD: 12.6), were 59.6% female, and 50.5% reported having at least some college education. They smoked an average of 18.3 (SD: 9.0) cigarettes per day. Nearly two-thirds (64.2%, n=2458) of participants reported having suffered from problems with or having been treated for depression and or anxiety, a significantly greater proportion than those who reported never having depression or anxiety ($p < 0.0001$). Discussion: Smoking and nicotine use is a major public health concern. Smoking causes a significant medical, emotional, psychological and financial burden on the individual and on society. Due to the dependence potential of nicotine, it is difficult to stop smoking and using nicotine. In addition, individuals who suffer from mental health disorders have a higher rate of smoking and nicotine use compared to the general population. For these individuals, quitting smoking or nicotine use is especially difficult. The majority of studies done for the cessation of smoking are conducted on individuals without ascertaining their mental health status. We found that 64.2% of the smokers, who agreed to participate in our study, had a history of depression and or anxiety. We suggest the studies for smoking cessation should include individuals with mental health disorders as this group has a higher percentage of smokers than the general population and have a harder time quitting smoking/nicotine.

No. 30

Is There a Relationship Between Nicotine Dependence and Withdrawal With Current and Past Diagnosis of Anxiety and Depressive Disorders?

Poster Presenter: Ahmad Hameed, M.D.

SUMMARY:

Background: Nicotine use and dependence are major public health concerns. Similarly data suggests that anxiety and depression are prevalent amongst nicotine users. We wanted to see if there was any relationship between nicotine dependence and withdrawal with current and past anxiety and or depression diagnosis. Literature suggests that there is high nicotine use and dependence in patients who suffer from anxiety and depression which may result in poorer outcomes in smoking cessation trials for these patients. Nicotine withdrawal symptoms worsen on quitting and represent a constellation of symptoms including dysphoria, anxiety, restlessness, poor sleep and irritability. Nicotine dependence and withdrawal are often measured by using Penn State Cigarette Dependence Index (PSCDI) and the Minnesota Nicotine Withdrawal Scale (MNWS). Method: We recruited 188 current smokers who had no plans to quit smoking in the next 6 months to participate in a randomized clinical trial to observe

the efficacy of reduced nicotine cigarettes in patients with anxiety and depressive disorders. Mini International Neuropsychiatric Interview (MINI) was used to screen and diagnose mental health conditions prior to the participants enrolling in our study. Only nicotine users/smokers with a current or past diagnosis of anxiety or depressive disorder were enrolled in our study. We used PSUCDI and MNWS to measure nicotine dependence and withdrawal symptoms at baseline, while participants were still smoking their usual number and brand of cigarettes. Kruskal-Wallis tests were used to test the differences in scores between those with current and those with past diagnoses of anxiety and depression. Results: There was a pattern in which those participants who met the current diagnostic criteria for anxiety and depression (i.e. had current history only) had higher measures than those meeting past diagnostic criteria of anxiety and or depression. Both dependence scores (PSCDI: 14.2 for current versus 12.4 for past, p=0.02) and current withdrawal symptom scores (MNWS 19.8 for current versus 8.0 for past, p=<0.01) were significantly higher for those meeting current versus past diagnosis of anxiety and depression. Discussion: Participants who met the diagnostic criteria for both current anxiety and depressive disorders had high scores on measures of nicotine dependence and withdrawal compared to those with a past history of anxiety and depression. It is possible that active smokers with current anxiety and depressive disorders have in particular difficulty in quitting smoking due to nicotine withdrawal (dysphoria, anxiety, restlessness, poor sleep, irritability etc.). This suggests that adequate dose on smoking cessation medications (e.g. nicotine replacement therapy or varenicline) are particularly important for smokers with anxiety or depressive disorder in addition to their appropriate psychotropic medications when attempting to quit smoking.

No. 31
WITHDRAWN

No. 32
Transition From Buprenorphine Maintenance to Extended-Release Naltrexone: Hybrid Residential-Outpatient Randomized Controlled Trial
Poster Presenter: Paolo Mannelli, M.D.

Co-Authors: Sandra Comer, Ph.D., Danesh Alam, Antoine B. Douaihy, M.D., Narinder Nangia, Sarah Akerman, Abigail Zavod, Bernard Silverman, Maria Sullivan

SUMMARY:
Introduction For patients with opioid use disorder (OUD) seeking to discontinue buprenorphine (BUP), transition to naltrexone extended-release injectable suspension (XR-NTX) may assist in relapse prevention. Currently, limited guidance is available to facilitate transition between medications. We report the results from a randomized, placebo-controlled, parallel group study to evaluate two regimens for transitioning from BUP maintenance to extended-release naltrexone (XR-NTX). Methods This Phase 3, hybrid outpatient-residential study (N=101) evaluated the efficacy and safety of oral naltrexone (NTX) used in conjunction with BUP and a standing regimen of ancillary medications to help adults with OUD transition from BUP maintenance to XR-NTX. Participants maintained on daily BUP for at least 3 months (receiving at most 8mg for at least the previous 30 days) and seeking antagonist treatment were stabilized on BUP (at most 4mg) and randomized (1:1) to 7 residential days of low, ascending doses of oral NTX (NTX/BUP) or placebo-NTX (PBO-N/BUP) in addition to a 3-day decreasing BUP taper, ancillary medications (clonidine, clonazepam, and trazodone), and daily psychoeducational counseling. On Day 8, participants received XR-NTX following a negative naloxone challenge. The primary efficacy endpoint was the proportion of participants who received and tolerated an XR-NTX injection on Day 8 as demonstrated by mild opioid withdrawal symptoms (Clinical Opioid Withdrawal Scale score at most 12) following administration. Results Induction rates onto XR-NTX were similar for both regimens: 69% (NTX/BUP) vs 76% (PBO-N/BUP; P=.407, primary endpoint not met), with an overall induction rate of 72%. Number of days with COWS peak score at most 12 during induction (Days 1-7) was similar for NTX/BUP and PBO-N/BUP groups (5.8 vs 6.3, P=.511). The craving 'desire for opioids' VAS least squares mean was 12.2 (NTX/BUP) vs 8.2 (PBO-N/BUP; P=0.045) for days 1-7 and 6.3 vs 7.6 (P=.578) for days 8-11, respectively. There were no significant differences between treatment groups for the

following exploratory outcomes: response to medication assessed by Patient Global Assessment of Response to Therapy (on Day 11), change in frequency of substance use assessed by the Quantitative Substance Use Inventory, and change from baseline in pupil diameter over time. Treatment emergent adverse events were mostly mild-moderate in severity and consistent with symptoms of opioid withdrawal. Conclusions This was the first randomized, controlled trial evaluating the efficacy of XR-NTX induction regimens in patients seeking to discontinue buprenorphine. Low ascending doses of oral naltrexone did not increase induction rates onto XR-NTX compared to placebo. The overall high rate of successful induction supports the use of a brief BUP taper in combination with standing ancillary medications as a well-tolerated approach for patients seeking to transition from BUP to XR-NTX. Study was funded by Alkermes

No. 33

Psychiatric Manifestations of Appearance and Performance Enhancing Drug Intoxication and Withdrawal

Poster Presenter: Trevor Charles Griffen, M.D., Ph.D.
Co-Author: Tom Hildebrandt

SUMMARY:

Appearance and performance enhancing drug (APED) use often occurs as polysubstance abuse with a mixture of anabolic steroids, stimulants and other compounds intended to mitigate unwanted side-effects. APED use is high prevalent, particularly among professional athletes and members of the military, and is most commonly seen in individuals who place a very high value on their body image. Components of APED regiments typically include drugs taken to aid with weight or fat loss. APED use can have serious physical health consequences, even leading to liver failure and death in otherwise healthy individuals. Several psychiatric manifestations of APED use have been reported, including depression, hypomania, irritability and agitation; however, several primary factors have complicated study of the psychiatric manifestations of APED use: 1) Use of a single APEDs is not normative; therefore, isolating the effects of a single agent is difficult and 2) APEDs use patterns differ from other drugs of abuse as their intoxication syndrome has a slower onset and longer duration 3) APEDs that have been studied in placebo controlled trials are frequently abused in combinations, patterns, durations & dosages quite different from clinical trial protocols. To better understand the psychiatric manifestations of APED use, we used standardized instruments to measure levels of depression, mania, disordered eating and shape and weight concerns in a sample of 60 real-world APED users. Prior studies have been limited in their ability to distinguish between effects of APED intoxication, withdrawal and psychopathology enriched in the population of APED users. We took advantage of the typical APED use pattern, cycling “on” and “off” anabolic steroids, that most APED users use to reduce side effects of long term use and used a within subject design to assess psychopathology just prior to the “on cycle,” during the “on cycle” and during the “off cycle.” We will report the psychiatric manifestations of APED use, both of the intoxication syndrome that occurs during active use, the “on cycle,” and of the withdrawal syndrome, during the “off cycle.”

No. 34

Opioid Overdose in Patients Treated With Extended-Release Naltrexone: Postmarketing Data From 2006 to 2018

Poster Presenter: Kimberley Marcopul
Lead Author: Priya Jain
Co-Authors: Rose Marino, Madé Wenten, Prashanthi Vunnava, Marie Liles-Burden, Avani Desai, Sarah Akerman, Maria Sullivan, James Fratantonio, Gary Bloomgren

SUMMARY:

AIM Opioid overdose rates are rising in the United States. Patients treated with naltrexone extended-release injectable suspension (XR-NTX), a μ-opioid receptor antagonist, may be vulnerable to opioid overdose if they attempt to override the blockade, miss a dose, or discontinue XR-NTX. Clinical trials of patients treated with XR-NTX have not demonstrated an increase in overdose susceptibility compared with treatment-as-usual, placebo, or buprenorphine-naloxone. We assessed postmarketing rates of reported fatal and non-fatal opioid overdose, and all-cause overdose, during and after treatment with XR-NTX. METHODS We

reviewed case data from postmarketing adverse event reports received from 2006 to 2018 for patients treated with XR-NTX (for any indication) and identified cases in which opioids were specifically stated as the cause of overdose. Assessable cases were adjudicated by at least 2 reviewers and categorized by the timing of the event from the last dose of XR-NTX (latency): at most 28 days (on-treatment), 29-56 days post-treatment, and >56 days post-treatment. Reporting rates were calculated by number of cases per number of patients who received XR-NTX. A sensitivity analysis was performed comparing reporting rates of opioid overdose reports with rates of all-cause overdose reports irrespective of agent(s) involved. RESULTS An estimated 495,602 patients were treated with XR-NTX (for any indication) from 2006 to 2018. We identified 161 cases in which opioids were specifically stated as the cause of overdose; approximately 41% (66/161) of cases contained adequate information to assess latency of event from last dose of XR-NTX. For the 66 assessable cases, opioid overdose rates were similar for each latency category. For the assessable cases of opioid overdose, the reporting rates (per 10,000 patients) were 0.54 (0.24, fatal), 0.34 (0.16, fatal), and 0.44 (0.40 fatal) for at most 28 days, 29-56 days post-treatment, and >56 days post-treatment, respectively. For 63 cases with sufficient information, the median latency for events occurring at most 28 days from last XR-NTX dose was 18 days (range: 1 to 28 days); for 29-56 days was 43 days (range: 29 to 56 days); and for >56 days was 76.5 days (range: 60 to 145 days). For the 131 assessable cases of all-cause overdose, the reporting rates (per 10,000 patients) were 1.11 (0.46, fatal), 0.67 (0.38, fatal), and 0.87 (0.71, fatal) for at most 28 days, 29-56 days post-treatment, and >56 days post-treatment, respectively. CONCLUSION Based on assessment of 12 years of postmarketing overdose data, the rates of fatal and non-fatal opioid overdose and all-cause overdose during or after treatment with XR-NTX were rare. As the incidence of opioid overdose in the United States continues to rise, further research is needed to better understand the risk of overdose in patients receiving or discontinuing medication for opioid use disorder. Analysis was funded by Alkermes, Inc.

No. 35

Exploring the Emerging Role of Testosterone-Coupled-Opiate Receptor Signaling in Gambling and Alcohol and Smoking Craving in Opiate Use Disorder

Poster Presenter: Zahra Khazaeipool
Co-Author: Simon S. Chiu, M.D., Ph.D.

SUMMARY:

Introduction: Community studies show endogenous testosterone level is linked to the Iowa-Gambling-Task performance score. High testosterone levels in healthy male subjects are linked to increased risk taking and impulsivity in gambling disorder (GD). Opiate signaling dysregulation is related to GD. Few studies examine the link of opiate receptor signaling;opiate agonist and antagonist interaction, on testosterone release, and to investigate craving of behavioral addiction:GD and substances of abuse. The objective of our study was twofold: Part 1)to determine whether opiate substitution treatments: methadone (MET), the prototypal mu-opiate receptor agonist, and buprenorphine (BUP) the mixed-mu-opiate agonist/kappa-antagonist, in opiate use disorder (OUD) exert differential effects in suppressing testosterone, Part 2) to delineate the link of gambling craving with craving for opiates, smoking (nicotine dependence) and alcohol urges. In Method: In part 1, we recruited male OUD subjects maintained on :1)methadone, (MET) [n=33];2)buprenorphine (BUP) [n=31] attending the community-based OUD rehabilitation program. We compared plasma levels of free and total testosterone, prolactin, FSH and LH between BUP and MET groups . In part 2, in the sample of OUD subjects maintained on methadone, we chose the cross-sectional design to examine the correlative pattern of GD urges in relation to craving for cigarettes, alcohol use. We administered a battery of standardized questionnaires and rating scales: SOGS (South Oaks Gambling Screen), DAST (Drug Abuse Screening Test), AUDIT (Alcohol Use Disorder Identification Test) and SCL-90 (Symptom Check List-90) and Fagerstrome test for Nicotine Dependence (FTND) to a cohort of OUD clients(Male/female ratio : 22/28) maintained on MET (n=50). Results: In part 1, we found that in male subjects, MET suppressed free testosterone to a greater extent than BUP:[122.6 pmol/l vs 163.2 pmol/l). BUP group

almost approached normal testosterone level. In Part 2, we determined the prevalence of GD according to DSM-V criteria and used the SOGS(South Oaks Gambling Screen) >5 to be cut-off value. We found that 18% of our sample fulfilled DSM V-GD. Alcohol urge, smoking urge and gambling urge scales were found to be highly and significantly inter-related ($p < 0.05$). Smoking urge correlated significantly with gambling urge. GD subjects were more likely to report current smoking and alcohol use: 78% of GD were more likely to exhibit nicotine dependence compared with 48% in the non-GD sample. GD subjects maintained on MET has higher scores on the SCL-90 subscales of paranoia, obsessive-compulsiveness, phobia and somatization compared with the non-GD MET group. Conclusion: Our findings suggest that behavioral addiction and substance use disorder share reward and craving pathways. Specific targeting testosterone-coupled opiate receptor signaling may offer novel therapeutic vistas in behavioral addiction and co-morbid substance use disorder

No. 36

Sociodemographic Characteristics, Adverse Childhood Experiences, Substance Use and Psychiatric Disorders Among Offenders and Non-Offenders

Poster Presenter: Bradley Kerridge

SUMMARY: Objective: To compare prevalences of alcohol, nicotine and any drug use and psychiatric disorders between non-offenders, adolescent-limited, adult onset, and lifetime persistent offenders. Method: Face-to-face interviews in the 2012-2013 National Epidemiologic Survey on Alcohol and Related Conditions-III were used to assess differences in substance use, substance use disorders and other psychiatric disorders among distinct classes of criminal offenders. Results: Adolescent-limited, adult onset and lifetime persistent offenders were more likely ($p < 0.05$) to have reported adverse childhood experiences than non-offenders, while adolescent-limited and adult onset offenders were both more likely ($p < 0.05$) to report adverse childhood experiences than adult onset offenders. A gradient of risk was observed, with lifetime persistent offenders being most likely ($p < 0.05$) to use substances and develop many psychiatric disorders followed by adult onset and lastly adolescent-limited offenders when compared to non-offenders. Lifetime persistent offenders were at greater risk of most substance use and psychiatric disorders compared with adolescent limited offenders, while adult onset offenders were at greater risk of drug, cannabis and alcohol use as well as drug, alcohol and nicotine use disorders than adolescent limited offenders. Comparing lifetime persistent offenders with adult onset offenders, we found that lifetime persistent offenders were at greater risk of drug, cannabis and nicotine use, all substance use disorders and all personality disorders than adult onset offenders. Conclusion: Taken together, these findings help form a science-based public health strategy to address substance use and mental health needs of adolescent-limited, adult onset, lifetime persistent offenders. Further research is warranted on age of incarceration and those processes underlying differential exposure to substances and development of psychiatric disorders.

No. 37

Sex-Related Disparities in Alcohol Use in the U.S.

Poster Presenter: Roopali B. Parikh, M.D.
Co-Authors: Amarjot Surdhar, M.B.B.S., Andrew C. Chen, M.D.

SUMMARY:
Background: The differences in alcohol use patterns in men and women in the U.S. have not been well studied, especially in the contemporary era. Methods: The 2016 Centers for Disease Control Behavioral Risk Factor Surveillance Survey was utilized to identify a cohort of men and women who provided information regarding their recent alcohol use. Study endpoints included presence of binge drinking, heavy alcohol use, and driving while intoxicated. Results: Of the 486,237 respondents, 210,606 (43.3%) were men and 275,631 (56.7%) were women. Women were older, more often Black (9.1% vs 7.2%, $p<0.001$), insured, and college educated (64.3% vs 63.5%, $p <0.001$), and had lower annual household income than their male counterparts. They were less likely to be married (49.0% vs 57.1%, $p<0.001$) but more likely to have children living with them (26.1% vs 24.7%, $p<0.001$). Women also had lower body mass index and were

less likely to be current smokers (13.6% vs 16.3%, p<0.001). Rates of depressive disorders were significantly higher in women than men (21.2% vs 12.9%, p<0.001). Compared to men, women had significantly lower rates of binge drinking (19.7% vs 31.2%, p<0.001), heavy alcohol use (5.5% vs 6.5%, p<0.001), and driving while intoxicated (2.3% vs 5.0%, p<0.001). In multivariable analysis, female sex was independently associated with lower rates of binge drinking [odds ratio (OR) 0.55, 95% confidence interval (CI) 0.53-0.56], heavy alcohol use (OR 0.97, 95% CI 0.94-0.99) and driving while intoxicated (OR 0.42, 95% CI 0.40-0.45). Conclusions: In this observational contemporary study, female sex was independently associated with lower rates of binge drinking, heavy alcohol use and driving while intoxicated. Further research on sex-related disparities in prevention and screening for alcoholism is warranted.

No. 38

The Impact of Marijuana Legalization

Poster Presenter: Sanya A. Virani, M.D., M.P.H.
Co-Author: Souparno Mitra

SUMMARY:

Background: Marijuana is placed in Schedule I of the Controlled Substances Act and the Medical Marijuana program in NYS has been in effect since 2014 under the Compassionate Care Act. With Colorado and Washington having celebrated their five year anniversary of cannabis legalization last year, New York State (NYS) is set to follow suit. In January 2018, the Governor of NYS tasked the Department of Health (DOH) with studying the anticipated impact of legalizing recreational marijuana use in NYS. After exhaustive deliberation, the DOH published its report in July 2018 concluding that the positive effects of a regulated marijuana market in NYS outweighed the potential negative impact. Aims: The aims of our research are to: • Provide audiences a point by point overview of the history of legalization of cannabis in various states in the US, a topic that has not been widely discussed. • Review current marijuana use policies in NYS particularly and inform where the government currently stands with this decision. • Comprehensively tabulate the advantages and disadvantages of cannabis legalization, with particular reference to consumer demographics in NYS. • Present industry-wide data related to consumption, revenue generation, crime rates and negative health outcomes to compare potential advantages with likely disadvantages. • Present data from studies that demonstrate how continuous use of marijuana have negative consequences like anemia and low birth weight (pOR=1.77, CI=1.04 to 3.01), admission to the NICU (pOR=2.02, 1.27 to 3.21), residual psychosis and increase in motor vehicle accidents. Conclusion: In sum we highlight scenarios pertaining to enforcement of policies related to legal age, quality control, maximum limit of purchase, pricing, registration of authorized manufacturers, taxation, regulation, and monitoring of driving under the influence. We discuss the importance of expunging of prior marijuana violations, designing education and outreach programs for masses and regularly monitoring the impact of the legalization on health, safety, criminality and accidents through evidence from social market research.

No. 39

Cannabinoid Hyperemesis Syndrome: A Mysterious Association of Marijuana Use to Compulsive Bathing

Poster Presenter: Shinwoo Kang, M.D.
Lead Author: Shinwoo Kang, M.D.
Co-Authors: Andrea Bulbena, M.D., Alexander R. Sanchez, M.D., Ronnie Gorman Swift, M.D.

SUMMARY:

Cannabis is the most widely used illegal drug in the United States, with an estimate of 26 million users in the past month among people aged 12 and older and with approximately 3 million new users in 2017. A consequence of daily chronic cannabis use that often goes unrecognized is Cannabinoid Hyperemesis Syndrome (CHS), characterized by cyclical, intractable abdominal pain, nausea, vomiting and its hallmark feature of compulsive hot showering for temporary symptom relief. In this poster, we present the case of a 24-year-old woman with a history of severe cannabis use disorder who presented in the emergency department with complaints of severe epigastric abdominal pain, nausea, and more than 10 episodes of non-bloody, non-bilious vomiting. She was admitted to the

medical service with acute kidney injury secondary to severe dehydration from her multiple emetic episodes and Psychiatry was consulted for "obsessive-compulsive disorder for her frequent hot showers." Her symptoms of abdominal pain, nausea and vomiting resolved after 48 hours of THC abstinence and she was subsequently discharged home. Cannabis hyperemesis syndrome is an emerging diagnosis that continues to be underdiagnosed and unrecognized. Prompt identification of its core features of cyclical abdominal pain, nausea, vomiting, compulsive hot showering or bathing and a significant history of chronic heavy cannabis use can effectively reduce costs of unnecessary workup and ED visits, as well as preventing unnecessary illness. Early recognition can encourage proper counseling and education of the patient to the detrimental sequelae of cannabis use and properly address abstinence with supportive measures and substance use referral.

No. 40

Civil Commitment for Substance Use Disorders: A Case Report on Substance Addiction and Discussion of a Need for New York State's Own Casey's Law

Poster Presenter: Shinwoo Kang, M.D.
Co-Authors: Andrea Bulbena, M.D., Ronnie Gorman Swift, M.D.

SUMMARY:
Involuntary civil commitment in behavioral health is the admission of an individual against their will when they pose a significant risk or danger to self, to others, or dangers associated with an inability to provide for one's basic needs. Although statutes across the country for determining criteria for involuntary commitment have shown consistency among individuals with mental health disorders, there is significant variability across states when it comes to substance use disorders, despite similar, comparable, detrimental consequences. The Matthew Casey Wethington Act for Substance Abuse Intervention, also known as Casey's Law, is a law that came into effect in Kentucky in 2004, named after 23-year-old Casey Wethington who died of a heroin overdose in 2002. The act allows an individual to petition the court for involuntary civil commitment and treatment on behalf of another with a significant substance abuse impairment. As of 2016, 37 states and the District of Columbia have similar involuntary civil commitment statutes, like Casey's Law, for individuals suffering from a substance use disorder, alcoholism, or both. In New York and 12 other states, involuntary civil commitment statutes do not include a separate provision for substance use disorders. In this poster, we present a case of a 47-year-old homeless man with history of severe intravenous drug abuse (IVDA) with cocaine and heroin, and hepatitis C and liver cirrhosis, who was brought in by ambulance on 3 separate occasions during a 48-hour time period to the ER. Psychiatry was consulted for "evaluation to rule out intentional overdose and to determine if the patient met criteria for substance detoxification." He denied any prior intentional self-injurious behavior and denied previous psychiatric admissions. He acknowledged an extensive history and active IVDA with cocaine and heroin. He refused detoxification and did not meet criteria for psychiatric admission. He was stabilized in the emergency department and was subsequently discharged with outpatient follow-up. The variability in the criteria for involuntary civil commitment across states calls into question what constitutes an appropriate determination to deem someone a danger or a safety risk when they have been using substances. With the rise of deaths secondary to drug overdose reaching epidemic numbers, despite new medications and continued efforts in availability of various treatment modalities, further research and discussion amongst clinicians is required to further implement and unify a common definition of civil commitment statutes for substance use disorders.

No. 41

Atypical Subarachnoid Hemorrhage in Schizophrenia: A Diagnostic Dilemma

Poster Presenter: Shinwoo Kang, M.D.
Co-Authors: Norma Dunn, M.D., Ronnie Gorman Swift, M.D.

SUMMARY:
The primary symptom of subarachnoid hemorrhage (SAH) is a sudden, severe headache that is classically described by the patient as the "worst headache of my life" seen in about 97% of cases. Other symptoms that may present and overlap include brief loss of consciousness, nausea or vomiting,

meningismus, seizures within the first 24 hours, or altered level of consciousness. Very few cases however illustrate psychiatric symptom overlap and symptom mimicry, and even fewer with just psychiatric symptoms in the absence of classic, typical complaints. We present a case of a 54-year-old African American man who is diagnosed with schizophrenia, Diabetes Mellitus II and polysubstance use disorder (alcohol, phencyclidine, cannabis, tobacco), who presented in the emergency department with the initial impression of acute intoxication with unknown substance. The patient was medically cleared and transferred to the psychiatric emergency room for bizarre and disorganized behavior in the last 24 hours described by his sister as not his baseline functioning. She said that he urinated in the bedroom which he had never done before. He denied headache, neck stiffness or other physical complaints. According to the patient and his sister, he had been compliant with his medications with no reported hospital admissions in the past year. The sudden change in the baseline mental status, warranted further diagnostic work up, including non-contrast head computerized tomography (NCHCT) which showed extensive subarachnoid hemorrhage in the basilar cisterns with moderate hydrocephalus. His complete blood count, liver function test, basic metabolic profile and ammonia level were within normal, urine toxicology screen was significant for THC. Patient was subsequently transferred to another facility for further management. It was determined that his brain bleed was secondary to a left posterior communicating artery aneurysm rupture, which was coiled. His condition was managed and stabilized. Our case report highlights that SAH can present with acute psychiatric symptoms. The complexity of medical mimics of psychiatric conditions can cause a diagnostic dilemma that can delay diagnosis and appropriate treatment. It also highlights the difficulties in managing medical comorbidities in psychiatric patients, whose histories are often very difficult to obtain in times of acute distress especially in cases that present atypically. This case report also demonstrates that clinicians must be aware that atypical presentations of SAH can be found in patients with psychiatric conditions. It must be considered as part of the differential diagnosis in patients presenting with sudden change in their baseline functioning.

No. 42

Prevalence of ADHD in Postural Orthostatic Tachycardia Syndrome (POTS) Patients

Poster Presenter: Sami B. Alam, M.D.
Co-Authors: Dutt Patel, M.B.B.S., Pruthvi Goparaju, M.B.B.S., Muhammad Asad Fraz, M.D., Nabihah Chaudhary, M.B.B.S., Sabih Alam, M.D., Amer Suleman, M.D.

SUMMARY:
Background: POTS is form of Dysautonomia associated with a heterogeneous array of symptoms and many other co-morbidities. POTS is frequently mistaken for other conditions because it commonly presents with concomitant symptoms that mimic symptoms associated with other psychiatric conditions. Symptoms like brain fog, lack of attention, and weakened memory and cognitive issues that are likely to be caused by Attention Deficit Hyperactivity disorder (ADHD), are many times also seen with POTS patients. In POTS patients however, treating the symptoms may not treat the underlying condition which is autonomic and neurogenic in nature. Many POTS patients come in having previously seen a Psychiatrist and already having been diagnosed with Attention Deficit Hyperactivity Disorder. POTS is relatively less common and one of the last differentials thought about, if at all. The aim of this study is to determine the frequency of ADHD in patients diagnosed with POTS and the medications prescribed. It is also to raise awareness about POTS for the future reference of psychiatrists. Method: 876 POTS patients were randomly selected from our clinic. Patients' electronic medical records were reviewed retrospectively for diagnosis of ADHD having been previously diagnosed in a Psychiatric Setting. Results: Out of 876 POTS patients, 85.5% are female (749) and 14.5% are male (127). 10.5% of those 792 patients are diagnosed with ADHD (92); out of which 88.0% are female (81) and 12.0% are male (11). 85.8% of patients diagnosed with ADHD were treated with Medication (79); out of which 90.2% were female (83) and 9.8% were male (9). 9.0% of all POTS patients were on ADHD medication (79). 5.0% of all POTS patients were taking Adderall (44). 2.3%

of all POTS patients were taking Vyvanse (20). 0.7% of all POTS patients were taking methylphenidate[Ritalin] (6). 0.2% of all POTS patients were taking concerta(2). 0.1% of all POTS patients were taking evekeo(1). 0.1% of all POTS patients were taking tenex(1). 0.2% of all POTS patients were taking guanfacine(2). 0.2% of all POTS patients were taking strattera(2). 0.1% of all POTS patients were taking dextroamphetamine(1). Conclusions: POTS patients can present with symptoms of ADHD because of the overlap, but is rarely considered as a differential by Psychiatrists. These patients are prescribed ADHD medication, which may or may not alleviate symptoms. However there is also a risk that the medication may induce side-effects, tachycardia, which could possibly exacerbate POTS. Our data suggests that 1 in 10 POTS patients are diagnosed with ADHD and most of them (85.8%) do take medicine for the condition. Medicating patients without finding the underlying cause could possibly lead to unwanted drug dependence or unwanted side-effects. Detailed History, Physical examination, and appropriate referral should be carried out by the attending Psychiatrist. Further clinical studies are required to broaden the area of these discrepancies.

No. 43

A Rose by Any Other Name Would Smell as Sweet

Poster Presenter: Danish Ali

SUMMARY:

Introduction: Trauma-induced aggregation of chemosensory complaints of subjective anosmia with retronasal normosmia, cacosmia, dysosmia, ageusia, and cacogeusia has not heretofore been reported. Methods: Case study: An 80-year-old right-handed female was nasute until nine months prior to presentation when she fell, with head trauma, without loss of consciousness. She suffered from a variety of persistent chemosensory complaints. These included reduced smell to fifty percent of normal, and smell distortions, whereby the aroma of roses smelled like cinnamon. Results: Abnormalities in physical examination: general: right carotid bruit. 4/6 holosystolic murmur. Dupuytren's contractures in both upper extremities. Bilateral palmar erythema. Neurological Examination: Mental Status Examination: Digit span: five digits forwards and two digits backward. Unable to spell the word 'WORLD' forwards. Unable to interpret similarities. Pharyngeal dysarthria. Cranial Nerve (CN) examination: CN VIIII: Calibrated Finger Rub Auditory Screening Test: Strong 5 AU. CN XI: Hypertrophy of left sternocleidomastoid with titubation. Motor Examination: Atrophy of intrinsics bilaterally. 1+ cogwheeling of both upper extremities. Drift Test: right pronator drift with right abductor digiti minimi sign and right cerebellar spooning. Gait examination: Decreased associated movements in the right upper extremity on heel walking. Cerebellar examination: Finger to nose with dysmetria bilaterally. Holmes phenomenon positive bilaterally with vertical titubation. Low amplitude, high-frequency tremor in both upper extremities on extension. Archimedes screw and handwriting: Large with superimposed tremor. Reflexes: 3+ throughout. Pendular quadriceps femoris. Absent ankle jerk. Chemosensory testing: Olfaction: Brief Smell Identification Test: 9 (normosmia). Retronasal olfactory test: Retronasal Smell Index: 9 (normosmia). Gustatory testing: Propylthiouracil Disk Taste Test: 1 (ageusia). Other: MRI of the brain, T2 hyperintensity, suggested of chronic small vessel ischemic demyelination. Discussion: The concurrence of absent smell with normal olfactory testing has been postulated to be due to psychiatric origin, malingering, or to the wide distribution of 2 standard deviations from the mean for olfactory ability in the general population (Hirsch, 2018). Ageusia in the presence of retronasal normosmia is unusual, since 90% of taste or flavor is olfactory in origin, due to retronasal pathways (Gruss, 2015). Olfactory deficits from the head trauma, which are too small to be demonstrated by testing, may have disinhibited other aromas which integrate together like notes of a chord, to produce not a flower aroma, but rather the sweet like smell of cinnamon. In those who complain of olfactory deficit without objective evidence of such, query as to the presence of dysosmia, especially when exposed to complex odors, is warranted.

No. 44

SCID-5-CV: An Inter-Rater Reliability Study of the Substance Abuse Disorder Module in a Brazilian Sample

Poster Presenter: Flávia Osório

Co-Authors: Mariana Fortunata Donadon, André Moreno, Victor Scalabrini Fracon, Juliana Ushirohira, Rafael Sanches, Cristiane Baes, Thiago Apolinario, Tiago Guimaraes, Ana Paula Casagrande Silva Rodrigues, Roberto Mascarenhas Souza, Jaime Hallak, Lívia Maria Bolsoni, Fernanda Pizeta, Sonia Loureiro, Bianca Campanini

SUMMARY:
Background & Aims: Diagnosis in psychiatry is complex and the use of standardised assessment instruments can improve its precision. One aims to assess the reliability of Module E (substance abuse disorders) of the DSM-5 Structured Clinical Interview (SCID-5-CV) in samples of psychiatric patients (n = 160) and subjects from the community (20). Materials & Methods: Twelve psychiatrists/psychologists alternated in the function of evaluator/observer. The SCID-5-CV was initially conducted live by two professionals, with one being an evaluator (E1) and the other an observer (O1). After 10-15 days, the interview was conducted again by a third professional (E2) either live or by telephone. The reliability of the clinical diagnosis (medical record) in relation to E1 was also assessed. The resulting data were analysed by using Kappa coefficient (K), being excellent (> 0.75), satisfactory (0.40-0.75) and poor (<0.40). Results: For the diagnosis of alcohol abuse disorder (past 12 months), the K coefficients were 0.91 (E1 vs O1), 0.84 (clinical diagnosis vs E1) and 0.55 (E1 vs E2), with differences being observed when the latter evaluation was performed live (K = 0.70) or by telephone (K = 0.47). For the diagnosis of non-alcohol use disorder (past 12 months), the K coefficient was above 0.92 for all assessment conditions. Conclusion: Psychometric indicators of reliability were found to be excellent, thus encouraging the use of the instrument within clinical and research contexts. The less expressive reliability rates regarding live vs telephone interview deserves further investigation, since the availability of telephone evaluation emerges as an important tool for data collection in clinical research settings

No. 45
Clinical Validity of Scid-5-Cv for Differential Diagnosis of Mood Disorders in Brazilian Samples
Poster Presenter: Flávia Osório

Co-Authors: Juliana Ushirohira, Cristiane Baes, Thiago Apolinario, Lívia Maria Bolsoni, Tiago Guimaraes, Ana Paula Casagrande Silva Rodrigues, Roberto Mascarenhas Souza, Jaime Hallak, Rafael Sanches, Mariana Fortunata Donadon, André Moreno, Victor Scalabrini Fracon, Fernanda Pizeta, Sonia Loureiro

SUMMARY: Objectives: To assess the clinical validity of Module D (Differential Diagnosis of Mood Disorders) of the DSM-5 Structured Clinical Interview (SCID-5-CV) in samples of 108 psychiatric in/outpatients with differents mood disorders. Materials & Methods: A total of 12 evaluators (psychiatrists and psychologists) conducted in a system of rotation a SCID-5-CV. The clinical diagnosis was performed by the clinician responsible for the patient, through the LEAD procedure (longitudinal, evaluation performed by an expert, using all data available). The percentage of positive and negative agreement between the clinical diagnosis and the one performed by SCID-5-CV was calculated, as well as the sensitivity and specificity. Kappa (K) coefficient was used, showing to be excellent when > 0.75, satisfactory between 0.40 and 0.75, and poor when < 0.40. Results: Kappa values ranged from 0.52 (Persistent Depressive Disorder) to 0.93 (Bipolar Disorder). The sensitivity was 0.60 for Persistent Depressive Disorder and 1.00 for Bipolar and Current Major Depressive Disorders. Specificity was greater than 0.95 for all disorders. Conclusion: SCID-5-CV showed clinical validity to differentiate mood disorders, being an important resource to minimize false positive and negative rates in both clinical practice and research settings.

No. 46
Self-Compassion and Attitudes Toward Seeking Professional Help in Generation Z
Poster Presenter: Dan Czech
Lead Author: Duke Biber

SUMMARY:
Background: The purpose of this study was to examine the attitudes towards seeking professional help of a Generation Z sample (e.g. students born after the year 2000). The secondary purpose was to examine the relationship between mental health (e.g. self-compassion, stress, anxiety, depression)

and attitudes towards seeking professional help. Methods: Participants included undergraduate students from a southeastern university (n = 216). Participants completed the Attitudes toward Seeking Professional Help Scale (ATSPH), Self-Compassion scale (SCS-12), and the Depression, Anxiety, and Stress scale (DASS-21). Results: There was a moderate to strong, negative correlation between self-compassion and depression, anxiety, and stress across gender, race, and school classification. Males had significantly stronger ATSPH (M = 68.67, SD = 9.67) than females (M = 62.17, SD = 9.71), F(2, 213) = 3.00, p = .05. Males also reported significantly greater levels of self-compassion than females, F(2, 213) = 12.49, p < .001. Lastly, depression, anxiety, and stress significantly predicted ATSPH in low-ATSPH undergraduates. Conclusion: Overall, the present study provided information into the mental health of Generation Z undergraduate students and the likelihood of seeking services on campus. Future research for improving attitudes toward seeking professional help is recommended through self-compassion training.

No. 47

Psycho-Pharmacogenomics in Clinical Practice: Treatment Modulation in MDD Patients Utilizing Tools of Precision-Medicine—a Case Series

Poster Presenter: Ekaterina Hossny, D.O.

SUMMARY:

Introduction: Although per APA guidelines SSRIs are suggested to be first line of treatment for unipolar depression, response rate to first medication trial is 50-75%. Multiple meta-analyses have found that the serotonin transporter gene, SLC6A4, has demonstrated the ability to predict predisposition to development of depressive symptoms, efficacy and adverse events with SSRI treatment. Several studies suggest that individuals carrying the short allele (S/S or L/S) are significantly less likely to respond to SSRI treatment than individuals with the long allele (L/L). Prevalence of S/S genotype varies based on geographical regions, from 70–80% in East Asia, 40-45% in a typical European to 10-15% in sub-Saharan African populations. Although this data has been available, SSRIs continue to be the most prescribed medications for depression. We report the utility of pharmacogenomics testing to guide treatment decisions in a community mental health hospital serving an ethnically diverse patient population. Objectives: To describe our experience with pharmacogenomics testing for guiding treatment in patients with MDD who had previously failed medication trials or were medication naïve. Methods: Systemic PubMed search for “Serotonin transporter”, “SLC6A4 polymorphism”, “Major Depressive Disorder”, “response to SSRI”, “pharmacogenomics”, APA guidelines for Treatment of patients with MDD, review of case summaries. Cases: Three representative cases of our series are presented here: 1) A 58 yo black female with no formal PPHx, no previous psychotropic medications trials who presented with moderate/severe depression for six months. Pt is a SLC6A4 L/S allele carrier suggestive of higher risk of side effects and intolerance to SSRIs, therefore was started on venlafaxine. Symptoms resolved completely within three weeks of treatment with minimal reported side effects. 2) A 23 yo Hispanic female with PPHx of MDD, anxiety and BPD, one suicide attempt, with failed trial of SSRIs that caused worsening of depression and suicidality. As pt was found to be SLC6A4 S/S allele carrier with high risk of poor response or intolerance to SSRIs, she was started on lamotrigine. 3) A 27 yo Caucasian female with PPHx of MDD and PTSD, history of multiple unsuccessful trials of SSRIs and treatment non-compliance due to failure to respond to medication. When found to be a SLC6A4 L/S allele carrier less likely respond to SSRIs, treatment with bupropion and L-methyl folate was initiated. Conclusion: While psycho-pharmacogenomics is still in its infancy, there is evidence that it can guide treatment decisions. The ability to identify individuals with higher risk for development of depressive disorders and greater probability of adverse events with SSRIs, could be utilized in clinical practice to improve compliance and provide cost-effective clinical outcomes.

No. 48

Screening for Pseudobulbar Affect in an Outpatient Mental Health Clinic

Poster Presenter: Shawn Wang

Co-Authors: Emily Koos, Shawyon Sedaghati, Rimal B. Bera, M.D.

SUMMARY:

Pseudobulbar affect (PBA) is a neurological condition characterized by episodes of sudden uncontrollable laughing and/or crying that is incongruent to current mood/social context. PBA occurs secondary to a neurologic condition such as TBI, MS, ALS, Parkinson's disease, stroke, or Alzheimer's disease. Since symptoms of PBA can overlap with mood disorders, it is possible patients within a psychiatric population exhibiting symptoms may have a co-morbid PBA. One of the most commonly used instruments to screen for PBA is the Center for Neurologic Study-Lability Scale. In a previous study, it was shown that patients with psychiatric disorder have a high prevalence of PBA symptoms, by scoring high on the CNS-LS Scale. This study aims to take the next step and determine if the patients who did score 13 or higher on the CNS-LS Scale also had an underlying neurologic condition. Also, we further inquired if patients who did have an underlying neurologic condition also had traumatic brain injury to better understand whether the high prevalence of emotional incontinence was due to an underlying neurological condition with PBA. Our main objective of this study was to use the CNS-LS scale to screen for PBA in the general psychiatric population. We hypothesize that patients with a history of an experience with TBI or an underlying neurological condition will score higher on the CNS-LS scale than patients without a history of these conditions. Method: 98 patients who came in for their regularly scheduled outpatient psychiatric appointment were asked to complete the CNS-LS, asked if a neurological condition exists, and administered a 3 question Traumatic Brain Injury questionnaire. The CNS-LS is a seven-item questionnaire designed to measure the frequency and intensity of PBA symptoms (pathological laughter and crying). The scores range from 7-35 with a score of 13 signifying a potential PBA diagnosis. The history of neurological condition is a yes/no response. The brain injury (TBI) screening tool contains three true/false questions. Results: We did find that there was a higher prevalence of patients acknowledging that they had an underlying neurologic condition if they scored above 13 on the CNS-LS Scale as compared to scores below 13. (28% vs 9%). We also found that patients with higher scores on the CNS-LS Scale also scored higher on the brain injury screening tool. Conclusion: The main aim of our study was to determine if there was a correlation between CNS-LS and acknowledgement of an underlying neurologic condition in a general outpatient psychiatric population. We found that the higher the score on the CNS-LS Scale the more likely a patient acknowledged that they had an underlying neurologic condition. With the validation of CNS-LS, along with patient inquiry to determine if there is an underlying neurologic condition, we now have a better ability to make a diagnosis of PBA, which in turn may allow the clinician to introduce more precise treatments.

No. 49

Utilization Review of Laboratory Tests for Inpatient Psychiatry Admission

Poster Presenter: Adjoa Smalls-Mantey, M.D., D.Phil.
Co-Author: Hannibal Person, M.D.

SUMMARY:
United States healthcare costs continue to grow at exponential rates, and lab testing is one contributor to these rising costs. The APA Practice Guidelines do not recommend any specific lab tests be performed as part of the initial psychiatric assessment of adults [APA Practice Guidelines, 3rd Edition]. Rather, guidance is provided that a thorough medical history be taken and review of systems be performed. Despite this, many patients undergo laboratory testing as part of their initial evaluation for psychiatric symptoms. This testing can include thyroid-stimulating hormone (TSH), syphilis rapid plasma reagin (RPR), vitamin B12 level, and folate level, because abnormalities in these labs may suggest an underlying organic etiology for depression, mania, or psychosis. However, in the absence of medical symptoms or findings suggestive of organic disease, the diagnostic benefit versus cost of this testing is not clear. To address this question, the volume and cost of the aforementioned lab tests were determined over a one month period for patients admitted to inpatient psychiatry at The Mount Sinai Hospital (MSH). Results of these tests were reviewed to assess for abnormalities that might necessitate change in management. The Mount Sinai Data Warehouse, a database of de-identified clinical data culled from MSH electronic medical records, was queried for lab testing in patients admitted to inpatient psychiatry during

November 2017. The costs of these labs were obtained from LabCorp™ which supplies the hospital. There were 51 admissions and lab work performed at the time of admission from this group included 45 TSH (88% of admissions), 48 syphilis RPR (94%), 51 vitamin B12 (100%), and 8 folate (16%). Only two TSH levels (4.4% of ordered) were abnormal, no syphilis RPR were reactive, only 9 (17.6%) vitamin B12 levels were elevated, and all folate levels were within normal limits. The average cost per patient of these labs was $203.23 and ranged from $87.00 to $328.25. Out of a total 152 labs ordered on admission, only two abnormal TSH potentially impacted management. Elevated vitamin B12 does not typically cause psychiatric symptoms. Further investigation will expand the sample size and include detailed review of the medical records to determine whether there were any documented clinical indications for ordering these labs in each patient. These findings suggest that routinely ordering these screening labs upon psychiatric admission have a low yield of clinically useful results that would impact a patient's trajectory of care. More selective ordering of screening labs at the time of psychiatric admission may reduce costs while not negatively impacting quality of care. This research was supported by the NCATS of the NIH, Award Number TL1TR001434-3.

No. 50

When NMS Stands for "Near Miss Situation": A Case Report

Poster Presenter: John J. Sobotka, M.D.
Co-Author: Yassir Osama Mahgoub, M.D.

SUMMARY:

Introduction: Neuroleptic Malignant Syndrome (NMS) is a condition arising unpredictably from neuroleptic treatment, resulting in morbidity and mortality. Mild or incipient forms have been described and often get missed. The DSM-5 has been changed to better account for the possibility of diverse onset, presentation, progression, and outcome. We present a case of NMS resulting from haloperidol displaying an atypical arrangement of initial symptoms. Clinical suspicion arose only after patient had made it beyond initial evaluation, which provides continued support for the reliance on clinical acumen in diagnosing this erratic condition. Objective: To emphasize focus on clinical suspicion in early diagnosis of NMS regardless of lack of Expected symptoms. Case Report: A 31-year-old woman with no significant past medical history and psychiatric history of schizophrenia, was admitted for agitation and command auditory hallucinations to kill herself. She had been apparently compliant haloperidol 5mg twice daily prior to admission and, secondary to agitation, had received 10mg of haloperidol in the emergency department. On the inpatient unit, she was afebrile, though lethargic, drooling, with significant muscle rigidity, and tachycardia. She was transferred to the ED for further management and her first creatinine kinase (CK) levels was slightly but not strikingly high (1180 U/L Due to the lack of more typical NMS signs, such as hyperthermia, diaphoresis, it fell low on the team's differential. Shortly after transfer, she required intubation for airway protection due to her severe lethargy. On day 3, concern for NMS returned as her CK rose to 11698 U/L, with new leukocytosis and other classic signs such as blood pressure fluctuation, tachycardia, and tachypnea with worsening rigidity. With further collateral information, it was realized that she had received long-acting haloperidol one month prior to the current admission. Symptom management took the forefront and she was started on dantrolene. After approximately one week, she showed improvement and was discharged from the medical unit. Discussion: The DSM previously had stricter guidelines in diagnosing NMS. The syndrome's varying presentation and growing documentation of incipient presentations, made this method untenable. DSM-5 addresses this problem to an extent, by eschewing strict parameters for diagnosis, rather, describing the array of symptoms and encouraging a reliance on clinical judgment in diagnosing. As seen in this case, the team and patient would have benefitted from persistent suspicion, despite the lack of an obvious presentation of NMS. Conclusions: - DSM-5 does not contain a set diagnostic criterion for NMS and gives higher weightage for clinical judgment. - Though initial or overall presentation may contain few known symptoms, acute action is necessary given the lethality of the syndrome.

No. 51

#Psybersecurity in the Differential Diagnosis: Mental Illness Due to Hacking

Poster Presenter: Ryan K. Louie, M.D., Ph.D.

SUMMARY:

Psybersecurity is the junction of psychiatry and cybersecurity that addresses the security issues of technology and mental health. As the interfaces between devices and humans become increasingly connected, new diagnostic methods and assessments will be needed that address the security of devices and the impact on mental health. Historically, a patient's complaint of "I've been hacked!" might suggest paranoia or delusions. However, with current technology and increasingly sophisticated cybersecurity breaches, psychiatrists will have to broaden and deepen their differential diagnosis to include the possibility of an actual technology security compromise resulting in mental illness manifestations. This poster will be composed of three parts: The first section will provide an overview of the range and diversity of the technology security landscape as related to mental health. Items range from less physically invasive modalities such as digital content and information, to more physically invasive circumstances involving embedded devices such as brain stimulation and neuromodulation. The second section will be the introduction of a psybersecurity assessment module that is added to the diagnostic interview. Domains of inquiry will include: usage history of technology and security, user responses to any instances of security compromise, attitudes and belief systems regarding technology, and level of risk-taking regarding security. The third section will integrate the first two sections for practical applications: providing mental health care for patients who have experienced real and/or perceived technology security compromise; the awareness and education of the role of technology security and the need to protect mental health and human information security assets; building a framework into the profession of psychiatry that facilitates inter-specialty communications with cybersecurity. Psychiatrists can play a central role to help develop a more robust and resilient infrastructure for security in a digital world.

No. 52

A Neuropsychiatric Case of Intractable Pediatric Skin Picking Disorder

Poster Presenter: Ethan T. Anglemyer, D.O.
Co-Authors: Krystal Jones, Serena Fernandes, Martha J. Ignaszewski, M.D., Kevin Tsang, Anna Muriel, Darcy Burgers, Jeffrey Bolton, Aaron Hauptman

SUMMARY:

Background: Pruritis and skin picking may occur secondary to a range of underlying systemic medical, neurological, oncological and other disorders. Excoriation (Skin Picking) Disorder is a psychiatric diagnosis with prevalence of 1.4%-5.4% defined in DSM-5 by recurrent skin picking resulting in lesions with repetitive attempts to stop the behavior which causes significant distress and is not attributable to other medical conditions. Given the multi-system etiologies that may underlay pruritis, multi-disciplinary approach to evaluation and management is critical. Case: We present the case of a 7-year-old male with two-year history of progressive, debilitating, localized excoriation of the head and neck. After a prolonged, treatment-refractory course of presumed primary excoriation disorder, including high-dose SSRI, aripiprazole, n-acetylcysteine and specialized cognitive behavioral therapy, he was emergently evaluated following dramatic exacerbation of skin-picking within the C2-C6 dermatomal distribution. Neurological consultation demonstrated mild unilateral decreased muscle bulk in left upper and lower extremities with clonus and hyperreflexia in the lower extremities. Brain and spine MRI demonstrated C2-C4 enhancing intramedullary mass involving the upper cervical cord. Biopsy was completed and pathology was consistent with ganglioglioma with BRAF V600E and H3K27M mutations. Conclusion: Literature review reveals that excoriation may be a presenting symptom of numerous medical conditions. This case highlights the importance of thorough multidisciplinary assessment and the role of integration of neuropsychiatry within the diagnostic and management paradigms in treatment-resistant cases of excoriation. It also highlights specific clues suspicious for underlying illness, such as localized anatomical distribution of excoriation sites and lack of improvement despite multiple medications or psychotherapy.

No. 53

Higher Serum VGF Protein Levels Discriminate Bipolar Depression From Major Depressive Disorder

Poster Presenter: Suzhen Chen

SUMMARY:

Major depressive disorder (MDD) and bipolar depression (BD) are both widespread and debilitating mental disorders, and recurrent chronic disorders main showing a pattern of fluctuations in mood state and energy. Despite clear phenomenological criteria, the differential diagnosis between MDD and BD remains a clinical challenge, and misdiagnosis often leads to ineffective treatment and poor prognosis. We found that VGF (non-acronymic) is implicated in the pathogenesis of MDD and serum VGF levels significantly declined in MDD patients in the previous study[1]. However, how serum VGF levels alter in BD patients is unknown. Here, we used Enzyme-linked immunosorbent assay kits to measure serum VGF levels of 30 MDD patients and 20 BD patients who respectively met MDD and depressive episode in course of bipolar disorder type I criteria of the Diagnostic and Statistical Manual of Mental Disorders IV diagnostic criteria as well as 30 demographically matched healthy controls (HC). One-way analysis of variance (ANOVA) and post hoc multiple comparisons were used to compare the difference of VGF levels among these three groups. Pearson correlation analysis was used to analyze correlations between serum VGF levels and clinical information including scores of 17-item Hamilton Depression Rating Scale (HDRS), body mass index (BMI) and so on. The receiver operating characteristic (ROC) curve was used to analyze the discriminatory capacity of serum VGF levels (area under the ROC curve (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) [2]. Positive LR values (+LRs) and negative LR values (-LRs) were used to validate the results of the ROC curve analysis (The higher +LRs and the lower -LRs are, the better performance to the diagnostic value for the test is) [3]. As a result, we found that, compared with HC, serum VGF levels significantly declined in MDD patients but increased in BD patients. No correlation was found between serum VGF levels and any clinical variables of subjects in MDD and BD group, respectively. ROC analysis of the diagnostic effectiveness of serum VGF levels lead to a fair to excellent discriminatory capacity between every two groups among these three groups (AUC from 0.732 to 0.990). The optimal cut-off value for serum VGF was = 968.19 ng/mL in discriminating MDD patients from HC, while =1099.06 ng/mL in discriminating BD patients from HC. For discriminating BD patients from MDD patients, the optimal cut-off value for serum VGF was =1093.85 ng/mL, and the AUC = 0.990, sensitivity was 95% and specificity was 100% as well as the accuracy was 95%. LRs further confirmed the differential efficiency of serum VGF levels for distinguishing BD and MDD patients with a +LR of infinity and a –LR of 0. The results reveal that serum VGF levels changed significantly different in MDD patients and BD patients, and serum VGF can be considered as a useful objective indicator for differentiating BD patients from MDD patients.

No. 54

Addressing Resident Wellness: Does Gratitude Journaling Improve Resident Quality of Life?

Poster Presenter: Kemper Schumacher, M.D.

Co-Authors: Bianca Kirit Patel, M.D., Bo Kim, Ph.D.

SUMMARY:

BACKGROUND While concern for resident physician wellness is on the rise, there is limited data around what tools are effective in promoting wellness during training. Studies have shown that during the active practice of gratitude, there is improved functional connectivity in brain regions regulating emotion and motivation, potentially indicating gratitude practices as means to improve wellness. This pilot study was designed to evaluate the impact of gratitude journaling on residents' perceived quality of life. Quality of life was a chosen marker as it can improve regardless of wellness-status at the start of use. OBJECTIVE: To determine if gratitude journaling can improve resident quality of life. METHODS: This study was conducted at an ACGME-accredited four-year psychiatry residency training program. The participants were recruited at a program meeting in September 2018 on a voluntary basis. We distributed a pre-survey, asking yes/no if: current use of a gratitude journal; belief the journal may help; opt-in/out for reminders – and to fill out a Quality of Life Enjoyment and Satisfaction

Questionnaire - Short Form (Q-LES-Q-SF), modified as follows: removal of questions related to sex-drive, mobility, and medication use. The modifications were made to protect participant privacy. Residents' decision to participate was not shared beyond the study team. Participants were provided the prompt: "write down five things from your day that you are grateful for," with a goal of 16 uses in the one month study period. A post-survey included the following: number of times journaled; if used differently than instructed; if they think it helped; intention to continue; and Q-LES-Q-SF. We analyzed change in quality of life using the survey. We received informal feedback from participants regarding contextual factors potentially impacting results. RESULTS Mean change in quality of life +7.083 (SD = 2.178) The questions with the most frequent improvement were satisfaction with "work" (10/12 improved) and "economic status" (9/12 improved) Participation, regardless of number of days used, showed some improvement. 1/12 participants indicated that 'yes' they intended to continue journaling. DISCUSSION Results suggest that gratitude journaling improves quality of life. The consistent improvement related to economic status for the majority of residents despite minimal change in actual status indicates that the effects of journaling are related to perception of well-being. This perception also seems to influence residents' experience at work as well. Also notable was self-reporting by participants of contextual factors that they felt effected their scores: rotation schedule, commuting distance, major life events and program changes. Thus, before expansion of the pilot, standardized interviews will be conducted to understand potential the contextual variation. Overall, this study represents a step towards establishing a tool for resident wellness.

No. 55

A Resident-Driven Wellness Initiative: The Step-Challenge

Poster Presenter: Patricia Paparone, M.D.
Co-Authors: Camila Albuquerque De Brito Gomes, M.D., Sumeet Badh, M.D., Anetta Raysin, D.O., Theresa Jacob, Ph.D., M.P.H.

SUMMARY:

Introduction: Studies have shown alarming rates of burnout in resident physicians, with data indicating rates between 50% -75% depending on the specialty1, 2. There is evidence that stress affects core elements of physician's performance, such as empathy and humanism3 and that physicians who suffer from burnout provide less adequate patient care4. The impact of wellness initiatives in residency programs have demonstrated improved career satisfaction, lower rates of burnout, and decreased perceived stress which ultimately can impact patient care5. Walking in particular, has profound effects on overall health and mental well-being 6, 7. In recognition of this, we developed a low cost, easy access pilot initiative to encourage an increase in physical activity through walking and tracking steps. Objective: To promote physical and mental wellbeing in resident and attending physicians within the psychiatry department by starting a step challenge and measuring the number of steps taken in a selected period of time through the use of a step-tracking smartphone application. Methods: This wellness initiative was developed as a performance improvement project in a community-based hospital of an independent academic medical center. It represents a collaborative effort between psychiatry residents and attending psychiatrists. First, we formed a Wellness Committee to plan this Step-Challenge project and identified "Stridekick" as the application to use for step tracking. With leadership support, residents and attending physicians were invited to participate in the created challenges over the course of the year in a variety of individual and team-based "competitions." Weekly wellness committee meetings were held to track progress through the Stridekick application and calculate winners, who were awarded prizes in the form of fitness items- i.e. fitness band, water bottle, etc. The step challenges are ongoing and post surveys will be done to evaluate perceived effects on resident wellbeing. Results: The overall response has been positive. More than 70% of residents, on average, have participated in the challenges held. Approximately 50% of core teaching faculty have participated as well. Post survey results will compare resident mindfulness with walking and whether this initiative encouraged participants to walk more. Formal surveys will address perceived health and wellness benefits through involvement in the step challenge initiatives for final data collection and analysis. Conclusion: The step challenge project was

a result of coordinated efforts from residents and attendings. The ubiquity of cellphones in our lives points to their value in assisting with the implementation of residency wellness initiatives, and initial data revealed residents across all years of training found the intervention to be easy and helpful in promoting physical activity, mindfulness towards one's wellness, and increased departmental camaraderie.

No. 56

Identification of Factors That Impact Response to an Interactive Obesity Treatment Approach Adapted for Use in Individuals With Severe Mental Illness

Poster Presenter: Taylor Dailing

SUMMARY:

Background We tested the feasibility of delivering an interactive obesity treatment approach (iOTA) derived from the Diabetes Prevention Program, incorporating short message service (SMS) text messaging to supplement in-person health coaching. We delivered the treatment in settings where patients with SMI are most likely to engage in psychosocial rehabilitation and mental health treatment – the Community Mental Health Center (CMHC) and the Clubhouse. Here, we describe treatment adaptations and the results of a 12-week feasibility test. We hypothesized that illness severity and iOTA engagement would be associated with weight change. Methods Individuals with SMI between the ages of 16 and 75 underwent 12 weeks of treatment consisting of monthly 1:1 in-person visits for participants seen in the CMHC setting and monthly group sessions for participants seen in the Clubhouse setting. All participants received SMS-based health tips 5 days per week that were directly related to their goals. Participants were prompted once a week to respond via text with their weight and progress towards goals. Treatment adaptations included increased frequency of in-person health coaching meetings (from quarterly to monthly), adding weekly phone check-ins with participants as needed, and incorporation of evidence-based psychological approaches to address barriers to behavior change to monthly in-person meetings. The primary outcome of interest in this feasibility study was change in weight. In addition, we aimed to evaluate factors associated with the magnitude of the primary outcome. Based on prior work suggesting that psychiatric symptom severity and poor treatment engagement may be predictors of response, we evaluated illness severity and treatment engagement (measured by weekly text messaging response rate) as potential exclusion criteria. Results A total of 26 participants were recruited for the study (24% schizophrenia, 68% mood disorder). One participant dropped out and became ineligible due to active substance use. The mean age of the population was 48.5 years (SD=15.67); 60% were white and 60% female. A total of 8 participants met the exclusion criteria under evaluation (CGI >5 and response rate <80%). Using repeated measures ANCOVA, a significant interaction was observed between included/excluded participant group and time. Participants with high symptom severity and low treatment engagement had a trend-level increase in weight. There was no significant interaction between time and treatment setting nor time and baseline LOCES. Conclusions These results demonstrate the feasibility of delivering an adapted iOTA intervention to SMI patients, and suggest testable criteria for defining sufficient treatment engagement and symptom severity. Future studies applying these inclusion/exclusion criteria can be used to further evaluate the effect of this iOTA in SMI. More comprehensive symptom assessments may be needed to understand the effect of eating disorders.

No. 57

Can Gratitude Journaling Help Reduce Resident Burnout? A Pilot Study

Poster Presenter: Bianca Kirit Patel, M.D.
Co-Authors: Kemper Schumacher, M.D., Bo Kim, Ph.D.

SUMMARY:

Background: While the Accreditation Council for Graduate Medical Education has highlighted the need for residency programs to promote well-being, burnout levels remain high. Studies have found gratitude journaling to be associated with a number of positive effects, including increasing happiness. There is presently little research on the potential impact of gratitude journaling on burnout. Objectives: To examine the feasibility of testing

gratitude journaling as a tool to reduce burnout in residents. Methods: This pilot was conducted at an ACGME-accredited four-year psychiatry residency training program. The study was introduced during a program-wide meeting in September 2018. A one-page sheet was distributed to all residents, asking them to indicate their interest in participating and complete the pre-survey if so willing. Volunteers were asked to gratitude journal for as many days as possible for four weeks. They were provided the prompt "Before bed list 5 things, big or small, which happened today that you are grateful for" and given the option to receive nightly reminders by text or email. At the end of the pilot, a post-survey was distributed to each resident at a program-wide meeting. We analyzed participant's number of journal entries and burnout levels per the Oldenburg Burnout Inventory, a validated 16-item survey with positively and negatively framed items that covers the domains of exhaustion and disengagement. We additionally solicited feedback to identify contextual considerations for protocol revisions in subsequent large-scale testing. Results: Twelve residents volunteered to participate in the study. Among residents who journaled fewer than a third of the total days (n=3), average improvement in overall burnout, disengagement, and exhaustion scores were 4, 2.3, and 1.7, respectively. Among residents who journaled between a third and two-thirds of the total days (n=5), average improvement in scores were greater than those who journaled on more or fewer days at 5.4, 2.8, and 2.6, respectively. Among residents who journaled more than two-thirds of the days (n=4), average improvement in scores were 4, 2.3, and 1.8, respectively. Participants noted variability in rotation-related demands on resident time as a confounder of burnout levels. Conclusions: Based on this pilot study sample, there is potential for gratitude journaling to help improve resident burnout. The greater improvement in participants whose tally was in the middle third aligns with findings of prior studies. Potential influences on burnout levels should be accounted for in the subsequent larger study through incorporation of a control group for comparison and use of mixed-methods investigation for appropriate triangulation of findings. This work marks an essential first step in rigorously investigating the impact of gratitude journaling on resident burnout, which is an increasing concern for both psychiatry and the health care community as a whole.

No. 58

Acute Decompensation of a Patient With Bipolar Disorder With Psychotic Features Upon Transitioning From Oral Paliperidone to LAI Formulation

Poster Presenter: Jaskirat Singh Sidhu, M.D.
Co-Authors: Fei Cao, M.D., Ph.D., Courtney Iuppa, Krishna Trivedi, Ambika Kattula, M.B.B.S., Joseph S. Moon, M.D.

SUMMARY:
Introduction: Worldwide prevalence of schizophrenia is about 1%. (1) To improve medication adherence, LAI's were introduced into the market. A meta-analysis comparing LAI's with OAP's did not show any significant differences in terms of efficacy and tolerability.(2) We reviewed the literature, and to best of our knowledge we did not find any case studies demonstrating oral Paliperidone to be more effective than its LAI formulation. We are presenting a case report, whereby a patient who did well on oral paliperidone showed signs of decompensation with LAI paliperidone palmitate. Case Report: Mr. X is a 27-year-old Caucasian male with past psychiatric history of Bipolar Disorder with Psychotic Features, Cannabis use disorder and Amphetamine use disorder, who was admitted to the hospital after being found incompetent to stand trial on charges of violation of an Order of Protection for adult first degree, class A misdemeanor. All substance related diagnoses were in sustained remission in controlled environment. Upon admission, he was continued on fluoxetine 20mg po qhs and prazosin 2mg po qhs. Buspirone was discontinued as there did not appear to be a clear indication for its use. Paliperidone 3mg was initiated for psychosis on admission day 2 and was increased to 6mg po daily on admission day 5. On admission day 27, oral Paliperidone was discontinued and first loading dose of LAI of Paliperidone Palmitate 234mg was given. The second loading dose of 156mg of LAI was given on admission day 34. On admission day 42, he was also started on divalproex sodium delayed release 500mg po qhs for mood stability, which was increased to 1000mg po qhs on admission day 97. On admission day 38, oral

Paliperidone was restarted at 3 mg due to concerns that symptoms were re-emerging and on admission day 43 it was increased to 6mg. He received his first maintenance dose of LAI on admission day 63 and oral Paliperidone was decreased to 3 mg on admission day 63 and again discontinued on admission day 70. However, symptoms again remerged and on admission day 72 oral Paliperidone was restarted at 6 mg daily. LAI of Paliperidone Palmitate was discontinued on admission day 84 and oral Paliperidone increased to 9 mg daily on admission day 85. Overall, the patient's symptoms of mental illness showed improvement on oral Paliperidone and divalproex sodium delayed release. He was opined competent to stand trial. Discussion: This case contrasts with the current literature, which shows that Paliperidone Palmitate performs as well as or better than oral Paliperidone. The hypotheses for the differential response, could be the administration technique. The LAI formulation must be shaken vigorously before administration and the needle used is weight based. This patient was also near the weight cut off, so he could have needed the longer needle. It is possible that it was not shaken thoroughly and longer needle wasn't used, explaining the poor response.

No. 59

Worried, Weary, and Worn Out: Well-Being in Final Year Medical Students

Poster Presenter: Abbie Lane
Co-Authors: Jack McGrath, Allys Guérandel, Kevin M. Malone, M.D.

SUMMARY:
Background: Wellbeing is known to have a major impact on the performance of doctors. Whilst there is much focus on burnout and psychological distress amongst physicians such studies in medical students are limited, despite it making intuitive sense to intervene earlier and focus on early intervention and prevention. Methods: This study objectively and subjectively explores medical student's perspectives on their health and wellbeing by using the Perceived Stress Scale and a Subjective Likert scale. Students report the factors they consider stressful in their lives, the impact of stress on their health and the strategies they use to manage pressure. Results: Of the 235 students in the University College Dublin final year class of 2017, 161 (response rate 69%) participated in this study, mean age 24.76 years (s.d. 2.61); 54.6% female and 40.4% graduate entry. 65.2% of students scored over accepted norms for the PSS (34.8% low; 55.9% moderate; 9.3% high). 35% scored low; 28.7% moderate and 36.3% on the Subjective scale suggesting that students reported higher or false positive high scores. Students reported being stressed by exams (both demands and student's expectations and fear of failure), relationships (concern about health of family members and conflict), concern about future, work-life balance and finance. Students reacted to stress in an Emotional, Cognitive and Physical manner. 39.2% of students reported anxiety, 32.4% irritability, anger and hostility and 8.8 % felt over-whelmed. Cognitive impacts were reported by 16.2% and included over-thinking, poor concentration, sense of failure, hopelessness and procrastination. 29.7% reported physical manifestations that included sleep and appetite disturbance, fatigue and low energy, headache, palpitations and breathing difficulties. Almost a quarter, 24.3% reported a positive reaction to stress and felt it increased their performance. The majority of students (70.5%) reported using positive strategies to manage stress that included connecting and talking (51.3%), exercise (50.7%), non-study activity (19.2%) and meditation (13%). Twelve students (8.2%) reported using unhelpful strategies such as isolation or substances. No student reported using the college support services or seeking professional help. The study was reviewed and approved by the SVUH Ethics and Medical Research Committee. Conclusion: These findings suggest that students experience and report high levels of anxiety, irritability and cognitive effects that may be a clinical harbinger of the future difficulties that physicians experience in their professional careers when lack of self-care may impact on patient care and increase risk. Our findings suggest that the focus of wellbeing and self-care in doctors should be moved upstream and into the medical students' classrooms, where novel strategies to engage and educate students in self-care could have a role in the prevention of longer term burnout and psychological distress.

No. 60

Evaluation of Burnout Levels in Psychiatric Residents

Poster Presenter: Nisha M. Saraiya, M.D.

SUMMARY: Objective: Burnout is a syndrome characterized by emotional exhaustion, depersonalization and low personal accomplishment. It is considered as a prolonged response to chronic interpersonal stressors from one's occupation. The rate of burnout has been reported in moderate to high levels for those working in health care, and at even higher levels for those working in mental health as they are exposed to more clients who have experienced psychological trauma. The objective of this study is to evaluate the baseline burnout levels of Psychiatric residents working in a high volume, urban academic center and determine if there is a correlation between the levels of burnout and the ability to utilize mindfulness, relaxation and/or other coping strategies. Methods: In-person self-administered anonymous surveys were given to 1st, 2nd, 3rd, and 4th year Psychiatry residents (n=21): the Maslach Burnout Inventory (MBI), and Measure of Current Status Part A (MOCS-A). This study was conducted in October, a few months after the start of the residency year (July). For this specific evaluation, the sub scores of the MBI were compared to responses of the MOCS-A to directly evaluate for correlations between symptoms of burnout with ability to utilize mindfulness and relaxation techniques. Results: 60% of residents were enrolled in the study. 19% reported severe emotional exhaustion, with 23.8% reported moderate emotional exhaustion; 9.5%% reported severe depersonalization with 52% reporting moderate depersonalization; 19% reported low personal accomplishment, 38.1% reporting moderate personal accomplishment. In evaluation of the MOCS-A, residents were found to have the most difficulty with using muscle relaxation techniques to reduce tension, using mental imagery to reduce tension, and becoming aware of body tightness as it develops. Those who scored high for burnout on the MBI were found to have most difficulty with relaxation and assertiveness in asking for support when needed. Conclusion: Approximately 50% of Psychiatric residents surveyed were at risk for moderate to high burnout based on the results of the MBI. Of those at higher risk, greater than 50% had severe to moderate difficulty with relaxation techniques and assertiveness in asking for emotional support. These results suggest that there may be an indication for interventions directed at increasing awareness of physical stress as well as teaching relaxation techniques.

No. 61

Measurement-Based Care Delivery Using an Innovative SaaS Measurement Feedback System: Proof-of-Concept Study

Poster Presenter: Sadaf Mughal, M.B.B.S.
Lead Author: Jaime Montes Gutierrez
Co-Authors: Mithila Kareti, Khizran Agha, M.B.B.S., Steven Evans Lindley, M.D., Ph.D., Tina Ting-Joan Lee, M.D., M.S., Rona Margaret Relova, M.D.

SUMMARY:

Background: Research has shown that measurement-based care (MBC) can effectively improve mental health outcomes but is difficult to implement at scale. The VA Palo Alto Healthcare System is utilizing Mirah Track, a MBC cloud technology, to assess the feasibility of MBC implementation in the mental health clinical workflow and telemental health programs. Mirah Track, a software-as-a-service (SaaS) application, is designed to maximize clinical efficiency through its capability to track a patient's treatment progress, outcome monitoring, and medication adherence. This proof of concept study could provide the foundation in integrating this evidenced-based intervention in mental healthcare settings. Methods: This pilot study will use both qualitative and quantitative methods to evaluate a measurement feedback system (MFS) as a practice improvement tool. Participating patients complete online standardized measures prior to their clinical appointments. The MFS then generates automatic scoring and real-time delivery of interpreted information in the form of a graphical feedback report. The clinician can utilize this report to review with the patient in-session. The MFS has the functionality to longitudinally track a patient's treatment progress over multiple assessments, enabling the clinician to precisely tailor the treatment to individual patient's needs. The quantitative methods of the study consist of: pre- and post-implementation surveys regarding

clinicians' views of MBC, implementation data involving the frequency of questionnaire completion, and surveys that assess patients' attitudes towards MBC. The qualitative methods of the study consist of: observations made from implementation support tasks, and a focus group with participating patients, clinicians, and healthcare administrators. Results: There are currently 58 patients enrolled in the pilot study and data collection is ongoing. All aggregated preliminary data (demographics, etc.) will be presented. Significance: MBC computer-technology tool, when integrated successfully in a mental healthcare setting, can change how care is delivered and how health outcomes are monitored. MBC enhances quality of care by fostering shared decision-making as patients gain better understanding of their disorders through visual reports of symptom-rating scales. This also encourages patients to get more involved in goal-setting. By providing outcome monitoring that tracks critical events (like relationship changes or suicide attempts) and early detection of treatment non-response or decline/failure, MCB promotes patient-centric customized care. A MBC computer technology application may prove to be an innovative tool in delivering behavioral care and nurturing patient engagement.

No. 62

An Examination of Popular Smartphone Health Apps to Understand Functionality, Quality, and Effectiveness

Poster Presenter: Hannah Wisniewski
Co-Author: John Torous, M.D.

SUMMARY:

Purpose: This study aimed to understand the functionality and attributes of popular apps for primary care treatment, such as mental illness or diabetes, and how these qualities relate to consumer ratings, app quality, and classification by the World Health Organization (WHO) app classification framework. Methods: The top 10 apps from the Apple iTunes store and the U.S. Android Google Play store were selected on July 20th, 2018 from six disease states including depression, anxiety, schizophrenia, diabetes, addiction, and hypertension. Each app was downloaded by two authors who evaluated the app by providing information on the apps' attributes, functionality for gathering data, interventions, popularity, scientific backing, and WHO app classification rating. Results: A total of 120 apps were examined. Due to the app heterogeneity, we found no relationship between features and quality measures. Despite this heterogeneity, 87.5% of apps were assigned WHO classification 1.4.2 "self-monitoring of health or diagnostic data by a client" or 1.6.1 "client look-up of health information." The "last updated" attribute highly correlated with quality rating of the app. Apps updated within 180 days had higher user ratings and apps updated prior were associated with "serious concerns regarding safety" ratings by the authors. Discussion: Due to the heterogeneity of the apps, we were unable to define a core set of features that would accurately assess app quality. However, "days since last updated" offers a useful and easy clinical screening test for health apps, regardless of the condition being examined.

No. 63

Comparison of DASS-21, PHQ-8, and GAD-7 Performance in a Virtual Behavioral Health Care Setting

Poster Presenter: Heidi Mochari Greenberger, Ph.D., M.P.H.
Co-Authors: Lila Peters, Evie Andreopoulos, B.A., Naomi Pollock, D.S.W., L.C.S.W., Reena L. Pande, M.D., M.Sc., Aimee Peters, L.C.S.W., M.S.

SUMMARY:

Background: Validated depression and anxiety symptom screeners are commonly used in medical populations. How these scales perform compared to each other is not well established, especially in virtual health care settings. The present study evaluated the performance of two common depression and anxiety symptom screeners in a real-world virtual behavioral health care setting, comparing the Depression (DASS-D) and Anxiety (DASS-A) scales of the Depression Anxiety Stress Scales 21 to the Patient Health Questionnaire-8 (PHQ-8) and Generalized Anxiety Disorder-7 (GAD-7). Methods: This was a retrospective comparison study of previously collected clinical data from a population of adults (N=202; mean age = 51 +/- 10.6 years; 68.3% female; 55.9% history of depression; 45.0% history of anxiety; all with common medical

issues such as hypertension (45.5%), diabetes (39.6%), and heart disease (16.8%)) who completed an initial clinical consultation via telephone or secure video with a licensed therapist as part of a standardized, evidence-based, virtual behavioral therapy program for individuals with comorbid medical and behavioral health conditions (AbleTo). Depression and anxiety symptom severity was measured using the DASS-D and PHQ-8, and the DASS-A and GAD-7, respectively. The correlation between DASS-D and PHQ-8 was assessed by Spearman rank correlation. The joint distribution of raw scores and symptom severity categories between the DASS-D and the PHQ-8 was evaluated using descriptive statistics; above normal scores were defined using clinically established dichotomous cut-points [DASS-D >=10 points and PHQ-8 >=5 points]. These same methods were repeated to compare the DASS-A with the GAD-7 [above normal defined as DASS-A >=8 points and GAD-7 >=5 points]. Results: The DASS-D and PHQ-8 were highly correlated (Spearman r=.71; p=<.001); the correlation between the DASS-A and GAD-7 was also high (Spearman r=.61; p=<.001). The PHQ-8 categorized significantly more individuals as having above normal depression scores versus the DASS-D (71.5% vs. 43.5%; p<.001). The GAD-7 categorized significantly more individuals as having above normal anxiety scores versus the DASS-A (59.0% vs. 45.0%; p<.001). Conclusion: The DASS-D and PHQ-8 and the DASS-A and GAD-7 similarly ranked symptom severity in a clinical population receiving virtual behavioral health care. The PHQ-8 and GAD-7 were more likely than the DASS-21 to classify individuals as having above normal symptom severity. This study was supported by AbleTo, Inc.

No. 64

Using Wearable Sleep Monitors to Improve Behavioral Health Care of Servicemembers' Families: A Clinical Quality Improvement Project

Poster Presenter: James Oh, D.O.

SUMMARY:

BACKGROUND: Sleep dysregulation is a common symptom of numerous behavioral health conditions. Research suggests that treating sleep directly can help improve not only the sleep of the patient, but improve the primary behavioral health condition of which the sleep dysregulation is a symptom. Subjective patient reports are most typically used in clinical practice to assess sleep. However, having a way to more objectively assess sleep quantity and quality—both initially and after intervention—would improve clinician's ability to evaluate and treat a patient's sleep. The goal of this project was to introduce clinicians to an inexpensive medical-grade device—the Actiwatch 2—that will enable them to more objectively monitor their patients' sleep patterns, with the expectation that they will then be more comfortable with such device, and more likely to use them in their patient care. METHOD: In our study, our team first developed familiarity of the watches in set-up, familiarization with the software, short trials of use, and in data analysis. Next, clinical staff (non-patient) volunteers were obtained for Actiwatch 2 use. Our team provided a brief set-up and instructional session before each trial with a participant, and a brief data analysis and review session with the participant after each trial. Pre- and post-trial questionnaires administered to subjects were compared to see if subjects' comfort with Actiwatches and likelihood of use with patients increased with the trial of their use. RESULTS: Based on the pre and post-trial questionnaires, all participants reported gaining familiarity with various aspects of use of watches and we determined that use would be feasible in a clinical population. In the case of the volunteer clinicians who used the Actiwatches, knowledge of and comfort/familiarity with the Actiwatch 2 increased, as did likelihood of use in their own clinical practice. DISCUSSION: The Actiwatch 2 software in particular provides clinically meaningful values such as sleep efficiency, wake after sleep onset (WASO), sleep onset latency, and number of awakenings. These values are paramount to carrying out sleep restriction therapy in insomniacs, assessing improvement of sleep symptoms in those with depression and anxiety, and evaluating and treating patients with primary sleep disorders. CONCLUSION: This clinical quality improvement project shows that one can easily become familiar with and train other providers in clinical setting to be familiar with wearable sleep monitors. Providers trained to use such wearable sleep monitors may then have access to wealth of objective and accurate data of sleep quantity and quality of their patient population. Without a doubt

this can transform evaluation and treatment of sleep symptom(s) in primary behavioral health condition(s) and primary sleep condition(s) that likely exist in any patient population.

No. 65

Google Search Activity in First-Episode Psychosis

Poster Presenter: Michael A. Kirschenbaum, M.D.
Co-Authors: Michael L. Birnbaum, M.D., John Michael Kane, M.D.

SUMMARY:
Aim: Manually explore the Google search queries of individuals with first episode psychosis (FEP) prior to their first hospitalization, in effort to identify common themes and search interests during the period of emerging illness. Methods: Individuals hospitalized for psychosis between December 2016 and September 2017 provided access to their Google archive data for manual qualitative evaluation of search content. Searches conducted during the 6-month time period prior to the participant's first hospitalization for psychosis were extracted and evaluated for search activity associated with mental health. Results: Of 20 archives reviewed, 15 individuals (75%) searched for information classified by reviewers as related to mental health. Searches with content associated with delusions were found in 15 participant archives (75%). Searches related to negative symptoms including social withdrawal and decline in function were identified in 6 participant's search archives (30%). Four participants (20%) had searches that were associated with thought processes, and 2 participants (10%) searched for information on suicide. Four participants (20%) searched for information related to anxiety, while 3 participants (15%) had searches related to depressive symptoms. Conclusions: Our findings support the notion that prior to their first clinical contact with psychiatric practitioners, individuals with early schizophrenia spectrum disorders are using the Internet for the purpose of obtaining information related to their symptoms and experiences. While our sample size was relatively small, the participants in our study sought information related to anxiety, mood, decline in function, and social withdrawal, rather than information related to hallucinatory or delusional themes. It is of note that while delusions did appear in 75% of our sample's search archives, they were highly nuanced and did not relate to help or information seeking themes. Exploring which experiences motivate this population to seek information via the internet is a key first step in developing targeted online interventions that seek to engage prospective patients with offers for evaluation and treatment. If automated algorithms can be developed to help screen for psychotic illness via digital footprints, the challenge of engaging the target population with your advertisement remains. Our work implies that user engagement is likely to be optimized by offering treatment for the distressing experiences that lead these individuals to engage in online information seeking behaviors namely; anxiety, mood, decline in function, and social withdrawal. Additionally our work highlights the need to engage in discussions about the ethics and behavioral risk-related aspects of internet behaviors, as searches related to violence, guns, suicide, and sexual violence were present in the searches of our subjects.

No. 66

Utility of Screening and Monitoring Behavioral and Psychological Symptoms in Severe Dementia Using Mobile Application in Thailand

Poster Presenter: Poonsri Rangseekajee, M.D.
Co-Authors: Pattharee Paholpak, Manasawee Kaenampornpan, Sirinapa Aphisitphinyo, Pongsatorn Paholpak

SUMMARY:
Introduction: Most patients with severe dementia developed behavioral and psychological symptoms of dementia (BPSD) and it is a major problem in dementia care. More than half of patients with severe dementia in northeastern part of Thailand live in community and are living with their family. Behavioral disturbances e.g. agitation and aggression often make transportation of the patients a lot more difficult and may prevent them from receiving regular continuous medical care. Telemedicine and mobile medical application that allows the caregivers to evaluate patients' behavioral symptoms periodically by themselves would be helpful for the caregivers in monitoring patients' BPSD. Objective: To develop an application that the caregivers can use to monitor patients' BPSD at home and can

contact to care provider directly. Method: We developed a mobile application which measured 8 common behavioral domains of BPSD. The application was an interactive questionnaire asking for frequency of behavioral problems in each domain and their effect on caregivers' emotion in Likert scale. The caregivers were trained to be familiar with the application before they used the application with patients. A total of 60 participants with severe dementia was expected to be recruited in this pilot study during November 2018 to July 2019. To study a concurrent validity of the application by comparing with a traditional paper-based version of NPI (Neuropsychiatric Inventory). In this poster, we present an example of the mobile application and results from our preliminary analyses on its concurrent validity and feedback from the caregivers. We also discuss pros and cons of using the mobile application in monitoring BPSD, and the challenges for future transformation to mobile platform.

No. 67

Using Electronic Health Records and Maching Learning to Predict Postpartum Depression

Poster Presenter: Shuojia Wang
Co-Authors: Jyotishman Pathak, Yiye Zhang

SUMMARY:
Background: Postpartum depression (PPD) is considered to be one of the most frequent maternal morbidities after delivery with serious implications on the mother and children. The ability to predict PPD in women could enable the implementation of effective mental and behavioral health interventions. However, most existing PPD prediction studies are based on prospectively sampled smaller populations. We aim to leverage machine learning(ML) to predict PPD using routinely collected clinical data from electronic health records (EHRs). Methods: EHRs from Weill Cornell Medicine and NewYork-Presbyterian Hospital from 2012 to 2017 were used as data source. Pregnant women with fully completed antenatal care procedure at the hospital and with a birth of a singleton infant were included. Univariate LR was performed for variable selection. Five ML algorithms, including Logistic Regression (LR), Support Vector Machine (SVM), Decision Tree, Naïve Bayes, and Random forest (RF) were constructed to predict PPD. We compared models with demographic only, medication information only, diagnostic information only, and their combinations. Models stratified by different trimester and their combinations were also used to predict PPD. Lastly, for all models, we applied an under-sampling method to the training data as our outcome was imbalanced. Results: 27,716 episodes of pregnancy were identified, which included 24,627 distinct patients. SVM demonstrated better overall performance. The AUC for different classifier was highest of 0.730 for the SVM, followed by the RF (0.729), LR (0.718), Decision Tree (0.715), and Naïve Bayes (0.701). The AUC for the model using only 1st, 2nd and 3rd trimester information was 0.684, 0.648, and 0.643, and the model with variables in both 1st and 2nd trimester, 2nd and 3rd trimester was 0.686 and 0.652, respectively, which were lower than the complete feature set. In addition, the AUC for the model with demographic variables only was 0.632. The AUCs for disease diagnoses model or drug exposure classes model were 0.690 and 0.518, respectively. When we combined drug exposures and diagnoses together, the AUC was promoted to 0.694. Age, ethnicity, gestational week, prenatal mental health; diagnoses include threatened abortion in 1st trimester, asthma in 2nd trimester, infectious disease, abdominal and pelvic pain in 3rd trimester; drug exposures include hyperosmotic laxatives, anti-infectives, antihistamine/ antitussive/analgesic, vitamins use in 3rd trimester were the most significant predictors. Conclusion: Our results suggest the potential for using ML to predict PPD in EHR. Clinical information including disease classifications and drug exposures during prenatal care procedure may assist in forecasting PPD. These results may facilitate effective detection and primary prevention of PPD as clinical decision support. This study was supported in part by the Walsh McDermott Scholarship, R01 MH105384, and P50 MH113838.

No. 68

Knowledge Gaps in Video Games, Gaming Behaviors, and Sequelae: A Survey of Medical Providers in Adult and Child Specialties at a Large Medical Center

Poster Presenter: Christopher T. Flinton

SUMMARY:
Ninety percent of American teens and nearly half of all Americans play video games. Though the use of this technology is widespread, medical provider awareness of video games, the effects of video game use, pathological gaming behaviors, and video game culture is not. This poster presents self-assessment data on video game and related behavioral expertise provided from a survey of hundreds of medical providers at a major medical center caring for child and adult patients. Results suggest that providers have very limited awareness of video games, patterns of their play, sequelae of their use, and DSM-V proposed criteria composed of signs and symptoms consistent with Internet Gaming Disorder, a condition for further study. Recognition of this knowledge gap presents an opportunity for greater engagement with patient behaviors and improved patient care.

No. 69
Comparison Trial of Telepsychiatry Delivery of Forensic Inpatient Care
Poster Presenter: Rikinkumar S. Patel, M.D., M.P.H.
Co-Author: William E. Tankersley, M.D.

SUMMARY: Objective: To examine the impact of telepsychiatry in forensic inpatient care including the length of stay (LOS). Methods: A retrospective review of patient records from Jan 1, 2015, to March 1, 2018, was conducted for patients treated at the Oklahoma Forensic Center (OFC). Patients treated by Griffin Memorial Hospital psychiatry residents through telepsychiatry (N=55) were compared with those managed by a face-to-face interview by licensed psychiatrists (N=55). Both groups were matched for a primary psychiatric diagnosis (schizophrenia 74.5%, bipolar disorder 14.5%, major depressive disorder 5.5% and other disorders) and a number of medical comorbidities. Linear regression model (adjusted for age, race, and sex) and independent sample T-test was used to measure the differences between both groups. Results: The mean number of assaultive events in the OFC were lower in telepsychiatry group (0.87 vs. 1.95). Also, there was a lower mean number of physical restraints in patients treated by telepsychiatry than a face-to-face interview (0.58 vs. 1.25). The most common substance abuse disorders were alcohol (37.3%), cannabis (34.5%) and cocaine (17.3%), with a statistically non-significant difference between both groups. The mean LOS was higher in patients treated by face-to-face interview (387.9 days) than by telepsychiatry (100.5 days). After controlling for demographics, telepsychiatry decreases the mean LOS by 443.5 days (95%CI -944.2 to 57.2, P= 0.08). Conclusions: A quality exposure to telepsychiatry during residency training could improve health equity as seen in our study [1]. Similar levels of satisfaction benefit patients managed by telepsychiatry at 10% less expensive cost [2, 3]. In an outpatient setting managing custody patients, telepsychiatry group showed significant satisfaction with no adverse events [4]. Telepsychiatry has the potential to manage court-committed patients in medically underserved remote areas to reduce the number of restraints and the need for acute inpatient care, and improve overall patient outcomes.

No. 70
Predicting Borderline Personality Disorder Features From Free Response Text With Machine Learning and Natural Language Processing Techniques
Poster Presenter: Eric Lin
Co-Author: Sarah Kathryn Fineberg, M.D., Ph.D.

SUMMARY:
Borderline personality disorder (BPD) patients are high utilizers of care and are at high risk of self-harm and suicide, but current risk assessment methods are poorly predictive of actual risk. Digital phenotyping can be used to evaluate large datasets derived from patients' active and passive interaction with technology, with the goal of making personalized precision predictions regarding such health risks. One significant example of digital phenotyping is in language analytics. Unstructured social media text (such as Twitter) has been used to make reproducible and accurate predictions about individual personality traits. We used language analytics to cluster individuals from a large online sample by self-reported BPD symptoms. While prior work in language analytics used word counts or counts within lexical categories, we used word2vec which is a neural net based language model that appreciates deeper semantic meaning of words than lexical categories. Hypothesis: Language analytic

tools can predict self-reported BPD symptom level in a large online community sample. Methods: Participants on the online crowdsourcing website "Amazon Mechanical Turk" were invited to participate. The research project asked participants to self-report psychological assessments and computer-based cognitive psychological tasks. In addition to standardized assessments, each participant typed a response (= 500 characters) to the prompt "Tell us about yourself". Participants were grouped into a "High BPD" (n = 1020) and "Low BPD" (n = 1136) groups based on responses to the SCIDII self-report questionnaire. SCID-II BPD questions were then mapped to DSM symptoms ("High BPD" > 5 vs. "Low BPD" = 4 symptoms). Each participant's text sample was trained on the classification between the High BPD and Low BPD groups (80/20 test train split). Using a pretrained word2vec model, we converted words into computable vectors. Logistic regression classifiers and convolutional neural nets (CNNs) were trialed on the vectors. The validation/test set accuracy is our primary metric. Results: A combination of word2vec and a logistic regression classifier achieved the highest prediction accuracy at 70.7%. Repeated efforts to train the CNN could not reliably achieve an accuracy much higher than 53%. Discussion: Preliminary results for binary classification of low versus high BPD features are promising. Despite various hyperparameter adjustments to the CNN, the CNN repeatedly overfit (test set accuracy scores significantly lower than training set accuracy) which suggests that the dataset may be too small for such a method. Machine learning and deep learning approaches may improve classification, especially as larger sample sizes become available. Automatic algorithms hold promise to predict borderline personality disorder features at an individual level, potentially offering opportunities for early intervention or for monitoring treatment response.

No. 71

Development of Evidence-Based Practice in Forensic Psychiatry: A Transdisciplinary Characterization and Development of New Methodologies

Poster Presenter: Märta Wallinius

Co-Authors: Peter Andiné, Malin Hildebrand Karlén, Christian Munthe, Ulrica Hörberg, Thomas Nilsson, Mikael Rask, Bjorn Hofvander

SUMMARY:

Background: Forensic psychiatric patients constitute a small but vulnerable patient group in society with high needs in terms of healthcare and societal interventions. The suffering of individual patients, their relatives and victims, as well as the societal costs generated by this group, far exceeds their numbers. Thus, providing an evidence-based forensic psychiatry would benefit not only the patients and others directly involved, but also society in general. There is a lack of knowledge on dynamic characteristics that could constitute important areas for intervention, on preconditions for and implications of user involvement, as well as on feasible and effective treatment interventions within forensic psychiatry. This poster presents a new research program which seeks to provide a basis for the development of evidence-based practice in Swedish forensic psychiatry, something that has not been available so far. Aims: The program entails four specific main aims: 1) To determine important areas for intervention in forensic psychiatry, 2) To clarify preconditions for, importance and implications of user involvement in forensic psychiatry, 3) To develop, adapt and evaluate new treatment methods for forensic psychiatry, and 4) To initiate a national platform for transdisciplinary forensic psychiatric research in Sweden. Methods: The aims will be pursued combining perspectives from medicine, psychology, philosophy, and caring sciences. Both quantitative and qualitative study designs are used, combining broad and in-depth knowledge of important preconditions and possibilities for optimal treatment modalities and thus providing a unique knowledge base for the continued development of forensic psychiatry. Results: The program employs a unique, transdisciplinary approach with emphasis on diversity, user involvement, and knowledge transfer between patients, healthcare providers, general society and scientists. Its focus is on development and evaluation of new interventions including modern technology such as Virtual Reality, and close collaboration between science and clinical practice. The poster will present the program in detail, along

with preliminary findings and considerations on knowledge transfer and the crucial implementation in clinical practice. Conclusions: The program synchronizes previous and new knowledge into a transdisciplinary venture for forensic psychiatric research where we move from assessment to implementation and treatment evaluation with a special emphasis on user involvement. The results from the program can, due to its focus on patient characteristics, be valuable for international contexts despite differences in legal practice between countries.

No. 72

Diagnostic Stability of Psychiatric Diagnoses in Forensic Psychiatric Patients

Poster Presenter: Eva Lindström
Co-Authors: Malin Hildebrand Karlén, Märta Wallinius

SUMMARY:
Background: Long-term follow-up of psychiatric diagnoses has previously reported diagnostic stabilities between 29% (personality syndromes) and 70 % (schizophrenia). Differences in diagnostic stability has been proposed as dependent not only on what type of mental disorder and measures used, but also on differences in settings where diagnoses are established (e.g., inpatient vs. outpatient care) and length of follow-up. Forensic psychiatric patients, a patient group characterized by heterogeneity, complexity and comorbidity in mental disorders, psychosocial preconditions and criminal profile, are often under care for long time periods and are subjected to repeated diagnostic assessment. However, there is a profound lack of knowledge so far on the diagnostic stability of forensic psychiatric patients, something that would be crucial for treatment planning and evaluation. Aims: This study evaluates the long-term diagnostic stability of psychiatric diagnoses in forensic psychiatric patients, investigating patterns of diagnostic instability, methods for diagnostic revisions, treatment adaptations after diagnostic revisions, and care processes related to diagnostic instability. Methods: The study is a retrospective file review based on 11 year cohorts of forensic psychiatric patients treated at a large, maximum security forensic psychiatric hospital in Sweden for at least 6 months. Data collection is ongoing, and data for 200 participants have been collected so far. Results: Preliminary analyses of diagnostic stability of personality syndromes on a subset (N = 65) of the total study sample demonstrates a diagnostic stability at 54.5 %, with the majority of the participants demonstrating a personality syndrome not otherwise specified (antisocial traits) or antisocial personality disorder (Törnmarck & Yngvesson, 2017). The presentation will provide an in-depth description of the care process of forensic psychiatric patients, with focus on the complex nature of mental disorders and their assessed stability within this vulnerable and challenging patient group. Conclusion: Psychiatric diagnoses constitute the basis for treatment planning within psychiatric settings. A deepened understanding of how the long-term diagnostic stability, and how diagnostic revisions are performed and affect the treatment of forensic psychiatric patients, would increase the possibilities of providing high-quality psychiatric care.

No. 73

The Efficacy of Riverside County Detention Behavioral Health Medical Remedial Plan on Recidivism Rates Among Adult Inmates

Poster Presenter: Troy L. Kurz, M.D.
Co-Authors: Brian Betz, Brandon Jacobs

SUMMARY:
Introduction: It is well known that many inmates suffer from mental illness that often need to be adequately treated with medications and provided outpatient resources to improve outcomes and decrease recidivism rates.1-3 The Riverside County Correctional Facility established a medical remedial plan to address the recidivism rates among inmates and to improve medical 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. Another goal was to encourage inmates to transition from oral antipsychotics to long acting injectables (LAI) as research shows improved outcomes and medication compliance.5 Our research team previously studied the recidivism rates of inmates that suffer from mental illness who were treated with specific oral antipsychotics and

who received community psychiatric services upon release from jail. The study showed male inmates adequately treated with oral antipsychotics who also received community psychiatric services were less likely to be re-incarcerated than were those who had not received community psychiatric services at their initial release from incarceration. Our team intends to expand on this initial study by examining the recidivism among inmates treated with LAI vs oral antipsychotics who receive community psychiatric services upon their release from jail. Methods: The sample will be obtained from Riverside County Detention Behavioral Health's medical records. Male and female inmates between the ages of 18 and 65 who were incarcerated between 10/1/16- 4/30/19 and released 10/5/16-10/16/19, and started on either oral stand-alone medication or LAI during incarceration will be obtained. Utilization of community psychiatric services will be checked for each identified inmate. This sample will consist of 4 groups: 1. inmates on oral stand-alone medication who had received no community psychiatric services following their release 2. inmates on oral stand-alone medication who had received community psychiatric services following their release 3. inmates on LAI who had received no community psychiatric services following their release and 4. inmates on LAI who had received community psychiatric services following their first release. These four groups will be compared statistically for effects on recidivism rates. Results: results are currently pending Discussion: Our previous study results indicated that inmates on oral antipsychotic medications who received established community psychiatric services were less likely to be re-incarcerated. We hypothesize that inmates treated with LAI and who receive community psychiatric services upon release from jail will have lower recidivism rates compared to our previous results. This is due to established research showing improved outcomes and medication compliance for individuals treated with LAI.

No. 74

Dual Agency in the Psychiatric Evaluation of Political Asylees: A Selected Review and Case Report

Poster Presenter: Yi Wang, M.D.
Co-Author: John K. Northrop, M.D., Ph.D.

SUMMARY:
Dual agency, in which a psychiatrist assumes two separate roles—the most frequently cited example being a physician providing both clinical and forensic services—has been written about extensively in the forensic psychiatry literature. Dual agency has generally been discouraged on ethical grounds, with the argument that it may compromise the forensic expert's objectivity and thereby damage the client's legal case. In addition, it may undermine the credibility of the expert and of her profession at large. In this poster, we propose another example of dual agency which occurs more commonly than is discussed—that of the psychiatrist acting as both forensic examiner and political advocate (and possibly even political partisan) within the setting of psychological examinations of political asylum seekers. We believe that these two roles, that of forensic expert and of political advocate, are guided by different procedures and ethical principles, which may at times come into conflict. We believe that this type of dual agency merits acknowledgement and discussion, especially because the question of whether physicians have professional responsibilities to the public (e.g. through political advocacy or policy-making), in addition to responsibilities to their individual patients, continues to be hotly debated. In this poster, we provide a brief review of the literature, exploring how, and when, the roles of the psychiatrist as forensic examiner, clinician, and political partisan/political advocate may come into conflict during the psychological examination of political asylees. We present the case of Mr. A, a 25-year-old gay Afro-Caribbean male with history of HIV and PTSD, who sought psychological evaluation in support of his application for political asylum due to persecution on the basis of sexual orientation. We use various parts of this case to illustrate the ways in which the examiner's political allegiance may bias the outcome of the forensic evaluation. We describe the ways in which this type of dual agency, if unacknowledged or unidentified, may harm both the physician and the asylee. Finally, we offer suggestions for mental health professionals providing medicolegal services to political asylees, as well as the institutions training these professionals, on how to anticipate this type of dual agency, how

to recognize it when it arises, and how to avoid it or to minimize its negative effects.

No. 75

Differential Diagnosis: Psychopathology Versus Politics as Usual

Poster Presenter: Amy Christianson
Co-Author: Kristina L. Jones, M.D.

SUMMARY:

Lying seems to have become rampant in our society, including in the political arena. Some politicians even lie about lying, and, if/when they do ultimately tell the truth (often after being caught lying), they expect to be rewarded for doing so. When does this behavior cross from harmless hyperbole into pathological lying, or even severe psychopathology? A determination of when it reaches a level of unacceptability may depend on factors such as motivation (ie conscious versus unconscious), intent (ie political expediency, versus personal gain, versus protecting one's family and/or career), and belief (ie whether the liar believes the statement to be true, versus recognizes it as false but reports it anyway). It's often difficult to distinguish, especially without direct clinical examination. Psychiatrists regularly deal with patient "untruths," ranging from malingering to delusional disorder. Although they cannot ethically or legally officially evaluate public figures, their expertise can provide valuable insight into the culture of untruth.

No. 76

Management of Delusional Disorder, Erotomanic Type in a Young Adult Male

Poster Presenter: William Robert McBride, D.O.
Co-Authors: Jarrad W. Morgan, D.O., J.D., William J. Sanders, D.O., Weston Mark Anderson, D.O.

SUMMARY:

A 27-year-old Caucasian male presented on a court order to the outpatient psychiatric clinic with a diagnosis of obsessive-compulsive disorder. He had been diagnosed with this disorder while hospitalized in a psychiatric unit after reporting to his therapist serious thoughts of raping and killing a woman that he had been stalking for 5 years. While inpatient, he was prescribed aripiprazole, escitalopram, and propranolol. Per record review, he had been prescribed risperidone 4 years prior and did not tolerate this medication. The patient had met the woman in 2012 and stalked her until 2017 without significant legal involvement. Although the woman was married, the patient loved the woman and believed that she loved him. The patient asked the woman out on multiple occasions over this 5 year time period and eventually violated a personal protection order placed against him, ultimately leading to his arrest. Per previous report, he had described violent sexual fantasies involving both the woman and her husband to his therapist on multiple occasions. Attempts by his therapist to convince him that the woman did not love him were met with anger, verbal aggression, and rationalization of his actions and delusional thought process. Based on record review, gathering of corroborating information, and regular follow up with the patient in the outpatient psychiatric setting, he was eventually diagnosed with delusional disorder, erotomanic type and generalized anxiety disorder and the diagnosis of obsessive-compulsive disorder was removed. Due to lack of efficacy, tolerance concerns, and the patient's reported increased anxiety when taking the medication, aripiprazole and propranolol were discontinued; Escitalopram was continued and buspirone was initiated. He was started on ziprasidone and titrated to 20 mg qam and 40 mg qpm over a 3-week period. By week 3, he began questioning his delusions and recognizing a need to stay away from her to avoid incarceration. Despite reported medication compliance, the patient's response to the medication decreased significantly after week 3. By week 11, he was cross-tapered off of ziprasidone and onto oral paliperidone. This was titrated to 6 mg total daily and discontinued after 2 weeks due to cost and tolerability concerns. At this point, he was cross-tapered from paliperidone back to his maintenance dose of ziprasidone. During the cross-taper, he again showed significant improvement, reporting better insight and decreased impulsivity. Since making this change, the patient's delusional thinking, lack of insight, and impulsive behavior have returned, often fluctuating in severity periodically. In this poster, we discuss this patient's case, as well as the current recommendations for and the inherent difficulties involved in the treatment of patients who suffer from delusional disorder, erotomanic type.

No. 77

Inadmissible Hearsay? Psychiatric Testimony in the Era of People v. Sanchez

Poster Presenter: Kayla L. Fisher, M.D., J.D.

SUMMARY:

"Reliable" hearsay was allowed by common law and in California prior to the California Supreme Court case of People v. Sanchez (2016) 63 Cal. 4th 665. The "reliable" hearsay, as described in People v. Dodd (2005) 133 Cal. App. 4th 1564 permitted an expert to rely on information that "is reliable and of the type reasonably relied upon by experts on the subject" in forming their opinion. New limitations to expert opinion flowed from Sanchez. Now. experts must rely only on: a) what they personally know; b) what the patient tells them; c) medical records of the patient; d) what other witnesses testify about in court. This poster will present an overview of the Sanchez case and suggest possible solutions to dealing with the limitations forensic psychiatrist experts now face as a result of the Court's ruling.

No. 78

Forensic Psychiatric Hospitals and Tattoo Removal: Necessary Treatment or Needless Diversion?

Poster Presenter: Kayla L. Fisher, M.D., J.D.

SUMMARY:

Tattoos, once thought to be linked to drug abuse and deviant behavior, have assumed a place in middle American with 30% of those surveyed in 2017 reporting at least one tattoo. Likewise, the patient population of forensic hospitals increasingly "wear ink". For some patients these tattoos bind them to a past they strive to ride themselves of. Such is particularly the case with tattoos rejecting gang affiliation. As forensic hospitals endeavor to provide treatment to patients to lower their risk of future dangerousness, some have embrace the treatment of tattoo removal in certain situations. Patients have reported that tattoo removal decreases anxiety and increases their ability to dissociate from a problematic past. Treatment considerations for tattoo removal include the substance of the tattoo, tattoo placement, and patient's symptoms flowing from the tattoo. Risks of medical complications and possible delays in discharge dates must be weighed against the benefits in determining whether this treatment should be provided to a forensic patient.

No. 79

Lions and Tigers and Bears, Oh My! How to Approach Requests for Emotional Support Animals.

Poster Presenter: Jeffrey Steven Khan, M.D.
Co-Author: Shirali Suryakant Patel, M.D.

SUMMARY:

Ms. A, a 23 year old Caucasian female presented to the outpatient clinic requesting a letter certifying her pet dog as an emotional support animal. While previously stable, she reported a recent significant increase in stressors, including an ongoing difficult breakup of a live-in relationship, the sudden death of her ex-partner's brother, and numerous graduate school interviews located across the country. She stated she could not cope without the presence of her animal. As with Ms. A, mental health practitioners are increasingly being asked to provide letters to patients "certifying" their pet or animal as an emotional support animal. Additionally, the media has published several high profile stories highlighting the unusual types of animals being designated emotional support animals and the sometimes negative consequences of bringing these animals into public places, particularly for air travel. Despite the increasing prevalence and requests for emotional support animals, there remains confusion amongst providers around the validity of emotional support animals, the difference between emotional support animals and service animals, and the laws that govern them. In this poster, we will review the difference in definitions between service animals and emotional support animals. We will also present evidence regarding emotional support animals and their role, or lack thereof, in the treatment of psychiatric illnesses. Third, we will review the law and broad requirements that various organizations place on emotional support animal letters and what mental health practitioners are being asked to decide. Finally, we will present a potential ethical and legal framework for addressing these letters in our various clinical settings.

No. 80

Endrew v. Douglas County School District and Its Impact on Special Education Law
Poster Presenter: Mary Gable, M.D.

SUMMARY:
The Supreme Court's decision in Endrew F. v. Douglas County School District RE-1 (2017) is the most significant special education decision in over 35 years, since that of Board of Education of the Hendrick Hudson Central School District v. Rowley (1982). In Rowley, the court ruled that the Individuals with Disability Education Act (IDEA) did not require schools to provide disabled students an equal educational opportunity relative to students without disabilities, but rather that services had to "convey some educational benefit," without clarifying what might constitute the latter. Yet in Endrew the court rejected that a de minimis standard can be adequate if the goal of grade-level advancement as outlined in IDEA is to be pursued, and instead it stresses that the focus on a "particular child" is critical and that IDEA "requires an educational program reasonably calculated to enable a child to make progress appropriate in light of a child's circumstances." This poster will provide practical guidance on what constitutes the four key components of the Endrew decision: educational program, reasonably calculated, progress, and the child's circumstances. And it will additionally examine how the decision impacts student assessment and evaluation in developing an individualized education plan.

No. 81
Two Episodes of Psychotic Depression in a Young Boy Upon Exposure to Two Distinct Leukotriene Inhibitor Medications
Poster Presenter: Mary Gable, M.D.
Co-Author: Jessica Jeffrey, M.D., M.B.A., M.P.H.

SUMMARY:
The subject of this case report poster is a Caucasian boy with a longstanding history of food allergies and asthma but no history of psychiatric symptoms prior to the described episodes. At the age of five, the child had been taking Montelukast daily for asthma for one year. Following prednisolone treatment for a respiratory infection, he developed suicidal ideation, depressed mood, decreased energy and interest, increased irritability, changes in appetite, and both visual and auditory hallucinations. These psychiatric signs and symptoms persisted with the same relative intensity for over four months following completion of prednisolone therapy. Montelukast therapy was then discontinued, which triggered a rapid remission of the psychiatric episode. Remission was maintained with psychotherapy and a 15-month treatment with low-dose fluoxetine. The patient remained without psychiatric symptoms for one year in the absence of psychiatric treatment. At the age of seven, the boy developed a psoriasiform rash that was poorly responsive to other treatments, leading to an initiation of oral dapsone therapy. Less than one week after beginning dapsone, the patient experienced a recurrence of prominent depressive and psychotic symptoms, which resolved 2-3 weeks after discontinuing the medication. Montelukast is a leukotriene receptor antagonist which has a labeled warning for neuropsychiatric events (including depression and hallucinations). Dapsone is an antimicrobial and anti-inflammatory drug with several mechanisms of action. In addition to inhibiting myeloperoxidase, dapsone has been shown to inhibit production of several leukotrienes, thereby reducing inflammation. In the subject of this case report, rapid improvements in two episodes of psychotic depression were observed following discontinuation of medications which decrease leukotriene activity by different mechanisms. In this poster, we will examine the relationships between leukotriene inhibition and potential psychiatric manifestations as well as implications for treatment.

No. 82
Perceived Weight Gain With Psychotropics in a Typical Psychiatry Outpatient Population: Inflated Claims or Shattered Dreams?
Poster Presenter: Fiore Lalla

SUMMARY:
Background: While the magnitude of weight gain and health risks associated with psychotropic use is well documented, the personal experience of patients suffering these complications and their cognitive mindset has not been characterized. Elucidating these factors may help structure interventions promoting improved compliance and health outcomes. Methods: Forty four patients were

randomly chosen to fill a questionnaire during an outpatient psychiatry appointment with their clinician (F.L.). The survey asked questions concerning weight before and after treatment, an estimate of their weight gain, perceived advice given, and their feelings about what this complication meant to them. All patients were clinically stable, with no recent medication changes, and had been in regular follow up for a minimum of three years. Results: There were 44 survey subjects, 25 male, 19 female, with an average age of 50 years. Their stated diagnoses included bipolar disorder (12 patients), major depression (12), schizophrenia (7), generalized anxiety (7) and attention deficit disorder (2). 25 patients were on antipsychotics, 17 on antidepressants, and 12 were on other psychotropics; 41 % of patients endorsed combination therapies. Two-thirds of patients stated that they were a healthy weight before psychotropic treatment, and similar proportion claimed they gained an average 27 pounds as a result. Only 10% of patients stopped or modified their treatment, according to the survey. More than half of respondents found they did not get useful clinical advice on dealing with the weight problem and the same proportion did not ask for help despite its magnitude. No one diagnosis appeared more likely to endorse weight gain, but the patient numbers were too small to derive inferences. The patient impact statements were poignant and highlighted how weight gain had provoked worries about future health and low self-esteem. Conclusions: Despite a long term therapeutic relationship with their clinician, most patients surveyed believed they had not received useful advice in dealing with a large weight gain. Despite the conviction that medication had an important role, and that their quality of life had suffered severely, the majority of patients had not initiated a discussion with their physicians. Some patient sentiments may have been unintentionally exaggerated or inaccurate, and this would have worked to further amplify the distress around the issue. Future intervention must empower clinicians to foresee and aggressively avoid the metabolic effects of treatment, since it appears that the physical and psychological impact persists chronically, and that even long term patients are unlikely to initiate this important conversation of their own volition.

No. 83

MAOI Efficacy in Early and Advanced Stage Treatment-Resistant Depression

Poster Presenter: Thomas Kim

SUMMARY: Objective: Evidence-based data suggest that MAOI therapy may be effective in up to 50% of patients with treatment-resistant depression (TRD). We hypothesized that MAOI therapy, compared to tricyclic antidepressants (TCAs), would be more effective in patients with early stage TRD and be equally effective as TCAs in advanced stage TRD. Methods: To test this hypothesis, data were obtained from 400 patient charts. Response was assessed using the Clinical Global Impressions Severity (CGI-S) scale. Results: Patients with early stage TRD had better outcomes with MAOI therapy than TCA therapy ($p < 0.00$); however, there was no difference amongst patients with advanced TRD ($p = 0.14$). When examining whether there was an interaction between type of antidepressant and number of prior treatments, there was a significant effect ($p = 0.04$). When examining this effect further, it suggested that MAOIs are more efficacious than TCAs with patients who have fewer prior treatments, but the difference shrinks as the number of prior treatments increase. Conclusion: These data suggest that MAOI therapy may be beneficial in patients with early stage TRD who are unresponsive to less than 4 treatments. For patients with more than 3 treatments, the advantage of MAOI therapy decreases compared to TCA treatment.

No. 84

Treatment Considerations for Behavioral Symptoms of CHARGE Syndrome

Poster Presenter: Jack Howell Owens, M.D.

SUMMARY:

CHARGE Syndrome, originally known as Hall-Hittner Syndrome is characterized by Coloboma, Heart Defect, Atresia Choanae, Retarded Growth and Development, Genital Hypoplasia, and Ear Anomalies/Deafness. Recognized as one of the most common causes of deafblindness, the reported prevalence of CHARGE ranges from 1/10,000 to 1/15,000 live births. Research demonstrates many behaviors of these patients, including mood, anxiety,

OCD-like symptoms, aggressive behavior, and increased rates of self-injury and autism-spectrum disorders. Wachtel et al reported anxiety disorders and pervasive developmental disorders were the most common psychiatric diagnoses assigned with antidepressant and antipsychotic medications the most frequently prescribed psychopharmacological agents. One study reported four pediatric patients on divalproex sodium The research available largely focuses on pediatric populations, with limited studies on adult patients with CHARGE. The Loyola University outpatient clinic has had the unique opportunity to follow a patient with CHARGE syndrome from adolescence (age 14) to adulthood (24), with one gap in treatment as she received specialized state-funded services. The patient has limited verbal skills and requires an ASL interpreter for evaluation, though she often mimics the interpreter. During her treatment, she has received multiple antidepressants, antipsychotics, as well as trials of stimulants and off-label medications such as guanfacine and hydroxyzine for her behavior. She exhibits many behaviors associated with CHARGE, including aggressive outbursts, crying spells that will last several hours, self-injurious behavior (biting herself, hitting her head against a wall), eloping from vehicles, and frequent ruminations. Upon the resumption of her treatment, her family reported these behaviors occurring three to four times weekly, lasting from one to several hours, of which the patient often has very little insight. This behavior had previously been managed with antipsychotics, but cardiac and metabolic considerations required an alternative be considered. Our clinic performed a thorough review of her medical records and the available literature. Following this review, the patient was trialed on divalproex sodium for the first time, the first trial in adult of which we're aware. The patient's family reports a significant reduction in the frequency and intensity of her outbursts and aggressive behavior, which could show promise moving forward in the treatment of adults who receive treatment for psychiatric comorbidities of CHARGE Syndrome.

No. 85
WITHDRAWN

No. 86

Dextromethorphan-Guaifenesin Cough Syrup to Treat Agitation in Patients With Neurocognitive Disorders

Poster Presenter: Ramaswamy Viswanathan, M.D., D.Sc.
Co-Author: Mohamed Wagdy Mohamed Elsayed, M.D.

SUMMARY:
Dextromethorphan-quinidine (DXM-Q) is FDA-approved in the USA for treating pseudobulbar affect. Dextromethorphan (DXM) is the active agent, and quinidine is added to prolong its half-life by blocking its metabolism through cytochrome P450 2D6 (CYP2D6). DXM-Q has also been used off-label to treat agitation in patients with neurocognitive disorders, where other classes of medications such as antipsychotics and benzodiazepines can cause serious side effects. DXM-Q is contra-indicated in patients with ECG QTc prolongation, because of quinidine's QTc prolonging effect. In such cases we suggest exploring using DXM with other CYP2D6 blockers. However, DXM by itself is not stocked in most hospital and other pharmacies, whereas dextromethorphan-guaifenesin (DXM-G) cough syrup is readily available. Guaifenesin is an expectorant and is not known to have any significant cardiac adverse effect. Here we report two cases of using DXM-G with a CYP2D6 blocker other than quinidine. The first case is a 67-year-old Hispanic man who presented with progressive worsening of language and cognition, frequent falls and restlessness over a few months. We diagnosed him with major vascular neurocognitive disorder with behavioral disturbance. ECG QTc was 469 ms. He had frequent episodes of agitation and restlessness. Trial of oral haloperidol 4 mg twice daily was not helpful, and produced akathisia and severe rigidity. Oral valproate 1000 mg and mirtazapine 15 mg did not control his agitation. We started DXM-G 10 mL, containing DXM 20 mg, orally twice daily, and paroxetine 10 mg once nightly for CYP2D6 inhibition. Patient's agitation and restlessness subsided in 4 days, which enabled his subsequent transfer to a Nursing Home. While paroxetine's serotonergic action might have contributed to the improvement, of note is that his agitation was not controlled by mirtazapine which is serotonergic and noradrenergic. The second patient was a 55-year-old

African-American woman with HIV, with decline in cognitive functions over 2 months. She had a plasma viral load <20 HIV1 RNA copies/mL, CD4 741/microL, and ECG QTc 463 ms. She was on ritonavir, atazanavir and emtricitabine/tenofovir. She refused all necessary care and was verbally aggressive, cursing and irritable. We diagnosed her with major neurocognitive disorder with behavioral disturbance due to HIV. Since she was already on a CYP2D6 blocker, ritonavir, we started her on DXM-G 10 mL orally tid. Her hostility and agitation subsided in 3 days. Subsequently when her DXM-G doses were missed she became hostile and improved again on resuming DXM-G. DXM is a low-affinity, uncompetitive NMDA receptor antagonist, s1 receptor agonist, serotonin and norepinephrine reuptake inhibitor and neuronal nicotinic a3ß4 receptor antagonist. Our two cases suggest that such DXM-G use needs to be explored by controlled studies. Such use may also be helpful in situations where DXM-Q is not readily available due to economic or other reasons.

No. 87

Assessment of Sleep Quality Using a Self-Rating Scale in an Outpatient Mental Health Clinic

Poster Presenter: Kishen Bera
Co-Author: Antonio Loza

SUMMARY:

Insomnia, which is characterized by difficulty falling asleep or maintaining sleep, is highly prevalent in the general population and is a common clinical complaint. The prevalence is even greater within the mentally ill population. Poor quality of sleep can have a negative impact on achieving a patients goal within a psychiatric population. Within this population clinicians often have difficulty determining accuracy of a patients sleep quality. Many self -rating sleep assessments have been developed, but to our knowledge none have been utilized and reported their findings within a outpatient mental health clinic. We chose to utilize the Insomnia Severity Index Scale (ISI) which is a 7-item patient reported outcome scale which assesses the severity of a patients by assessing the severity of sleep-onset and sleep-maintenance difficulties and any insomnia related difficulties with day time functioning. Method:The ISI was administered to 150 outpatients in a community mental health clinic who carry the diagnosis or major depression, bipolar disorder and schizophrenia that came in for their regularly scheduled appointment. We also collected their age and gender. Results: We found that 25% of the patients that completed the ISI Scale reported a score that fell into the Clinical Insomnia Range. Within the three diagnosis that were evaluated patients with major depression had a higher prevalence of insomnia followed by bipolar disorder and then schizophrenia. Females had a significantly higher likelihood of scoring in the insomnia range than males. The highest age group that reported insomnia was in the 40-49 age range. Conclusion: We have shown how a most user friendly self-adminitered scale will enhance the clinicians understanding of the patients sleep quality and lead to improved clinical outcomes in an outpatient psychiatric setting. The evalution of a patients sleep quality will no longer be purely subjective in nature, but rather we will now have a more objective measure. Positive clinical insomnia scores will now allow the clinician to ask more specific questions to determine the appropriate course of treatment to treat the insomnia.

No. 88

Assessing Gender Differences in Cognitive Function Among Patients With Major Depression

Poster Presenter: Kishen Bera

SUMMARY:

Major depressive disorder (MDD) is a condition that impairs the normal day to day functioning of a person. There is an increasing awareness that cognitive function is a valuable construct in understanding the impairments caused by a depressive mental state. Recent research has shown that cognitive/executive dysfunction is common in depression Our aim was to see if there was a gender difference seen in cognition in patients with MDD. The Massachusetts General Hospital, CPFQ, was developed to assess 7 common complaints of depressed patients regarding fatigue and cognitive problems. The CPFQ is a 7-item self-administered questionnaire that has been found to have strong internal consistency, with higher scores indicating poorer functioning. To our knowledge this is the only self-rating scale for cognitive function in practice.

We set out to assess patient's response when both scales were administered and to evaluate the correlation between the two scales within the same patient and to determine if there were differences in cognition between males and females. Our belief was that the CPFQ score would correlate with the BDI score, where the higher self-response scores on the CPFQ would relate to higher self-response scores on the Beck Depression Scale. Method: A total of 38 patients who came in for their regularly scheduled outpatient mental health clinic appointment who carried a diagnosis of MDD in their medical chart participated. They were given the BDI/CPFQ questionnaires to fill out. All the surveys collected from the participants were completely anonymous. Results: We found a trend for both men and women with MDD in which social cognition does decline with age. However, a steeper deterioration in social cognitive functioning occurred in males as compared to females. We also found a direct correlation between higher scores on the BDI and higher scores on the CPFQ. Conclusion: Cognitive impairment is emerging as an important therapeutic target in patients with psychiatric illness including major depressive disorder. Based on our findings the CPFQ was significantly correlated with degree of depression on the BDI. This suggests that the more severe the depression the more impaired is one's cognition. Also, males had greater cognitive decline than females with MDD. Clinicians will now be able to use this simple user-friendly cognitive self-rating scale to assess a patient's cognitive function and then introduce appropriate treatments to address these findings.

No. 89

Utility of Pharmacogenomics Studies in Treatment of Psychiatric Disorders: A Case Report and Literature Review

Poster Presenter: Steven Anthony Vayalumkal, M.D.
Co-Author: Asghar Hossain, M.D.

SUMMARY:

In the treatment of psychiatric disorders, medication side effects are a key factor contributing to patient noncompliance. Despite many developments, psycho-pharmacotherapy has not been satisfactory in controlling the symptoms of many psychiatric patients. This is a case report of a 29-year-old patient who was not responding to multiple medications, which resulted in poor compliance followed by aggressive behavior toward his father and suicidal ideations. Due to his poor response to multiple psychiatric medications, pharmacogenomics (Genesight) studies were utilized to find the right treatment for him. The patient was begun on a regimen of Wellbutrin 150mg daily. Gradually, based on the study findings, Trileptal 150mg twice daily was added to the regimen, and the patient's mood appeared to improve. He did not endorse any side effects after starting treatment. In this report, we have highlighted the importance of pharmacogenetics and pharmacogenomics in the outcome of treatment in patients with psychiatric disorders. The results of recent genomic studies, as well as obstacles in implementing pharmacogenetics and pharmacogenomics in the treatment of psychiatric diseases, have been reviewed. More research and advancement in pharmacogenetics and pharmacogenomics may serve to improve the condition of psychiatric patients and lead to improved quality of life and clinical outcomes.
Acknowledgments: The authors would like to thank Soroush Pankiyat Jahromi for his help in preparation of this abstract.

No. 90

Antipsychotic Efficacy of ALKS 3831 Across Three Olanzapine-Controlled Clinical Studies

Poster Presenter: Adam Simmons
Co-Authors: Peter Weiden, M.D., David McDonnell, Ying Jiang, Lauren DiPetrillo, Bernard Silverman

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 Phase 1 and Phase 2 clinical studies, samidorphan mitigated olanzapine-associated weight gain. Here, we report antipsychotic efficacy results (using the Positive and Negative Symptoms Scale (PANSS) total score) between ALKS 3831 and OLZ from three double-blinded, OLZ-controlled randomized clinical studies. Results: The first study was a 12 week, Phase 2 study in subjects without a recent exacerbation of schizophrenia. At Week 12 the least square mean change (LSM) from baseline in PANSS was similar; -

2.2 (95% confidence interval [CI]: -3.2, -1.3) for ALKS 3831 vs -2.9 (95% CI: -4.5, -1.3) for OLZ. The least square mean difference (LSMD) of ALKS 3831 vs OLZ was 0.6 (95% CI: -1.2 to 2.5). The second study was a 9 to 15 month, Phase 2 study of subjects with schizophrenia and alcohol use disorder with a recent exacerbation of disease, overall improvements in PANSS were similar in both treatment groups, as indicated by LSM of change from randomization to Week 63 of -5.4 (95% CI: -7.4, -3.4) and -3.4 (95% CI: -5.4, -1.5) in the ALKS 3831 and OLZ groups. The LSMD of ALKS 3831 vs OLZ was -1.9 (95% CI: -4.7 to 0.9, p=0.175). Lastly, in a 4 week Phase 3 study of subjects experiencing an acute exacerbation of schizophrenia, LSM (95% CI) of change from baseline to Week 4 in PANSS total score was -17.5 (95% CI: -20.1, -14.9) for PBO, -23.9 (95% CI: -26.5, -21.4) for ALKS 3831 and -22.8 (95% CI: -25.3, -20.2) for OLZ. The LSMD of ALKS 3831 vs OLZ was -1.2 (95% CI: -4.7, 2.4; p=0.517); the LSMD of ALKS 3831 vs PBO was -6.4 (95% CI: -10.0, -2.8; p<0.001); the LSMD of OLZ vs PBO was -5.3 (95% CI: -8.9, -1.7; p=0.004). Conclusion: In 3 separate studies with clinically unique patient populations with schizophrenia, treatment with ALKS 3831 resulted in similar antipsychotic efficacy to olanzapine, as evaluated by change in PANSS total score. Addition of samidorphan to olanzapine (ALKS 3831) did not decrease the antipsychotic efficacy compared to OLZ alone in adults with schizophrenia.

No. 91

Lurasidone-Induced Mania: A Case Report

Poster Presenter: Assad Mukhtar, M.B.B.S.
Co-Author: Henry A. Nasrallah, M.D.

SUMMARY:

Background: Bipolar disorder is often misdiagnosed as major depression because two thirds of patients begin their illness with a depressive episode. This leads to either failed trials of antidepressant therapy or to switching to mania or hypomania or mixed state. Only 2 agents, both atypical antipsychotics, have been FDA-approved for bipolar depression: quetiapine in 2006 and lurasidone in 2011. It is assumed that those 2 agents would not cause a switch to mania, but in fact they do, and a few reports have been published about that. Here, we report a case of a bipolar patient who switched to mania on lurasidone. Case Report: A 27-year-old white married childless female, with a BA in economics, has a 6-year history of being diagnosed with MDD, ADHD and GAD.. Previous medications include sertraline, fluoxetine, citalopram, escitalopram, venlafaxine, duloxetine, amitriptyline, trazodone, and dexmethylphenidate; currently, she is on Wellbutrin XL 450 mg and Adderall 30 mg. She presented to our clinic for management of depression. The patient reported having symptoms of low energy, fatigue and headache after a recent increase in dose of Wellbutrin. On further assessment, she disclosed having mood swings, episodes of irritability, increased energy, hyperproductivity, compulsive spending, and forgetfulness for recent events. Stated her last manic episode was 3 years ago, which was a break from depression, mostly characterized by hypersomnia and hyperphagia. She was started on lurasidone 20 mg/day and titrated up to 40 mg/day. Bupropion was and tapered down and discontinued. At the next visit, the patient reported that when Lurasidone was increased to 40 mg/day, she felt like a tornado, being propelled, ready to go, with compulsive and excessive shopping, flying through things with very little awareness, excessive talking, inability to make informed decisions, lack of a need to sleep, and being hyperproductive. Based on this information, lurasidone was discontinued and she was restarted on Wellbutrin XL 150 mg/day, titrated up to 300 mg/day after 1 week. The patient mood improved, and manic symptoms subsided and were not apparent during subsequent visits. Discussion: To our knowledge, this is the 6th case of a report of switch to mania with lurasidone. A literature search revealed 2 recent publications (Doan et al, 2017; Kanzawa and Hadden, 2017) with a total of 5 cases, especially when the dose was increased. It is possible that the patient may have had a spontaneous cycling into mania, but the close proximity to the uptitration of lurasidone makes it more likely to be a drug-induced switch.Clinicians should monitor for emergence of mania symptoms on lurasidone.

No. 92

Long-Term Treatment With Adjunctive Buprenorphine/Samidorphan Combination in

Patients With Major Depressive Disorder: Phase 3 Study Results

Poster Presenter: Michael Edward Thase, M.D.
Co-Authors: Arielle D. Stanford, M.D., Asli Memisoglu, William Martin, Amy Claxton, Alexander Bodkin, M.D., Madhukar H. Trivedi, M.D., Maurizio Fava, M.D., Miao Yu, Sanjeev Pathak, M.D.

SUMMARY:

Background: Buprenorphine/samidorphan (BUP/SAM; ALKS 5461) is an investigational opioid system modulator combining BUP, a μ-opioid receptor partial agonist and ?-antagonist, and SAM, a sublingually bioavailable μ-opioid antagonist.1 As an investigational adjunctive treatment for major depressive disorder (MDD), BUP/SAM demonstrated efficacy and a generally well-tolerated safety profile across placebo-controlled clinical studies.1-3 Preliminary results from a 52-week, phase 3, open-label, BUP/SAM study (FORWARD-2; NCT02141399) were previously reported.4 We report final safety, tolerability, and exploratory efficacy results from FORWARD-2. Methods: FORWARD-2 enrolled patients from 4 short-term studies (FORWARD-1 [ALK5461-210; NCT02085135], FORWARD-3 [ALK5461-206; NCT02158546], FORWARD-4 [ALK5461-205; NCT02158533], FORWARD-5 [ALK5461-207; NCT02218008]) and de novo patients. Patients had a confirmed, current MDD diagnosis and suboptimal responses to antidepressant therapy (ADT) in the current MDD episode. After treatment with an established ADT for =8 weeks, patients received open-label, sublingual, adjunctive BUP/SAM 2 mg/2 mg for up to 52 weeks. Safety and tolerability (primary objective), suicidal ideation or behavior (SIB), and abuse potential and withdrawal were evaluated via adverse events (AEs). SIB and withdrawal were also assessed using the Columbia Suicide Severity Rating Scale (C-SSRS) and the Clinical Opiate Withdrawal Scale (COWS), respectively. Vital signs, laboratory analytes, and electrocardiograms (ECGs) were monitored. Changes in mean Montgomery–Åsberg Depression Rating Scale (MADRS) scores from baseline were assessed (last observation carried forward), with baseline defined as the time of BUP/SAM initiation (in FORWARD-2 or prior study, as applicable). Remission rates, defined as MADRS scores of =10, were determined. Results: Of 1485 patients, 50% completed the study, 11% discontinued due to AEs, and 39% discontinued for other reasons. Nausea, headache, constipation, dizziness, and somnolence each occurred in =10% patients. Few (0.5%) patients experienced AEs related to SIB. Based on C-SSRS, 10.3% of patients experienced post-baseline SIB. Euphoria-related AEs (1.2%) and “drug withdrawal” AEs (0.4%) were uncommon. COWS assessments were consistent with low incidence of categorical increases in scores. BUP/SAM was not associated with clinically meaningful changes in vital signs, laboratory analytes, or ECGs. Mean MADRS scores decreased from 22.9 at baseline to 12.1 at last treatment period assessment. The remission rate at last treatment period assessment was 52.2%. Conclusions: Long-term adjunctive BUP/SAM treatment was well tolerated with an AE profile consistent with placebo-controlled studies. There was little evidence of abuse potential or opioid withdrawal symptoms upon abrupt discontinuation. BUP/SAM was associated with a durable antidepressant effect in patients continuing treatment up to 52 weeks.

No. 93

Screening for Clozapine-Induced Myocarditis: A Naturalistic Observation Study

Poster Presenter: Sandarsh Surya, M.B.B.S.
Lead Author: Joseph Patrick McEvoy, M.D.
Co-Authors: Ram Bishnoi, Brian Miller, William McCall

SUMMARY:

Background: Myocarditis is listed among the Food and Drug Administration (FDA) boxed warnings for using clozapine [1]. It appears that the greatest risk for myocarditis occurs during the first 4 weeks of the first exposure to clozapine. The reported incidence of myocarditis associated with clozapine use has been highly variable, ranging from < 1% to 8.5%, largely based on differences in the diagnosis of myocarditis [2,3]. The danger of excessive “diagnosis” of myocarditis in patients receiving clozapine is that this may consign patients whose clozapine is stopped to continued, unremitting severe psychopathology, including heightened rates of suicide. In this study we utilize screening program similar to that was developed for the CATIE Schizophrenia trial to screen for potential cases [4].

Methods: Subjects recruited into the study are hospitalized on an acute inpatient psychiatric unit and the treating psychiatrist has decided to initiate treatment with clozapine for the subject's psychiatric condition. We collected C-reactive protein (CRP), creatinine kinase (CK), troponin, absolute eosinophil count (AEC) and eosinophil percentage (ECP) at baseline (prior to initiating or restarting clozapine) and weekly thereafter until discharge or the end of week 4 of clozapine treatment in all patients beginning clozapine treatment Preliminary Results: In this ongoing study, 25 subjects have completed the study. 20% subjects were previously exposed to clozapine had no elevation in biomarker levels by end of the 4th week. 2 of 25 (8%) subjects were hospitalized in cardiac care unit with suspicion for myocarditis and 1 of the 2 subjects was diagnosed with myocarditis. Troponin level were significantly elevated compared to baseline in both cases. Simultaneously, significant elevations of CRP, CK, AEC and ECP were noted in these 2 subjects. However, AEC and ECP elevation was present even at baseline. Significant elevation of AEC and ECP seen in 6 (24%) subjects, CK in 3 (12%) and CRP in 6 (24%). There was no simultaneous increase in biomarkers in any subjects other than the 2 subjects with troponin elevation. Conclusion: From the preliminary data, troponin level appears to a sensitive and specific biomarker for clozapine induced cardiac morbidity. Elevated troponin level was associated with simultaneous elevation in all other biomarkers. Hence, elevated CK, CRP, AEC and ECP may be sensitive markers but are not specific for clozapine induced cardiac morbidity.

No. 94

Evaluating the Safety of Buprenorphine/Samidorphan for Adjunctive Treatment of Major Depressive Disorder: A Focus on Buprenorphine-Related Concerns

Poster Presenter: Andrew J. Cutler, M.D.
Co-Authors: Alexander Bodkin, M.D., Sanjay J. Mathew, M.D., Narinder Nangia, Sanjeev Pathak, M.D., Arielle D. Stanford, M.D.

SUMMARY:

Background: Buprenorphine (BUP) is a controlled substance with potential for abuse and, following prolonged use, a persistent and markedly dysphoric withdrawal syndrome. BUP prescribing information includes warnings for the risk of respiratory and central nervous system (CNS) depression, hepatic events, hypersensitivity, and orthostatic hypotension, particularly in combination with other CNS depressants. BUP/SAM, a combination of BUP with the mu-opioid receptor antagonist samidorphan (SAM), is an opioid system modulator under investigation for the adjunctive treatment of major depressive disorder (MDD). SAM is intended to mitigate the risk of abuse associated with BUP alone. Previously reported, the abuse potential of BUP/SAM has been shown to be similar to placebo (PBO) at therapeutic doses, with low incidence of euphoria-related adverse events (AEs), and no evidence of abuse behavior or opioid withdrawal.1,2Here we describe the safety profile of BUP/SAM in patients with MDD regarding the AEs of concern with BUP alone. Methods: Data were pooled from the BUP/SAM 2 mg/2 mg and PBO arms of 4 randomized controlled trials (ALK5461-202, NCT01500200; FORWARD-3, NCT02158546; FORWARD-4, NCT02158533; and FORWARD-5, NCT02218008). All studies used sequential, 2-stage randomization designs, allowing for pooling of data within stages. Incidence of AEs categorized as potentially related to respiratory depression, CNS depression, hypersensitivity, hypotension and orthostatic hypotension, hepatic effects, and QT prolongation were assessed, and the effect of concomitant BDZ use was evaluated. Results: The safety populations comprised patients from the BUP/SAM 2 mg/2mg (stage 1: n=162; stage 2: n=289) and PBO (stage 1: n=658; stage 2: n=286) treatment arms. During stage 1, AEs in the CNS depression category (mainly fatigue, somnolence and sedation) were reported for 22.2% of patients in the BUP/SAM arm (vs 6.7% PBO), no hypersensitivity AEs were observed in the BUP/SAM arm (vs 0.5% PBO), and the incidence of hypotensive and orthostatic hypotensive AEs (mainly dizziness) was 14.2% in the BUP/SAM arm (vs 4.1% PBO). There were no differences between treatment groups regarding post-baseline changes in blood pressure or pulse. Incidences of these AEs in stage 2 were lower. Across both stages, no AES were reported in the respiratory depression category, 1 patient (0.3%) in the BUP/SAM arm reported a hepatic effect AE, and 1 patient (0.2%) on PBO and 1 patient (0.3%) on

BUP/SAM had an event of QT prolongation. AEs were similar in patients taking BDZ on BUP/SAM to those on BUP/SAM not taking BDZ. Conclusions: Treatment of patients with MDD with adjunctive BUP/SAM 2 mg/2 mg was associated with a low incidence of AEs that are typically associated with BUP alone. Potential reasons for this safety profile may include the addition of SAM, a mu-opioid receptor antagonist, and the low dose of BUP utilized.

No. 95

The Safety of Buprenorphine/Samidorphan Combination as Adjunctive Therapy for Major Depressive Disorder: A Pooled Analysis of 4 Clinical Trials

Poster Presenter: Andrew J. Cutler, M.D.
Co-Authors: Scott Tyler Aaronson, M.D., John Michael Zajecka, M.D., Dan Vlad Iosifescu, M.D., William Martin, Amy Claxton, Miao Yu, Narinder Nangia, Sanjeev Pathak, M.D., Arielle D. Stanford, M.D.

SUMMARY:

Background: Approved adjunctive therapies for major depressive disorder (MDD) are associated with metabolic abnormalities, weight gain, and movement disorders, and approved monotherapies are associated with sexual dysfunction.1,2 Buprenorphine/samidorphan (BUP/SAM; ALKS 5461) is a novel opioid system modulator that has abuse potential similar to placebo (PBO), with little evidence of abuse potential or withdrawal.3 Adjunctive BUP/SAM has shown efficacy in MDD in PBO-controlled clinical studies.4-6 This post-hoc analysis summarizes the safety profile of BUP/SAM using pooled data from these trials. Methods: ALK5461-202 (NCT01500200), FORWARD-4 (NCT02158533), and FORWARD-5 (NCT02218008) were sequential parallel comparison design studies; FORWARD-3 (NCT02158546) was a placebo run-in design study. These 2-stage studies assessing adjunctive BUP/SAM in patients with MDD had comparable durations (10-11 weeks) and populations. The stage 1 pooled safety population included all randomized patients receiving =1 dose of study drug (BUP/SAM 2 mg/2 mg or PBO) during stage 1. The stage 2 pooled safety population included all stage 1 PBO non-responders that entered stage 2 and received =1 dose of study drug. Adverse events (AEs), vital signs, laboratory analytes, and electrocardiograms (ECGs) were evaluated. Results: Demographics and baseline characteristics were comparable between groups in stage 1 (BUP/SAM: 162; PBO: 658) and stage 2 (BUP/SAM: 289; PBO: 286). Proportionally, more BUP/SAM patients experienced an AE in stage 1 relative to PBO (BUP/SAM: 68.5%; PBO: 54.4%) with lower incidence and smaller difference between treatments in stage 2 (BUP/SAM: 47.4%; PBO: 41.6%). Most AEs were mild/moderate. Stage 1 AEs reported in =5% of BUP/SAM patients were nausea (26.5%), dizziness (13.0%), constipation (12.3%), headache (10.5%), vomiting (9.9%), fatigue (7.4%), somnolence (6.8%), sedation (6.8%), and dry mouth (6.2%). In stage 2, only nausea (12.5%) was reported in =5% of BUP/SAM patients. In stage 1 and stage 2, respectively, 13.6% and 3.8% of BUP/SAM patients discontinued due to an AE (mainly nausea, dizziness, and vomiting) (vs 2.0% and 1.4% PBO). Incidence of sexual dysfunction-related AEs were similar between groups in stage 1 (BUP/SAM: 1.2%; PBO: 0.3%) and stage 2 (BUP/SAM: 0.3%; PBO: 0.7%). Incidence of hypomania/mania-related AEs were similar between groups in stage 1 (BUP/SAM: 3.1%; PBO: 0.8%) and stage 2 (BUP/SAM: 0.7%; PBO: 0.0%), and there was no clustering of events to suggest clinical hypomania/mania. BUP/SAM patients did not report any movement disorders or clinically meaningful changes in laboratory values (including lipids and glucose), vital signs, ECGs, or weight during either stage. Conclusions: Adjunctive BUP/SAM 2 mg/2 mg treatment was generally well tolerated in patients with MDD. BUP/SAM was not associated with metabolic abnormalities, weight gain, movement disorders, or sexual dysfunction.

No. 96

Meta-Analysis of the Influence of UGT Genetic Polymorphisms on Lamotrigine Concentration

Poster Presenter: Su Cheol Kim

SUMMARY:

Background : 5’-diphospho-glucuronosyltransferases (UGTs) are involved in the metabolism of lamotrigine, but whether the UGT1A4 and UGT2B7 genetic polymorphisms affect lamotrigine concentration remains controversial. Thus, the

objective of this meta-analysis was to analyse the influence of UGT1A4 and UGT2B7 genetic polymorphisms on lamotrigine concentration. Methods : Through searching, screening, selection, data extraction and quantitative analyses, the influence of UGT1A4 and UGT2B7 genetic polymorphisms on lamotrigine concentration-to-dose ratio (CDR) was assessed by meta-analysis of nine studies. Results : Neither UGT1A4 70C>A nor 142T>G significantly affected lamotrigine CDR values (standardised difference in means [SDM] = 0.433, 95% confidence interval [CI] = -0.380 to 1.302; SDM = -0.458, 95% CI = -1.141 to 0.224, respectively). Only the UGT2B7 -161C>T homozygous variant had significantly higher CDR values than the wild type (WT) and heterozygous variant (SDM = 0.634, 95% CI = 0.056 to 1.222). Conclusion : In conclusion, CDR of lamotrigine was significantly higher for the UGT2B7 -161C>T homozygous variant than for the WT and heterozygous variant. Thus, UGT2B7 -161C>T homozygous variant need to receive reduced dose. The paper was written without any financial support.

No. 97

Sertraline Associated With REM Sleep Behavior Disorder: A Case Report

Poster Presenter: Seyedmostafa Mansouripour, M.D.
Co-Author: Dharmendra Kumar

SUMMARY:

Introduction: REM sleep behavior disorder (RBD) manifested by the abnormal motor behavior with an endurance of tone during REM sleep. It could be associated with energetic and sometimes violent motor activity and nocturnal vocalizations (1). Studies suggest patients taking Selective serotonin reuptake inhibitors (SSRIs) would be at greater risk of developing REM sleep behavior disorder, with advanced age (2). Case Presentation: We are presenting a case of 39-year-old female with past medical history of spinal cord injury from a gunshot wound 19 years ago resulting in paraplegia, post-traumatic stress disorder, chronic pain and chronic sleep problem. At initial evaluation, patient was already taking amitriptyline for her neuropathic pain, sertraline 12.5 mg added for anxiety symptoms. Patient tolerated the dose well with mild very mild improvement in symptoms. The dose sertraline was increased to 25 mg. The patient was also sent for polysomnography as she was having high suspicion of obstructive sleep apnea. She also reported mild symptoms of leg kicking, crawling feeling in her leg, and talking in her sleep sometime. Polysomnography was negative for any obstructive sleep apnea. Her central line does increased gradually to 150 mg and then to 200 mg for better control of depression/anxiety and PTSD symptoms. After patient does increase from 150-200 mg she noticed worsening of her nighttime sleep behavior. Her mother also witnessed sleepwalking episode and doing things which patient has no recollection in the morning including try to take a bath and eat from refrigerator. The patient became very scared and she cut the dose to 12.5 mg. This relieved her symptoms of parasomnia immediately but made her anxiety worse. On her follow-up appointment her sertraline was discontinued altogether and she was started on escitalopram 5 mg. She tolerated the medication well, it helped moderately with her anxiety and by the time of this case report (approximately 1 month) patient did not report any sleep related behavior. Conclusion: Since antidepressant medication are very common prescribed, it is important to be cautious of physiologic changes they may induce, even if the clinical significant of these changes is not fully elucidated.

No. 98

Angioedema Associated With Clozapine and Olanzapine

Poster Presenter: Julie Bittar
Co-Author: Heather M. Fretwell, M.D.

SUMMARY:

Background: Drug induced angioedema is a rare cutaneous drug reaction that has primarily been associated with betalactam antibiotics and anti-inflammatory drugs.1 However, angioedema associated with antipsychotics is much more rare side effect, with only few reported cases. To date, there are only three reports in the literature of angioedema associated with clozapine or olanzapine.5-7 Objective: This report serves to add to the literature on the association of clozapine and olanzapine with angioedema. Approach/Results: A 69 year old male with a history of schizophrenia presented to the emergency department on 9/30/2016 for altered mental status. Medical

workup was unremarkable and he was transferred to inpatient psychiatry service. Patient was being managed by outpatient psychiatry for schizophrenia with clozapine 450 mg total daily dose for many years, however stated he had not been taking his medications. His other medications included sertraline 50 mg, buspirone 10 mg, and buproprion 150 mg. Upon admission, his sertraline and buproprion were held and he was restarted on buspirone 150 mg, and clozapine 25 mg BID for 3 days with a plan to increase by 25 mg every 3 days until back to 450 mg total daily dose. He developed facial and bilateral arm swelling on 10/14/2016. Clozapine was discontinued and diphenhydramine was initiated. Internal medicine team was consulted. CBC was notable for eosinophilia at a level of 1.1. Physical exam significant for induration of both arms and desquamation, mild erythema of the upper chest, no urticaria. He was diagnosed with allergic form of angioedema and his diphenhydramine was changed to hydroxyzine. After discontinuation of clozapine, his angioedema resolved however his psychosis worsened. The patient was subsequently started on olanzapine on 10/23/2016 and developed facial angioedema with eosinophilia two days later on 10/25/2016. Olanzapine was discontinued, haloperidol was initiated and his facial edema resolved. The patient is still being followed by outpatient psychiatry and has not had a recurrence of the angioedema since discontinuing the olanzapine and clozapine. Discussion/Conclusions: This case report adds to the literature on the adverse effects of clozapine and olanzapine and suggests the need for physicians to be aware of the possible side effect of angioedema secondary to clozapine and olanzapine use when treating patients with psychotic disorders.

No. 99

First-Episode of Cannabis-Induced Psychosis in Two Young Adults, Successfully Managed With Paliperidone Long-Acting Injection on Outpatient Basis

Poster Presenter: Paramjeet Khurana

SUMMARY:

Background and Objectives: Cannabis is various forms is one of the most commonly used illicit drug around the world and expanded legalization has also popularized “edible” forms of marijuana, including teas and food products. Although often portrayed as a harmless drug with potential therapeutic uses, cannabis has detrimental effects on mental and physical health. We present two cases who after ingestion of edible cannabis developed psychosis to illustrate the management of acute cannabis induced psychosis using Paliperidone Prolonged Release Injection on outpatient basis. Case Report: Two young adults antipsychotic-naive male with no past or family history of psychiatric illness were brought to the outpatient services with an acute psychotic episode in the context of prolonged cannabis ingestion orally. These patients presented with three weeks of insomnia, elated mood, agitation, violence, paranoid ideas, persecutory delusions, pacing, bizarre delusional thoughts with thought derailment and disorganized behaviour. Due to concerns regarding treatment compliance, the it was decided to start a long-acting injection formulation, Paliperidone. Following the loading dosage, patients were given on 4 weekly dosage of injection for six months. Medication was well tolerated. Patients showed improvement in all targeted symptoms and were fairly asymptomatic. Motivation enhancement therapy session were conducted for relapse-prevention. Conclusions: Poor insight is one of the main reasons of antipsychotic discontinuation and subsequent relapse and further worsening of patient condition. While more research is needed, this case report suggests the potential role of long-acting injectables as outpatient treatment for people with substance induced psychosis for improvements in psychopathology, relapse prevention, fewer rehospitalizations, and better outcomes.

No. 100

Long-Term Response of Clozapine and Its Clinical Correlates in the Treatment of Tardive Movement Syndromes: A Naturalistic Observational Study

Poster Presenter: Dongbin Lee

SUMMARY: Objective: Switching to clozapine is a treatment option for tardive movement syndrome (TMS). However, its efficacy and clinical correlates have not been fully explored. This study investigated long-term efficacy of clozapine on TMS and associated factors of its response in a naturalistic

outpatient setting. Methods: Subjects were 35 patients with schizophrenia or bipolar disorder receiving only clozapine as an antipsychotic drug for more than 12 months. Their prior antipsychotics were switched to clozapine after the onset of tardive dyskinesia and/or dystonia. We assessed TMS and clinical characteristics through direct interview and examination, and review of hospital records. Results: The offending antipsychotics administered at the time of TMS onset were 2nd generation antipsychotics in 94.3% of the subjects. TMS symptoms were remitted in 23 patients (65.7%) after switching to clozapine. More than 50% reduction in the Abnormal Involuntary Movement Scale (AIMS) score was observed in 88.6% of the patients. Younger age and age of onset of TMS were significantly associated with remission of TMS. Male sex, good antipsychotic effects of clozapine, and lower baseline AIMS score showed a trend of association with better response. Conclusions: Clozapine seems to be an excellent treatment option for TMS in the era of 2nd generation antipsychotics especially for younger patients with mild tardive dyskinesia. Clinical trials comparing the effect of switching antipsychotics to clozapine with add-on therapy of new drugs targeting TMS are difficult to design in ordinary clinical settings. Therefore, more naturalistic observational studies are warranted to identify predictors of clozapine response to TMS.

No. 101

An Interactive Discussion of Innovative Psychopharmacology in Treatment-Refractory Patient

Poster Presenter: Mujeeb Uddin Shad, M.D., M.S.

SUMMARY:

There is growing number of treatment-refractory patients in psychiatric practice. Although evidence-based treatments may be generally effective in most patients, they may be relatively ineffective in the treatment refractory population, especially patients in state hospital settings or community mental health centers. Over a relatively short period of time several molecules with extremely novel and exciting mechanisms of action have been approved by the FDA for indications that we never used to think would be possible, such as tardive dyskinesia, pseudobulbar affect, Parkinson's disease psychosis, and female hypoactive sexual desire disorder.r. Development of these novel agents was facilitated by a failure to develop better "me too" drugs by the pharmaceutical industry, which has enabled their efforts to develop psychotropic medications at a subsyndromal level beyond DSM 5 diagnoses. These newly approved neuro-psychopharmacological molecules have quite interesting mechanisms of action and although they should not be used routinely for any indications not approved by the FDA, it is at least theoretically plausible to consider these novel agents in treatment-refractory patient population, when no other medications have made a difference. However, it is extremely important to provide neurobiological explanation to use these novel agents based on their putative mechanism(s) of action. For example, using an agent with glutamate-modulation may be a reasonable approach in patients with treatment refractory schizophrenia, if other antipsychotic medications, including clozapine, are not helpful. The main objective of this presentation is to have an interactive discussion on novel uses of new and some relatively older psychotropic medications for indications above and beyond those approved by the FDA with neurobiological explanations. Recently published case reports/series1-4 and reviews by our group will be used to provide background information to initiate our interactive discussion about innovative psychopharmacology, which will be facilitated by an electronic setup to capture audience responses in response to relevant questions to initiate discussion. More importantly, audience will be repeatedly cautioned to use these agents for novel indications only in treatment-refractory patients who have failed all evidence-based treatments either due to lack of efficacy and/or adverse effects.

No. 102

A Case of Priapism With High Sensitivity to Trazodone, Naltrexone, and Quetiapine

Poster Presenter: Ritvij Satodiya, M.D.
Co-Authors: Fariya Faireen Ali, M.D., Adeeb Yacoub

SUMMARY:

Background: Priapism is a persistent and painful erection of penis without sexual stimulation. It is a relatively rare urologic emergency with an incidence

of 5.34 per 100,000 men per year(1). Hematologic dyscrasias like Sickle Cell Disease, Multiple Myeloma, Leukemia and Thalassemia increase the risk. Psychotropic medications may cause this medical emergency which include Antidepressants (Trazodone), Antipsychotics (Olanzapine, Clozapine) and Mood Stabilizers (Lithium)(2, 3). Despite of low occurrence, some patient characteristics (substance use, hematologic disorders, African American race) increase susceptibility to such pharmacologic agents. We present a case showing high sensitivity to multiple psychotropic medications including Naltrexone, which is not much reported. We emphasize on consideration of risk factors and awareness about offending medications to avoid this emergency. Case Report: A 35-year-old Hispanic male with psychiatric history of bipolar disorder and polysubstance abuse (alcohol and cocaine), poor treatment compliance presented with worsening suicidal ideations in context of recent cocaine use. We restarted his Sertraline 100mg and Depakote 500mg, titrated to 1500mg (home medications). He received a one-time dose of trazodone 200mg for insomnia, which he was naïve to. Within 6 hours, he developed priapism lasting for 4 hours. On examination, he had a painful persistent penile erection causing severe pain. He required emergent urological intervention consisting of penile aspiration and intracavernosal injection with phenylephrine that resulted in successful resolution. He reported no prior episode of priapism. Trazodone was discontinued. In addition, Quetiapine 200mg was added for augmentation of mood symptoms. He received Naltrexone 25mg with titration upto 50mg to address alcohol cravings with good effects. During the course of his hospitalization patient developed two episodes of morning penile erections that resolved with conservative management and one episode of priapism that required repeat urological intervention. We performed hematology work up which revealed sickle cell trait on hemoglobin electrophoresis. Following this discovery, he was taken off all possible offending medications, first naltrexone and then quetiapine. He was educated about the medications that may cause priapism on discharge. Discussion: Priapism is a true urologic emergency, and is a significant but rare side effect of many psychotropic medications. Atypical Antipsychotic precipitates priapism mostly by blocking action of alpha1-adrenergic receptors in corpora cavernosa(4). Naltrexone may have modulating effects on gonadotropins homeostasis that may cause priapism(5). We highlight the challenges in treating our sickle cell trait patient with high sensitivity to uncertain medications that may cause priapism. We need to be aware of these medications that may cause this rare yet possible side effect considering its multifactorial etiology.

No. 103

Pharmacokinetics of Amphetamine ER Oral Suspension (AMPH EROS) in Adolescents Interpolated From Children and Adults Using Population Analysis

Poster Presenter: Barry K. Herman, M.D.
Co-Authors: Vijay Ivaturi, Ph.D., Judith Kando, Pharm.D., Thomas King, M.P.H., M.S., Antonio Pardo, M.D., Jogarao Gobburu, Ph.D., M.B.A.

SUMMARY:
OBJECTIVES:AMPH EROS is an extended release oral suspension amphetamine (ratio of 3.2 to 1 d- to l-amphetamine) approved for treatment of ADHD in patients =6 y. To support product labeling, the PK of AMPH EROS in adults (=17 y) and children (6 12 y) were described in Studies A and B, respectively. We simulated adolescent PK using the PK of AMPH EROS in adults and children. Pharmacokinetic simulations were employed to project the PK in adolescents to guide dosing. METHODS: Study A was an open-label, single-dose, randomized, 3-period, 3-treatment, 6-sequence, crossover, relative bioavailability (BA) and food-effect study in 29 adults, comparing relative BA of AMPH EROS vs. reference IR MAS at the same daily 18.8 mg AMPH base dose. Study B was an open-label study in children w/ADHD to investigate PK of AMPH EROS over 28 h following 1 dose of 10 mg (10 mg/4 ml) in 12 children w/ADHD. A: Blood was collected pre-dose and 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 14, 16, 24, 36, 48, and 60 h post-dose. B: Blood was collected pre-dose and 1, 3, 4, 6, 8, 10, 12, and 26-30 h post-dose. In total, 1178 concentration-time points for d- and l-amphetamine were employed for the PK modeling. The actual sample collection times were used for the analysis. For Study A, AMPH EROS data from the fasted state were used for modeling because the goal of the analysis was to project PK profiles in adolescents and not to model food effect.

In Study B, all children were dosed under fasted conditions. Exploratory graphing of the PK profiles indicated a one-compartment disposition. The one-compartment was parameterized in terms of the apparent clearance (CL/F), apparent volume of distribution (V/F), 1st-order absorption rate constant (ka) and a time-lag for absorption (tlag). CL/F and V/F estimated from children and adult data were used to simulate PK profiles in adolescents at 2.5 mg, 5 mg, 7.5 mg, 10 mg, 15 mg and 20 mg doses (1/day). Based on CDC growth charts, mean body weight of 52 kg was used to represent a typical adolescent. RESULTS: A PK model with a delayed 1st-order absorption and 1st-order disposition adequately described the concentration-time profiles in children and adults. Body weight was the only prognostic factor that was necessary to describe the differences between children and adults. In contrast, age, sex and race were not found to be important prognostic factors. The CL/F for children, adolescents and adults are: 7.1 L/hr, 10.1 L/hr and 12.3 L/hr, respectively, and respective V/F measurements are: 111.1 L, 160.9 L and 196.7 L, respectively. The between-subject variability in was 18.9% for CL/F and 11.2% for V/F. CONCLUSIONS: The projected PK profile of AMPH EROS in adolescents matched that of children and adults. AMPH EROS was shown to be efficacious in children in a pivotal study that served as the basis for approval in older subjects. The PK in adolescents from this simulation support dosing recommendations of AMPH EROS in this popula

No. 104

Mixed Amphetamine Salt-Induced Delusional Infestation: The Importance of Collaborative Care in the Diagnosis and Treatment of Psychiatric Patients

Poster Presenter: Shane Burke, M.D.
Co-Author: Amanda Vastag, M.D.

SUMMARY:

Ms. A is a Caucasian female in her late 20s with a past psychiatric history of ADHD and anxiety who presented to the emergency department with multiple unexplained physical symptoms and the belief that her body was infected with worms. Physical exam revealed complete baldness, chemical burns secondary to repeated lice treatments, lesions on her scalp, back of the neck, and abdomen secondary to picking. Her symptoms resulted in extensive testing by a variety of medical providers over the course of two years without any pertinent positive findings. Her symptoms shortly after Adderall, a mixed amphetamine salt, was initiated for ADHD treatment and resolved with the discontinuation of the medication combined with the introduction of olanzapine. Ms A was subsequently diagnosed with a substance induced delusional disorder, somatic type, which has rarely been referenced in the literature as an adverse reaction of mixed amphetamine salts. The objectives of this case report are to raise awareness about the link between mixed amphetamine salts and delusional infestation, to identify the need for greater collaboration of care between psychiatrists and other medical specialties, and to discuss possible advances in treatment of delusional infestation.

No. 105

Priapism in a Patient Using Olanzapine and THC: A Case Report

Poster Presenter: Patrick E. DiGenova, M.D.
Co-Authors: Andrea Bulbena, M.D., Ronnie Gorman Swift, M.D.

SUMMARY:

Priapism is a urological emergency that can cause serious complications including irreversible impotence. Medications are responsible for 25 to 40% of cases of priapism, with antipsychotics being responsible for at least 50% of those cases. In this study, we present the case of a patient with bipolar disorder, who developed priapism after combining olanzapine with THC. The patient never experienced priapism when taking olanzapine alone or with using THC alone. While many studies have described the potential alpha 1 adrenergic blockade in the copora cavernosa with olanzapine, very few studies have considered the potentiating effects of THC on this symptomatology. Cannabinoids can potentially modulate autonomic blood outflow in both the central and peripheral nervous systems, and also have direct effects on the vasculature. Since many patients with mental health conditions also have comorbid marijuana use disorder, it is important to educate physicians and prescribers about this potential adverse reaction so they can inform their patients about the risks of priapism. Additionally,

with marijuana being legalized in many states, this may be a more common adverse reaction as THC use increases.

No. 106

Efficacy and Tolerability of a Switch to Levomilnacipran Extended Release Versus Adjunctive Quetiapine Extended Release in Major Depressive Disorder

Poster Presenter: Narei Hong, M.D., Ph.D.
Co-Authors: Prakash S. Masand, M.D., Angelo Sambunaris, M.D., Steven Taylor Szabo, M.D., Ph.D., Nitin Jindal, Anusha Agarwal, Ashwin Anand Patkar, M.D.

SUMMARY:

Background: Major depressive disorder (MDD) is the leading cause of disability in the world. Many pharmacological approaches for MDD are generically available including not only the antidepressants but also other psychotropic medications such as antipsychotics often used as adjuncts. In the STAR-D trial, only 36.8% of patients achieved remission in the first step treatment with citalopram and 27.0% after switching to bupropion, cognitive therapy, sertraline or venlafaxine. In clinical situations, clinicians frequently try to switch to other antidepressants use to adjunctive psychotropic medications. This trial compared the efficacy and tolerability of switching to levomilnacipran extended release(ER) versus adjunctive therapy with quetiapine extended release (XR) to the patients existing generic SSRI treatment in MDD patients. Methods: This trial was an 8-week, randomized rater blinded parallel group, two-arm trial. The subjects were recruited at two sites by self-referral via ads or introducing by health providers. The subjects had taken SSRIs for MDD and had inadequate response to SSRIs. The subjects with a current or previous use of antipsychotics were excluded. The dose of levomilnacipran ER and quetiapine XR were flexibly adjusted by clinicians. The blinded rater performed specified ratings only and didn't address or ask any other clinical issues. The subjects were evaluated at 0, 1, 2, 3, 4, 6, 8 week. Results: This study compared 29 subjects switching to levomilnacipran ER and 31 subjects with adjunctive quetiapine XR. Both group showed improvement in MADRS scores and there were no significant difference between two groups (p=0.530). Anxiety symptoms also improved similarly in both groups (p=0.254). The subjects were evaluated on verbal memory and visual memory, with both groups showing improvement without significant difference between groups. The rate of adverse effects was not statistically different between two groups except drowsiness (p=0.004). The two groups showed some difference in distribution of sexual dysfunction but the change during the trial was not different. The subjects in levomilnacipran ER switching group had a tendency to improve quality of life more in work (p=0.08) and social life (p=0.05) than the quetiapine XR adjunctive group. Conclusion: Switching to levomilnacipran ER and adding quetiapine XR showed similar efficacy in patients who have shown inadequate relief with SSRIs in MDD. Although the subjects who had adjunctive therapy with quetiapine XR experienced more drowsiness than the subjects switch to levomilnacipran ER, they showed similar tolerability overall. Switching to levomilnacipran ER and adjunctive use of quetiapine XR with SSRIs may have similar potential in MDD patients who does not respond to SSRI monotherapy. Further studies with more subjects will be needed. This study was supported by Allergan plc.

No. 107

Valbenazine: A Novel Treatment With Novel Side Effects?

Poster Presenter: Maanasi H. Chandarana, D.O.
Co-Author: Richard Calvin Holbert, M.D.

SUMMARY:

Tardive dyskinesia is a hyperkinetic athetoid /choreiform movement disorder affecting primarily the tongue, lips and face(1) . While the exact pathophysiologic mechanism of TD is unknown, hypotheses include an increased dopamine receptor sensitivity, decreased function of GABA, neurodegeneration, and maladaptive synaptic plasticity(1,2) . The incidence of TD ranges from 1%-30% in patients receiving antipsychotics in the treatment of schizophrenia(1). While treatments for TD have traditionally been limited to off-label use, new FDA-approved options such as Ingrezza are emerging. Here we describe a case where Ingrezza therapy resulted in a novel side effect. Mr. X is a 30-year old male with schizophrenia, stable on Invega

Sustenna 39mg monthly, who subsequently developed tardive dyskinesia. The patient's presentation included hyperkinesia affecting the head, face and neck with ensuing headaches, nausea and vomiting. As per evidence-based practice, the patient's dose of Sustenna was reduced. Trial with benzodiazepines failed secondary to over-sedation. The patient was also treated with Abilify 7mg, pyridoxine 25mg, and Gingko biloba 240mg with minimal change in the intensity and frequency of TD. The patient's symptoms of TD prompted him to avoid social situations, defer engagement in pleasurable activities, and engage in ruminative and catastrophic thoughts of his symptoms intensifying indefinitely. Mr. X was initiated on Ingrezza 40mg for one week, then titrated to 80mg. Four days following completion of a one-month trial of medication, Mr. X reported acute onset of pruritic, diffuse rash with rapid progression within 30 minutes. The patient noted an identical rash two weeks prior, coincident with the titration of Ingrezza from 40mg to 80mg. The patient denied other changes in medications, environmental exposures, history of dermatologic diagnoses, or recent illness/ travel. The patient denied that the skin eruption was vesicular in nature, painful, or accompanied by airway compromise. The patient was referred to an Immunologist and diagnosed with a type 4 delayed hypersensitivity reaction, unknown subtype. Drug reactions are most frequently identified when involving the skin and are associated with medication hypersensitivity in 90% of cases, with a new medication in 1-3% of individuals, and presentation within 6-9 days of treatment (3). The drug reaction in this patient manifested after the patient had entered maintenance treatment with Ingrezza. Interestingly, the delayed hypersensitivity reaction in this patient was amplified with dosage and medication burden suggesting a cumulative effect immunologically. At present, known side effects associated with Ingrezza include fatigue, anticholinergic effects, headache, akathisia, nausea, vomiting, and arthralgia(1). This patient's presentation serves as an admonition of thorough survey of patient reported side effects with VMAT 2 inhibitors with initial and continued use.

No. 108

Using Risperidone to Screen for Side Effects to Paliperidone Palmitate: A Case Study Comparing Side Effect Profiles

Poster Presenter: Kevin Truong, M.D.
Co-Author: William Hayton

SUMMARY:
Long-acting injectable (LAI) antipsychotics are becoming a more common method for administering antipsychotics with improved medication compliance and efficacy. However, it is important to assess for potential effectiveness and side-effects prior to administration as these LAIs have a sustained, commonly 2-4 week, period of activity. Oral risperidone is cheaper than oral paliperidone and it is therefore common to prescribe oral risperidone to challenge for effectiveness and side-effects prior to starting LAI paliperidone palmitate. This case report examines a patient who showed no EPS symptoms to both forms of oral and LAI paliperidone palmitate but experienced EPS symptoms to oral risperidone. As an outpatient she was successfully trialed on oral paliperidone without adverse reactions and was switched to LAI paliperidone palmitate, to which she later developed side-effects related to excess prolactin. While in acute psychiatric hospitalization she was trialed on oral risperidone for the first time and encountered dystonic reactions, which are mechanistically different side-effects from those encountered with LAI paliperidone palmitate. This case brings awareness to physicians of potential differences between oral risperidone and paliperidone, which are commonly considered comparative equivalents when assessing effectiveness and side-effects prior to starting LAI paliperidone palmitate. Despite current expert opinion to transition from oral risperidone to LAI paliperidone palmitate, oral paliperidone may be a better indicator for potential side-effects to LAI paliperidone palmitate

No. 109

Social Support and Major Depression Among Immigrant and Non-Immigrant Subpopulations Across New York City

Poster Presenter: Hania Ibrahim
Co-Authors: Min-Hyung Kim, Julie Carmalt, Jyotishman Pathak

SUMMARY:

Background: While there is a well-documented association between adequate social support and lower rates of depression, little is known about the effect of immigration on this relationship. This study aims to assess the association between the level of social support and the prevalence of depression among the immigrant and non-immigrant subpopulations across New York City (NYC). Methods: Cross-sectional data from 1,526 respondents of the 2014 NYC Health and Nutrition Examination Survey (NYC-HANES) was screened for Major Depression using the Patient Health Questionnaire-9 (PHQ-9) with a cut-off of =10 points indicating moderate severity. The degree of perceived social support was determined using a 3-category scale based on the validated scales of MacArthur Studies of Successful Aging. Weighted multivariable logistic regression to estimate effect size of social support in response to depression was performed. Additional analyses with interaction terms between social support and each of gender, income, or birthplace were conducted. We hypothesized potential heterogeneity in the association between social support and depression. Results: Participants with adequate social support had an adjusted odds ratio (OR) of 0.29 (0.18 - 0.47) for having depression compared to those with inadequate social support, adjusting for gender, income, age, race, marital status, education level, and access to healthcare and insurance. In the additional analyses with interaction terms, we observed a statistically significant interaction between social support and immigration status (p=0.025). In the subgroup analysis, the estimated OR in the non-immigrant subpopulation was 0.16 (0.09 - 0.30), while that in the immigrant subpopulation was 0.64 (0.28 - 1.47). For gender and income, we found no statistically significant interaction with social support. Conclusions: Adequate social support was associated with a lower prevalence of depression. The association between social support and depression was heterogeneous by immigration status, with a stronger association between social support and depression found in non-immigrants.

No. 110

Two Drops a Day Keep the Saliva Away: A Review of Atropine Eye Drops in the Management of Clozapine-Induced Sialorrhea

Poster Presenter: Thomas Van der Poorten

SUMMARY:

BACKGROUND: Approximately 30% of patients taking clozapine are troubled by sialorrhea, with possibly important medical as well as psychosocial implications such as perioral maceration, cheilitis, sleeping disorders, compliance problems, aspiration pneumonia and even asphyxiation. Systemic treatments have not been successful so far and have unfavourable side effects. Stimulation of M4-muscarinic receptors and blockade of alpha2-receptors by clozapine are thought to be responsible for sialorrhea. Atropine and its structurally related ipatropium bromide are thought to relieve the sialorrhea by acting as a competitive antagonist of the M4-receptors. OBJECTIVE: The objective is to discover the evidence for the use of local atropine in clozapine-induced sialorrhea (CIS) and sialorrhea of other aetiology in the latest literature, as well as 2 patients treated in our centre. METHODS: PubMed and Google Scholar were used with the keywords "sialorrhea", "clozapine", "atropine" to study the use of sublingual atropine for CIS but also sialorrhea of other aetiology. Two patients of the author are also included. RESULTS: From a total of 24 patients, 21 patients (including 2 patients treated in our centre) were found with a beneficial effect on CIS with sublingually administered atropine eye drops or 1% ipatropium bromide nasal spray at 0.03%. Side-effects like a dry mouth, unpleasant taste and short duration of action of the eye drops were occasionally reported. One case-series reported accidental ocular administration by a staff member, and a disorganised patient swallowing a whole eye drop bottle, with no irreversible or systemic side effects reported. 67 patients treated with local atropine for sialorrhea of other aetiology were found, ranging from head trauma, cerebral palsy, Parkinson-patients to progressive supranuclear palsy, with a generally favorable effect and few side effects. One methodologically weaker RCT on 22 palliative upper GI-tract patients found a decrease in salivation, although not significant. In all the reports, no signs were found of any systemic resorption. CONCLUSION: The sublingual administration of

atropine appears to be an effective, simple, safe and promising treatment of CIS, as well as in sialorrhea of other aetiology. The posology varies around 1 to 2 eye drops 1 to 4 times daily. Ipatropium nose-spray has the advantage of possibly being more user-friendly, having a longer duration of action and not crossing the blood-brain barrier.

No. 111

Presumptive Antipsychotic Polypharmacy Differences by Age: A Retrospective Claims Data Analysis

Poster Presenter: Carolyn Martin
Co-Authors: Monica Frazer, Cori Blauer-Peterson, Helen Trenz, Rachel Halpern

SUMMARY:
Background: Behavioral health conditions can be difficult to treat, especially when patients fail to respond to initial therapies. Poor adherence, limited efficacy, changing symptomology and difficult social factors make finding an ideal treatment plan challenging. Antipsychotic therapies, alone or in combination, are increasingly used to treat different behavioral health (BH) conditions. Despite growing frequency of use, little is known about differences in antipsychotic polypharmacy (APP) by age group. The objective of this analysis was to explore characteristics of US insured patients with presumptive APP, stratified by age. Methods: Commercial and Medicare Advantage Part D enrollees with a claim for an antipsychotic from 01JAN2016-31DEC2016 were identified from the administrative database of a US health insurer. The date of the first antipsychotic medication was the index date. Continuous health plan enrollment was required for 6 months before (baseline) and 12-months after (follow-up) index. Patients with a baseline claim for an antipsychotic medication or <5 weeks follow-up days' supply were excluded. An episode of APP was defined as =37 days of overlapping supply of >1 antipsychotic. Logistic regression examined the relationship between patient characteristics and APP within age groups: children (<18 years), elderly (>64 years), and adults (18-64). Results: The sample included 29,951 patients; 1,303 (4%) with =1 episode of APP during follow-up. APP was observed among 5% of elderly patients (N=520); 4% each of children (N=100) and adults (N=683). Frequency of some baseline BH diagnoses was higher among patients with APP versus those without APP including: anxiety disorders (62% vs 50% of children with and without APP respectively, 39% vs 34% elderly and 56% vs 50% adults), depression (adults 53% vs 48%) bipolar disorder (11% vs 8% elderly and 36% vs 24% adults) and schizophrenia (3% vs 1% children, 6% vs 3% elderly, 14% vs 5% adults); all comparisons p<0.05. Time from index date to the first episode of APP ranged from 122 days (adults) to 155 days (children). Patients with APP vs without APP were also more likely to have an overlapping non-psychotic psychotropic medication. Among children, =1 baseline claim for an antianxiety medication was associated with nearly twice the odds of APP (odds ratio [OR]=1.9, p=0.032). Among the elderly, a baseline diagnosis of schizophrenia (OR=1.9, p=0.001) and prior BH-related hospitalization (OR=1.4, p=0.010) were associated with APP. A baseline diagnosis of schizophrenia (OR=2.5), bipolar disorder (OR=1.4), substance abuse (OR=1.3), or prior BH-related inpatient hospitalization (OR=1.5) were associated APP in adults (all p<0.02), while =1 baseline claim for a SNRI was associated with lower odds of APP (OR=0.8, p=0.035). Conclusion: This analysis found the characteristics of patients whose treatment included APP differed by age. Further research is needed to better understand therapeutic needs by age.

No. 112

Low-Dose Clonidine for Treating Posttraumatic Stress Disorder in Veterans: A Chart Review

Poster Presenter: Gregory A. Burek, M.D.
Co-Authors: Tareq Yaqub, M.D., Amanda K. Liewen, M.D., Sadie Larsen

SUMMARY:
Background: Posttraumatic Stress Disorder (PTSD) is mediated through hyperactivity of the sympathetic nervous system. Intrusive symptoms of PTSD including distressing thoughts and memories, nightmares, flashbacks, exaggerated physiologic response to cues, as well as hyperarousal symptoms including irritable and angry behavior, reckless and self-destructive behavior, hypervigilance, exaggerated startle response, poor concentration, and sleep disturbance have all been linked with

norepinephrine levels in the cerebrospinal fluid. Clonidine, an alpha2-adrenergic agonist, reduces the release of norepinephrine from neurons. Clonidine has been suggested as a treatment of PTSD, though evidence is currently limited to a few case studies and a small case series. Low-dose clonidine has several proposed advantages over other medications for PTSD including more rapid relief of symptoms, lower effective dose, and fewer potential side effects. The objective of this chart review was to evaluate the records of patients with PTSD treated clinically with clonidine, and to provide more robust and reliable evidence of its safety and efficacy. Methods: This was a retrospective chart review of veterans with a diagnosis of PTSD treated with low-dose clonidine. The research team collected data from the VA electronic medical record (CPRS) to identify veterans with PTSD seen in Mental Health outpatient clinics or Mental Health urgent care who were treated with clonidine between July 1, 2015 and January 31, 2018. Progress notes were reviewed by three independent reviewers using the Clinical Global Impressions Scale (CGI) to identify symptom severity (CGI-S) before starting clonidine and improvement or change in symptoms (CGI-I) after treatment with clonidine. Scores were then averaged. Notes were also reviewed for concurrent medications, adverse effects, length of treatment, and other factors pertinent to treatment. Results: This study included 81 patients with prominent PTSD symptoms (mean age 47.5, range 26-76yo, 79% Caucasian). Mean CGI-S score was 4.84 (4 = moderately ill, 5 = markedly ill). The primary outcome was improvement in PTSD symptoms reported as mean CGI-I score. 76.5% of patients reported at least some improvement (mean CGI-I 1.0-3.67), 45.7% were scored as “much improved” or “very much improved” (mean CGI-I 1.0-2.67). 15 patients reported side effects (6 – lightheadedness/dizziness, 4 – grogginess/drowsiness, 3 – GI upset, 2 – dry mouth). No adverse events associated with clonidine use were reported. Conclusion: This study provides valuable evidence for the efficacy and safety of low-dose clonidine in the treatment of PTSD. The study results offer an additional treatment option for PTSD with low side effect profile, help to identify factors that may influence its efficacy, and support the proposal for a randomized controlled trial of clonidine for PTSD.

No. 113

Challenges in Managing Valproic Acid-Induced Parkinsonism: A Case Report and Literature Review

Poster Presenter: Ebony M. Dix, M.D.

SUMMARY:

Mrs. P is a 56-year-old Caucasian female with a history of Bipolar I Disorder, diagnosed after her first manic episode following a seizure at age 49, presents to her outpatient psychiatrist for a routine follow-up visit. Mrs. P is accompanied by her husband, who concurs with her report that her mood has been stable on her current medication regimen of bupropion and valproic acid. However, both Mrs. P and her husband express major concerns regarding abnormal movements, which began a few years prior that appear to be getting progressively worse. She has made attempts to reduce the dosage of her psychotropic medications and has been seen by neurologists at various institutions for second and third opinions, however, her providers have been unable to determine the exact cause of her abnormal movements. In addition to dyskinetic movements, Mrs. P reports having a hand tremor, dysphagia, urinary incontinence, frequent diarrhea, dysphonia, and episodic confusion. Her husband reports that she is a very restless sleeper, often moving her legs around so vigorously, that she has made holes in their bed linens. Psychiatric patients presenting with atypical motor symptoms are a challenging subset of patients to manage given the fact that many psychotropic medications may induce such movements. Because of the high co-morbidity of neurodegenerative diseases present in older adults, elucidating between a drug-induced parkinsonism and a de novo movement disorder can be challenging and important in determining treatment and outcomes. Patients presenting to their outpatient psychiatrists with atypical motor symptoms should receive a thorough work up to determine etiology. The work up might include neuropsychological testing, neuroimaging, a physical and neurological exam, laboratory studies, and thorough review of medication history. This case and literature review will discuss the challenges and importance of

differentiating between drug-induced Parkinsonism and idiopathic Parkinson's disease. Additionally, collaboration with colleagues in the field of neurology will be essential in the treatment and management of these patients.

No. 114

Neuroprotective Effects of the Second Generation Antipsychotics

Poster Presenter: Alexander Chen
Co-Author: Henry A. Nasrallah, M.D.

SUMMARY:

BACKGROUND: In contrast to over 30 studies reporting neurotoxicity associated with the first-generation antipsychotics (FGAs), several published studies have reported multiple neuroprotective effects associated with the second generation antipsychotics (SGAs). This prompted us to conduct a review of the reported neuroprotective mechanisms of the SGA class of antipsychotics compared to the FGAs. METHODS: A PubMed search was conducted using the keywords antipsychotic, neuroprotection, neuroplasticity, neurogenesis, neurotoxicity, toxicity, brain volume, neuroinflammation, oxidative stress, myelin, and oligodendrocyte. No restrictions were placed on the date of the articles or language. Studies with a clearly described methodology were included. RESULTS: Animal, cell culture, and human clinical studies were identified. Twenty-four reports met the criteria for the search. All studies included at least one SGA (aripiprazole, clozapine, lurasidone, olanzapine, paliperidone, perospirone, quetiapine, risperidone, and/or ziprasidone). A few also included FGAs as a comparator (predominantly haloperidol). All studies demonstrated at least one neuroprotective mechanism of one or more SGAs, while some studies also showed that FGAs ranged from having no neuroprotective effects to actually exerting neurotoxic effects leading to neuronal death. CONCLUSIONS: A review of the literature suggests that in addition to their antipsychotic efficacy and low motoric side effects, SGAs exert measurable neuroprotective effects mediated via multiple molecular mechanisms and often in a dose-dependent manner. The neuroprotective effects of SGAs range from preventative to restorative and may play a salutary role in ameliorating the neurodegenerative effects of psychosis.

No. 115

Plasma Serotonin Levels Are Associated With Antidepressant Response to SSRIs

Poster Presenter: Amanda Holck, M.D.
Co-Authors: Owen Mark Wolkowitz, M.D., Synthia Mellon, Ph.D., Victor Ivar Reus, M.D., Daniel Lindqvist, M.D., Ph.D., Åsa Westrin, M.D., Ph.D.

SUMMARY:

Background: Less than half of patients with major depressive disorder (MDD) respond to their first antidepressant trial. Our understanding of the underlying mechanisms of selective serotonin reuptake inhibitors (SSRIs) remains poor, and there is no reliable method of predicting treatment response. Methods: Thirty-seven MDD subjects and 41 healthy controls, somatically healthy and medication-free for at least six weeks, were recruited, and plasma serotonin (5-HT) levels were assessed at baseline. Twenty-six of the MDD subjects were then treated in an open-label manner with clinically appropriate doses of sertraline for 8 weeks after which plasma 5-HT levels were again assessed. Response to treatment was defined as an improvement of 50 % or more on the Hamilton Depression Rating Scale. Results: Non-responders to sertraline treatment had significantly lower pre-treatment 5-HT levels compared to healthy controls ($p<0.01$) and compared to responders ($p<0.05$). There was a significant decrease in 5-HT levels over treatment in all MDD subjects ($p<0.001$). The decrease was significantly more prominent in responders compared to non-responders ($p<0.05$). There was no significant difference in post-treatment 5-HT levels between responders and non-responders. Conclusions: The results indicate that SSRI response may be facilitated by adequate baseline plasma 5-HT content and that successful SSRI treatment is associated with greater decreases in circulating 5-HT. This is consistent with earlier findings of a relative 5-HT1A hypofunctioning in responders, although the mechanisms are not known. Plasma 5-HT content may be a predictor of treatment outcome. This study was funded by grants from the National Institute of Mental Health (NIMH) (Grant Number R01-MH083784), the O'Shaughnessy Foundation, the Tinberg family, and grants from the UCSF Academic Senate, the UCSF Research

Evaluation and Allocation Committee (REAC). This project was also supported by National Institutes of Health/National Center for Research Resources (NIH/NCRR) and the National Center for Advancing Translational Sciences, National Institutes of Health, through UCSF-CTSI Grant Number UL1 RR024131. The contents of this publication are solely the responsibility of the authors and do not necessarily represent the official views of the NIH. Daniel Lindqvist was supported by the Swedish Research Council (registration number 2015- 00387), Marie Sklodowska Curie Actions, Cofund (Project INCA 600398), the Swedish Society of Medicine, the Söderström König Foundation, the Sjöbring Foundation, OM Persson Foundation and the province of Scania (Sweden) state grants (ALF). Amanda Holck was supported by the province of Scania (Sweden) state grants (ALF).

No. 116

Trihexyphenidyl-Induced Psychosis

Poster Presenter: Khaled Said, M.D.
Co-Authors: Casey Lenderman, D.O., David Aaron Eisenberg, M.D., Shevani Uveni Ganesh, M.D., Sanjay S. Chandragiri, M.D.

SUMMARY:

A 56 y/o female presented to the ED with acute behavioral changes. The patient's had past medical history included childhood epilepsy, dystonia with tremors, and depression. Because the patient was a poor historian, her history was obtained from her daughter and husband. Her daughter stated that the patient began hallucinating and having screaming outbursts one week before hospital admission. Initially the patient was lethargic with episodes of agitation, and yelling out repeatedly: "I am losing blood", "Suicidal!", "I am killing people". She was evaluated by Neurology and Psychiatry services on daily basis. Her Initial differential diagnosis included encephalitis secondary to infectious, autoimmune or Para neoplastic etiologies. Extensive work up including brain imaging, lumbar puncture, Para neoplastic antibodies, tumor markers, and pan CT studies was unremarkable. The patient was transferred to ICU for severe agitation and need for intubation for Lumbar Puncture under GA, where she remained agitated. During her ICU stay, the critical care team noted continued agitation, with episodes of dystonia and posturing while reducing doses of sedative hypnotics and antipsychotics. The patient was treated with a therapeutic trial of physostigmine for suspected overdose of Trihexyphenidyl, which was prescribed for this patient for her dystonia. The patient responded well to the trial. One day after physostigmine injection, the patient was more awake and expressed herself with written words saying: "I am going to Die, Please help my family". After extubation she stated that she overdosed with 15 Trihexyphenidyl HCL tablets with intension to die. Within two days, the patient's level of consciousness improved significantly and she was able to be discharged. Trihexyphenidyl is one of the anticholinergic medications that was approved in 2003 for treatment of Parkinson's disease(1). Few cases were published reporting possible behavioral changes and psychosis secondary to Trihexyphenidyl HCL use (2-4). In this case, we illustrate how to approach a case of acute onset psychosis, possible differential diagnosis, and the importance of considering effects of prescribed medications in the work up.

No. 117

Relationship Between ADHD Symptom and Executive Function Improvement in Adult ADHD in SHP465 Mixed Amphetamine Salts Extended-Release Clinical Trials

Poster Presenter: Thomas E. Brown, Ph.D.
Co-Authors: Jie Chen, Brigitte Robertson

SUMMARY:

Introduction: Adult attention-deficit/hyperactivity disorder (ADHD) is associated with impaired executive function (EF). In 2 clinical studies, SHP465 mixed amphetamine salts (MAS) extended-release reduced ADHD symptoms, as measured by ADHD-Rating Scale IV (ADHD-RS-IV) total score (primary endpoint), and improved EF, as measured by Brown Attention-Deficit Disorder Scale (BADDS) total score (secondary endpoint), more than placebo (Pbo) in adults with ADHD. However, relationships between changes in ADHD symptoms and EF in these studies have not been previously described. Objective: To examine relationships between ADHD-RS-IV and BADDS score changes in 2 SHP465 MAS clinical studies. Methods: Data from 1 dose-optimization and 1 fixed-dose study in adults (18–55 y) with DSM-

IV-TR–defined ADHD were used. The dose-optimization study randomized adults with baseline ADHD-RS-IV total scores >=24 to SHP465 MAS (12.5–75 mg) or Pbo for 7 weeks. The fixed-dose study randomized adults with ADHD-RS-IV total scores >=32 to SHP465 MAS (25, 50, or 75 mg) or Pbo for 6 weeks. These post hoc analyses assessed relationships between changes from baseline to end of study (EOS; the last nonmissing postbaseline assessment) in ADHD-RS-IV scores (total, hyperactivity/impulsivity [HI] subscale, inattentiveness [IA] subscale) and BADDS scores (total and cluster [cluster 1: organizing and activating to work; cluster 2: sustaining attention and concentration; cluster 3: sustaining energy and effort; cluster 4: managing affective interface; cluster 5: utilizing working memory and accessing recall]) in the intent-to-treat (ITT) populations using Pearson correlations. Results: The ITT populations of the dose-optimization and fixed-dose studies, respectively, included 132 and 103 Pbo participants, and 136 and 302 SHP465 MAS participants. Changes from baseline to EOS in ADHD-RS-IV total score were positively correlated with BADDS total and cluster score changes for both treatment groups in the dose-optimization study (Pearson correlation coefficients [Pbo; SHP465 MAS]: total score [0.7054; 0.7252], cluster 1 [0.6312; 0.6181], cluster 2 [0.7200; 0.7078], cluster 3 [0.5459; 0.6273], cluster 4 [0.4605; 0.3857], cluster 5 [0.5626; 0.6617]) and the fixed-dose study (total score [0.7539; 0.7439], cluster 1 [0.6819; 0.6957], cluster 2 [0.6442; 0.7394], cluster 3 [0.6501; 0.6480], cluster 4 [0.5597; 0.5593], cluster 5 [0.5511; 0.6636]). ADHD-RS-IV subscale score changes were positively correlated with BADDS total and cluster score changes in both treatment groups in both studies (Pearson correlation coefficient range: 0.2447 to 0.7699), with correlations being numerically greater on the IA than HI subscale in the SHP465 MAS treatment groups. Conclusions: These post hoc analyses indicate that improvement in ADHD symptoms and EF were correlated in clinical studies of adults with ADHD, suggesting changes in these domains may be interdependent. (Sponsor: Shire Development LLC, Lexington, MA)

No. 118

Post Hoc Responder Analyses of SHP465 Mixed Amphetamine Salts Extended-Release Among Adults With Attention-Deficit/Hyperactivity Disorder

Poster Presenter: Richard Able
Co-Authors: Brigitte Robertson, Jie Chen, Elias Henry Sarkis, M.D.

SUMMARY:
Introduction: In 2 studies of adults with attention-deficit/hyperactivity disorder (ADHD), SHP465 mixed amphetamine salts (MAS) extended-release reduced ADHD-Rating Scale-IV total score (ADHD-RS-IV-TS) significantly more than placebo (Pbo). Multiple criteria have been used to identify responders to ADHD pharmacotherapy, but SHP465 MAS treatment response rates have not been reported. Objective: To examine SHP465 MAS treatment response rates in adults with ADHD. Methods: Data from 2 SHP465 MAS studies (1 dose optimization, 1 fixed dose) in adults with Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision–defined ADHD were used for these analyses. The 7-week dose-optimization study randomized adults with baseline ADHD-RS-IV-TS >=24 to SHP465 MAS (12.5–75 mg) or Pbo. The 6-week fixed-dose study randomized adults with ADHD-RS-IV-TS >=32 to SHP465 MAS (25, 50, or 75 mg) or Pbo. The primary efficacy endpoint in both studies was ADHD-RS-IV-TS change from baseline; the Clinical Global Impressions–Improvement (CGI-I) scale was a secondary endpoint. These post hoc analyses assessed the percentage of participants exhibiting a response to SHP465 MAS treatment over time using 3 previously described definitions (>=30% ADHD-RS-IV-TS reduction + a CGI-I rating of 1 or 2; >=50% ADHD-RS-IV-TS reduction + a CGI-I rating of 1 or 2; ADHD-RS-IV-TS <=18). Kaplan-Meier analyses assessed between-group differences in time to response. The studies were not powered for these post hoc assessments; all reported P values are nominal and descriptive. Results: The dose-optimization and fixed-dose studies, respectively, included 268 (Pbo: n=132, SHP465 MAS: n=136) and 405 (Pbo: n=103, SHP465 MAS: n=302) participants. In the dose-optimization study, percentages (95% CI) of participants meeting response criteria (Pbo vs SHP465 MAS) at week 7 were: 31.6% (21.1%, 42.0%) vs 66.0% (56.4%, 75.5%) for a >=30% ADHD-RS-IV-TS reduction + a CGI-I rating of 1 or 2; 27.6% (17.6%, 37.7%) vs 47.9% (37.8%, 58.0%) for a >=50% ADHD-

RS-IV-TS reduction + a CGI-I rating of 1 or 2; and 30.3% (19.9%, 40.6%) vs 54.3% (44.2%, 64.3%) for ADHD-RS-IV-TS <=18. In the fixed-dose study, percentages (95% CI) of participants meeting response criteria at week 6 were 28.3% (16.9%, 39.7%) vs 72.7% (67.0%, 78.5%) for a >=30% ADHD-RS-IV-TS reduction + a CGI-I rating of 1 or 2; 16.7% (7.2%, 26.1%) vs 60.6% (54.3%, 66.9%) for a >=50% ADHD-RS-IV-TS reduction + a CGI-I rating of 1 or 2; and 18.3% (8.5%, 28.1%) vs 52.6% (46.2%, 59.0%) for ADHD-RS-IV-TS <=18. In both studies, Kaplan-Meier analyses indicated that time to response favored SHP465 MAS over placebo (all nominal log-rank P<0.0001). Conclusions: In post hoc analyses of 2 clinical studies of adults with ADHD, SHP465 MAS was associated with treatment response rates that were more than 1.5 times greater than Pbo, with time to response also nominally favoring SHP465 MAS over placebo. (Sponsor: Shire Development LLC, Lexington, MA)

No. 119

Residents Teaching Residents: A Psychopharmacology Curriculum Pilot

Poster Presenter: Brenda Cartujano Barrera, M.D.
Co-Authors: Anetta Raysin, D.O., Navjot Kaur Brainch, M.B.B.S., Ambika Yadav, M.B.B.S.

SUMMARY:

Psychopharmacology is a pillar in the foundation of all psychiatric training programs. Teaching the material throughout residency at the appropriate level for each class is challenging and exciting at the same time. Based on the “see one, do one, teach one” mentality, we developed a pilot curriculum serving both PGY1 and PGY4 classes (9 residents in each class) with fairly limited resources (2 faculty members as mentors.) In phase 1, we developed a 10-session faculty-led work shop for PGY4s, each of the residents randomly assigned a disorder, either at a basic or advanced level (i.e. first line treatment for depression, treatment resistant depression.) PGY4 residents were provided with a standard template for their slide sets and were required to present in front of their peers, receiving real time feedback from faculty both on content and on the style of their presentation. Emphasis was placed on critical appraisal of the most up to date evidence as well as landmark trials supporting the data presented. In phase 2, each PGY 4 resident presented their topic to the PGY1 class, using innovative real-time feedback systems in class and featuring interactive case-based discussions. Emphasis here was on delivering the content at the appropriate PGY1 level as well as developing the PGY4 teaching skills. The PGY1 residents received “before” and “after” knowledge based surveys, as well as a survey rating the quality of the content and style for each presentation, and their overall perception of a resident- taught curriculum as opposed to a faculty lecture. PGY4s were surveyed on their teaching skills as well as the impact of this project on their own fund of knowledge. The pilot was received with overwhelming positive comments from both classes, with PGY1s rating it as engaging and informative, taking notes and requesting access to the slide sets. PGY4s felt it enhanced their knowledge for less common disorders like impulse control and sleep disorders, as it forced them to prepare thoroughly for the topic. For the more common disorders like first line treatment for depression or psychosis, they did identify a shortcoming in the level of the knowledge they were expected to present. Both classes voted to continue the pilot next year and expand to more sessions. This resident taught curriculum seems to have benefited both levels of training and impacted their fund of knowledge as well as the seniors’ teaching skills, contributing to their professional development. This format could also be a creative solution for smaller residency programs which have limited faculty resources.

No. 120

Bioavailability of Manipulation-Resistant, Immediate-Release Amphetamine (AR19) in Adults: Influence of Food on Intact Capsule or Sprinkled Pellets

Poster Presenter: Steven Caras
Co-Author: Terrilyn Sharpe

SUMMARY:

Introduction: Food can alter the pharmacokinetics of orally administered drugs, as can the sprinkling of drug pellets on food to improve treatment adherence. We evaluated the bioavailability and safety of racemic amphetamine (AMP; d-AMP and l-AMP) from manipulation-resistant, immediate-release AMP sulfate pellets in capsule (AR19) in the

context of food alterations and effects when sprinkled on food. Methods: This was a single-site, open-label, single-dose, randomized, 4-period, 4-treatment, 4-way crossover study. After >=10-hr overnight fast, healthy volunteers aged 18-45 years received a single AR19 dose (20 mg) as an intact capsule while fasting or after a high-fat/-calorie meal, or as pellets sprinkled on applesauce or yogurt. Drug administrations were separated by a washout period of >=6 days. Blood samples were collected at specific time points from predose to 48 hr postdose (25 samples/volunteer/study period) and analyzed for d- and l-AMP. Bioavailability was assessed using time to peak plasma concentration (Tmax), peak plasma concentration (Cmax), and area under the plasma concentration–time curve from time-zero extrapolated to infinity (AUCinf). Concentration-time data for d- and l-AMP were analyzed by noncompartmental methods. Results: A total of 34 volunteers completed >=1 study period. Geometric least squares mean ratios (90% confidence intervals) were within the 80%-125% boundary for d- and l-AMP bioavailability with intact capsule and high-fat/-calorie meal vs fasting for Cmax (92.92% [90.21-95.71]; 93.61% [91.07-96.22], respectively) or for AUCinf (96.72% [93.33-100.24]; 95.23% [91.52-99.09], respectively). Mean (standard deviation [SD]) Tmax values for d- and l-AMP were higher with intact capsule and high-fat/-calorie meal (5.59 [1.57]; 5.59 [1.59], respectively) vs fasting (2.85 [0.76]; 2.97 [0.79], respectively). No significant differences were found for Cmax of d- and l-AMP with sprinkled pellets on applesauce (101.39% [98.43-104.44]; 101.16% [98.42-103.98]) or yogurt (100.61% [97.72-103.59]; 100.37% [97.69-103.12], respectively) vs fasting, or for AUCinf of d- and l-AMP with sprinkled pellets on applesauce (104.65% [100.97-108.45]; 104.72% [100.64-108.97] or yogurt (102.37% [98.83-106.05]; 102.92% [98.97-107.03], respectively) vs fasting. Mean (SD) Tmax values for d- and l-AMP were similar with pellets sprinkled on applesauce (2.57 [0.89]; 3.10 [1.69], respectively) or yogurt (2.83 [0.98]; 2.93 [1.06], respectively) vs fasting (2.85 [0.76]; 2.97 [0.79], respectively). Twenty mild adverse events (AEs) were reported by 8 volunteers. No serious AEs were reported. Conclusion: The high-fat/-calorie meal with AR19 capsule increased Tmax of d- and l-AMP, though had no effect on Cmax, indicating delayed absorption but similar exposure vs fasting. Overall, there were no significant alterations in d- and l-AMP bioavailability with high-fat/-calorie meal or sprinkled pellets on food. AR19 (20 mg) was well tolerated by healthy volunteers.

No. 121

One or More Antidepressants for Better Outcome

Poster Presenter: Suhayl Joseph Nasr, M.D.
Co-Authors: Anand Popli, Burdette Wendt

SUMMARY:

Background: The APA practice guidelines for the treatment of depression support the use of a single antidepressant at an adequate dose prior to changing to another one or to augmenting with another medication. In practice many patients end up taking more than one antidepressant because of resistance to remission with one antidepressant. Rush et al (1) report no advantage to combining antidepressants while Blier et al(2) report higher remission rates with such an approach. Following is a retrospective review of the two options in a general practice. Methods: A retrospective chart review was performed on all unipolar major depression patients seen in a private outpatient psychiatric clinic. Patients were given the PHQ-9 depression screening prior to their first visit, and at every subsequent visit. Data collected included PHQ-9 scores, medication history, diagnostic history, and demographic information. Patients were included if they had a diagnosis of unipolar depression, were on 1 antidepressant at baseline, and then maintained on either one or more antidepressants during this observation period. Results: 259 patients were included in the study with an average number of 13 visits. The average age was 48 years old (±18), and 66% of patients were female. 76% of patients were still on 1 antidepressant at their most recent visit (average visit number 13.2), compared to 24% who were on 2 or more antidepressants (average visit number 13.5). Patients who were on 2 or more antidepressants scored lower on the PHQ-9 compared to their intake score by an average of 6.0 points, compared to 4.7 for patients still on only 1 antidepressant. Patients on multiple antidepressants also had significantly lower CGI-improvement scores (2.2 vs 2.5, p<.05). The multiple antidepressant group had non significantly higher PHQ-9 scores at

baseline (13.3 vs 12.6) but lower scores at their most recent visit (7.3 vs 8.0). Conclusions: The more severe the depression, the more likely it is that the patient will end up on more than one antidepressant to achieve remission, not unlike the treatment of diabetes mellitus or hypertension where the severity of symptoms leads to more medications being used to gain control over the illness.

No. 122

Dose Optimization of Evening-Dosed DR/ER-MPH in Children With ADHD: Efficacy and Safety From the 6-Week Open-Label Period of a Phase 3 Classroom Trial

Poster Presenter: Ann C. Childress, M.D.
Co-Authors: Andrew J. Cutler, M.D., Andrea Marraffino, Ph.D., Norberto J. DeSousa, M.A., Bev Incledon, Ph.D., F. Randy Sallee, M.D., Ph.D.

SUMMARY:
Background: Evening-dosed HLD200 is a once-daily, delayed-release and extended-release methylphenidate (DR/ER-MPH) designed to delay initial drug release by 8–10 hours to provide onset of treatment effect upon awakening and lasting into the evening. Herein, we present the dose optimization parameters, efficacy, and safety of DR/ER-MPH during the 6-week, open-label (OL), dose-optimization phase of a pivotal, multicenter, phase 3, laboratory classroom study of children (6–12 years) with attention-deficit/hyperactivity disorder (ADHD) (NCT02493777). Methods: The trial comprised 3 phases: a washout period of =5 days; a 6-week, OL, treatment-optimization phase; and a 1-week, double-blind, placebo-controlled, classroom test phase. At initiation of the OL phase, participants received 20 or 40 mg/day of DR/ER-MPH at 8:00 PM ± 30 min for 1 week. Up to 4 weekly dose adjustments were permitted to achieve both an optimal dose (20, 40, 60, 80, or 100 mg/d; maximum of 3.7 mg/kg/d) and administration time (8:00 PM ± 1.5 h). Participants were then maintained on the optimal dose and administration time during the last week. Optimal dose and evening administration time were defined as those that produced maximal symptom control, while remaining tolerable. A minimum of >=33% improvement in the total scores from baseline for ADHD Rating Scale based on DSM-IV criteria (ADHD-RS-IV), Before School Functioning Questionnaire (BSFQ), and Conners' Global Index – Parent (CGI-P) were required. Safety measures included treatment-emergent adverse events (TEAEs). Results: A total of 125 and 117 participants were included in the safety and efficacy analyses, respectively. The mean (SD) prescribed dose of DR/ER-MPH increased from 29.7 (10.04) mg/d at baseline to 66.2 (19.56) mg/d at final dose adjustment on week 5. The median prescribed dosing time was consistent at 8:00 PM throughout the OL phase and ranged from 7:00 PM to 9:00 PM at week 5. While the final optimal dose ranged from 20 mg/d to 100 mg/d, most (87.2%) participants achieved dose optimization on 40, 60, or 80 mg/d of DR/ER-MPH. ADHD-RS-IV, BSFQ, and CGI-P mean scores progressively improved starting at week 1 and continuing through to week 6. The mean (SD) total scores at baseline to week 6 were 42.5 (6.60) to 11.0 (7.14) for ADHD-RS-IV, 40.7 (10.28) to 7.3 (6.45) for BSFQ, and 22.0 (5.11) to 5.5 (4.08) for CGI-P. The majority of TEAEs were judged as mild or moderate, no serious TEAEs were reported, and only 3 participants (2.4%) discontinued due to TEAEs (affect lability; anxiety/panic attack; agitation/aggression). Conclusion: During 6 weeks of treatment optimization, evening-dosed DR/ER-MPH was generally well tolerated and resulted in progressive improvements in investigator- and caregiver-reported ADHD symptoms/behaviors, as well as early morning functional impairment. The approach utilized in this trial may serve as a guide for clinicians in optimizing the dose and evening administration time of DR/ER-MPH.

No. 123

Potato Chips and Potentially Toxic Lithium Levels: A Case Report

Poster Presenter: Sumaiyah Sadaf, M.B.B.S.
Co-Author: Yassir Osama Mahgoub, M.D.

SUMMARY:
Introduction- Lithium is the gold standard treatment in the management of acute mania and maintenance of bipolar disorder. It has a narrow therapeutic window, requiring frequent monitoring of plasma drug levels. We present a case where a significant variation of the serum lithium levels was found due to changes in the dietary sodium intake. Case- A 47yr old female with medical history of PCOS, asthma and

psychiatric history of bipolar disorder with psychotic features, presented to the hospital for decompensation. Prior to admission she was on Lithium 1200mg, Quetiapine 800mg and Ativan 2mg; and she was compliant with her medication. At admission, her random lithium level was 0.6mmol/L and the next trough level was 0.8mmol/L (after 12 hours). Following this, lithium dose was increased to 1350mg daily for better management of her symptoms. After five days the level was found to be 1.5mmol/L following which Lithium was reduced back to 1200mg. But the level continued to remain at 1.5mmol/L (checked twice on separate occasions). However, the patient improved, did not demonstrate any toxic symptoms, and was discharged home. She was re-admitted a month later for medication noncompliance. Lithium 1200mg was restarted and a level of 1.1mmol/L was achieved in 5 days. This increased to 1.6mmol/L about 2 weeks later without any dosage changes. No medication interactions or changes in renal clearance were noted to explain this variation of the levels. On further investigation, it was discovered that the patient snacked on 1-2 bags of potato chips (10 oz size) daily at home which she did not in the hospital. Discussion- On an average, a 10oz potato chips bag contains about 1.7gms of sodium. Additionally, our patient was consuming salt with her daily meals at home, whereas the dietary sodium content in her in-patient meals was <2gms/day. Our patient's daily sodium consumption was reduced approximately by one to two-thirds in the hospital. Being on this relatively low sodium diet for a few days resulted in the near doubling of her lithium levels, even while at the same medication dosage. Although our patient did not have any exacerbation of manic symptoms or toxic effects, such effects are possible with these lithium serum level variations. Existing evidence points to an increased retention of lithium during periods of low sodium intake. Electrolyte balance studies in psychiatric patients have demonstrated an increased urinary excretion of lithium with lowering of serum lithium levels when sodium intake was increased. Conclusions- 1. Dietary changes may cause unexpected variations in the effectiveness of lithium treatment. 2. That sodium intake plays an important role in the homeostasis of lithium is widely overlooked. 3. There is an urgent need to educate patients on lithium about the role of diet in the control of symptoms, and potential side-effects of lithium's serum level variations.

No. 124

An Atypical Lifelong Thiamine Regimen for Wernicke's Encephalopathy

Poster Presenter: Samra Shoaib
Co-Authors: Mehnaz Hyder, Margaret Reynolds May, M.D.

SUMMARY:
A 64-year-old male patient, with an extensive history of Alcohol Use Disorder (AUD) and a recent diagnosis of Major Depressive Disorder (MDD) with psychotic features and Wernicke's Encephalopathy with concomitant memory impairments, presented to the emergency room (ER) with progressive decompensation in walking, poor oral intake, diminished verbal communicativeness, and increased frequency of falls. After initial medical work up showing no pertinent findings except ventriculomegaly on MRI and treatment with IV Thiamine and IV fluids, Consultation Liaison Psychiatry service was referred for cognitive disability and treatment of his mood. He was subsequently admitted to the inpatient Psychiatry service. On initiation of the recommended oral Thiamine, he became abruptly delirious, combative and began self-injurious behavior. Abstinence from alcohol was instituted and a trial of a multi-drug regimen including donepezil, fluoxetine, risperidone, and lithium was undertaken without significant improvement in mental status or behavior. The patient was started on an intravenous (IV) thiamine dose, followed by regular intramuscular (IM) dosing and he showed remarkable improvement within the ensuing 48 hours. Repeated attempts were made to reduce the IM burden on the patient and taper the intramuscular thiamine however he rapidly decompensated within hours of tapering the IM dose. This case was a clinical dilemma because the conventional treatment regimen for Wernicke's didn't bring about the desired outcome until the mode of thiamine administration and duration of treatment was exceptionally altered. This case illustrates the utility of a sustained intensive thiamine regimen irrespective of sobriety, as opposed to the traditional regimen of parental (primarily IV) thiamine for 3-7 days, followed by oral

repletion until the patient achieves sustained abstinence. Conclusion: This is an unusual case of Wernicke's Encephalopathy as the conventional treatment did not work, and the patient had to be given IM as an alternate route of thiamine. The longitudinal time-course of this case suggests a relationship between this route of administration and improvement, and indicates a potential life-long need for IM thiamine to maintain the patient's baseline cognitive status.

No. 125

Antipsychotic Polypharmacy in a State Psychiatric Hospital: Long Term and Recent Patterns

Poster Presenter: Evaristo O. Akerele, M.D.
Co-Authors: Gabija Usaite, Corinthia Wilkerson, Jeffry Raul Nurenberg, M.D., Steven Jay Schleifer, M.D.

SUMMARY:

Antipsychotic polypharmacy (APP) continues to occasion much discussion and some controversy. Partly in response to State policy, performance improvement initiatives were undertaken at our 500 bed state psychiatric hospital beginning in 2001. Periodic assessments suggested a gradual increase in APP from a nadir of 31% in 2002 to a peak of 67% in 2008, followed by a gradual decrease thereafter. Peak APP occurred doing the months leading up to a major institutional change in 2008 (relocation to a new facility). Ongoing projects have assessed APP in recent years, considering evolving pharmacologic practices and guidelines (especially increased use of clozapine), regulatory requirements, and systemic hospital changes associated with increased clinical acuity. We present recent data in the context of the long-term efforts to decrease unjustified APP. METHODS: Hospital-wide data sets for all active prescriptions on a typical day in September 2016, 2017 and 2018 identified APP by medication class (standing orders only). Prescription of different forms of the same active agent (e.g., P.O., i.m., LAI preparations) were not counted as polypharmacy events. We also focused on APP associated with clozapine treatment. As the drug of choice for psychosis refractory to traditional antipsychotic agents, clozapine monotherapy is an important therapeutic intervention. We expected that patients whose psychosis remained refractory to clozapine would be considered candidates for APP, resulting in increased frequency of clozapine in combination with other antipsychotic agents. RESULTS: Overall rates of APP were 29%, 36%, and 41% respectively for the three years, with 1.5, 2.2, and 4.1% of patients receiving 3 antipsychotics. These rates remain within the lower range of polypharmacy for the past two decades. APP in September, 2017 for patients prescribed different classes of antipsychotics was 57% for conventional agents, 39% for atypical antipsychotics other than clozapine, and 51% for clozapine. APP for these classes in 2018 was 62% for conventional agents, 45% for atypical antipsychotics other than clozapine, and 49% for clozapine. Comparison of APP for patients prescribed clozapine with those prescribed all other agents in 2018 revealed significantly higher rates for clozapine (chi-square 4.47; $p<0.04$). CONCLUSION: APP within a single long term psychiatric hospital has shown variability over the years as a likely function of clinical and environmental factors. The increasing role of clozapine in the treatment of chronic psychiatric patients requiring extended hospitalization is reflected in the distribution of APP. Clinical and demographic factors associated with APP will be discussed.

No. 126

Antipsychotic Polypharmacy Involving Long-Acting Agents: A Community Sample and Treatment Implications

Poster Presenter: Calvin J Flowers, M.D.
Co-Author: Tagbo E. Arene, M.D., M.P.H.

SUMMARY:

Introduction: The widespread use of antipsychotic polypharmacy persists, despite no clear evidence to support its use, and significant epidemiological data suggesting increased morbidity and possibly increased mortality. While there has been widespread discussion of this subject, a less common facet has not been as well studied, namely long term antipsychotic polypharmacy involving both oral antipsychotic and long-acting injectable antipsychotics. Methods: A community outpatient mental health clinic with a significant portion of individuals requiring long term use of antipsychotics was studied to obtain cross-sectional data on patients receiving more than one antipsychotic

medication, one of which was a long-acting injectable medication. Demographic variables were reviewed, along with clinical data as well as historical and concurrent psychotropic medication use. Descriptive data analysis was completed using chart review and retrospective pharmacy records. Results: A significant portion of patients receiving long-acting antipsychotic medications also had an oral antipsychotic co-prescribed on a long term basis. Individuals receiving antipsychotic polypharmacy involving long-acting agents represented higher levels of complexity, treatment refractory illness and physical comorbidity. Various demographic and clinical variables were correlated with this prescribing practice. Conclusions: Maintenance antipsychotic polypharmacy involving long-acting injectable antipsychotic agents may represent significant treatment refractory illness rather than treatment nonadherence. Clozapine monotherapy would represent a preferred (evidence based) treatment option. Implications: Antipsychotic polypharmacy involving long-acting antipsychotic agents should signal a review of treatment resistant criteria and pharmacotherapy should be adjusted accordingly. Broader availability of Clozapine medication support services may reduce this common practice pattern.

No. 127

A Case Report on Risperidone Induced Diabetic Ketoacidosis

Poster Presenter: Mandeep Kunwar, M.D.
Co-Authors: Nisha Manandhar, Atit Tiwari

SUMMARY:

Patient is a 20 years old Nepali male with no personal or family history of Diabetes Mellitus. He presented with 4 months of illness with symptoms of withdrawn to self, muttering to self, third person auditory hallucination, unprovoked violence and decreased functionality. On mental status examination, he had restricted affect, third person auditory hallucination, suspiciousness and delusion of persecution. His baseline investigations were within normal limit (Hemoglobin, 12.2 g/dl; Random blood glucose, 83 mg/dl; Blood urea nitrogen, 10 mg/dl; Creatinine , 0.9 mg/dl). Diagnosis of Paranoid Schizophrenia was made and patient was started on ripseridone 1 mg which was gradually optimized to 3 mg. He was discharged after 1 month of hospital stay with ripseridone 3 mg daily and chlorpromazine 50 mg at night time. After discharge, he was on regular follow every month on outpatient psychiatric clinic. His risperidone was gradually optimized to 5 mg daily and was chlorpromazine was maintained on 50 mg. He was maintaining well and his monthly baseline investigations showed normal values until 8 months later after his discharge when he presented to emergency department with single episode of unresponsive spells. A day prior to it, he had multiple episode of vomiting and vague abdominal pain. Results of laboratory tests revealed leukocytosis (white blood cell count, 19,400/cmm with 88% neutrophils and 5.5% lymphocytes); hyperglycemia (random blood glucose, 1038 mg/dl, HBA1C, 11.9 %); and dyselectrolytemia (sodium, 134 mg/dl; potassium, 5.6 mg/dl; blood urea nitrogen, 69 mg/dl; creatinine, 4.2 mg/dl). Urine analysis showed clear urine with glucose, 3+; ketones 3+; and albumin, 1+. Electrocardiogram showed sinus tachycardia. Diagnosis of Diabetic Ketoacidosis with Diabetes Mellitus Type 1 was made. His condition gradually improved after begining treatment with intravenous insulin, hydration and electrolytes supplements. Psychiatric consultation was done and risperidone was cross tapered with aripiprazole 15 mg. He was discharged 7 days later on aripiprazole 15 mg, Insulin mixtard (30/70) and metformin 1 gm two times a day.Patient and patient party were then counseled regarding diet thepary, regular exercise and were also educated about potential side effects of medication and ways to recognize and manage these symptoms. This case illustrates the importance of being alert to the possibility that risperidone may be associated with development of new onset Diabetes Mellitus with Diabetic Ketoacidosis. The fact that diabetic ketoacidosis can occur as a first presentation is alarming as it has considerable morbidity and mortality. To reduce the risk of morbidity and mortality, clinicians must regularly monitor for potential side effects in patients treated with antipsychotics to ensure early recognition and prompt treatment. Care givers should also be about side effect of the drugs, symptoms of diabetes and need for regular monitoring.

No. 128

How Safe Is the Combined Prescription of Triptans and Serotonergic Antidepressant.

Poster Presenter: Olatunde Falaiye
Co-Authors: Tarika Nagi, M.D., Omotola O. T'Sarumi, M.D.

SUMMARY:
Introduction: Selective serotonin reuptake inhibitors (SSRI) are increasingly used to treat patients with depression, other indicated mental illnesses and concomitant use of Triptans use for headache disorders given the increase likelihood of these conditions occurring in the same patients. (Breslau & Davis 1993). This combination has been known to increase the risk of serotonin syndrome. Serotonin syndrome (SS) is a constellation of symptoms with life threatening potential ranging from mental status changes, autonomic hyperactivity and neuromuscular abnormalities). Questions remain of how acceptable the diagnostic criteria, Sternberg and Hunter, are, with the later noted to be more sensitive and specific (84% & 97%) (Robert Z et al. 2016). There have been case reports about occurrence of SS in combination treatments. However, data also suggest increasing numbers of patients on this combination treatment (Molina et. al. 2018) Objectives: To evaluate the data on the reported risk and safety of sumatriptans coprescribed with serotonergic antidepressant in causing serotonin syndrome. Material and Methods: A systemic literature review of case reports of patients on Triptan / serotonergic antidepressant combination, comparing cases with SS (evaluating the diagnostic criteria, incidence reports) with data suggestive of relative safety. A total of 29 case reports were in favor of SS risk with the combination. On this basis, the FDA issued an alert warning physicians about the risk and consequences. We compared this reports with other research data suggestive of safe use of this combination or minimal risk. Results: The systematic analysis reveals the case reports had only 10 cases that met SS diagnosis (Sternberg criteria), none was reported to meet Hunter's criteria (Randolph et al 2010). Contrary to that, other studies cast doubts of the risk of SS in this drug combination stating the incidence rate, 0.6 cases per 10?000 person-years of exposure; 95% CI, 0.0-1.5 therefore posing minimal risk (Orlova et. al. 2018). We analyzed these data for strengths, methods and the sample size. Conclusion: There is inadequate research data concerning this drug combination despite the increasing likelihood of their combined prescription. Substantial amount of study was done showing low risk of SS in patient on the combination however, only few case report data supported concerning risk for SS. Notably, the mechanisms of action show that these combinations will increase serotonin peripherally and centrally in the body and should still be strongly considered while co-prescribing these drugs.

No. 129

Adverse Side Effects Associated With Subanesthetic Intravenous Dose of Ketamine

Poster Presenter: Elia E. Acevedo-Diaz, M.D.
Co-Authors: Grace Cavanaugh, Lawrence Park, M.D., Carlos A. Zarate, M.D.

SUMMARY: Objective: Ketamine, a well-defined prototypic glutamatergic modulator, has been extensively used initially as an anesthetic agent, and more recently in studies examining its antidepressant effects at subanesthetic doses[1, 2]. One of the concerns about using ketamine for the treatment of depression is the occurrence of psychotomimetic effects, which include dissociation, depersonalization, altered perceptions and hallucinations. Research has mostly focused on assessing these side effects with standardized tools like the Clinician-Administered Dissociative States Scale (CADSS) and the Brief Psychiatric Rating Scale (BPRS) and by passive monitoring[3]. In this study we aim to report adverse side effects associated with a single subanesthetic intravenous dose of ketamine that were collected at several time points before and after infusion via active solicitation by trained clinicians. Methods: Data was pooled from three double-blind, placebo-controlled crossover ketamine studies and one open label study. The sample included 163 patients with treatment-resistant depression (either MDD or bipolar disorder I/II) who were currently experiencing a major depressive episode. The sample also included 23 healthy controls. Patients between the ages of 18 and 65 were included in the study. All participants were assessed to be in good medical health, as determined by medical history, physical examination and routine blood and urine tests. Adverse side

effects were solicited by a clinician and collected in a standardized fashion, before and after infusion each infusion, and followed for up to 28 days afterwards. In this study, we will analyze those instances in which symptoms reported increased in severity by 2 points from baseline, meaning that they were moderate or severe. The time of onset and resolution of symptoms was also recorded. Results: Preliminary results demonstrate that the rates of the most commonly occurring acute side effects of ketamine intravenous administration include feeling strange, weird or bizarre (79%), spacey (74%), woozy/loopy (72%), dissociation (62%), floating (55%), visual distortions (54%), difficulty speaking (51%), numbness (50%), confusion (44%), and dizziness/faintness (37%). Conclusion: Subanesthetic intravenous dose of ketamine is associated with transient high rates of adverse side effects as collected by active solicitation by trained clinicians.

No. 130

How Common Is Benign, Transient Neutropenia With Clozapine Treatment? A Retrospective Hospital-Wide Chart Review

Poster Presenter: David B. Hathaway, M.D.

SUMMARY:

Background: Clozapine is an antipsychotic medication which may improve quality of life, decrease the occurrence of unsafe behaviors, and even improve the lifespan of individuals with severe schizophrenia, but it has also been associated with agranulocytosis. Persons taking clozapine must undergo regularly scheduled blood draws: normal immune cell counts are reassuring, but decreased counts (neutropenia) are suggestive of an increased risk for developing agranulocytosis and may necessitate that patients stop taking clozapine. Yet stopping clozapine may be risky because it may lead to disease relapse. Given this tenuous balance, providers must be extremely careful to identify benign forms of neutropenia not associated with agranulocytosis. Transient neutropenia is one form of benign neutropenia which has been described but not well characterized in terms of its prevalence. Methods: Institutional review board exemption was obtained to examine absolute neutrophil counts of patients prescribed clozapine at a large, urban medical center. Patients´ absolute neutrophil counts (ANC) were examined to identify episodes of transient neutropenia. Results: Of 396 patients who received clozapine, ANC labs were available for 316 patients. Of these 316 patients, 33 were found to have experienced at least one episode of neutropenia per lab normal values. Conclusions: Consistent with prior literature, it appears that neutropenia is a fairly common occurrence among patients prescribed clozapine. Further research is needed to determine the effects of transient episodes of neutropenia on prescribing patterns and patients´ clinical outcomes.

No. 131

Serotoninergic Antidepressant Treatment Amplifies the Influence of the Environment on Mood

Poster Presenter: Igor Branchi

SUMMARY:

Selective serotonin reuptake inhibitors (SSRIs), the most commonly prescribed antidepressant drugs, have a variable and incomplete efficacy. In order to better understand their action, we explored the hypothesis that SSRIs do not affect mood per se, but amplify the influence of the living conditions on mood in a dose-dependent fashion [1]. We have previously validated such hypothesis in preclinical models [2]. In order to test the hypothesis also in clinical settings, we exploited the STAR*D dataset and analyzed the effect of the socioeconomic status on treatment outcome according to dosage – 20 or 40 mg/d of citalopram -- predicting a stronger effect in the patients' group receiving the higher dose. We found that socioeconomic status affected treatment response reaching statistical significance only in the 40 mg/d dose group. In this group, improvement rate was significantly associated with having a working employment status, longer education, high income or a private insurance, and higher remission rate was significantly associated with having a working employment status or longer education. When comparing the effect of the sociodemographic characteristics on mood in the 20 and the 40 mg/d dose group, this was much greater – up to 37-fold – in the latter. Overall, our results indicate that citalopram amplifies the influence of the living conditions on mood in a dose-dependent manner. These findings provide a potential explanation for the variable efficacy of SSRIs and might lead to

develop personalized strategies aimed at enhancing their efficacy.

No. 132

Genomic Signatures of Response to Combination Escitalopram-Memantine Treatment for Geriatric Depression

Poster Presenter: Adrienne L. Grzenda, M.D., Ph.D., M.S.

Co-Authors: Helen Lavretsky, M.D., Prabha Siddarth

SUMMARY:

Background: A large proportion of patients with geriatric depression (up to 55%) suffer from MCI, which frequently persists even after treatment [1]. Furthermore, comorbid depression appears to accelerate conversion from MCI to dementia [2]. Pharmacological studies have suggested that cognitive symptoms respond poorly to classical antidepressants. Drugs that target glutamate neuronal transmission, such as memantine, offer novel approaches to treat depression, especially in older patients with cognitive impairment. A preferential response is anticipated to the combination of an antidepressant and cognitive enhancer that creates a potent "mood plus cognitive enhancer," which acts via glutamatergic and serotonergic neurotransmission toward an improved response compared to an SSRI alone. Our aims were to: 1. Evaluate the efficacy of escitalopram/memantine (EsCIT+MEM) therapy compared to escitalopram/placebo (EsCIT+PBO) for the treatment of geriatric depression. 2. Determine if unique genomic signatures underlie EsCIT+MEM treatment response compared to EsCIT+PBO. Methods: UCLA IRB approved all study procedures (clinicaltrials.gov, NCT01902004). All participants were recruited from the UCLA inpatient and outpatient services. Inclusion criteria were: 1) presence of unipolar MDD according to the DSM-IVR/DSM-5 criteria, 2) = 16 on HAM-D-24, 3) Mini-Mental State Exam) score of = 24, and 4) age = 60 years of age. A total of 97 patients were randomized to the two treatment arms. Follow-up took place weekly for the first 4 weeks of treatment and then every 2 weeks for the remaining 5 months of the 6-month trial with naturalistic follow up monthly up to 12 months. Peripheral blood samples were collected at baseline and 24 weeks posttreatment. Samples were processed by the UCLA Genomics Core applied to Affymetrix U133 2.0 Plus microarrays. Pathway analyses were performed in UPA. Results: There were no significant differences in baseline characteristics between the two treatment arms or average escitalopram dose received during the trial. Remission rate in the EsCIT+MEM group was 78.8% and 62.1% in the EsCIT+PBO; however, this difference was not statistically significant. Pathway analysis indicates that responders to the two treatments display more differential than common pathway activation. EsCIT+PBO response genes significantly ($p < 0.05$) enrich pathways related to neuroinflammation, stem cell pluripotency, and metabolism, among others, consistent with prior studies. EsCIT+MEM treatment response genes enrich pathways related to stress response, senescence, and DNA repair. Conclusions: At 24 weeks, EsCIT+MEM treatment is as effective as EsCIT+PBO in promoting reduction of depressive symptoms. The genomic signature of EsCIT+MEM response compared to EsCIT alone suggests additional beneficial properties to combination treatment. Additional data from the trial, including cognitive measures, are in progress.

No. 133

Characterizing Current MDMA Use Patterns and Barriers to Harm Reduction: Results From the UCLA International MDMA Survey

Poster Presenter: Adrienne L. Grzenda, M.D., Ph.D., M.S.

Co-Authors: Ashley Margo Covington, M.D., Timothy W. Fong, M.D.

SUMMARY:

Background: According to the 2017 Global Drug Survey, MDMA (3,4-methlenedioxymethamphetamine, also known as "MDMA" or "ecstasy" or "Molly") is the fourth most used recreational drug worldwide. Factors such as stigma, difficulty accessing recreational communities, and lack of funding, have prevented epidemiologic studies related to recreational. As a result,cross-sectional studies looking at associations between behavior patterns of use and health outcomes are lacking. Preclinical evidence indicates that combining MDMA with certain substances, such as alcohol and ketamine, contributes to

neurotoxicity. Effective MDMA harm reduction requires an improved understanding as to current use patterns as well as barriers to disclosing use to providers. Methods: Study approved by the UCLA Institutional Review Board (IRB#17-006390). The anonymous online electronic survey consists of six sections: 1) demographics, 2) patterns of MDMA, 3) psychiatric conditions, 4) supplementation practices, 5) supplementation agents, 6) users/supplementation perceptions. Recruitment began January 2018 through online forum posts (e.g., Reddit, Bluelight,). As of December 2018, a total of 379 individuals have completed the survey. Results: Respondents were primarily male (67.8%), heterosexual (70.1%), Caucasian (81.7%), employed (44.8%), and US citizens (45.6%). Most utilized MDMA 1-5 times per year (42.3%), orally (84.6%), in pill (34.5%) or "moonrock" form (29.2%), obtained from a dealer (34.7%) or the Darkweb (28.9%). Top use locations were home (67.6%) or rave/festival (58.1%), primarily for euphoria (90.5%). The majority (51.5%) never test their MDMA. Top adulterants found by those who test their MDMA included amphetamine (64.9%), caffeine (44.8%), and methylone/bath salts (31.3%). Cannabis (53.5%), alcohol (36.4%), LSD (25.3%), and ketamine (16%) were the most commonly cited co-ingested substances during MDMA use. 39.7% reported diagnosis of a psychiatric condition, including MDD (46.7%), GAD (45.3%), and ADHD (35.3%). The majority denied that MDMA worsened their psychiatric conditions. 77.4% had never disclosed their use to a provider, although of those who did, 69% stated it was a positive experience. Reasons for non-disclosure included stigma and fear of legal repercussion. Bluelight (58%) and Erowid (53%) were the most commonly cited sources of information about harm reduction practices. Conclusions: The current survey reveals a need for increased engagement by mental healthcare providers with their patients regarding MDMA use. Current practice use patterns reveal several high yield points of intervention, including non-judgmental inquiry about MDMA use, encouragement of pill testing, and avoiding alcohol and other drug co-ingestion, among others. Grant Support: UCLA CTSI #UL1TR001881.

No. 134

Undercoding of the Transgender Population: Insights From the DSM-5 Field Trials and Medicare

Poster Presenter: Adrienne L. Grzenda, M.D., Ph.D., M.S.
Co-Authors: Seungyoung Hwang, Diana Clarke, Ph.D.

SUMMARY:
Background: The identification of transgender individuals in healthcare datasets is a major obstacle in the study of issues related to mental health. Electronic health records and survey instruments lack non-binary gender identification options. For decades, well-intentioned providers undercoded transgender patients to circumvent insurance exclusions. To demonstrate the extent to which the transgender population is undercoded, we performed secondary analysis of the DSM-5 Field Trials dataset and CMS Medicare claims data. Methods: The DSM-5 Field Trials were conducted in 2011 by the APA to test reliability of DSM criteria in "real-world" diagnostic evaluation. Each participant received two diagnostic evaluations by trained clinicians. Participants self-identified gender from options that included male, female, other, male-to-female transgender (MTF), female-to-male transgender (FTM), or intersex. Medications were additionally searched to determine current hormone treatment. Transgender individuals were also identified from Medicare claims data spanning 2004-2016 using an adaptation of a previously published algorithm (1). All analyses were completed in SAS. Results: Seven adult patients self-identified as a gender minority from 2,246 unique participants in the DMS-5 Field Trials. All but one were diagnosed with at least one primary personality, mood, or psychotic disorder. Each patient was seen by one or two independent trained clinicians for their diagnostic interviews. Only in one encounter did the evaluator indicate gender dysphoria as a contributing diagnosis. Hormone therapy was reported in one subject. A similar scenario was observed using the CMS Medicare administrative claims data. A total of 13,274 transgender subjects were identified in CMS data from 2004-2016. Of these individuals, 21% had no evidence of transition-related medications or procedures. Use of ICD9/10 transgender-related codes was generally poor. Conclusions: Until non-binary gender identification

markers find widespread adoption in EHR and administrative data, ICD and DSM coding remain important to the investigation and visibility of the transgender population. While not all transgender individuals suffer clinically-defined dysphoria, gender variance carries increased risk for mood disorders and suicide. Transition-related codes are unreliable proxies as not all transgender individuals elect to undergo transition. The development of non-pathological coding for the transgender population is critical. Simultaneously, providers must increase their comfort in employing such designations or the transgender community will become further hidden in the datasets used to justify life-saving medical, surgical, and psychiatric treatment. Support: This work is supported by research fellowship from the American Psychiatric Foundation.

No. 135

Diversity Based on Race, Ethnicity, and Sex of the U.S. Psychiatric Physician Workforce

Poster Presenter: Rhea Wyse
Co-Author: Curtiland Deville

SUMMARY:
Background: The existence of mental health disparities in access, use and health outcomes are well documented in the U.S., however the psychiatric workforce in its current form continues to fall short of providing equitable and high-quality care to diverse populations. Diversification of the physician workforce has been identified as a strategy to address such disparities, given that physicians from underrepresented minority groups are more likely to provide care within underserved communities. The purpose of this study was to assess the current diversity of the US Psychiatry physician workforce by race, ethnicity, and sex, and investigate significant changes over time. Methods: Publicly available American Medical Association, American Association of Medical Colleges, and US census registries were used to assess differences by race, ethnicity, and sex for 2016 among practicing Psychiatrists, faculty, residents, and residency applicants. One-sample t-tests were used for comparison to the US population statistics and 2-sample t-tests were used for comparison amongst Psychiatry groups. To assess significant differences in diversity of Psychiatry residents between 2007 and 2016 academic years, the slope and the associated 95% confidence intervals for each group were estimated using a simple linear regression model. Results: Traditionally underrepresented minorities in medicine (URM), Blacks, Hispanics, American Indians, Alaska Natives, Native Hawaiian, and Pacific Islanders are underrepresented as Psychiatry residents (16.2%), faculty (6.3%), and practicing physicians (10.4%) levels compared with the US population (32.6%; P<.001). Representation of URMs at both the Psychiatry resident trainee and Psychiatry fellowship (15.9%) levels is significantly higher compared with their proportions as medical school graduates (10.9%; P<.001 and P<.001, respectively). Representation of Blacks (7.1%; P<001) and Hispanics (8.9%; P<.001) as Psychiatry Residents is significantly higher than that of Psychiatry faculty (3.4%) and practicing Psychiatrists (4.4%), however representation of AI/AN/NH/PI (0.2% is no different than physicians (0.2%; P=.967) or faculty (0.2%; P=.404). Females are significantly increased in proportion as residents (51.9%) compared with practicing Psychiatric physicians (38.5%; P<.001), however, are similarly underrepresented as practicing psychiatrists compared with the U.S. population (38.5% v 50.8%; P<.001). There is a trend toward increased diversification for female and URM resident trainees over the past 22 years, however no trend toward diversification for Black and Hispanic faculty over the past 30 years. Conclusion: Females and URM are underrepresented in the Psychiatry physician workforce. Given the shortage of Psychiatrists and existing mental health disparities, further research and efforts are needed to ensure that the field is equipped to meet the needs of an increasingly diverse society.

No. 136

Attitudes of VA Mental Health Professionals Toward LGBTQ Veterans

Poster Presenter: Julian Lagoy, M.D.
Co-Authors: Adam Childers, Ph.D., Anita S. Kablinger, M.D., Anjali Varma, M.D.

SUMMARY: Objective: To study the attitudes of VA mental health providers using an anonymous 20-question survey to identify areas of bias, ease and comfort levels and need for provider education in

relation to the LGBTQ patient population. Methods: An anonymous 20 question survey based on the LGBT-DOCSS was emailed to psychologists and psychiatrists, including trainees in each of these disciplines, in the VA healthcare system. We used a survey that includes questions about demographic data, the provider's educational background, level of training, attitudes and challenges that they have come across while caring for LGBTQ veterans. We chose to draw and modify several items in this survey for the purpose of brevity and to assess attitudes of VA providers specifically. Participation in the survey was voluntary. Results: The data set is composed of 118 responses from VA mental health professionals. We were interested in two main issues: did respondents believe a LGBTQ lifestyle is immoral and do they feel prepared to professionally treat LGBTQ patients? In this pilot study there are many interesting descriptive statistics that indicate a follow up study is likely to produce statistically significant predictors. Just over 10% (12 of 118) of the respondents indicated that they believed an LGBTQ lifestyle is immoral but none of the demographic or professional descriptors, including race, religion, training, profession, age, and gender, were predictive for indicating this belief. Understanding what groups feel unprepared can help inform training decisions and necessitate education opportunities. Just under 39% (46 of 118, CI: .3898+- .0888) said they felt unprepared in some capacity to treat the LGBTQ community. While none of the predictors were statistically significant, it was interesting to see that 45% (31 of 69) of females responded they felt unprepared while only 31% (15 of 49) of male said so (2-sample proportion, p-val = 0.1677). Further, 50% (10 of 20) of the under 30 age group felt unprepared which was higher than the any of age groups, most notably, 32% (16 of 49) of 30 to 39-year olds and 31% (8 of 26) of 40 to 49-year olds (Chi-Square test for independence, p-val = 0.2841). Among the professional groups, the psychiatry residents felt the most unprepared with 61% (16/26) indicating so (Chi-Square test for independence, p-val = 0.07169). Discussion: To our knowledge this is the first study examining mental health providers' attitudes toward the LGBTQ population in the VA healthcare system. The data shows that VA mental health providers generally have positive views toward LGBTQ veterans. There were mixed responses about whether the current LGBTQ clinical training at the VA is adequate. This pilot study may be used to develop future curricula for VA providers so they can increase their awareness of their attitudes or biases toward the LGBTQ population.

No. 137

Open Mole: Exploring the Relationship Between Culture, Development, PTSD, and Psychosis

Poster Presenter: Kiran Johal
Co-Authors: Katarzyna Liwski, D.O., Karriem L. Salaam, M.D.

SUMMARY:
Open Mole or "hole in the head" is a commonly used Liberian idiom related to trauma, particularly head and neck gunshot wounds. Open Mole is described as a soft spot on the skull, along with headache, dizziness, confusion and fugue states. Additionally, it is a term correlated with posttraumatic stress disorder (PTSD). In light of the civil conflict lasting from 1989-1997 and 1999-2003, it is estimated that 30-40% of individuals in Liberia suffer from PTSD. While the prevalence of PTSD in Liberia is explored, little is known regarding the incidence of PTSD and psychotic symptoms among Liberians and Liberian refugees in the United States. This case report highlights a 15 year old Liberian male, presenting to an urban crisis response center after displaying symptoms consistent with first episode psychosis while at church camp. The patient emigrated from Liberia at the approximate age of 8 and had spent early childhood living in Liberian orphanages, subject to severe trauma and physical abuse. The patient has received notoriety as a "Little Prophet," or local spiritual healer, it was noted he was sought out from an early age (approximately 3 years old) to heal those physically and emotionally ravaged by war. The patient was admitted to an inpatient adolescent ward and responded positively to antipsychotics. He was discharged home to his adoptive parents and siblings. This case demonstrates the juxtaposition of psychiatry, culture, development, and trauma. Throughout treatment, ensuring interviews were conducted in a culturally sensitive manner were difficult. Little literature exists on a standardized transcultural interview. The initial goal of this report is to better understand Open Mole and offer themes

for a standardized transcultural interview. A further goal of this report is to better understand the relationship between PTSD/Psychosis and early adverse life events.

No. 138

Effects of Acute Air Quality Decline on Mental Health in a Northern California Outpatient Clinic Population

Poster Presenter: Dan Yang, M.D.
Co-Author: Thomas P. Tarshis, M.D., M.P.H.

SUMMARY:

Background: Recent research has revealed potentially harmful effects of poor air quality (AQ) on population-level mental health (MH), with increases in depression, anxiety, and completed suicides during times of poor AQ vs control periods. The 2018 Camp Fire in northern California caused an acute increase in fine particulate matter (PM2.5) throughout the San Francisco Bay Area, where the AQ index was mostly in the Unhealthy (PM2.5 > 150) range from 11/9/2018 to 11/20/2018, with some areas having worse AQ relative to others. In this study, we examine the effects of acute AQ decline on MH status in a youth outpatient psychiatry clinic population to determine 1) whether the acute worsening in AQ correlated with changes in MH functioning and 2) whether the relatively worse AQ at one clinic site may have had a differential effect on patients there relative to other sites. Methods: Data was extracted from individual MH visits from 3 multidisciplinary evidence-based clinics in the San Francisco Bay Area. Patients who had a visit on both normal AQ days and then returned for a visit during poor AQ days at the same site were included in the analysis to control for biases. Primary outcome was a per session variable in which the clinician rates whether the patient is “Same”, “Better”, or “Worse” since the previous visit. Chi-square statistics and p-values were calculated based on time frame and clinic location. Results: 167 patients were identified with visits during poor AQ as well as normal AQ. 112 (67.1%) patients were under age 18, and 55 (32.9%) were over 18. 106 (63.5%) patients had a mood disorder diagnosis, 67 (40.1%) of which the mood disorder was the primary diagnosis. There was no significant difference with respect to how patients were doing on their poor AQ visit vs their normal AQ visit. However, there was a significant difference between clinic sites after combining Menlo Park and San Jose clinic visits vs Oakland clinic visits (which had worse AQ): For MPK/SJC, Worse = 2 (2.0%), Same = 67 (66.3%), Better = 32 (31.7%) and for OAK, Worse = 7 (10.6%), Same = 34 (51.5%) and Better = 25 (37.9%). Chi-square = 7.41, p =.0246. For comparison, there was no difference in how patients were doing between clinics during normal AQ dates: For MPK/SJC, Worse = 14 (13.9%), Same = 56 (55.4%), Better = 31 (30.7%) and for OAK, Worse = 7 (10.6%), Same = 40 (60.6%) and Better = 19 (28.8%). Chi-square = .5697, p =.752. Conclusion: We did not detect a decline in functioning in patients who presented during a poor AQ day vs their previous visit outside the poor AQ period. We did find that a statistically higher percentage of patients were doing “Worse” at our Oakland site during the poor AQ period relative to patients at our other sites, which are in areas that had less poor AQ. Further research is needed to examine what specific symptoms may have have been affected in our patients and whether other areas that experienced acute AQ decline had negative MH outcomes.

No. 139

The ADHD Brain Circuit Buddies: A Novel Neuroscience Approach to Educate the Underserved Population of Hempstead, New York About ADHD

Poster Presenter: Nonye Okonkwo

SUMMARY:

The “ADHD Brain Circuit Buddies” concept was created to help patients relate to their ADHD diagnosis by associating pre-treatment symptoms with an animated character to underscore how different therapy modalities augment brain functionality. The objective of this project is to elucidate the complex neurological basis of ADHD and engage our target population of Hempstead, NY with high-quality interactive video infographics. Our main project aim is to allow medical students with strong interests in psychiatry to engage with the underserved population in Hempstead, New York in order to bridge the gap in knowledge regarding ADHD in this community, and help to decrease the stigma that may exist in having a diagnosis of ADHD or with seeking mental health care due to this

diagnosis. Hempstead, NY has a population of 55,454 people with a racial breakdown of 56.4% Black, 45% Hispanic, and 5.26% White. Of the residents, 48% speak a non-English language, with 72.5% reporting US citizenship. Our primary clinical site is an outpatient based pediatric clinic located in Hempstead, NY that treats children and adolescents up to age 21. In this clinical and community setting, patients with a clinical diagnosis of ADHD and their family members will be provided with a 15-minute tutorial in both English and Spanish. Additionally, they will be provided static infographic educational tools in the form of Health literacy brochures, as well as "ADHD Brain Circuit Buddies" materials to take home. The quantitative and qualitative outcomes of our educational models will be assessed through a standardized 5-10 question pre and post-test survey. The pre-test survey will collect information regarding: overall comfort with mental health and ADHD, baseline knowledge, and likelihood of referring a family or friend for treatment. The post-test surveys will measure those same parameters, in addition to: how the training effects referral rates, treatment compliance, and influences the factors perpetuating noncompliance and mental health stigmas. The results of these pre and post-test surveys will be organized into a standard scale and by analyzed to see if there is a significant difference in the patients and families' perception and understanding of ADHD when comparing the use of traditional educational materials (i.e. health literacy brochures) and the novel interactive "ADHD Brain Circuit Buddies" material. From adolescence to adulthood, ethnic minorities experience higher rates of untreated stress, depression, and mental illness, compounded by the lack of access and underutilization of local mental health services. Despite the recent advances clinical psychiatry and neuroscience research have made in the diagnosis and treatment of Attention-deficit/hyperactivity disorder (ADHD), the DSM-5 criteria and medical school curriculum have not caught up. Although the issue is multi-factorial, research shows that skilled physician-patient communication is the foundation for fostering

No. 140

Ethical-Legal Concerns of Emergent ECT Treatment in a Patient With Malignant Catatonia

Poster Presenter: Joshua Hamilton
Co-Author: Michael Able

SUMMARY:
Mr. S, a 62-year-old male veteran with a past psychiatric history of schizophrenia (treated with clozapine), was transferred to our medical ICU for treatment of catatonia refractory to benzodiazepines. The patient had originally presented to a Veteran's Affairs hospital one week prior for a routine follow up appointment. During this visit, the patient had a witnessed generalized tonic-clonic seizure and was admitted for observation. His clozapine was discontinued secondary to concerns for clozapine-induced seizures and the patient subsequently developed worsening auditory hallucinations and symptoms concerning for catatonia including withdrawal with poor oral intake, agitation, negativism, and mutism. The patient was monitored in the VA ICU and treated with benzodiazepines without improvement in symptoms and subsequently developed labile blood pressures concerning for autonomic instability. Due to concerns for malignant catatonia and the patient's absent oral intake for 48 hours, the patient was transferred to our facility for ECT treatment. At the time of transfer, the patient maintained a Bush-Francis score ranging from 20-23 for mutism, negativism, verbigeration, withdrawal, oppositional paratonia, combativeness, and autonomic instability. The patient did not have any family or legal advocate available to give consent for ECT and the decision was made to proceed with ECT under emergent indication as agreed upon by the staff psychiatrist and anesthesiologist . The patient received 5 sessions of ECT with improvement of his autonomic instability and oral intake. Malignant catatonia refractory to benzodiazepines is a medical emergency and has been shown to be responsive to emergent ECT treatment (1). Maryland is one of only 6 states without specific laws regulating the use of ECT (2), and as such this patient was able to receive emergent ECT despite lack of capacity to give consent. Many states, including the nearby District of Columbia, require a court order or consent of a legal guardian to perform ECT (2). This may create ethical dilemmas for treating physicians and contribute to poor patient outcomes. In this poster we discuss current laws regulating ECT in many

states and use this case to illustrate how these regulations may delay urgent patient care.

No. 141

Response of Physicians to Family Members' Request for Medical Treatment

Poster Presenter: Maya Ramic
Co-Authors: Marla Hartzen, M.D., Michael Swiatkowski, D.O., Matthew Filippo, D.O., Adnan Safvi, D.O.

SUMMARY:
Background: The topic of physician involvement in providing treatment for members of their own family remains largely unstudied. Uniform and clear guidelines are limited, leaving physicians to individually decide the role their professional training and skill will play in a family setting when a member is ill and requesting treatment. The importance of this study lies in understanding the physicians' attitudes and behaviors in deciding whether or not to provide medical care when asked by a family member in need. The goal is to make this information available to a broader population of physicians who are likely to find themselves in a similar situation. Methods: A 10 item questionnaire, offered electronically via Qualtrics survey software was sent to 1299 Advocate Lutheran General Hospital attending physicians. The questionnaire was be administered on 3 separate occasions, 3 weeks apart. Participation was voluntary. It assessed the factors that affect the attitudes and behaviors of physicians in providing medical treatment to family members who request it. The questionnaire also assessed practices of diagnosis, physical exam, medication use, performance of procedures, as well as physicians' field of practice and nature of relationships to members of family who receive treatment. Results: Of 1299 eligible attending physicians, 168 (13%) responded with the top four specialties represented being Pediatrics, Family/Internal Medicine, and Surgery. On the topic of being asked for medical consultation by family members, 150 (89%) replied this occurs at least sometimes, while an even higher portion, 160 (95%) report granting these requests when they do occur. The most common requests are from spouses (61%), mothers, and siblings (55%). Of the respondents, 133 (79%) had prescribed medication, 120 (71%) had diagnosed a medical illness requiring treatment, 116 (69%) had performed a physical examination, 17 (10%) had served as primary attending for a hospitalized family member, and 6 (4%) had electively operated on a family member. Additionally, 33 (20%) have agreed to a request that made them uncomfortable and 59 (35%) have observed another physician being "inappropriately involved" in treating a family member. Conclusions: The practicing physician can expect to receive requests from family members and friends for medical care, and some of these requests may be uncomfortable. In regards to the practice of psychiatry, this boundary is no less certain as a good portion of psychiatric care is a verbal exchange of ideas, which can resemble dialogue a physician may have informally with kin. The American Psychiatric Association's Principles of Medical Ethics gives some guidance for an informed practice, but the topic of treating family members is not directly addressed. The ambiguity of this gives physicians the independence to weigh the benefits and risks on a case by case basis.

No. 142

Navigating Political Discussions in a Psychiatric Practice

Poster Presenter: Pavan Kundan Madan, M.D.

SUMMARY:
Ms. C is a 35-year-old bisexual Jewish woman with past psychiatric history of Major Depressive Disorder and Generalized Anxiety disorder. She has been seen for medication management on a monthly basis for the past three years in an outpatient clinic. Over the past two years, she has experienced an increase in anxiety and depression symptoms for weeks around political events such as presidential election or nomination of Supreme court justices. The clinician initially tried to utilize empathic validation and suggested coping strategies while maintaining a neutral political stance with the patient. However, it became increasingly challenging to avoid self-disclosure about the clinician's political or social views as the patient found it difficult to trust a clinician or anyone whose political affiliations were unclear. When it became clear that the clinician needed to change the stance, he utilized limited self-disclosure to address the feelings of mistrust and

started rebuilding the alliance. Although the patient continued to experience distress over the administration's policies regarding sexual and religious minorities, she started to feel safe while processing her feelings in the therapeutic setting. Whether a psychiatrist has a similar or different political perspective, a discussion on politics can significantly affect treatment. While a lack of openness from the clinician can lead to negative transference, our own political views and feelings towards recent events can influence counter-transference. Given the potential impact of political discussions on therapeutic relationships, it is pertinent to review the American Psychiatric Association's ethical guidelines and the available literature on this topic. Limiting self-disclosure while navigating political discussions can be challenging, however, an astute psychiatrist may utilize appropriate self-disclosure only to serve the needs of the patient and not the clinician.

No. 143

To Treat or Not to Treat: A Suicide Pact in an Elderly Couple With an Existing DNR

Poster Presenter: Jessica Marie Khan, M.D.
Co-Authors: Tessy M. Korah, M.D., Hannah Elizabeth Morrissey, D.O., Richard LeRoy Stratton, M.D., Joseph Ed Thornton, M.D., Tessy M. Korah, M.D.

SUMMARY:
Mr. and Mrs. W are a married couple ages 93 and 92, respectively. After developing advanced dementia, Mr. W moved to a memory unit at the assisted living facility in which he and his wife had been living. He subsequently developed severe depression and convinced his wife to attempt suicide with him. Mrs. W brought medications and a knife to her husband's room and they both attempted suicide. Neither of them was successful and after medical stabilization, Mr. W was admitted to the inpatient psychiatric unit. He was deemed to not have capacity to make his own decisions and his grandson was appointed his decision maker. He also had a previously documented Do Not Resuscitate code status. His family initially requested no services be provided to Mr. W, including withholding food and water, because Mr. W wanted to die. The medical team felt ethically conflicted about following the patient's family's wishes because Mr. W had no terminal illness and with proper medical and psychiatric treatment, was likely to return to his nursing facility without significant complications from his hospitalization. This poster will discuss factors that influence individuals to enter into suicide pacts and the ethical challenges that can arise in treating individuals involved in suicide pacts, particularly when the patient is elderly and lacks capacity to make his or her own decisions.

No. 144

A Patient With Borderline Personality Disorder Becomes Septic During Her Outpatient Ketamine Infusions, Raising Discussion on Ethics and Regulation

Poster Presenter: Christopher Kenta Tokeshi
Co-Authors: Robin Martin, D.O., Celia Mercado Ona, M.D.

SUMMARY:
A Caucasian woman in her 30's with psychiatric history of borderline personality disorder (BPD), bipolar disorder, substance use disorder and factitious disorder, presents to the ED with fever and chills. She was subsequently found to be septic, presumably from a PICC through which she was receiving her outpatient ketamine infusions for treatment of her suicidal ideations. Psychiatry was consulted for a safety assessment and to determine whether to continue her ketamine infusions while in the hospital. Sub-anesthetic doses of ketamine have been established to have profound anti-depressive effects in patients with refractory mood disorders. However, clinical trials are currently limited by small sample sizes and a lack of data on long term safety and efficacy. (Sanacora et al., 2017) Our understanding of ketamine's underlying mechanism continues to evolve, with some prominent theories including activation of the mammalian target of rapamycin (mTOR) pathway (Li et al., 2010) and blockage of the lateral habenula through murine studies (Yang et al., 2018). Throughout our patient's hospitalization, the most significant psychopathology was her BPD. Theoretically, as the lateral habenula receives some afferent signaling from the amygdala (Hikosaka, Sesack, Lecourtier, & Shepard, 2008), a structure found to be hyper-responsive through MRIs and PET scans in BPD patients, there could be value in using ketamine for BPD. To our knowledge,

only one ongoing randomized clinical trial has attempted to determine whether ketamine could improve social functioning in BPD (Moran, 2018). Unregulated off-label ketamine businesses or "ketamine clinics" continue to proliferate and providers increasingly are not psychiatrists, or even physicians. Our patient's outpatient infusions were administered by a plastic surgeon. Aside from the ethical consideration of non-psychiatrists managing suicidal patients, without regulation, providers may be more motivated by the profit model rather than ensuring proper indication and obtaining adequate informed consent. In this poster, we discuss these ethical and regulatory issues, as well as the potential benefits and mechanism of ketamine in BPD patients.

No. 145

Venlafaxine Versus Fluoxetine in Postmenopausal Women With Major Depressive Disorder: Results From an 8-Week,Randomized, Active-Controlled Study

Poster Presenter: Jingjing Z.

SUMMARY: Objective: To compare the efficacy and tolerability of venlafaxine versus fluoxetinein the treatment of postmenopausal depression. Method: This was an8-week, single-blind, randomized clinical trial. Subjects were postmenopausal women with major depressive disorder(MDD) who had 24-item Hamilton Depression Rating Scale(HAMD-24) score=20.Eligible participants were randomized to receive with flexible doses either venlafaxine (75-300mg/day) or fluoxetine(20-60mg/day).The full analysis set(FAS)included172 patients (venlafaxine,N=82;fluoxetine,N=90).The primary outcome measure was to compare efficacy of venlafaxine and fluoxetine in improving depressive symptoms (HAMD-24score)using mixed-model repeated-measures methodology(MMRM).Secondary outcomes included the change of HAMD-24 Anxiety/somatization factor score(items10-13,15,17),Clinical Global Impressions-Improvement (CGI-I)scales,HAMD-24 response rates and remission rates at endpoint. Safety and tolerability were assessed via analysis of reasons for discontinuation, treatment-emergent adverse events (TEAEs), discontinuation-emergent adverse events, and changes in vital signs. Results: The reductionof HAMD-24 scoresat week 8 was significant ($p<0.0001$) in both groups,but significantly greater decline was observed in the venlafaxine group compared to the fluoxetine group from baseline(least squares mean difference [95%CI]:-2.97[-5.58, -0.36],p <0.001).Baseline-to-week-8 least-squares mean change ofAnxiety/somatizationfactorscores,CGI-I,HAMD-24 responseratesand remission rates was greater in venlafaxine group than fluoxetine group (all $p<0.05$).The most frequent adverse events (=5%) for both treatments were nausea, somnolence, dizziness, headache and dry mouth. There was no significant difference between two groups in the frequency of adverse events during this trial. Conclusion: Venlafaxine and fluoxetine groups were generally safe and well tolerated. Venlafaxine was statistically significantly superior to fluoxetinein the treatment of postmenopausal major depression. Venlafaxine show early improvement of postmenopausal depression.In addition, for postmenopausal women, improvement in anxiety symptoms was significant greater with venlafaxine than with fluoxetine. Keywords:Postmenopausal Depression, Venlafaxine,Fluoxetine, Clinical trial

No. 146

WITHDRAWN

No. 147

Inflammation and Metabolism in Perimenopause-Onset Depression

Poster Presenter: Camille Basurto

Co-Authors: Gioia Mia Guerrieri, D.O., David Russell Rubinow, M.D., Peter Schmidt, Pedro Martinez, Karla Thompson

SUMMARY:

Institution/Setting: Behavioral Endocrinology Branch outpatient clinic, NIH/NIMH Background/Objectives: The perimenopause is associated with increased risks of depression, as well as cardiovascular, metabolic, and inflammatory disease in women. Depression alone also increases the risk of cardiovascular mortality in mid-life women. The aim of this study was to evaluate cardiovascular, metabolic, and inflammatory measures in depressed perimenopausal women (PMD) compared to asymptomatic perimenopausal women (ACs). Methods: Women with PMD met the following

criteria: 1) onset of depression during the perimenopause; 2) the presence of major or minor depression of moderate severity confirmed by the Structured Clinical Interview for DSM IV; and 3) menstrual cycle irregularity > 6 months and < 1 year amenorrhea, and elevated plasma follicular stimulating hormone (FSH) levels. ACs had no past or current history of depression and met the same criteria for the perimenopause. All women were medication-free and medically healthy (confirmed by medical history, physical exam, and laboratory tests). Outcome measures were batched and analyzed using ELISA or radio-immunoassays for the following: TNF-alpha, TGF-beta, IGF-1, IL-2, IL-6, IL-17, hsCRP, BDNF, ghrelin, leptin, VEGF, and HSP-70. Data were analyzed with ANOVA, with diagnosis (PMD vs ACs) and presence or absence of self-reported hot-flushes as between-subjects' factors. Results: Plasma samples were available for 122 women (80 PMD, 42 AC), ages 42-59 years. No significant differences between PMD and ACs were observed in baseline demographics including age, BMI, reproductive stage, or routine laboratory measures (p=ns). As expected baseline measures of mood severity (p=<.001) differed between PMD and ACs. ANOVA showed no significant main or interactive effects of PMD or hot-flushes on log transformed outcome measures (p=ns, all comparisons). Discussion: These preliminary results suggest that abnormalities of peripheral measures of cardiovascular, inflammatory, and metabolic function do not distinguish women with PMD from reproductively-matched control women. These findings are consistent with some, but not all, published studies in PMD. Limitations of both our sample size and assay batteries notwithstanding, the explanation for the observed associations between depression and immune/ metabolic dysregulation during the perimenopause might not be found in cross-sectional plasma measures. Thus, it is unsurprising that this single timepoint failed to capture meaningful amounts of the clinically-relevant variance in the physiology seen with midlife depression.

No. 148

Challenges in Identifying Postpartum Psychosis in a Non-English Speaking Patient

Poster Presenter: Tatsuhiko Naito

Co-Authors: Justin Chin, Christine Lomiguen

SUMMARY:

Ms. K, a 37-year-old Japanese female with a past psychiatric history of "pre-depression" in Japan 12 years ago due to stress, presented to the ED after an attempt of self-harm with a knife. Her husband was able to interfere before any harm was caused. Of note, the patient had given birth 1 week prior and only speaks Japanese, with limited support system in America. She was evaluated by the medical team and admitted to inpatient psychiatric unit for the evaluation of postpartum depression versus postpartum psychosis. Upon admission, her mood was labile, ranging from calm coherence and cooperation to extreme agitation with episodes repeated speech and impaired thought process. Her clinical picture was further complicated as communication was limited to her husband and the off-site telephone translation service, in which both attempts were inconclusive in deciphering her symptoms. She was started on Sertraline and Lorazepam with marginal change in symptoms. The turning point occurred when the patient suddenly admitted to an on-site Japanese speaking staff member that she was experiencing auditory hallucinations, in which antipsychotic pharmacotherapy (Aripiprazole) was immediately started. Her mood rapidly stabilized over the next couple of days and was able to be discharged 6 days after admission with outpatient follow-up. Due to its relative rarity, minimal research has been done on postpartum psychosis, with an even sparser focus on non-English speaking patients. In this poster, we highlight and discuss the role of language barriers and importance of cultural competency during the treatment of postpartum psychosis in Japanese, and by extension, non-English speaking patients.

No. 149

Effects of Subsidized Paying Status on Edinburgh Postnatal Depression Scale Scores for Perinatal Women in Singapore

Poster Presenter: Cornelia Yi Chee, M.D.

SUMMARY:

Introduction: Women delivering at National University Hospital (NUH), a tertiary hospital in Singapore, are routinely screened using the

Edinburgh Postnatal Depression Scale (EPDS) for possible depression and other psychiatric morbidity. We wanted to investigate the characteristics of these women across non-subsidized versus subsidized paying status. Women who choose subsidized obstetric care in Singapore cannot choose their obstetrician, but pay substantially lower fees for their antenatal care and delivery fees. Subsidized status thus is a proxy for women of lower income status in Singapore (household income less than USD 2200/month). Methodology: 1909 pregnant or postnatal women scoring 13 and above on the EPDS at NUH between 1st Jan 2008 and 31 Mar 2016 were approached and assessed by the perinatal mental health team for a psychiatric diagnosis. A diagnosis was obtained using the DSM-5 criteria for Mood, Anxiety and Adjustment disorders. Basic socio-demographic data such as ethnic race, marital status and age were also collected. Statistical analysis was run using 2-way ANOVA. Results: Paying status had a significant effect on EPDS scores on women for certain diagnoses but not others. Subsidized patients were more likely than non-subsidized patients to have higher EPDS scores for Major Depressive Disorder (18.1 vs 16.9, $p<0.01$) and Adjustment Disorder (14.8 vs 12.1, $p<0.01$) but not for Anxiety Disorders (15.0 vs 16.5, non-significant trend). Patients of the Malay race scored higher on the EPDS than patients of other races (Chinese, Indian or others). Unsurprisingly, unmarried patients and patients under 21 years also scored higher on the EPDS than married patients and those who were older. Conclusion: Women across the spectrum of income and paying status develop perinatal psychiatric morbidity, but lower-income patients are more likely experience higher levels of depressive symptoms, though not anxiety symptoms.

No. 150

Seeking Mental Health Care in the Postpartum: Outpatient Follow-Up After Postpartum Mental Health Emergency Department Visits

Poster Presenter: Lucy Barker
Co-Authors: Susan Bronskill, Hilary Brown, Paul Kurdyak, Simone N. Vigod, M.D., M.Sc.

SUMMARY:
Background: Up to 20% of perinatal women suffer from a mental health (MH) disorder,1 and while the consequences of these disorders are often preventable with treatment, most women do not receive care.2 Psychiatric reasons are a leading cause of postpartum emergency department (ED) visits,3 and our prior research found that many postpartum women use the ED as an entry point for MH care.4 It is unknown what care women receive after leaving the ED; this study aimed to describe women's outpatient MH service use following postpartum MH ED visits. Methods: This retrospective cohort study used ICES health administrative data to identify all Ontario (Canada) women who delivered a live-born infant (2008-2015) and had a MH ED visit (International Classification of Diseases, ICD-10-CA codes F06-99, X60-84, Y10-19, Y28) within 1 year postpartum and were discharged from the ED. The primary outcome was =1 outpatient MH visit with a family physician (FP) or psychiatrist within 30 days of ED discharge (modified health systems indicator5). Secondary outcomes were =1 outpatient psychiatrist visit and =1 outpatient MH FP visit within 30 days of ED discharge. Proportion of women with each outcome were described in relation to the primary diagnosis and presence of deliberate self-harm (DSH) at the index ED visit. Results: Of the 8153 women with a postpartum MH ED visit who were discharged from ED, 3675 (45.1%) had =1 outpatient MH visit within 30 days of ED discharge. These visits occurred for 1140 (41.5%) of the 2744 women with anxiety disorders, 1363 (60.1%) of the 2267 women with depression, 323 (28.4%) of the 1137 women with substance use disorders (SUD), 497 (41.1%) of the 1207 women with trauma/stressor disorders, 149 (72.7%) of the 205 women with serious mental illness (SMI, includes bipolar and schizophrenia), 85 (39.0%) of the 218 women with other MH diagnoses, and 145 (33.1%) of the 428 women with DSH (not mutually exclusive with other categories). Overall, 1508 (18.5%) women in the cohort had an outpatient psychiatrist visit and 2785 (34.2%) women had an outpatient MH FP visit within 30 days post-ED (of these, 618 had visits with both provider types). The highest follow-up with psychiatrists was among women with SMI (n=114, 55.6%) and the lowest was among women with SUD (n=74, 6.5%), while the highest FP MH follow-up was among women with depression (n=930, 41.0%) and lowest was among women with DSH (n=105, 24.0%).

Discussion: Among a large population-based cohort of postpartum women who demonstrated a need for MH care by presenting to the ED, less than half received outpatient care within 30 days of the ED visit, demonstrating serious gaps in follow-up. The particularly low follow-up among women presenting with SUDs and DSH is concerning due to the potential impact of these conditions on mother and child safety. Further research to identify barriers to post-ED outpatient care, and strategies to connect women with needed mental health care, are warranted.

No. 151

Differentiating Postpartum Depression and Normal Grief in an Adolescent Mother After Neonatal Demise

Poster Presenter: Nicole Elizabeth Derish, M.D.
Co-Authors: Anjanique Mariquit Lu, Barbara Jane Coffey, M.D., D. Jeffrey Newport, M.D.

SUMMARY:

Ms. M., a 17 year-old adolescent girl with no previous psychiatric history, was referred by her OBGYN for admission to the child and adolescent inpatient psychiatric unit for endorsing suicidal ideation with a plan during a routine checkup. The patient is 8 weeks postpartum and reports a neonatal loss following a pregnancy complicated by anhydramnios. For the past 4 weeks, she has experienced worsening of depressive symptoms, with intense feelings of guilt, worthlessness, and suicidal ideation. Her symptoms were triggered by infant crying; she had become increasingly isolative, as her sister has a baby at home. One week ago she had overdosed on 27 tablets of ibuprofen in an attempt to end her life. Mental status evaluation revealed a tearful adolescent with depressed mood, blunted affect, and psychomotor retardation. M. was diagnosed with major depressive disorder. This led to disagreements with the family who felt this was a normal grief response and did not require professional help. Additionally, there was concern on behalf of the treatment team for delay in treatment as a result of stigma and lack of information. Comprehensive evaluation revealed the severity of M.'s illness As postpartum depression can often be considered a psychiatric emergency, patients with significant risk factors, such as adolescents, should be closely monitored. In this poster, we discuss the challenges and importance of differentiating depression from normal grief response in a postpartum adolescent patient in order to improve early detection and treatment in this high-risk population.

No. 152

Depression in Pregnancy and Postpartum: A Predictor of Impaired Attachment/Bonding

Poster Presenter: Lacey J. Croskey, M.D.
Co-Author: Katherine Maria Tontillo, M.D.

SUMMARY:

BACKGROUND: Perinatal mood disorders are associated with impaired maternal fetal attachment and bonding in the postpartum period. Depressive symptoms play a crucial role in the prediction of impaired bonding and attachment. METHODS: A retrospective chart review was done of female patients (N = 237) voluntarily referred to a mother/baby Partial Hospitalization Program. Patients completed the Edinburgh Postnatal Depression Scale (EPDS), Generalized Anxiety Disorder 7-item scale (GAD-7), Adverse Childhood Experiences Questionnaire (ACE), and a maternal/child bonding questionnaire-the Postpartum Bonding Questionnaire (PBQ) or the Maternal Fetal Attachment Scale (MFAS). Pearson correlation coefficient analyses were used to examine relationships between anxiety scores (GAD-7), depression score (EPDS), adverse childhood experience scores (ACE), and measures of attachment in pregnancy (MFAS) or impaired bonding postpartum (PBQ-Impaired bonding) at admission. Multiple linear regression analyses examined prediction of attachment in pregnancy (MFAS) and postpartum (PBQ-Impaired Bonding) by GAD-7, EPDS, and ACE at admission. Multiple linear regression analyses also analyzed the prediction of changes in attachment scores over the course of treatment by initial GAD-7, EPDS, and ACE scores and treatment gains (change scores) in EPDS and GAD-7. RESULTS: Attachment at admission was significantly predicted by GAD-7 , EPDS, and ACE for both pregnant and postpartum women, $F(3, 16) = 3.938$, $p = .028$ and $F(3, 134) = 3.145$, $p = .027$, respectively. Higher EPDS scores at admission were uniquely predictive of impaired attachment/bonding

for both pregnant patients, rp= -.649, p = .004, and postpartum patients, rp= .247, p = .004. After controlling for other variables in the model (EPDS at admission, GAD-7 at admission, ACE scores, change in EPDS scores, and change in GAD-7 scores), improvements in attachment were predicted by initial attachment scores for both MFAS and PBQ, rp= - .510, p = .052, and rp= .718, p < .001. Greater improvements in bonding/attachment were also uniquely predicted by improvements in depression for both postpartum, rp= .313, p < .001, and pregnant, rp= -.577, p = .024, patients. CONCLUSION : Early identification and management of depression during pregnancy and postpartum can improve the maternal Fetal attachment and bonding in the postpartum period.

No. 153

Design an Assess Instrument of Sexual Violence and Gender Discrimination in Medical Residents

Poster Presenter: Diana Guizar
Lead Author: Ingrid Vargas-Huicochea
Co-Authors: Ana Fresan-Orellana, Gerhard Heinze

SUMMARY:
Background and Aims: Although specialist medical training is an important pillar for a future effective health system, there is evidence of violence during their trainship. Residents usually did not spontaneously report violence, but they identify when asked directly, there is a need of an instrument to assess the two less frequently reported types of violence (gender discrimination and sexual violence). Aim. To design a screening instrument assessing sexual violence and gender discrimination in medical residents. Materials and Methods: The study was conducted at the National Autonomous University of Mexico(UNAM), Mexico City. Participants provided informed written consent. The research and ethics committees approved the study. The design of the instrument consists in two phases: 1)Qualitative phase: 3 focus groups were formed, each with 8 medical residents. A focal group guide with 15 questions was prepared according to the literature review. A total of 24 medical residents participated, 50% women(n=12), age of 29.5 years(SD=2.43), mostly single(62.5%, n=15) and without children(75%,n=18). They were coursing 12 different medical specialties courses. The contents of the interviews were coded and categorized. Subsequently, the categories that emerged were organized according to a pre-established category tree and analyzed. Finally, the interpretation of the testimonies was triangulated. 2)Quantitative phase, the information was incorporated into a 62-item instrument. For content validity, gender and sexuality experts were asked to rate on a four-point scale. Items with a Content Validity Index(CVI) over 0.80 were remained Results: This study provided an instrument for assessing sexual violence and gender discrimination in medical residents. Future research is needed to test psychometric properties of the instrument.

No. 154

Exploring the Role of YouTube in Delivering Dementia Education to Older Chinese

Poster Presenter: Benjamin K. Woo, M.D.

SUMMARY: Objective: Social media can be a useful tool to bridge the gap between health care and ethnic minorities over cultural and language barriers. Our study explores the role of YouTube in delivering dementia education to older Chinese American immigrants. Methods: Two educational YouTube videos related to dementia were uploaded. Data from each video were collected for the first 2-year period. The recorded parameters included age and gender of viewers, number of views, watch time, and average view duration, and results were analyzed using descriptive statistics and chi-square test. Results: The two videos recorded 4333 views with a total viewing time of 26,554 minutes. The videos in their Year 2 period had a better performance compared to their Year 1 period in terms of the following parameters: (1) longer total watch time; and (2) more number of viewers. YouTube as a platform improved in Year 2 to outreach older adults (age group of viewers aged 65 and above), in comparison with data from Year 1 (53.0% vs. 46.1%, p<.01). Conclusion: YouTube is an attractive format for disseminating dementia educational contents to older Chinese-speaking immigrants. It can also be an important communication tool that can bridge the health disparities for ethnic minorities over language barriers.

No. 155

The Dunedin Dementia Risk Awareness Project: Pilot Study in Older Adults.
Poster Presenter: Yoram Barak

SUMMARY:
Aims: Recommendations from the USA and UK governmental and academic agencies suggest that up to 35% of dementia cases are preventable. We canvassed dementia risk and protective factor awareness among local older adults to inform the design of a larger survey. Methods: The modified Lifestyle for Brain Health (LIBRA) scale quantifying dementia risk was introduced to a sample of 304 eligible participants. Results: Two hundred and sixteen older adults (>50 years), mean + SD age 65.5 + 11.4 (50-93 years) completed the survey (71% response rate). Respondents were mostly women (n=172, 80%), European (n=207, 96%) and well educated (n=100, 46%, with a tertiary qualification; including n=17, 8%, with a post-graduate qualification). Around half of participants felt they were at risk of suffering from dementia (n=101, 47%), and the majority felt this would change their lives significantly (n=205, 95%), that lifestyle changes would reduce their risk (n=197, 91%), and that they could make the necessary changes (n=189, 88%) and wished to start changes soon (n=160, 74%). Only 4 of the 14 modifiable risk or protective factors for dementia were adequately identified by the participants: Physical Exercise (81%), Depression (76%), Brain Exercises (75%) and Social Isolation (83%). Social isolation was the most commonly cited risk factor for dementia while physical exercise was the most commonly cited protective factor. Three clusters of brain health literacy were identified: psychosocial, medical and modifiable. Conclusions: Older adults are not adequately knowledgeable about dementia risk and protective factors. However, they report optimism about modifying risks through lifestyle interventions.

No. 156
Adherence to Mediterranean Diet and Risk of Late-Life Depression
Poster Presenter: Dimitris Avramidis
Lead Author: Konstantinos Argyropoulos
Co-Authors: Argyro Argyropoulou, Eleni Jelastopulu

SUMMARY:
Background The rapid increase in the numbers of older adults worldwide makes a focus on mental disorders and aging both timely and imperative. Aims The aim of the present study was to estimate the prevalence of Late-Life Depression (LLD) of an urban area in Athens and to investigate associations with adherence to a Mediterranean-based dietary pattern and other risk factors. Methods A cross-sectional study was conducted among the members of the open day-care centers for older people, in East-Attica, Greece. An anonymous questionnaire was developed to collect basic demographic data, the Geriatric Depression Scale (GDS-15) was applied to screen the elderly for depressive symptoms and the MedDietScore (MDS) for assessing adherence to Mediterranean diet. Statistics was processed with SPSS 24.0. Results According to MDS 64.3% of the participants present medium and 34.4% high adherence to a Mediterranean dietary pattern. 24.7% of older adults screened positive for depressive symptoms (21.4% moderate and 3.2% severe type) based on GDS-15. Depression was more frequent in women than in men (14.3% vs 3.2%, p=0.034), in lower-educated (p=0.012), in participants with lower monthly income (p=0.003), and in older people with comorbidity (p<0.001). Although MDS is not significantly associated with GDS-15 (p=0.051), or other demographics parameters, greater consumption of a dietary pattern that was higher in vegetables and lower in poultry and alcohol was associated with decreased likelihood of developing LLD (p<0.001) Conclusions Our results support that depression in older adults is common and strongly associated with several risk factors. Adherence to a Mediterranean diet may protect against the development of depressive symptoms in older age.

No. 157
Antidepressant Augmentation in a Geriatric Clinic
Poster Presenter: Matthew Majeske
Co-Author: Hein H. Latt, M.D.

SUMMARY:
We present data on antidepressant augmentation strategies used in an elderly population (average age 80.5) for the treatment of depression. The method is a retrospective chart review and 19 patients were included. Five patients received bupropion and 14,

mirtazapine. All patients were treated with an antidepressant (SSRI and SNRI). Augmentation strategy was chosen based on clinical factors, e.g., patients with apathy or fatigue were prescribed bupropion whereas patients with insomnia or anorexia received mirtazapine. Average doses were 140 mg/d for bupropion and 15.5 mg hs for mirtazapine. Patients also received supportive psychotherapy from social work staff, who also conducted regular PHQ 9 scores. PHQ 9 scores decreased on average 53-58% over a six month period, suggesting bupropion and mirtazapine can be effective augmentation strategies in an elderly population. The medications were well tolerated.

No. 158

Intolerable Extrapyramidal Symptoms After the Use of Long-Acting Injectable Paliperidone Palmitate in Two Elders With Delusions

Poster Presenter: Minjung Kim
Co-Author: Hyun-Ghang Jeong

SUMMARY:

Long-acting injectable antipsychotics are the useful and well-accepted method of improving medication adherence. As long-acting injectable antipsychotics are considered as a suitable treatment for poorly therapeutic compliant patients to prevent relapses and maintain remission. However, the outcome of long-acting injectable antipsychotics has been sparsely reported in the older adults aged 65 or over. We report two cases of elderly Asian men treated with paliperidone palmitate 1-month (PP1M) because of their poor compliance, lack of insight, persecutory idea, a delusion of infidelity and violent behaviors. They were both highly resistant to oral antipsychotics and reluctant to visit the hospital. Thus, PP1M was considered to maintain the therapeutic level of antipsychotics and the injection was given per guardian consent. In the first case, the patient was a 74-year-old male, who was diagnosed as major vascular neurocognitive disorder. He experienced cerebral infarction on left temporal lobe. The patient was admitted to the psychiatry hospital, presenting violent and impulsive behaviors toward his wife due to delusion of jealousy. He experienced rigidity of his limbs, cervical dystonia, bilateral hand tremor, and swallowing difficulty on 23 days after the initial injection. Extrapyramidal symptoms were measured by Modified Simpson-Angus Scale (MSAS) and scored 20 which stood for severe status. We considered anticholinergics and dopaminergic agents to relieve extrapyramidal symptoms. Case two presents with a 75-year-old male who was also admitted to the closed ward because of persecutory idea toward his families accompanied by behavioral disturbances. He had a past history of being diagnosed as delusional disorder and paranoid personality disorder. He showed improvement in his psychotic symptoms after the initial and booster injection. However, he was admitted again at 2 weeks after the first maintenance injection. The patient had suffered from akathisia, slurred speech, and rigidity of his whole body. He developed aspiration pneumonia due to swallowing difficulty and became delirious. The symptoms were improved after adjustment for medication. After all, PP1M was withdrawn because there were significant extrapyramidal pyramidal symptoms and deterioration in daily living after the injection of PP1M in both patients. It may imply that long-acting injectable antipsychotics to the elderly can result in significant adverse effects. On the other hand, it needs to be considered underlying pathologies of the patients which can increase the rate of adverse effects, such as a-synucleinopathy, metabolic syndrome, and organic brain damages. Further studies are required to confirm predisposing factors which can make the elderly be more vulnerable to long-acting injectable antipsychotics.

No. 159

Association of the Volumes of Temporal Lobe and Limbic System With Treatment Response of Delusions to Risperidone in Alzheimer's Disease Patients

Poster Presenter: Giok Kim
Lead Author: Young-In Chung, M.D.
Co-Author: Kangyoon Lee

SUMMARY:

Background: Delusions are among the most common non-cognitive neuropsychiatric symptoms and are associated with more rapid progression and poor prognosis in dementia. Gray matter volumes are associated with the treatment response of delusions in schizophrenia. Many previous studies of functional neuroimaging studies support a shared

etiology for delusions in Alzheimer's disease (AD) and schizophrenia. This study was designed to determine whether gray matter volume is associated with the treatment response of delusions to antipsychotic drug in AD patients. Methods: Risperidone which is commonly used as atypical antipsychotic drug was administered to 26 AD patients with delusion for 6 weeks from May 2011 and June 2013. Delusional symptoms were rated with delusion item scores (severity × frequency) in Korean version of the Neuropsychiatry Inventory (K-NPI) at baseline and after 6 weeks, and the treatment response was defined as the change of delusion item scores in K-NPI scores from baseline to 6 weeks. Gray matter volumes were measured with magnetic resonance imaging and voxel-based morphometry at baseline. Age, gender, years of education, total intracranial volume, dosage of risperidone, the baseline Korean version of the Mini-Mental Status Examination scores, the baseline K-NPI delusion and non-delusion scores were measured as covariates of no interest. Results: The treatment response of delusion to risperidone in AD patients was positively associated with the volume of temporal lobe (left superior temporal gyrus, left inferior temporal gyrus and both fusiform gyrus) and limbic system (left parahippocampal gyrus and left amygdale) after controlling covariates of no interest ($P < 0.001$, uncorrected, KE > 100 voxels). Conclusion: In AD patients presenting with delusions, the volume of temporal region and limbic system was associated with the treatment response of delusions to risperidone.

No. 160

Depression and CSF Biomarkers in Relation to Clinical Symptom Onset of Mild Cognitive Impairment in Preclinical Alzheimer's Disease

Poster Presenter: Carol Ka-Lap Chan, M.B.B.S.
Co-Authors: Anja Soldan, Corinne Pettigrew, Jiangxia Wang, Marilyn Albert, Paul Rosenberg

SUMMARY:

INTRODUCTION: Late-life depression has been hypothesized to be an early manifestation of mild cognitive impairment (MCI) and Alzheimer disease (AD) (1). We previously demonstrated that depression, even at low severity, is associated with an increased risk of progression from normal cognition to onset of clinical symptoms of MCI for those who progress within 7 years, but not after 7 years (2). However, the extent to which the relationship between depressive symptoms and risk of progression to MCI is influenced by the presence of AD pathology (as measured by biomarkers) remains unclear (3,4). METHODS: Data for this study was derived from the Biomarkers for Older Controls at Risk for Alzheimer's disease (BIOCARD) study, a cohort of individuals who were cognitively normal at baseline and have been followed for up to 20 years. Participants receive a comprehensive neuropsychological battery and clinical examination annually. At baseline, depression symptom severity was measured using the Hamilton Depression Scale (HAM-D), and cerebrospinal fluid (CSF) biomarkers of amyloid (Aß1-42), total tau (t-tau) and phosphorylated tau (p-tau181) were determined. We used Cox regression models to examine the interaction between baseline HAM-D scores and baseline CSF values in relation to time to clinical symptom onset of MCI. All Cox models were run twice: first using continuous HAM-D scores, then using dichotomous HAM-D scores. All Cox models were adjusted for baseline age, education and sex. Significance was set at p=0.05. RESULTS: These analyses included 216 participants who were cognitively normal at baseline (mean follow-up=14 years, baseline age=57.0, 40% female, baseline HAM-D=2.3), of which 47 progressed to MCI (mean time to symptom onset=7 years). Overall, patients who progressed to MCI and dementia were older, had lower baseline CSF Aß1-42 levels, and higher baseline t-tau and p-tau. With HAM-D as a continuous variable, there were no interactions between HAM-D and CSF biomarkers in relation to time to onset of MCI. With HAM-D as a dichotomous variable, there was a significant interaction between HAM-D and CSF p-tau (HR=0.49, p=0.005). In follow-up analyses, baseline HAM-D was significantly associated with the risk of symptom onset among individuals with low p-tau (HR=3.61, p=0.02), but not among individuals with high p-tau (HR=0.52, p=0.10). There were no significant interactions between HAM-D and CSF Aß1-42 or t-tau. CONCLUSIONS: Depression, at low severity, among cognitively normal, primarily middle-aged individuals was associated with an increased risk of progression to clinical symptom onset of MCI in individuals with low

p-tau, but not high p-tau at baseline. These results suggest that the effect of depression on progression to MCI may be most evident among individuals with low levels of tau pathology. Further studies are needed to confirm these findings.

No. 161

Psychiatric Morbidity Among Informal Caregivers of Older Adults

Poster Presenter: Richard Goveas, M.B.B.S.

SUMMARY:

Introduction: Care-giving for older adults with mental and physical disorders can be a stressful experience and may negatively impact well being of the informal caregivers leading to psychiatric morbidity (PM). This study aimed to assess PM and its correlates among informal caregivers of older adults. Methods: A cross-sectional study was conducted among 285 informal caregivers of community-dwelling older adults and mental health service users aged 60 years and above. Data on caregivers' sociodemographic background, medical history and time spent per day assisting older adults with activities of daily living (ADLs) were obtained. PM was assessed using General Health Questionnaire (GHQ)-12; scores above 11 indicating psychiatric distress/PM. Other assessments included the Zarit Burden Interview (for assessing care burden), and the Multidimensional Scale of Perceived Social Support. Results: The mean age of the caregivers was 47.2 years with the majority being women (64.6%), Chinese (56.1%), married (60.7%) and employed (75.8%). The mean (SD) GHQ score was 11.2(5.3), ranging from 2 to 32. Over a third (37.2%) met criteria for PM. Binary logistic regression analysis with PM (Yes/No) as the dependent variable and all the above as independent covariates showed that while high care burden was associated with increased odds, higher age, Malay (versus Chinese) ethnicity, non-spousal relationship with the older adult and higher perceived social support were associated with lower odds of PM. Conclusion: Informal caregivers experiencing higher care burden, and younger and spousal caregivers were more likely to have PM, while those with higher perceived social support demonstrated lower likelihood. The high proportion of caregivers with PM warrants the need for psycho-social interventions to improve their support network and mental well-being.

No. 162

Leuprolide-Induced Low Testosterone in a Patient With Severe Recurrent Major Depressive Disorder: A Case Report and Literature Review

Poster Presenter: Jordan Lee Schwartzberg, D.O.
Co-Author: Arnabh Basu

SUMMARY:

Introduction: Leuprolide is a GnRH-agonist used in the treatment and prevention of prostate cancer that causes a decrease in testosterone, sometimes to barely detectable levels. Low circulating testosterone has been associated with depression, metabolic syndrome, as well as with increased risk of developing dementia. Objective: To describe leuprolide-induced low testosterone in a patient with severe major recurrent depressive disorder. Case: A 71 year-old male with only 1 previous episode of major depression in his youth, presented with severe treatment resistant depression following initiation of Leuprolide treatment for his prostate cancer. His symptoms were resistant to multiple medication trials and augmentation strategies, including Wellbutrin, Effexor and Aripiprazole, as well as ECT and TMS, with some improvement only after initiating Lithium and Nortryptiline. His testosterone levels were described as "undetectable" and his initial BDI was 30, improving to 19 shortly after treatment initiation. We believe the low testosterone level contributed to the recurrence of his depressive episode, fitting temporally with symptom emergence, and that the severity and recurrence of his depression partially remitted only with an atypical medication regiment. Conclusion : Existing evidence points to an inverse relationship over time between depression and testosterone. Although testosterone treatment appears to be effective and efficacious in reducing depressive symptoms in men, currently there are no recommendations of starting testosterone treatment or what medication(s) are effective for these men. Further research is warranted to explore the possibilities of testosterone correction in older depressed males and the usefulness of early psychiatric intervention in those undergoing prostate cancer treatment.

No. 163

Prevalence of Depression Among Residents of Old Age Homes in Eastern Nepal

Poster Presenter: Atit Tiwari
Lead Author: Nidesh Sapkota
Co-Authors: Anubhav Poudel, Bimal Khadka

SUMMARY:

Introduction: Although the prevalence of depression among elderly population in old age homes has been evaluated in a few studies from developed countries like Europe and Americas, data from a developing country like Nepal is lacking. The present study was carried out to estimate the prevalence of depression among residents of elderly homes in Eastern Nepal and to measure the severity of the symptoms of depressive disorders. Methods: A cross sectional analytical study was done among the residents of old age homes in following four districts of Eastern Nepal- Sunsari (Shriram Shanti Nikunja Helpless Women Service Ashram Chatara Dham), Morang (Birateswor Briddhaasram), Jhapa (Ratna Old age homes) and Dhankuta (Bisranti Briddhaasram). All elderly people of age 60 years and above living in these old age home were included in this study to include heterogeneous study population with diverse cultural background and ethnicity. After explaining about rationale of the study and taking informed consent, General Health Questionnaire (GHQ-12) was applied to all subjects. Geriatric Depression Scale (GDS) was then applied to those subjects who score =6 on GHQ-12 with subsequent categorization as normal, mild depressives or severe depressives based on their GDS score. All the questionnaires were translated into Nepali language by a panel of translators using repeated "forward backward procedure." Results: A total of 62 geriatric people from aforementioned old age homes were enrolled in our study, out of which 48.38% of the respondents belonged to age group of 60-69 years, 27.4% belonged to the age group 70-79 years and 24.2 % were 80 years and above. Out of total respondents, 56.46% showed normal mental status on GHQ scale while 43.54% were screened to have some sorts of psychological problems. Among the subjects screened positive on GHQ, 81.48% of them had mild depressive symptoms while 18.52% had severe depressive symptoms. Prevalence of depression was found to be significantly related to family history of mental illness. Conclusions: About half of the people living in old age home in Eastern Nepal were found to have depressive symptoms among which majority of them had mild depressive symptoms while few of the had severe depressive symptoms as well. It depicts the need of proper and in depth evaluation of status of mental health of the elderly people in Nepal. Similar researches in wide scale needs to be carried out in different regions of Nepal, so as to find the prevalence of depression among elderly people living in old age homes such that effective programs are launched at community and national level for early diagnosis and effective management for better rehabilitation and happiness of marginalized group of senior citizens of Nepal.

No. 164

Aripiprazole-Induced Neutropenia in an Elderly Male: A Case Report

Poster Presenter: Tyler J. Torrico
Co-Authors: Nakisa Kiai, Carlos Estuardo Meza, M.D., M.P.P., Sara Abdijadid, D.O.

SUMMARY:

Aripiprazole is an atypical antipsychotic medication that is commonly used as an augmentation agent for treatment of refractory depression. Although blood dyscrasias are a widely known adverse effect of the second-generation antipsychotics, they are a seemingly rare adverse effect of aripiprazole. To our knowledge, this is the first case report of aripiprazole-induced neutropenia in a geriatric patient. This case report examines the hospitalization of an elderly male who developed neutropenia while being treated with aripiprazole as an adjunct to his SSRI for treatment resistant depression. Because of this finding, clinicians should be made aware of this potentially life-threatening adverse effect. If a patient is started on aripiprazole and begins to develop neutropenia or thrombocytopenia and follow-up visits with the provider are infrequent or missed, this has potential for concern given the potentially life threatening neutropenia or coagulopathies, specifically in the geriatric population. Monitoring the patients complete blood count is crucial when adding pharmacologic agents that are known to possibly

contribute to blood dyscrasias, no matter the frequency of the side effect profile.

No. 165

Loneliness in the Cognitively Impaired on Inpatient Geriatric Units

Poster Presenter: Sarah Elmi, M.D.
Co-Author: Francesco Kment

SUMMARY:

Introduction There is growing concern to address the issue of loneliness in older adults. More research is needed to understand loneliness in those with cognitive impairment who may be at greater risk. Here we examined the prevalence of loneliness and characterized loneliness experienced in cognitively impaired older adults receiving treatment in a tertiary mental health care facility. Methods Fifteen participants with mild cognitive impairment or mild/moderate dementia, age = 60 years, were recruited from a Geriatric Psychiatry Unit to take part in a mixed-methods(Qualitative and quantitative), cross-sectional study. Participants completed a brief demographic survey, the DeJong Gierveld 6-Item Loneliness Scale, Montreal Cognitive Assessment (MoCA), and a semi-structured interview. Basic thematic analysis was used to extract major themes. Results Depression (unipolar or bipolar) was the primary diagnosis in 60% of our participants and 26% of them had schizophrenia or schizoaffective disorder. We divided participants into a lower (MoCA = 17 or less) and higher (MoCA = 18 or above) cognitive(LC and HC) impairment groups which roughly overlapped mild dementia versus mild cognitive impairment. We found significantly greater total loneliness score in HC compared to LC. 6 weeks later HC had improved more in loneliness score but LC 's loneliness scores remained the same but the change in the loneliness scores between the two groups was not statistically significant. Themes emerging during interviews included limited social networks, lack of connection or social engagement, loss of role, meaning of activities, missing families, dependency, and stigma. Discussion People with lower cognitive impairment had higher loneliness scores. Further studies are required to confirm these results. Qualitative data results can be used to inform future interventions.

Keywords: dementia; loneliness; cognitive impairment; mixed-methods

No. 166

Parkinson's Psychosis: An Illustrated Guide to Hallucinations and Current Treatments

Poster Presenter: Kristina L. Jones, M.D.

SUMMARY:

At about 10 years into Parkinson's Disease, more than half of patients develop hallucinations. Initially they are a sense of presence, (someone near but not seen) or passage, (someone went by), migraine-like patterns, and illusions such as pareidolia, which describes the tendency to see faces in inanimate objects. As disease progresses, more complex visual hallucinations of people and faces occur. Initially insight is preserved, but at later stages, the patients have delusions and paranoia as well as visual hallucinations. Each type of hallucination will be shown using photoshopped images based on patient descriptions such as "ghost dogs" and "transparent friends". Expert guidelines now suggest using Quetiapine or Clozaril or Pimavanserin to avoid D2 blockade that can make Parkinsonian motor symptoms worse. Pimavanserin is a relatively new novel antipsychotic that is FDA-approved for Parkinson's Psychosis. Comparative receptor profiles of these three medications show that Pimavanserin has no dopaminergic blockade, but is mainly a 5HT2c receptor agonist, versus Clozapine with some muscarinic and dopaminergic action in addition to its 5HT2a, 2b and 2c receptor activity. The effectiveness of Pimavanserin offers a new model of Parkinson's Psychosis that posits that we think "outside the basal ganglia" to a more complex model of Parkinson's psychosis involving not only dopamine, but serotonergic projections as well.

No. 167

Repeated Subcutaneous Esketamine for Cancer Pain and Depressive Symptoms in a Palliative Care Patient: A Case Report

Poster Presenter: Matheus Barbosa
Co-Authors: Rodrigo Simonini Delfino, Luciana Sarin, Acioly Lacerda

SUMMARY:

We present the case of a 65-year-old male who first came to our university hospital with complaints of nausea, vomiting, fatigue, weight loss (15kg in 3 months) and abdominal swelling. He reported daily alcohol (2 doses/50g) and tobacco (20 cigarettes) consumption for the past 50 years but denied any other chronic diseases or ongoing treatments. Through the course of 8 months, he received multiple diagnostic procedures, all returning inconclusive results. Later, he presented upper gastrointestinal bleeding, and was submitted to an exploratory laparotomy, which revealed a metastatic upper abdominal tumor. He was then referred to palliative care and our liaison psychiatry team was called due to "unacceptance of terminality". His life expectancy was estimated to be 48 hours. Since beginning of physical symptoms (9 months), he felt mild sadness, reduced appetite, weight loss and fatigue. For the past month, after hospital admission, he reported worsening of symptoms, presenting hopelessness, insomnia, difficulty to concentrate, decreased interest in activities. The patient stopped eating and was malnourished (BMI < 14kg/m^2), reported severe abdominal pain, persistent nausea, and respiratory distress. At baseline evaluation, he was receiving morfine 2mg SC 4/4h and midazolam 1mg/h EV from 9pm to 7am, haloperidol 1mg SC 8/8h and needed extra morfine doses 2-3 times a day, but still maintained intense abdominal pain. We decided to start esketamine subcutaneous injections, 0,5mg/kg, twice a week, after informed consent was signed, due to the need of rapid symptomatology relief. Patient had a baseline pain level on VAS (Visual Analogical Scale) of 8/10 and depressive symptoms on MADRS (Montgomery-Asberg Depression Rating Scale) of 30. Due to a modest response after first esketamine injection, dose was increased up to 1mg/kg at third infusion. He showed a continuous improvement for both measurements through four esketamine administrations, with the lowest scorings being 2 on VAS and 9 on MADRS. Vital signs remained stable, patient stayed calm and had no other complaints. Against expectations, he lived for another 11 days. Our subject had a modest mood symptom response after first ketamine injection, but sustained a progressive relief and achieved symptomatology remission after third dose. There are a few reports on ketamine use for depression in oncologic patients, but none with the SC injections. The present report combines the accumulated knowledge from prior depression and pain studies and discusses a potentially safer ketamine route of administration for both symptoms in palliative care cancer patients.

No. 168

Effectiveness of a Mindful Self-Compassion Program to Improve Quality of Life of Chronic Pain Patients

Poster Presenter: Ainoa Muñoz San José
Lead Author: Ángela Palao Tarrero
Co-Authors: Beatriz Rodriguez Vega, Marta Torrijos, Maria Fe Bravo, Roberto Mediavilla, Maria del Río, Cristina Rocamora González

SUMMARY:
Background and Aims: Around 10-23% of people suffer from chronic pain. Chronic pain has a huge impact on patient's life. Cognitive-Behavioral therapy (CBT) has been the most common therapy in chronic pain up to now. Other kind of interventions are emerging (Mindfulness interventions) which are, at least, as effective as CBT. Neff and Germer developed a specific program to improve self-compassion, Mindful Self-Compassion (MSC), that is useful in a variety of clinical problems. The aim of this study is to compare the effectiveness of MSC program and CBT program to improve Quality of Life and Self-Care in chronic pain. Methods: We conducted a RCT with 2 arms of treatments in a chronic pain patients sample of Hospital Unviersitario La Paz, Madrid. N=159. Group interventions, 8 sessions, weekly. We collected data of anxiety, depression, catastrophizing, pain interference self-compassion, and quality of life. These outcomes were measured at the beginning and at the end of the intervention through clinical interview, HADS, SCS, BPI, CPAQ, PCS and SF-36. Results: MSC is, at least, as effective as CBT to improve some aspects of quality of life (Vitality, Social Function, Mental Health) of Chronic pain patients. Also MSC is as effective as CBT to reduce anxiety, depression and catastrophizing. Both interventions were effective to improve pain acceptance and self-compassion capacity. Conclusions: These results are promising in order to find effective interventions to this prevalent clinical

problem, especially for those patients with comorbid Depression, Dysthymia or Adaptative Disorder and that have been through more than two or three lines of treatment but no one of them seems to be effective. MSC is an effective intervention for this population, and it produces changes clinically relevant.

No. 169

Mechanisms of Action of Mindful Self Compassion and Cognitive Behavior Therapy in Chronic Pain: The Role of Pain Acceptance and Catastrophizing

Poster Presenter: Ainoa Muñoz San José
Lead Author: Marta Torrijos
Co-Authors: Ángela Palao Tarrero, Beatriz Rodriguez Vega, Maria Fe Bravo, Roberto Mediavilla, Maria del Río, Cristina Rocamora González

SUMMARY:
Background: Catastrophizing and acceptance are two hypothesized mechanism of action of Chronic Pain treatments. Catastrophizing has been defined as a tendency to think about the worst possible consequences of pain, which is related to rumination, loss of sense of control about pain and also feeling of helplessness. Acceptance means to engage in daily activity despite of pain, and to be aware that avoidance of pain is an ineffective strategy of coping. It has been hypothesized that Cognitive Behavioural Therapy works through reduction of catastrophizing, and Mindfulness and Acceptance Based Therapies works through improve capacity of pain acceptance. Methods: We conducted a RCT with 2 arms of treatments in a chronic pain patients sample of Hospital Unviersitario La Paz, Madrid. N=159. Group interventions, 8 sessions, weekly. We collected data of depression, anxiety, catastrophizing, pain interference, pain intensity, self-compassion, and quality of life. These outcomes were measured at the beggining and at the end of the intervention through clinical interview, HADS, SCS, BPI, EVA, CPAQ, PCS and SF-36. Results: It has been found statistically significant correlation between catastrophizing and acceptance (negative correlation), also between acceptance and quality of life (positive correlation), and it has been found negative correlation between catastrophizing and anxiety, depression, and quality of life and positive correlation between catastrophizing and pain interference and pain intensity. Interestingly, it has been found in this study that both treatment have an effect on this two mechanism of action: CBT and MSC reduce catastrophizing and improve acceptance of pain. Also, both treatments increases self-compassion. Conclusions: These results may indicate that both treatment share common mechanisms and ways of action despite of it has been believed that CBT increases control, and Mindfulness interventions works mainly increasing acceptance. Both treatments have these effects, even though they were not their principal objective and focus. Surprisingly, CBT is also capable of improve self-compassion, and, as it has been pointed previously, this may indicate that reducing self-criticism is a common aim of all kinds of psychotherapies along a great variety of clinical conditions.

No. 170

On Importance of Group Therapy to Decrease Agitation During the Critical Period of Nursing Shift Changes on an Acute Psychiatric Inpatient Floor

Poster Presenter: Lioubov Leontieva, M.D., Ph.D.
Co-Authors: Sally Safadi, Derek Empey

SUMMARY:
Background and significance: Agitation on inpatient psychiatric units is one of the major challenges and impediments to mental healthcare and safety. This project aims to examine the effects of implementing a group focused on creative expression as a means to decrease incidences of agitation in the inpatient floor during the critical period of nursing shift change. Method: An observational, naturalistic quality improvement 3-month project was conducted on the acute inpatient 23-bed psychiatric unit. New interactive group sessions were designed to target inpatients' ineffective coping strategies, and to encourage new cognitive and emotional brain pathways. The 1 hour sessions consisted of art based exercises that promote new ways of thinking about a patient's existing difficulties in interactions and handling of emotions. The sessions were implemented during the critical period of shift change. This period often has an increase in patient agitation due to caregiver changes. We tracked group attendance, incidents of agitation during the 5 hour period starting from the beginning of the group

session, and as-needed medications administration during the same time frame. We also administered a set of Likert-type scales before and after each session for participants to rate feelings of happiness, sadness, and anger. We compared as needed medication for anxiety/agitation 1 month prior to the group and during 3 months when the group was implemented. Results: The average daily census on the unit was 17 patients. Average group attendance was 41%. Average agitation incidences were 2% of daily census, and the average of as-needed medications administrations was 10% of daily census. We observed a decrease in PRN medications for agitation/anxiety during 3 month of group implementation compared to 1 month prior to the group. Specifically, agitation medications were almost 7 times decreased, anxiety medications were 4 times decreased; and total as needed medication administration were almost 5 times decreased during 3 month group period compared to 1 month before the group. After their initial session, patients indicated an increase in happy feelings (mean 0.46, SD 0.978), a decrease in sad feelings (mean 0.44, SD 1.078), and decrease in anger (mean 1.15, SD 1.984). Restraints decreased from 7 during the month before the project to 3 during 3 month of the project; seclusion incidents went down from 8 to 1 respectively. Conclusion: Conducting interactive group sessions on an acute psychiatric floor during the critical period of shift change is feasible and well received by the patients and staff. The group helped to decrease agitation and extra medication administration. The patients' feedback on their emotions indicated that the group helped them to feel happier, less sad, and less angry.

No. 171
WITHDRAWN

No. 172
Using Evidence-Based Practice to Optimize Appointment Reminder Systems and Increase Psychiatric Appointment Attendance
Poster Presenter: Lacy Clayton

SUMMARY:
Background: Appointment no-shows cost the United States healthcare system an estimated 150 billion dollars annually and result in lost opportunities to provide optimal patient care. Psychiatric no-show rates are estimated as twice that of other medical specialties. Perinatal women are particularly at risk for missing psychiatric appointments due to factors such as childcare, transportation, and a belief that these appointments are low priority despite higher depression rates in perinatal women than the general population. Appointment reminder systems are effective tools for increasing appointment attendance. Technological advances allow healthcare systems to provide standardized, efficient appointment reminders via automated telephone and short message service (SMS) systems. Knowledge of how to optimize these reminder systems is critical for effective implementation. Purpose: The appointment no-show rate of a perinatal psychiatric service within a large, urban hospital located in Philadelphia is currently 60%. A process evaluation was conducted to investigate how the intended reminder system compares to evidence-based practice recommendations and corresponds to the actual delivery system. Methods: A two-hour work-group meeting with five identified key experts was convened. Representatives from Psychiatry, Information Systems, Nursing, Social Work, and Administration were included. A semi-structured interview compared the intended appointment reminder process to its actual delivery. Results: The institution's appointment reminder system provides one automated reminder sent 48 hours prior to the appointment. This reminder system is not aligned with the current evidence-based best practice of providing two appointment reminders. The literature suggests that inaccurate patient contact information is a main barrier to the success of appointment reminder systems. This institution lacks a formal system for updating patient contact information and the automated reminder system does not confirm receipt of the reminder or provide any data on undeliverable reminders due to inaccurate contact information. A critical finding of this evaluation is that no staff is assigned to monitor when patients cancel their appointments via the automated system. Available appointments remain vacant, contributing to lack of patient access to care and the inefficient use of provider time and institution resources. Conclusions: The current psychiatric service would benefit from consultation with the service provider of the automated system

to highlight areas of concern including: lack of confirmation of reminder delivery; strategies to maintain current patient contact information; and, adding an additional appointment reminder based on evidence-based recommendations suggesting two reminders as preferred. Cancellations via the automated system should be monitored to offer available slots to waiting patients, optimizing provider time and increasing patient access.

No. 173

Outcomes and Effectiveness of an Intensive Outpatient Program for Transitional Age Youth

Poster Presenter: Zoe Chace-Donahue
Co-Authors: Thomas P. Tarshis, M.D., M.P.H., Parker Anderson

SUMMARY:
Background: Intensive Outpatient Programs (IOPs) aim to provide integrative, evidence-based treatment to individuals experiencing mental health problems, at a level of care that is higher than outpatient intervention but lower than partial hospitalization or inpatient settings. Bay Area Clinical Associates (BACA) is a community, multi-disciplinary, evidence-based treatment agency with clinics in three San Francisco area locations. Previous research has analyzed the outcomes and effectiveness of the BACA manualized IOP for adolescents, showing success in reducing certain domains of psychosocial dysfunction and likelihood of hospitalization. Presently, there is no research investigating the effectiveness of an IOP for transitional age youth (TAY). Method: Twenty-five youth between the ages of eighteen and twenty-four (mean age = 20.04 ± 1.76; 52% female, 48% male; 48% White, 20% Asian, 12% Black, 12% Hispanic, 4% Native-American, 4% Middle-Eastern) with predominantly mood and/or anxiety disorder diagnoses, completed daily self-report measures of psychosocial functioning (mood, stress, quality of sleep, appetite, safety, relationships with parents, and relationships with peers) during an 8-week manualized IOP program. The median and mode for participation in the program was 8 weeks, with 75% of the TAY attending for 4 to 12 weeks. Self-report measures were collected electronically via a tablet and consisted of likert scale scores between 0 (very low/very bad) to 100 (very good/very high). To determine if psychosocial functioning differed significantly pre- and post-treatment, mean reports from the first week (baseline) were compared to mean reports from the last week (endpoint) for each measure. Results: Paired t-tests revealed that mean mood (45.66 to 55.93, $t = 2.12$, $p = 0.046$) and appetite reports (43.7 to 53.47, $t = 2.18$, $p = 0.042$) were significantly better at endpoint compared to baseline. Reports on measures of stress, quality of sleep, safety, relationships with parents and relationships with peers did not differ significantly between baseline and endpoint. Discussion: This analysis suggests that a manualized IOP designed for TAY was successful at improving mood by the end of treatment. Continued data collection and outcome reporting utilizing multiple measures will further support the use of intensive treatments as an evidence-based approach to care.

No. 174

Evaluating Dialectical Behavior Therapy in Individuals With Personality Disorder With and Without Cormorbid Substance Use Disorder

Poster Presenter: Amir Garakani, M.D.
Co-Authors: Eric D. Collins, M.D., Julianne O'Connell, B.A., Brianna Cerrito, B.A., Frank D. Buono, Ph.D.

SUMMARY:
Background: The prevalence of personality disorders (PD) in the United States is 9.1% (29.4 million) (Lenzenweger et al., 2007). Of those individuals, 22.6% (6.65 million) have a comorbid substance use disorder (SUD) (National Institute of Mental Health, 2017), which contributes to an increased likelihood of relapse (Grant et al., 2004), as well as significant distress and impairment in social and occupational areas of functioning (Trull et al., 2010). Dialectical Behavior Therapy (DBT) is effective in increasing distress tolerance, emotional regulation, and improving interpersonal effectiveness in these areas (Bloom et al., 2012). One assessment that effectively evaluates these skills is the DBT Ways of Coping CheckList (DBT-WCCL; Neacsiu et al, 2010). However, limited research has studied the efficacy of DBT between individuals formally diagnosed with comorbid PD and SUD and those without SUD. Therefore, the purpose of the current study to evaluate changes in the DBT-WCCL scores in patients with both PD and SUD and patients with PD but

without SUD. Methods: To evaluate the initial differences of a 28-day inpatient/residential-type treatment programs within a private psychiatric hospital, we gathered (N=62) completed admission and discharge assessments. Patients charts were retrospectively assigned and categorized into two groups: (PD +SUD; n=28) and (PD; n=34) based on formal DSM-5 diagnoses for personality disorders and substance use disorder. Data was collected over a nine-month time period, in which each participant was asked to self-report on the following: depression (PHQ, Patient Health Questionnaire), generalized anxiety (GAD-7) and coping (DBT-WCCL). Results: A MANOVA comparing two independent variables: 1. PD with and without SUD, and 2. Completion of programming, found a significant difference in the difference between those diagnosed with SUD and their changes in their coping skills found in the DBT-WCCL (p=.006). Moreover, there was a significant difference noted in depression scores, when evaluating for completion and SUD (p=.033). However, there were no significant findings in the completion rate, or change in anxiety. Discussion: The preliminary findings in this study indicate that DBT is significantly effective in treating individuals with SUD. This study supports and extends previous research on DBT to provide preliminary understanding the co-occurrence between SUD and PD (Lee et al., 2015; Gianoli et al., 2012). By utilizing DBT skills in a sober environment, this provides the opportunity for increased skills use with SUD, thus allowing for important therapeutic implications. Future implications of DBT will also be addressed within this poster.

No. 175

Are Humans Hard Wired to Crave Beauty: A Review of How Beauty in the Form of Art Can Help Achieve Better Mental Health Outcomes for Patients

Poster Presenter: Zain Ul Abideen Memon, M.D.

SUMMARY:

A hospital is inherently a stressful environment for patient and their families and admission in a psychiatric unit can be even more of an unnerving and stressful experience for many: the locked doors, dull colors, limited access to personal items, constant observation, other patients with varying mental health severity can be quite an over whelming if not traumatizing experience especially if one is being admitted into the mental health unit for the very first time. Art, as an expression of beauty is well known for its capacity to alleviate stress levels. My aim was to do a literature review of different forms of art to see how art exhibits its effects on human behavior particularly in the context of a healthcare setting. A systematic literature review showed that beauty expressed in the form of art possess therapeutic benefits of healing, and infusing art in health care settings has shown to improve patient mood, and stress with the potential to counter the negative thoughts which impede the healing process. Patients have been noted to require less PRN (as needed) medication (i.e. anti psychotic and benzodiazepine) for anxiety or agitation when art depicting a savannah scene was displayed in the patient lounge. Studies continue to show that variables like art, design, and environment in mental healthcare settings affect positively physiological and psychological health, and hence effecting the clinical and behavioral outcomes of patients. Psychiatric facilities using art, light, color and abundance of natural light demonstrate increased perceived comfort to patients, and interestingly even a higher perception of delicious food. Studies have demonstrated the comforting effect of different forms of art even in patients suffering from critical illnesses and their families noticing the impact of art in improving patient motivation in a healthcare environment. Literature review also shows healthcare staff reporting a positive impact of art in their work environment with improved mood, decrease stress and reduced burnout hence also resulting in improved patient staff relationship. To conclude art is commonly value engineered from design budgets as elements with higher operational significance (equipment, technology, furniture) take precedence. This review shows that although seemingly a non-essential part of healthcare environment, art can have a substantial impact that translates directly to improved mental health

No. 176

Listening to College Students in Distress: Systematic, Coordinated Tracking After an Inpatient or Emergency Department Hospitalization

Poster Presenter: Yuliana Noniyeva

SUMMARY:
Background: The onset of mental illness across the lifespan is highest among children and youth, with 70% of cases emerging before age 24 (Kessler et al., 2007). This means that many college and university students receive their initial contact with mental health care while attending undergraduate or graduate school. At times, these students experience distress and require treatment in high acuity settings, such as an emergency department (ED) or inpatient psychiatric unit (IPU). Importantly, improved communication among providers to insure continuity of care after discharge from an ED may decrease recidivism (Manton, 2013). By contrast, patients who are not tied into a system of care after discharge from an IPU have elevated short-term risk for suicide (Olfson et al., 2016). Methods: For the academic year (Oct 2017-June 2018) we tracked all students who were reported to receive at least one ED or IPU hospitalization at one, public west-coast university with an enrollment of approximately 36,000. The case management teams both on and off campus were instructed to notify the college mental health care coordinator (CC) of the ED or IPU encounter. Upon discharge, students worked with the CC to create a best-fit disposition based on student preference, referral source recommendations and insurance options. We report the demographics, clinical characteristics and utilization patterns of these students. Ultimately, our aim is to determine whether such systematic and coordinated tracking improves long-term outcomes and decreases short-term adverse events. Results: Records identified 95 unique students (median age=22; 53% female) and a total of 111 encounters. Ten students were recognized as high-utilizers, requiring 26 encounters (23% of the total encounters). Preliminary analyses showed the referral sources for continuity of care to be:institution's EDs, 51%; institution's IPU, 25%, and other mechanisms, including student health and counseling located on-campus and community EDs and IPUs, 24%. Sixty-two percent of students presented with depression/suicidal ideation, 28% with psychosis, 11% with mania and 10% with other diagnoses. After discharge, 64% of students were referred to institutional outpatient services, 18% to Intensive Outpatient Services (IOPs) and 18% were sent outside of the institution. This included 11% who elected to return to their home, outside the county. Conclusion: During the first academic year of this project, 95 psychiatrically distressed students received treatment via an ED or IPU admission (.26% of the student body) and then successfully obtained assistance with coordination of services upon discharge. We plan to continue systematic, coordinated tracking in the coming year, and will begin to analyze the relationship between discharge coordination and both short-term adverse events (harm to self or others) and long-term outcomes such as length of outpatient treatment, symptomatic improvement and eventual degree completion

No. 177
Health Disparities in the Local Homeless Population
Poster Presenter: Jeena April Kar
Co-Authors: Haider Ali, Asad Haroon, Meron Hirpa, Omar Iqbal

SUMMARY:
Introduction: In states such as Florida that did not expand Medicaid, a large number of economically disadvantaged individuals do not qualify for subsidies to buy health insurance through the Affordable Care Act (ACA) (City of Gainesville/Alachua County Office on Homelessness, 2013). This leaves the health needs of Florida's homeless population largely unaddressed. Nearly 48.1% of Alachua County's homeless population has disabling conditions (United States Interagency Council on Homelessness, 2013). This confirms a pressing need to understand the homeless population's healthcare needs, knowledge, and barriers in accessing healthcare. Methods. Our goals included using a Community-Based Participatory Research model in conducting health fairs and needs assessment surveys, incentivizing participation, and providing education about existing resources. The surveys were conducted at two homeless meal service sites and consisted of 22 questions regarding access to healthcare, utilization, and satisfaction. Health fairs consisted of blood pressure, blood glucose, and mental health screening. Patient participation was encouraged through games, prizes and food. Results. Of the population we surveyed, 100% have income levels below $11,490, thereby falling into the ACA coverage gap. Ninety nine percent are between the ages of 18-64 and do not

qualify for Medicare or Medicaid based on age. Fifty-eight percent were uninsured and did not get any treatment for their illnesses. Additionally, 67% had no knowledge of free local healthcare clinics. Discussion/Conclusion. The majority of this population falls into the ACA Coverage Gap, lacks knowledge about free community clinics, and inappropriately uses the ED. Future implications of this research involve advocacy to expand Medicaid in Florida and enroll those who are eligible for health insurance. Vital goals include outreach by free healthcare clinics to make healthcare more accessible, as well as building trust with the community through continued health fair initiatives. A community-Based Participatory Research Model is an effective tool to increasing collaboration among diverse members of the community in order to bring meaningful and positive change to the health of populations. Keywords: Affordable Care Act coverage gap; health fair; homeless population; health disparities; Alachua County; Community Based Participatory Research

No. 178

Prevention and Early Intervention Mental Health Services by Mobile Clinics in a County Population (Fiscal Year 2016?2017)

Poster Presenter: Julia Luu Hoang, M.D.
Co-Authors: Shalin Rajesh Patel, M.D., Richard J. Lee, M.D., Emma Girard

SUMMARY: Objective: The Prevention and Early Intervention Mobile Services (PEIMS) is an approach to the inaccessibility of mental health services in under severed communities. Mobile units are able to optimize care with delivery of behavioral preventions: Parent-Child Interaction Therapy (PCIT), Dinosaur School, Incredible Years, Positive Parenting Program (Triple P), and Trauma-Focused Cognitive Behavioral Therapy (TF-CBT). The mobile units also provide prevention activities and outreach at community events as well as provider training to teachers and other professionals in Riverside County. Methods: 3 mobile clinics provide services at different elementary schools to families in the West, Mid-County, and Desert regions of Riverside County. Mental Health service enrollment and utilization are recorded in an electronic health record between the fiscal year 2016-2017. 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). Measures are collected pre, post, and sometimes mid treatment for analysis. Results: PCIT: A total of 125 children received services. About 2/3 were male (62%), more than half were Hispanic/Latino (51.2%). There was statistically significant decrease in the frequency of child program behaviors and in the extent to which caregivers perceived their child's behavior to be a problem. Overall, parents felt more confident in their parenting skills and ability to discipline their child. TF-CBT: 3 clients received services and all 3 showed improvement in general mental health functioning. Dinosaur School: 4 children were enrolled and showed a 77.7% decrease in the problem score and 9.2% decrease in the average intensity score. Parenting Group: 4 parents were enrolled in Triple P. Upon completion of the Triple P series, parents reported an increase in their positive parenting practices and a decrease in their inconsistent discipline practices. Discussion: Mobile clinics represent an essential part of the healthcare system that serves vulnerable populations, encourages prevention, and promotes high-quality care that would not have been received otherwise. The Affordable Care Act has expanded insurance coverage to millions, however barriers such as time, money, trust, and stigma associated with mental health remain. By traveling to these communities, mobile clinics remove logistical constraints such as transportation issues, difficulties making appointments, long wait times, complex administrative processes, and financial barriers such as health insurance requirements and copayments.(1) The American Academy of Pediatrics recommends that before prescribing medicine to a young child with, for example, ADHD, healthcare providers should refer parents to training in behavioral therapy.(2)

No. 179

Increasing Awareness of Adolescent Mental Health Issues in the Parents of the High School Freshmen

Poster Presenter: Ajay Marken, M.D.

Co-Authors: Peng Pang, M.D., Alyssa Stram, M.D., Michael Jeannette, Pirtya Raj Chugh, D.O., Sonia Gera, D.O.

SUMMARY:
Background: In the Emergency Department, we assess and treat adolescents in crisis, many of whom may be presenting deteriorations of mental health issues from which they have already suffered for an extended period of time. Unfortunately, their parents oftentimes do not understand the conditions that trouble their children [1,2]. Therefore we outreached to schools and parents to provide psycho-education to increase their awareness on adolescent mental health issues. And we collected feedback data to help us to assess the needs in the community and to design more targeted services in the future. Methods: We presented psycho-educational workshops that were organized and supported by the parent teacher associations (PTAs) and the school administrations in three local high schools. We developed educational materials based on contents from AACAP or SAMSHA and related websites [3]. We administered pre- and post- workshops surveys. And then we analyzed the data, using McNemar's test to evaluate pre- and post- binomial outcomes. Results: 78 parents attended four presentations in the three local high schools in which we presented. 81.7% of the attendants had no prior exposure to information on adolescent mental health. 21.1% of parents reported having children with mental health issues. 25.4% of parents had children who require Individualized Educational Plans (IEP) in school. 22.5% of parents surveyed reported suffering from mental health issues themselves, and 21% reported that their family members suffer from mental health issues. 98.5% of parents surveyed believe that their adolescent children very often or somewhat often share information with them, and 88.4% of parents surveyed think they can recognize signs of distress or troubles in their teens. According to the post-survey 65.7% of parents surveyed considered that the information given at the workshop “met” their expectations. 100% of parents surveyed said that the information provided was helpful in better understanding and communicating with their children. The pre- and post-workshop attitude change in "acceptance of mental health service if their adolescent children needed" was statistically significant (p-value = 0.008). Conclusions: The primary intervention in the form of enhancing awareness of adolescent mental health issues in parents is welcomed by the community and effective. It’s noteworthy that there is an inconsistency between the high percentage of the parent cohort (98.5%) that believed that “their teens sharing information with them” and the survey data collected from teenagers, as majority of teens said that they are “not comfortable to share information with their parents.” The inconsistency is also present in our perceptions based on our clinical encounters with children and parents [1,2,4]. Much is needed to be done in order to reach more parents and families and to reduce the psychiatric illness burden in increasingly large teen populations.

No. 180

Mood and Anxiety Disorders in Patients With Alzheimer Disease (AD): Results of a Cohort Study Using U.S. Claims Databases

Poster Presenter: Ruby C. Castilla Puentes, M.D.

SUMMARY:
Background/Objectives: Depression and anxiety in people with AD have important implications, such as are associated with reduced cognition. There is an increasing trend towards observational research methodologies using large population-based health databases. Methods: We utilized the Truven Health MarketScan® Commercial Claims and Medicare Supplemental Databases, which represents retirees in the United States with primary or Medicare supplemental coverage through privately insured health plans and captures administrative claims of more than 10 million individuals. We assessed the incidence of Mood and Anxiety disorders in a cohort of, 432,229 patients newly diagnosed with AD. AD was defined using the SNOMED vocabulary (code: 26929004). Outcomes of mood and anxiety disorders and prevalence were defined according to the MedDRA Lowest Level Term. Risk factors for AD occurring prior to initial AD diagnosis were defined using the SNOMED vocabulary. Findings are exploratory and are unadjusted for potential confounding factors. Results: Among 432,229 persons with AD (Mean age 82.6 SD ±7.2; 62.21% Females), 56,338 patients had a record of depression

corresponding to an incidence rate of 87.36 events per 1,000 person-years. The prevalence of any mood and anxiety comorbidity (>1%) (using any Depression and Anxiety MedDRA Lowest Level Terms) any time prior to AD onset was 4.25% for affective disorders, 4.22% for mood disorder due to a general medical condition, 4.18% for acute stress disorder, 3.62% for depression, 2.03% for anxiety disorders, and 1.12% major depression. Further examination of potential risk factors of AD found that AD patients were more likely than the overall population to have a prior diagnosis of: recurrent depression (Odds Ratio 4.75; CI 4.39- 5.14), organic anxiety disorder (4.44; 4.28-4.61), severe major depression, single episode, with psychotic features (3.35; 3.15-3.55), obsessive compulsive disorder (2.28; 1.87-2.79), alcohol-induced anxiety disorder (2.08; 0.91-4.74), bipolar disorder, current episode depression (2.07; 1.92-2.23), mild recurrent major depression (1.98; 1.92-2.05), moderate recurrent major depression (1.62; 1.59-1.66), severe recurrent major depression without psychotic features (1.58; 1.53-1.63), major depression, single episode (1.55; 1.51-1.59), substance-induced organic anxiety disorder (1.37; 0.88- 2.11), generalized anxiety disorder (1.34; 1.31-1.36), agoraphobia (1.32; 0.70-2.48), anxiety disorder (1.07; 1.067-1.09) and post-traumatic stress disorder (1.00; 0.813-1.233) though not all findings were statistically significant. Conclusion: Based on U.S. claims data, there is a higher prevalence of mood and anxiety disorders occurring prior to an initial diagnosis of AD compared with those who are not diagnosed with AD.

No. 181

Cumulative Burden of Illness in Veterans With Serious Mental Illness and Tardive Dyskinesia

Poster Presenter: Stanley N. Caroff, M.D.
Co-Authors: E. Cabrina Campbell, M.D., Rosalind Berkowitz, Shirley Leong

SUMMARY: Objectives: Data on the impact of tardive dyskinesia (TD) affecting health, financial status, and quality of life remain scarce. To inform cost-benefit treatment decisions, the prevalence of TD and patient characteristics, comorbidities and outcomes by TD status were assessed in Veterans with serious mental illness (SMI) in a retrospective cross-sectional study. Methods: Veterans with schizophrenia/schizoaffective, bipolar and major depressive disorders receiving antipsychotics for at least 30 days in VISN 4 facilities during 10/1/2014-9/30/2015 were identified. Prevalence of TD was determined by ICD-9-CM codes and compared with Abnormal Involuntary Movement Scale (AIMS) scores via Student's t-tests. Risk factors for TD were examined using Chi-square or t-tests. Odds ratios (OR) and beta parameters with 95% confidence intervals (CI) for categorical and continuous outcomes associated with TD were derived from a multivariate logistic and linear regression respectively, adjusting for risk factors associated with TD. Results: Among 7985 Veterans with SMI on antipsychotics, 332 (4.16%) were diagnosed with TD. Veterans with TD were more likely to be older (mean ± SD; 59.9 ± 10.8 vs. 54.5 ± 12.8, p<0.0001). There were no significant differences between Veterans with and without TD in gender or race (both p>0.05). Those with TD were more likely to have schizophrenia/schizoaffective disorder (50.3% vs. 39.7%, p<0.001) and less likely to have bipolar disorder (29.2% vs. 35.4%, p=0.02) but there were no significant differences in major depressive or post-traumatic stress disorder diagnoses (both p>0.08). There were no differences in receiving 30 or more days of antidepressants, lithium or anticonvulsants, or in receiving two or more antipsychotics (all p>0.07). There were no differences in marital status, homelessness, or financial status (all p>0.3). Veterans with TD had a higher mean ± SD Charlson Comorbidity Index (1.62 ± 1.75 vs.1.09 ± 1.64, p=0.0007) and a higher rate of medical hospitalizations (16.9% vs.11.0%, p=0.017) but did not differ in mortality rate (1.2% vs. 1.5%, p=0.378). Veterans with TD compared to those without TD were not significantly different in rates of emergency visits (0.30% vs.0.35%) and hospitalizations for substance use (5.4% vs. 6.1%) or psychiatric disorders (16.0% vs. 13.6) (all p>0.09). Mean ± SD total AIMS scores (3.07 ± 4.48 vs. 0.47 ± 1.62) and AIMS awareness/incapacitation scores (0.72 ± 1.24 vs. 0.14 ± 0.57,) were significantly higher for patients with TD (both p<0.0001). Conclusions: TD was recorded as a diagnosis in 4.16% of Veterans receiving antipsychotics and was strongly associated with age, schizophrenia/schizoaffective disorder, medical comorbidity and medical hospitalization. TD may be a marker for a cluster of variables predictive

of serious adverse health outcomes and impairments in quality of life. More assertive screening, monitoring and treatment of patients at risk of TD is needed.

Tuesday, May 21, 2019

Poster Session 7

No. 1
Be a Detective: Is It Depression, Delirium, or Cancer?
Poster Presenter: Talya Shahal, M.D.
Co-Author: Samuel Wedes, M.D.

SUMMARY:
Mr. A., a 67-year-old white male with no previous psychiatric history, was brought by the police after he had called to report he planned to shoot himself due to chronic disagreements with his wife. That morning, he impulsively contemplated shooting himself, went to the liquor store, returned home, started to drink after a 21-month sobriety, and called the police. The police found him in his room with a loaded gun nearby. His wife reported that she recently noticed mood swings and irritability, along with isolation, poor energy, weight loss, and occasional confusion; however, he did not express any suicidal or homicidal ideation. Mr. A was brought to the emergency department, where he was found to be septic. An extensive workup revealed a large pleural effusion secondary to stage IV adenocarcinoma of the lung. MRI of the brain was negative for metastases. His symptoms improved status-post thoracentesis, and he subsequently denied any depressive symptoms including suicidality. The medical team consulted Psychiatry, who made a diagnosis of delirium secondary to the pleural effusion that resolved as well as an unspecified depression diagnosis. He was admitted to the mental health unit for further treatment of depression and was treated with mirtazapine to target his mood and appetite, which were expected to worsen due to the terminal diagnosis. His depressive symptoms that his wife noted improved and he was discharged back home with further workup for his cancer. Many times, when a diagnosis of a terminal cancer is made, it is hard to differentiate between symptoms of the terminal illness (poor appetite, poor energy, isolation) and depressive symptoms. This is complicated by possible delirium secondary to sequelae of the cancer. The depressive symptoms tend to overlap and worsen as the cancer progresses. Although this patient did not have a history of depression, depressive symptoms were evident and he contemplated suicide. It is less likely that delirium was the only cause for this. While there are multiple theories for the contribution of cancer to depression that might explain attempting suicide before a diagnosis of cancer was made, awareness of this connection is crucial when treating patients with a terminal illness. Adding an antidepressant to the medication regimen can have a significant impact on the wellbeing of the patient and his/her caregivers. In this poster, we discuss the challenges in assessing and treating depression in palliative care and end of life situations.

No. 2
Budget Impact Analysis of Atypical Long-Acting Antipsychotics in Norway Using Real-World Evidence From the Norwegian Prescription Registry
Poster Presenter: Johan Lundberg
Co-Author: Erik Gustafsson

SUMMARY:
OBJECTIVES: The long-acting injectable aripiprazole once-monthly 400 mg (AOM-400) has been approved for treatment of schizophrenia in Norway since 2014. Other atypical anti-psychotics, risperidone, paliperidone and olanzapine are also available as long-acting injectable formulations. A mixed treatment comparison has demonstrated that AOM-400 is at least as efficacious as other atypical long-acting anti-psychotics (ALAIs).(1) However, drug and administration costs vary among the ALAIs. This analysis investigates the costs of ALAIs using real-world prescription data from Norway. METHODS: A one-year time horizon real-world budget impact analysis was conducted. All patients in the Norwegian prescription registry receiving continuous prescription of an ALAI (paliperidone-LAI (once monthly), risperidone-LAI, olanzapine-LAI or AOM-400) for at least 18 months were included. The Norwegian drug prescription registry contains all prescriptions dispensed by all outpatient pharmacies.(2) Four cohorts, one per ALAI, were

constructed. The cost for administration was assumed to be the cost of a short healthcare visit.(3) Average cost per subject receiving a certain ALAI was calculated for the four different cohorts by dividing the sum of individual costs for prescriptions filled and costs of administration day 180-545 (where day 0 is the day of initiation) by the number of subjects in the cohort. The time period was chosen to eliminate titration costs from the analysis. Drug costs were attained from the official national price list.(4) RESULTS: The resulting drug and administration cost per patient/year, for AOM-400 is 40,899 NOK*. The expected costs per patient/year for drug and administration for paliperidone-LAI, risperidone-LAI and olanzapine-LAI are 53,195 NOK, 42,712 NOK and 54,750 NOK respectively. In a sensitivity analysis looking at the first 12 months since initiation Day 0-360 the results were similar. The cost per patient/year in the sensitivity analysis were for AOM-400 44,571 NOK, for risperidone-LAI 46,248 NOK, for olanzapine-LAI 59,544 NOK and for paliperidone-LAI 58,201 NOK. CONCLUSIONS: In a budget impact analysis, using the method, data and assumptions described, AOM-400 is expected to be cost saving, in the real-world setting, in terms of cost of drug and administration compared to other ALAIs available in Norway. Prescription registry data can be an important information source when making coverage decisions. *Values are in Norwegian Krona, 1 USD = 8.3598 NOK NORGES BANK August 29 2018 ECB 2018-03-23 14:21

No. 3

Abnormal Network Hub Organization of Structural Brain Networks in Schizophrenia: A Diffusion MRI Tractography Study

Poster Presenter: Harin Kim
Lead Author: Jungsun Lee
Co-Authors: Young Tak Jo, Woon Yoon, Sung Woo Joo, Seung-Hyun Shon

SUMMARY:

Introduction Schizophrenia is a neuropsychiatric disorder with varying degrees of altered connectivity in a wide range of brain areas. Network analysis using graph theory allows researchers to integrate and quantify relationships between widespread changes in a network system. Global properties such as global efficiency, local efficiency, clustering coefficient, and mean betweenness centrality present topological characteristics of the whole brain network. Robustness is an indicator of network stability when brain damage is present. This study examined the organization of brain structural networks by applying diffusion MRI, probabilistic tractography, network analysis, and robustness simulation. Methods A total number of 104 schizophrenia patients and 94 healthy controls were included in this study. Neuroimaging data was obtained from SchizConnect(www.schizconnect.org). T1-weighted MR images were parcellated into 87 regions of interests (ROIs) according to the Desikan-Killiany atlas, which is a prior anatomical template from FreeSurfer program and registered to diffusion-weighted images (DWI) of the same subjects. Probabilistic tractography was performed to obtain sets of white matter tracts between any two ROIs and determine the connection probabilities between them. Connectivity matrices were then constructed using the estimated probabilities, and several network properties related to network effectiveness were calculated. Of the 87 ROIs, 40 nodes were removed one by one while global properties were calculated repeatedly to evaluate the stability of the network. Results There was no significant difference in age and sex between patients and healthy controls. Mean betweenness centrality was significantly higher in schizophrenia patients (290.2 vs. 281.3, $p<0.05$). Global efficiency, local efficiency, and clustering coefficient did not show between group difference. As the number of removed nodes increased, global efficiency decreased continuously and mean betweenness centrality showed inverse U-shaped pattern. However, robustness was not significantly different between two groups. Conclusion This study suggests that schizophrenia may be associated with abnormal network hub organization.

No. 4

Predictors of Treatment Response, Remission, Relapse and Rehospitalization in 310 First-Episode Schizophrenia Patients From Medellin, Colombia

Poster Presenter: Juan A. Gallego, M.D.
Co-Authors: Jenny García-Valencia, Natalia Castro-Campos, Oscar Javier Ribero Salazar, Lina Maria Agudelo Baena

SUMMARY:

Background: The majority of research studies with first-episode schizophrenia patients have been conducted in either United States or Europe. Accordingly, known factors that predict treatment response, remission and relapse are derived from these studies. Unfortunately, since very few first-episode studies have been conducted in Latin-America, and given the unique socio-economic challenges within the region, such as poverty and violence, it is possible that the predictive factors in Latin-America differ from those in the US and Europe. Therefore, our goal was to determine predictors of treatment response, remission, relapse and rehospitalization in a population of first-episode schizophrenia spectrum disorder (SSD) patients from Medellin, Colombia. Methods: Electronic health records (HER) were obtained from patients with an ICD-10 diagnosis of schizophrenia, schizoaffective disorder or acute and transitory acute disorder who were evaluated for the first time between January 2014 and December 2016 at two psychiatric institutions in Medellin, Colombia. All follow-up psychiatric visits for each patient included in the EHR were reviewed to determine data regarding treatment response, remission, relapse and rehospitalization. Cox-proportional hazard models were calculated to determine predictors for all four outcomes. Results: Three hundred and ten patients were included in the analysis. Of those, 260 (83.9%) had schizophrenia, 40 (12.9%) had an acute and transient psychotic disorder and 10 (3.2%) had schizoaffective disorder. Patients had a mean age of 29.6 years (SD= 13.4), 73.5% (n= 228) were male and most were unmarried (n=262, 84.5%). Treatment response was predicted by shorter duration of untreated psychosis (DUP) (HR: 0.56, 95% CI: 0.40-0.78; P=0.0001). Remission was predicted by shorter DUP (HR: 0.52, 95% CI: 0.34 – 0.79; p<0.002), older age of onset (HR: 0.47, 95% CI: 0.28 – 0.82; P=0.007) and hospitalization at first presentation (HR: 2.32, 95% CI: 1.39-3.88; P=0.001). Relapse was predicted by non-adherence to medication (HR: 0.38, 95% CI: 0.22-0.65; P=0.0007) and use of substances (HR: 2.61, 95% CI: 1.32-5.15; P=0.006) and rehospitalization was predicted by non-adherence to treatment (HR:0.35, 95% CI: 0.18-0.68; P=0.02), hospitalization at first presentation (HR: 2.52, 95% CI: 1.11-5.72; P=0.03), use of substances (HR: 3.39, 95% CI: 1.38-8.32, P=0.008) and low academic status (HR: 0.46, 95% CI: 0.26-0.83, P= 0.009). Conclusion: Predictors of treatment response, remission, relapse and rehospitalization in first-episode patients were similar in our study compared to US and European studies, despite differences in socio-economic factors across cultures. Therefore, interventions developed to improve outcomes, such as specialized first-episode or high-risk clinics that have proven to be of benefit in the US and Europe, could also improve treatment outcomes for first-episode patients in Colombia and other Latin-American countries.

No. 5

Depression in Non-Affective Psychoses and Correlation to Functioning at Baseline and One Year

Poster Presenter: Sutapa Basu, M.D.

SUMMARY:

Background Depression is seen commonly in the course of Schizophrenia (1) 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%. (2) According to some studies, the presence of depressive symptoms in the acute phase of the illness is associated with a favorable outcome (3-5) Aims This study aims to examine the 1) functioning (GAF symptoms and disability) at baseline and 1 year of those with Depression at Baseline and those without Depression. 2) Functioning at 1 year in those with DE Novo depression at 3, 6 and 12 months and those without. Subject and Methods This was a naturalistic database study. A total of 443 consecutive patients with non-affective psychoses, under the care of Early Psychosis Intervention Programme in Singapore for the past 3 years were included. 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. (6) Positive and Negative Symptom Scale (PANSS) (7) and Global Assessment of Functioning Scale (GAF) (8) – total, symptoms and disability, and Clinical Global Impressions (CGI) – severity of illness were done. PHQ 9 (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 cut off score of PHQ 10. (10) We looked at functioning at baseline and at 1 year between those with depression at baseline and those without. Functioning at 1 year was compared between those with De Novo Depression at 3, 6 and 12 months and those without De Novo depression. Result The mean age of the sample was age of 26.5 years, 51.58% were males, 82.6 % were unmarried, 36.5% were employed. GAFS – (Symptoms) scores (SD) at baseline was 42 (12.9) Mean GAFS – (Disability) scores 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, 34.98% patients had depression (PHQ > 10) 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). There was no difference in functioning at baseline or at 1 year, between those with depression at baseline, 3 and 6 months and those without. A significant finding was that those with persistent depression and De Novo depression occurring at 12 months had higher GAF disability and lower GAF symptoms at 1 year. Conclusions It is important to identify and treat depressive symptoms in psychoses to optimize functional recovery.

No. 6

Trend of Psychiatric Contacts Prior to First Admission for Schizophrenia Under Universal Health Coverage, 1998?2007: A National Cohort Study in Taiwan

Poster Presenter: Emily Yang
Co-Authors: Yu-Chi Tung, Chen-Chung Liu, Wei J. Chen

SUMMARY:

Background: After Taiwan's implementation of National Health Insurance in 1995, the psychiatric service improved steadily, with the number of psychiatric beds per 10,000 population increased from 6.9 in 1998 to 8.6 in 2007, and that of psychiatrists per 100,000 population increased from 3.2 in 1998 to 5.4 in 2007. Meanwhile, the first admission rates for psychosis significantly reduced from 1998 and 2007, mainly driven by a 48% reduction for schizophrenia, and the quality of inpatient care remained similar This study aims to explore the changes in patients' psychiatric contacts prior to the first admission accompanied the declined admission rate for schizophrenia from 1998 to 2007. Methods: Using the Psychiatric Inpatient Medical Claims Database (PIMCD), psychotic patients admitted for the first time from 1998 to 2007, with an age at admission between 15 and 59 years, were identified (n = 69690) and all of their psychiatric contacts were extracted. After excluding patients with involuntary admission (n = 2540), 48976 out of 67150 patients received the diagnosis of schizophrenia at the first admission and were examined for their psychiatric ambulatory care prior to the admission, including the diagnosis at the first psychiatric contact, the time interval between the first-time diagnosis of schizophrenia and admission, the number of psychiatric contacts prior to the admission, and the antipsychotics prescribed at the last psychiatric contact prior to the admission. Results: From 1998 to 2007, the proportion of the firstly admitted schizophrenia patients receiving a diagnosis of schizophrenia at their first psychiatric contact decreased from 70.1% to 45.0%, whereas the proportion increased from 0.8% to 14.8% for non-schizophrenia psychosis and increased from 29.2% to 40.2% for non-psychotic disorders. The mean time intervals between the first-time diagnosis of schizophrenia and admission increased from 17.7 month in 1998 to 59.9 months in 2007. For the number of psychiatric contacts prior to the admission during the period, the proportion having zero or one contact decreased from 10.1% to 7.2%, whereas that of more than 20 times increased from 41.9% to 55.0%. In terms of antipsychotics prescribed at the last psychiatric contact prior to the admission, the proportion of patients receiving haloperidol decreased from 42.25% in 1998 to 23.28% in 2007, whereas that of risperidone increased from 4.7% in 1998 to 26.81% in 2007. For the newest atypical antipsychotics aripiprazole, which was available since 2003, the prescription proportion increased from 0.03% in 2003 to 4.1% in 2007. Conclusions: The diminishing rate of first admission for schizophrenia over the year was accompanied by an increasing proportion of patients

seeking psychiatric ambulatory care in the early stage of the illness and receiving atypical antipsychotics.

No. 7

Right Sided Intracranial Lesions in Active Duty Service-Members Presenting With First-Episode Psychosis: The Importance of a Comprehensive Evaluation

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 an episode 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 and is only 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 the case of three 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 and discuss the role that each of these lesions played in the patients' initial presentation and to what extent they impacted their treatment while enrolled in the Psychiatric Transition Program. Additionally, this discussion will demonstrate the critical importance of access to a multidisciplinary team including psychiatrists, psychologists, neurologists, radiologists, primary care physicians, case managers, and psychiatric technicians whose round the clock care and assistance to transition to life outside of the military in terms of establishing care with Veteran's Administration physicians and developing a transition plan for career or educational advancement was essential to their prognosis.

No. 8

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 five 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. 9

Lifetime Cannabis Use Is Associated With Physical Aggression and Long-Acting Injectable Antipsychotic Use in Asians With Schizophrenia:

Poster Presenter: Seon-Cheol Park

SUMMARY:

A dose-response relationship between cannabis and psychosis has been demonstrated in several studies. However, to our knowledge, the relationship

between cannabis and schizophrenia has rarely been reported in a real-world setting. We investigated lifetime cannabis use-related clinical characteristics and psychotropic prescription patterns in Asian schizophrenia patients.We performed secondary data analysis using data from the Research on Asian Psychotropic Prescription Patterns for Antipsychotics survey (REAP-AP), a collaborative consortium survey used to collate the prescription patterns for antipsychotic and other psychotropic medications, and their clinical correlates among Asian countries/areas.We included 132 schizophrenia patients in the lifetime cannabis use group and 1,756 who had never used cannabis, from the 3,744 subjects recruited in the REAP-AP study. Adjusting for the effects of age, sex, geographical region, income group, duration of untreated psychosis, and Charlson comorbidity index (CCI) level, a binary logistic regression model revealed that lifetime cannabis use was independently associated with physical aggression (adjusted odds ratio [aOR] = 1.582, 95% confidence interval [CI] = 1.006 - 2.490, P = 0.047) and long-acting injectable antipsychotic use (aOR = 1.796, 95% CI = 1.444 - 2.820, P = 0.001). Our findings support lifetime cannabis use as being a risk factor for aggressive behaviors in schizophrenia patients. In addition, the data suggest that physically aggressive behaviors associated with lifetime cannabis use are often treated with long-acting injectable antipsychotic agents in schizophrenia patients in Asia, especially in South or Southeast Asia.

No. 10

Treatment of Schizophrenia in a Patient With Pituitary Macroadenoma: Case Report and Literature Review

Poster Presenter: Zachary Michael Lane, M.D.
Co-Authors: Atika Azhar, Marian Azer

SUMMARY:

Pituitary adenomas present a unique challenge in the treatment of psychotic illness. In this case report and literature review, we present a schizophrenic patient with a large, inoperable pituitary macroadenoma along with a review of the literature describing best evidence based practice for management of this complicated condition. Patient is a 34 year old Jamaican male with schizophrenia admitted following acute psychotic decompensation. Patient was managed on Risperidone with good treatment response for fourteen years. After presenting to his PCP with heteronymous hemianopia patient was found on MRI to have a large, inoperable macroadenoma compressing into the optic chiasm. Further investigation revealed hyperprolactinemia with prolactin >3000ng/ml and hypogonadism with testosterone of 91ng/dl. The patient was switched from Risperidone to Aripiprazole 30mg daily Cabergoline 0.25 mg was added. Following this change, the patient began experiencing persecutory delusions, auditory hallucinations and aggressive behavior. Patient was admitted to acute inpatient, stabilized on aripiprazole, and discharged with outpatient follow-up. While the cause of this patient's prolactinoma is unknown, there is evidence that antipsychotics, notably risperidone, can play a causative role. Severe hyperprolactinemia can be a consequence of the interaction between a developing prolactinoma and Risperidone treatment. Aripiprazole has been shown to reduce prolactin levels and abate psychiatric decompensations. In cases of breakthrough psychosis, treatment with clozapine is also recommended. The absence of elevation in prolactin with use of Aripiprazole may be attributed to partial agonism at D2 receptors. Clozapine has lower D2 receptor occupancy and has shown similar effects on prolactin levels. Cabergoline and Bromocriptine are also used for hyperprolactinemia. Cabergoline exhibits higher potency and selectivity for D2 receptors than bromocriptine, however both drugs can precipitate psychotic decompensation. Quinagolide, another selective D2 receptor agonist, has lower permeability through the blood-brain-barrier. Consequently, Quinagolide is expected to have lesser effect on the brain while maintaining a potent effect on the pituitary. Selective estrogen receptor modulator, Raloxifene has also shown efficacy in treatment of hyperprolactinemia. There is currently few best practice guides for treatment of this condition. Guidelines published in 1999 recommend pharmacological treatment with a dopamine agonist and surgery or radiation for pharmacologically resistant treatment. However, guidelines published in 2010 by Massachusetts General Hospital recommend close monitoring for non-growing microadenomas. If possible, surgical

management is preferred for prolactimomas with mass effect due to the risk of decompensation under Cabergoline and Bromocriptine. For inoperable tumors, such as in this case, radiation therapy can be considered.

No. 11

Steroid-Induced Psychosis in a Patient With Leukocytoclastic Vasculitis

Poster Presenter: Xavier Yang Diao, M.D.
Co-Author: Dennis Jared Dacarett-Galeano

SUMMARY:
Mr. F is a 30-year-old undomiciled Latino male military veteran, with a past medical history of leukocytoclastic vasculitis (LCV) and a documented psychiatric history of post-traumatic stress disorder, major depressive disorder, schizophrenia, as well as cocaine and opioid use disorders in remission, who presented with first-rank Schneiderian symptoms concerning for psychotic decompensation. On intake interview, patient appeared dysphoric and anxious, but was cooperative and not internally preoccupied or responding to internal stimuli. He reported that he had been hearing voices "constantly" for the past 4 months. He described multiple voices that were seemingly external, and could recognize at least one of these voices, which belonged to a man. These voices ran running commentaries about him, and sometimes talked to each other. The patient also endorsed active persecutory delusions, stating that his ex-coworkers were working in tandem to frame him so that he would be incarcerated, and that he was being surveilled by people who were tapping his phone. He had some ideas of reference, describing that he could tell that he "was being followed whenever people pull on their left ears," and endorsed thought withdrawal and broadcasting. Although he was intermittently tearful on interview and endorsed some depressive symptoms of low mood and passive death wishes, he denied other typical neurovegetative or manic symptoms. Of note, about 4 months prior to presentation, patient presented with polyarticular edema (wrist, elbow, knee, and ankle), diffuse bilateral myalgia, and non-blanching palpable purpura, concerning for a small-vessel vasculitis. He re-presented a month later with nausea, vomiting, epigastric pain, and left hand and right foot weakness. Workup at the time a right lower extremity skin biopsy, which revealed leukocytoclastic vasculitis but negative for IgA deposition on immunofluorescence. Given history of abdominal pain and likely mononeuritis multiplex, a preliminary diagnosis of IgA vasculitis was posited. He was subsequently treated with intravenous methylprednisolone 250 mg daily for 2 days, followed by prednisone 60 mg daily. The etiology of the patient's presenting symptomatology was therefore unclear, with competing hypotheses for this undifferentiated psychosis. Patient endorsed prominent first-rank Schneiderian symptoms, but was appropriately related, not internally preoccupied, and reactive in affect. Etiologies on the differential included vasculitic syndromes e.g. lupus cerebritis given his rheumatologic diathesis, steroid-induced psychosis given high-dose long-term corticosteroid treatment, substance-induced psychotic disorder, a primary affective disorder with psychotic features, and malingering given unstable housing. Ultimately, the patient was started on quetiapine for psychosis, titrated to clinical effect, and maintained on prednisone 10 mg daily for his LCV.

No. 12

Assessing the Burden of Care for Treatment-Resistant Schizophrenia: A Quantitative Caregiver Survey of Experiences, Attitudes and Perceptions

Poster Presenter: Dawn Velligan, Ph.D.
Co-Authors: Cecilia Brain, M.D., Ph.D., Laëtitia Bouérat Duvold, Ofer Agid

SUMMARY: Objective: Previous qualitative focus groups with caregivers of individuals with treatment-resistant schizophrenia (TRS) indicate significant humanistic, clinical, societal and economic impacts of providing care. This quantitative survey aimed to further characterize the different burdens of caring for people with TRS. Methods: Non-professional adult caregivers providing >=20 hours/week of care (including 4 hours direct care) were enrolled by specialist recruiters across the United States. In line with international treatment guidelines, TRS was defined as failure of >=2 separate antipsychotics (taken as prescribed for >=6 weeks, including >=1 atypical) and at least moderate severity in two of four persistent core positive symptoms despite medication adherence, as reported by the caregiver.

Results: This interim analysis included 80 caregivers of individuals with TRS who had a mean of 7.3 prior antipsychotic switches, which included a long-acting injectable in 58% of cases. Caregivers reported spending an average of 65 hours a week providing direct care and 163 hours a week on-call. Overall, 73% of caregivers said being on-call for medical emergencies and/or illness aggravation was an essential part of their role. Other daily tasks that caregivers deemed essential included providing companionship (59% of caregivers), picking up medication/renewing prescription (56%), supporting medication taking (53%), attending physician's appointments (45%), and food preparation (45%). Most caregivers reported having physical (87%) or mental health issues, such as stress (74%) and/or anxiety (61%). Over half (55%) of caregivers reported essential involvement in managing the finances of the person with TRS, and most caregivers (87%) reported assisting with expenses. The presence of persistent positive symptoms and related behaviours despite medication adherence was reported to cause caregiver stress/anxiety, with agitation/hostility being the most stressful (rated as 7.4 on a 10 point scale) followed by suspiciousness/persecution (rated as 7.1/10). Overall, 80% of caregivers believed that their care-recipient may harm others. The most common symptoms related to this perception were: agitation (identified by 69% of caregivers), suspiciousness/persecution (61%) and delusions (61%). Of these caregivers, 58% identified themselves as most 'at risk' of harm, 58% identified family/friends as being at risk and 48% identified a risk of harm to the care-recipient themselves. Key symptoms driving the caregivers' fear of care-recipient hospitalization were agitation/hostility (rated as 7.3 on a 10 point scale of perceived likelihood); delusions (6.9/10); and hallucinations (6.8/10). Conclusions: To our knowledge, this is the first study to quantify the burden of TRS on caregivers. The results underscore the great impact of persistent positive symptoms on people living with TRS and their caregivers, and highlight the urgent need for new treatments for TRS.

No. 13

12-Month Follow Up of Metabolic Measures Following a Randomized Controlled Trial of Exenatide for Clozapine Associated Obesity and Diabetes

Poster Presenter: Dan J. Siskind, M.D.

SUMMARY:

Background: Clozapine is associated with obesity and type 2 diabetes (T2DM). Glucagon-like peptide-1 (GLP-1) receptor agonists such as exenatide can counter clozapine-associated GLP-1 dysregulation in animals, and may be beneficial in people on clozapine. Our randomized, controlled (RCT), open-label, pilot trial of once-weekly extended-release subcutaneous exenatide or usual care for 24 weeks (n=28), found 6 of 14 people on exenatide achieved >5% weight loss vs 1 of 14 receiving usual care (P = .029). Compared with usual care, participants on exenatide had greater mean weight loss (-5.29 vs -1.12 kg; P = .015) and body mass index reduction (-1.78 vs -0.39 kg/m2; P = .019), and reduced fasting glucose (-0.34 vs 0.39 mmol/L; P = .036) and glycated haemoglobin levels (-0.21% vs 0.03%; P = .004). Methods: We followed up trial participants at 6 months and 12 months following the end of the trial. We collected information on weight, BMI, waist circumference, blood pressure, fasting glucose, glycated haemoglobin, and use of metformin and other weight impacting medications. Change in these parameters from trial endpoint to follow up point will be compared between those in the active and control arms. Data will be adjusted for added concomitant medications, such as metformin. Results: Data from endpoint to follow up point on change in weight, proportion with >5% weight gain or loss, BMI, waist circumference, blood pressure, fasting glucose, glycated haemoglobin and rates of type 2 diabetes will be presented. Conclusions: Recent follow up studies of other weight loss agents in RCTs in schizophrenia suggest that difference in weight between intervention and control narrows at follow up. This information can help inform the role of continued use of exenatide among people on clozapine who have achieved weight loss.

No. 14

Relationship Between Electroencephalogram Abnormalities and Plasma Clozapine Levels in Clozapine-Treated Patients

Poster Presenter: In Won Chung, M.D., Ph.D.

Co-Authors: Yong Sik Kim, Tak Youn, M.D., Hee Yeon Jung, Seong Hoon Jeong, Hyesung kim

SUMMARY:
The electroencephalogram (EEG) abnormalities during clozapine treatment could be relevant clinically as a possible indicator of the therapeutic effects and seizure occurrence. This study was aimed to investigate clinical implications of EEG abnormalities in clozapine-treated patients with major psychotic disorders including schizophrenia or bipolar disorder. The EEG and plasma clozapine and norclozapine levels in 71 patients were measured on the same day. Fifty-nine patients (85.9%) had a diagnosis of schizophrenia, and 12 patients (14.1%) had a diagnosis of bipolar disorder. The mean daily clozapine dose was 242.9 ± 105.5 mg (20–500 mg), and the mean plasma clozapine and norclozapine levels were 429.4 ± 264.1 and 197.8 ± 132.6 ng/ml, respectively. Twenty-five patients (35.2%) were taking valproate in combination with clozapine. EEG abnormalities were found in 51 (71.8%) patients. No patient reported clinical seizures. Plasma clozapine level was significantly associated with EEG abnormalities and was identified as a significant predictor of EEG abnormalities in a logistic regression analysis. The plasma norclozapine levels of patients taking both clozapine and valproic acid were significantly lower than those of patients treated with clozapine alone. These results demonstrate that EEG abnormalities are closely correlated with plasma clozapine levels. Valproate reduced plasma norclozapine levels. Simultaneous monitoring of EEG and plasma clozapine levels was useful for adjusting clozapine doses, improving clinical efficacy, and preventing the side effects of clozapine treatment.

No. 15

Smartphone-Based Assessment of Executive Functions and the Real-Time Prediction of Symptoms in Schizophrenia and Substance Use Disorders

Poster Presenter: Joel Swendsen
Co-Authors: Maud Dupuy, Majd Abdallah, Pierre Schweitzer, Melina Fatseas, Fuschia Serre, David Misdrahi, Marc Auriacombe, M.D., Sandra Chanraud

SUMMARY:
Background. Mobile technologies have revolutionized research in psychiatry over the past two decades. However, these novel methods have largely ignored one of the most common characteristics of mental disorders: deficits in cognitive functioning. This controlled investigation in two distinct populations (addiction and schizophrenia) tested executive functioning in real time, and examined its association with symptom expression over subsequent hours of the day as well as its underlying brain mechanisms. Methods. Patients with a substance use disorder (n=70), schizophrenia (n=33) and healthy controls (n=42) were administered a functional MRI examination and then completed Ecological Momentary Assessments (EMA) for a one week period via smartphones. EMA solicited information five times a day concerning the participants' behaviors, experiences and eventual symptoms. For a random portion of assessments, participants also completed mobile tests of executive functioning, including either a stroop-like task or a letter-verbal fluency task. Results. Hierarchical linear regressions were used to examine the prospective influence of executive performance at any given EMA assessment on symptom expression at the subsequent assessment (approximately 3 hours later, controlling for symptom status at the time of mobile test completion). For patients with a substance use disorder experiencing craving, momentary fluctuations in executive performance in daily life predicted the probability of new episodes of drug or alcohol use over subsequent hours, coef=0.106, SE=0.045, p<.05. For patients with schizophrenia, fluctuations in executive performance predicted the onset of new positive symptoms over subsequent hours, coef=0.06, SE=0.030, p<.05. Concerning brain functioning, within-day associations between cognitive performance and symptoms varied as a function of static- small-worldness (coeff=0.20, SE=0.06, p < 0.01), transitivity (coefficient= 0.81, SE = 0.23, p<.01) and number of cliques (coefficient= -0.02, SE = 0.01, p <0.05) of resting-state functional networks. Conclusions. To our knowledge, the present findings represent the very first evidence for the role of momentary cognitive variation in the prediction of future symptoms of addiction or schizophrenia. The combined analysis of EMA and MRI data permits the identification of precise brain

markers associated with the prospective influence of cognitive fluctuations on symptom expression. These findings suggest that mobile cognitive assessment offers important and highly novel opportunities for EMA research in psychiatry.

No. 16

Sadder but Wiser: Depression Outweighs Sex and Schizophrenia in Self Assessment of Interpersonal Functioning

Poster Presenter: Lisa Nicole Oliveri, M.D.
Co-Authors: Adam Awerbuch, Philip Harvey

SUMMARY:

Background. Impairments in social functioning are central features of Schizophrenia (SCZ). Patients with SCZ also have challenges in self-assessment and ability to evaluate their own level of functioning across cognitive, social cognitive, and functional domains. One of the major correlates of self-assessments in schizophrenia is depression, wherein patients who have very low levels of self-reported depression overestimate their functioning when compared to objective milestone data and reports of knowledgeable informants. Interestingly, healthy individuals also generate reports of functioning that are related to mood states, wherein mild levels of dysthymia are associated with reduced overestimation of functioning; this finding appears to be stronger in females than in males. In this study, we examine depression, gender, and psychiatric diagnoses as predictors of self-reported everyday functioning. Methods. 372 subjects were enrolled in this study, including 218 with SCZ and 154 healthy controls. Participants self-reported their everyday social functioning using the 31-item Specific Level of Functioning (SLOF) scale. All participants self-reported their depression with the Beck's Depression Inventory (BDI) and their impressions of their social cognitive ability on the Observable Social Cognition Rating Scale (OSCARS). The resulting data was analyzed using linear regression models, predicting self-reported social functioning and social cognition with sex, diagnosis, and self-reported depression. Results. 64% of subjects were male and 36% were female. Schizophrenia patients reported more depression, poorer social functioning, and worse social cognition. Linear regression analyses revealed a significant correlation between self-reported social functioning and scores on the BDI: R2=0.23. BDI scores also predicted self-reported social cognition on the OSCARS: R2=0.30. There was no significant effect of sex on either self-reported social functioning or social cognition. Diagnosis accounted for 6% of the variance in OSCARS scores, but none for self-reported social functioning when depression was accounted for. Finally, when both the BDI and OSCARS were added to diagnosis and sex to predict self-reported social functioning, both depression, R2=0.23, and OSCARS scores, R2=0.06 predicted self-reported social functioning, with no impact of diagnosis or sex. Implications. Self-reported interpersonal functioning is largely determined by levels of depression, with these influences being more important than sex or diagnosis of schizophrenia. Both healthy people and people with schizophrenia judge their social functioning by their level of depression, with the impact of sex not being statistically significant.

No. 17

Exploring Male Postpartum Psychosis: "The Husband Who Wanted to Choke His Wife"

Poster Presenter: Parveen Hussain
Co-Author: Victoria Hendrick, M.D.

SUMMARY:

Mr. H., a 38-year-old Armenian with a history of Schizoaffective disorder, Bipolar Type, was bought into to the Emergency Department by ambulance on a 5150 hold for danger to self and others on November 8th, 2018. He had threatened to start a fire with a newspaper and choke his wife, while also endorsing thoughts of suicide. He had begun to experience a relapse of auditory hallucinations and paranoid delusions approximately three –four months earlier, which became further exacerbated due to his discontinuation of his medications shortly thereafter. The hallucinations included voices telling him to choke his wife and visual hallucinations of seeing his wife "naked". The patient's wife had also reported that the patient had recently become hypersexual. Patient had been hospitalized three previous times within the previous four months and had been displaying escalating aggression towards his wife. Of note, the wife had given birth to a baby girl four months earlier. The couple also have a five-year-old daughter. The patient's wife reported that

her husband had decompensated previously during the end of her first pregnancy five years earlier and was admitted to an inpatient psychiatry ward around the time of her delivery. She denied that the patient was a danger to her baby and reported he is a “good father”. The patient was restarted on his previous medication (long acting injectable paliperidone) and showed a rapid response to treatment. The family felt safe with patient returning home, and reported that he had returned to his baseline. Perinatal and postpartum psychosis has been extensively studied in new mothers but very little is known about the incidence of perinatal and postpartum relapses in men with previous diagnoses of schizoaffective or bipolar disorder. In this poster, we explore the impact that a partner’s pregnancy and delivery may have on the course of illness in men with these illnesses.

No. 18

Factors Affecting an Empowerment Experienced by Outpatients With Schizophrenia

Poster Presenter: Jungee Kim

SUMMARY: Objectives: To identify various factors that might affect an empowerment recognized by outpatients with schizophrenia. Methods: Of patients who had been receiving outpatient treatments at department of psychiatry of Dong-A university hospital, 116 patients with a DSM-IV-TR diagnosis of schizophrenia with stable symptoms were enrolled in this study. In these patients, empowerment (consumer constructed empowerment scale), psychiatric symptoms (the Korean version of the positive and negative syndrome scale), social functions (the Korean version of the social functioning scale), insight (the self-appraisal of illness questionnaire), family attitude (family attitude scale), social support (multidimensional scale of perceived social support), and self-esteem (Rosenberg self-esteem scale) were assessed through an interview or a self-reporting. In more detail, multiple regression analysis were performed in consideration of 11 factors (age, sex, the level of education, age of onset, the frequency of hospitalization, symptoms, social functions, insight, family attitude, social support, self-esteem) as explanatory variables for an empowerment. Results: On a multiple regression analysis using a backward elimination, the following four factors were found to be significant explanatory variables for an empowerment that is experienced by outpatients with schizophrenia: age of onset, social functions, family attitude, self-esteem. A coefficient of determination for these four explanatory variables was 0.65. Conclusions: In conclusion, the results showed that four factors, such as age of onset, social functions, family attitude, and self-esteem, were found to be significant explanatory variables for an empowerment that is experienced by outpatients with schizophrenia. Because these four variables account for 65% of total empowerment, however, further studies in a larger group of patients are warranted to identify other factors that might affect an empowerment.

No. 19

Hindered Reappraisal and Biased Suppression Emotion Regulation in Schizotypy: Evidence From Late Positive Potential and Frontal Alpha Asymmetry

Poster Presenter: Xuebing Li

SUMMARY:

Schizophrenic patients and high risk individuals consistently report a general elevated negative affectivity, and this negative disposition may be related to their impaired emotion regulation (ER) ability and biased ER strategy use (Kring & Caponigro, 2010; Horan, Hajcak, Wynn, & Green, 2013). Cognitive reappraisal and expression suppression are two main ER strategies with a greater impact on daily lives (Webb, Miles, & Sheeran, 2012). Beyond generalized deficits in emotional regulation, exploring the disturbances in use of specific strategies in schizophrenia spectrum may be instructive for understanding their cognitive-affective etiology. The current study investigated ER ability and bias in strategy use in individuals with schizotypy using a questionnaire and a laboratory ER task with EEG recording. In the ER task, each participant was asked to complete two passive attention blocks (negative-view/neutral-view) and two emotion regulation blocks (cognitive reappraisal/expression suppression). Twenty-six individuals with schizotypy and 26 healthy controls (HC) participated in this study. Questionnaire results indicated that high schizotypy individuals reported

more habitual use of suppression strategies than HC, subjective ratings in the ER task demonstrated that individuals with schizotypy exhibited poor effect of reappraisal. The event-related potentials (ERP) results suggested that for individuals with schizotypy, the late positive potential (LPP) magnitude in suppression condition was significantly smaller than that of reappraisal and passively viewing conditions in early time window (350-800ms), its regulation effect lasted to later time window (800-1500ms). While HC exhibited similar effect of emotion regulatory with reappraisal and suppression indexed by early LPP, but the effect of suppression was not significant in later time windows. As for frontal alpha asymmetry (FAA), the schizotypy group showed a general negative FAA score, indicating weakened left activation and diffused negative affectivity. Specifically, under reappraisal condition, individuals with schizotypy showed no increase in left side activity as healthy controls, suggesting their impaired voluntary reappraisal. According to previous studies, LPP amplitude reduction can be regarded as an important indicator of emotional regulation success (Macnamara, Ochsner, & Hajcak, 2011). In addition, higher FAA is a reliable indicator of relative left frontal activity. FAA typically represents the affective motivation system, higher score (relative left frontal activity) involves mainly positive emotion related with approach motivation (e.g., joy), whereas lower score (right-sided frontal activity) involves negative emotion related with avoidance motivation (e.g., fear)(Davidson, 1998). Taken together, this study revealed that individuals with schizotypy have impairments in regulating negative emotions and biased ER strategy use.

No. 20

Mind the Gap—Remission and Recovery Across Psychiatric Diagnoses

Poster Presenter: Ling Zeng, M.D.
Co-Author: Robert Zipursky

SUMMARY:

Background: The majority of patients with schizophrenia are able to achieve remission with antipsychotic treatment. Remission involves achieving symptomatic control, in which positive and negative symptoms are no greater than mild in severity. Recovery rates in schizophrenia, however, have remained low. Recovery involves achieving normal levels of social and vocational functioning in addition to sustained remission. It remains unclear why many patients are unable to achieve recovery if their symptoms are dramatically improved. Objectives: We were interested in understanding to what extent the large gap between rates of remission and recovery in schizophrenia is a reflection of factors specific to schizophrenia versus nonspecific factors that are shared across other psychiatric illnesses. Our objectives were to 1) compare rates of remission and recovery in schizophrenia with those reported for other major psychiatric illnesses, and 2) describe factors associated with recovery in different psychiatric disorders. Methods: A search of the published literature was conducted for naturalistic and randomized studies that report outcomes in remission and recovery rates in major psychiatric disorders using EMBASE, PsycINFO, and PubMed. Findings: Remission rates from a first episode of schizophrenia have been estimated to be 58.0% with higher rates reported in more recent study periods. Meta-analyses have estimated recovery rates from first episode schizophrenia at 38% and from schizophrenia more broadly at 13.5%. For other psychiatric disorders, rates of symptomatic recovery and functional recovery, respectively, were as follows: bipolar disorder (39-72% and 36-43%), major depressive disorder (MDD) (51-87% and 35-60%), and borderline personality disorder (BPD) (85-99% and 40-60%). Greater genetic predisposition predicted poor long-term outcomes in schizophrenia and was associated with lack of recovery and poor functional outcome in MDD and bipolar disorder, respectively. The absence of family history of psychiatric illness predicted earlier remission in BPD. Lower age of onset, poor premorbid functioning, and the presence of comorbidities including substance use and other psychiatric diagnoses were associated with poor functional outcome in schizophrenia and bipolar disorder. Illness severity was associated with greater disability scores and functional impairment in schizophrenia and BPD, respectively. Conclusion: Our review showed that recovery rates appear to lag behind remission rates across many psychiatric illnesses. This gap likely reflects the effects of the determinants of health shared across disorders that

limit achieving recovery, including genetic predisposition, early age of onset, and greater illness severity. This literature review highlights the importance of standardizing remission and recovery definitions in order to accurately compare and assess outcomes in patients suffering from mental illnesses.

No. 21

Clinical Utility of a Dimensional Approach to Rating Severity for the Core Symptoms of Psychosis in DSM-5: Factor Structure for Early Psychosis

Poster Presenter: Jae Hoon Jeong
Co-Author: Kyu Young Lee

SUMMARY: Objective: Schizophrenia subtypes were discarded because of their clinical insignificance. Correspondingly, DSM-5 presented a dimensional approach to rating severity for the core symptoms of psychosis, which consists of 8 items. The purpose of this study is to investigate the structure categorizing the items of dimensional assessment through factor analysis in patients with early psychosis. In addition, we tried to see if the categorized structure is useful for predicting the clinical course. Methods: The subjects were 498 patients with early psychosis who were enrolled in the Korean Early Psychosis Cohort Study. They were between 18 and 45 years old who fulfill the criteria of DSM-5 for schizophrenia spectrum and other psychotic disorders. The proportion of males was 41.9% and their mean age and age at onset were 28.7(SD=8.9) and 26.8(SD=9.1) years, respectively. An exploratory factor analysis(EFA) was conducted on the 8 items of dimensional assessment of psychosis in DSM-5 with principle components extracted by the varimax method. Also, we grouped the patients according to the factors listed in the factor structure and compared the data of baseline and 3-year longitudinal follow-up by the groups. Results: Two factors were identified which were labeled as 'psychotic' and 'deficit' domain. The first factor included delusions, hallucinations, disorganization and abnormal psychomotor behavior. The second factor included negative symptoms and impaired cognition. Depression and mania were excluded in factor analysis due to the lack of communality. In deficit dominant group, the patients were younger in age, longer in duration of DUP, younger in onset and had higher rate of comorbidity and higher non-urban residential rate. The baseline severity represented by PANSS total score and CGI-S was higher in the psychotic dominant group, but the difference began to disappear from two months later. However, in the deficit-dominant group, the PANSS negative scale, deficit scale, and CGI-I remain constantly poorer for three years. Conclusion: The factor analysis demonstrates a factor structure of dimensional assessment of psychosis in DSM-5, which were labeled 'psychotic', and 'deficit' domain, respectively. It is meaningful that it is the first study to analyze patients with early psychosis. In addition, grasping the dominance according to the structure can also be helpful in predicting the clinical course of the patients. KEY WORDS : Early psychosis, DSM-5, dimensions, diagnosis, schizophrenia

No. 22

Antidepressive Effect of Antipsychotics in the Treatment of Schizophrenia: Meta-Analysis of Randomized Placebo-Controlled Trials

Poster Presenter: Itaru Miura
Lead Author: Tadashi Nosaka
Co-Authors: Hirooki Yabe, Katsuhiko Hagi

SUMMARY:

Background: Depressive symptoms are common in schizophrenia and can have considerable debilitating effects, which may lead to increased risk of suicide. The presence of depressive symptoms in patients with schizophrenia is associated with reduced social functioning and decreased quality of life. Despite the clinical relevance of depressive symptoms, the comparative influence of antipsychotics on depressive symptoms has not been comprehensively evaluated. This systematic review and meta-analysis evaluated the effect of antipsychotics on depressive symptoms in patients with schizophrenia. Methods: A systematic literature searches of the PubMed, EMBASE, Scopus, and Cochrane databases (last search Nov 2018) was conducted to identify published and unpublished studies that reported double-blind randomized placebo-controlled trials (RCTs) comparing changes in depressive symptoms between patients receiving antipsychotic or a placebo for the treatment of schizophrenia or related disorders. The primary outcome of interest

was mean changes from baseline in depressive symptoms. Results: We included 36 RCTs reporting changes in depressive symptoms. The analysis was based on 14,026 adult patients. Overall, antipsychotics showed greater efficacy than placebo in reducing depressive symptoms, with small to medium effect size (standardized mean difference (SMD) = -0.27, 95% CI= -0.32 to -0.22, p<0.001). All the antipsychotics, except for chlorpromazine, haloperidol, and ziprasidone were associated with significantly greater decreases in depressive symptom compared to a placebo (SMD = -0.19 to -0.40). The superiority of grouped antipsychotics regarding improvement of depressive symptom remained statistically significant in second generation antipsychotics studies (SMD = -0.28, p < 0.001) and studies published after year 2000 (SMD = -0.35, p < 0.001). Meta-regression analysis showed that a higher anti-depressive effect was significantly correlated with a higher improvement in total, positive, negative, and general psychopathology symptoms (Coefficient = 0.552, p<0.001; Coefficient = 0.447, p<0.001; Coefficient = 0.685, p<0.001; Coefficient = 0.506, p<0.001, respectively), with the highest correlation coefficient for the improvement of negative symptoms. Conclusion: In the present analysis, second generation antipsychotic therapy except for ziprasidone was associated with small to medium treatment effects sizes in adult patients with schizophrenia. There was a significant correlation between change in PANSS subscale scores and change in depressive symptom scale score, indicating that some of the reduction in depressive symptoms may be related to the improvement in other symptoms of schizophrenia, in particular negative symptoms. Further investigation in patients with schizophrenia and depression is warranted to confirm these findings. This study was sponsored by Sumitomo Dainippon Pharma Co., Ltd., Tokyo, Japan.

No. 23

An Examination of Heterogeneity in Treatment Response to Antipsychotic Medications

Poster Presenter: Natalie Bareis, Ph.D., L.M.S.W., M.S.

Co-Author: T. Scott Stroup, M.D., M.P.H.

SUMMARY: Objective: To examine treatment heterogeneity in the Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE); a large RCT comparing effectiveness of several oral second-generation antipsychotics (SGAs) and a first-generation antipsychotic. We tested whether subgroup characteristics modified treatment effects on time to all-cause treatment discontinuation and change in neurocognition measured by the MATRICS Consensus Cognitive Battery (MCCB). Methods: Data is from the intent-to-treat cohort without tardive dyskinesia (N=1206). Participants aged 18-65 years, with a DSM-IV diagnosis of schizophrenia were randomly assigned to SGA olanzapine (OLAN), quetiapine (QUET), risperidone (RISP), or first-generation perphenazine (PERP) and followed for 18 months. For the primary analyses of overall time to all-cause treatment discontinuation and change in least squares mean (LSMean) MCCB composite Z-scores from baseline to month 2 between the four treatments (3 degrees of freedom, significance of p<0.05), we tested the modification of assigned treatment by subgroup characteristics (i.e., age, sex, race, substance use disorder, baseline symptom severity (PANSS) and baseline adherence) using Kaplan-Meier curve estimation and cox proportional hazards regression models, and analysis of covariance, adjusted for treatment site and exacerbation of schizophrenia symptoms in the previous three months. Second, we tested the modification of bivariate pairs of SGAs versus PERP by subgroup characteristics on both outcomes. Results: The primary analysis of overall time to all-cause treatment discontinuation found no interactions, but bivariate analyses found longer time to all-cause treatment discontinuation in females assigned PERP versus QUET (Χ²=5.93, p=0.02), and no difference in males. For the primary analysis of overall change in MCCB Z-score between the treatments, persons with PANSS ≥75 had the greatest LSMean increases when assigned PERP and RISP (increase=0.33 and 0.25 respectively) and the smallest increases when assigned QUET and OLAN (increase=0.10 and 0.14 respectively). Persons with PANSS <75 at baseline had Z-score increases when assigned any treatment, but not significantly different between treatments (increases from 0.16-0.19). Bivariate analyses found persons with PANSS

≥75 had a greater increase when taking PERP versus QUET but the increase was not significantly different between QUET and PERP among persons with PANSS <75 at baseline. Conclusions: In some comparisons, sex modified assigned treatments' effects on time to all-cause treatment discontinuation and symptom severity modified assigned treatments' effects on change in neurocognition. Although these analyses do not reach statistical significance after multiple comparisons adjustment, they are of potential clinical importance; further study is warranted. Examination of heterogeneity of treatment effects has the potential to lead to more personalized treatment choices.

No. 24

The Importance of Social Support for Promoting Insight in Patients With Schizophrenia With a History of Admission

Poster Presenter: Minjung Kim

SUMMARY:

Background: Schizophrenia is characterized by repetitive aggravation of psychotic symptoms which results in high rates of relapses, declined social and personal functioning, and deterioration of daily life. As lack of insight is one of the reliable predictors of poor prognosis, it has been emphasized to identify the factors that can affect insight among patients with schizophrenia. In this study, we investigated the association between clinical insight and sociodemographic factors, social support, the severity of psychotic symptoms, and accompanied depression. Methods: A total of 22 patients with schizophrenia were recruited, who had been admitted to the closed psychiatric ward of Korea University Guro Hospital. They completed the questionnaires at the first month and the sixth month after their discharge. The following clinical scales were performed in this study: the Korean version of the Revised Insight Scale of Psychosis (KISP), the Positive and Negative Syndrome Scale (PANSS), the Calgary Depression Scale for Schizophrenia (CDSS), the Korean version of the Drug Attitude Inventory (KDAI), the Multidimensional Scale of Perceived Social Support (MSPSS). The score differences between the first month and the sixth month were calculated. Correlation analyses were performed to assess the association between the change of the KISP and the changes of other clinical scales. Results: The mean scores of the KISP in the first month and the sixth month after discharge were 13.95 (SD = 5.89) and 14.68 (SD = 9.12), respectively. The change of the KISP scores was positively associated with the change of the MSPSS total scores (r=0.804, p-value<0.001). In each domain of MSPSS, support from family (r=0.804, p-value<0.001), support from friends (r=0.692, p-value<0.001), and support from significant others (r=0.544, p-value=0.009) were correlated with the change of the KISP scores. Otherwise, the changes of the PANSS total scores and the change of the KISP scores did not show meaningful relationship (r=0.088, p-value=0.696). The change of the CDSS scores (r=-0.183, p-value=0.414) and that of the DAI scores (r=-0.092, p-value=0.685) were not reliably associated with the change of the KISP scores. Conclusion: Our results showed that insight in the patients with schizophrenia can be promoted or worsened in respect of social support from family, friends, and people in intimate relationship with the patients after their discharge from the hospital. On the other hand, the changes in the severity of psychotic symptoms, depression, and drug attitude were not relevant factors for the change of the insight. In conclusion, these results suggest that it is important to provide appropriate social support to patients with schizophrenia for improving their insight toward their diseases. Also, it may imply that the guardians of the patients would be helpful by receiving a proper psychoeducation which emphasizes the importance of social support for the patients.

No. 25

Poor Response to Treatment in Outpatients With the First Episode of Schizophrenic Spectrum Disorders

Poster Presenter: Egor Chumakov
Co-Author: Nataliia Petrova

SUMMARY:

Background: Approximately 30% of patients with first-episode psychosis manifest a minimal response to antipsychotics [1]. Up to 23% of patients can be treatment resistant at the time of illness onset [2]. Objective: To assess the incidence of poor response to treatment in outpatients with the first episode of

schizophrenic spectrum disorders. Methods: 46 outpatients with the first episode (the duration of the disease is up to 5 years and the number of episodes is not more than three) of schizophrenic spectrum disorders according to the criteria of ICD-10 (F2) seeking treatment in 2017 in a day hospital in St. Petersburg, Russia, were examined (mean age=25.7; 63.0% male). To assess the dynamics of the mental state, the PANSS was used, the evaluation was performed twice - when diagnosing schizophrenic spectrum disorders and at discharge. Results: Most of the examined patients were diagnosed with schizophrenia (F20; 63.0%), the sample also included patients with schizotypical disorder (F21; 23.9%), acute polymorphic psychotic disorder with symptoms of schizophrenia (F23; 4.3%), and schizoaffective disorder (F25; 8.7%). Clinical features of the disease, pharmacological history, personalized risks of side effects were taken into account in the appointment of an antipsychotics during this treatment. Patient follow-up period was on average 95 days. During this period, only 47.8% of patients achieved complete remission (n=22), what was confirmed by the decrease in the total score of PANSS by more than 30%. 5 patients (10.9%) were hospitalized to the hospital due to exacerbation of mental state. The remaining patients (n=13; 28.3%) had a poor response to treatment, which means that by the end of the observation period they had symptoms of a mental disorder (decrease in the total score of PANSS by less than 30%). The frequency of registered non-compliance in patients with a poor response to treatment (38.5%) was two times higher than in patients who achieved remission (18.2%; p=0.18). The state of more than half of the examined patients (54.3%) required changes in the main therapy during the observation period (antipsychotic replacement) – 50.0% of patients who achieved complete remission and 100% of patients with a poor response to treatment. This means that even patients who achieved remission did not respond to the first prescribed antipsychotic (22.7%). Another serious problem identified was that 47.8% of the total number of the sample had serious side effects of therapy upon the first antipsychotic prescription. Among the main side effects were: medical sedation (45.5% of patients with side effects of therapy), dyskinesia (45.5%), akathisia (27.3%), weight gain (18.2%), menstrual irregularities (9.1%), increased prolactin levels (18.2%), visual impairments (4.5%). Conclusion: It has been established that up to 28% of outpatients with the first episode of schizophrenic spectrum disorders are characterized by poor responses to antipsychotic therapy.

No. 26

Toxoplasma Gondii Infection on a Group Patients With Schizophrenia in Colombia

Poster Presenter: Jaime Valero
Co-Authors: Juan Cano, M.D., M.Sc., Rodrigo Nel Cordoba, M.D., Alexie Vallejo, Laura Ramirez, Jorge Enrique Gomez-Marin, Alejandra de la Torre

SUMMARY:

Schizophrenia is a mental disorder that affects quality of life directly to the patient and indirectly to their family group. It also demands a high amount of resources from the national health care system in Colombia. According to the WHO (world Health Organization) has a global prevalence of 1% and 1.4% to 1.6% in Latin America. Toxoplasmosis is the main cause of intraocular infection and visual disability for adults and infants in Colombia. The severity of the infection caused by this parasite is higher compare to the strains found in Europe. Strains type I are the ones mainly link to the central nervous system. The infection can be acquired by the contact with infected cats, eating raw meat or drinking non-filtered water. Studies in several countries have shown a strong association between toxoplasma antibodies and the presence of schizophrenia which has raise several hypotheses and some new visions regarding the presence of the parasite in the pathophysiology of this illness. The presence of the parasite could affect the human host in different levels according to the time of infection, temporality, life stage (In uterus, childhood, adulthood), changing the metabolism of some neurotransmitters, interacting with some gene expression. Changes in IgM have not been significant in the studies that planed a more acute situation, which concludes that is actually the chronical exposure to the T. gondii that could induce in some way the development of schizophrenia. This case-control study aims to determine if there is a higher prevalence of Toxoplasma gondii IgG antibodies in Colombian patients with schizophrenia compared versus a group of healthy controls. Studies in several

countries have shown a strong association between toxoplasma antibodies and schizophrenia, which has raise several hypotheses and some new visions regarding the presence of the parasite in the pathophysiology of this illness. Our secondary objective is to analyze whether there is a relationship among the existing toxoplasma strains in our country and the presence of the disease. A descriptive observational will be completed in relation to genetic and social risk factors.

No. 27

Psychiatric Manifestations and Treatment Challenges in Patients Diagnosed With Digeorge Syndrome: A Case Report

Poster Presenter: Sylvia Kim, M.D.
Co-Authors: Jooyeon Lee, M.D., Joe Hong, M.D., Norma Dunn, M.D., Ronnie Gorman Swift, M.D.

SUMMARY:
Introduction: DiGeorge syndrome (also known as 22q11.2 deletion syndrome or velocardiofacial syndrome) is a genetic microdeletion at the 22q11.2 chromosome with an estimated prevalence of 1 in every 3000-6000 births. The classic clinical features of DiGeorge syndrome (DGS) include cardiac anomalies, hypoplastic thymus, facial anomalies, palatal anomalies, hypocalcemia, speech and learning disabilities. The literature shows that the most frequent psychiatric disorder associated with DiGeorge syndrome is schizophrenia-like psychosis with the risk estimated to be 25 times higher than the general population. As a result, this makes DGS one of the greatest known risk factors for psychotic illness. Other associated psychiatric disorders include mood disorders, anxiety disorders, attention deficit hyperactivity disorder (ADHD), and mild and borderline intellectual disability. Up to 60% of patients with DGS fulfill diagnostic criteria for the spectrum of mental disorders at some point in their lives. We present a case of a patient diagnosed with DiGeorge syndrome and Schizoaffective disorder. Case: Ms. A is a 50-year-old female who has been diagnosed with DiGeorge syndrome and intellectual disability at an unknown age. Her significant medical conditions include hypothyroidism and hyperlipidemia. She was recently discharged from the inpatient psychiatric unit and she presented to the psychiatric outpatient clinic for follow up care. She was diagnosed with Schizoaffective disorder. During her recent inpatient admission, the patient presented with labile mood, staring eye contact with strabismus, a disheveled appearance, and she was internally preoccupied as well as delusional with being pregnant with the devil's baby. The patient had multiple prior psychiatric hospitalizations, mostly for depressed mood and auditory hallucinations in context of medication non-compliance. During this admission, the patient was stabilized with a combination of Haloperidol 10mg po BID for psychosis and Valproic acid 500mg po BID (with blood Valproic acid level of 98.9) for mood stabilization. Her family history is significant in that she has one daughter who was also diagnosed with DiGeorge syndrome at birth and developed multiple episodes of schizophrenia- like psychosis as a teenager, which she described as her chronic stressor. The patient's mother is the primary support system for both of them. Discussion: Our case report highlights the challenges and importance of providing medication treatment and an adequate support system for patients with DiGeorge syndrome with psychiatric co- morbidities. Patients with an adequate support system can be functional and are able to take care of themselves. Furthermore, it is important to raise awareness of the psychiatric manifestations of DiGeorge syndrome as it represents one of the highest known risk factors for the development of schizophrenia.

No. 28

Relation Between Smoking and Formal Thought Disorder in Schizophrenia

Poster Presenter: Koksal Alptekin, M.D.

SUMMARY:
Background: Formal thought disorder (FTD) is one of the fundamental features of schizophrenia. FTD usually proceeds in a vague form throughout the illness and exacerbates in acute episodes, and might persist in remitted patients. It is one of the strongest predictors determining conversion from first-episode acute transient psychotic disorder to schizophrenia. Prevalance of smoking cigarettes is higher in patients with schizophrenia compared to normalpopulation Possible reasons are due to decrease the severity of side effects or to increase cognitive abilities. The aim of this study is to investigate the relation between

smoking cigarettes 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 before. Schizophrenia patients who had been assessed with Thought and Language Index (TLI), Positive and Negative Syndrome Scale (PANSS), and Sociodemographic Data Form in the two former studies were included in the present study. 150 patients with schizophrenia were included into the study. Results: Schizophrenia patients using more cigarettes have less TLI scores compared to patients using less. Discussion: Smoking cigarettes may be related to formal thought disorder. However this may be result of the efforts to increase thought abilities. Underlying mechanisms need to be investigated.

No. 29

Agile Development of Pear-004, a Prescription Digital Therapeutic for Patients With Schizophrenia

Poster Presenter: Tim Campellone, Ph.D.
Co-Authors: Kirsten Smayda, Yuri Maricich, M.D., M.B.A.

SUMMARY:

Software-based interventions require agile and data-driven product development, and allow for continuous product refinement. Compared to existing models of therapeutic development, this approach allows for more rapid clinical validation while creating a more engaging and efficacious treatment. Here, we illustrate agile product development with Pear-004, a prescription digital therapeutic for patients with schizophrenia delivered in conjunction with standard of care anti-psychotic pharmacotherapy. Pear-004 fills the gaps between care visits by providing patients with schizophrenia 24/7 access to coping skills to promote illness self-management. Skills in Pear-004 are derived from evidence-based psychosocial interventions, including Cognitive Behavioral Therapy and Social Skills Training. The development of Pear-004 was informed by data collected from user research (clinicians and patients), and two translational studies conducted in patients with schizophrenia. In these studies, we collected clinical outcome data, including schizophrenia symptoms as measured by the Positive and Negative Syndrome Scale, depression symptoms as measured by the Beck Depression Inventory, and psychosocial functioning as measured by the WHOQOL-BREF. In addition, we also examined user engagement with the therapeutic (percentage of days logged into Pear-004 and number of skills practiced) as well as overall satisfaction as rated on a 1 (not at all) to 7 (very much so) scale. The initial version of Pear-004 was tested in a 2-week open-label feasibility trial (n = 13) with the primary endpoint being user engagement. Over the course of 2-weeks, an average of 76% of patients engaged with Pear-004 each day of treatment and the median number of skills practiced was 15.5. Overall satisfaction with the first version of Pear-004 was 5.91 out of 7. Data from this study plus additional user research informed a second iteration of Pear-004, which was evaluated in an 8-week open-label trial (n = 20). Clinical outcome data analysis is ongoing and will be completed in January 2019. For comparison, 72% of patients used this version of Pear-004 every day over the first two weeks of the trial and 55% of patients engaged with Pear-004 greater than half of the days that they had access. The median number of skills practiced was 33 and overall satisfaction was 6.41 out of 7. Data from this trial were used to inform the version of Pear-004 included in a proof-of-concept randomized control trial (n = 102), which launched in December of 2018. By taking a data-driven approach to the iterative development of Pear-004, we were able to enhance and refine the therapeutic three times in 8 months. As the data suggest, the changes made resulted in a product that is optimized for patient engagement and efficacy. The opportunities for therapeutic testing and refinement in rapid cycle represent the distinct advantages of agile, data-driven development over traditional drug development.

No. 30

Paliperidone Induced Mania in Patient With Schizophrenia

Poster Presenter: Praveen Sadananda Gopan

SUMMARY:

Introduction Affective symptoms can be part of schizophrenia and one of the five dimensions schizophrenia. The most of the second generation antipsychotics are also used for the first line treatment of acute mania as well as prophylaxis

because of the mood stabilising property of these atypical antipsychotics. However here we present case report of patient who was started on paliperidone monthly long acting depot and developed manic symptoms as it is one of very few cases in literature which were possibly relates Mania following paliperidone. Case history- Mrs A ,a patient with schizophrenia who is currently in remission and risperidone ,was started on paliperidone depot of 150mg upon the request of the patient and her relatives. Into the second month of treatment the patient started having elevated mood, increased sexual desire, decreased sleep, excessive spending and increased religiosity, these symptoms did not occur during her 5 years of treatment on oral second generation antipsychotics. She was started on mood stabilizers, her symptoms decreased in intensity gradually and subsided after a month. Thorough evaluation of history and presenting complaints showed that the possible etiology for the presenting symptoms to be shift to paliperidone depot, whose symptom subsided with mood stabilizer. Key words: paliperidone, mania, paliperidone depot, schizophrenia

No. 31

Predicting Self-Reported and Objective Social Functioning With Autistic Symptoms in Schizophrenia: Comparison With Depression and Social Avoidance

Poster Presenter: Adam Awerbuch
Co-Authors: Amy Pinkham, Philip Harvey

SUMMARY:
Background. Patients with schizophrenia (SCZ) have significant impairments in social functioning. In addition, those with SCZ are challenged by self-assessment across cognitive, social cognitive, and functional domains. Previous studies of schizophrenia patients have demonstrated a significant correlation between depression and self-reported functioning, wherein patients with lower levels of self-reported depression will over-estimate their level of functioning when compared to objective data. Moreover, there is increasing research highlighting the similarity between some of the negative symptoms of schizophrenia and the symptoms of autism, including a validated autism sub-scale of the PANSS. In this study, we analyze the effects of depression, autistic symptoms, and active social avoidance on self-assessment of functioning in Schizophrenia, as well as objective functioning as reported by a close informant. Methods. 218 individuals with SCZ participated in this study. Participants reported their everyday social functioning using the 31-item Specific Level of Functioning scale. Participants rated their depression with the BDI and impressions of their social cognitive ability on the OSCAR. Participants were rated with the 30-item PANSS evaluating the severity of SCZ symptoms across multiple domains, including symptoms of autism and active social avoidance. Using linear regression models, we predicted self-reported and objective social functioning with depression, autism, and active social avoidance. Results. Analyses revealed a significant correlation between scores on the BDI and self-reported social functioning (r=.47) as well as informant-rated social functioning (r=.32). BDI scores also predicted self-reported social cognitive ability on the OSCARs (r=.49) and informant-rated social acceptability (r=.49). Severity of active social avoidance was also significantly correlated with self-reported (r=.55) and informant-rated (r=.412) social functioning, as well as the OSCARs score (r=.34). Symptoms of autism were less strongly correlated with both self-assessment of social functioning (r=.18), and informant-rated social function (r=.20). Finally, autism severity also did not strongly predict self-reported or informant rated OSCARs scores. Implications. Objective assessments of social functioning and social cognition are associated with both depression and active social avoidance. Similarly, self-reported interpersonal functioning and social cognition are predicted by both levels of depression and active social avoidance. Autistic symptoms, interestingly, are much less strongly correlated with awareness of social and social cognitive limitations than other negative symptoms. It may be that autistic symptoms are one of the determinants of impaired self-assessment in schizophrenia, while the presence of depression is associated with increases in the perception of both social and social cognitive limitation.

No. 32

The Bright Splenium of a Psychotic Mind

Poster Presenter: Michelle Tom, M.D.

Co-Author: Douglas Grover, M.D.

SUMMARY:
A 32 year old male, with history of seizure disorder, presented with increased seizure activity and new onset behavioral alteration, thought to be post-ictal psychosis. MRI of the brain showed a hyperintense lesion in the splenium of the corpus collosum. The patient's seizure activity resolved with antiepileptic medication. However, symptoms of psychosis, including paranoia, delusions and agitation persisted. Transient splenial lesions, known as the ?boomerang sign,? have been observed in patients with increased seizure activity. Isolated cases of patients presenting with psychiatric manifestations following corpus collosum compromise have been documented in literature, with one case of a splenial lesion presenting as postpartum psychosis. We present this case as a clinical presentation of splenial pathology in the form of new onset psychosis.

No. 33

Coprophagia as a Presentation of Catatonia

Poster Presenter: Rachel Natasha Varadarajulu, M.B.B.S.
Co-Author: Yassir Osama Mahgoub, M.D.

SUMMARY:
Introduction: Catatonia is a complex psychomotor dysregulation seen concurrently in a number of psychiatric illnesses. One of its commonly missed signs is stereotypy, defined as the presence of restricted, repetitive, and stereotyped patterns of behaviors, including some that may be inappropriate in nature. Coprophagia, a variant of pica, although has long been associated with psychiatric disorders, is not a common stereotypic behavior of catatonia. We report a case of catatonia with this unusual presentation. Methods: A PubMed and Google Scholar search conducted using the terms "catatonia","coprophagia" and "stereotypy", yielded no results. Case report: Ms. C is a 21-year-old, Asian female with a reported history of depression was admitted to the inpatient psychiatric unit due to aggression with her father. She reportedly spent hours in the bathroom few weeks prior to admission and when her father asked her to get out, she became violent. She was reported to have significant decline in her educational, interpersonal and occupational functioning for over one year prior to this incident. She revealed that she stayed in the bathroom to eat her feces, drink urine. This behavior was ego-syntonic and was not preceded by anxiety. She endorsed extreme anger towards her father when he asked her to get out of the bathroom. She appeared to be dishevelled, oddly related. She was noted to be taking one step forward and subsequently one step backward while walking. Her speech was repetitive, fixated on one or two topics, and she had loosening of associations. She was diagnosed with schizophrenia and her behavior was initially categorized as obsessive psychosis. Olanzapine was initiated and titrated to 35 mg and switched to Risperidone, which was titrated to 8 mg and switched later to Aripiprazole, which was titrated to 20 mg daily, with no improvement. Her diagnosis was revisited, and catatonia was considered. Lorazepam 1 mg was added to Aripipraziole and within 3 days, her speech perseveration and verbigeration resolved. The coprophagia stopped few days later. Discussion: After careful assessment and re-evaluation of her symptoms, in retrospect, it was concluded that Ms. C suffered from catatonia in the course of her schizophrenia. She had the following signs of catatonia: Agitation, stereotypy (repeated corprophagia), ambitendency (walking forward and backwards), speech perseveration and verbigeration. Coprophagia was initially recognized as obsessive psychosis, occurring in the course of her schizophrenia. It didn't respond to several trials of antipsychotics but with the addition of Lorazepam, there was improvement of coprophagia and most of the reported symptoms. Conclusion: Stereotypical behaviors are highly heterogeneous, may be verbal or nonverbal, simple or complex in nature. Stereotypy, when present with other signs may suggest catatonia.

No. 34

Severe Symptomatic Young Schizophrenia Patients Showed Gray Matter Volume Reduction in the Left Temporal Lobe and the Frontal Lobe

Poster Presenter: Takefumi Ueno
Co-Authors: Risa Hayashida, Naho Nakayama, Naoya Oribe

SUMMARY:

Introduction; Several studies investigated that the gray matter volume in schizophrenia patients were reduced than the normal control subjects. However, the location of the reduction is not clearly understood. Neckelmann et al. showed that the hallucination score was related to the gray matter volume in the temporal lobe. They used Brief Psychiatric Rating Scale (BPRS) to access the clinical feature. Although they accessed the clinical impairments, the group consisted of severe symptom and not so severe symptom. This study aimed to investigate the gray matter volume reduction in severe symptomatic young schizophrenia patients. Methods; One hundred and twenty one schizophrenia patients were recruited from Hizen Psychiatric Center. They met to the DSM-5 criteria diagnosed by two independent psychiatrists. All participants signed informed consent forms according to the ethical committee of the Hizen Psychiatric Center. The exclusion criteria were alcohol/drug abuse, brain hemorrhage/ infarction, or thyroid dysfunction.BPRS (24 factors) was used to assess the clinical condition of each patient. Eleven schizophrenia patients were chosen out of this group by the age(<35) and symptomatic state with the scale of Unusual thought, Bizarre behavior, and Conceptual disorganization in the BPRS scale. They had 6(severe) or 7(very severe) points rated. Eleven normal age matched normal control were recruited from Hizen Psychiatric Center by Ads . All participants were scanned by 1.5T MRI machine (Philips) to get the T1 weighted structural brain images in 6 minutes. Resolution was 1mm x 1mm x 1.2 mm. All the images were segmented to the gray matter images and converted to the normalized images with the canonical brain image in MNI coordinate with the DARTEL method in SPM software (Ashburner 2007). General linear model was used to investigate a gray matter volume reduction rather than normal control. General linear model has covariates of age and sex. Cutoff was under 0.001 (P value) of each point of brain, and 0.001 (P value) of spatial extent with Gaussian random field model to exclude the type 1 error. Results; Schizophrenia patients showed smaller volume in the left superior temporal gyrus, the left opercular part of the inferior frontal gyrus. No voxels were survived in the analysis of volume excess rather than normal control. Discussion; Severity in young schizophrenia patients might be related to temporal lobe and frontal lobe. Further investigation would be needed.

No. 35

Verbal Memory and Learning, Executive Function and Attentional Functioning in Patients With First-Episode Psychosis Depending on Cannabis Use

Poster Presenter: Teresa Sanchez-Gutierrez
Co-Authors: Belén Fernández-Castilla, Sara Barbeito, Juan Antonio Becerra-Garcia, Ana Calvo

SUMMARY:
Background: There is a current debate about the effects of cannabis use in the neurocognitive functioning of patients with first episode psychosis (FEP) which is still inconclusive (Arnold, 2015). Verbal memory and learning, executive function and attention deficits are common in the neuropsychological functioning observed in patients with psychosis (van Erp, 2016; Knowles, 2015). Objective: The objective of the present meta-analysis is to analyze the magnitude of effect of cannabis use on the verbal memory and learning, executive function and attention performance of patients with FEP. Methodology: Potential manuscripts were screened from extensive literature searches using six electronic databases: PubMed, Sciencedirect, Web of Knowledge, Wiley Cochrane Library, PsycInfo (EBSCOHost) and Springerlink (2008-2018). Studies which only focused in cannabis use were selected and studies on poly-substance use were excluded to avoid the influence of confounding variables. After examination of 110 full-text manuscripts, 7 studies met the inclusion criteria with 14 independent samples (a total sample of 304 cannabis user and 369 cannabis nonuser FEP patients) and 52 effect sizes included in the current meta-analysis. Standardized mean differences were computed for each cognitive domain between cannabis user and nonuser patients. We employed a meta-analytic three level model to combine effect sizes across studies. Results: There was not significant effects in any of the cognitive domains between the user and non-user groups: 1) verbal memory and learning: (standard error = 0.18, p = 0.98, 95% CI (-0.400, 0.389]); 2) executive function: (standard error = 0.28, p = 0.59, 95% CI (-0.618, 0.949]); 3) attention: (standard error = 0.81, p =

0.68, 95% CI [-2.262, 1.561]); Conclusions: The present meta-analysis shows that there are not significant differences between the groups of cannabis users and non-users in their neurocognitive functioning. However, these results may be cautiously interpreted because the presence of a subsample of patients with a better neurocognition who develop psychosis due to cannabis may mask possible differences between users and nonusers. Neither was data from the cannabis abstinence available so, as it is known that quitting cannabis improves functionality in first psychotic episodes in the long term, this limitation could interfere the present results. Future studies may examine the extent of these confounding variables.

No. 36

Can the Negative Symptoms of Schizophrenia Be Self-Rated?

Poster Presenter: Maria Paz Garcia-Portilla
Lead Author: Julio Bobes, M.D., Ph.D.
Co-Authors: Leticia Garcia-Alvarez, Leticia Gonzalez-Blanco, Francesco Dal Santo, Angela Velasco, Lorena de la Fuente Tomás, Pilar A. Sáiz, Teresa Bobes-Bascaran

SUMMARY:

Introduction: In recent years there has been a growing interest in the evaluation of the negative symptoms of schizophrenia. In addition, in the era of patient-centred care and research, we are also witnessing an increasing interest in the self-evaluation of these symptoms1-3. The objective of this research is to determine the level of agreement between the evaluation of negative symptoms by physicians and the patients themselves. Methods: Subjects: Data from 158 clinically stable patients with schizophrenia –ICD-10 criteria- who gave their written informed consent were analyzed. Persons with an intellectual developmental disorder, acquired brain injury, or who refused to participate were excluded. Assessment: Clinicians assessed negative symptoms using the PANSS and the CAINS while patients completed the MAP-SR. In addition, some patients were evaluated using the BNSS (n= 96) and self-completed the SNS (n= 83). Depressive symptoms were evaluated with the CDS and functioning with the PSP. Results: MAP-SR and the SNS total scores followed a normal distribution [K-S test (p)= 0.068 (0.068) and 0.088 (0.161) respectively]. A moderate and significant correlation between both was found (r=.656,p<0.0001). MAP-SR total score showed significant and moderate correlations with total CAINS (r=.645), CAINS-MAP subscale (r=.696), total BNSS (r=.522) and PANSS-N (r=.422) scores, and a lower correlation with CAINS-EXP subscale (r=.331,p<0.0001). However, it also showed significant and moderate correlations with total CDS (r=.516) and PSP (r=-.563) scores, and a lower correlation with PANSS-P score (r=.224,p<0.013). SNS total score showed significant and moderate correlations with total CAINS (r=.500), CAINS-MAP and EXP subscales (r= .484, r=.425), total BNSS (r=.796) and PANSS-N (r=.549) scores. However, it also showed a significant and moderate correlation with total CDS (r=.509), and lower correlations with PANSS-P (r=.354,p<0.018) and PSP (r=-.397) scores. When selecting those patients with CDS scores between 0-4 (Spanish version no depression) correlations between both MAP-SR and SNS total scores and PANSS-P lost their significance and those with CDS total score became low (r=.364 and r=.338 respectively). The rest of correlations showed minimal changes. Conclusions: We demonstrate a moderate agreement between the ratings of negative symptoms performed by clinicians and patients, regardless of their mood. Therefore, both evaluations should be considered complementary and useful in providing patient-centred interventions.

No. 37

The Great Imitator: Neurosyphilis in a Patient With Primary Schizophrenia Diagnosis

Poster Presenter: Shantanu Baghel

SUMMARY:

This case illustrates an interesting presentation of a 66 year-old Native American female with a past psychiatric history of depression, bipolar disorder, and schizophrenia who was brought to the emergency department for evaluation by her husband with the chief complaint of “altered mental status”. Per her husband, the patient had missed her last monthly dose of aripiprazole. After careful chart review, it was evident that the patient had a long standing diagnosis of schizophrenia, previously treated with aripiprazole at an outside institution;

however due to no next of kin present and no capacity, the patient was involuntarily committed. Upon review of systems, the patient complained of tingling and pain in her lower extremities bilaterally. Physical examination revealed an agitated elderly woman oriented solely to self. At the time of presentation, a comprehensive neurologic examination was not completed in the emergency department. Laboratory work was collected, specifically including a FTA-ABS. Recent literature supports obtaining FTA-ABS over RPR for questionable latent syphilis as RPR is most sensitive during initial primary infection. FTA-ABS was found to be positive, as well as the State Department confirmatory test. As a result, the patient was admitted to the medicine service. As the patient continued to exhibit neurologic and psychiatric instability, a lumbar puncture was performed for diagnosis of underling neurosyphilis. Lumbar puncture was confirmatory and the patient was initiated on IV penicillin G therapy for 14 days. The goal of this case study is to discuss the clinical utility of a complete infectious workup in elderly patients presenting with psychotic symptoms. It is the goal of our case to bring light to the public health benefits in identifying and treating patients with contractible sexually transmitted infection in the rural and underserved settings are tremendous.

No. 38

Influence of Race and Ethnicity on Diagnosing Schizophrenia at Riverside County Behavioral Health

Poster Presenter: Arthur Secundino Leitzke, M.D.
Co-Authors: Jason Tran, Julia Luu Hoang, M.D., Brandon Jacobs, Takesha J. Cooper, M.D., M.S.

SUMMARY:
Introduction: Previous research has shown variations in diagnosing schizophrenia between different racial/ethnic groups. In the United States, African Americans are more likely to be diagnosed with schizophrenia when compared to Caucasians. Similarly, studies have found similar trends among Asian Americans. Proposed causative factors include cultural barriers, physician bias, stigma, immigration status, limited access to care and socioeconomic standing. For instance, a history of institutionalized racism and perceived bias against African Americans may prompt patient mistrust of providers, which could be wrongly interpreted as paranoia and lead to a misdiagnosis of schizophrenia. When considering Asian Americans, Westernized views of traditional Asian practices may assume these practices are delusions, thus wrongly painting a schizophrenia label. In this study, we will examine the effects of race/ethnicity toward the rate of diagnosing schizophrenia among patients who utilized inpatient and outpatient services at Riverside University Health System Behavioral Health (RUHS-BH). Objective: Given the findings in prior studies, we aim to study if within Riverside County, Asian and African Americans are more likely to be diagnosed with schizophrenia when compared to Whites. Methods: RUHS-BH collects data annually on patient's ethnicity, age, gender, and diagnosis. Data analyzed from the electronic medical records throughout the system. Patients self-identify race and ethnicity when initially presenting for mental health services. Results: In fiscal year 2017-2018, RUHS-BH provided services to 59,298 consumers. Overall, within mental health, more male than female consumers were served (54% to 45% respectively). Hispanic/Latino consumers made up the largest proportion of the population at about 38%. African Americans made up about 11%, while Asians/PI made up about 1% of consumers. A preliminary analysis of the data yields variations in proportions of schizophrenia diagnosed in different racial groups. Conclusion: Our study highlights the need to understand and address reasons why rates of schizophrenia spectrum disorders are diagnosed at higher rates in certain racial/ethnic groups. Diagnostic errors may affect racial/ethnic minority groups and delay treatment plans for an otherwise correct diagnosis. Our findings also contribute to a growing body of work detailing the importance of cultural awareness within psychiatry with implications for mental health policies.

No. 39

Case Report: Early Onset Psychosis in Adolescent Identical Twins

Poster Presenter: Arthur Secundino Leitzke, M.D.
Co-Authors: Julia Luu Hoang, M.D., Shalin Rajesh Patel, M.D., Monish Parmar, M.D., Elizabeth M. Tully, M.D.

SUMMARY:

Introduction: Genetic factors play an important role in the development and severity of symptoms in schizophrenia. The lifetime risk in the general population is just below 1%, whereas 6.5% in first-degree relatives and over 40% in monozygotic twins (1,2). Studies concluded that a concordance rate for psychosis of about 50% in monozygotic twins versus 10-19% in dizygotic twins (3). We review a case of monozygotic twins with first episode psychosis in Riverside County. Case: 16 year old African American identical twin females W and Z developed psychotic symptoms 3 months after a court hearing for sexual trauma they were victims off. First episode of psychosis occurred at age 15, with at least 4 hospitalizations. The patient's mother noticed equal timing when they developed anxiety and disorganized behaviors/speech. Both started talking in tongues, became hyper-religious, endorsed seeing spirits and hearing voices, had ideas of references, and thought insertion. They have a strong genetic predisposition to mental illness as there is a family history of mother with bipolar disorder, maternal grandmother and uncle with schizophrenia, and maternal grandfather and older sister with undisclosed mental illness. Both were born premature, but met all their developmental milestones. They started smoking cannabis frequently at age 14, without current use. They are living with biological their mother and have phone contact with the father. They are on 11th grade, and under an IEP are being home schooled. Their working diagnosis includes strong suspicion for Schizophrenia given the severity of symptoms and strong genetic back ground, with a rule out for Bipolar Disorder with psychotic features, or substance induced psychotic disorder. Due to multiple psychiatric hospitalizations, both W and Z have been on similar medication regimens with Valproate, Lurasidone, Hydroxyzine, and Aripiprazole with sub-therapeutic effects. The mother has reported partial adherence, and is open to simplifying regimen, reducing polypharmacy, and switching to long acting injectable psychotropic such as Aripiprazole Maintena. Discussion: In the case presented, it appears that both twins developed similar symptoms at about the same time after it was triggered by a significant stressor such as sexual trauma. Notable features included auditory/visual hallucinations, paranoia, disorganized behavior and speech, grandiose delusions, thought insertion, and ideas of references. The identical twins are genetically predisposed to mental illness due to strong family history of psychosis in first and second generation relatives. Medications were found to be sub therapeutic, with a hope that over time, long acting injectable antipsychotics would improve adherence and overall symptoms. Reports of twin pairing developing psychosis at the same time are rare, but can show a strong genetic predisposition to psychosis in relatives with a history of mental illness.

No. 40
WITHDRAWN

No. 41
Lipid Peroxidation as a Potential Biomarker of Deterioration in Social Cognition in Schizophrenia: A One-Year Follow-Up Study

Poster Presenter: Leticia Gonzalez-Blanco
Lead Author: Julio Bobes, M.D., Ph.D.
Co-Authors: Maria Paz Garcia-Portilla, Leticia Garcia-Alvarez, Lorena de la Fuente Tomás, Francesco Dal Santo, Angela Velasco, Julia Rodriguez-Revuelta, Celso A. Iglesias, Pilar A. Sáiz

SUMMARY:

Background and Aims: Oxidative stress biomarkers have been related to cognitive impairment in patients with schizophrenia or first-episode of psychosis. However, to date no longitudinal study has analyzed the association between lipid peroxidation subproducts (LPO) and social cognition (SC). The aim of this study was to explore the relationship between changes in concentrations of LPO and SC at 1-year follow-up. Methods: One-year follow-up study of 54 stable outpatients with schizophrenia (=10 years of illness) [mean age = 31.3±6.4; 61.1% males]. Assessment: SC was measured with MSCEIT (MATRICS Cognitive Consensus Battery). Oxidative stress biomarker: LPO measured as nmol of malondialdehyde/ gr of hemoglobin. Statistics: Paired T-test, pearson correlation and linear regression analyses, including age, sex, duration of illness, and changes in BMI, smoking and psychopharmacological treatment as covariates. Results: At follow-up, overall patients presented a worsening (decrease) of SC T-score [51.1

±16.1 vs 46.9 ±17.3 (t=2.434; p=0.018)]. No significant changes in LPO at follow-up have been found [6070.1 ±1366.1 vs 5906.5 ±1094.1 (t=0.762; p=0.449)]. LPO was not significantly correlated with SC T-score at baseline. We divided patients with an increased of LPO at follow-up (n=27; 50%)[a] and those with a decreased of LPO (n=27; 50%)[b]. Group [a] showed an statistically significant worsening of SC T-score [51.4 ±16 vs 44 ±14 (t=3.648; p=0.001)] that was not found in group [b] [52 ±16.4 vs 50.1 ±19.4 (t=0.671; p=0.509)]. Also, changes in LPO were correlated with changes in SC T-score (r=-0.299; p=0.029). Multiple linear regression model for changes in SC, including covariates, showed that increase of LPO was a predictor of a worsening in SC at follow-up [beta=-0.287, R2=0.087 (p=0.034)]. Conclusions: We found that the biomarker "lipid peroxidation" was associated with a deterioration in SC at 1-year follow-up in patients with early-stage schizophrenia. Thus, oxidative stress mechanisms could be involved in the deterioration over time of SC.

No. 42

The Safety and Tolerability of Lumateperone 42mg for the Treatment of Schizophrenia: A Pooled Analysis of 3 Randomized Placebo-Controlled Trials

Poster Presenter: John Michael Kane, M.D.
Co-Authors: Kimberly Vanover, Michal Weingart, Robert Davis, Andrew Satlin, M.D.

SUMMARY:
Introduction: Lumateperone (ITI-007) is in late-phase clinical development for schizophrenia and other disorders. Lumateperone has a unique mechanism of action that modulates serotonin, dopamine, and glutamate neurotransmission. Lumateperone was evaluated in 3 randomized, double-blind, placebo (PBO)-controlled studies in patients with an acute exacerbation of schizophrenia. A pooled analysis of these studies was conducted to evaluate the safety and tolerability of lumateperone 42mg (ITI-007 60mg). Methods: Data were pooled from the 3 phase 2 or 3 studies of lumateperone 42mg in patients with schizophrenia. The safety population was defined as all patients who received at least one dose of PBO, lumateperone 42mg, or risperidone 4mg. Safety assessments included treatment-emergent adverse events (TEAEs), changes in laboratory parameters, and vital signs. Additional assessments included changes on the Barnes Akathisia Rating Scale (BARS), Abnormal Involuntary Movement Scale (AIMS), and Simpson-Angus Scale (SAS). Results: The safety population comprised 1,073 patients (PBO [n=412], lumateperone 42mg [n=406], risperidone [n=255]). The only TEAEs that occurred in the lumateperone 42mg group at a rate of =5% and twice PBO were somnolence/sedation (24.1% vs 10.0%) and dry mouth (5.9% vs 2.2%); rates for these TEAEs in the risperidone group were 23.9% and 4.7%, respectively. Rates of discontinuation due to TEAEs with lumateperone 42mg (0.5%) were similar to PBO (0.5%) and lower than risperidone (4.7%). Mean change in weight was smaller for lumateperone 42mg and PBO patients (1.6kg and 1.3kg, respectively) than risperidone patients (2.6kg). Similarly, the percent of patients with clinically meaningful weight increase (=7%) was similar for the lumateperone 42mg and PBO groups (9.1% and 9.2%, respectively) and greater in the risperidone group (22.0%). Mean change from baseline in metabolic parameters were similar or smaller for lumateperone 42mg vs PBO. Mean changes were notably higher in risperidone patients vs lumateperone 42mg and PBO patients for glucose (7.7mg/dL vs 0.7mg/dL and 2.1mg/dL), cholesterol (4.8mg/dL vs -3.0mg/dL and -1.6mg/dL), and triglycerides (20.4mg/dL vs -1.7mg/dL and 4.6mg/dL). Risperidone but not lumateperone 42mg or PBO increased mean prolactin levels (34.9ng/mL vs -1.3ng/mL and -0.2ng/mL). Lumateperone 42mg showed similar rates of EPS-related TEAEs using both narrow and broad standard MedDRA terms (3.0% and 6.7%) vs PBO (3.2% and 6.3%) and lower than risperidone (6.3% and 10.6%). Mean changes from baseline for BARS, AIMS, and SAS scores were similar across groups. Conclusion: In this pooled analysis of 3 randomized, PBO- and active-controlled studies in patients with acute exacerbation of schizophrenia, lumateperone 42mg showed good tolerability with potential benefits over risperidone for metabolic, prolactin, and EPS risks. These results suggest that lumateperone 42mg may be a promising new treatment for schizophrenia.

No. 43

Effects of Cariprazine on Attentional Processes in Patients With Schizophrenia: Post Hoc Analysis From a Randomized, Controlled Phase 3 Study
Poster Presenter: Roger S. McIntyre, M.D.
Co-Authors: David Gordon Daniel, M.D., Willie R. Earley, M.D., Mehul Patel, István Laszlovszky, Pascal Goetghebeur, Keith Wesnes

SUMMARY:
Background: Cariprazine, a dopamine D3-preferring D3/D2 receptor and serotonin 5-HT1A receptor partial agonist, is approved for the treatment of schizophrenia and manic or mixed episodes associated with bipolar I disorder. This post hoc analysis from a phase 3, randomized, double-blind, placebo (PBO)- and active-controlled study in acute schizophrenia (N=617; NCT01104766) evaluated the effects of cariprazine on a computerized performance-based cognitive measure, the Cognitive Drug Research (CDR) System attention battery. Methods: Patients in the study were randomized 1:1:1:1 to PBO, cariprazine 3 or 6 mg/d, or aripiprazole 10 mg/d for 6 weeks of double-blind treatment. Cognitive effects were assessed using two validated composite scores from the CDR system, Power of Attention (PoA) and Continuity of Attention (CoA), reflecting focused and sustained attention, respectively. Median changes from baseline to week 6 were evaluated in all patients, as well as in patients with higher levels of cognitive impairment, defined as patients having scores poorer on the two measures than the median scores of the population at baseline. The Wilcoxon rank-sum test was used to statistically analyze between-group differences. Results: At study endpoint, in the overall population, the cariprazine 3 mg group showed an improvement over baseline in PoA while the other groups showed a decline. Cariprazine 3 mg was significantly superior to PBO (P=.0036) and aripiprazole (P=.0006). Further, the 6 mg group showed a significantly smaller decline than aripiprazole (P=.0260) but not PBO (P=.1272). In patients with higher baseline cognitive impairment, all groups improved on PoA, and the 3 mg group was significantly superior to PBO (P=.0080) and aripiprazole (P=.0064). For CoA, both cariprazine dose groups showed a significant improvement over placebo (3 mg, P=.0005; 6 mg, P=.0168) in the overall population. In patients with higher cognitive deficit at baseline, CoA scores significantly improved compared to PBO for cariprazine 3 mg (P=.0012), cariprazine 6 mg (P=.0073) and aripiprazole (P=.0160) groups. Conclusion: In patients with schizophrenia, cariprazine 3 mg/d significantly improved the focused attention measure, Power of Attention, relative to both placebo and aripiprazole in the overall study population as well as in patients with greater baseline attentional impairment. Cariprazine 3 and 6 mg/d were both significantly superior to placebo on the sustained attention measure, Continuity of Attention. These results suggest that cariprazine may provide benefits for cognition symptoms in patients with schizophrenia.
Supported by Allergan plc.

No. 44
Changes in Abnormal Involuntary Movement Scale (AIMS) Items 8, 9, and 10: Results From the Valbenazine KINECT 4 Study
Poster Presenter: Khodayar Farahmand
Lead Author: Stephen Marder
Co-Authors: Jean-Pierre Lindenmayer, M.D., Carlos Singer, Josh Burke, Leslie Lundt, Scott Siegert

SUMMARY:
Background: In contemporary clinical trials of tardive dyskinesia (TD), efficacy focuses on changes in the Abnormal Involuntary Movement Scale (AIMS) total score. This score is derived from the sum of AIMS items 1 to 7, which rate the severity of abnormal movements in different body regions. However, the AIMS also includes questions about the overall severity of abnormal movements (item 8), incapacitation due to abnormal movements (item 9), and patient's awareness of abnormal movements and distress level (item 10). Data for AIMS items 8, 9, and 10 were collected in a long-term study of once-daily valbenazine (VBZ) in adults with TD (KINECT 4[NCT02405091]). These data were analyzed to provide more context for understanding the effects of VBZ in patients with TD. Methods: KINECT 4 included 48 weeks of treatment followed by a 4-week washout period. Key eligibility criteria included: ages 18 to 85 years; DSM-IV diagnosis of schizophrenia, schizoaffective disorder, or mood disorder; neuroleptic-induced TD for =3 months prior to screening; stable psychiatric status (Brief Psychiatric Rating Scale score <50); no high risk of

active suicidal ideation or behavior. Stable doses of concomitant medications to treat psychiatric and medical disorders were allowed. VBZ dosing was initiated at 40 mg, with escalation to 80 mg at Week 4 based on clinical assessment of TD and tolerability; a reduction back to 40 mg was allowed if 80 mg was not tolerated. VBZ doses were pooled for analysis. For AIMS items 8, 9, and 10, mean changes from baseline (BL) to Weeks 48 and 52 were analyzed descriptively. For AIMS items 8 and 9, which have the same scale for scoring (0=none to 4=severe), the percentage of participants who shifted from a BL score =3 (moderate or severe) to score =2 (none to mild) was analyzed at Week 48 and Week 52. A shift analysis was not conducted for Item 10 because the scoring represents 2 different patient types: unaware (score=0) and aware with increasing levels of distress (score=1 to 4). Results: At Week 48 (end of treatment, n=103), mean improvements from BL (±standard error) were observed as follows: item 8, -2.0 (±0.08); item 9, -1.9 (±0.11); item 10, -1.9 (±0.11). At Week 52 (end of 4-week washout, n=103), mean changes from BL were smaller but indicated some maintenance of VBZ effect: item 8, -0.8 (±0.10); item 9, -1.0 (±0.13); item 10, -0.9 (±0.13). Among participants at the Week 48 visit who had a score =3 at BL, most shifted to a score =2 after treatment: item 8, 95.9% (94/98); item 9, 98.3% (58/59). Among those at the Week 52 visit who had a score =3 at BL, >40% maintained improvement after washout: item 8, 46.9% (46/98); item 9, 59.3% (35/59). Conclusion: Analysis of AIMS items 8 and 9 indicated that long-term treatment with once-daily VBZ (40 or 80 mg) improved overall severity of abnormal movements in patients with TD. Patient incapacitation due to abnormal movements was also improved. Sponsored by Neurocrine Biosciences, Inc.

No. 45

Confidence, Performance, and Accuracy of Self-Assessment of Social Cognition: A Comparison of Schizophrenia Patients and Healthy Controls

Poster Presenter: Mackenzie Jones
Co-Authors: Elizabeth A. Deckler, Carlos Larrauri, L. Jarskog, David Penn, Ph.D., Amy Pinkham, Philip Harvey

SUMMARY:

Impairments in self-assessment in schizophrenia have been shown to have functional and clinical implications. This study examines the correlations between performance on social cognitive tests, confidence in performance, effort allocated to the task, and other aspects of self-assessment in patients with schizophrenia and healthy controls. Participants were stable outpatients with diagnoses of schizophrenia or schizoaffective disorder (n=218) and healthy controls (n=154). Measures included self-reported depression (BDI-2), interpersonal sensitivity (PADS), social cognitive ability (OSCARS), and social functioning (SLOF). A performance-based emotion recognition test (BLERT) assessed social cognitive performance and provided the basis for confidence judgments. Confidence was higher when correct for both healthy controls $t(150)=5.87$, $p<.001$ and patients with schizophrenia, $t(214)=5.44$, $p<.001$. However, the effect size for controls was $d=0.7$ and $d=0.3$ for the patients. We found that healthy controls responded significantly more rapidly when correct than incorrect, $t(150)=4.92$, $p<.001$; $d=0.37$. Patients with schizophrenia, in contrast, did not significantly differ in their response times to items when they were correct or incorrect, $t(214)=1.89$, $p=.06$; $d=.13$. Schizophrenia patients reported more depression, more interpersonal sensitivity, poorer social cognitive ability, and poorer everyday functioning than the healthy controls (all $p<.001$). Interestingly, 28 schizophrenia patients (13%) provided confidence scores of 100% on every item, while only 3 healthy controls (1.4%) provided these 100% confidence scores. Healthy controls who were 100% confident did not perform differently from those who were not, M=76.8%, vs. M= 75.7%. However, the schizophrenia patients who were 100% confident performed significantly more poorly than those who were not, M=57.5% (SD=21.5) vs. 67.2% (SD=18.4) respectively, $t(214)=2.56$, $p=.011$. Those patients who believed that their performance was perfect also had significantly lower scores on the BDI than those who believed that they had made some errors, M=10.8 (SD=11.9) vs. M=15.8 (SD=12.5) respectively, $t(214)=2.04$, $p=.048$. Self-assessment of everyday social functioning in healthy people was associated with confidence and impressions of social cognitive competence and, to a lesser extent, depression. In contrast, the self-assessments of schizophrenia patients were correlated only with

depression in a regression analysis. Confidence that one is correct when performing social cognitive tests was not associated with actual performance in either group, and confidence in healthy people was associated with a test-taking style that included more rapid responses both when correct and incorrect. These data are consistent with previous studies of confidence and self-assessment in both healthy people and people with schizophrenia, again suggesting that patients are largely relying on their current mood state as an index of their gl

No. 46
WITHDRAWN

No. 47
Self Stigma in Patients With Schizophrenia Spectrum Disorders: Oral Versus LAI Antipsychotic Pharmacological Approaches
Poster Presenter: Luis Jimenez-Trevino
Co-Authors: Javier Caballer García, M.Angeles Paredes Sanchez, Maria Suarez Alvarez, Aranzazu Fernandez Guerra, Maria Paz Garcia-Portilla, Elisa Seijo-Zazo

SUMMARY:
Background: Approximately 40-60% of patients with schizophrenia are partially or totally non-adherent to their antipsychotic regimen, but only 30% or less are prescribed a long-acting injection (LAI). Research on attitudes has also revealed that psychiatrists feel that long-actinginjections have an 'image' problem (1). Concerns about patient acceptance continue as do negative views about some aspects of LAI use; these may compromise medication choices offered to patients (2). We have cnducted a survey to test self stigma perception in psychotic patients under oral treatment vs. LAI treatment. Methods: ICD-10 schizophrenia spectrum consecutive outpatients receiving ORAL or LAI treatment were assesed using the Internalized stigma of mental illness (ISMI) scale and an ad-hoc qustionnaire for sociodemographic variables. Severity of schizophrenia was assesed using CGI-SCH scale. Results: 45 patients [53.3% males/46.7% females, Mean age (SD): 50.07 (10.84) years] completed the preliminary assesment. Mean time of illness (SD) was 21.20 (10.33) years. 53.3% of patients received LAI treatment while 46.7% received ORAL treatment. Mean CGI-SCH Score (SD) was 3.40 (1.45) and Mean ISMI Score (SD) was 2.02 (1.45). There were no differences in CGI-SCH score between ORAL vs. LAI treatment (3.29 vs.3.50; T Test= 3.041; p=0.787) or in Global ISMI Score (2.08 vs. 1.96; T Test= 0.003; p=0.610). We didn't find significant differences in any of the ISMI subscales. All subscores qualify as minimal to no internalized or mild internalized stigma (between 1.00 and 2.50) but "Discrimination Experience" in the ORAL group (2.54 vs. 1.92 in the LAI group), although there were no statistically significant differences between groups. Conclusion: The lack of difference of self stigma between ORAL vs. LAI treatment suggests that concerns about patient acceptance or "image problems" of LAI treatments are unjustified. LAI antipsychotic treatment should be a first line option for clinicians given its benefits in terms of improving adherence. Our results need to be confirmed with a larger sample and ruling out posible confounding factors.

No. 48
A Rare Case of New-Onset Psychosis in the Context of Nasopharyngeal Non-Hodgkins B-Cell Lymphoma
Poster Presenter: Bruce D. Fox, M.D.
Co-Authors: Michael N. Valan, M.D., Alan W. Newman, M.D., Chi Zhang

SUMMARY:
Ms. A is an 81-year-old Hispanic female with no past psychiatric history and past medical history significant for hypertension, DMII, HLD, past NSTEMI, and long-standing dementia who was brought in for AMS after being found wandering with a nosebleed and a hospital ID band from another facility dated the previous day. Findings on admission were notable for a UTI, hearing loss not previously recorded, and a nasopharyngeal mass with a malodorous discharge. Psychiatry was consulted for new onset psychotic symptoms. Patient was in obvious distress as she reported AH of people talking, VH of people in her room, and persecutory delusions that people wanted to kill her, to the point that she refused to share her address. Chart review indicated patient had been having 3 months of nasal congestion with discharge and a left breast mass of unknown significance for a similar time period. Collateral information indicated hearing loss had been present for less than 4 weeks and

patient had displayed no psychotic symptoms previously. CT head without contrast demonstrated senescent and atrophic brain changes along with pansinusitis, but no acute changes. MRI brain without contrast showed a large nasopharyngeal mass with skull base erosion suspicious for malignancy, but otherwise study was inconclusive due to motion artifact. PET scan confirmed hypermetabolic masses in nasopharynx with bilateral cervical lymphadenopathy and hypermetabolic mass in left breast; pathology conducted on samples from both sites was significant for high-grade non-Hodgkin's B-Cell Lymphoma with a starry sky appearance. Prolactin levels were within normal limits. Low dose Haldol was administered to good effect, along with low dose Ativan both scheduled and as a prn. Literature review reveals a case of psychosis associated with nasopharyngeal carcimona, but, in contrast to our case, symptoms appeared only after radiotherapy therapy that directly involved the temporal lobe. In our case, mass effect or structural causes were considered as a differential diagnosis but appeared unlikely due to the lack of involvement of the temporal lobe or any auditory pathways. Although new onset organic psychosis could not be ruled out, the most likely etiology is a paraneoplastic process. Nasopharyngeal carcinoma is exceedingly rare outside parts of Asia, and primary breast lymphoma is also very uncommon; paraneoplastic processes are unusual among Non-Hodgkin's Lymphomas. Thus we have a most atypical cause of patient's symptoms, and not previously described in the literature.

No. 49

What Factors Influence Whether Individuals in a First-Episode Clinic Successfully Graduate From School?

Poster Presenter: Philip Cawkwell, M.D.
Co-Authors: Ann K. Shinn, M.D., Stephanie Pinder-Amaker, Ph.D., Kirsten Bolton

SUMMARY:

Background: Psychotic disorders tend to first present when individuals are in their late-adolescence to early twenties, right as many are attempting to navigate the academic and social rigors of college life. There is scant literature to help guide patients and treaters as to the most evidence-based practices for maximizing the chances that individuals who experience a first psychotic episode during college can successfully return to school. Methods: This is an IRB-approved retrospective chart review analysis of the 219 patients who have been treated at McLean Hospital's trans-diagnostic first-episode clinic, 'On Track,' since the inception of the clinic in 2012. This clinic accepts referrals from both inpatient hospitals and community providers for any individual who has experienced a psychotic episode within the past year regardless of underlying diagnosis. Multiple logistic regression analysis was performed to analyze which baseline characteristics predicted successful graduation. Results: At time of intake 132 patients (60%) were pursuing a degree. Of these, 24 (18%) successfully graduated while in the OnTrack program. When comparing individuals who successfully graduated with those who did not, both groups had similar intake demographic characteristics including age (21.0 vs 20.1), male sex (79.2% vs 79.6%), Caucasian race (69.6% vs 82.3%). Logistic regression analysis of intake factors reveals that duration of treatment in years (Odds Ratio = 4.4, $P < .01$), referral diagnosis of bipolar disorder (OR 32.8, $P<.01$), trauma history (OR 0.04, $P<.05$), and presence of a romantic relationship (OR 9.6, $P<.05$) were statistically significantly associated with successful graduation. The presence of symptoms at intake, number of hospitalizations, presence of insight, active substance use, and number of prior antipsychotic trials were not found to be statistically significantly correlated with success or failure in school. Notably, a significant number of patients (46, 35%) left treatment with OnTrack within one year of joining the clinic. Examining the patients who were treated for at least one year reveals a higher rate of successfully graduating (22 of 86, 26%). Conclusion: The results of this research can offer important guidance to clinicians when trying to prognosticate functional outcome; individuals who were referred with a bipolar diagnosis (compared to psychotic-spectrum illness or psychosis not otherwise specified) were much more likely to graduate, as well as those without a history of trauma. This study also reinforces to patients and families the importance of maintaining active treatment – while many individuals in the clinic did not successfully reach their goal of graduating with a degree, those

who stayed in treatment for over a year had higher rates of successfully graduating.

No. 50

Burden of Treatment-Resistant Depression in Medicare: A Retrospective Claims Database Analysis

Poster Presenter: Kruti Joshi
Lead Author: Dominic Pilon
Co-Authors: John J. Sheehan, Miriam L. Zichlin, Peter Zuckerman, Patrick Lefebvre, Paul Greenberg

SUMMARY:
BACKGROUND: The burden of Major Depressive Disorder (MDD) can be reduced with effective care and treatments, nonetheless ~30% of patients receiving antidepressants will develop treatment-resistant depression (TRD). Previous studies of commercially-insured, and Medicaid populations have shown higher cost burden among patients with TRD, but gaps exists among the Medicare population. OBJECTIVE: To assess the healthcare resource utilization (HRU) and cost burden of patients with TRD in a Medicare population. METHODS: A retrospective study was conducted using patients from the Chronic Condition Warehouse de-identified 100% Medicare database (01/2010-12/2016). Adults aged 65 year old or more with a MDD diagnosis code and antidepressant (AD) were defined as MDD. Patients who initiated a third AD, following two AD treatment regimens at adequate dose and duration (including augmentation therapy), were defined as TRD. The index date was defined as the first AD claim (TRD and non-TRD MDD patients) or randomly imputed (non-MDD patients). Patients with psychosis, schizophrenia, manic/bipolar disorder, or dementia in the 6-months prior to the index date were excluded. Patients with TRD patients were matched 1:1 to non-TRD MDD patients and a randomly selected group of non-MDD patients using propensity score models including key demographics. HRU and costs, evaluated over a maximum follow up of 2 years post-index date, were compared between TRD and non-TRD MDD as well as TRD and non-MDD cohort using negative binomial and ordinary lease squares regression with 95% confidence intervals (CIs) obtained from nonparametric bootstraps (costs only); baseline costs and comorbidity index were adjusted in the multivariable models. RESULTS: Of the 18,908 patients with MDD, 1,338 (7%) had TRD. Of the 496,983 randomly selected non-MDD patients, 112,922 (22%) met the inclusion criteria. All patients with TRD were matched to non-TRD MDD and non-MDD patients. Patients with TRD were on average 73 years old and primarily female (65%). The TRD cohort had higher per patient per year (PPPY) HRU than non-TRD MDD patients (e.g., inpatient visits: 0.80 vs. 0.59, adjusted incidence rate ratio [IRR]: 1.27 [95%CI: 1.13-1.43], P<0.001) and non-MDD patients (e.g., inpatient visits: 0.80 vs. 0.27, adjusted IRR: 2.33 [95%CI: 2.04-2.66], P<0.001). Higher HRU translated into higher healthcare costs, The TRD cohort incurred significantly higher healthcare costs PPPY than the non-TRD MDD cohort ($29,986 vs. $21,720, adjusted cost difference: $4,903 [95%CI: 1,502-8,376], P=0.004) and non-MDD cohort ($29,986 vs. $11,918, adjusted cost difference: $8,532 [95%CI: 6,066-10,917], P<0.001). CONCLUSION: Among elderly patients covered exclusively by Medicare, the TRD cohort demonstrated higher HRU and cost burden compared with non-TRD MDD and non-MDD.

No. 51

Predictors of Social Functioning in Patients With Higher and Lower Levels of Reduced Emotional Experience

Poster Presenter: Elizabeth A. Deckler
Lead Author: Philip Harvey
Co-Authors: David Penn, Ph.D., L. Jarskog, Amy Pinkham

SUMMARY:
Background: Deficits in social functioning in schizophrenia are primarily predicted by negative symptoms, social cognition deficits, and social skills deficits. Here we examine those predictive variables across variations in the severity of reduced emotional experience.We hypothesized that in patientswith high symptomseverity, factors such as social cognition would have reduced importance for predicting social outcomes. Methods: Participants with schizophrenia (n=312) were tested using five different measures of social cognition. Performance-based assessments and clinical ratings of reduced emotion experience were used to assess social

competence. High contact informants rated interpersonal functioning and social acceptability of behavior, while unaware of other patient data. Patientswere divided into higher and lower reduced emotional experience using previously validated criteria. Results: 33% of the patients had at least moderate symptoms of reduced emotional experience. Patients with greater severity had more social functioning impairment, but not poorer social competence and social cognition. In the patientswith lower severity, social cognition accounted for 9% of the variance in interpersonal functioning, while in patients with higher severity, social cognition did not predict any variance. In the patients with lower severity, social cognition accounted for 4% of the variance in social acceptability of behavior, while in patients with higher severity, social cognition also did not predict any variance. Implications: The influence of social cognition on social outcomes appears greater in patients with less severe symptoms of reduced emotional experience. As there are treatments for both these symptoms and social cognition with demonstrated efficacy, these data suggest differential application of these interventions based on symptom severity.

No. 52

Training Inpatient Psychiatric Nurses and Staff to Utilize High-Yield, Cbtp Informed Skills in an Acute Inpatient Psychiatric Setting

Poster Presenter: Katherine Eisen, Ph.D.
Co-Authors: Neda Kharrazi, Psy.D., Elizabeth Michael, M.Sc., Alix Simonson, B.A., Kate Hardy, Psy.D.

SUMMARY:

Background: Cognitive Behavioral Therapy for Psychosis (CBTp) is an intervention with the potential to benefit many patients who are treated in acute inpatient psychiatric settings. However, a typical inpatient stay is too short for a full course of CBTp, and it is impractical to train enough therapists in full CBTp to provide this intervention in most acute inpatient settings. There is evidence that training psychiatric nurses and other inpatient staff in brief, high-yield techniques that draw on core elements of CBTp can benefit individual patients and the inpatient milieu. The purpose of this study was to assess the impact of a focused CBTp skills training program on staff knowledge and confidence in using high-yield CBTp skills. Methods: Nursing and other frontline providers (including social workers and occupational therapists) were recruited for a 12-hour training, titled Positive Practices for working with Psychosis (PPP), from two inpatient psychiatric units housed within an academic medical center. Participants self-selected for the training, which consisted of two 6-hour sessions, spaced 2 weeks apart. A total of 3 trainings were offered to staff between 2016 and 2018. All trainings were led by two clinical psychologists who were trained to competency in CBTp. Results: Across two years 32 participants commenced the training, with 25 completing the two days. Paired t-tests were used to compare self-rated change in knowledge and confidence for each of the 9 domains measured. We found significant gains ($p < .001$) in knowledge of CBTp skills across all domains, with greatest gains occurring for the skills of Normalization ($t = -4.71$, $p < .001$), Psychoeducation ($t = -6.15$, $p < .001$), Interventions for Delusions ($t = -4.80$, $p < .001$) and Interventions for Hallucinations ($t = -4.24$, $p < .001$). Additionally, participants reported significant increase in confidence using skills ($p< .001$) across all 9 domains. Conclusion: Participation in a 12 hour PPP training was associated with significant gains in knowledge and confidence in using CBTp informed skills.

No. 53

Case Report: An Adolescent Female With First-Episode Psychosis and Ehlers-Danlos Syndrome

Poster Presenter: Julia Luu Hoang, M.D.
Lead Author: Shalin Rajesh Patel, M.D.
Co-Author: Elizabeth M. Tully, M.D.

SUMMARY:

Introduction: Individuals with Ehlers-Danlos Syndrome (EDS) and hypermobility syndrome are at increased risk of being diagnosed with psychiatric disorders(1). EDS is the name applied to a large group of inherited disorders that affect the connective tissue. The disease is characterized by hypermobility, although symptoms and signs can be highly variable and include joint complaints, myalgia, skin problems, sleep apnea, pneumothorax and cardiovascular disease(1). We report a case of an adolescent female diagnosed with Schizophrenia

with co-morbid Ehlers-Danlos Syndrome in Riverside County. Case: The patient is a 17 y/o mixed Caucasian-Hispanic female with a history of Ehlers-Danlos syndrome diagnosed at 5 years old, and schizophrenia diagnosed at age 16.6. Autism Spectrum Disorder was ruled out at a formal autism evaluation. Evaluators noted disorganized thought and speech which made conversation difficult to follow. She screened positive for both hallucinations and delusions on the K-SADS. She described frequently hearing voices and visual hallucinations of people, along with delusions about being shot, being the captain of a rocket team, meeting Jesus, and having special abilities. Mother the patient had a steep decline in functioning over the past 2 years in her ability to have coherent conversations and care for her own hygiene. She was hospitalized for the first time for 6 days after she acted bizarre in school, had disorganized behaviors, and appeared to be responding to internal stimuli. She was discharged after showing improvement with olanzapine 20 mg daily. She was born premature at 32 weeks weighing 4 lbs and was treated in the NICU. She did not walk until 2 years old, but all other developmental milestones were normal. Her history of stressors include witnessing domestic violence, multiple visits to ER due to EDS, and spinal fusion surgery at age 11. Biologically, she has a mental illness: her great family history maternal uncle committed suicide and brother and maternal uncle have PTSD. She lives with her maternal grandmother, mother, step-father, and maternal uncle. She was seen by multiple psychiatrists in the past and has the following diagnoses in addition to Schizophrenia: ADHD, Unspecified Anxiety Disorder, and emotional disturbance of early adolescence. Currently, she is prescribed olanzapine 5 mg with partial therapeutic response. Discussion: Previous studies have shown an increased risk of psychiatric disorders in those with Ehlers- Danlos, with the most common diagnosis being depression and anxiety. Previous research which investigated the relationship with schizophrenia found conflicting results (2). Our case is unique because a patient with EDS developed significant psychotic symptoms followed by a diagnosis of schizophrenia at age 16. Further research is needed to investigate the possible relationship between Ehlers-Danlos and development of schizophrenia.

No. 54

Use of Unconventional Film Narrative in the Rehabilitation of Severe Mental Disorder: An Experience With the Third Season of Twin Peaks

Poster Presenter: Luis Maria Caballero Martínez, M.D.

Co-Authors: Inés García del Castillo, Monica Magariños Lopez, Ana Rodriguez, Pablo del Sol, Angela Izquierdo de la Puente, Paula Fernández-Guisasola, Sara Boi, Luis Caballero Escobar

SUMMARY:

Background: Severe mental illness generates perceptual, cognitive and emotional distortions and deficits in the experience of reality, that also manifest when patients are viewing films. Some neuroimaging studies have shown that circuits and brain areas are activated in the experience of watching films, that are frequently affected in severe mental disorder. A controlled clinical trial led by the authors showed that an original technique of guided training (1), sequence by sequence, working with a conventional TV series (first season of The Sopranos by D. Chase, 2003), could improve the scores of the positive (d: 0.82; p:0001), negative (d:0.89; p:.005) and unorganized (0.49; P:0.013) factors of the PANNS scale in a group of patients with severe mental disorder (2) (3) Results: The preliminary results of a study with the technique already described with an unconventional film narration are presented (3rd season of Twin Peaks). The unexpected theme, the fragmented and rambling narrative as well as the spatio-temporal distortion of this series allows to think that the psychocinematic results (attention, memory, executive functions and emotions) are different from those obtained with conventional series. Conclusions The psychocinematic results observed in the guided training with an unconventional series suggest a different activation of the neural networks involved in the cinematic experience (default mode network, salience network and central executive network). Consequently, this could imply therapeutic opportunities potentially different from those obtained with conventional series.

No. 55

Going, Going, Gone? Can Physicians Keep Up-to-Date With Developments in Schizophrenia Via Continuing Medical Education?

Poster Presenter: Jovana Lubarda, Ph.D.
Co-Authors: Cayla Cason, Teresa Marshall, Katie Lucero, Piyali Chatterjee

SUMMARY: Objectives: To evaluate effects of online continuing medical education (CME) on physician knowledge and confidence around the most recent developments in schizophrenia.[1-5] Methods: • Psychiatrists participated in 1 or more of 3 online CME activities on various topics in schizophrenia including the most recent understanding of the mechanism of disease (MOD), mechanisms of action (MOA) of emerging treatments, and latest clinical data.[6-8] The CME formats were a 30-minute video lecture, a 30-minute video discussion, and a 45-minute anthology of video-based interviews. • Effectiveness was analyzed using 3 multiple-choice and 1 self-efficacy question (5-point Likert-type scale), presented as pre-/post-CME repeated pairs. Activities posted in May and June 2018; data were collected from each for 30 days after launch. • Participant knowledge and confidence change in pre- to post-CME responses were calculated for each activity. • Knowledge was reinforced (correct pre- and post-CME), improved (incorrect pre- but correct post-CME), or unaffected (correct pre- but incorrect post-CME). • McNemar's test assessed changes in responses to knowledge questions from pre- to post-CME. • Cramer's V effect size was calculated using the change in proportion of learners who answered questions correctly from pre- to post-CME (<0.06 = modest, 0.06-0.15 = noticeable, 0.16-0.26 = considerable, and >0.26 = extensive effect). • Paired sample t-tests assessed changes in confidence. • P values measured significance; P <.05 = statistically significant. Results: • Psychiatrist completers of all pre- and post-CME questions were: Activity 1: N=1131, Activity 2: N=1071, and Activity 3: N=1359. • Across the activities 37% improved, 50% were reinforced, and 13% were unaffected. • Related to MOD post-CME, 17% more psychiatrists improved knowledge on the roles of glutamate signaling (activity 1; P<.0001; V=0.167), and 28% improved on evolution of schizophrenia symptoms (activity 1; P<.0001; V=0.284). • Related to MOA of emerging treatments post-CME, 25% (activity 1; P<.0001; V=0.255) and 10% (activity 2; P=.0004; V=0.093) more psychiatrists improved knowledge, respectively. • Related to the latest clinical data post-CME, 9% more psychiatrists improved knowledge (activity 3; P<.0001; V=0.095). • Across the three activities, there was a significant increase in confidence from pre- (M=2.60, SD=1.08) to post- (M=3.04, SD=1.02) CME [n=3561, t(7099)=-17.67, p<.001]. • There were significant differences in relative improvement in confidence for improved (n=1308, M=.42, SD=.68) and reinforced/unaffected (n=2253, M=.24, SD=.57) participant groups [t(2363)=-8.20, p<.01)]. Conclusions: Online CME may assist psychiatrists to integrate recent developments in schizophrenia into practice as demonstrated by their association with improved knowledge and confidence post-CME. However, residual gaps in both knowledge and confidence in this topic suggest a need for continued education.

No. 56

Risk of Arrest in Patients With Schizophrenia and Prior Jail Detention Treated With Long-Acting Antipsychotics at a Community Mental Health Center

Poster Presenter: Madhav Bhatta
Co-Authors: Saroj Bista, Antoine C. El Khoury, Eric Hutzell, Neeta Tandon, Douglas A. Smith, M.D.

SUMMARY:

Purpose: Only a limited number of studies have evaluated the relationship between long-acting injectable (LAI) antipsychotic medications, especially second generation drugs, and psychosocial outcomes including criminal justice system (CJS) encounters among patients with schizophrenia and/or schizoaffective disorders receiving care at the community level. This cohort study examined the association between LAI use and the risk of being arrested during two years of follow-up among patients with prior encounters with the CJS receiving care for schizophrenia and/or schizoaffective disorders at a community mental health center. Methods: This retrospective follow-up study utilized clinical data from a community-based mental health service provider and arrest data from a county jail in Ohio between the period of January 01, 2010 - July 18, 2018. The index date was defined as the date of the initiation of an LAI and an arrest was defined as

having been booked in the county jail for any misdemeanor or felony offense. We performed pre- and post-analyses to compare the risk of an arrest 1 and 2 years before and after the initiation of one of the five LAIs, namely, Aripiprazole; Fluphenazine Decanoate; Haloperidol Decanoate; Paliperidone Palmitate once a month (PP1M); or Risperidone. Results: Of the 978 patients in the cohort, this sub-analysis focused on 132 (13.5%) and 196 (20.4%) individuals with at least one arrest 1 and 2 years prior to index medication initiation (those with a prior history of CJS encounter). Males were significantly more likely to have an arrest record than females ($p<0.01$). Among those with a history of CJS involvement, the mean (SD) number of arrests 1- and 2-years prior to LAI initiation were 1.68 (1.29) and 2.33 (1.96) respectively. After the initiation, the mean number of arrests were 0.64 (1.18) and 1.03 (1.66) during 1- and 2-year follow-up period. Among those with a previous history of at least one arrest, the post-LAI initiation incidence declined significantly from 100.0% to 34.8% ($p<0.001$) and 44.9% ($p<0.001$) during the1- and 2- year follow-up periods, respectively. Among those on PP1M, the incidence of an arrest declined from 100.0% to 33.0% ($p<0.01$) and 42.5% ($p<0.01$) 1- and 2- years post-initiation. Conclusions: In this cohort study of schizophrenia and/or schizoaffective spectrum disorder patients with a prior encounter with the CJS, a significant reduction in the incidence of at least one arrest was observed during a two-year follow-up period after LAI treatment initiation, specifically PP1M, at a community mental healthcare facility. These results clearly highlight the benefits of LAI treatment (PP1M) on reducing the risk of an arrest, an important psychosocial outcome, especially among schizophrenia and/or schizoaffective spectrum disorder patients with a previous history of arrest.

No. 57

Dopamine Transporter as a Cause for Schizophrenia and the Associated Decreased Incidence of Lung Caner in This Population

Poster Presenter: Andrew Spaedy
Co-Authors: Nitin Pothen, Shveta Kansal, Alex Soloway

SUMMARY:

Introduction/Review Individuals with schizophrenia have a markedly higher than average rate of tobacco smoking; yet it has been shown by multiple studies that their risk of lung cancer is overall lower than that of the general population. There are both environmental and genetic factors that form the protective link between these two conditions. Our study aims to shed light on part of the genetic aspect of this relationship. Methodology Two unique search queries were run through OMIM (Online Mendelian Inheritance in Man) to obtain the known genetic links of both schizophrenia and lung cancer. These results were then crossmatched. One of the common genes, the SLC6A3 gene, was selected for further research. Multiple electronic databases were then searched with results going back over the past 30 years (1988 through 2018). Per our inclusion criteria, the abstract sections as well as the titles were sorted independently by two authors. Articles were sorted into relevant and irrelevant categories, with irrelevant articles being discarded. The full text was obtained for articles deemed to be relevant and were then reviewed by both authors. Results Evidence suggests that the SLC6A3 encoded DAT1 positively effect on the decreased likelihood of the development of lung cancer in individuals with schizophrenia. This appears to be largely achieved through dopamine's potent tumor inhibiting effects on neoplastic pulmonary tissue via it's effects on vascular endothelial growth factor. Conclusion The SLC6A3 encoded DAT1 may be associated with a protective effect against lung cancer in patients with schizophrenia. However, although preliminary findings have been positive, additional high quality research in the area of study will be needed to further delineate the relationship between the two.

No. 58

Myasthenia Gravis With Schizophrenia a Rare Combination With Long-Term Treatment Challenges

Poster Presenter: Meghana Rao Medavaram, M.B.B.S.
Lead Author: Chandani Maria Lewis, M.D., M.B.B.S.
Co-Author: Barbara Mary Funke, M.D.

SUMMARY:

Case Report: Myasthenia gravis with schizophrenia a rare combination with long- term treatment

challenges. Introduction: Myasthenia gravis (MG) is a rare autoimmune disorder caused by autoantibodies targeting the neuromuscular junction. The prevalence of MG is less than 10 per 100,000 persons per year and the mean lifetime prevalence of schizophrenia is around 1%. Only 10 cases of this rare combination is reported in the in the literature so far. We present a case of a 45-year old African American male with a current diagnosis of schizophrenia with myasthenia gravis, who has been followed up in our clinic for more than two decades. He was diagnosed with Myasthenia gravis when he was very young and was treated with pyridostigmine. His mother and grandmother were diagnosed with MG. His first psychiatric hospitalization was at the age of 8. Over the course of his treatment, he was treated with various antipsychotic medications. When he was younger he did fairly well on oral risperidone but later he was maintained on haldol decanoate for few years. Other psychotropic medications used over time included fluphenazine, aripiprazole, and sertraline. He was treated with both oral and long acting injections. His clinical course fluctuated due to non-adherence to antipsychotics as well as pyridostigmine. We present long-term treatment challenges encountered in treating a patient with MG with schizophrenia for over 20 years. Even though this combination is rare it is still necessary for a psychiatrist to recognize and address this disorder. It is difficult to recognize symptoms of MG in a patient with schizophrenia as the clinical symptoms of MG can be mistaken as adverse drug effects of antipsychotic medications. Antipsychotic medication treatment can potentially worsen myasthenia gravis in these patients.

No. 59

Insights on Clinician Understanding of Treatment-Resistant Schizophrenia

Poster Presenter: Purvi Smith
Lead Author: John Michael Kane, M.D.
Co-Authors: Jose Manuel Rubio-Lorente, M.D., Elizabeth Brunner, Angela Fix, Katia Zalkind, Jani Hegarty

SUMMARY:
Background: More than 21 million people worldwide are affected by schizophrenia. Despite the variety of antipsychotics available, a considerable proportion of patients with schizophrenia remain severely ill and resistant to treatment. At the onset of illness, rates of primary treatment resistance to primary schizophrenia treatment have been shown to be 10%-23%. Further, treatment resistance to what is commonly considered the last line of schizophrenia treatment, clozapine, is estimated to be 40–70% of the treated population. Little is known about physician knowledge and practice behaviors related to diagnosis and management of treatment-resistant schizophrenia (TRS). Objective: Determine the level of knowledge and characterize practice behaviors related to TRS among mental health clinicians. Methods: An industry-sponsored symposium was conducted at a large independent conference for mental health clinicians in 2018. All audience members (N=186) were offered the opportunity to participate in audience response system (ARS) survey questions before the symposium. Questions were designed to assess knowledge of prevalence, pathophysiology, guideline criteria, and evidence-based management of TRS. All data are summarized using descriptive statistics. Results: The symposium audience was primarily comprised of psychiatrists (78%). There were 146 respondents to pre-symposium ARS questions, although the number of responses varied per question. Among respondents, 33% (47/142) demonstrated knowledge of the literature-reported prevalence of treatment resistance among patients with schizophrenia. The majority of respondents (80%, 117/146) were not able to identify all of the distinctions between characteristics of patients with TRS and patients who are treatment-responsive. Half (50%, 67/133) were not able to correctly identify international guideline criteria for identifying TRS and only 23% (31/134) recognized that there are no evidence-based recommendations for management of TRS. Most respondents (74%, 100/135) were able to identify the contributing factors to the burden of TRS. Half of respondents (50%, 58/117) indicated that they did not regard TRS as categorically distinct from treatment-responsive schizophrenia. Conclusion: A survey of mental health clinicians highlights a need to increase clinician awareness of TRS prevalence, characteristics, and evidence-based treatment options. These findings may inform development of clinician training around disease state, diagnosis, and management of TRS.

No. 60

Comparative Effectiveness of a New Clozapine or Other Atypical Antipsychotic Monotherapy for Treatment-Resistant Schizophrenia

Poster Presenter: Taylor Sullivan
Co-Authors: Ira Ralph Katz, M.D., Ph.D., John McCarthy, Ph.D., Nicholas Bowersox

SUMMARY:

Background: Clozapine is the only antipsychotic medication with demonstrated increased effectiveness in reducing symptoms of schizophrenia in patients who have not responded to other antipsychotics ("treatment resistant schizophrenia"). Within the Veterans Health Administration (VHA), 20-30% of patients with schizophrenia have treatment resistant schizophrenia. Goren et al. (2016) suggested that clozapine is underutilized, and projected that VHA would save $22,444 per veteran with treatment resistant schizophrenia over the first year of clozapine therapy, based on a projected average reduction of 18.6 days of inpatient psychiatric care per patient. Previous evaluations of clozapine impact have used estimates or have conducted trials in controlled treatment environments, limiting generalizability. This work represents a real-world evaluation of the effectiveness of a new clozapine monotherapy trial in reducing the number of inpatient psychiatric days for patients with treatment resistant schizophrenia. Methods: A cohort of VHA users with treatment resistant schizophrenia who received a new antipsychotic monotherapy trial during FY 2006-2014 was created from the National Psychosis Registry, a national administrative database on care for VHA patients with psychotic disorders. The cohort was separated into those who received a new clozapine trial or a different atypical antipsychotic. Propensity scoring was used to account for differences in baseline characteristics between the two groups. Doubly robust estimation accounted for lingering imbalance between the treatment groups and estimates were produced using linear regression. Results: Patients with treatment resistant schizophrenia who received a new clozapine monotherapy had, on average, 19.2 fewer inpatient psychiatric days relative to those who receive a trial of a different atypical antipsychotic after controlling for patient and clinical factors, given that they adhered to the prescription for the full trial year. Conclusions: Clozapine does indeed reduce IP psych days, but only when groups are weighted, balanced, and confounding factors are addressed. The conceptualization of "treatment resistant schizophrenia" may benefit from additional expansion to include additional patient clinical characteristics to better identify patients who are good candidates for a trial of clozapine.

No. 61

Health-Related Quality of Life in Patients With Tardive Dyskinesia Based on Patient and Clinician Assessments

Poster Presenter: Chuck Yonan
Lead Author: Stanley N. Caroff, M.D.
Co-Authors: Andrew J. Cutler, M.D., Huda Shalhoub, William Lenderking, Karen Yeomans, Ericha Anthony

SUMMARY:

BACKGROUND: The presence and impact of possible tardive dyskinesia (TD) was assessed in RE-KINECT, an ongoing screening study of psychiatric outpatients treated with antipsychotic medications. The study includes patients with involuntary movements confirmed by a clinician as possible TD (Cohort 2), along with those who did not have possible TD (Cohort 1). While standard measures for TD severity are already being used in clinical research (e.g., Abnormal Involuntary Movement Scale), more alternative rating methods, especially patient self-assessments, are needed to better understand the significance of TD and its impact on patient health-related quality of life (HRQoL). METHODS: Patient-rated HRQoL measures included the EuroQoL 5-Dimension 5-Level (EQ-5D-5L) utility score (0=health state equivalent to death and 1=perfect health; normalized per general US population) and the Sheehan Disability Scale (SDS) total score (range, 0 [no impact] to 30 [highest impact]). The severity of possible TD in each of 4 body regions was rated by both patients and clinicians as follows: 0=none, 1=some, and 2=a lot. Patients also rated the impact of possible TD in each of 7 daily activity domains using the same item responses. Using baseline data from Cohort 2 (n=204), summary scores were calculated for patient-rated TD severity [sum of 4 body regions],

clinician-rated TD severity [sum of 4 regions], and patient-rated impact of TD [sum of 7 domains]. Associations between these summary scores and HRQoL scores by patient self-reports (EQ-5D-5L utility, SDS total) were analyzed using generalized linear regression models; the models were also adjusted using a set of baseline characteristics as covariates. RESULTS: For the EQ-5D-5L utility score, regression coefficients indicated that the strongest associations were with patient-rated impact of TD (unadjusted, -0.027 [P<0.001]; adjusted, -0.021 [P<0.001]) and patient-rated severity of TD (unadjusted, -0.029 [P<0.05]; adjusted, -0.028 [P<0.05]). No significant association was found with clinician ratings of the severity of TD (unadjusted, -0.013 [P>0.05]; adjusted, -0.007 [P>0.05]), which tended on average to be lower (less severe) than patient ratings of severity (mean [±standard deviation]: 2.3 [±1.4] vs. 2.7 [±1.6]). For the SDS total score, the only significant association was with patient-rated impact of TD (unadjusted, 1.129 [P<0.001]; adjusted, 0.984 [P<0.001]). CONCLUSIONS: These data suggest that patients are consistent in evaluating the severity and impact of TD on their lives whether based on subjective assessments or ratings using standardized HRQoL instruments (EQ-5D-5L, SDS). Clinician-rated severity of TD may not always correlate with patient perceptions of the significance of TD. Patient self-assessments can be clinically relevant; incorporating such measures into everyday practice may provide a more comprehensive approach to TD assessment and management. Supported by Neurocrine Biosciences, Inc.

No. 62

Efficacy of Monthly Extended-Release Risperidone Injections (RBP-7000) for the Treatment of Schizophrenia: Comparison of Two Analyses

Poster Presenter: Jay Graham, Pharm.D.
Lead Author: Anne Andorn, M.D.
Co-Authors: Maurizio Fava, M.D., John Csernansky, M.D., John W. Newcomer, M.D., Sunita Shinde, M.D., Anne Le Moigne, Ph.D., Paul J. Fudala, Ph.D., Christian Heidbreder, Ph.D.

SUMMARY:

Background: The efficacy and safety of RBP-7000 (PERSERIS™), a once-monthly subcutaneous extended-release risperidone formulation approved for the treatment of schizophrenia in adults, were demonstrated in an 8-week Phase III double-blind placebo-controlled inpatient study (NCT02109562). In a post hoc efficacy analysis, change from baseline to Day 57 (end of study) in Positive and Negative Syndrome Scale (PANSS) scores was evaluated using a mixed-effects model for repeated measures (MMRM), with scores at early termination (ET) carried forward to Day 57. To evaluate the robustness of that analysis, and to follow current industry and regulatory standards, a revised MMRM analysis was conducted in which ET data assessed at an unscheduled visit were excluded and not carried forward to Day 57. Methods: Adults with acute exacerbations of schizophrenia were randomized to receive monthly injections of placebo (n=112), RBP-7000 90 mg (n=111) or 120 mg (n=114). The original efficacy analysis examined changes from baseline in PANSS total and subscale scores to end of study, with ET PANSS scores collected at a scheduled or unscheduled visit carried forward to Day 57. In a revised analysis, ET PANSS scores that were not assessed as part of a scheduled visit were excluded from the analysis and these ET scores were not carried forward at Day 57. Mean treatment effects across all visits were examined. In both analyses, least squares (LS) estimates, standard errors (SE), and P values were based on a repeated measures linear regression model of the change from baseline score, with fixed effects for visit, baseline score, treatment and treatment-by-visit interaction, assuming an unstructured covariance matrix. One-tailed P values were adjusted for multiple comparisons with Dunnett's adjustments, with significance at ≤0.025. Results: Both analyses demonstrated efficacy for RBP-7000 90 mg and 120 mg compared with placebo. PANSS total scores between the 2 analyses were similar, with LS mean (SE) changes from baseline (original vs revised analysis) of -11.8 (1.5) vs -13.4 (1.6) for placebo, -18.7 (1.5) vs 19.9 (1.6) for RBP-7000 90 mg, and -20.5 (1.5) vs -23.6 (1.6) for RBP-7000 120 mg. LS mean differences (SE) between RBP-7000 90 mg and placebo were -6.9 (2.2) in the original analysis (P=0.0016) and -6.5 (2.2) in the revised analysis (P=0.0037). For RBP-7000 120 mg vs placebo, LS mean differences (SE) were -8.7 (2.1) in the original

analysis (P<0.0001) and 10.2 (2.2) in the revised analysis (P<0.0001). Both analyses yielded comparable results on changes in PANSS Positive and General Psychopathology scales. The revised analysis also revealed a significant treatment effect of RBP-7000 120 mg on PANSS Negative Scale scores vs placebo (P=0.0248) that was not apparent in the original analysis. Conclusions: Similar results were obtained with both analyses, reinforcing the conclusion that RBP-7000 is effective for the treatment of schizophrenia in adults. The revised analysis suggests that RBP-7000 120 mg may be useful in addressing difficult to treat negative symptoms. Funding: Indivior

No. 63

A Combination of Olanzapine and Samidorphan Mitigates Weight Gain Observed With Olanzapine: Results From the Phase 3 ENLIGHTEN-2 Schizophrenia Study

Poster Presenter: Craig Hopkinson
Lead Author: Christoph U. Correll, M.D.
Co-Authors: Rene Kahn, Bernard Silverman, Lauren DiPetrillo, Christine Graham, Ying Jiang, Yangchun Du, Adam Simmons, Peter Weiden, M.D., David McDonnell

SUMMARY:
BACKGROUND: A combination of olanzapine and samidorphan (OLZ/SAM) is in development for the treatment of schizophrenia. SAM is an opioid receptor antagonist intended to mitigate olanzapine-associated weight gain while maintaining the antipsychotic efficacy of olanzapine. The present 24-week (wk), phase 3 study (ENLIGHTEN-2) evaluated weight gain with OLZ/SAM compared with olanzapine alone. METHODS: This was a multicenter, randomized, double-blind study (ClinicalTrials.gov: NCT02694328) in adults with stable schizophrenia suitable for outpatient treatment. Eligible patients (pts) were randomized 1:1 to matching coated bilayer tablets of OLZ/SAM (10/10mg) or olanzapine (10mg) orally once daily. Doses were titrated up to OLZ/SAM 20/10mg or olanzapine 20mg after 1wk (depending on tolerability, dose could be decreased back to OLZ/SAM 10/10 or olanzapine 10mg). After wk 4, doses were fixed for the remainder of the study. Co-primary endpoints were percent change from baseline (BL) in body weight and proportion of pts with >=10% weight gain from BL at wk 24. The key secondary endpoint was the proportion of pts with >=7% weight gain from BL at wk 24. Antipsychotic efficacy was assessed using the Positive and Negative Syndrome Scale (PANSS). Safety and tolerability assessments included adverse events (AEs). RESULTS: Altogether, 561 pts were randomized (OLZ/SAM, n=280; olanzapine, n=281); 550 pts received at least 1 dose of study drug (safety population), 538 of 550 pts had at least 1 post-BL weight assessment (full analysis population), and 352 completed treatment. The most common reason for discontinuation was AEs (10.9%). BL characteristics were generally similar between groups (mean [SD] age, 40.2 [9.90] y; 72.7% male; 71.3% black; mean [SD] BMI, 25.45 [3.158] kg/m2). In the OLZ/SAM and olanzapine groups at BL, mean (SD) weight was 77.00 (13.680) and 77.45 (13.478) kg and PANSS total score was 68.2 (9.51) and 70.2 (9.47) points, respectively. At wk 24, least squares (LS) mean (SE) percent change from BL in body weight was 4.21 (0.681)% vs 6.59 (0.668)% in the OLZ/SAM vs olanzapine groups, respectively (difference: -2.38 [0.765]%; P=0.003). The proportion of pts in the OLZ/SAM and olanzapine groups with >=10% weight gain was 17.8% vs 29.8% (P=0.003), respectively, and with >=7% weight gain was 27.5% vs 42.7% (P=0.001). LS mean (SE) change from BL in PANSS total score was -8.2 (0.73) in the OLZ/SAM group and -9.4 (0.72) in the olanzapine group (P=0.261). The most common AEs reported in >=10% of pts in any treatment group were weight increased, somnolence, dry mouth, and increased appetite. DISCUSSION: In pts treated with OLZ/SAM for 24wks, mean percent weight gain was significantly lower, and significantly fewer pts gained clinically meaningful weight (>=10% and >=7%) vs olanzapine-treated pts. Pts in both treatment groups had similarly improved schizophrenia symptoms. Aside from weight-related AEs, the safety profile of OLZ/SAM was similar to olanzapine.

No. 64

The Impact of Second-Generation Antipsychotic Side Effects on Functioning From a Schizophrenia Patient Perspective: A Global Patient Centered Survey

Poster Presenter: Catherine Weiss

Co-Authors: Stine R. Meehan, William Lenderking, Huda Shalhoub, Jun Chen, Andrea Schulz, Ann Hartry, Mallik Greene, Laëtitia Bouérat Duvold

SUMMARY:
Background: Second-generation antipsychotics (SGAs) used to treat patients with schizophrenia generally have lower risk of motor side effects than first generation antipsychotics, but are associated with other well-known side-effects (SEs). The goal of the study was to understand how specific SEs of SGAs impact daily functioning, emotional well-being, and overall quality of life (QoL) of patients with schizophrenia from their own perspective Methods: This study was a cross-sectional, patient-reported web survey, conducted in the United States (N=180), Canada (N=99), Australia (N=28), and Europe (Italy; Spain; Denmark; Norway: N=128) in 2017-2018. The survey included patient socio-demographics, the Quality of Life Enjoyment and Satisfaction Questionnaire Short Form (Q-LES-Q-SF), and the Glasgow Antipsychotic Side-Effect Scale (GASS). In addition, specific questions about functional and emotional impacts were developed for SEs recognized as being bothersome to patients, such as activating SEs ('Feeling restless/unable to sit still,' 'Shaky hands or arms,' and 'Difficulty sleeping'), sedating SEs ('Feeling sleepy during the day' and 'Feeling drugged/like a zombie'), and metabolic or endocrine SEs ('Weight gain,' 'Problems enjoying sex'). Patients noted on a visual analog scale (VAS) the degree of impact on functioning, 0 indicating 'no impact at all' and 100 indicating the 'largest degree of impact.' Patients with schizophrenia (=18 years old), stable for at least one month, taking an SGA for 1-12 months, and self-reporting at least one SE were included (N=435). Results: The majority of the patients were diagnosed within the last 5 years and nearly half were living with a spouse or partner. Employment rates in different countries ranged from 32.2% to 54.5%. The most prevalent SEs reported on the GASS were 'difficulty sleeping,' 'feeling sleepy during the day' and 'drugged like a zombie.' More than half of the participants stated they have experienced gaining weight. SEs perceived as bothersome by patients were reported to impact patient functioning and emotions. These SEs had at least a moderate to severe impact (defined by a VAS score =50) on all aspects of functioning (physical, psychological, social, and vocational). Activating, sedating, and other SEs investigated showed a low negative correlation with quality of life and satisfaction score indicating worse QoL in participants with higher frequency of SEs. The most common emotions reported by patients with SEs were feeling Frustrated, Ashamed/Embarrassed, and Impatient/Irritated/Angry. Discussion: Findings confirm that stable patients taking SGAs still have many SEs including activating SEs and sedating SEs, sexual SEs, and weight gain. These SEs have considerable negative impact on patient's daily functioning and quality of life satisfaction, including on work, sexual drive and psychosocial effects.

No. 65

Mindfulness-Based Social Cognition Training for Psychosis: A Pilot Study

Poster Presenter: Carmen Bayon
Lead Author: Ainoa Muñoz San José
Co-Authors: Roberto Mediavilla, Nazaret Fernandez Gomez, Maria-Paz Vidal-Villegas, Beatriz Rodriguez Vega, Ángela Palao Tarrero, Guillermo Lahera, Maria Fe Bravo, M.D.

SUMMARY:
Background: People with schizophrenia tend to perform worse than healthy controls on a variety of social-cognitive tasks, an impairment which is thought to lead to diminished social functioning (Green, Horan & Lee, 2015). Social cognition accounts for an important portion of variance in social functioning (Green et al., 2015) and it is often affected in early stages of psychosis (Healey, Bartholomeusz, & Penn, 2016). Therefore, social cognition and social functioning are core outcomes for any psychiatric or psychological intervention tailor made for psychotic disorders (Warner, 2009). Limited effect of pharmacological strategies have boosted the development of different psychotherapeutic approaches. This research team developed a mindfulness-based social cognition group training (SocialMind) for persons with psychosis. Although there is enough evidence to support the lack of adverse events derived for mindfulness-based interventions specifically designed for psychotic patients (Cramer, Lauche, Haller, Langhorst & Dobos, 2016), many clinicians express their concerns about the beneficial effects of

these approaches. Therefore, and in keeping with international health organisms such as United Kingdom's National Health Service (NHS), this team has proposed a pilot study in order to evaluate feasibility and preliminary results of SocialMind. Objectives: To examine the feasibility (enrollment, attrition rate, session attendance, secondary effects) and initial effectiveness (change in social cognition) of SocialMind Training. Methods: A non-randomized, non-controlled, single group, prospective, pilot clinical trial. Participants are people with schizophrenia spectrum disorders. Indicators of adherence, attrition rates, adverse effects, and social cognition are measured. Results: 25 participants were included. No adverse effects were found regarding hospitalization rates or anxiety, depressive, or dissociative symptoms. Attrition rate was 15%. Although non-significant, there was an improvement in of theory of mind and emotion recognition. Discussion and conclusions: SocialMind is tolerable for participants with schizophrenia spectrum disorders. Adherence and attrition rates suggest that a randomized controlled trial can be implemented. Additionally, it is possible to target social cognition with a mindfulness-based training. Studies with greater sample size and a comparison group are needed. Conflict of interest: None

No. 66

SEP-363856 in the Treatment of Schizophrenia: A 4-Week, Randomized, Placebo-Controlled Trial of a Novel Compound With a Non-D2 Mechanism of Action

Poster Presenter: Kenneth S. Koblan
Co-Authors: Seth Hopkins, Justine Kent, Hailong Cheng, Robert Goldman, Antony David Loebel, M.D.

SUMMARY:
Background: SEP-363856 is a novel compound with a non-D2 mechanism of action which has shown broad efficacy in animal models of psychosis and depression. In pre-clinical models, the molecular targets responsible for the antipsychotic and antidepressant efficacy of SEP-363856 appear to include agonist activity at both trace amine associated receptor-1 (TAAR1) and 5HT1A receptors. Early clinical experience with SEP-363856 has demonstrated dose-proportional PK, with t½ of 12-18 hours, and evidence on fMRI of pharmacodynamic effects on midbrain dopamine circuits. The aim of this Phase 2 clinical trial was to evaluate the efficacy and safety of SEP-363856 in acutely symptomatic patients with schizophrenia. Methods: Hospitalized patients with schizophrenia were randomized, double-blind, to 4-weeks of flexible-dose treatment with SEP-363856 (once daily, 50 or 75 mg). The primary efficacy measure was the PANSS total score; secondary efficacy measures included the Clinical Global Impressions-Severity (CGI-S) score, PANSS subscale scores, and the Brief Negative Symptom Scale (BNSS) total score. Change from baseline in primary and secondary efficacy measures were analyzed using an MMRM analysis. Results: PANSS total scores were similar at baseline in the SEP-363856 group (N=120; mean score, 101.4) and the placebo group (N=125; mean score, 99.7). Least-squares (LS) mean reduction from baseline to week 4 was significantly greater for SEP-363856 vs. placebo on the PANSS total score (-17.2 vs. -9.7; P=0.001; effect size, 0.45), the PANSS positive subscale score (-5.5 vs. -3.9; P=0.019; effect size, 0.32), the PANSS negative subscale score (-3.1 vs. -1.6; P=0.008; effect size, 0.37), the PANSS general psychopathology subscale score (-9.0 vs. -4.7; P<0.001; effect size, 0.51), the CGI-Severity score (-1.0 vs. -0.5; P<0.001; effect size, 0.52), and BNSS total score (-7.1 vs. -2.7; P<0.001; effect size, 0.48). Study completion rates were similar for SEP-363856 vs. placebo (78.3% vs. 79.2%). Changes in weight, lipids, glucose and prolactin on SEP-363856 were similar to placebo. Adverse events occurring with an incidence =2% and at a higher rate on SEP363-856 vs. placebo were: somnolence (6.7% vs. 4.8%), agitation (5.0% vs. 4.8%), nausea (5.0% vs. 3.2%), diarrhea (2.5% vs. 0.8%), and dyspepsia (2.5% vs. 0%). Rates of extrapyramidal symptoms were similar to placebo (3.3 vs 3.2 %). Conclusions: In this placebo-controlled, 4-week study, SEP-363856, a novel compound with a non-D2 mechanism of action, demonstrated statistically significant and clinically meaningful symptom improvement in patients with schizophrenia. SEP-363856 exhibited robust, broad-spectrum activity across a range of positive, negative, depressive, and general psychopathology symptoms. The tolerability and safety profile of SEP-363856 appeared to be similar to placebo. ClinicalTrials.gov identifier:

NCT02969382 Funded by Sunovion Pharmaceuticals Inc.

No. 67

The Efficacy of Lumateperone 42mg in the Treatment of Schizophrenia: A Pooled Analysis of Phase 2 and 3 Randomized Controlled Trials

Poster Presenter: Carol A. Tamminga, M.D.
Co-Authors: Kimberly Vanover, Michal Weingart, Robert Davis, Andrew Satlin, M.D.

SUMMARY:

Introduction: Lumateperone (ITI-007) is in late-phase clinical development for schizophrenia and other disorders. Lumateperone has a unique mechanism of action that modulates serotonin, dopamine, and glutamate neurotransmission. Lumateperone was evaluated in 3 randomized, double-blind, placebo (PBO)-controlled studies in patients with acute exacerbation of schizophrenia. In 2 studies, lumateperone 42mg (ITI-007 60mg) met the primary endpoint, significant reduction vs PBO in the Positive and Negative Syndrome Scale (PANSS) Total score. In 1 study, no significant difference between lumateperone 42mg vs PBO was seen; however, the magnitude of improvement in PANSS Total score was similar to that seen in the positive studies. In all 3 studies, lumateperone was well tolerated. This pooled analysis of the 2 positive studies evaluated the efficacy of lumateperone 42mg in the treatment of schizophrenia. Methods: Data were pooled from the 2 positive studies for analysis. The primary efficacy endpoint in the pooled analysis was change from baseline to Day 28 in PANSS Total score. Secondary assessments included change from baseline in PANSS subscale scores (Positive Subscale score [PS], Negative Subscale score [NS], General Psychopathology Subscale score [GPS], derived Prosocial Factor score [PF]), and Clinical Global Impressions–Severity (CGI-S) score. Additional secondary endpoints were percent of patients meeting various PANSS response criteria (20%, 30%, and 40% PANSS improvement). Analysis of PANSS Total and subscale scores, and CGI-S score was conducted via a mixed model for repeated measures; PANSS response rates were analyzed using Fisher's exact test. Results: The intent-to-treat population comprised 520 patients (221, PBO; 224, lumateperone 42mg; 75, risperidone 4mg). Lumateperone 42mg significantly reduced PANSS Total score compared with PBO (least squares mean difference versus PBO [LSMD]= 4.76; P<.001) with efficacy similar to risperidone 4mg (LSMD= -4.97; P=.014). Lumateperone 42mg also showed significant efficacy vs PBO across 3 of the 4 PANSS subscales analyzed: PS, LSMD= -1.71, P<.001; NS, LSMD= -0.76, P=.098; GPS, -2.04, P=.009; PF, LSMD= -1.47, P<.001) and on the CGI-S (LSMD= -0.29, P<.001). Lumateperone 42mg was associated with significantly higher PANSS response rates than PBO for each criterion level (20% improvement, 37% vs 50%, P=.010; 30% improvement, 24% vs 38%, P=.002; 40% improvement, 15% vs 25%, P=.010). Negative results from the third study did not impact the ability of lumateperone 42mg to significantly separate from PBO when the 3 studies were pooled. Conclusions: In this pooled analysis in patients with acute exacerbation of schizophrenia, lumateperone 42mg significantly improved the symptoms of schizophrenia. Improvement on various PANSS subscales and greater rates of PANSS response suggest that lumateperone 42mg has broad efficacy across schizophrenia symptoms and is associated with clinically meaningful improvement.

No. 68

The Differences of Cognitive Control Deficits in Schizophrenia, Bipolar I Disorder, and Their Unaffected Relatives

Poster Presenter: Bohyun Jin
Lead Author: Seunghee Won
Co-Author: Hyerim Yun, M.D.

SUMMARY:

Background: Cognitive control is an adaptive action, which is required the ability to maintain intentions and goals over time in constantly changing environment and to flexibly switch between these goals in response to significant changes. Cognitive control disability is considered a core pathology of schizophrenia. As well as schizophrenia, bipolar disorder have reported cognitive control deficits in similar area but a less severe degree. However, the studies of first relatives of probands with schizophrenia and bipolar disorder showed a mixed findings. This study aimed to identify the differences and the profiles of cognitive control deficits and possible candidates as endophenotypes of

schizophrenia and bipolar disorder. Methods: Five groups were included in this study: remitted patients with schizophrenia(n=69), patients in euthymic states of bipolar I disorder(n=64), unaffected first-degree relatives of proband with schizophrenia(n=45), those with bipolar I disorder(n=36), and healthy controls(n=64) who were matched on age, sex and years of education. Patients met criteria for schizophrenia, bipolar I disorder based on the Structured Clinical Interview for DSM-IV(Diagnosis and Statistical Manual of Mental Disorder-IV). All participants had to be euthymic, as evaluated by the Korean version of the Montgomery-Asberg Depression Rating Scale(K-MADRS)(score=8), the Young Mania Rating Scale-Korea version(YMRS-K)(score=6) and not to be psychotic, as evaluated by the Brief psychiatric Rating Scale(BPRS)(score=40). A version of the AX-CPT (AX-continuous performance test) paradigm was used to examine cognitive control. Error rate, correct response times of each subsets (AX, BX, AY, BY) and d' score as an indication of accuracy sensitivity index were calculated. Psychopathology, intelligence and psychomotor speed were also assessed. Results: Both patient groups showed significantly worse error rates in BX subset (p=0.01), and higher d` score (p=0.01) than the others. The error rates in AX subset of the patients with schizophrenia also higher than those of the others. (p=0.01) Both patient groups showed more delayed correct response times than the others in all CPT subsets(p<0.01) and the first degree relatives of schizophrenia performed more delayed correct response times than relatives of bipolar I disorder and healthy controls in all CPT subsets(p<0.01). Conclusion: These findings suggest that cognitive control is impaired in schizophrenia and bipolar I disorder with poorer ability of schizophrenia and the impairments in cognitive control seems more likely to be a possible endophenotypes shared in schizophrenia. This research is supported by Kyungpook national university research fund, 2015.

No. 69

Psychosis in the Elderly: A 5-Year Retrospective Analysis of Patients Admitted to an Acute Psychiatric Inpatient Unit

Poster Presenter: Leonor Santana

Co-Authors: Hugo Simião, Carla Spinola, Catarina Santos, Daniel Neto, Joaquim Gago, Bernardo Barahona-Corrêa

SUMMARY:

Background: Psychosis and Schizophrenia spectrum disorders are predominantly studied in young adults. However, it is known that some individuals only develop psychotic disorders later in life. Late-life psychosis has been recognized since Bleuler's introduction of the term Late-onset Psychosis (LOP) (1). There has been some research on the subject but neither ICD-10 or DSM V include LOP as a diagnosis, thus limiting the clinical awareness and research of this clinical entity (2). According to Korner et al., patients with psychosis in old age have a higher risk of developing dementia compared to the general population (3). Some authors defend that psychosis is just a presentation of dementia in the very old onset cases (1). There is a lack of studies regarding the etiopathogenic process underlying this risk and its specific causes. The aim of this study is to make a 5 -years retrospective analysis of the patients admitted to the Acute Psychiatric Inpatient Unit in Hospital Egas Moniz with a diagnosis of psychosis and 60 or more years of age. Methods: Screening of all electronic medical records and charts of patients admitted to the Acute Psychiatric Inpatient Unit of Hospital Egas Moniz in Lisbon, Portugal, between 2013 and 2018. Patients with a primary psychotic disorder, age above 60 years at the time of hospitalization and without a prior psychiatric history were included. Patients with affective symptoms at time of admission were excluded. Mortality by any cause, development of dementia (and if so time to diagnosis), and other changes in diagnosis were analyzed. Results: Preliminary results show a mean age of 72 years old at time of hospitalization, with a higher rate of women. 66% of patients were diagnosed with dementia of any cause at the time of discharge. After discharge, the time to the diagnosis of dementia was 4,25 months on average. Conclusion: The transition to dementia in LOP patients is very high and clinicians should be aware. Routine cognitive assessment should be integrated in routine psychiatric clinical practice.

No. 70

Treatment Challenges Among a Japanese-American Young Adult With New Onset Schizophrenia: A Case Report

Poster Presenter: Jin Cai, D.O.
Co-Authors: Scott Kirby Brenner, D.O., Kimberly Brandt, D.O., Garima Singh, M.D.

SUMMARY:
Background: Schizophrenia is a mental disorder affecting 0.5-1% of populations, There are studies discussing the role of genes, environment, demographics and other psychosocial factors associated with the cause and pathology of disease yet there is limited evidence in regards to effect of cultural belief and ethnicity in the course of diagnosis and management of schizophrenia. Methods: This is a case of a 26-year-old Japanese exchange student with new onset schizophrenia and the impact of his and family's belief on the treatment and prognosis of the disease. Initially, patient presented to the hospital for auditory hallucinations which affected his primary, social, and academic life. During his hospital stay, patient was diagnosed with schizophrenia and started on Olanzapine 2.5 mg which was titrated up to 5mg. After the discharge, Olanzapine was decreased to 2.5mg in clinic because complaints of somnolence with the medication. Patient continued to be noncompliant to medications secondary due to not believing his diagnosis of schizophrenia. Patient and patient's mother believed he had only social anxiety/Hikikomori. Returned to Japan for a short period and saw a psychiatrist in Japan who discontinued Olanzapine and continued with diagnosis of just social anxiety. After returning back to USA, patient again was admitted to the inpatient unit with worsening psychosis and treated aggressively with Aripiprazole 10 mg daily and continued on Paxil 10 mg which was started in Japan for anxiety. Oral Aripiprazole increased and then transitioned to Aripiprazole Maintena 400mg LAI (long acting injectable). During this hospital stay patient's auditory hallucinations significantly decreased and the patient's paranoia symptoms improved. One month after his hospital stay, the second dose of the LAI was planned but patient refused as he did not to be on a LAI and continued only on oral Aripiprazole 5 mg twice daily. Conclusion: There continues to be multiple barriers in the psychiatric treatment of Japanese patients. The duration of untreated patient with psychosis in Japan is on average 20.3 months. (4) There is a large population being treated, yet are unaware that they have schizophrenia. (1) There is a negative stigmatization attached to old Japanese term of schizophrenia, "Seishin Bunretsu Byo", which is linked to long-term inhumane treatment. (2) Many Japanese believe they have hikikomori which often delays the diagnosis and treatment of schizophrenia. Goal of this case study is to provide more awareness and education about cultural and social implications when treating Japanese patient with new onset schizophrenia. This will aid in decreasing noncompliance and providing optimal treatment in a timely manner. There needs to be further education to help destigmatize outdated Japanese thoughts on schizophrenia because currently it can be successfully treated with a combination of pharmacotherapy and appropriate psychosocial intervention. (2)

No. 71

Conversion to Primary Psychosis Following Substance-Induced Psychotic Disorder

Poster Presenter: Maria Novaes
Co-Authors: Inês Donas-Boto Esturrenho, Miguel Nascimento, M.D.

SUMMARY:
Background Patients with substance-induced psychotic disorder (SIPD) stand at an increased risk of conversion to a schizophrenia or bipolar disorder diagnosis. The distinction between the entities of SPID and primary psychotic disorder with concurrent substance abuse (PPD + SA) poses a challenging differential diagnosis. Previous studies have highlighted the role of demographic factors, family history and individual symptoms, but have not, thus far, delineated a full explanatory model. The authors characterize the clinical course of SPID in a group of patients and investigate the factors pondering on the evolution to PPD+SA. Methods The authors selected a convenience sample among patients admitted to the Acute Psychiatric Inpatient Unit of a Psychiatry Department in a general hospital in Lisbon, Portugal, between January 2016 and July 2018, with discharge diagnoses of SPID (n=25). The authors examined the full clinical records and

extracted demographic data and disease concerning data, such as age of onset, family history of mental disorders and diagnosis conversion to PPD+SA. The authors conducted a descriptive analysis of the collected data. Results Overall, 40% (n= 10) of patients with SIPD converted to a PPD+DA diagnosis within an average of 3,6 years (standard deviation 3,503) after the first psychotic episode. Sixty percent of patients maintained their initial SPID diagnosis. The age of onset was similar between groups (SPID= 26,866; PPD+SA) and, in both cases, men were more heavily represented (male to female ratio SPID 4:1; PPD+DA 2,33:1). SPID patients presented an average of 3,2 hospitalizations in the course of their disease, versus 2,2 in the PPD+SA group. Sixty percent of PPD+DA patients had a positive family history of mental disorders, in contrast to only 40% of SPID patients. Conclusions SIPD seems to be strongly associated with the development of primary psychotic disorders and its clinical meaning should not be undermined. A consistent follow-up seems to be crucial, especially in patients with positive family history and in the first 3 years of illness, when the rate of conversion is higher. More and better-quality data will further substantiate the cause for primary prevention in substance abuse and can potentially pave the way for secondary prevention at an individual level.

No. 72

Novel Treatment of Negative Symptoms: A Network Analysis Indicates Avolition Is the Most Central Domain for the Efficacy of Roluperidone

Poster Presenter: Gregory Strauss, Ph.D.
Co-Authors: Farnaz Zamani Esfahlani, Ph.D., Hiroki Sayama, Ph.D., Brian Kirkpatrick, M.D., Jay Saoud, Ph.D.

SUMMARY:

Introduction: Daily functioning is impaired in people with schizophrenia largely driven by negative symptoms. DSM-5 describes 5 negative symptoms domains: blunted affect, avolition, asociality, anhedonia and alogia. In a 12-week Phase 2b trial (Ph2b), roluperidone (MIN-101) demonstrated improvement of negative symptoms (Davidson et al 2017, Kirkpatrick et al 2017). A network analysis of the Ph2b data to determine how the 5 domains of negative symptoms interact and elucidate how the drug achieved its clinical effect is reported here. Methods: Ph2b data was collected with the Brief Negative Symptoms Scale (BNSS) on patients with negative symptoms of schizophrenia randomized to 1 of 3 treatment arms: roluperidone 32 mg (n = 78) or 64 mg (n = 83) or placebo (N = 83). A standard approach of evaluating symptom networks by calculating macroscopic and microscopic network properties was adopted. Macroscopic properties (e.g., network density, average clustering coefficient, and average shortest path length) provide information about the overall connectedness of the network (i.e., interdependence of symptoms). In contrast, microscopic properties (e.g., degree centrality, closeness centrality) provide information about which individual symptoms are most influential and inter-connected with other symptoms in the network. Results: Macroscopic properties did not distinguish between active drug and placebo. However, microscopic properties indicated that avolition was highly central in patients on placebo and that roluperidone effectively reduced this level of centrality. Interactions examining between-subjects effects of sex and dose were nonsignificant in both types of network properties. Conclusions: These findings suggest that decoupling the influence of motivational processes on other aspects of negative symptoms may be essential to successful treatment. Importantly, it was the avolition internal experience item on the BNSS that was most central, suggesting that reduced goal-directed drive and motivation may be core to the negative symptom construct. As evidenced by the current microscopic analyses, network analysis is capable of indicating whether certain symptoms are driving treatment response by having dynamic influences on the entire constellation of negative symptoms. This finding has critical treatment implications for future clinical trials and novel therapeutics. The Ph2b study was supported by Minerva Neurosciences Inc., however the network analysis was conducted without support.

No. 73

Differential Expression of Molecular Factors in Psychotic Spectrum Disorders: A Case-Control Study

Poster Presenter: Rodney Uy, M.D.
Co-Authors: Benjamin Fey, M.D., Theresa Jacob, Ph.D., M.P.H., Sarah Elmi, M.D.

SUMMARY:

Introduction: Besides schizophrenia, there are numerous other psychiatric and non-psychiatric conditions that present with psychotic symptoms. The pathological mechanisms resulting in psychotic symptoms are not fully understood, nor is it known whether the various psychotic illnesses are the result of similar biochemical disturbances. Brain-derived neurotrophic factor (BDNF), a neurotrophin known to be responsible for development, regeneration, survival and maintenance of neurons, has been implicated in the pathophysiology of psychosis in schizophrenia. Patients predisposed to psychotic spectrum disorders would have conditions that impair neuronal plasticity and neurogenesis. BDNF pathway reportedly plays a key role in the pathogenesis of several mental disorders and reduced BDNF mRNA levels found in psychosis patients. Objective: To assess the plasma levels of BDNF in patients undergoing psychotic episodes as compared to those in healthy controls and to determine if it has a predictive value for psychosis. Methods: This IRB-approved prospective, case-control study was conducted at a community-based mental health center of an urban teaching hospital. Peripheral blood samples were collected from psychiatric inpatients and healthy age, gender and race-matched subjects. Brief Psychiatric Rating (BPRS) and Clinical Global Impression (CGI) scales were administered and levels of free and total BDNF were determined by enzyme-linked immune-absorbent assays. Data collected included anthropometrical measures, medical / psychiatric / psychosocial and substance abuse history and were analyzed using the SPSS statistical software. Results: Of the patients enrolled in this study (N=77; average age: 41.6±13.2 years; female, 54%), nearly half had a schizoaffective disorder diagnosis. Psychosis patients had significantly lower lymphocyte count, LDL, HDL, and albumin levels, while they had higher neutrophil count and blood glucose. Analyses are ongoing and it is expected that the data will demonstrate significant differences in plasma levels of BDNF between patients and controls. It is envisioned that there will be an association between symptom severity and BDNF levels in psychotic spectrum patients. Conclusion: While previous biomarker research mostly focused on schizophrenia, we addressed 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. 74

Associated Factors of Psychosocial Function and Outcome of Individuals With Recent-Onset Schizophrenia and at Ultra-High Risk for Psychosis

Poster Presenter: Hyunkyu Kim
Lead Author: Suk Kyoon An
Co-Authors: Hye Yoon Park, M.D., Eunchong Seo, Minji Bang, Su Young Lee, Jin Young Park, Eun Lee, M.D.

SUMMARY:

Background: Schizophrenia patients suffer the impairments in social function and frequent readmission. A 'putative' prodromal, ultra-high risk (UHR) for psychosis already presents poor social functioning and 20~30% individuals convert to overt psychosis within 1-2 years. The aims of this study were to explore the factor structure of the self-related psychosocial variables and neurocognitive function, and investigating whether these factors are associated with social function and prognostic outcome in individuals with recent onset schizophrenia (ROSPR) and at UHR. Methods: Sixty UHR individuals, 47 ROSPR, and 71 healthy controls were assessed by using the self-reported scales of the attribution style, self-esteem, resilience, aberrant subjective experiences of schizotypy (physical anhedonia, social anhedonia, magical ideation, and perceptual aberration), basic symptoms, and comprehensive neurocognitive test battery. Social function was assessed by using the Quality of Life scale (QLS). Results: Factor analysis of self-related psychological variables and neurocognitive performance in the entire subject showed a four-factor structure, comprised of social-cognitive bias, reflective self, neurocognition, and pre-reflective self factors. At baseline, multiple regression analysis revealed that the factor structure predicted QLS. In UHR, social-cognitive bias, reflective self, neurocognition factors and negative symptom were significant determinants that explained 38% of the variance of the total QLS score. In ROSPR group, reflective self factor and negative

symptom were significant determinants that explained 54.4% of the total QLS score. During follow-up, thirteen UHR participants converted to psychosis (cumulative prevalence: 31.2% ± 7.6% at 6 years), and neurocognition factor score at baseline remained significant as a predictor for transition [χ² (1)=4.009, p=0.045; HR 0.56, 95% CI 0.31-0.99, p=0.048) by cox regression analysis. Five schizophrenia subjects (re)admitted during follow up (cumulative prevalence: 16.1% ± 7.1% at 6 years), but there was no significant factor that predicts the (re]admission rate [χ² (1) =2.630, p=0.105]. Conclusion: This study constructed the intrinsic four-factor structure of the social-cognitive bias, reflective self, neurocognition and pre-reflective self for individuals living in the world. These findings of the associations of four factor structure with social function in both clinical subjects at baseline and conversion rate of UHR during follow-up may implicate the clinical significance of these intrinsic four factors in individuals with schizophrenia spectrum disorders. This work was supported by the 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. 75

Schizoaffective Disorder Following a Traumatic Brain Injury: A Case Report and Literature Review

Poster Presenter: Robert Mullin
Co-Author: Rebekkah Rae Brown, D.O.

SUMMARY:
Traumatic Brain Injury (TBI) is known to be associated with a range of long-term adverse psychiatric sequelae. Recent research suggests prior TBI as being a risk factor for the development of various psychotic disorders. Schizoaffective disorder is a fascinating well-documented psychotic disorder where patients exhibit both schizophrenic and intermittent mood symptoms. While the exact cause of schizoaffective is unknown, current research suggests the etiology is multifactorial including a combination of physical, genetic, psychological, and environmental factors. We present a case of a 28-year-old Caucasian male with a past medical history significant for growth hormone insufficiency and TBI at age 13 who was involuntarily taken to the emergency room by the police department after he showed up to multiple businesses, schools, and public parks under the delusion that he was on the campaign trail for state congressman. Discussion with his family revealed that he had been having delusions of grandeur and hallucinations for approximately 1.5 years following the loss of his job and that he was non-compliant with any medications prescribed. We review the case presentation and available literature to help better educate healthcare professionals on schizoaffective disorder and possible risk factors.

No. 76
WITHDRAWN

No. 77

A Rare Case of Turner's Comorbid With Schizoprenia and OCD

Poster Presenter: Hans Wang

SUMMARY:
Turner syndrome (TS) is a rare genetic disorder in females. Case reports of psychosis, schizophrenia, mood disorders having been reported, however, none with all three in conjunction. We report a case of treatment resistant schizophrenia with co-morbid obsessive compulsive disorder in a patient with Turner Syndrome. To the best of our knowledge, our case is the first of its kind. We hope to add to existing literature about psychiatric illness co-morbid in with TS and to discuss the basic principles of management in such a rare combination.

No. 78

HP-3070 Asenapine Transdermal System in Adults With Schizophrenia: Categorical Response and Clinical Relevance as Assessed in a Phase 3 RCT

Poster Presenter: Leslie L. Citrome, M.D., M.P.H.
Co-Authors: David Walling, Courtney Zeni, Marina Komaroff, Alexandra Park

SUMMARY:
Background: HP-3070, asenapine transdermal system, is a once-daily patch for treatment of schizophrenia in adults. A Phase 3, multicenter, double-blind, placebo (PBO)-controlled, 6-week inpatient study of HP-3070 met primary and key

secondary efficacy endpoints for low- and high-dose HP-3070 (equivalent to sublingual [SL] asenapine 5mg and 10mg BID, respectively) on Positive and Negative Syndrome Scale (PANSS) total score and Clinical Global Impression–Severity of Illness Scale (CGI-S) change from baseline (BL) to Week 6 vs PBO. Outcomes regarding categorical response are reported here. Methods: Adults with an acute exacerbation of schizophrenia, PANSS total score >=80, and CGI-S score >=4 (full analysis set N=614) were randomized (1:1:1) to HP-3070 high-dose (n=204), HP-3070 low-dose (n=204), or PBO (n=206). Secondary efficacy outcomes included PANSS responder analysis (=30% improvement from BL in PANSS total score), CGI-Improvement (CGI-I) scores, and CGI responder analysis (CGI-I score of 1 or 2 [very much or much improved]) at each week. Safety included treatment-emergent adverse events (TEAEs) and dermal assessments. Results: PANSS responder rates were significantly higher with HP-3070 vs PBO only at Week 6 (high-dose: 29.6% [p=0.006]; low-dose: 30.8% [p=0.006]; PBO: 18.7%; number needed to treat [NNT] vs PBO: 10 [95% CI 6-39] and 9 [95% CI 5-27], respectively). CGI-I scores generally decreased over time, with significant improvement vs PBO for HP-3070 low-dose at Week 2 (p<0.05), high-dose at Week 3 (p<0.05), and both doses at Weeks 4, 5, and 6 (all p<0.01). Least squares mean±standard error CGI-I scores at Week 6 were 2.6±0.07 (p=0.005), 2.5±0.07 (p<0.001), and 2.9±0.07 for HP-3070 high-dose, low-dose, and PBO, respectively. CGI responder rates were significantly higher with both HP-3070 doses vs PBO at Weeks 4, 5, and 6 (all p<0.05). Week 6 CGI responder rates for HP-3070 high-dose, low-dose, and PBO, respectively, were 43.3% (p=0.044), 49.8% (p=0.002), and 34.0% (NNT vs PBO: 11 [ns] and 7 [95% CI 4-16], respectively). Systemic TEAEs were mostly mild or moderate in severity and consistent with SL asenapine. Rates of application site TEAEs were 14.2% and 15.2% for HP-3070 high- and low-dose, respectively, vs 4.4% for PBO (number needed to harm [NNH] vs PBO: 11 [95% CI 7-24] and 10 [95% CI 7-20], respectively). Discontinuations due to application site reactions or skin disorders were <=0.5% across groups; thus NNH calculations were not clinically relevant for this outcome. Conclusion: HP-3070 is efficacious for treatment of schizophrenia, with significant treatment response in both PANSS and CGI responder analyses. Application site TEAEs were observed but did not generally lead to treatment discontinuation. Once approved, HP-3070 will be the first transdermal antipsychotic available in the US, providing a novel treatment formulation. This study was supported by Noven Pharmaceuticals, a wholly-owned subsidiary of Hisamitsu Pharmaceutical Co.

No. 79

Effect of Dasotraline on Body Weight in Patients With Binge-Eating Disorder

Poster Presenter: Leslie L. Citrome, M.D., M.P.H.
Co-Authors: Joyce Tsai, Matthew Mandel, Ling Deng, Andrei A. Pikalov, M.D., Ph.D., Antony David Loebel, M.D.

SUMMARY:

Background: Binge-eating disorder (BED) is associated with obesity (BMI =30) in ~40-45% of patients, with approximately 20% of the obese subgroup meeting class III criteria (BMI=40). Dasotraline is a potent, long-acting dopamine/norepinephrine reuptake inhibitor with a PK profile characterized by slow absorption and a t½ of 47-77 hours, permitting once-daily dosing. In a recent placebo-controlled, flexible-dose study, dasotraline demonstrated efficacy in patients with BED. We now report an analysis from this study of the effect of dasotraline on body weight. Method: Patients with moderate-to-severe BED, based on DSM-5 criteria, were randomized into a 12-week, double-blind, placebo controlled, flexible-dose trial of dasotraline (4-8 mg/d). The primary efficacy measure was number of binge-eating days/week. Mean change in body weight at Week 12 was analyzed by baseline body mass index (BMI, kg/m2) category, and by mean modal dose of dasotraline (4, 6, or 8 mg/d). Inferential statistics were not performed. Results: The safety population consisted of 317 patients (female, 84%; mean age, 38.2 years; mean weight, 97.3 kg). At baseline, the proportions of patients in each BMI category were as follows: normal (<25: 5.7%), overweight (25 to <30: 18.1%), obesity class I (30 to <35: 25.1%), class II (35 to <40: 29.2%), and class III (=40: 21.9%). For the overall patient sample, treatment with dasotraline significantly reduced the number of binge eating days per week vs. placebo (-3.74 vs. -2.75; P<0.0001;

effect size = 0.74). Mean changes in weight (in kg) at LOCF-endpoint for dasotraline vs. placebo by baseline BMI category were as follows: normal weight (-3.40 vs. -0.13), overweight (-4.98 vs. +1.29), obesity class I (-4.17 vs. +0.17), class II (-3.47 vs. +0.26), class III (-7.52 vs. +0.35); and obesity classes I-III combined (-4.81 vs. +0.26). For the dasotraline group, the proportion of patients at LOCF-endpoint with =5% or =10% reduction in weight, respectively, were as follows: normal weight (57.1% and 28.6%), overweight (64.5% and 22.6%), obesity class I (44.7% and 15.8%), class II (36.2% and 6.4%), and class III (59.4% and 21.9%). No patients on placebo had =5% reduction in weight during the study. No dose-related effect of dasotraline on change in weight was observed across the baseline BMI categories. For the dasotraline group, the Spearman correlation between LOCF-endpoint change in binge eating days per week and change in weight was 0.34 (P<0.001). Conclusion: In this placebo-controlled 12-week study of dasotraline in patients with moderate-to-severe binge eating disorder, treatment with dasotraline (4-8 mg/d) was associated with significant reduction in binge eating days per week. Among patients completing 12 weeks of treatment, weight reduction =5% was observed in approximately 40% of obese patients. There was a significant correlation between endpoint reduction in binge eating and reduction in weight.

No. 80

Dasotraline for Treatment of Adults With Binge-Eating Disorder: Effect on Binge-Related Obsessions and Compulsions

Poster Presenter: Leslie L. Citrome, M.D., M.P.H.
Co-Authors: Joyce Tsai, Matthew Mandel, Ling Deng, Andrei A. Pikalov, M.D., Ph.D., Antony David Loebel, M.D.

SUMMARY:

Background: Binge-eating disorder (BED), the most common eating disorder in the US (lifetime prevalence, 1.3-3.5% in women and 0.4-2.0% in men), is associated with impairment in quality of life and functioning. Dasotraline, a potent, long-acting dopamine/norepinephrine reuptake inhibitor, has a PK profile characterized by slow absorption and a t½ of 47-77 hours, permitting once-daily dosing. In a recent study, dasotraline demonstrated robust efficacy in patients with BED. We now report an analysis from this study of the effect of dasotraline on binge-related obsessions and compulsions. Method: Patients with moderate-to-severe BED, based on DSM-5 criteria, were randomized into a 12-week, double-blind, placebo controlled, flexibly-dosed trial of dasotraline (4, 6, and 8 mg/d). The primary efficacy measure was number of binge-eating days/week; secondary measures included the Binge Eating Clinical Global Impression of Severity (BE-CGI-S) score and the Yale-Brown Obsessive-Compulsive Scale Modified for Binge-Eating (Y-BOCS-BE), a validated, 10-item interviewer-administered measure designed to assess the severity of obsessional thoughts and compulsive behaviors related to binge eating. Change from baseline in efficacy measures were analyzed using a mixed model for repeated measures (MMRM) analysis. Results: The ITT population consisted of 317 patients (female, 84%; mean age, 38.2 years). LS mean reduction from baseline in number of BE days per week was significantly greater for dasotraline vs. placebo at week 12 (-3.74 vs. -2.75; P<0.0001; effect size [ES] = 0.74; primary endpoint); week 12 change was significantly greater for dasotraline vs. placebo on the Y-BOCS-BE total score (-17.05 vs. -9.88; P<0.0001; ES, 0.96), the obsession subscale score (-8.32 vs. -4.58; P<0.0001; ES, 0.95), and the compulsion subscale score (-8.69 vs. -5.35; P<0.0001; ES, 0.87). All 10 YBOCS-BE items were significantly improved on dasotraline vs. placebo at week 12 (P<0.001 for all comparisons; with effect sizes ranging from 0.54 to 0.90). For all patients at baseline, the mean BE-CGI-S score was 4.6, and the mean YBOCS-BE total score was 21.6. At Week 12 (LOCF), for dasotraline and placebo, respectively, 52.3% and 18.4% of patients had a BE-CGI-S score of 1 (“normal; not at all ill”; NNT=3), with mean YBOCS-BE total scores of 0.5 and 0.7, respectively. Conclusion: In this placebo-controlled, 12-week study of patients with moderate-to-severe binge eating disorder, treatment with dasotraline (4-8 mg/d) was associated with significant reduction in binge-related obsessional thoughts and compulsive behaviors as measured by the YBOCS-BE, with 52.3% achieving a BE-CGI-S score of “1-normal; not at all ill”.

No. 81

TBI and Eating Disorders: A Case Report and Literature Review

Poster Presenter: Sachidanand R. Peteru, M.D.
Co-Author: Mafruha Manzur

SUMMARY:

According to the CDC in 2013, there were approximately 2.8 million ED visits, hospitalization, and deaths related to traumatic brain injury (TBI) in the U.S. After the TBI it is common for patients to experience psychiatric complications such as depression, post traumatic stress disorder, anxiety, psychological and behavioral changes. Unlike other psychiatric illnesses, eating disorder following TBI is a rare complication. Classically the hypothalamus is attributed to controlling appetite, however, reports have linked cerebral injuries to changes in eating behavior. This paper discusses the findings of previous literature that have alluded to right frontotemporal involvement in the pathophysiology of eating disorder. Furthermore, TBI injuries to right frontotemporal regions have presented with a range of eating disorders from anorexia to hyperphagia. This leads us to postulate that the injury to an area of the brain is not the cause of a particular type of eating disorder like anorexia or hyperphagia but perhaps a an injury to the relay pathway between the right frontotemporal cortex and the hypothalamus is the culprit in the pathophysiology. In addition to the review of literature, we also present a case of a young TBI patient with eating disorder whose cortical injuries are located in the frontotemporal region. However, this case is unique because the pt had undiagnosed signs and symptoms of eating disorder prior to the TBI. Immediately after the TBI during her hospitalization, the pt's symptoms worsened and she completely stopped eating requiring a feeding tube placement. This presentation may suggest that there were deficits in the relay between the cortices and hypothalamus prior to the TBI, and that the frontotemporal injuries exacerbated her condition.

No. 82

Differential Glucose Metabolism in Weight Restored Women With Anorexia Nervosa

Poster Presenter: Youngjung Rachel Kim, M.D., Ph.D.
Co-Author: Laurel Mayer, M.D.

SUMMARY:

Women with anorexia nervosa (AN) develop visceral adiposity associated with insulin resistance after partial weight restoration, but little is known about the glucose homeostasis after full weight restoration. In this investigation, we studied glucose homeostasis in twenty-four women with AN before (AN) and after weight restoration (WR) at a single institution, compared to gender-, age- and BMI-matched healthy controls (HC). Participants underwent fasting plasma hormone analysis, oral glucose tolerance test (OGTT), and body composition analysis. Glucose homeostasis was assessed by the homeostasis model assessment (HOMA) and OGTT, and parameters were analyzed for association with body composition. We observed that 21% of the WR patients and none of the control subjects had metabolically unhealthy HOMA insulin resistance estimate (HOMA-IR), while the mean HOMA-IR in WR was not significantly different from the HC. Mean glucose reactivity was higher in the WR group than HC women ($g = -0.811$, $p = 0.008$), and time-adjusted glucose reactivity was inversely associated with visceral adiposity ($r = -0.559$, $p = 0.006$), but not with fat mass ($r = -0.273$, $p = 0.208$) or lean mass ($r = -0.002$, $p = 0.994$). Our findings suggest that glucose response during the OGTT in women with AN is altered in association with visceral adiposity acutely after full weight restoration, but that they do not develop overt insulin resistance. Glucometabolic profiling could offer novel insights to energy homeostasis acutely after weight restoration.

No. 83

Binge Eating Disorder in Adolescents: An Indian Perspective

Poster Presenter: Dinesh Narayanan

SUMMARY:

Introduction: Eating disorders are common psychiatric disorders, which typically has onset in adolescence, and are associated with high morbidity/mortality; Binge Eating Disorder (BED)being one of them. Despite of its consequences, limited data exists about BED amongst adolescent population in India. Objectives: To study prevalence of binge eating in urban Indian adolescent population.To compare adolescents with

binge eating disorder and non binge eating disorder on socio-demographic variables and eating patterns. Methods: A cross-sectional study included 2000 participants of English medium school in Mumbai,India from 8th – 12th standard.The data was collected through self report questionnaire which included demographic details, Binge Eating Scale, Eating Pattern Questionnaire.Statistical analysis was performed and p <0.05 was considered statistically significant. Results: The prevalence of binge eating was 86.9%.The mean age was 15.05 years. There was statistical significant difference found infollowing correlates female (p=0.0001),11th grade(p=0.0001), nuclear family (p=0.0001),upper middle class (p=0.0001) , overweight (p=0.0001), irregular menses(p=0.0001).The eating pattern showed binge eating patterns amongst adolescents eating out (p=0.008), daily (p=0.0001),brunch(p=0.001)and wanted to change their existing food habits(p=0.0001). Conclusion: The study revealed a high prevalence rate of binge eating disorderamongst adolescents in India.This is an indication for taking necessary actions to create cognizance among the general population about the detrimental effects of Binge eating disorder.The study also shows that binge eating is associated with overweight (BMI 26-30) which can in future lead to serious physical and psychological consequences.

No. 84

Characteristics of Health Service Utilization in Health Care Detected Anorexia Nervosa and Bulimia Nervosa

Poster Presenter: Mei-Chih Tseng, M.D., Ph.D.
Co-Author: Shu-Feng Hsieh

SUMMARY: Objectives: This study aimed to examine the characteristics of psychiatrists, hospitals, and patients' help-seeking behaviors in detected anorexia nervosa (AN) and bulimia nervosa (BN) based on nationwide registry data in Taiwan. Methods: Data of individuals with AN and BN from 2002 through 2013 were extracted from the merged national inpatient and outpatient/emergency department registry of the National Health Insurance by means of unique identified numbers. Incident AN (ICD-9 CM code 307.1) and BN (307.51) cases were defined as individuals who had no diagnosis of any eating disorders (307.1, 307.51, and 307.50) in the preceding two years and were diagnosed by psychiatrists at outpatient clinics or via consultations at medical settings/emergency room visits. We adopt 1:1 ratio to select one group of incident schizophrenia patients with same sex, age stratum (within 5 years), and year of visits each for AN and BN as controls. Pairwise comparisons were made to examine the differences of age and sex of the psychiatrists and teaching status and geographical location of the hospitals that AN and BN were first diagnosed between groups of AN and schizophrenia, BN and schizophrenia, and AN and BN. Health service utilization and physical comorbidities of AN and BN patients in the preceding one year before the detection were also compared between groups. Results: A total of 1631 incident AN cases, 10016 incident BN cases, and corresponding number of incident schizophrenia patients as controls for AN and BN were identified. AN cases were predominantly detected by women psychiatrists (31.0%) compared to BN (17.1%) and schizophrenia (19.8%). There was no gender difference of psychiatrists in diagnosis between BN and schizophrenia controls. AN cases were most frequently to be diagnosed in medical centers (43.6%) in contrast to BN cases who were most commonly diagnosed at local clinics (44.9%). There was statistically significant predominance in the location of hospitals, i.e., in Northern Taiwan, for diagnoses of AN (58.9%) and BN (49.6%) compared to schizophrenia controls. The most frequently associated physical diagnoses in the preceding year before the incident diagnosis were peptic ulcer and mild liver disease for both AN and BN. Patients with AN had significantly more physical comorbidities than those with BN or schizophrenia and both AN and BN patients had significantly higher health service use compared to schizophrenia controls in the percentages of outpatient visits and admissions in medical/surgical settings. A statistically significantly lower rate of AN cases (7.2%) has ever been diagnosed as eating spectrum disorders compared to that of schizophrenia (28.1%) being diagnosed as schizophrenia spectrum disorders by non-psychiatrists in the preceding one year before detection. The corresponding figures for BN was even lower (0.8% vs. 28.9%). Conclusions: Our study results may help establish strategies for early diagnoses of patients with AN and BN.

No. 85
WITHDRAWN

No. 86
Metabolic Risk Among Adults With Binge Eating Disorder: Findings From a Retrospective Cohort Study
Poster Presenter: William M. Spalding, M.S.
Co-Authors: James Mitchell, Monica Bertoia, Mei Lu, Akin Akinwonmi, John Seeger

SUMMARY:
Introduction: Individuals with binge eating disorder (BED) are at increased risk of developing symptoms of metabolic syndrome. Objective: To examine metabolic risk during a post-index date follow-up period among BED patients identified from the Optum electronic health record (EHR) database. Methods: In this retrospective cohort study, BED patients were identified using natural language processing (NLP) of clinical notes from January 1, 2009 to September 30, 2015 sourced from the Optum EHR database. Full text notes were processed into distinct NLP fields and patterns of NLP terms (eg, compulsive eating, food addiction) comprised algorithms that were applied to define a BED cohort. Adult patients (>=18 years old) were required to have had >=1 outpatient encounter with a provider who would recognize BED and to be notes eligible during the 12 months preceding the index date (ie, the date of first recognition of BED in the study period) for study inclusion. These analyses examined metabolic risk by estimating the onset of metabolic-related comorbidities and changes in laboratory and blood pressure (BP) values during the post-index date follow-up period. A Framingham risk score was calculated to assess 10-year risk of cardiovascular disease. Results: In an identified BED cohort of 1042 patients, 80.8% of patients were female and 87.1% were white. Mean ± SD body mass index was 41.9±11.1 kg/m2. At baseline, 83.4% of patients were categorized as obese, 8.3% as overweight, 4.4% as normal weight, and 0.1% as underweight. There were 17.3% of patients categorized as current smokers and 36.9% as ever smokers. Baseline laboratory and vital sign values were 6.5%±1.5% for hemoglobin A1C, 183.5±38.0 mg/dL for total cholesterol, 144.3±82.9 mg/dL for triglycerides, 106.9±31.2 mg/dL for fasting blood sugar, and 126.2±14.7 and 77.1±9.5 mmHg for systolic and diastolic BP. Mean ± SD Framingham risk score was 9.2%±10.2%. During the 12 months before and including the index date, frequencies of metabolic-related comorbidities were 45.8% for hypertension, 44.0% for hyperlipidemia, and 25.0% for type 1 or 2 diabetes. Frequencies of newly diagnosed metabolic-related comorbidities within the first year following the index date were 6.2% for hyperlipidemia, 5.4% for obesity/overweight, 4.1% for hypertension, and 2.0% for type 1 or 2 diabetes. Changes (mean ± SD) from baseline during the first year post-index date for laboratory and vital sign values were –0.3%±1.2% for hemoglobin A1C,–6.8±31.8 mg/dL for total cholesterol,–14.1±80.5 mg/dL for triglycerides, 9.8±38.8 mg/dL for fasting blood sugar, and –1.6±16.0 and –1.5±10.7 mmHg for systolic and diastolic BP. The Framingham risk score was increased by 2.4%±7.0% during the first year post index date. Conclusions: During the post-index date follow-up period, BED patients exhibited increased metabolic risk as measured by the onset of new metabolic-related comorbidities (Sponsored by Shire Development LLC, Lexington, MA)

No. 87
A Retrospective Cohort Study of Suicidality Among Patients With Binge Eating Disorder
Poster Presenter: William M. Spalding, M.S.
Co-Authors: Monica Bertoia, Cynthia Bulik, Mei Lu, Akin Akinwonmi, John Seeger

SUMMARY:
Introduction: Individuals diagnosed with binge eating disorder (BED) are at higher risk for suicidality than those not diagnosed with BED. Objective: To estimate the incidence of suicidal ideation and suicide attempts among BED patients. Methods: BED patients were identified using natural language processing (NLP) of clinical notes obtained from January 1, 2009 to September 30, 2015 sourced from the Optum electronic health record (EHR) database. Full text notes were processed into distinct fields by NLP and algorithms comprised of NLP terms were applied to identify adult (≥18 years old) BED patients. Patients were required to have ≥1 outpatient visit with a provider who would recognize BED and be notes eligible during the 12-month

baseline period preceding the index date (the date of first recognition of BED in the study period). To assess incidence (per 1000 person-years), patients were followed until the occurrence of a suicide attempt (incidence of suicide attempts only), suicidal ideation (incidence of suicidal ideation only), provider group departure, death, or study period end, whichever occurred first. A propensity-score matched comparator (MC) cohort (matched 10:1 to BED patients on age, sex, region, race/ethnicity, and index date calendar period) estimated incidence in the general population. Results: The cohorts included 1042 BED patients and 10,420 MCs. Most patients (BED vs MCs) were female (80.8% vs 80.5%) and white (87.1% vs 87.7%). During the 12-month baseline, the most frequently reported psychiatric comorbidities in BED patients were major depressive disorder (48.5%); anxiety, dissociative, or somatoform disorder (42.7%); and eating disorder not otherwise specified (32.7%). The incidence (95% CI) of suicidal ideation and suicide attempts, respectively, was 31.1 (23.1, 41.0) and 12.7 (7.9, 19.4) in the BED cohort and 5.8 (4.7, 7.1) and 1.4 (0.9, 2.2) in the MC cohort. The incidence of suicidal ideation and suicide attempts was higher among BED patients with histories of attention-deficit/hyperactivity disorder (ADHD) or bariatric surgery in the baseline period. In BED patients with (n=71) versus without (n=971) comorbid ADHD in the baseline period, the incidence (95% CI) of suicidal ideation was 73.5 (23.9, 171.6) versus 29.2 (21.3, 39.1) and of suicide attempts was 57.2 (15.6, 146.4) versus 10.7 (6.3, 17.2). In BED patients who had (n=52) versus did not have (n=990) bariatric surgery in the baseline period, the incidence (95% CI) of suicidal ideation was 55.5 (18.0, 129.5) versus 29.6 (21.6, 39.6) and of suicide attempts was 32.4 (6.7, 94.6) versus 11.5 (6.8, 18.2). Conclusions: The incidence of suicidal ideation and suicide attempts was greater in BED patients than a MC cohort during the post-index date follow-up period. Incidence was higher in the presence of ADHD or bariatric surgery in the baseline period, but small sample sizes limit the robustness of these findings. (Sponsor: Shire Development LLC, Lexington, MA)

No. 88

Multiple Admissions: Getting to a Good Outcome in Inpatient Eating Disorder Treatment

Poster Presenter: Sarah Ann Smith, M.D.
Co-Author: D. Blake Woodside, M.D.

SUMMARY:
Multiple Admissions: Getting to a Good Outcome in Inpatient Eating Disorder Treatment Background: Eating disorders are serious mental illnesses often characterized by chronicity and high health care costs (1). For patients who are medically or psychologically unstable, the most intensive form is inpatient treatment. Prior research has shown that inpatient eating disorder programs have high rates of premature termination of treatment (2) and relapse following discharge among patients who complete treatment (3). Consequently, many patients require readmission to inpatient care (1). However, the number of admissions required to achieve weight restoration or a good treatment outcome after inpatient treatment remains unknown. The purpose of this study was to explore the rate and patterns of readmission to large, specialized eating disorder program over a 15 year period. Methods: This study analyzed existing data from a specialist inpatient eating disorder program at a large Canadian hospital. Data collected between 2000 and 2016. Data was available on 648 inpatient eating disorder admissions representing 459 unique patients. Patterns of inpatient admissions and readmission were analyzed using descriptive statistics. Results: Over a quarter of patients were readmitted during the study period. The average number of admissions per patient was 1.48. Over half of all admissions were terminated before inpatient treatment completion (defined as weight restoration). The average number of admissions to treatment completion was 1.19. Among patients who achieved weight restoration (N=248) a quarter required further admissions. The average number of admissions to a good outcome (defined as weight maintenance for one year in the absence of binging and purging) was 1.16. Among patients who achieved a good treatment outcome (N=55) a quarter also required further admissions. Conclusions: Many eating disorder patients require multiple admissions to achieve weight restoration and good treatment outcomes at longer term follow-up. Future research should further explore what factors differentiate patients who require multiple

admissions to inpatient eating disorder programs to achieve clinical benefit from those who do not.

No. 89

Patient Characteristics Associated With Binge-Eating Disorder (BED): An Administrative Claims Database Study

Poster Presenter: Aditi Kadakia
Lead Author: Susan Lynn McElroy, M.D.
Co-Authors: Helen Trenz, Tim Bancroft, Daisy Ng-Mak

SUMMARY:

Background: Despite being the most common eating disorder in the U.S., most patients with Binge Eating Disorder (BED) lack a formal diagnosis. The Diagnostic and Statistical Manual of Mental Disorders (DSM-5) first described official diagnostic criteria for BED in 2013, and an International Classification of Diseases Tenth Revision (ICD-10) diagnosis code was introduced in October 2016. Given the recent introduction of the diagnostic criteria and code, it is important to examine characteristics associated with BED patients. Objective: To determine patient characteristics and comorbidities associated with BED patients from an administrative claims database. Methods: This retrospective cohort study was conducted using commercially insured BED patients and controls included in the Optum Research Database ™ from 01OCT2015 to 30SEPT2017. BED patients were identified with 1 or more claim for ICD-10 diagnostic code of F50.81 and controls were identified randomly without any claims for F50.81, in a 4:1 ratio to BED patients. Index date for BED patients was defined as date of first BED claim during 01OCT2016-30SEPT2017 and was assigned randomly for controls during the same period. All patients were more than or equal to13 years of age and had 12 months of pre-index continuous enrollment. Multivariate logistic regression was used to identify patient characteristics of BED patients which included demographics, psychiatric and physical comorbidities, pharmacological and non-pharmacological treatments. Results: The BED cohort included 1,919 patients with a mean (SD) age of 38.9 (13.1) years and 82.6% female. The control cohort included 7,676 patients with a mean (SD) age of 40.4 (15.7) years and 48.6% female. Multivariate logistic regression found that the odds of BED were 2-fold greater among older patients vs. patients aged 13-17 years ($p < 0.001$) and among women vs. men (OR = 3.4, $p < 0.001$). The odds of being a BED patient were two times greater for patients with depression (OR=2.1, $p < 0.001$), anxiety (OR=1.7, $p < 0.001$) and bipolar disorder (OR = 2.2, $p < 0.001$) than for patients without. Diagnosis of obesity/overweight or abnormal weight gain increased the odds of having BED by 3.6 and 3.9 ($p<0.001$). Patients with hypertension or type 2 diabetes were 1.2 and 1.4 times more likely to have BED ($p<0.05$). Prescriptions for antidepressant, antianxiety medication and weight-loss medication increased the odds of having BED by 2.3, 1.2 and 1.8 times, respectively ($p<0.05$). Patients with 4 or more claims for non-pharmacological therapy had 2.7 times greater odds of having BED than patients with <4 claims for non-pharmacological therapy ($p<0.001$). Conclusion: In this large retrospective claims database study, patients with BED were more likely than controls to be female, overweight or with abnormal weight gain, to have comorbid mood and anxiety disorders, hypertension and type II diabetes. Additional therapeutic options are clearly needed for patients with BED.

No. 90

Efficacy and Safety of Dasotraline in Adults With Binge-Eating Disorder: A Randomized, Double-Blind, Fixed-Dose Trial

Poster Presenter: Robert Goldman
Co-Authors: James Irvin Hudson, M.D., Susan Lynn McElroy, M.D., Carlos M. Grilo, Joyce Tsai, Ling Deng, Justine Kent, Antony David Loebel, M.D.

SUMMARY:

Background: Dasotraline is a potent inhibitor of human dopamine and norepinephrine transporters with a long elimination half-life permitting once-daily dosing. In a previous flexible dose study, dasotraline demonstrated significant efficacy in the treatment of binge eating disorder (BED). The aim of this fixed dose replication study was to evaluate efficacy and safety of dasotraline in the treatment of patients with BED. Methods: Patients meeting DSM-5 criteria for BED were randomized to 12 weeks of double-blind treatment with dasotraline (4 mg/d and 6 mg/d), or placebo. The primary efficacy endpoint

was change in number of binge-eating days per week at week 12. Secondary efficacy endpoints included Week 12 change on the Binge Eating Clinical Global Impression of Severity Scale (BE-CGI-S), the Yale-Brown Obsessive-Compulsive Scale Modified for Binge Eating (Y-BOCS-BE), and the proportion of patients with 4-week cessation of binge eating episodes at Week 12-endpoint. Efficacy was assessed using an MMRM analysis with a pre-specified sequential testing procedure used to control overall type I error rate. Results: The modified ITT population consisted of 485 patients. At week 12, treatment with dasotraline was associated with significant reduction in number of binge-eating days per week in the 6 mg/d group vs. placebo (-3.47 vs. -2.92; P=0.0045), and non-significant improvement in the 4 mg/d group vs. placebo (-3.21; P=0.12). Improvement in secondary efficacy measures and nominal p-values (not adjusted for multiplicity) generally favored dasotraline. Changes on the BE-CGI-S for the 6 mg/d and 4 mg/d groups vs. placebo were -2.27 vs. 1.77 (P<0.01), and -2.13 vs. 1.77 (P<0.05), respectively. On the YBOCS-BE scores for the 6 mg/d and 4 mg/d groups the changes were -15.2 vs. -11.8 (P<0.01) and -14.1 vs. -11.8 (P<0.05), respectively. The proportion of patients who achieved 4-week cessation of binge eating episodes was 34.0%, 33.5% and 30.2% for the dasotraline 6mg/d (p=0.64), dasotraline 4mg/d (p=0.80), and placebo groups, respectively. The most common adverse events on dasotraline 6 mg/d and 4 mg/d were combined insomnia (early, middle, late), dry mouth, headache, decreased appetite, nausea, and anxiety. Changes in systolic and diastolic blood pressure were minimal. Mean baseline to endpoint changes in supine pulse rate on dasotraline 6 mg/d and 4 mg/d vs. placebo was +6.2 bpm and +4.8 vs. +0.2 bpm. Conclusions: In this 12-wk, placebo-controlled, fixed-dose study, treatment with dasotraline 6 mg/d was associated with a significant reduction in frequency of binge-eating days per week; efficacy was not demonstrated for the 4 mg dose. Treatment with both doses of dasotraline resulted in improvement in binge-eating related obsessional thoughts and compulsive behaviors on the Y-BOCS-BE, and in global improvement on the BE-CGI-S. Dasotraline was safe and generally well-tolerated at both doses; most common adverse events were insomnia, dry mouth and headache.

No. 91

Neuropsychological Function in Youth With Early Onset Anorexia Nervosa

Poster Presenter: Kee Jeong Park
Co-Authors: Kyu Min Kim, Hyo-Won Kim

SUMMARY: Objectives: The aim of this study was to investigate neuropsychological function in youth with Early-Onset Anorexia Nervosa (EO-AN). Methods: We retrospectively reviewed medical records of 35 subjects who were diagnosed as having Anorexia Nervosa (AN) from January 2000 to June 2018 at the Department of Psychiatry of Asan Medical Center. We compared the following three groups: 24 subjects with EO-AN (onset below 14 years old, age 12.9 ± 1.2 years), 11 subjects with typical AN (onset after 14 years old, age 18.3 ± 3.4 years), and 26 healthy controls (age 11.0 ± 0.8 years). The Korean Wechsler Intelligence Scale for Children-fourth edition, Korean Educational Development Institute-Wechsler Intelligence Scale for Children or Korean-Wechsler Adult Intelligence Scale-fourth edition were performed. The subtests those are commonly included in all of the intelligence tests were analyzed. Chi-squared test and Analysis of Variance were used to analyze demographic and clinical characteristic of each group. Analysis of covariance was used to compare the neuropsychological function among groups. Results: The three groups showed statistically significant differences in age ($F(2, 58)=71.03$, $p<.001$) gender ($F(2, 58)=17.30$, $p<.001$), depressive disorder ($F(2, 58)=10.16$, $p=.006$) and body mass index (BMI) ($F(2, 57)=20.56$, $p<.001$). Clinical characteristics were analyzed between EO-AN group and typical AN group. The EO-AN group showed younger age-of-onset than typical AN group ($F(1, 33)=43.48$, $p<.001$). Duration of disease, number of patients on medication for AN at baseline and numbers of hospitalization did not show statistically significant differences. FSIQ was significantly different among three groups ($F(2, 57)=3.26$, $p=.045$). Post hoc test of comparison of FSIQ showed that control group had higher score than the typical AN group and EO-AN group had no significant difference with other groups. The scores were significantly different between typical AN and control group in picture completion task ($F(2, 45)=5.95$, $p=.005$) and coding

task (F(2, 55)=5.37, p=.008). The significance was maintained on both tasks after adjusted for BMI and depressive disorder. However, after Bonferroni correction, statistical significance on both tasks disappeared. Conclusion: These findings suggest the possibility that neuropsychological function, especially subtests of intelligence test could be distinguished among EO-AN, typical AN and normal population. Further study with larger sample size is needed.

No. 92

The Association Between the Hamilton Rating Scale for Depression and the Edinburgh Postnatal Depression Scale in Postpartum Depression

Poster Presenter: Margaret Gerbasi, Ph.D.
Co-Authors: Samantha E. Meltzer-Brody, M.D., M.P.H., Adi Eldar-Lissai, Ph.D., Sarah Acaster, M.S., Moshe Fridman, Ph.D., Vijayveer Bonthapally, Ph.D., Paul Hodgkins, Ph.D., Stephen J. Kanes, M.D., Ph.D.

SUMMARY:
Background: In postpartum depression (PPD) clinical trials, the Hamilton Rating Scale for Depression (HAM-D), a clinician reported measure, is commonly used as the primary endpoint; however, it is less frequently used in clinical practice. Instead, the Edinburgh Postnatal Depression Scale (EPDS), a patient-reported measure, is commonly used by clinicians to screen for PPD. Objective: To explore the association between the clinician-reported 17-item HAM-D and the patient-reported EPDS to assist in the application and translation from clinical trials into real-world clinical practice. Methods: An integrated efficacy dataset of three pivotal trials evaluating brexanolone injection, an investigational, proprietary intravenous formulation of the GABA-A receptor positive allosteric modulator allopregnanolone, in women with PPD was used. Data were pooled across the brexanolone injection 90 µg/kg/h and placebo arms. Due to baseline HAM-D score restrictions mandated by inclusion criteria and in order to limit associated restriction of range concerns, Day 30 (end of trial follow-up), rather than Hour 60 (primary endpoint), absolute and change from baseline (CFB) HAM-D and EPDS scores were used to assess the correlations between the measures and associations between definitions of remission. Pearson correlation was used to assess the relationship between HAM-D and EPDS absolute and CFB scores, while Cohen's kappa was used to assess the agreement between remission on HAM-D (score?7) and EPDS (score<10). Ordinary least squares (OLS) regression was used to examine the relationship between HAM-D and EPDS absolute and CFB scores while controlling for history of depression, concurrent antidepressant use, BMI, parity, and PPD history. Results: At Day 30, 199 subjects were included. There were significant associations between absolute scores of HAM-D and EPDS at Day 30 (r=0.71, p<0.001) and CFB of HAM-D and EPDS (r=0.57, p<0.001). There was also significant agreement between HAM-D and EPDS with 79% of HAM-D remitters and 67% of HAM-D non-remitters also classified as such by EPDS (Cohen's kappa=0.45, p<0.001). The OLS regression models demonstrated that the relationship between HAM-D and EPDS absolute and CFB scores remained significant when controlling for history of depression, concurrent antidepressant use, BMI, parity, and PPD history (p<0.001). Conclusions: There is significant agreement between absolute score, change score, and remission as measured by the clinician-reported HAM-D and patient-reported EPDS. These data suggest that when clinicians perceive patients as improved or in remission, patients' own ratings are likely to reveal the same interpretation. These results may help clinicians apply findings from clinical research to their daily practice.

No. 93

Social Cognition and Functional Connectivity in Borderline Personality Disorder

Poster Presenter: Xochitl Duque-Alarcon

SUMMARY:
Introduction Brain imaging studies have revealed spontaneous low-frequency fluctuations (<0.1 hz) during rest or no task. These fluctuations have significant correlations across the brain, thereby creating a distinct brain organization of intrinsic neural networks which are the same previously described in task-related research (1). One of these intrinsic networks is the default mode network (DMN), a network associated with self-related processes. The network includes Medial Prefrontal Cortex (MPFC), posterior cingulate cortex (PCC) and

lateral parietal cortex (LP). These structures have been related in brain imaging studies to social cognition (SC). Borderline personality disorder (BPD) is a psychiatric disorder characterized by deficits in social cognition. The neurobiological substrate of social cognition in BPD has been studied by task-related neuroimaging studies where a high activation of the amygdala, insula, superior temporal gyrus, and precuneus was reported to compare to controls (2,3,4,5). However, the information related to brain activity at resting state and performance in social cognition tasks is scarce. The objective was to evaluate the correlation between functional connectivity at resting state in DMN seeds and behavioral performance in MASC in BPD patients and controls. Methods: A BPD women group (n=18, age mean=29.4 +9.3) and women healthy controls (n=15, age mean=33.3+8.3) participated. The Spanish version of the Movie for the assessment of social cognition (MASC) and the RMTE test was applied (4). rs-fMRI data were preprocessed and analyzed with seed-based correlation using the CONN Toolbox. We defined the following seeds: MPFC, LP_R, LP_L, PCC, and both side Amygdala (AMY). Results. No difference between BPD and CN in the performance of social cognition. Higher connectivity in MPFC, lower Connectivity in LP_R and PCC are associated with better performance in MASC. Higher connectivity in AMY_L is related to higher numbers of errors by overmentalizing. Conclusion Brain activity at the DMN is associated with the performance in tasks of social cognition. The activity observed at the DMN rather than an inactive state could be reflecting a state where the brain is working as a statistical machine, continuously performing probabilistic estimates of the past, present, and future and including predictions of the requirements social aspects. In this way, the DMN can facilitate or influence the behavioral response.

No. 94

The Relationship Between Defensive Styles and Personality Traits of Borderline Personality Disorder Using Network Analysis

Poster Presenter: Seok-Ho Yun
Lead Author: Bon-Hoon Koo
Co-Authors: Choi Jinhui, So Hye Jo, Bumseok Jeong, Jaehwa Choi

SUMMARY:
Introduction Borderline personality disorder (BPD) has characteristics such as affective instability, impulsivity, and interpersonal difficulties. BPD has long been known as polysymptomatic neurosis and is known to have a variety of symptoms, personality traits and defense styles. BPD is difficult to diagnose and treat because of the variable degree and course of symptoms. In order to find out the core characteristics of BPD, research has been tried in various fields using characteristic elements such as defense styles. However, due to the dynamic and complex nature of personality, classical statistical methods have limitations in expressing such characteristics. In order to solve these problems, we have examined the relationship between personality traits and defense styles in BPD using network analysis, which has been recently used. Method We used Personality Diagnostic Questionnaire (PDQ) and Defense style questionnaire (DSQ) to investigate the relationship between defense styles and various personality traits in BPD. We used PDQ and DSQ of 165 patients who were clinically diagnosed with BPD among the patients who visited psychiatric outpatient clinic of one university hospital. 11 PDQ subscale and 4 cluster scores of DSQ were used for analysis. The network analysis used R's qgraph package and the EIBC-glasso model was used to construct a partial correlation edge network. Significant edges in the formed network were verified using bootstrapping, and the centrality of the network was also verified using the sampling based method. Result Strong connections were emerged between narcissistic and histrionic; narcissistic and image-distorting; image-distorting and maladaptive action; avoidant and dependent; schizoid and schizotypal; depressive and negativistic; self-sacrifice and adaptation. The most potent centrality was maladaptive action. Conclusion Based on the results, BPD can be accessed using network analysis. Maladaptive action defense style having the highest centrality is considered to be a key component of various symptoms, interpersonal problems, and behavioral patterns of BPD. In addition, the connection between the cluster B personality elements and immature defense styles represent the characteristic feature of BPD. Further network studies with large sample size including

other PD or healthy subjects are needed to understand BPD's psychopathology from a network perspective with more variables, such as psychological symptoms and personal information.

No. 95

A 24-Hour Phone Permanency to Prevent Self-Injurious Behaviors and Suicide Attempts in Borderline Patients

Poster Presenter: Alexandra Pham-Scottez
Co-Authors: Mario Speranza, Maurice Corcos

SUMMARY:
Suicide attempts and self-injury are very common in patients with borderline personality disorder. Most psychotherapies (apart from Linehan's Dialectical Behavioral Therapy) and psychotropic treatments are not intended to directly decrease this suicidality. The main objective of this multicentric, randomized, controlled, single-blind therapeutic trial is to prove that a 24-hour phone permanency ("crisis hotline"), implemented by trained clinical psychologists, and specifically dedicated to borderline patients, reduces frequency of self-destructive behaviors (suicide attempts, self-injurious behaviors) of these patients. 318 patients with a borderline personality disorder (diagnosed with SIDP-IV), were recruited from 6 French recruiting centers (mean age : 27.9 +/- 7.2 years old, 91.2% women, 53.9% hospitalized). They were assessed with standardized instruments (SIDP-IV, SCID-I, GAF…) and randomized into two groups : - an intervention group with treatment as usual PLUS a one-year access to a 24-hour hotline - and a "control" group with treatment as usual only, without the access to the hotline. Patients in the intervention group must phone as soon as they feel inner tension or other emotional state that could lead to self-destructing behavior. The incidence of suicide attempts is significantly ($p<0.05$) lower in the intervention group (0.50) than in the control group (0.79). Results are similar for self-injurious behaviors : 7.51 in the intervention group and 4.51 in the control group ($p<0.05$). Concrete examples of access to the hotline will also be detailed, to illustrate the support provided by this innovative therapeutic device.

No. 96

Social Cognition in Personality Pathology: Dimensional Construct or Disorder-Specific?

Poster Presenter: Sarah Rutter, M.A.
Co-Authors: Nicole Elizabeth Derish, M.D., Kenechi G. Ejebe, M.D., Margaret McClure, 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:
Social cognition is crucial for role functioning, and deficits in social cognition are well characterized in autism spectrum disorders (ASD) and have been more recently characterized in the schizophrenia spectrum. However, social cognitive deficits in personality disorder pathology are less understood. The current literature suggests either a general deficit related to personality pathology or specific deficits in each personality disorder (PD). To test this, we administered the multiple-choice version of the Movie for the Assessment of Social Cognition (MASC) to 79 participants recruited from the community (Schizotypal PD [SPD] n=26, Borderline PD [BPD] n=19, and healthy control [HC] n=34). The MASC is a naturalistic task assessing mentalizing accuracy in social cognition, as well as "no mentalizing," "hypomentalizing," and "hypermentalizing" errors. All of our participants received a structured diagnostic interview (SCID and SIDP), were medication free, and all of our PD participants were without a history of psychiatric hospitalization. We used the revised MASC scoring from Dziobek and colleagues (2011), and calculated the number correct for each item type from these scores (thoughts, intentions, emotions). MASC measures (four for mentalizing accuracy and errors and three for type of question) were compared across diagnostic groups (HCvsSPDvBPD) in ANCOVA's, using age and gender as covariates. After controlling for basic understanding of the task (excluding those with less than 3 correct answers in the MASC control questions assessing attention and understanding of the task), results suggest a marginally significant effect of diagnostic group on overall MASC accuracy ($F(2,78) = 2.934$, $p = 0.059$), with no significant differences in the number of hyper- , hypo-, or no-mentalizing errors committed ($F(2,78) = 1.470$, $F(2,78) = 1.267$, $F(2,78) = 1.769$, all NS, respectively). In post-hoc analyses for MASC

accuracy, the SPD group performed significantly worse than the HC group (post-hoc p = 0.024) and there was a trend for worse performance compared to the BPD group (post-hoc p = 0.076). We found a significant effect of group on MASC items relating to thoughts (F(2,78) = 7.019, p = 0.02) with post-hoc analyses showing that the SPD group performed significantly worse than HC (p=0.006) and marginally worse than BPD (p=0.082). There was no effect of diagnosis on items relating to intentions (F(2,78) = 2.033, p = 0.138), and no effect on items relating to emotions(F(2,78) = 0.133, p = 0.876). The BPD group did not significantly differ from the HC group on MASC accuracy or thought items (all NS). This suggests that, in keeping with the literature, individuals with BPD do tend to perform as well as HC's, while individuals with SPD demonstrate specific social cognitive deficits. We have thus provided support for the idea that social cognitive deficits vary across personality disorders, and are not a general symptom associated with personality pathology.

No. 97

Induced Illusory Body Ownership in Borderline Personality Disorder

Poster Presenter: Eli S. Neustadter
Co-Authors: Jacob Leavitt, Meagan Carr, Majed Samad, Philip Corlett, Sarah Kathryn Fineberg, M.D., Ph.D.

SUMMARY:

Introduction: Disturbances of self-experience are a core phenotype of Borderline Personality Disorder (BPD). One aspect of selfhood that may have relevance for BPD is variation in sense of body ownership. Mechanistically, sense of body ownership arises from neural computations on sensorimotor signals. These computations generate a malleable model of self-representation. In the current study, we used a laboratory paradigm to manipulate the experience of body ownership in BPD. Experimental illusion induction such as the rubber hand illusion (RHI) can test the plasticity of body ownership by manipulating sensory integration of self and non-self stimuli. The RHI can induce the feelings that the rubber hand belongs to the participant (subjective illusion) and that their own hand has moved toward the rubber hand (proprioceptive drift). One previous study has tested illusory body ownership in BPD. Subjective illusion, but not proprioceptive drift, was greater in BPD versus control, and there was a small but significant correlation of illusory body ownership with dissociative experiences. We extend these findings by testing: 1) Two illusion conditions (asynchronous & synchronous stimulation: these elicit differences in other mental illnesses), 2) Illusion experience x core BPD symptoms, 3) Illusion experience x dimensional trait measure of psychoticism. Methods: Participants (24 BPD, 20 control) underwent RHI procedures with synchronous and asynchronous conditions at 1 Hz stroking. We measured illusion strength (questionnaire responses), proprioceptive drift (perceived shift in physical hand position), and self-reported BPD symptoms (semi-structured interview; DIB) and personality inventory of maladaptive traits (PID-5). Results: For subjective illusion strength, we found a main effect of group (BPD > HC), F(1, 43) = 11.94, p = 0.001, and condition (sync > asyc), F = 22.80, p < 0.001. There was a group x condition interaction for proprioceptive drift (F(1, 43) = 6.48, p = .015) such that patients, unlike controls, maintained illusion susceptibility in the asynchronous condition. In the BPD group, borderline symptom severity correlated with illusion strength and this effect was driven by negative affect (r = .481, p <.001). Across all participants, trait psychoticism correlated with illusion strength (r = .481, p <.001). Conclusion: We found that people with BPD are more susceptible to illusory body ownership. This is consistent with the rich clinical literature describing aberrant physical and emotional experience of self in BPD and borderline personality organization. A predictive coding interpretation of these results holds promise to develop testable mechanistic hypotheses for experiences of disrupted bodily-self in BPD. We also outline future directions to use a computational model underlying illusory body ownership, and to define the pathophysiology of aberrant embodied self in BPD.

No. 98

Genetic Testing Diagnostic Yield in Autistic Children With Low Adaptive Functioning

Poster Presenter: Ahmed M. Maher, M.D.

SUMMARY:

Autism spectrum disorders (ASDs) are a group of neurodevelopmental disorders, characterized by varying degrees of limitations in communication and social interaction, problems with coordination and ability to perform Activity of Daily Living (ADL) or occupational functioning. Several well-defined genetic disorders have been identified in patients with ASDs; however, clinical genetic testing is diagnostic in only a minority of cases. The purpose of this study was to determine if there is correlation between genetic testing yield and several subdomains of adaptive functioning testing in a population of children with ASDs seen at the Autism Specialty Genetics Clinic, part of the Autism Treatment Network, at Children's Hospital Colorado. This study was a retrospective chart review of patients who had an initial or follow-up genetics evaluation, a diagnosis of an ASD through formal evaluation and at least one Adaptive functioning testing was done and available for review. This study is a retrospective chart review of individuals seen for genetics evaluation between the period from July 1st 2009 and July 1st 2015 the ASD clinic part of CHCO. In order to be seen by this clinic, individuals must have a confirmed diagnosis of autism or an autism spectrum disorder as diagnosed by specialists in Developmental and Behavioral Pediatrics using standardized scales such as ADOS, SCQ, RDI. Data from study shows comparable yield for pathogenic finding on genetic testing in ASD, children with a yield of 11 % for combined CMA and single gene testing with comparable studies with average diagnostic yield of 6 for combined testing of WES and CMA in idiopathic autism, to 37.5 % diagnostic yield for combined CMA and WES for complex autism. Data collected shows a higher diagnostic yield of genetic testing for those with Adaptive functioning scores below the 3rd percentile. It reaches the almost the double with 22 % of diagnostic yield in children with ADL adaptive functioning below the 3rd percentile, compared with only 3 % who had scored at or above the 3rd percentile. Other 2 subcategories, had higher yield with 17 % diagnostic yield for both socialization and communication adaptive functioning domain. Comparing both groups of subdomains of adaptive functioning below the 3rd percentile with pathogenic genetic testing findings and those with higher adaptive functioning at or above the 3rd percentile, have led to a statistical significance in the domain of ADL, with a p value of 0.0003 . Among children with an autism spectrum disorder, the genetic yield of testing is 11% with the majority of children being diagnosed with a chromosomal microarray. This yield was increased to 17% when combined with children with adaptive functioning testing scores below the 3rd percentile in the socialization and communication subdomain, and had increased to 22% in the subdomain of ADL

No. 99

A First Internet Survey of Knowledge, Attitudes Toward Autism in Thai General Population

Poster Presenter: Orarat Choukuljaratsiri

SUMMARY:

Background Perception and understanding of people in society have impact to Autism patient's quality of life. With this reason, many countries had conducted studies among general population on knowledge and attitude of Autism Spectrum Disorder patient. however in Thailand, there were only studies among autism related citizen. This is the first online survey of the Thai general population samples about their knowledge, attitudes toward individuals with autism. Method 1,184 participants were asked with an internet version of validated likert scale questionnaire divided in 2 parts, autism knowledge part included with causes, symptoms and treatments, along with attitude part asking how they feel if have to associate with autism, such as affect, social stigma, relationship and treatment tendency. The reliability of the questionnaire is good with internal consistency at 0.69-0.90 cronbach alpha. Descriptive statistic was used to show the results, and multiple linear regression was used to find correlation between demographic factor and results. Result The results show that although most of the samples had accurate knowledge of autism, some misperception that all autism have intellectual disabilities and attention deficit hyperactivity disorder, 30% and 25.8% respectively. Still 14.4% had outdated belief that autism caused by neglected parenting style. 68.1% of respondents empathized to autism, and most were willing to socially interact, except for romantic relationship which was rejected at approximately 70%. The majority reported that they wouldn't find danger nor feel ashamed if have

relation with autism, and would definitely bring their autism suspected offspring to seek appropriate medical treatment(80.3%). Autism familiarity, younger age, high education , female and higher income significantly increased the autism knowledge. High autism familiarity gained positive attitudes toward autism, conversely to high income which had negative perspective in significant. Conclusion Although the majority of responders show good knowledge and attitude toward Autism Spectrum Disorder, There're still some misperception in this disease. Further studies should be done to clarify problems, and campaigns or policies could be designed to create better knowledge and attitude about autism among Thai general people, in order to raise Thai autism quality of life.

No. 100

De Novo Noncoding Mutations Contribute to Autism Risk Via Long-Range Regulatory Interactions

Poster Presenter: Ilbin Kim, M.D.

SUMMARY:

Autism is a neurodevelopmental disorder with complex genomic etiologies, with most cases occurring sporadically. De novo mutations (DNMs), accordingly, have been thought to play a critical role in the development of autism. However, DNMs are known to contribute to ~10%-30% of patients with autism, which is largely due to studies limiting to protein-coding regions, occupying up to 2% of the genomes. Although DNMs in noncoding regions also seem to underlie the genomic etiologies of autism, the pathogenic role of the mutations outside the protein-encoding regions remains poorly understood. Since the genomes are a form of three-dimensional chromatin structures, how the noncoding DNMs affect the long-range chromatin interactions in autism is to be explored. Here, we generated 931 whole-genome sequences of whole blood DNA acquired from 276 Korean simplex families to detect DNMs, and identified target genes that have the chromatin interactions with the noncoding DNMs in regulatory elements, using resources of DNase-seq and Hi-C. Notably, the noncoding DNMs that have the chromatin interactions exhibit transcriptional dysregulation implicated in autism. And those target genes are significantly involved in histone modification and prenatal expression of brain development, both of which are implicated in the pathogenesis of autism. Furthermore, we experimentally validated the effects of the noncoding DNMs defined through the long-range chromatin interactions. Indeed, the noncoding DNMs remotely affect the expressions of target genes in the mutation-carrying neurons derived from probands' induced pluripotent stem cells. Interestingly, the noncoding and coding DNMs collectively contribute to severely low IQs. This strongly suggests that a clinical subtype of autism can be genetically defined by discovering the functionally active noncoding DNMs. Analysis results are reproducible in independent 517 probands of Autism Speaks. This work reveals the contribution of the noncoding DNMs to autism via the long-range chromatin interactions, thereby suggesting the subtype of autism with intellectual disability.

No. 101

An ERP Marker of Attribution of Intentions May Help Differentiate Autism Spectrum Disorder From Neurotypical Development

Poster Presenter: João Fernandes

Co-Authors: Sara Soares, Ricardo Lopes, Rita Jerónimo, Bernardo Barahona-Corrêa

SUMMARY:

Social cognition is a recognized area of deficit in autism spectrum disorders (ASD) that correlates with poor functioning. Theory of mind (ToM) is a domain of social cognition that involves the capacity of attributing mental states to others, including intentions. In a study including 21 males with ASD (aged 25.6 +/- 5.1 years) and 30 male neurotypical controls (aged 28.2 +/- 7.0 years) we used behavioural measures and neurophysiologic markers, including event-related potentials (ERPs), to help clarify possible mechanistic differences underlying social cognitive performance. To evaluate ToM, we used a nonverbal [Comic Strips Task (CST)] and a verbal [Hinting Task (HT)] measure of attribution of intentions. To assess emotion recognition ability, we used the Reading the Mind in the Eyes (RMET) test. Cognitive ability was assessed using the Hopkins Verbal Learning Test (HVLT) and the Trail Making Test (TMT-A and TMT-B). The CST protocol was performed under EEG monitoring for

collection of an ERP related with the cognitive processes involved in attribution of intentions that is expressed as a bilateral posterior positive component ranging from 250 to 650 ms post-stimulus and peaking at around 300 ms. We compared ERP data between groups and within the control group to investigate the association between the ERP and social cognitive performance. To achieve this, we divided the control group into high (HP), medium (MP) and low performance (LP) terciles. Participants with ASD performed significantly worse than controls on the CST (proportion of correct answers: 73.6% ± 13.4% vs. 85.7% ± 10.1%, P=0.014 after Holm-Bonferroni correction) and RMET (23.3 ± 3.3 vs. 26.4 ± 2.8; P=0.018) tasks, while no significant difference was observed on the HT (16.2 ± 2.2 vs. 17.5 ± 1.1; P=0.082). When compared to the different performance terciles, ASD patients performed similarly to the LP control subgroup on the CST (73.6% ± 13.4% vs. 74.0% ± 7.9%), but worse than the MP subgroup (87.7% ± 15.8%; P=0.021) and the HP subgroup (94.7% ± 2.3%; P<0.001). The ERP was observed in the control group but not the ASD group. When we analyzed control subgroups separately we found this same ERP in LP controls, but not in the HP and MP subgroups. ASD participants performed significantly worse than controls on the TMT (TMT-A: 33.35 ± 18.4 vs. 19.8 ± 4.8, P=0.018; and TMT-B: 71.95 ± 32.9 vs. 44.8 ± 16.2, P=0.018) but not on the HVLT (27.3 ± 4.5 vs. 29.7 ± 3.5, P=0.082). Our results show that the ERP marker of attribution of intentions is only evident in LP neurotypical controls, possibly reflecting greater effort concerning the contextual integration involved in intention understanding. In ASD individuals, absence of the ERP effect suggests an inability to recruit the resources involved in intention understanding. Absence of this ERP may serve as a biomarker to differentiate ASD from neurotypical subjects who are impaired in this specific dimension of social cognition.

No. 102

Association of Brain Choline Levels With Severity of Social Anhedonia in Adults With Autism Spectrum Disorder

Poster Presenter: Monika Batra
Lead Author: Kenneth Gadow
Co-Authors: Heather Garman, Joseph Giacomantonio, Russell Vogel

SUMMARY:
High functioning adults with autism spectrum disorder (HFA) often experience social anhedonia and depression although their pathogenesis remains poorly understood. Recent studies show increased choline levels in the brains of adults with HFA, as well as in participants diagnosed with major depressive disorder (MDD; Murphy et al., 2002; Riley et al., 2018). Increased concentrations of choline in the anterior cingulate cortex (ACC) are reported to alter brain activity and connectivity between the medial prefrontal cortex (mPFC) and posterior cingulate cortex (PCC) in adults with ASD (Libero et al., 2015). Prior research has linked higher choline levels in the brain to increased depression and length of illness in adults with MDD (Riley et al, 2018; Portella et al., 2011). The aim of the present study was to examine the association of brain choline levels with severity of social anhedonia, depression and rumination symptoms among adults with HFA. Participants were 16 adults (18-45 years) with ADOS-defined ASD; IQs (=80). (1)H-MRS data was acquired with a 3T scanner for the metabolite choline, which was performed with one voxel (30×30×20 mm3) in the ACC using a TR/TE of 2000/68 ms with a spectral bandwidth of 2 kHz and 16 water reference lines. Prior to the scan, participants completed the Hamilton Depression Ration Scale, Social Anhedonia Scale – Revised, Kaufman Brief Intelligence Test Second Edition. After controlling for ASD severity there was a positive correlation found between choline levels and severity of social anhedonia (r= .548, p= .034), severity of depression (r= .621, p=.018), and rumination (r= .560, p= .037). These findings provide a tentative support for the notion that brain choline levels may be associated with processes involved in the severity of social anhedonia, depression and rumination among HFA. Moving forward, additional studies with larger samples are necessary to fully understand this possibility.

No. 103

Weather Changes and Problematic Behavior in Autism Spectrum Disorder

Poster Presenter: Chu Wei Tsai

SUMMARY:

Background: For people with autism spectrum disorder, it is often noticed that overloaded sensory stimulation such as loud noises, lights, touch, or even movement can lead to emotional or behavioral problem. Although “Sensory Processing Disorder” is not recognized by the Diagnostic and Statistical Manual, its core idea of “significant problems in organizing sensation coming from the body and the environment and is manifested by difficulties in the performance in one or more of the main areas of life” seems to describe many patients’ condition appropriately. There are several reports from the autism support network and family’s support group that raise discussion on how their children were affected by weather changes. Up to date, there is no related medical study on this topic, we wish to give the unproven idea of “weather changes can affect autistic children’s mood and behavior” a solid and scientific approach. With this study, starting with a 26-year old autistic young male’s case, whose stereotype behavior and mood both affected by weather changes in the past 6 years, we wish to identify probable causes of his fluctuating symptoms, and to bring up some hypothesis of how they are affected by weather changes, and furthermore, what we can do in the future. Method: We study and analyze this patient’s mother’s diaries through 2011-2018. Taking record of whether he has gone though any unstable mood or aggravated stereotype/ritual behavior. We obtain weather data from local weather observation station, the location of the weather observation station is in the same district of this patient’s home, or in the same district as the hospital if this patient is hospitalized. We collate the above two datas and applied a regression analysis for associational analysis. Based on several non-scientific articles, it is believed that low barometric pressure might be the cause, but low barometric pressure could also mean change in temperature, or humidity, to eliminate confounding effects, we also put temperature and humidity in comparison. The primary outcome variable was set a priori as the relation of behavioral variables and barometric pressure or other weather changes. Result and Discussion: A positive correlation between problematic behavior and lower barometric pressure was found, as there is no significant correlation between problematic behavior with humidity nor with temperature. We believe that people with ASD might either be suffering from underdeveloped middle ear system, or might as has already be mentioned in another study, could be due to migraine headache. Further study in (1) extending case number and to record their behavior accordingly, (2) medical intervention in resolving their problematic behavior and labile mood is required to further clarify the correlation.

No. 104

The Iron Triangle: Catatonia, Psychosis, and Autism

Poster Presenter: Martha J. Ignaszewski, M.D.
Co-Authors: Ethan T. Anglemyer, D.O., Lauren View, Tamar Katz, Eleni Maneta

SUMMARY:

Background: There is growing evidence in the medical literature that catatonia is associated with autism spectrum disorder (ASD), with studies suggesting that 12-18% of individuals with ASD may present with catatonia. Rapid diagnosis and treatment are imperative as untreated catatonia can be life threatening. However, the assessment of catatonia in individuals with ASD can be complicated, particularly as it often occurs with comorbid psychosis, which can obscure diagnosis as many symptoms of ASD overlap with those of catatonia and psychosis making diagnostic precision challenging. For example, the stereotypy or mannerisms associated with catatonia may be difficult to distinguish from the self-stimulatory behaviors of ASD or interactions with internal stimuli of psychosis. The high co-morbid association of catatonia, autism, and psychosis are referred to in the medical literature as the Iron Triangle. Given the growing awareness and prevalence of these cases, a thorough understanding of assessment, diagnosis, and treatment is critical. To elucidate these concepts, we present 2 cases of adolescent patients with ASD who presented to an inpatient psychiatry unit with catatonia and psychosis Results: The first case is a 14 year old adopted male with a history of severe trauma, developmental delay, history of aggression, and ASD who presented with acute onset psychosis characterized by visual hallucinations, auditory hallucinations and paranoid ideation, and catatonia characterized by mutism, negativism,

posturing, staring, and purposeless movements (among other symptoms) which was treatment refractory to standard medication treatments and required a prolonged course of ECT. The second case discusses a 15 year old male with a history of high functioning autism who presented with 6 month deterioration associated with low mood, anhedonia and progressive withdrawal and catatonic symptoms. Diagnostic challenges included distinguishing symptoms of catatonia from baseline autism, and distinguishing familially sanctioned religious beliefs around communication with the devil from hyper-religiosity and delusional thinking. He received high dose Ativan with clinical improvement though treatment is ongoing. Varying hypotheses around the neurobiology of catatonia and autism have been proposed and will be summarized here. In addition, the commonly misinterpreted symptoms of catatonia will be differentiated from features of autism spectrum disorder and other developmental disorders. Conclusions: To avoid negative patient outcomes, clinicians must have a thorough understanding of the diagnosis and treatment of catatonia, including patients who may have psychiatric or developmental co-morbidities that can obfuscate the diagnosis.

No. 105

ADHD Symptoms in Young Children With Autism Spectrum Disorder

Poster Presenter: Ji Su Hong, M.D.
Co-Authors: Roma Vasa, M.D., Luke Kalb, Ph.D., VIni Singh, M.P.H.

SUMMARY: Objectives: This study examines: 1) the prevalence of attention-deficit hyperactivity disorder (ADHD) symptoms among children, ages 1.5 to 5 years, with Autism Spectrum Disorder (ASD), 2) the relationship between ADHD symptoms and comorbid psychopathology. Methods: 819 toddlers and preschoolers with ASD (M = 3.5y, SD = 1.2y) were recruited from a clinic research registry at a university-affiliated, specialized outpatient ASD center. All children were given a DSM-5 ASD diagnosis by an expert clinician, and. 71% received the Autism Diagnostic Observation Schedule (ADOS). Parents completed the Child Behavior Check List (CBCL) 1.5-5 version, which served as the primary measure for ADHD symptoms and other psychopathology. Parents also completed the Parenting Stress Index. Sample characteristics were as follows: 82% male, 48% Caucasian, 73% had private insurance, and 55% had at least one parent with a Bachelor's degree. Children with ASD were divided into 3 groups: 1) low level of ADHD symptoms (both CBCL Attention Problems and ADHD Problems T scores < 60), 2) moderate level of ADHD symptoms (either CBCL Attention Problems or ADHD Problems T scores 60-69), and 3) high level of ADHD symptoms (either CBCL Attention Problems or ADHD Problems T scores = 70). Multivariate, multinomial regression analysis was performed to examine the relationship between ADHD symptom groups and the following variables: ADOS module type (proxy for language level), ADOS severity score, parent education, parenting stress, and demographic (child age, race, gender, insurance-type) variables. Results: A total of 40% of children had low level ADHD symptoms, whereas 27% and 33% had moderate and high levels of ADHD symptoms, respectively. All CBCL subscales, including affective problems, anxiety problems, pervasive developmental problems, oppositional defiant problems, emotionally reactive, anxious/depressed, somatic complaints, withdrawn, sleep problems, aggressive behavior were positively associated with increasing ADHD risk symptom groups (all p<.05). The groups with moderate (RRR=1.04; p<.05) and high (RRR=1.04; p<.05) level of ADHD symptoms were associated with increased parenting stress. The group with a high level of ADHD symptoms were older (RRR = 1.21; p<.05), less likely to be African-American (RRR=.41; p<.05) and have private insurance (RRR=.57; p<.05), compared to the group with a low level of ADHD symptoms. Child gender, ADOS Module, ADOS severity score, and parental education were not related to ADHD groups (all p>.05). Conclusions: ADHD symptoms were highly prevalent in young children with ASD and were associated with high levels of parenting stress and comorbid psychopathology. Caucasian race, preschoolers with public insurance, elevated parenting were associated with a high level of ADHD symptoms. These findings highlight the importance of screening for ADHD symptoms among young children with ASD, with the goal of early intervention for those with the diagnosis.

No. 106

Serum Prolactin Level as a Biomarker Tool for Disruptive Behavior Assessment in Autism Spectrum Disorder

Poster Presenter: Yaowaluck Hongkaew
Co-Author: Chonlaphat Sukasem

SUMMARY:

Background: Current tools for estimating disruptive behaviors in autism spectrum disorders (ASD) patients used self or caregivers-report questionnaires which may incredible responses or response biases. The aim of this study was to examine laboratory test for disruptive behavior assessment in risperidone-treated ASD patients. Methods: The prospective study was performed in Thai children and adolescents with ASD. A risperidone-naïve group of patients underwent a baseline assessment of serum prolactin level and Aberrant Behavior Checklist (ABC) behavior score before starting risperidone therapy and a follow-up assessment after a stable course of risperidone treatment for 3 to 20 months. At every visit, a careful assessment of behavior using ABC subscales score, serum prolactin and plasma drug levels of risperidone, 9-OHrisperidone levels were measured. Treatment responder was defined as at least a 30% decrease in ABC total score after month 3. Results: In the risperidone-naïve group 48 patients were included. No statistically significant differences were found in the association between serum prolactin level before treatment with ABC total scores (Spearman correlation coefficient =0.067, P=0.649) and ABC-irritability subscales (Spearman correlation coefficient =0.033, P=0.825). Among nineteen complete follow-up patients, 10 (52.63%) of them were responders and the remaining 9 patients (47.37%) were non-responder. Serum prolactin level in non-responder was significant higher than responder after 3 months of risperidone treatment (20.10 vs 10.25 ng/ml; p = 0.013). While plasma level of risperidone, 9-OHrisperidone and active moiety (the sum of risperidone and 9-OHrisperidone) were not found any significantly differences between responder and non-responder. The ROC curve of serum prolactin level was analyzed. The area under the curve was found to be 0.833 (p=0.014, 95% CI = 0.651-1.016), which indicates that children with autism can be satisfactorily identified using the prolactin level. The suggested cutoff point was 10.9 points. At cutoff point 10.9, we observed that the biomarker presented very high sensitivity (100.00%) and high specificity (60.00%) in identifying children with autistic disorder in the population. Conclusion: There was a connection between serum prolactin level and the behavior improvement in ASD during risperidone treatment. Prolactin measurement shows promise as a laboratory test for identifying behavior in autism children and adolescents when a cutoff score of 10.9 is used. Serum levels of prolactin could be a mediated biological marker for behavior assessment in ASD children and adolescents with risperidone treatment. This study was supported by grants of the Thailand Research Fund through the Royal Golden Jubilee Ph.D. Program (Grant No. PHD/0107/2557).

No. 107

Cannabinoids for the Treatment of Behavioral and Psychological Symptoms of Dementia

Poster Presenter: Juan Joseph Young, M.D.

SUMMARY:

Despite limitations of the currently available data, cannabinoids appear to show promise in the treatment of BPSD with some benefit in ameliorating symptoms while having a limited adverse effect profile. However, current data on the use of cannabinoids in the treatment of BPSD should be considered as preliminary. Positive data from additional well-controlled and sufficiently larger studies with longer treatment time durations and specific endpoints that include the evaluation of cannabinoid effects on BPSD are necessary before cannabinoids could be labeled as definitive agents for the treatment of BPSD.

No. 108

Mindfulness-Based Interventions for Caregivers of Patients With Major Neurocognitive Disorder in Primary Care: Future Direction and a Literature Review

Poster Presenter: Jiali Lau
Co-Author: Xuan Li Tang

SUMMARY:

Background: Mindfulness based interventions have evolved dramatically with numerous other mindfulness based interventions introduced since

the development of the mindfulness-based stress reduction (MBSR) program and mindfulness-based cognitive training (MBCT). The ever increasing caregiving burden for persons with major neurocognitive disorder is associated with significant psychological morbidity. A large number of patients with major neurocognitive disorder are seen in the primary care setting, however evidence for mindfulness-based interventions for caregivers of such patients are limited. We aim to review existing literature on mindfulness based interventions in a primary care setting for caregivers of patients with dementia and to discuss areas of further development. Methods: Several databases including PubMed and the Cochrane library were searched with search terms used pertaining to mindfulness interventions including interventions in primary care as well as interventions for caregivers of patients with major neurocognitive disorder. Results: Depressive and anxiety symptoms have been shown to improve for these patients in a number of studies post intervention although it was not known if the effects were sustained beyond the period of intervention[1][2][3]. Self-rated caregiver stress showed an improvement with mindfulness based interventions compared to other forms of interventions such as respite care and standard social support [3] [4][5]. Targeted interventions for these caregivers including focusing on training skills such as attending to the present moment nonjudgmentally may help to reduce maladaptive emotional responses for these caregivers which play a major role in perpetuating caregiver stress[6]. Other benefits shown for caregivers of such patients include increased quality-of-life ratings and better subjective sleep quality [6]. There have also been a wide range of other interventions incorporating elements such as yoga although the evidence was not compelling due to heterogeneous study populations and small study sample sizes [7]. While studies done have shown promise with moderate effect size in favor of mindfulness based interventions in primary care for mental health–related outcomes and quality of life for patients with chronic conditions including dementia, evidence supporting similar interventions for caregivers of such patients is lacking[8]. Conclusion: While there is emerging evidence that mindfulness based interventions can be effective for caregivers of patients with major neurocognitive disorder, future research needs to be done with a focus this group in the primary care setting. Studies with larger sample sizes with improved methodology will be beneficial in determining the effectiveness of larger scale interventions in the primary care setting.

No. 109

Noninvasive Brain Stimulation and Cognitive Impairment: A Review

Poster Presenter: Mansi Sethi Chawa, M.D.
Co-Author: Pranav Milind Jagtap, M.D.

SUMMARY:

Introduction: Cognitive functions begin to decline slowly with age, but they can become severely compromised in various neuropsychiatric disorders. Structural and functional defects in cortical brain areas such as the dorsolateral prefrontal cortex (DLPFC) have been found in a variety of cognitive tasks across a host of neuropsychiatric disorders. Non-invasive brain stimulation (NIBS) modalities such as transcranial magnetic stimulation (TMS) and transcranial direct current stimulation (tDCS) that exert their effect by selectively activating cortical brain regions and networks and can help improve and in some cases prevent/delay cognitive decline. Therefore, we decided to survey the literature for the evidence collected thus far. Methods: The databases Ovid, Medline, and Embase were searched using the terms: (((((transcranial magnetic stimulation) OR transcranial direct current stimulation)) AND ((traumatic brain injuries) AND mood disorders))) OR ((((transcranial magnetic stimulation) OR transcranial direct current stimulation)) AND ((dementia) AND ((cognition disorders) OR cognit* impairment))). The filters “english language” and “humans” were applied to the initial search, and the results were manually sorted into randomized controlled studies. Results: A total of 360 references initially resulted, and of these 39 were randomized control trials. TMS (n = 22), tDCS (17), and tRNS (1) were among the neuromodulation therapies employed. The conditions studied were various: Alzheimer’s disease/Mild Cognitive Impairment (10 out of these 12 demonstrated improvements in cognition), Schizophrenia (6 out of 9), Major Depressive Disorder (4 out of 6), Parkinson’s Disease (3 out of

4), and Fibromyalgia (2/2). Beneficial effects on cognition were also reported in singular reports of HIV, stroke, Huntington's disease, and Multiple Sclerosis. In addition to the PFC, cortical regions such as the primary motor cortex were also targeted. Conclusion: These results are suggestive that TMS/tDCS/tRNS may improve cognition in patients with various neuropsychiatric conditions. Given the sharp increase in rates of dementia from the 7th decade of life through the 9th, the expectation of elderly (65+) people outnumbering those under 18, by 2030-2035, becomes critically important. In this light, neuromodulation/NIBS may categorically present as an effective therapeutic modality to reconfigure brain networks by selectively influencing the hyper/hypo-activity of cortical regions and improve cognitive functioning. Further studies with larger sample sizes and more robust biometric measurements are required to substantiate these findings.

No. 110
WITHDRAWN

No. 111
Relationship Between Subjective Memory Concerns and Memory Performance in Older Adults Without Dementia

Poster Presenter: Mirjam Mulder-Heijstra, M.D.
Co-Authors: Nathan Herrmann, M.D., Frankie Chan, Nicolaas P. Verhoeff, M.D., Ph.D., Linda Mah, M.D., Susan Vandermorris, Aliya Ali

SUMMARY:
Subjective Cognitive Decline (SCD) is considered among the earliest manifestations of Alzheimer's disease and hence can be a potential target for early cognitive and behavioral interventions. SCD is defined as self-experienced decline in cognitive capacity but normal performance on standardized cognitive testing. However, self-perception of memory decline and actual cognitive performance are not typically correlated. Subjective cognitive ability may be characterized in other ways in addition to perception of change from a previous cognitive level. The aim of this study was to determine which aspects of subjective memory ability predict memory performance on neuropsychological assessment. Methods: 57 older adults (mean age 71 yrs, 67% female) with memory concerns and Montreal Cognitive Assessment (MoCA)-score 24 and higher were recruited from outpatient clinics and community. Exclusion criteria included medical, neurological or psychiatric etiology for memory concern and recent (<3 weeks) use of psychotropic or memory enhancing medication. Participants completed the Memory Functioning Questionnaire (MFQ) and received medical and neuropsychological assessments. The MFQ is a validated self-report 64-item questionnaire consisting of 4 subscales; Retrospective Functioning (RF- comparing current and prior memory), Frequency of Forgetting (FF- how often forgetting occurs), Seriousness of Forgetting (SF-seriousness of memory failure) and Mnemonics Use (MU- use of reminder techniques). Data were analyzed using linear regression models. Predictors were MFQ-Total and MFQ-RF, MFQ-FF, MFQ-SF and MFQ-MU subscales. Outcome measures for memory function were California Verbal Learning Test Immediate Recall (CVLT -IR), CVLT Delayed Recall (CVLT-DR) and Delayed Recall on the Wechsler Memory Scale-R Logical Memory Story A (LM). We also conducted an exploratory analysis of individual items from MFQ subscales that were significant predictors of memory performance. A p-value <.05 was used as the threshold for statistical significance of predictor variables. Results: MFQ-Total was predictive of LM (R2=.082, p=.03). Of the subscales, only MFQ-FF predicted LM (R2=.151, p=.003) and CVLT-IR (R2=.068, p=.049). MFQ-RF, SF and MU did not predict any of the memory outcome measures. Items that were significant predictors included "frequency of forgetting things people tell you"(LM R2=.137, p=.005; CVLT-IR R2=.096, p=0.02) and "frequency of forgetting 3 or 4 sentences before the one you are reading in a newspaper" (LM R2=.231, p<.001; CVLT-IR R2=.077, p=.04). Conclusions: Questions regarding frequency of memory concerns, but not perception of memory decline, as measured by the MFQ, were best predictive of actual memory performance. In line with the literature showing that the MFQ-FF has the strongest relationship with actual memory performance, these findings suggest that self-report of frequency of memory problems may be a more sensitive indicator of objective memory ability.

No. 112

ARTISTS2: A Well-Controlled, Fixed-Dose Study of Deutetrabenazine for the Treatment of Tics Associated With Tourette Syndrome

Poster Presenter: Juha-Matti Savola, M.D., Ph.D.

SUMMARY:

Background: Tourette syndrome (TS) is a neurodevelopmental disorder manifested by motor and phonic tics. Behavioral and psychiatric comorbidities often accompany TS. In the US, antipsychotics, including haloperidol, pimozide and aripiprazole, are approved for the treatment of TS. However, the EU currently lacks European Medicines Agency–approved medicinal products for the treatment of TS. Only haloperidol and tiapride are approved nationally in some EU countries. Antipsychotics have been associated with serious side effects, such as tardive dyskinesia (TD). Deutetrabenazine, a generally well-tolerated vesicular monoamine transporter type 2 (VMAT2) inhibitor, was recently approved by the US Food and Drug Administration for the treatment of chorea associated with Huntington's disease (April 2017) and TD (August 2017). It is currently under evaluation for the treatment of tics in pediatric and adolescent patients with TS. This controlled study evaluates the efficacy of flexible doses of deutetrabenazine in reducing motor and phonic tics associated with TS compared with placebo. Methods: ARTISTS2 (Alternatives for Reducing Tics in TS) is a Phase 3 placebo controlled study of 150 patients between 6 and 16 years of age with tics associated with TS. Patients will be randomized 1:1:1 to deutetrabenazine high dose, low dose, or placebo. Doses will be titrated for a period of 4 weeks followed by 4 weeks of maintenance at their randomized study dose. The primary outcome is change from baseline to Week 8 in the Total Tic Score (TTS) of the Yale Global Tic Severity Scale (YGTSS) between high dose deutetrabenazine and placebo. Secondary outcomes are change from baseline to Week 8 in: TS Clinical Global Impression (TS-CGI) score (high dose vs placebo), TTS of the YGTSS score (low dose vs placebo), TS-CGI score (low dose vs placebo), TS-Patient Global Impression of Impact (TS-PGII) score (high dose vs placebo), TS-PGII score (low dose vs placebo), child and adolescent Giles de la TS-Quality of Life (C&A-GTS-QoL) activities of daily living (ADL) subscale (high dose vs placebo) score, and C&A-GTS-QOL ADL subscale (low dose vs placebo) score. Additionally, safety and tolerability will be evaluated. The primary analysis will use a mixed-model, repeated-measures model. A hierarchical (fixed-sequence) testing approach will be used for the analysis of the primary and key secondary endpoints to maintain the experiment-wise type I error rate of 5% (two-sided). Results: Not available yet. Conclusion: TS is a neurodevelopmental disorder that often impairs quality of life in young patients, impacting occupational, social, and educational activities. TS presents an important unmet medical need for effective and well-tolerated treatment options. ARTISTS2 is a Phase 3 study with fixed doses of deutetrabenazine in pediatric patients with TS. The study is sponsored by Teva Pharmaceuticals and operationalized by Teva's development partner Nuvelution TS Pharma INC.

No. 113

ARTISTS: An Open-Label, Long-Term Safety Study of Deutetrabenazine for the Treatment of Tourette Syndrome in Children and Adolescents

Poster Presenter: Juha-Matti Savola, M.D., Ph.D.

SUMMARY:

Background: Tourette syndrome (TS), a tic disorder with involuntary movements and vocalizations, is frequently accompanied by a variety of behavioral and psychiatric comorbidities. Antipsychotics, such as haloperidol, pimozide and aripiprazole, are approved for the treatment of TS in the US; however, there are no European Medicines Agency–approved medicinal products throughout the EU, although haloperidol and tiapride are approved in some EU countries. Antipsychotics have been associated with serious adverse effects, including tardive dyskinesia (TD). Deutetrabenazine is a generally well-tolerated vesicular monoamine transporter type 2 inhibitor (VMAT2) recently approved by the US Food and Drug Administration for the treatment of chorea associated with Huntington's disease (April 2017) and TD (August 2017). It is currently under investigation for the treatment of tics in pediatric and adolescent patients with TS. This controlled study evaluates the safety and tolerability of long-term therapy with

deutetrabenazine and persistence of effect with a randomized withdrawal period for patients with TS who have previously completed participation in study SD-809-C-17, study TV50717-CNS-30046, or study TV50717-CNS-30060. Methods: ARTISTS (Alternatives for Reducing Tics in TS) is a 56-week, open-label, single-arm, long-term safety study in approximately 210 children and adolescents with TS after they have successfully completed a parent study (SD-809-C-17, TV50717-CNS-30046, or TV50717-CNS-30060). All patients will undergo a randomized drug withdrawal period followed by a deutetrabenazine retitration and maintenance period. The primary outcome is assessment of safety via assessing incidence of adverse events, clinical laboratory parameters, 12 lead ECG and safety scales during the study. Secondary outcomes are change from Day 1 to each visit the scale is administered in: Total Tic Score (TTS) of the Yale Global Tic Severity Scale (YGTSS), TS-Clinical Global Impression (TS-CGI) score, TS-Patient Global Impression of Impact (TS-PGII) score, and child and adolescent Giles de la TS-Quality of Life (C&A-GTS-QoL) activities of daily living (ADL) subscale score. Results: Not available yet. Conclusion: TS is a chronic condition impairing major life activities, such as occupational, social, and educational activities, during childhood and adolescence. TS presents an area of significant unmet medical need in the pediatric population for effective and well-tolerated treatment options. ARTISTS is an open-label Phase 3 study to further evaluate the long-term safety and the persistence of effect of deutetrabenazine in patients with tics associated with TS. The study is sponsored by Teva Pharmaceuticals and operationalized by Teva's development partner Nuvelution TS Pharma INC.

No. 114

ARTISTS1: A Study of Deutetrabenazine for the Treatment of Tourette Syndrome in Children and Adolescents

Poster Presenter: Juha-Matti Savola, M.D., Ph.D.

SUMMARY:

Background: Tourette syndrome (TS) is a neurodevelopmental disorder manifested by motor and phonic tics and often accompanied by behavioral and psychiatric comorbidities. In the US, antipsychotics, including haloperidol, pimozide and aripiprazole, are approved for the treatment of TS. However, the EU currently lacks European Medicines Agency–approved medicinal products for the treatment of TS. Only haloperidol and tiapride are approved nationally in some EU countries. Antipsychotics have been associated with serious side effects, such as tardive dyskinesia (TD). Deutetrabenazine, a generally well-tolerated vesicular monoamine transporter type 2 (VMAT2) inhibitor, was recently approved by the US Food and Drug Administration for the treatment of chorea associated with Huntington's disease (April 2017) and TD (August 2017). Deutetrabenazine is currently under evaluation for the treatment of tics in pediatric and adolescent patients with TS. This controlled study evaluates efficacy of fixed doses of deutetrabenazine in reducing motor and phonic tics associated with TS compared with placebo. Methods: ARTISTS1 (Alternatives for Reducing Tics in TS) is a Phase 2/3 placebo controlled study of approximately 100 patients between 6 and 16 years of age with tics associated with TS. Patients will be randomized 1:1 to deutetrabenazine or placebo. The dose for each patient will be titrated over 7 weeks to an optimal level, followed by a 5-week maintenance period at that dose. The primary outcome is change from baseline to Week 12 in the Total Tic Score (TTS) of the Yale Global Tic Severity Scale (YGTSS). Secondary outcomes are change from baseline to Week 12 in TS Clinical Global Impression (TS-CGI) score, TS-Patient Global Impression of Impact (TS-PGII) score, and child and adolescent Giles de la TS-Quality of Life (C&A-GTS-QoL) activities of daily living (ADL) subscale score. Additionally, safety and tolerability will be evaluated. The primary analysis will use a mixed-model, repeated-measures model. A hierarchical (fixed-sequence) testing approach will be used for the analysis of the primary and key secondary endpoints to maintain the experiment-wise type I error rate of 5% (two-sided). Results: Not available yet. Conclusion: TS is a neurodevelopmental disorder that often impairs quality of life in young patients, impacting occupational, social, and educational activities. TS presents an important unmet medical need for effective and well-tolerated treatment options. ARTISTS1 is a Phase 2/3 placebo controlled study with personalized optimal dosing of deutetrabenazine, a VMAT2 inhibitor, for pediatric

patients with TS. The study is sponsored by Teva Pharmaceuticals and operationalized by Teva's development partner Nuvelution TS Pharma INC.

No. 115

Relationship Between Cognition and Language: Is There a Difference Between Alzheimer's and Parkinson's Disease?

Poster Presenter: Maria Kralova
Co-Author: Lubomira Izakova

SUMMARY:

In our previous works we detected the language deficits in the sentence comprehension test in both patients with Alzheimer´s disease and Parkinson´s disease. Cognitive disorders, especially mild cognitive impairment (MCI), are of the most prevalent nonmotoric features of Parkinson´s disease (PD). The character and structure of cognitive impairment is different in this two neurodegenerative disorders even in the case of MCI. This poster presents the results of comparison of MCI patients with Parkinson´s disease and Alzheimer´s disease, matched by sex, age and severity of cognitive decline (measured by total score in Montreal Cognitive Assessment tool, MoCA). In both groups we found the correlation between cognitive and language performance, but we found also that this correlation is driven by different deficits in the individual cognitive domains. Identification of these communication disturbances can help to detect cognitive decline earlier and to start cognition preserving treatment in time.

No. 116

Impulse Control Disorders in Parkinson's Disease

Poster Presenter: Stefano Pallanti, M.D., Ph.D.
Co-Authors: Luana Salerno, Sonia Gaur

SUMMARY:

Background: Recent evidence indicated a higher prevalence of Attention Deficit Hyperactivity Disorder (ADHD) in patients with Parkinson's Disease (PD). Both ADHD and PD are characterized by impaired executive functions and problems in attention. People with ADHD frequently suffer from substance and behavioural addiction, whereas a minority of patients with PD can develop an Impulse Control Disorder (ICD). In this study we explored the ICDs presentation in patients with PD in comparison to those who also met the criteria for adult ADHD. Methods: 86 patients with PD were administered the Diagnostic Interview for ADHD in Adults (DIVA 2.0) in presence of a collateral informant. The presence of ICDs was defined according the Questionnaire for Impulsive-Compulsive Disorders in Parkinson's Disease-Rating Scale scores. Results: Adult ADHD was found in 33 patients with PD. The frequency was higher in those with both PD+ ICDs (n=24 versus n=9 of PD patients).

No. 117

Electroconvulsive Therapy for Behavioral and Psychological Symptoms of Dementia: A Prospective, Open-Label, Observational Study

Poster Presenter: Sarah Elmi, M.D.

SUMMARY:

Introduction: Dementia involves cognitive decline that impedes independent functioning. The non-cognitive features of this disorder are most closely affiliated with quality of life. These challenges known as "Behavioural and Psychological Symptoms of Dementia" (BPSD) encompass abnormalities in behaviour, affect, and reality testing that affect most of those affected. Agitation and aggression are associated with increased risk of institutionalization, psychotropic medication use, caregiver burden, and mortality. Safe and effective treatments for BPSD are lacking. Antipsychotics have the most evidence of benefit in BPSD, yet, their use is offset by risks that have led regulatory authorities in Canada to issue warnings about their use in dementia. Research has established the safety and efficacy of electroconvulsive therapy (ECT) in elderly with depression, mania, and schizophrenia. Clinical experience suggests ECT is a valuable treatment option for BPSD after non-pharmacologic and pharmacologic options have been exhausted. Design: This was a prospective, open-label, observational study of the efficacy and safety of ECT for BPSD. Subjects were compared on outcome measures pre- and post-ECT including scoring on the Neuropsychiatric Inventory and Pittsburgh Agitation Scale. Patients with dementia and BPSD will be recruited from the Geriatric Psychiatry inpatient units at Ontario Shores. To be deemed eligible for this study, patients must meet all the following

inclusion criteria a) Severe BPSD: BPSD of sufficient severity that the safety of the patient or others precludes the possibility of discharge to any non-hospital environment. b) Failed “standard of care for BPSD”: i) Non-pharmacological treatments are of insufficient benefit to allow discharge to any non-hospital environment, and ii) Pharmacological treatments are of insufficient benefit to allow discharge to any non-hospital environment. c) Provide informed consent Only patients meeting criteria will be identified as potential study participants to the PI by the attending psychiatrist. ResultsThe intensity and frequency of behavioural symptoms was shown to be significantly reduced over the course of the treatment. The treatment was also tolerated well with few adverse effects. Out of 16 individuals who completed the study, 9 were males, Average age 72.6(SD: 8). FAST score of dementia was 6 or 7 in 90% of the subjects. Comparison of NPI score at the start and end of treatments showed statistically significant drop; 34.7(24.0) , P <0.001. Comparison of Cornell depression scale score before and after completing all the treatments showed a significant drop; (15.3 vs 6.6, P: 0.002). Pittsburgh agitation scale score showed a significant drop after completing treatments as well; (6.75 vs 3, P: 0.04). Conclusion: Electroconvulsive Therapy can be a safe and effective treatment for agitation and aggression in dementia.

No. 118

Fetal Brain Exosomes in Cord Blood, Amniotic Fluid and Maternal Circulation: A New Liquid Biopsy to Study Early Brain Development?

Poster Presenter: Larissa Takser, M.D., Ph.D.
Co-Authors: Annie Ouellet, Erika Croft, Virginie Gillet

SUMMARY:

BACKGROUND: Prevention of neurodevelopmental disorders of prenatal origin suffers from the lack of objective tools for early detection of susceptible individuals and the long-time lag, usually in years, between the neurotoxic exposure and the diagnosis of mental dysfunction. We propose that early brain damages might be assessed using exosomes, nanovesicles released by brain cells, and their content in microRNAs (epigenetic modulators), in cord blood. Moreover, given the potential ability of exosomes to pass placental barrier, we hypothesized that Fetal Brain Exosomes (FBE) could also be detected and isolated in maternal blood during pregnancy. OBJECTIVE: To isolate and characterize FBE in cord blood and amniotic fluid at delivery, as well as in maternal blood before labor. In addition, we determined the profile of miRNAs in FBE. METHODS: We obtained maternal plasma (MP) before labor, arterial cord blood plasma (ACBP), venous cord blood plasma (VCBP) and amniotic fluid (AF) at delivery in eight pregnancies. Plasma samples from four non-pregnant women (NPP) were used as a negative control. Total exosomes were isolated and their characterization/quantification were done by electron microscopy with immunolabelling CD81-exosome specific protein and enzyme-linked immunosorbent assay (ELISA). Presence of FBE were confirmed by electron microscopy with immunolabelling for Contactin-2/TAG1 (neuron specific protein only expressed during brain human developmental stages), L1CAM (neural-cell adhesion molecule) and Enolase-2 (neuron specific enzyme). Quantification of FBE was done using sandwich ELISA test for Contactin-2/TAG1. In ACBP, VCBP and AF, miRNAs were isolated from FBE and quantified using NanoDropTM. RESULTS: Presence of exosomes was validated in all samples and confirmed by ELISA. Concentration of total exosomes was higher in MP (493x108particle/ml) compared to NPP (279x108particle/ml), VCBP (452x108particle/ml), ACBP (376x108particle/ml) and AF (8x108particle/ml). Presence of FBE was successfully shown by electron microscopy where vesicles with size from 30 to 150nm were positive for Contactin-2/TAG1, L1CAM and Enolase-2 both in ACBP, VCBP and amniotic fluid with higher proportion in cord blood. In maternal circulation, FBE positive for Contactin-2/TAG1 were isolated, but not in non-pregnant women. MiRNAs was isolated from all samples with recovery of sufficient quantity (>0.5ng/ul) to measure expression levels of brain-specific miRNAs with qRT-PCR. CONCLUSION: Ours is the first study to show the presence of FBE and to characterize their miRNA content in cord blood, amniotic fluid, and maternal blood before labor. These results open up new opportunities to characterize epigenetics change in the fetal brain in response to potential neurotoxic drugs or environmental pollutants in utero. This study was

supported by internal instutitional funds, CIHR, and Quebec Training Network in Perinatal Research.

No. 119
WITHDRAWN

No. 120
USP2 Single-Nucleotide Polymorphisms (SNPs) Have Association With Resilience and Fear of Negative Evaluation in Normal Healthy Female Volunteers
Poster Presenter: Jun Ho Seo
Lead Author: Se Joo Kim

SUMMARY:
Introduction : Resilience, the psychologically adaptive ability in response to stress, is valuable intermediate phenotype to study. Ubiquitin-proteasome system(UPS) regulates neurotransmitter receptors, protein kinases, synaptic proteins, transcription factors, and other molecules critical for synaptic plasticity. Thus, we can expect defects of UPS will lead to insufficient homeostatic response, resulting increase of allostatic loads so that individuals become vulnerable to certain disorders and this means UPS may be associated with resilience of individuals. In this study, we hypothesized Ubiquitin-specific peptidase(USP)46&USP2 may be associated with resilience, so we designed a gene association study to investigate the association of USP2 and USP46 polymorphisms with resilience in normal healthy subjects. Methods: A total of 341 subjects(189 males, 152 females) were included in the final analysis. Connor–Davidson Resilience Scale and Fear of Negative Evaluation(FNE) Scale were assessed. Rs2241646 on USP2 gene and rs2244291 on USP46 gene were genotyped. Multiple analysis of covariance(MANCOVA) were performed using the total scores of resilience, each of five subgroups' scores of resilience and FNE scores as dependent variables and USP2&46 SNPs genotypes as fixed factors. Age and educational years were controlled as covariates to control possible effects. Each gender was analyzed separately. The statistical significance was set at $p<0.05$ for all tests. Results: There were significant overall effects of USP2 rs2241646 genotypes in females(Wilks ?=0.903,F(6,141)=2.535,p=0.023). There was significant difference in resilience scores between USP2 rs2241646 genotypes(F=4.670,p=0.032,?p2=0.031) and in FNE scores(F=6.291,p=0.013,?p2=0.041) for only female subjects. There were no associations about USP46 rs2244291 in both genders. The female subjects with the TT genotype of USP 2 gene polymorphism rs2241646 showed the higher resilience score(Mean=65.31, SD=11.01) than CT&CC genotype(Mean=61.38, SD=12.16, $p< 0.05$), and showed the lower FNE score(Mean=31.04,SD=8.00) than CT&CC genotype(Mean=34.74,SD=7.26). Discussion: These findings suggest that resilience and fear of negative evaluation are influenced by USP2 gene in female. Considering previously known target proteins and roles of USP2, USP2's associations with Hypothalamic-Pituitary-Adrenal axis, synaptic plasticity, and circadian rhythm imply its involvement in modulating and mediating stress response, and this is in accordance with the major finding of this study. Although some limitations of this study, this study suggests that UPS plays some roles in modulating stress response, implying its association with neural substrates of psychological resilience. This research was supported by Basic Science Research Program through the National Research Foundation of Korea(NRF) grant funded by Mininisty of Science, ICT&Future Planning, Republic of Korea(NRF-2018R1A2B2007714).

No. 121
The SLC39A12 Gene Polymorphism Is Associated With Schizophrenia in Korean Population
Poster Presenter: Junho Song
Co-Authors: Jong Won Lee, Won Sub Kang

SUMMARY:
Introduction: The zinc transporter SLC39A12 (solute carrier family 39 member 12) have a role in regulating the distribution of Zn hoemostasis that is critical for the normal functioning of tissues including the CNS. It is known that Slc39a12 has roles in controlling cyclic AMP-response-element-binding protein phosphorylation and activity, neurite outgrowth as well as microtubule polymerization and stability. Recent study have shown that SLC39A12 mRNA expression was increased in the cortex of schizophrenia subjects. Moreover, the SLC39A12 gene is located at chromosome 10p12, a region that was shown to be linked to schizophrenia.

Therefore, we investigated whether genetic polymorphisms of SLC39A12 gene are associated with schizophrenia in Korean population. Further, we assessed the association of the SNPs of the SLC39A12 gene with specific clinical symptoms of schizophrenia patients. Methods: Five single nucleotide polymorphisms (SNPs) (rs691112, rs10764176, rs691513, rs2478568 and rs59434947) of the SLC39A12 gene considering their heterozigosity and minor allele frequency were genotyped in 257 schizophrenia patients and 485 control subjects. The genotypes of SNPs were performed by direct sequencing. All patients were evaluated by the operational criteria checklist for psychotic illness. Multiple logistic regression models (co-dominant, dominant, recessive, and over-dominant) were performed to evaluate odds ratios (ORs), 95% confidence intervals (CIs), and p values controlling for age and gender as covariates. To avoid chance findings due to multiple testing, a Bonferroni correction was applied. Results: The genotype frequencies of rs59434947 showed significant association between schizophrenia and controls [p=0.0095, OR=0.33, 95%CI=0.12-0.89 in the co-dominant model (A/T vs. A/A) and p=0.0023, OR=0.21, 95%CI=0.14-0.78 in the recessive model (T/T vs. A/A + A/T)]. In addition, the genotype distributions of the rs10764176 and rs2478568 showed significant association with hallucination symptoms. The rs1076416 was significantly associated with hallucination in both the co-dominant model (A/G vs. A/A, p=0.0014, OR=0.35, 95%CI=0.11-0.64) and the dominant model (A/G + G/G vs. A/A, p=0.003, OR=0.33, 95%CI=0.17-0.64). The rs2478568 also revealed a significant association with hallucination in the over-dominant model (A/G vs. A/A + G/G, p=0.028, OR=1.80, 95%CI=1.06-3.07). Conclusions: In conclusion, a significant association was revealed between SLC39A12 gene polymorphisms and symptoms of hallucination in schizophrenia patients. These results suggest that SLC39A12 gene polymorphisms may be related to the susceptibility to schizophrenia in Korean population. Key Words: Solute carrier family 39 member 12 (SLC39A12) gene, Zinc, polymorphism, schizophrenia.

No. 122

An Immunohistochemical Profile of the Cerebellum in Aged Rats Developmentally Exposed to Methylmercury, Polychlorinated Biphenyls, and Organochlorines

Poster Presenter: Nazneen Rustom
Co-Authors: Richard Millson, M.D., Felicia Iftene, M.D., Ph.D.

SUMMARY:

Background- It has been widely reported that environmental toxicants namely methylmercury (MeHg), polychlorinated biphenyls (PCBs), and organochlorine pesticides (OCPs) are found at higher levels in maternal blood of pregnant women residing in Arctic regions of Canada. This is of particular concern for offspring health, especially in the central nervous system (CNS). Long-term CNS effects of toxicant exposure are largely unknown following gestational and early-life phases of development. Developmental toxicant exposure is linked with several consequences such as increased risk of autism and subtle neuropsychological deficits in children. Therefore, at environmentally proportionate and relevant levels to human studies, our aim was to assess pathological changes in the CNS of aged rodents that were exposed to toxicants indirectly via in utero and lactation only. The cerebellum was chosen as an important region of interest since: (1) it has been previously identified as a region vulnerable to toxicant effects; (2) is found to have a high toxicant burden in direct exposure studies; (3) and is a neuronal region implicated in several psychiatric disturbances. Our paradigm aimed to compare single and multiple toxicant exposure with controls testing the null hypothesis across 9 groups (n = 6-9). Method - Dams were exposed to MeHg, PCBs, and OCPs at ecologically relevant levels throughout the gestational period and first 21 days following birth of offspring. Following this early-life period, pups were not exposed to the toxicants, and were sacrificed via transcardial perfusion at postnatal day 450. Brains were fixed, frozen, and sliced at 40 µm. Immunohistochemical markers of interest included glutamic acid decarboxylase-67 (GAD67) since this is a comparative marker to cysteine sulfinic acid decarboxylase, previously described to be influenced by toxicant exposure in the cerebellum; CD11b as an index marker of microglial reactivity; cleaved

caspase-3 (CC3) as a marker of apoptotic/necrotic activity; glial fibrillary acidic protein (GFAP) as a marker of Bergmann glia (specialized cells formed in early development); and endothelial barrier antigen (EBA) as a marker of blood-brain barrier organization. Lastly, lipofuscin, a natural autofluorescent marker of oxidative stress was assessed in tissue samples. Comprehensive image analysis was conducted to assess each stain. Findings and conclusions - One-way analysis of variance (at a =0.05) using Tukey's post-hoc analysis was conducted. Exposure to MeHg (p =0.011), PCBs (p= 0.001), and MeHg+PCBs (p = 0.000) significantly increased GAD67 immunoreactivity in comparison to control. No significant differences were found on other immunohistochemical markers comparative to controls. Altogether, our results suggest that developmental exposure to even low doses of MeHg and PCBs are suffice to influence GAD immunoreactivity well into aging; a potential lifelong consequence upon the cerebellum.

No. 123

Genetic Variants of CCND2 Are Associated With Susceptibility to Schizophrenia in Korean Population

Poster Presenter: Jong Won Lee
Co-Authors: Junho Song, Won Sub Kang

SUMMARY:
Introduction: There is considerable evidence that schizophrenia is associated with subtle alterations in cell cycle dynamics, shortening of the cell cycle period, and increased expression of G1/S phase cyclins. Cyclin D2 (CCND2) protein encoded by this gene belongs to the highly conserved cyclin family, whose members are characterized by a dramatic periodicity in protein abundance through the cell cycle. Cyclins function as regulators of CDK kinases. In addition, several studies showed that abnormal expressions of several cell cycle-related genes are associated with schizophrenia. Therefore, we examined whether genetic polymorphisms of CCND2 gene is associated with schizophrenia in Korean population by analyzing the genotype and allele frequencies. Methods: Three single nucleotide polymorphisms (SNPs) (rs7304270, rs3217805, and rs3812821) of the CCND2 gene considering their heterozygosity and minor allele frequency were genotyped in 185 schizophrenia patients and 303 control subjects. The genotypes of SNPs were performed by direct sequencing. Multiple logistic regression models were employed to calculate odds ratios (ORs), their 95% confidence intervals (CI) and corresponding p values, controlling for age and gender as co-variables. In the logistic regression analysis for each SNP, we compared three different models of gene expression (co-dominant model, dominant model and recessive model). Results: SNP rs7304270 showed significant difference in the allele frequencies between schizophrenia and controls (p=0.002). The genotype frequencies of rs7304270 showed significant association between schizophrenia and controls (p=0.003 in the co-dominant model; p=0.003 in the recessive model). There was no significant association between other two SNP polymorphisms and schizophrenia. Conclusions: Our study found that CCND2 gene polymorphism may have susceptibility to schizophrenia in Korean population. Key Words: CCND2, schizophrenia, polymorphism

No. 124

The Association Between Therapeutic Response and Change of Mismatch Negativity in Schizophrenia Patients

Poster Presenter: Jong Won Lee
Co-Authors: Junho Song, Won Sub Kang

SUMMARY: Objective: Schizophrenia is characterized by disturbances in perception and cognition. Cognitive deficits include impairments in attention and memory that, along with executive control, are fundamental to the performance of many experimental tasks. Attenuated mismatch negativity (MMN) reflects central auditory dysfunction in schizophrenia. Pharmacological studies in both animals and humans show that the memory-based comparison process underlying MMN is critically dependent on the activity of N-Methyl-D-aspartate (NMDA) receptors fundamental to glutamatergic neurotransmission. Glutamate hypofunction plays a central role in the neurochemistry of schizophrenia. The aim of this study is to compare MMN changes before and after treatment in schizophrenia patients and to assess their association with treatment response. Methods: Twenty-three schizophrenia patients underwent an

oddball paradigm. MMN was calculated by the difference waveforms of the event-related potentials (ERPs) elicited by subtracting standard from deviant stimulus. The clinical symptoms were measured by the Positive and Negative Syndrome Scale (PANSS), the Psychotic Symptom Rating Scale (PSYRATS). Follow-up evaluation was conducted when the PANSS total score decreased by 30% or more (treatment response group) or before discharge (non-response group). Results: The treatment response group showed significantly larger MMN amplitude improvement and latency reduction than the non-response group after treatment (Fz; mean amplitude $p = 0.035$, FCz; $p = 0.041$). The auditory hallucination group showed shorter latency than that of the group without hallucinations. Additionally, auditory hallucination was associated with prolonged MMN latency and shortened after treatment in the auditory hallucination response group (Fz; $p = 0.048$). Conclusions: These results suggest that the attenuated MMN amplitude reflects the progression of the disease. The increment of MMN amplitude and shortening of latency after treatment may reflect cognitive functional recovery of central auditory sensory processing. Key Words: Mismatch negativity, schizophrenia, therapeutic response.

No. 125

A Case Presentation of Misdiagnosed Pseudobulbar Affect in Multiple Sclerosis Presenting With Depression

Poster Presenter: Benjamin Ehrenreich, M.D.
Co-Author: Shane Verhoef, M.D.

SUMMARY:

Pseudobulbar affect, which affects less than 1% of the population, describes the behavior of sudden uncontrollable outbursts of tearfulness, crying, or extreme mood lability that commonly presents with neurologic diseases or brain injury such as Amyotrophic Lateral Sclerosis, strokes, traumatic brain injuries, dementia, Parkinson's disease, or multiple sclerosis. Patients with neurologic diseases or brain injury often can present for psychiatric evaluations for general psychiatric complaints such as depression. This poster will present a case of a patient who carried a diagnosis of a progressive multiple sclerosis, referred by his neurologist for treatment of depression. Further evaluation of patient's cognition, comprehensive medical review, thorough psychiatric history of the patient, and keying into patient's particular symptoms of uncontrollable laughter and crying spells revealed that his crying spells were more consistent with a diagnosis of pseudobulbar affect. This case will help facilitate discussion and review of how to evaluate depression with co-occurring neurologic diseases or brain injuries to distinguish between a primary affective diagnosis of depression or a neurologic presentation of pseudobulbar affect and how the treatment of a primary depression vs pseudobulbar affect is different.

No. 126

Neurocognitive Deficits Among Patients Seeking Treatment for Mood, Substance Use, and Psychotic Spectrum Disorders

Poster Presenter: Jonathan Savant
Co-Authors: Hector Sigler, Robert A. Moran, M.D.

SUMMARY:

Background: Neurocognitive deficits within and between psychiatric populations seeking treatment is a phenomenon with implications for treatment modalities and prognostications for recovery. Methods: We conducted a retrospective chart review of patients treated at a center with residential, PHP, IOP, and OP levels of care during a 45 month period. The patients were diagnosed by a psychiatrist, were clinically stabilized, and completed standardized computer-based neurocognitive testing as part of treatment as usual. We included patients with a primary diagnosis of addiction, unipolar depression, bipolar depression, and psychotic spectrum disorders. Testing produced a composite Neurocognition Index (NCI) and 9 Domain Scores. Raw scores were converted to standard scores using an age-matched normative sample with mean score of 100 and standard deviation of 15, where higher scores represent better performance. Standard scores 90-100 were average, 80-89 low average, 70-79 low, and <70 very low. Tests not completed within 14 days of admission, and tests deemed not valid by built-in quality indices were excluded. Descriptive statistics were performed on testing results and comparison of results between categorical diagnoses were performed using ANOVA.

Values of p<0.05 were considered significant. Results: 238 patients had an eligible primary diagnosis (addiction N=159, unipolar depression N=15, bipolar depression N=44, psychotic spectrum N=20) and valid neurocognitive testing completed within 2 weeks of admission. Mean NCI for all patients was 87 (SD=16). Standard scores were in the below average range for all domains, except Psychomotor Speed and Visual Memory which were in the average range, as compared to standardized norms. Patients with a psychotic spectrum disorder had lower NCI scores (M=75, SD=19) than those with addiction (M=89, SD=15), unipolar depression (M=95, SD=16), and bipolar depression (M=85, SD=16), (p=0.001). Similarly, those with a psychotic spectrum disorder scored lower in Reaction Time (p=0.003), Complex Attention (p=0.03), Cognitive Flexibility (p<0.001), Processing Speed (p=0.024), and Executive Functioning (p<0.001) than those without a psychotic spectrum disorder. No differences were observed in Psychomotor Speed, Composite Memory, Verbal Memory, or Visual Memory domains between diagnoses. Conclusion: This patient population scored below average as compared to standardized norms on most tested neurocognitive domains, and those with psychotic spectrum disorders tended to score lower than those with non-psychotic spectrum disorders. Clinicians should be cognizant of potential neurocognitive deficits when treating these patient populations to help inform selection and monitoring of treatment modalities. Study strengths include our relatively large, community-based, treatment-seeking sample size, and use of computerized testing standardized with psychiatric patient populations.

No. 127

Effect of Tardive Dyskinesia on Quality of Life: Self-Reported Symptom Severity Is Associated With Deficits in Physical, Mental, and Social Functioning

Poster Presenter: Benjamin Carroll

SUMMARY:

Background: Tardive dyskinesia (TD), an often-irreversible movement disorder typically caused by exposure to antipsychotics, most commonly affects the face, mouth, and tongue, and may be debilitating. This study investigated TD burden on patients' quality of life and functionality. Methods: Adults with clinician-confirmed schizophrenia, bipolar disorder, or major depressive disorder participated in an observational study. Approximately half (47%) of participants had a clinician-confirmed TD diagnosis. Participants completed the SF-12v2 Health Survey® (SF-12v2), Quality of Life Enjoyment and Satisfaction Questionnaire Short Form (Q-LES-Q-SF), and the social withdrawal subscale of the Internalized Stigma of Mental Illness scale (SW-ISMI), and rated the severity of their TD symptoms. Group differences in SF-12v2 physical and mental component summaries (PCS and MCS), Q-LES-Q-SF, and SW-ISMI scores were analyzed. Results: TD (n=79) and non-TD (n=90) groups were similar in age, gender, and number of patients with schizophrenia, bipolar disorder, and major depressive disorder. TD patients reported significantly worse SF-12v2 PCS (P=0.003), Q-LES-Q-SF (P<0.001) and SW-ISMI (P<0.001) scores than non-TD patients. The difference in SF-12v2 PCS scores exceeded the established minimal clinically important difference (MCID) of 3 points. When stratified by TD severity, those with more-severe symptoms had significantly worse Q-LES-Q-SF (P<0.001) and SW-ISMI (P=0.006) scores than those with less-severe symptoms. Differences in SF-12v2 PCS (P=0.12) and MCS (P=0.89) were in the expected direction and exceeded the MCID. Conclusion: Among patients with psychiatric disorders, TD is associated with significant physical health burden and incremental mental health burden. TD severity is also associated with lower overall quality of life and greater social withdrawal. This research was supported by Teva Pharmaceuticals, Petach Tikva, Israel.

No. 128

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

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 eight 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 the size of the corpus callosum appears to be play an important role in the emergence of psychiatric illnesses. 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 insights into how sensory information is processed and the 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. 129

Neurogenic Stuttering From Metastatic Renal Cell Carcinoma With Resolution Post Supratentorial Craniectomy and Tumor Excision

Poster Presenter: Douglas Grover, M.D.

SUMMARY:

Neurogenic stuttering is a relatively rare occurrence described as a disruption in the normal fluency of language causing involuntary repetition, prolongation, or cessation of sound, which can be the result of a variety of insults to the brain. In this report we demonstrate an even further rare case of a 45 year old right handed male with metastatic clear cell renal cell carcinoma (CCRCC) who acquired a case of stuttering, with nearly 100% resolution after tumor resection. Following a left radical nephrectomy and chemotherapy, he developed bony metastasis to the pelvis, which progressed to the spine, lungs, and finally the brain. The patient's stuttering began after 2 weeks of worsening headaches and blurry vision. Imaging showed a 2cm hemorrhagic metastatic mass in the right temporal occipital region. He underwent a right supratentorial craniectomy and excision of the tumor. On post-op day 12, the patient no longer exhibited stuttering speech except during situations triggering highly intense emotions. In review of the literature, the mainstay of treatment for stuttering (either neurogenic or developmental) usually requires extensive therapy with a speech language pathologist and/or psychotropics used off-label. There has been one case reported of a patient with a brain abscess and resolution of stuttering following neurosurgical intervention. To our knowledge, this is the first case of a patient with neurogenic stuttering as a result of metastatic CCRCC and resolution of stuttering following tumor resection.

No. 130

Obstructive Sleep Apnea: Association to Neurocognitive Impairment. Therapeutic Strategies and Priorities

Poster Presenter: Ali M. Khan, M.D.

SUMMARY:

Introduction: Obstructive sleep apnea (OSA) refers to a fairly common, multisystem chronic disorder which results due to reoccurring partial as well as total pharyngeal obstruction in the course of

sleeping. OSA presents with typical symptoms such as excess sleepiness, involvement in vehicle accidents due to falling asleep at the wheel and some degree of systemic hypertension. There has been indication of an indirect connection between excess daytime sleepiness and the future incidents of cognitive decline and dementia. Aim: The main aim of this review is provision of a current summary of the knowledge and practice on diagnosing and treating patients with OSA and associated neuro-cognitive deficit disorders. Methodology: The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) methodology was used for doing a review of relevant published literature. Results: This review shows that there is a definite association between OSA and associated neuro-cognitive deficit disorders due to the pathophysiological changes caused by OSA. Conclusion: The evidence from this review underlines the importance of early identification of cognitive decline (using neuro-imaging and other tests), definite diagnosis and subsequent proper choice of treatment and management options (in accordance with the associated comorbidities presented by the patient) so as to lower morbidity and mortality rates.

No. 131

Diagnosis and Management of Deep Brain Stimulation-Induced Elevated Mood States

Poster Presenter: Andreea L. Seritan, M.D.
Co-Authors: Jessica Weinstein, Jill Ostrem

SUMMARY:

Deep brain stimulation (DBS) is an FDA-approved surgical treatment option for movement disorders including dystonia, essential tremor, and Parkinson' disease. DBS, in particular with subthalamic nucleus (STN) target, has been linked to rare potential psychiatric complications, warranting a thorough preoperative evaluation and risk assessment. DBS-associated psychiatric complications can include mood lability, elevated mood states, irritability, depression, impulsivity, suicidal ideation or behavior, and psychosis. DBS-induced elevated mood states (previously described as mania/hypomania or "mirthful laughter") are being increasingly recognized, posing diagnostic and management challenges.1-5 A series of three patients with STN DBS-induced mood elevated states is described here, along with contributory risk factors, alleviating factors, and corresponding clinical course. DSM-5 allows clinicians to diagnose mania or hypomania induced by antidepressant treatment (e.g., medications, ECT) if symptoms reach full syndromal severity and persist beyond the physiological effects of the substance or somatic treatment.6 With DBS therapy becoming increasingly common, there is a need for an appropriate diagnostic classification and nomenclature of DBS-induced elevated mood states. Psychiatrists have an important role in recognizing and managing these distinct mood disorders. Management strategies include DBS setting adjustments, behavioral strategies, and consideration of mood stabilizers, if nonpharmacological approaches are unsuccessful.5,7

No. 132

A Clinical Conundrum: Cognitive Changes in a Patient Discovered to Have Wernicke's Encephalopathy and Anti-NMDAR Encephalitis—Which Came First?

Poster Presenter: Bora Colak, M.D., M.P.H.
Co-Authors: Hande Okan, M.D., Ariel Heller, D.O., Mohammad Tavakkoli, M.D., M.P.H., M.Sc., Reena Baharani, M.D.

SUMMARY:

We present the case of a highly functional, previously obese, 26-year-old male with marked cognitive changes from baseline associated with a several-months history of extreme dieting, exercise, frequent use of "slim teas" containing Senna, and reported 100-lb weight loss. The patient initially presented to the psychiatric service with psychotic symptoms, including disorganization and paranoia, but was later found to have cognitive deficits (MOCA 17/30) including short-term memory loss with confabulation, cognitive slowing, and impaired speech, as well as the physical exam finding of opthalmoplegia. The patient was highly agitated on the psychiatry service but was eventually able to be transferred to the neurology service and initiated on IV thiamine therapy for suspected Wernicke's encephalopathy. The patient's opthalmoplegia resolved, his speech improved, and cognition was very mildly improved with IV thiamine

administration but other deficits including short term memory impairments persisted. The patient was in subsequent days also diagnosed with anti-NMDAR encephalitis and treated with IVIG and steroids, leading to more marked improvement in his symptoms including gradual recovery of memory and increased cognitive clarity and efficiency. This case involves the unique constellation of thiamine deficiency resulting from extreme dietary and behavioral changes, presenting with concurrent discovery of anti-NMDAR encephalitis. It is the only known case in the literature of these two clinical entities arising in relation to each other. The case presents a unique clinical challenge in uncovering the source of cognitive changes in two conditions which overlap in symptoms and have unclear etiologic relationship. It is suspected that the thiamine deficiency in this case developed as a result of behavioral and dietary changes stemming from the encephalitis itself but the possibility of a more complex relationship cannot be ruled out in light of our developing understanding of anti-NMDAR encephalitis. There is some literature suggesting that nutritional deficiency can itself be a trigger for autoimmune conditions. Moreover, experimental studies have found a relationship between thiamine deficiency and NMDA receptor activation, suggesting a potential link between thiamine deficiency and the pathophysiology of anti-NMDAR encephalitis on the molecular level. NMDAR excitotoxicity is thought, for instance, to stimulate NMDAR subunit cleavage and fragmentation, leading potentially to immunological identification of NMDAR subunits as foreign antigens and subsequent autoantibody production against NMDAR. One may consider then that severe thiamine deficiency may be a contributing factor to the onset of anti-NMDAR encephalitis rather than merely its consequence.

No. 133

To Test or Not to Test: Screening for Anti-N-Methyl-D-Aspartate Receptor Antibodies in Atypical First-Episode Psychosis

Poster Presenter: Austin G. Greenhaw, M.D.
Co-Authors: Martha J. Ignaszewski, M.D., Serena Fernandes, Eleni Maneta, Aaron Hauptman

SUMMARY:

Background: Anti-N-methyl-D-aspartate receptor (NMDAR) encephalitis is an autoimmune disorder that can present with neuropsychiatric symptoms, including psychosis. Though medical workup for potentially contributory underlying organic factors is recommended for all first episode psychosis (FEP), what constitutes this work-up, including testing for NMDAR antibodies in serum and cerebrospinal fluid, has not been defined by a gold standard. Autoimmune-mediated causes of psychosis may respond to immunotherapeutic treatment. Presently, case by case variation in workup may contribute to diagnosis of a primary psychiatric condition when another cause is responsible. Providers may not be aware of the evidence when determining workup or treatment of these possible overlapping disorders. Methods: We review and summarize the evidence and proposed guidelines around anti-NMDAR testing in FEP through a systematic review of PubMed literature review. Results: There is a paucity of evidence-based consensus to provide consistent, formalized guidance around screening for NMDAR antibodies in FEP, though various proposals exist. Some studies support screening all patients with FEP, whereas others promote a more tailored approach given the cost of NMDAR antibody testing. Additionally, universal screening may lead to an increased burden of false-positive and false-negative results. Pooled data suggests that testing may be most beneficial and valuable in a subset of patients experiencing atypical symptoms, including the following clinical features: severe cognitive involvement, rapid onset, neurological symptoms, catatonia, heightened sensitivity to the extrapyramidal side effects of antipsychotic medication, or abnormal MRI or EEG results (such as focal or diffuse slow or disorganized activity, epileptic activity, or extreme delta brush). Conclusions: Given that treatment of NMDAR encephalitis and FEP diverge in specific management, it is important for psychiatrists to be aware of this disorder and understand appropriate testing. This will allow for the increased likelihood of identifying NMDAR encephalitis as the cause of psychosis and guide appropriate immunotherapy. We propose expanded evidence based screening of patients with FEP who might demonstrate even mild atypical clinical signs and symptoms.

No. 134

A Case of Psychosis Secondary to Hashimoto Encephalopathy

Poster Presenter: Nilar Thwin, M.D., M.B.B.S.
Co-Author: Denisse Vanessa Saldarriaga, M.D.

SUMMARY:

This is a case involving a 58 year old African American female with a remote past psychiatric history of major Depressive disorder, and medical history of hypertension who presented with subacute onset of psychotic symptoms. She had been previously healthy, working as a home health assistant. Over a course of five days, patient developed persecutory delusions and command auditory hallucinations with possible visual hallucinations. Furthermore, she reported tiredness and was socially withdrawn. She was initially admitted to a psychiatric unit and treated with Risperidone and lexapro. Following the day of admission, patient presented with multiple episodes of tonic clonic seizures, myoclonus, and unsteady gaits with several falls. She was agitated, lethargic, and disorientated to place, time and situation. EEG studies were indicative of moderate diffuse cerebral dysfunction initially and later of bitemporal cerebral dysfunction. Initial blood work, CT scan head, EKG were unremarkable except elevated ESR, abnormal thyroid function test showing subclinical hypothyroidism. Thyroid ultrasound was done and showed left solid nodule measuring 2.5cm and she was subsequently started on levothyroxine. Neurology was consulted and recommended transfer to a different hospital for further neurologic management with placement in epilepsy monitoring unit. After an extensive medical work-up including CSF study, blood work and neuroimaging, the patient was eventually diagnosed with autoimmune Hashimoto's encephalitis. She was treated with IVIG for 5 days followed by solumedrol IV for 5 days and lastly given Prednisone 60 mg PO. Patient gradually improved overall including mental status, seizures and myoclonic movements. Patient was seen by endocrine who then recommended outpatient management with continued use of prednisone, and levothyroxine. This case demonstrates the difficulty in diagnosing and treating autoimmune Hashimoto's encephalitis. It is a rare autoimmune neuropsychiatric syndrome which often goes under-diagnosed primarily due to a lack of definitive diagnostic criteria. For that reason, it is important to increase awareness of this illness through the form of case reports or poster presentations. It is essential to have a basic understanding of the endocrinologic autoimmune contribution to psychiatric presentations, to keep it in the differential diagnosis of acute or subacute psychosis, especially if there is thyroidopathy.

No. 135

Effect of Online Educational Interventions in Tardive Dyskinesia Across Multiple Clinical Audiences

Poster Presenter: Stacey L. Hughes
Co-Authors: Andrew J. Cutler, M.D., Susan Gitzinger

SUMMARY:

Background and Introduction: Based on educational needs informed by Medscape's previous initiatives in tardive dyskinesia (TD), and recent approval by the FDA of 2 drugs specifically targeting TD, an educational curriculum was developed to extend foundational awareness of TD and its treatment into clinical adoption and application. Methods: A study was conducted to determine whether a curriculum of online educational interventions could address underlying educational needs in the area of diagnosis, evaluation and management of TD. Data were collected through 8/7/18. Four clinical themes were identified for analysis: assessment of TD, clinical data regarding TD, the risk for and burden of TD, and treatment of TD. The educational effects were assessed using a repeated pairs pre-assessment/post-assessment study design, where individual participants served as his/her own control. For all questions combined, the chi-squared test assessed whether the mean post-assessment score differed from the mean pre-assessment score. P values <.05 are statistically significant. Results (Neurologists n=645; Psychiatrists n=3368; PCPs n=1132; NP/PAs n=845): When surveyed about the recognition, diagnosis, and assessment of bipolar disorder, the following resulted: • Psychiatrists had the highest post-activity demonstration of knowledge/competence across all themes compared to their counterparts, having the highest post values in treatment and assessment, and demonstrated less knowledge in clinical trial data and risk/burden. •

68% of neurologists, on average, correctly responded to knowledge/competence questions across all themes. The fewest participants gained knowledge in questions related to clinical data. • For TD assessment, confidence shifts range from 7% to 17% for all target audiences; for TD management, confidence shifts range from 17% to 25% for all target audiences. Significant changes were seen in the following areas: • Across all target groups, there was a significant increase in knowledge/competence in assessing patients with TD symptoms or diagnosed TD and appropriately incorporating emerging TD treatment regimens • Both neurologists and psychiatrists showed the greatest improvement in identifying current guidelines for TD prevention and management, as well as having the highest post-assessment knowledge gain in patient risk/burden • NPs/PAs demonstrated the largest improvement (relative % change: 113%) in TD treatment knowledge/competence compared to other target groups • With the exception of clinical data knowledge, PCPs had the largest overall baseline to post-assessment improvement across all clinical themes Conclusions: This research shows there were significant improvements in knowledge and competence in all activities for the target audiences after education. However, gaps still remain in understanding current clinical data information and the risk/burden for patients with TD or symptoms of TD, in particular for PCPs and NP/PAs.

No. 136

Importance of Cognitive Behavior Therapy in Psychogenic Non-Epileptic Seizures (PNES) Management

Poster Presenter: Saher Kamil
Co-Author: Rikinkumar S. Patel, M.D., M.P.H.

SUMMARY:

Psychogenic non-epileptic seizures (PNES) are classified as a conversion disorder (1). We present a case of a 23-year-old male with a past psychiatric history of posttraumatic stress disorder (PTSD) and intellectual developmental disability (IDD), admitted to our inpatient psychiatric unit. The patient experienced multiple episodes of seizures during hospitalization. Work up was unremarkable, and PNES were suspected and later confirmed with video-electroencephalography (EEG). He underwent supervised withdrawal of antiepileptic medications with the initiation of cognitive behavioral therapy (CBT), which reduced the frequency of seizures. Diagnosis of PNES can present as a challenge and failure to diagnose its psychological nature can lead to a delay in the psychological intervention (2). A meta-analysis reported that upon completion of psychological interventions, 82% individuals with PNES had 50% reduction in seizures and 47% individuals were seizure free as compared to those who did not receive any psychotherapy (3). In a randomized controlled trial, CBT reduced seizures with the trend being maintained at 6-month follow up, and absence of PNES for three consecutive months (4). A study presented by LaFrance demonstrated a decrease in seizure frequency, and improvement in psychiatric symptoms, psychosocial functioning, and quality of life in patients receiving CBT (5). It is important to consider PNES in the differential diagnosis of seizures presented by psychiatric patients as psychological interventions especially CBT is necessary for better patient outcomes.

No. 137

Long-Term Deutetrabenazine Treatment Is Associated With Sustained Treatment Response in Tardive Dyskinesia: Results From an Open-Label Extension Study

Poster Presenter: Hadas Barkay, M.D., Ph.D.

SUMMARY:

Background: In the 12-week ARM-TD and AIM-TD studies evaluating deutetrabenazine for the treatment of tardive dyskinesia (TD), the percentage of patients achieving =50% response was higher in the deutetrabenazine-treated group than in the placebo group, and there were low rates of overall adverse events and discontinuations associated with deutetrabenazine. The current study evaluated the long-term efficacy and safety of deutetrabenazine in patients with TD in an open-label extension. Updated results of the responder analysis and results for sustained response are reported here. Methods: Patients with TD who completed ARM-TD or AIM-TD could enroll in this open-label, single-arm extension study, titrating up over 6 weeks to a maximum total daily dose of 48 mg/day on the basis of dyskinesia control and tolerability. The proportion

of Abnormal Involuntary Movement Scale (AIMS) responders was assessed based on response rates for achieving =50% improvement from baseline in the open-label extension study. AIMS score was assessed by local site raters for this analysis. Results: 343 patients enrolled in the extension study. At Week 54 (n=249; total daily dose [mean ± standard error]: 38.6±0.66 mg), the mean percentage change from baseline in AIMS score was –40%; 48% of patients achieved a =50% response and 59% of those had already achieved a =50% response at Week 15. Further, 34% of those who had not achieved a =50% response at Week 15 achieved a =50% response at Week 54. At Week 106 (n=169; total daily dose: 39.6±0.77 mg), the mean percentage change from baseline in AIMS score was –45%; 55% of patients achieved a =50% response, 59% of those patients had already achieved a =50% response at Week 15, and 41% of those who had not achieved a =50% response at Week 15 but who reached Week 106 achieved a =50% response. At Week 132 (n=109; total daily dose: 39.7±0.97 mg), the mean percentage change from baseline in AIMS score was –61%; 55% of patients achieved a =50% response, 61% of those patients had already achieved a =50% response at Week 15, and 43% of those who had not achieved a =50% response at Week 15 but who reached Week 132 achieved a =50% response. Treatment was generally well tolerated. There were 623 patient-years of exposure through Week 158, and exposure-adjusted incidence rates (incidence/patient-years) of adverse events of special interest were 0.01 for akathisia and restlessness, 0.07 for somnolence and sedation, 0.04 for parkinsonism, and 0.05 for depression. Conclusions: Patients who received long-term treatment with deutetrabenazine achieved response rates that were indicative of clinically meaningful long-term benefit. Results from this open-label trial suggest the possibility of increasing benefit over time with individual dose titration. This study was supported by Teva Pharmaceuticals, Petach Tikva, Israel.

No. 138

Effects of Fremanezumab in Patients With Chronic Migraine and Comorbid Depression

Poster Presenter: Joshua Cohen

SUMMARY:

Background: An estimated 41% of people with chronic migraine (CM) have depression, although the actual percentage may be higher. Both CM and depression can cause substantial loss of quality of life. This study evaluated the effects of fremanezumab, a fully humanized monoclonal antibody (IgG2?a) targeting the calcitonin gene-related peptide (CGRP) ligand, on efficacy and migraine-specific quality of life (MSQoL) in patients with CM and depression. Methods: In the 12-week, Phase 3 HALO CM trial, CM patients received subcutaneous fremanezumab quarterly (675 mg at baseline and placebo at Weeks 4 and 8), fremanezumab monthly (675 mg at baseline and 225 mg at Weeks 4 and 8), or placebo. This post hoc analysis analyzed the change from baseline in monthly average headache days of at least moderate severity, migraine days, and MSQoL domain scores (role function-restrictive [RFR], role function-preventive [RFP], emotional function [EF]) in patients with moderate to severe depression (Patient Health Questionnaire [PHQ-9] score 10–27); these changes were compared with those of patients with no/minimal or mild depression (PHQ-9 score 0–9). Results: This analysis included 1115 patients. At baseline, patients with moderate to severe depression had a slightly higher mean number of headache days of at least moderate severity (quarterly [mean days] 14.0, monthly 14.2, placebo 15.2) and migraine days (quarterly 17.2, monthly 17.8, placebo 18.4) than patients with no/minimal or mild depression (headache days of at least moderate severity: quarterly 12.9, monthly 12.4, placebo 12.8; migraine days: quarterly 15.9, monthly 15.4, placebo 15.9). Patients with moderate to severe depression treated with fremanezumab had greater reductions from baseline in headache days of at least moderate severity (quarterly [least-squares mean change in days] –5.3, monthly –5.5; both P<0.001) versus placebo (–2.2) and greater improvements than patients with no/minimal or mild depression (quarterly –4.0, monthly –4.3, placebo –2.5). Reductions in migraine days were greater in patients with moderate to severe depression (quarterly –5.4, monthly, –5.5, placebo: –2.4) than in patients with no/minimal or mild depression (quarterly –4.7, monthly, –4.8, placebo –3.3). MSQoL improvements were greater in patients with moderate to severe

depression (RFR: quarterly 28.9, monthly 30.8, placebo 21.3; RFP: quarterly 28.4, monthly 29.1, placebo 20.7; EF: quarterly 31.4, monthly 32.8, placebo 29.7) than in patients with no/minimal or mild depression (RFR: quarterly 18.5, monthly 18.9, placebo 12.8; RFP: quarterly 13.8, monthly 13.0, placebo 9.9; EF: quarterly 18.4, monthly 17.6, placebo: 13.8). Conclusions: Fremanezumab reduced the number of migraine days and headache days of at least moderate severity, and improved MSQoL in patients with CM and depression. This study was funded by Teva Pharmaceuticals, Petach Tikva, Israel.

No. 139

Resignation Syndrome: A Novel Clinical Condition Affecting Immigrant Populations

Poster Presenter: Julia Danielle Kulikowski, M.D.
Co-Author: Usha Devi Parthasarathi, M.B.B.S.

SUMMARY:

We report an unusual clinical presentation of episodic stupor affecting a recent Syrian immigrant to Canada. We believe this is the first reported case of Resignation Syndrome (RS) in an adult and perhaps in North America. Case A 47 year old man, and recent immigrant from Syria, was admitted to hospital six times within eight months for decreased level of consciousness. His clinical symptoms were aggressively managed with intubation during a brief intensive care stay. Within 24 hours, his symptoms resolved and he returned to his baseline. Following this foremost 'attack', he presented to the hospital five times with a similar presentation. During these medically unexplained attacks, he developed a fluctuating level of consciousness, but maintained normal vital signs. The family described that in the hours preceding these 'attacks', the patient developed intense dysphoria and headache. He also exhibited social disengagement and apathy that quickly progressed to stupor becoming dependent on all activities of daily living. Each of these presentations occurred after receiving 'bad news' from his children who are living in Turkey as refugees awaiting immigration to Canada. On presentation, his symptoms were recognised as functional in nature, hence a psychiatric assessment and admission were warranted. During the initial psychiatric assessment, he was unable to meaningfully participate remaining nonverbal with his eyes closed for the duration of the assessment; however did not appear to have typical clinical signs of catatonia. Within one week, he recovered to his baseline with supportive treatment and a low dose antipsychotic and antidepressant. Discussion The dramatic and atypical nature of his clinical presentation with complete recovery and minimal support did not fit with any known medical or psychiatric illness. His symptoms are not entirely explained by 'conversion disorder', 'catatonia' or 'dissociative disorder'. Though his presentation appears to share symptoms from each of the aforementioned illnesses, the clinical picture does not appear to be fully explained by either of these disorders. Given the degree of this behaviour in light of a significant history of cultural turmoil, his presentation aligned most consistently with RS, a disorder typically affecting young refugees that was first recognized in individuals seeking asylum in Sweden (Duarte Santiago et al. 2018). To our knowledge, this is the first reported case of RS in adults and in North America. Patients with RS often present with a short prodrome of mood symptoms and lethargy that rapidly progresses to stupor (Sallin et al. 2016). A significant trigger related to a negative asylum decision commonly progresses to this rapid deterioration leaving the patient supine, appearing unconscious and requiring complete daily support (Sallin et al. 2016). Paralleled with catatonia and conversion disorder, individuals affected by RS can expect a full recovery as turmoil resolves.

No. 140

Psychiatric Manifestations in Patients With SLE: A Meta-Analysis of Prospective Studies

Poster Presenter: Golara Zahmatkesh, M.D.

SUMMARY:

Background/Purpose: The American College of Rheumatology (ACR) has defined 19 neuropsychiatric SLE (NPSLE) syndromes, among which are anxiety, mood, and psychotic disorders. In prior cross-sectional studies using proper screening tools, the prevalence of anxiety and mood disorders is shown to be up to 40% among patients with SLE. However, the incidence of these manifestations is disproportionately lower in prospective cohorts of SLE patients. Thus, we aimed to synthesize the best

current evidence regarding how often anxiety, mood, and psychotic disorders are found in patients with SLE. Methods: To conduct this meta-analysis study, we completed a comprehensive search within PubMed, Embase, CINAHL, and PsycINFO. We used a highly-sensitive search strategy comprising 23 keywords representing NPSLE and its epidemiology. We also carried out forward and backward citation checking of the included studies and the relevant reviews using the Web of Knowledge Science Citation Index. We included prospective cohort studies of SLE patients that used validated tools to periodically screen for anxiety, mood, and psychotic disorders, and reported the necessary statistics to calculate incidence rates. Two investigators (GZ, SFA) independently replicated data extraction using a standard form. We used Stata 13.0 for statistical analyses. Results: We screened 962 records eventually yielding seven included studies representing five cohorts of SLE patients. These studies had a total sample size of 2483, 2484, and 1547, respectively, to calculate the incidence rates of the anxiety, mood, and psychotic disorders in SLE patients. The Systemic Lupus International Collaborating Clinics (SLICC) was the largest cohort involving 32 centers in 11 countries. The pooled incidence rates of the anxiety, mood, and psychotic disorders were respectively 4.87 (95% CI: 0.92 to 8.82), 20.00 (95% CI: 7.02 to 32.99), and 9.68 (95% CI: 3.94 to 15.42) events/1000 patients/year. Conclusion: We observed relatively low incidence rates of anxiety, mood, and psychotic disorders in patients with SLE. Given the considerably higher prevalence of anxiety and mood disorders among SLE patients, the observed incidence rates for these manifestations seem to be underestimations of the actual incidence rates. This may be due to the fact that the prior cross-sectional studies have commonly used proper screening tools administered by mental health professionals, whereas prospective cohort studies have mainly used no more than the ACR NPSLE nomenclature & case definitions.

No. 141

AXS-05: A Mechanistically Novel Oral Therapeutic in Development for Neuropsychiatric Disorders

Poster Presenter: Cedric O'Gorman, M.D.
Co-Authors: Amanda Jones, Herriot Tabuteau

SUMMARY:
Introduction AXS-05 is a novel, oral, investigational medicine that combines glutamatergic, monoaminergic, and anti-inflammatory mechanisms of action. AXS-05 consists of dextromethorphan (DM) and bupropion. The DM component is an N-methyl-D-aspartate (NMDA) receptor antagonist, sigma-1 receptor agonist and an inhibitor of norepinephrine and serotonin reuptake. The bupropion component of AXS-05 serves to increase the bioavailability of DM and is a norepinephrine and dopamine reuptake inhibitor. Both components are nicotinic receptor antagonists and possess anti-inflammatory properties. These mechanisms of action may be relevant for various neuropsychiatric conditions. Pharmacokinetic data from completed Phase 1 trials of AXS-05 and clinical observations with the DM component indicate that AXS-05 increases DM concentrations into a potentially therapeutic range. AXS-05 is therefore being developed for the treatment of major depressive disorder (MDD), treatment resistant depression (TRD), agitation associated with Alzheimer's disease (AD), and nicotine dependence. Methods The efficacy and safety of AXS-05 are being evaluated in late-stage clinical trials. The potential of AXS-05 in the treatment of agitation associated with AD is being assessed in the ADVANCE Phase 2/3 trial, a randomized, double-blind, controlled trial in which subjects are randomized to treatment with AXS-05, placebo, or bupropion. The primary efficacy variable of the ADVANCE study is the Cohen Mansfield Agitation Inventory. The potential effects of AXS-05 in MDD are being evaluated in the ASCEND trial, a randomized, double-blind, active-controlled trial in which subjects are randomized to treatment with AXS-05 or bupropion. The primary efficacy variable of the ASCEND trial is the Montgomery Asberg Depression Rating Scale. The potential effects of AXS-05 in TRD are being evaluated in the STRIDE-1 trial, which is a randomized, double-blind, active-controlled trial, with an open-label bupropion lead-in. Inadequate bupropion responders are randomized to treatment with AXS-05 or bupropion. AXS-05 is being evaluated as a therapeutic aid for smoking cessation in a randomized, active-controlled Phase 2 trial under a collaboration with the Duke Center for Smoking Cessation. Results Results of the ongoing efficacy trials with AXS-05 may be available

at the time of the meeting. Potential results and/or status of the ongoing trials will be presented. Conclusion AXS-05 is an innovative, oral, investigational medicine with novel glutamatergic, monoaminergic, and anti-inflammatory mechanisms of action that may be relevant to the treatment of a variety of neuropsychiatric disorders including MDD, TRD, Alzheimer's disease agitation, and smoking cessation. The efficacy and safety of AXS-05 are being evaluated in a number of mid- and late-stage, randomized, controlled clinical trials. Latest data characterizing the potential effects of AXS-05 in the indications being evaluated will be presented.

No. 142
WITHDRAWN

No. 143
PET Quantification of Serotonin Transporter Binding in Depressed Patients With and Without a History of Suicide Attempt
Poster Presenter: Patrick James Hurley, M.D.
Co-Authors: Jeffrey Miller, M.D., Francesca Zanderigo, Ph.D., Harry Rubin-Falcone, Todd Ogden, Ph.D., Ramin V. Parsey, M.D., Ph.D., Maria Antonia Oquendo, M.D., Ph.D., Joseph John Mann, M.D.

SUMMARY:
Background: The serotonin transporter (5-HTT) modulates serotonin signaling by facilitating reuptake of this neurotransmitter into presynaptic neurons. Previous positron emission tomography (PET) studies quantifying 5-HTT binding in people with major depressive disorder (MDD) have yielded discrepant findings. We used [11C]DASB to quantify 5-HTT binding in a sample of MDD patients and healthy volunteers (HV), and did not observe differences in binding as a function of MDD diagnosis. Here, we sought to examine the relationship between [11C]DASB binding and MDD diagnosis in an independent cohort. Methods: 22 HV and 35 unmedicated MDD patients in a current major depressive episode underwent PET with [11C]DASB and T1-weighted structural magnetic resonance imaging (MRI) for co-registration of PET images and identification of the following regions of interest (ROIs): dorsal caudate, dorsal putamen, amygdala, midbrain, thalamus, and ventral striatum, which were selected based on our earlier work and meta-analyses of serotonin transporter binding in MDD. We applied a hybrid deconvolution approach, and likelihood estimation in graphical analysis, in combination with an arbitrarily scaled and noninvasively-derived input function, to quantify binding potential (BPND) without having to assume any reference region; this approach has been validated for [11C]DASB. Linear mixed effects models were computed with region and diagnostic group as fixed effects and subject as the random effect, with age and sex included as covariates. Results: Considering all a priori ROIs simultaneously, [11C]DASB BPND did not differ between MDD and HV groups (p=0.84). No region by diagnosis interactions or post-hoc differences within each ROI were observed. Within the MDD group, [11C]DASB BPND did not differ between antidepressant-naïve and patients with prior antidepressant exposure (minimum antidepressant-free interval of 3 weeks within prior antidepressant group; p=0.52). Conclusions: This study did not find altered 5-HTT binding in current MDD, consistent with our prior publication using the same radiotracer, despite different modeling approaches between studies. Future work will examine baseline clinical characteristics that may relate to [11C]DASB BPND, as well as the relationship between baseline [11C]DASB BPND and future clinical course assessed during two-year clinical follow-up.

No. 144
Body Mass Index Relationships With Dopamine D2/3 Receptor Availability in Cocaine Use Disorder as Measured by [11C] (+)PHNO PET
Poster Presenter: David Matuskey
Co-Authors: Jean-Dominique Gallezot, Richard Carson

SUMMARY:
Prior positron emission tomography (PET) work with the dopamine D3-preferring ligand [11C](+)PHNO in obese subjects have demonstrated positive correlations between body mass index (BMI) and measures of D2/3 receptors (D2/3Rs) availability in important brain reward areas, including the substantia nigra/ventral tegmental area (SN/VTA), ventral striatum (VS) and pallidum. In cocaine use disorder (CUD), similar increases have been found in the SN/VTA as compared to healthy controls.

Although both BMI and CUD positively relate to D2/3Rs availability, it is not currently known whether BMI-receptor availability relationships are preserved in individuals with CUD. Specifically, this work seeks to establish whether D2/3Rs availability is similarly increased in obese as compared to normal weight individuals with CUD as measured by [11C](+)PHNO PET. Methods: Normal weight CUD subjects (N=13) were compared to age-matched obese CUD subjects (N=14). All subjects underwent [11C](+)PHNO acquisition using a High Resolution Research Tomograph scanner. Regions of interest investigated included the amygdala, caudate, hypothalamus, pallidum, putamen, SN/VTA, thalamus and VS. Parametric images were computed using the simplified reference tissue model with cerebellum as the reference region. [11C](+)PHNO measures of receptor availability were calculated and expressed as non-displaceable binding potential (BPND). Results: In a between group analysis, normal weight and obese CUD groups were not significantly different in D2/3Rs availability in any region studied. BMI was significantly negatively correlated with BPND in the SN/VTA ($r = -0.39$, $p = 0.05$ uncorrected) in all subjects. Conclusion: These data suggest that BMI/obesity is differentially associated with D2/3Rs availability in CUD compared with non-CUD obesity, providing further evidence of possible desensitization of natural food rewards with cocaine use.

No. 145

K(NO)W MORE: A Novel Tool for Addressing Patient on Psychiatrist Harassment

Poster Presenter: Amanda Leigh Helminiak, M.D.

SUMMARY:

Background: There are robust articles and workshops about harassment from employers and coworkers but scarce literature regarding harassment from patients towards physicians. There is a lack of data that demonstrates the strategies used when confronted with such behavior and the possible consequences of utilizing such strategies. The lack of resources appears to be a practice gap as one study shows 75% psychiatric residents who responded experienced sexual harassment from patients. Although the behaviors of the patient may be attributed to the diagnosis, it is pertinent to realize the potential psychological impact on the victim. Purpose: A workshop about patient on physician harassment will increase awareness and confidence in psychiatric residents. Methods: PGY1 and PGY2 psychiatric residents attend a workshop regarding patient on physician harassment and are introduced to a tool called K(NO)W MORE. This tool will instruct residents on how to notice and recognize harassment when it occurs, techniques on how to manage harassment and model an appropriate response, to take time for respite and to debrief and process with team, and ultimately empower physicians. The residents will complete a survey prior to the workshop to assess their awareness and levels of confidence along with their prior experiences to harassment and a follow up survey. Results: The majority of residents during their first two years of training experience harassment of some type from patients. Females were more likely to experience it than males yet males feel more confident in handling harassment. Discussion/Conclusion: This survey demonstrates that the majority of the residents have experienced harassment of some sort from patients yet residents do not receive much training and preparation for these instances. However, this workshop will increase their confidence levels and provide a sense of empowerment but more efforts will be needed globally to address this ongoing issue.

No. 146

Residency and the Good Life: The Development and Implementation of a Positive Psychology Course for Psychiatry Residents

Poster Presenter: Patcho N. Santiago, M.D.
Co-Authors: Dallin Rowley, Jaremy Jon Hill, D.O.

SUMMARY:

Background: This presentation describes the implementation of a year-long “Residency and the Good Life” course, based on principles of positive psychology, that was implemented in the National Capital Consortium Psychiatry Residency in the 2018-2019 academic year. A majority of Americans do not consider themselves happy, and among resident physicians, levels of stress and burnout are high. An emerging field, positive psychology, may serve as a countervailing influence against the forces that lead to physician burnout. Positive psychology is based on

the idea that health is more than just the absence of disease. It suggests that the skills of behavioral health professionals in assessing and influencing thoughts, feelings, and behavior can be used not simply to relieve misery, but also to build happiness. Laurie Santos, a psychology professor at Yale, built a popular undergraduate course to not only teach the principles of positive psychology to her students, but also to help them put those concepts into practice in their own lives with a goal of greater wellbeing. Seeing the success of her efforts, the National Capital Consortium Psychiatry Residency implemented a similar course for its residents. Course Structure: The course was divided into a series of seminars as well as monthly small "coaching groups." Attendance was voluntary. Residents were encouraged to take the PERMA scale to evaluate their happiness at the beginning and end of the course. Six seminars were taught by PGY-4 residents throughout the year, including an introductory seminar, and subsequent foci on defining happiness, identifying misconceptions about positive psychology, the problem of expectations, the role of bias, and hedonic adaptation. The monthly coaching groups were held with greater flexibility. Each consisted of 10-15 residents across all PGY levels, led by a PGY-4 and could be held in person or by telephone conference. These groups focused on sharing how they have been implementing positive psychology ideas into their personal and professional lives, and whether or not they found utility in the endeavor. Discussion: "Residency and the Good Life" is a new year-long positive psychiatry course implemented this academic year with a goal of increasing resident happiness and well-being. The effects of the program have not yet been fully analyzed. However, we suggest that it is a program that can be easily adapted to other residencies, including other specialties, and may be a helpful tool to turn around the high rates of resident burnout.

No. 147

Extracting Lifestyle Risk Factors of Alzheimer's Disease From Clincal Notes Using Natural Language Processing

Poster Presenter: Yanshan Wang
Co-Authors: Xin Zhou, Hongfang Liu

SUMMARY:
Extracting Lifestyle Risk Factors of Alzheimer's Disease from Clinical Notes Using Natural Language Processing Abstract Background Several lifestyle risk factors of Alzheimer's disease (AD) have been identified in previous studies. However, it remains unclear if clinicians address these factors in routine practice. In this study, we used a Natural language processing (NLP) engine to identify lifestyle risk factors and intervention strategies from clinical notes. The purposes of this study were 1) to determine whether identified lifestyle risk factors were diagnosed and treated in clinical practice; and 2) to investigate potential factors that might increase the AD risk from Electronic Health Records (EHRs). Methods 260 patients diagnosed as AD were filtered from a cohort who received their primary care in Mayo Clinic, Rochester from 1998 to 2015 (ICD-9 code 294.1/331.0). Age-matched 260 control patients without AD were randomly selected from the same cohort. Metamap was used as an automatic NLP engine to extract unified medical language system (UMLS) terms of risk factors and interventions from clinical notes. The clinical notes results were compared with risk factors identified from literature. The frequencies of risk factors were compared between AD and control groups. This study was approved by the institutional review board (IRB) for human subject research. Results 19 lifestyle risk factors were identified in AD patients from EHRs, covering dietary, activities and substance addictive factors. Tobacco smoking was the most common risk factor in AD patients, affecting 145 of 260 patients. 22 lifestyle interventions were identified in AD patients. Physical exercise, smoking cessation and nutrition supplements (fish oil, vitamin and mineral supplements) were the most common advices from physicians. 21 factors proved to increase the risk of AD in literature were not mentioned in EHRs. 10 factors including smoking/alcohol drinking demonstrated a significantly increased risk for AD (logistic regression, age-adjusted odds ratio: 1.77 – 8.37). A significant correlation was observed between the condition of AD and the number of risk factors for each patient (Chi-square test, chi-sqaure = 75.59, p-value < 0.001). Conclusions In this study, we used NLP techniques to extract lifestyle risk factors from clinical notes. We found that AD patients were more

exposed to disease risk factors compared to the controls. However, several factors proved to be correlated to AD in the literature have not been well measured in the routine practice. Our study demonstrated that a more integrated assessment of risk factors could eliminate the possible omission of effective treatment for AD patients.

No. 148

Psychiatric Morbidity Among the Patients of First Ever Ischemic Stroke

Poster Presenter: Muhammad Sayed Inam, M.B.B.S., M.Phil.

SUMMARY:

Stroke is the most common cause of mortality world wide and a serious cause of disability in the community. Stroke affects not only physical but also emotional, psychological, cognitive, and social aspects of patients. Some of the neuropsychiatric disorders associated with stroke include post stroke depression (PSD), bipolar disorder, anxiety disorder, apathy without depression, psychotic disorder, pathological affect and catastrophic reaction. Previous studies showed that co-morbid psychiatric disorders significantly increase medical costs. Aims and objectives:To evaluate psychiatric morbidity among the patients of first ever ischemic stroke. Materials and Methods: This cross sectional comparative study was carried out in the Department of Psychiatry, Sylhet MAG Osmani Medical College Hospital, Sylhet during the period from 1st July 2013 to 30th June 2014. Sixty Six ischaemic stroke patients of first attack between 2 weeks to 2 years of stroke, aged above 18 years irrespective of sex and 66 accompanying healthy person of the patients and other patients without any kind of stroke matching age and sex fulfilling inclusion and exclusion criteria were taken in Group-A and Group-B respectively. Exclusion criteria were patients with transient ischaemic attack, haemorrhagic stroke, previous stroke, head injury, known psychiatric disorder, serious cognitive impairment and other chronic diseases that may cause psychiatric morbidity. Diagnosis of ischaemic stroke was made in these patients by the consultant neurologists reviewing the history, clinical examination and accompanying investigations reports specially CT scan of brain. Psychiatric assessment was done using General Health Questionnaire (GHQ12) as screening tool. All GHQ12 positive cases were evaluated using mental state examination and recorded in a MSE sheet. Diagnosis of psychiatric disorders of all respondents was confirmed by psychiatrist according to DSM-5 criteria. Results: Patients with ischaemic stroke and control subjects were similar in age [57.6 (SD ± 5.5) years vs 57.1 (SD ± 4.5) years; p>0.130] and sex [48(72.7%) male and 18 (27.3%) female vs 45 (68.2%) male and 21(31.8%)female; p=0.567]. Co-morbid psychiatric disorder was found in 23 (34.8%) patients of ischaemic stroke and 9 (13.6%) control subjects.The co-morbid psychiatric disorder was significantly higher in patients of ischaemic stroke than that of control subjects (p=0.004). Co-morbid specific psychiatric disorders were generalized anxiety disorder in 9 (13.6%) and major depressive disorder in 14 (21.2%) in stroke group; while co-morbid specific psychiatric disorders were generalized anxiety disorder in 2(3.0%) and major depressive disorder in 7 (10.6%) respondents in control group (p<0.013). Conclusion: Co-morbid psychiatric disorders are quite common among patients with first ever Ishchemic Stroke in the form of Major Depressive Dirorder and General anxiety Disorder.

No. 149

The Disproportionate Presence of Female Psychiatrists on Editorial Boards of Influential Psychiatry Journals

Poster Presenter: Monique Mun, M.D.

SUMMARY:

Background: Psychiatry is an increasingly popular specialty among women. According to the Association of American Medical Colleges (AAMC), women comprised 39% of practicing psychiatrists in 2017 compared to 32% in 2007. However, it is unknown whether this increase in percentage of female psychiatrists has also translated to more women holding leadership roles that most influence future research. Methods: This study examined the editorial boards of the top 12 psychiatry journals based on impact factor (IF). Data was collected from journal websites, LinkedIn, institution profiles, and other professional memberships. Descriptive statistics were used to analyze the data to determine

the proportion of female psychiatrists across all editorial positions of the psychiatry journals used in the study. Results: Among all editorial positions, women made up only 23% of total positions. Overall, women comprised 28% of associate editor positions, 27% of deputy editor positions, and, remarkably, only 17% of editor-in-chief positions. There was no association between journal IF and the percentage of female editors. Other than The Lancet and European Psychiatry, men comprised 100% of the editor-in-chief positions of the psychiatry journals included in the study. Conclusions: This study highlights that there exists a disproportionate percentage of female psychiatrists who occupy the roles that most influence future research. Psychiatrists who are on the editorial boards of high IF psychiatry journals are responsible for overseeing the content that all psychiatrists, even those internationally, learn from and refer to. They determine what is published and disseminated and thus, influence the direction of the field. With women approaching half of the workforce of practicing psychiatrists, perhaps there should be an equal representation of female psychiatrists on the editorial boards of the most influential psychiatry journals as well.

No. 150

A Preliminary Review of the Role of Chatbots and Conversational Agents in Mental Health

Poster Presenter: Aditya Vaidyam
Co-Author: John Torous, M.D.

SUMMARY: Objective The aim of this review was to explore the current evidence for conversational agents or chatbots in the field of psychiatry and their role in screening, diagnosis, and treatment of mental illnesses. Methods A systematic literature search in June 2018 was conducted in PubMed, EmBase, PsycINFO, Cochrane, Web of Science, and IEEE Xplore. Studies were included that involved a chatbot in a mental health setting focusing on populations with or at high risk of developing depression, anxiety, schizophrenia, bipolar, and substance abuse disorders. Results From the selected databases, 1466 records were retrieved and eight studies met the inclusion criteria. Two additional studies were included from reference list screening for a total of 10 included studies. Overall, potential for conversational agents in psychiatric use was reported to be high across all studies. In particular, conversational agents showed potential for benefit in psychoeducation and self adherence. Additionally, satisfaction rating of chatbots was high across all studies, suggesting that they would be an effective and enjoyable tool in psychiatric treatment. Conclusion Preliminary evidence for psychiatric use of chatbots is favorable. However, given the heterogeneity of the reviewed studies, further research with standardized outcomes reporting is required to more thoroughly examine the effectiveness of conversational agents. Regardless, early evidence shows that with the proper approach and research, the mental health field could utilize conversational agents in psychiatric treatment.

No. 151

The Psychodynamics of Narcissism and Obsessive-Compulsiveness in Medical Education: How the Field of Freud Can Help Us Develop Healthier Healers

Poster Presenter: Aaron Wolfgang, M.D.
Co-Authors: Alexander Kaplan, M.D., Rachel M. Sullivan, M.D., Judy Kovell, M.D.

SUMMARY:
Narcissism and Obsessive-Compulsiveness are personality traits that are commonly found in physicians. It is unknown to what extent the medical profession either selects for or reinforces these personality traits; however, both perspectives may hold some truth. Resident psychiatrists are under perpetual clinical, educational, and administrative demands that inevitably lead to chronic stress. Under stress, residents may accentuate underlying personality traits that though may be adaptive in achieving particular professional goals, may be maladaptive in maintaining effective interpersonal functioning. The goal of this poster will be to explore how senior residents and faculty of residency training programs can navigate and manage interpersonal dynamics with residents that are colored in traits of narcissism and obsessive-compulsiveness. This will be accomplished by first exploring ways in which medical culture perpetuates traits of narcissism and obsessive-compulsiveness. There will then be further exploration of actionable interventions that can be implemented at both the

individual and program level in order to address systemic factors that perpetuate dysfunction arising from these personality traits. Domains of narcissism that will be explored include: narcissistic injury, superficiality in professional interests, difficulties in tolerating ambivalence in relationships, externalizing responsibility, fragile identity, lack of empathy, grandiosity, and denigration of vulnerability and interdependence. Domains of obsessive-compulsiveness that will be explored include: perfectionism, and excessive devotion to professional pursuits. Armed with strategies on how to address each of these domains of narcissism and obsessive-compulsiveness, clinicians will be able apply these lessons in their respective residency programs in a way that ultimately empowers residents to thrive in their personal and professional growth.

No. 152

Sibling Risk Across Psychiatric and Neurodevelopmental Disorders and Quantitative Brain Phenotypes Psychiatric Cross Disorder Risk

Poster Presenter: Rahel Hali Saporta
Co-Author: Mark Weiser, M.D.

SUMMARY:

Background: While phenomenological classifications such as DSM and ICD define psychiatric disorders as separate diagnostic entities, many symptoms, risk factors and treatments are shared across different diagnostic entities. In addition, many of the genes associated with a given psychiatric disorder are associated with other disorders. Objective: To utilize diagnostic data from screening of an entire population to further understand shared familial, maybe genetic risk, across psychiatric diagnostic groups. Methods: Subjects were adolescents (ages 16-17) undergoing mandatory screening for eligibility to serve in the Israeli military, between the years 1998-2014. We compared the risk of psychiatric disorders in siblings of probands with psychotic disorder (n=7902), mood disorders (n=9704), anxiety disorders (n=10,606), personality disorders (n=24,816), intellectual disability (n=9572), autism spectrum disorders (ASD) (n=2128),ADHD (n=3272), substance use disorder (SUD; n=791) low cognitive ability (defines as IQ<2 standard deviations below population mean, n=31,186), type-1 diabetes (n=3638), hematological malignancies (n=931) and hernia (n=30,199), to the risk in siblings of controls matched for age and sex of the probands. Odds ratios (OR's) were adjusted for sex, socio-economic status and year of birth. Results: Siblings of probands with all psychiatric disorders were at increased risk for all psychiatric disorders examined and for low cognitive ability (most ORs ranging 2-3). Higher risks were found among siblings of probands with psychotic disorder for psychotic disorder (OR=9.277, 95% CI=8.668-9.929), among siblings of probands with intellectual disability for intellectual disability (OR=9.537, 95% CI=8.817-10.317) and for ASD (OR=7.539, 95% CI=6.335-8.970) and among siblings of probands with ASD for intellectual disability (OR=6.879, 95% CI= 5.972-7.924) and for ASD (OR=11.53, 95% CI=9.239-14.403). In comparison, siblings of probands with non-psychiatric illnesses (type-1 diabetes or inguinal hernia) were at increased risk for concordant disorders, but not for any of the psychiatric diagnoses. Conclusions: In this large population based study, there appears to be a large shared risk among different psychiatric diagnostic groups, with specifically increased genetic risks in psychotic disorder, intellectual disability and ASD. Psychiatric disorders are cosegragated such that risk is only shared for psychiatric, and not for general medical conditions. Molecular studies should continue in their attempts to identify both the shared and the specific genetic variations associated with different psychiatric diagnostic groups.

No. 153

Using Simulated Auditory Hallucinations to Develop Provider Empathy: A Review and Proposal for Medical Education

Poster Presenter: Angharad Elizabeth Ames, M.D., M.A.
Co-Author: Jeannie D. Lochhead, M.D.

SUMMARY:

Empathic skills facilitate meaningful patient interactions, allow collection of a comprehensive history, and precipitate the degradation of harmful stigmas. Empathy is crucial to the development of clinical excellence in all fields of medicine, but commands special utility in psychiatric practice, as many debilitating illnesses involve perceptual experiences and associated behaviors to which

medical students and trainees may have difficulty relating, but which are central to the patient's presentation. This in turn can create a barrier to proper patient care and complete medical education. In the absence of empathy, psychotic patients may incite feelings of aversion in even the most well-intending students, who often lack formal education in how to connect and communicate with such patients. In many undergraduate medical curricula, standardized patient interactions are employed to allow students to practice empathy and interviewing skills; however, such simulations rarely if ever involve psychotic symptoms as a chief complaint. Simple audio files of voices, designed to express auditory hallucinations commonly described by patients who hear voices (e.g. non-specific whispering or themes of degradation) provide an accessible simulation of auditory hallucinations. When individuals are asked to listen to such a file via headphones while going about their activities of daily living, such as having conversations with colleagues and ordering food at a restaurant, the experience can have a profound impact on one's understanding of the burden of auditory hallucinations. The paucity of literature on the application of such a simulation, which involves samples of nursing students, college students, and pharmacy students, suggests that students felt transformed by this type of experience. Post-simulation, they expressed increased understanding of patients' challenges, awareness of the functional impact voice-hearing causes, and greater consideration of the communication skills necessary to engage productively with such patients. In one study, college students reported increased comfort being around psychotic individuals after undergoing a hearing voices simulation. In a study of student pharmacists, all participants recommended that the simulation be offered to other students, and 99% felt that the simulation would impact their future careers. Unfortunately, there is no data on the application of auditory hallucination simulations in medical or resident education. This poster will review the existing literature on this form of simulation and its role in the clinically-relevant development of empathy. It will also propose a plan to integrate such a simulation into a third year medical student psychiatry clerkship and psychiatry training program.

No. 154

Physicians' Perceived Approaches to Care for Patients With Schizophrenia: A Qualitative Study With Physicians in Family Medicine, Psychiatry, and Both

Poster Presenter: Rachel Bigley
Co-Authors: Bhargav Muppaneni, M.D., Susan Ivey, M.D., Carrie Melissa Cunningham, M.D.

SUMMARY:
Background: People with schizophrenia are among the most vulnerable and stigmatized patients within healthcare. Schizophrenia is a brain disorder characterized by symptoms associated with disconnection from social situations, cognitive processes, and attention. Acute psychosis, which can include auditory hallucinations or paranoid delusions, can limit effective communication with physicians. Physicians play an important role in a patient's health by effectively communicating diagnoses, treatment options, risks and side effects of medications, and overall prognosis. Primary care is where people with schizophrenia obtain care for physical health and referrals to psychiatry for mental health, so it is important for primary care physicians to communicate effectively with patients with schizophrenia. Previous quantitative studies have showed that primary care providers have a more negative attitude toward patients with schizophrenia than their mental health provider counterparts in one region of the United States. There has been a qualitative study done in Canada showing that patients with schizophrenia desire better communication with their health care providers. There have been no qualitative studies done in the United States comparing how physicians with different residency training approach care for people with schizophrenia. Objective: The specific aim of this study was to learn how physicians from different educational backgrounds perceive how they approach care for and communicate with patients with schizophrenia in order to learn how to best care for them. Methods: Twenty pre-interview, online surveys and subsequent 1-hour, semi-structured interviews were completed with physicians in three specialties: family medicine, psychiatry, and in both family medicine and psychiatry. Interviews were transcribed and coded using a comparative case

study method in the MaxQDA qualitative data analysis software. Results: Through preliminary data analysis, three themes emerged: training, communication, and collaboration between physicians. Family physicians and dually-trained physicians both expressed the need for more psychiatric education during family medicine residency and better training on communication with patients with schizophrenia. Family physicians, psychiatrists, and those dually trained perceived their approach to care with patients with schizophrenia was the same as with all their patients, but family physicians generally felt they did not have adequate training to care for patients with schizophrenia. Family physicians used more stigmatizing language when describing the disease and their approach to care to patients with schizophrenia. All physicians expressed a desire for a more integrated collaboration between psychiatrists and family physicians. Conclusion: Educational reforms need to be implemented at the national level to better prepare family physicians to provide quality care for patients with schizophrenia.

No. 155

Student Perceptions of Facilitating Mindfulness Group Within Inpatient Psychiatry Ward

Poster Presenter: Matthew Harrison Weingard, M.D., M.P.H.

Co-Author: Mary Ann Dutton

SUMMARY:

Introduction: Therapy is integral to psychiatry training; however, incorporating students in psychotherapy can be challenging. Current evidence shows that mindfulness groups are beneficial to a number of illnesses in varied treatment settings. In addition, mindfulness has shown to improve student resilience/burnout. There are currently no reports of student-based mindfulness group on inpatient psychiatry unit. The purpose of this study is to measure medical student opinion of the benefits students teaching mindfulness on an inpatient psychiatry unit as part of their psychiatry training. Background: Georgetown Inpatient Unit is a 13-bed voluntary unit that uses multidisciplinary treatment to address a variety of mental illnesses. At present group therapies are held during normal work week but not weekends. Current hypothesis is that teaching students to facilitate mindfulness groups on the inpatient unit may offer perceived benefit to students. Methods: All students were lectured for 2 hours about mindfulness and running a mindfulness group. Lecture was both experiential and didactic where began with raisin eating exercise, followed by instruction of how to run a mindfulness group then conclusion with a 10-minute body scan exercise. Anonymous pre- and post-lecture surveys were distributed by paper and electronic surveys were emailed to each student to be completed after facilitating a mindfulness group. Perceptions of students were measured on a 10-point Likert scale. Self-reports and free-text comments about student experience were also recorded. Results: Of 31 student respondents before and after lecture over 4 months (October 2017- January 2018). Of students surveyed, 67.7% had some prior experience. After lecture, avg student perceptions of conducting mindfulness groups as beneficial to both psychiatric and non-psychiatric patients was 8.48/10. Of 15 student respondents who facilitated a mindfulness group, perceptions reported patient engagement avg 6.83/10, Positive patient response avg 7.42/10, efficacy as tool for mental illness avg 8.01/10, meaningful self-learning avg 7.8/10, meaningful patient learning avg 7.51/10, positive student contribution to patient care avg 7.17/10, likelihood of student adding mindfulness to self-care avg 7.75/10, likelihood of student adding mindfulness to future patient care avg 7/10. Student comments were positive overall although some had difficult experience engaging severely ill and psychotic patients who were not interested in mindfulness. Conclusions: Overall student believe that their facilitating mindfulness groups can be helpful to patients through both rating scales and comments. Low survey response rate after groups may have been due not having a busy call day and mixed faculty support on weekends. More positive response was with larger group size with interested patients. Further measurement of inpatient perceptions of student run mindfulness group is indicated.

No. 156

Enhancing Residents' Training Experiences in Community Mental Health Primary Prevention

Poster Presenter: Ajay Marken, M.D.

Co-Authors: Peng Pang, M.D., Nikita K. Shah, D.O., Michael Jeannette

SUMMARY:
Background: Psychiatry residency training primarily involves caring for patients with significant symptoms and functional impairments in the clinic or hospital setting. These services fall under secondary or tertiary prevention [1]; reducing patient suffering and helping them regain prior level of functioning. In the wake of the acute mental health crisis of increasing emergency room visits in the adolescent population [2], our program expanded its training curriculum to emphasize primary prevention measures [1]; using the established integrated care model [3], to design workshops that promote mental illness prevention and access to mental health services for local adolescents. We aim to build the training curriculum of the Community Primary Prevention Program through process learning [4], requiring trainees to develop and effectively deliver educational materials in the non-clinical setting and to better meet the community's needs. Methods: Using process learning, the methods of this study can be divided into two parts. First, the trainees voluntarily participate in step-wise activities to identify objectives of the initiative; to solicit community collaborators in order to recruit the parents of the incoming freshmen of local high schools and to deliver the educational material to interested parents. Second, through participating in educational material development, survey designs, workshop presentations, analysis and feedback review, the trainees learn to embrace a more applicable and engaging approach with the community audience. Results: From August-December 2018, seven residents and three medical students have visited three local high schools which host over 6,000 students in Staten Island. There was a total of 71 parents of the incoming freshmen who participated in the workshops. The pre- and post-workshop parent surveys revealed that 81.7% parents had not attended prior workshops or discussions regarding adolescent mental health and 61.2% of parents who attended the workshop think "it's very helpful." In addition, based on the trainee questionnaires, those who participated in the pilot outreach program were more likely to identify the role of parent liaison as an integral part of adolescent mental health care than those who did not. These participants also reported an increase in understanding the parent population and an improved ability to communicate effectively with families. However, in the future we plan to focus on stronger recruitment processes and better engagement of attendees during the workshops for more effective results. Conclusion: This is the first pilot study to develop the new training curriculum for our general psychiatry residents to implement community primary preventive adolescent mental health intervention. Through the process learning, residents design and implement preventive measures and identify needs for early identification and intervention, all of which were found to be effective in the community.

No. 157
WITHDRAWN

No. 158
Impact of Accountability Program on Psychiatry Resident's In-Training Examination and Board Pass Rate: Insights From a Community Hospital (2008?2017)
Poster Presenter: Rikinkumar S. Patel, M.D., M.P.H.
Lead Author: William E. Tankersley, M.D.
Co-Author: Hema Mekala, M.D.

SUMMARY: Objective: To study the trends in the psychiatry resident in-training examination (PRITE) scores at a teaching hospital from 2008 to 2017. The authors hypothesized that the 2012 accountability program would lead to improved scores and the American Board of Psychiatry and Neurology (ABPN) examination pass rate. Educational Intervention: An accountability program with rewards and remediation was implemented based upon the resident's PRITE scores. Residents scoring <30th percentile were required to retake the examination and attend structured study hall one hour/week and residents earn external moonlighting privileges if they score >50th percentile. Methods: Residents graduating in the general psychiatry program at the Griffin Memorial Hospital (GMH) from 2008–2017 were included in this study. To examine the effect of the accountability program, we compared PRITE and ABPN results from 2008–12 (N=22) and 2013–17 (N=

26). The changes in PRITE scores were evaluated using a linear regression model. To examine the effect of accountability program on board pass rate we used a logistic regression model. Results: PRITE psychiatry score significantly increased by 57.5 points from 2008–12 to 2013–17 academic years (P= .042). A Kruskal-Wallis test showed a statistically significant difference in PRITE psychiatry score between the two academic groups (P= .030), with a higher mean rank psychiatry score of residents in 2013–17 academic year. 77% of residents passed ABPN at first attempt in 2013-17 compared to those in 2008-12 (45.5%). Residents in 2013–17 were more likely to pass ABPN than those in the 2008-12 (OR 11.844; 95% CI 1.659–84.564; P= .014). Discussion and Conclusion: The first year of implementation of the accountability program had a minor improvement in PRITE scores, and a dramatic increase was seen in the second year [1]. This increase was due to the enforcement of rewards and remediation during the first year. Compared to other remediation programs [2-5], the program at GMH had a benefit of a built-in reward system. Starting an accountability program showed improvements in annual assessment exams and was correlated to improved ABPN pass rate at the first attempt.

No. 159

A Public Health and Advocacy in Psychiatry Elective for Medical Students

Poster Presenter: Claudia L. Reardon, M.D.
Co-Authors: John Battaglia, Robert M. Factor, M.D., Ph.D., Katrina N. Hickle-Koclanes, M.D., Rebecca M. Radue, M.D., Kelly Valdivia, Art C. Walaszek, M.D., Beth Zeidler Schreiter

SUMMARY:

Background: Knowledge of and skills in public health and advocacy related to mental health are important for practicing psychiatrists, but often there is no formal curriculum to teach these topics to trainees. Medical students at the University of Wisconsin School of Medicine and Public Health (UWSMPH) have long engaged in public health and advocacy initiatives, primarily through extracurricular activities, in keeping with the institution's mission as an integrated school of medicine and public health. When the UWSMPH requested formal specialty-specific public health electives for UWSMPH medical students, we developed a psychiatry offering. Methods: We developed a 2-week elective for fourth year medical students titled "Public Health Advocacy and Service in Psychiatry" based on: review of the literature; discussion with UWSMPH Psychiatry Student Interest Group student members to determine areas of interest; meetings with community agencies who would potentially be involved in the elective; and feedback from UWSMPH curriculum design experts. We designed the curriculum to include two main categories of experiences. First, students gain first-hand experience participating in psychiatric clinical practice in a number of community settings that serve patients who are seriously mentally ill and/or underinsured. For example, they participate at the Program for Assertive Community Treatment (PACT) in Madison, Wisconsin (the world's first ACT program), at a local community mental health center, at a mental health clubhouse, and as part of the behavioral health consultation model at a federally qualified health center. Second, having seen evidence of the need for advocacy (e.g., for additional community resources and patient capacity) through the first set of experiences, the students participate in professional medical societies to undertake public health initiatives and/or advocacy for psychiatric populations. For example, they author a blog for the American Psychiatric Association's public-facing website, record a public service announcement with the Wisconsin Medical Society, receive advocacy and media training from the Wisconsin Medical Society, and attend professional medical society meetings. Over the 7 years the elective has been in existence, we have refined the curriculum based on student feedback. Results: 100% of students taking the elective over 7 years (n=20) strongly agreed that "this elective allowed me to see how I could integrate its public health content into my future practice." Refinements made to the curriculum included development of a set of readings to coincide with each experience, creation of an online repository for course materials, and incorporation of a reflection exercise to tie together all of the experiences undertaken. Conclusion: A public health and advocacy elective in psychiatry has the potential to increase relevant knowledge and skills for medical students, and to possibly affect students' values.

No. 160

Addressing Inappropriate Sexual Behavior From Psychiatric Patients: Are Current Training Methods and Resources Sufficient?

Poster Presenter: Rebecca M. Capasso, M.D.
Co-Authors: Sarah Michael, M.D., Xinlin Chen, M.D., Elizabeth Raymond

SUMMARY: Objective: Psychiatrists and other mental health providers are at an increased risk of encountering inappropriate sexual behavior (ISB) due to providing services to people with psychiatric diagnoses. Mental health providers are often taught how to treat psychiatric diagnoses but not how to respond to and process ISB. This is an exploratory study to document the prevalence of exposure to ISB among trainees and assess the preparedness of trainees to deal with ISB. Methods: A survey was administered to 58 psychiatry residents and 14 psychology interns at a metropolitan hospital. A total of 22 questions were asked regarding participants' experiences with ISB, training regarding ISB, and preparedness in managing ISB. Results: Of those who completed the survey, 89% of respondents had experienced ISB. Seventy percent said they had no training in responding to ISB, and 95% wanted more training. A minority of respondents consistently processed these events at all, and only 60% did so with a supervisor. Conclusion: Experiences involving ISB are prevalent amongst the mental health trainees surveyed, but the majority of trainees did not feel that they received adequate training in preparation for or supervision to process their experiences. Creating training and establishing protocols to respond to ISB may help trainees feel more capable and safe. Further studies are needed to understand ISB's impact on trainees and patient care, as well as to assess the efficacy of training and protocols developed to manage ISB.

No. 161

Trainee Experiences With the Death of a Patient

Poster Presenter: Rachel Christine Conrad, M.D.

SUMMARY:
Purpose: To understand trainees' most distressing experiences with the death of a patient and explore trainees' reactions, coping strategies, and sources of support. Method: A survey study of 279 resident physicians was conducted at Emory University's Graduate Medical Education orientation in June 2017. Variation in experience was assessed by subgroup including by gender and specific circumstances about the patient death experienced. Results: 97% of respondent reported experiencing a distressing patient death, and most respondents had their most distressing experience with the death of a patient during medical school (62% [169/274]). The most distressing circumstances were unexpected deaths (43% [119/279]), young age of patient (42% [117/279]), feeling disempowered (33% [93/279]) and prolonged suffering of the patient (30% [84/279]). The most common reactions were sadness (75% [209/279]), shock (30% [84/279]), numbness (24% [66/279]), and detachment (22% [61/279]). The most common coping mechanisms were discussing the experience (77% [214/279]), socializing (60% [166/279]), hobbies or exercise (30% [83/279]), and spending time alone (28% [79/279]). Trainees desired support from family and friends (53% [147/279]), partners (49% [136/279]), residents (47% [131/279]) and attending physicians (37% [102/279]) and were likely to experience support from family and friends (52% [145/279]), a partner (48% [134/279]), and other residents (45% [127/279]) but less likely to experience support from attending physicians (28% [79/279]). Conclusions: Most trainees experienced a distressing patient death during medical school. The range of emotional reactions vary by circumstances and gender, and discussing the experience is the most common coping strategy. While many trainees experience the support that they desire from their family, friends, partners and other residents, trainees are less likely to experience the support that they desire from attending physicians.

No. 162

Depression and Stress in Singapore Psychiatry Residents

Poster Presenter: Cecilia Kwok

SUMMARY:
Background: Doctors in training are at high risk of depression and burnout. Depression in residents has been linked to increased medical errors. As a specialty, psychiatrists are at increased risk of

suicide. This study looks at factors affecting depression and perceived stress among psychiatry residents in Singapore. Methods: Residents in the Singapore nation-wide psychiatry residency program were surveyed in September 2018. Using an anonymous online questionnaire, residents completed demographic data, the Patient Health Questionanire-9 (PHQ-9) and Perceived Stress Scale (PSS). They were also asked if they were concerned they might have made a medical error. Results: The response rate was 65.3% (47/72), with 29 junior residents (Years 1-3) and 18 senior residents (Years 4-5). Gender distribution was about equal (46.8% male); 40.4% were below 30 years old. About half (55.3%) were married and 19.1% had children. Majority (70.2%) slept 6-8 hours a night while 29.8% slept <6 hours a night. In terms of working hours, 55.3% worked <60 hours a week, while the rest worked 60-80 hours a week. Working >60h/week was more common among single (p=0.0089) and junior residents (p=0.0185). Based on PHQ-9 score =10, 38.3% had depression, which is higher than a meta-analysis that found a depression rate of 20.9% in residents (p=0.006). Depression was significantly associated with sleeping <6h/night (p=0.0006) and working >60h/week (p=0.033). Six residents (12.8%) endorsed suicidal ideation in the past 2 weeks; they were more likely to be concerned about making a medical error (p=0.0004). Scores on the PHQ-9 correlated positively with feeling more callous, burnt out and experiencing concern over having made a medical error (p<0.0001), while being inversely correlated with job satisfaction (p=0.01). Residents who slept <6h/night were more likely to report feeling burnt out (p=0.0073). The mean score on the PSS scale was 23.89±1.95, with 8.5% (4/47) experiencing high perceived stress (PSS=27). Only 36% reported deriving satisfaction from their work fairly or very often, while 34.0% reported feeling burnt out fairly or very often. Conclusion: Singapore psychiatry residents have a high rate of depression and perceived stress. Shorter sleeping duration and longer working hours are the main factors associated with depression; there was no relationship with gender or year of training. Scores on the PHQ-9 correlated with concern over making medical errors.

No. 163

Design and Pilot Study of a Structured Format for Teaching Evidence Based Medicine and Literature Search/Appraisal Skills in a Journal Club Format

Poster Presenter: Samuel James Ridout, M.D., Ph.D.
Co-Authors: Brooke Harris, Zhongshu Yang, M.D., Ph.D., Divya Reouk, Kathryn Kelly Ridout, M.D., Ph.D.

SUMMARY:
Intro: Teaching evidence-based medicine (EBM) requires imparting a working knowledge of searching the literature, evaluating levels of evidence, appraising statistical methodology and interpreting results and their impact on clinical practice. The journal club format, involving group discussion of an article led by a peer facilitator, offers learners an efficient way to practice these skills. However, journal clubs often lack structure and ties to EBM making the effort less impactful. The purpose of project was (1) to create an efficient, objective form which uses EBM tools and can be applied in regular practice and (2) to obtain pilot data from stakeholders on usefulness and acceptability. Methods: A handout was constructed by content experts (authors) including: a brief recapitulation of EBM principles, study types, effective medical literature search instructions, a novel form guiding the user through the most salient components to evaluate the paper they are reviewing or presenting. Qualitative and quantitative data were collected from journal club participants via anonymous survey including a 5-point Likert scale to assess usefulness (range “not at all” to “very”). Qualitative data regarding strengths versus weaknesses of the EBM tool and utility were assessed. Additionally, time required to use the EBM tool the first time was measured. Results: Fourteen psychiatrists and one medical student attended a Journal Club session in an outpatient psychiatry clinic in a hospital in Northern CA and 7 (6 psychiatrists and 1 medical student) responded to the survey and their replies were analyzed. Seventy two percent (5 out of 7) felt the tool was “very useful” in understanding EBM; 100% (7 out of 7) would use this format for article appraisal and teaching EBM again and 86% (6 out of 7) would recommend this tool to others. Most respondents reported taking 60 minutes or less to use this tool (57%, n=4). Respondents reported structure and efficiency as strengths and no weaknesses were identified for this tool.

Conclusions: These data suggest that the novel EBM tool was highly acceptable to users who found it helpful for assessment of medical literature as well as structured journal club presentations. This suggests implementation of this novel EMB tool will be helpful for resident instruction. Unlike many circulated tools for similar EBM purposes this is more comprehensive, includes all steps needed to critically appraise an article, and can be used for any journal articles regardless of study types. Broader use at multiple levels of training (medical student, faculty) and collaboration with other institutions may be warranted to further facilitate EBM education which is a vital area of medical training and practice.

No. 164

Trauma in the Workplace: A Crime and Violence Victimization Survey of Medical Students

Poster Presenter: Janice Hill-Jordan

SUMMARY:

Background: Although screening for child abuse, intimate partner violence (IPV), and elder abuse is mandated by many states and professional organizations, significant barriers still exist at the provider level. One barrier may be lower experience with crime among physicians. However, among the many national and campus victimization surveys, we have found no victimization surveys focused on medical students. This poster will describe a medical student victimization survey conducted in 2015, 2016, and 2017. The purpose of this project was to 1) establish lifetime prevalence and incidence of crime victimization among a sample of medical students; 2) identify locations on campus where students felt less safe; and 3) inform future educational programs, security strategies, and policies aimed to promote a safe educational environment. We also believed surveying medical students about their experiences might heighten the students' awareness regarding victimization patients might experience. Methods: This study used a one-stage design with an online survey and a convenience sample. The questions were behaviorally specific, which have been shown to produce higher self-reported victimization compared to legally-defined terms. Questions and response items were drawn from several sources, such as the National Intimate Partner and Sexual Violence Survey and notalone.gov. The survey included questions regarding property crime; violent crime including robbery, sexual assault, and IPV; and coercive crimes including stalking and sexual harassment. Results: Results of climate questions indicated that a high percentage of students feel the institution protects students and that they feel safe on campus. Less than 4% of respondents reported social media harassment since becoming a medical student. Stalking victimization while a medical student ranged from 1.9% to 7.3%. Fondling lifetime prevalence was as high as 23.3%. The highest prevalence of emotional abuse by an intimate partner was 36.0%, and no students reported current intimate partner violence, although a few students reported current emotional abuse. Conclusions: Reports of crime victimization were considerably lower than results from other campus and national surveys. This may suggest the medical student population comes from a less violent personal background than many of their future patients. However, in each year, there was at least one student who reported current partner abuse or sexual harassment, which highlights the need for relevant processes and services for students. The results have been used to upgrade lighting in areas identified as unsafe. We will describe efforts to educate medical students and practitioners regarding professional requirements and practices around violence and trauma-informed care.

No. 165

Survey of Early Career Neurologists About Psychiatry Training During Residency

Poster Presenter: Dorthea Juul
Co-Author: Larry R. Faulkner, M.D.

SUMMARY: Objective: To obtain feedback from early career neurologists and child neurologists about the psychiatry component of residency training. Methods: A questionnaire was developed and administered electronically to four recently certified cohorts of ABPN diplomates. Results: The response rate was 16% (431/2,677) and included 330 neurologists and 101 child neurologists. Overall, the respondents described psychiatry as contributing to their professional development as physicians and providing useful preparation for practice. The most

common suggestions for improving psychiatry training were to provide more time in psychiatry with more outpatient experiences to increase the exposure to patients with conditions relevant to neurology/child neurology. Conclusions: Psychiatry is an important component of career preparation for neurologists and child neurologists, and the clinical experiences need to be thoughtfully designed to provide a good match between duration and specifics of patient encounters in training and what is needed in practice. Development of model curricula that can be shared with psychiatry faculty is one approach to enhancing these experiences.

No. 166

Psychiatry Trainee Perspectives on Involvement in Medical Education: A Case-Based Approach

Poster Presenter: Jessica Bayner
Co-Authors: Martha J. Ignaszewski, M.D., Lilanthi Balasuriya, M.D., M.S., Jessica Elizabeth Isom, M.D., M.P.H.

SUMMARY:

Background: The Psychiatry Departments within Boston Children's Hospital/Harvard Medical School and Yale New-Haven Hospital support trainee involvement in medical education. However, there are fewer publications directly relating to the involvement of psychiatry trainees across the varying levels of education. Methods: Case-based presentation of identified projects in medical education, supported by evidence-based knowledge from Harvard Macy Course. Results: We briefly present 3 identified projects that reflect novel ideas in medical education, spearheaded by psychiatry trainees at multiple institutions. Project design, implementation and collaborative problem solving was emphasized and supported through the Harvard Macy Program for Post Graduate Trainees: Future Academic Clinician-Educators. Project 1 comprised fellow involvement in existing M&M rounds in the hospital as a proxy for QI learning. Project 2 attempts to increase access to care for substance abuse treatment by providing buprenorphine-waiver training sessions to clinicians. Project 3 focuses on a residency-wide curriculum for adult psychiatry trainees that aims to highlight and reduce health disparities through experiential and skills-based learning focused on using critical social justice to achieve mental health equity. A component of project 3 focuses on creating 6 interactive sessions for a track entitled "The Human Experience" which focuses on teaching PGY2 residents relating concepts from the social sciences to psychiatry. In each case, we highlight the learning points that lead to adaptation of each project for realistic implementation secondary to involvement in the program. Clinical pearls in medical education are also listed for each proposed project. Conclusion: It is important for programs to foster trainee enthusiasm and excitement for medical education. Trainees may be best suited to identify areas of needed improvement and provide ground-level feedback around effectiveness of existing curricula. These examples highlight the ability for program directors to support trainees in medical education with examples of various projects than can be implemented across institutions.

No. 167

Challenges in the Treatment of Restless Legs Syndrome

Poster Presenter: Shirshendu Sinha, M.D.
Lead Author: Audrey Umbreit, Pharm.D.
Co-Author: Bhanu Prakash Kolla, M.D.

SUMMARY:

The patient is a 67-year-old Caucasian gentleman with psychiatric history of bipolar disorder type I, unspecified anxiety disorder, obstructive sleep apnea (OSA) on CPAP and treatment refractory restless legs syndrome (RLS) was first seen for Psychiatry consult on November 29, 2016. He has history of inpatient psychiatric hospitalization with most recent one secondary to worsening of RLS contributing to insomnia leading to mania. He was also abusing Temazepam. His medication regimen included Fluoxetine 40mg, Gabapentin 800mg in the morning and 3200mg at bedtime, Pramipexole 0.375mg, Lamotrigine 200mg, Trazodone 200mg at bedtime and Temazepam 15-30mg as needed for insomnia and RLS. Initially Trazodone was tapered off, Temazepam was discontinued, bed time dose of Gabapentin was reduced to 1600mg. Continued on all other medications. Eventually Fluoxetine was discontinued. Subsequently he underwent a short trial of Quetiapine and Olanzapine. He was abusing Quetiapine, Olanzapine or Gabapentin to self-

medicate for sleep disturbances driven by RLS. Early in 2017 he was started on Depakote 1500mg at bedtime to stabilize his mood. He was diagnosed with RLS augmentation secondary to Pramipexole and was recommended Rotigotine patch which he couldn't afford. In March, 2017, additionally he was started on Codeine 30mg at bedtime for RLS. For persistent symptoms of RLS, in July, 2017, Pramipexole was changed to Ropinirole. He underwent Polysomnography on 10/9/17; RLS appeared be well controlled on Gabapentin 800 mg in morning, 1600mg at bedtime, Ropinirole 6mg and Codeine 30mg at bedtime. Was diagnosed with Insomnia Sleep State Misperception and recommended for Cognitive Behavioral Therapy for Insomnia (CBT-I) On March, 2018, for recurring symptoms of RLS, he was started on Carbidopa-Levodopa with a taper plan for Ropinirole. He noted worsening RLS on lower dose of Ropinirole. Pharmacogenomic test was done. The patient was a rapid metabolizer for CYP1A2 which may indicate reduced response to Ropinirole. He was also an intermediate metabolizer for CYPD2D6. Codeine is activated to morphine via CYPD2D6 metabolism. He may not have optimal effect from codeine for RLS. Codeine was tapered off. Given the patient is a rapid metabolizer for CYP1A2, alternative option could be Pramipexole, but his prior response to Pramipexole was suboptimal and had augmentation from Pramipexole. He completed 6 sessions of CBT-I. For continued symptoms of RLS, in August of 2018, Gabapentin was tapered off and was started on Pregabalin. Most recently for RLS he is taking Carbidopa-Levodopa 25-100mg 4 times daily, Pregabalin 300mg twice daily, Ropinirole 2mg in morning and 4mg at bedtime and Ferrous gluconate 38mg daily. He continues to remain on CPAP. For mood, he is on Depakote 1000mg at bedtime and Lamotrigine 300mg daily. His symptoms of RLS and mood are optimally controlled at this time. In this poster we discussed the challenges in treatment of RLS.

No. 168

Prevalence of Insomnia in Postural Orthostatic Tachycardia Syndrome (POTS)

Poster Presenter: Sami B. Alam, M.D.
Co-Authors: Pruthvi Goparaju, M.B.B.S., Dutt Patel, M.B.B.S., Muhammad Asad Fraz, M.D., Nabihah Chaudhary, M.B.B.S., Sabih Alam, M.D., Amer Suleman, 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. 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 socially1. The symptoms of POTS are vast because the Autonomic Nervous System plays an extensive role in regulating various functions and pathways throughout the body. Sleep and the autonomic nervous system are closely related from an anatomical, physiological, and neurochemical point of view. Sleep disorders may cause or be associated with clinically relevant autonomic dysfunctions. Dysfunctions of cardiovascular and respiratory autonomic control have a significantly negative impact on prognosis of the associated sleep disorder and may represent a risk factor for the development of other chronic diseases or for life-threatening events. The aim of this study is to determine the frequency of Insomnia in patients diagnosed with POTS and the medications prescribed for it. It is also to raise awareness about POTS for the future reference of psychiatrists. Method: As of 2018, 876 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; Insomnia based on DSM-V criteria (Pre-diagnosed from Psychiatric or other clinical settings fit to evaluate sleep disorders). Results: Out of 876 patients, 86.3% are Female (756) and 13.6% are Male (120). 42.2% of those 876 patients are diagnosed with Insomnia (370); out of which 151 patients have been on sleeping aids. The other 219 patients have not been on an sleeping aids. So 17% of those 876 patients are diagnosed with Insomnia and have been on sleeping aids(151). Out of the 120 male patients, 30% of those are diagnosed with Insomnia(36) and 12.5% used sleeping aids(15). Out

of the 756 female patients, 44.1% of them are diagnosed with Insomnia(334) and 17.9% of them have been on sleeping aids(136). All POTS patients were asked about social and psychological factors on initial and subsequent follow up visits. Out of the 151 patients who have been on sleeping aids, the following medications have been used: Zolpidem-26.4%(40) Trazadone-25.8%(39) Melatonin-20.5%(31) Temazepam-9.2%(14) Lunesta - 5.9%(9) Clonazepam-5.2%(8) Alprazolam- 1.9%(3) Others - 4.6%(7) Conclusions: Insomnia can lead to poor quality of life, especially when it occurs or is associated with symptoms of POTS patients. A detailed history and examination should be carried out for proper treatment and improvement of quality of life in POTS patients.

No. 169
WITHDRAWN

No. 170
Reversible Posterior Leukoencephalopathy Syndrome (RPLS) in a Pregnant, Catatonic Sickle Cell Patient With Pre-Eclampsia
Poster Presenter: Jeffrey Lee

SUMMARY:
Ms. C, a 24-year-old G2P0100 at 31 weeks of pregnancy with a past medical history of sickle cell disease, presented to the psychiatric consult service with recent onset catatonia. The patient was admitted five days earlier for sickle cell crisis, which was managed with administration of packed RBCs and pain control. Over the next few days, she was diagnosed with pre-eclampsia, was less verbally responsive, and was moving minimally. She scored a 16 on the Bush-Francis catatonia rating scale. Following an MRI, she was diagnosed with reversible posterior leukoencephalopathy syndrome (RPLS). After the delivery of her baby and antihypertensive treatment, her symptoms abated within two days. We discuss this atypical presentation of RPLS, the many risk factors in this patient for developing RPLS, and the possible underlying pathophysiological mechanisms of RPLS. Prompt recognition and treatment of this clinical syndrome in its various neuropsychiatric manifestations is essential, as it can potentially lead to life-threatening complications from cerebral edema. Overall, this knowledge will enable clinicians to be more aware of possible complications of well-known conditions, such as pre-eclampsia or sickle cell anemia.

No. 171
The Effects of Brief Intervention for Insomnia on the Community Dwelling Older Adults
Poster Presenter: Euisun Oh
Lead Author: Eun Lee, M.D.
Co-Authors: Kyungmee Park, Suk Kyoon An, Kee Namkoong

SUMMARY: Objectives: Insomnia is one of the major concerns in elderly population. Cognitive behavioral treatment for insomnia is the first line treatment option for insomnia, but there are some limitations including time and cost burden, and the requirement for cognitive resources to obtain maximized treatment effect. Brief intervention for insomnia (BII) is the treatment that focuses on behavioral aspects of treatment for insomnia in primary care practices. The purpose of this study was to evaluate the effects of the BII in community-dwelling older adults. Methods: Total 47 older adults (mean age 73.13 years; 37 female [78.7%]) with insomnia were enrolled from local community centers between May 2016 and January 2018. They participated in the BII program for three weeks. We gathered sleep related information of participants by using Pittsburgh Sleep Quality Index (PSQI), Sleep hygiene index, and sleep diary. The clinical efficacy was evaluated by comparing total sleep time (TST), sleep latency (SL), waking after sleep onset (WASO), and sleep efficiency (SE) before and after treatment. Result: Participants of BII showed significant improvements in global PSQI score (from 11.2 to 9.3, $p < 0.001$). Improvements were also observed on measures of sleep quality in PSQI ($p < 0.001$), next-day morning freshness ($p = 0.01$). A significant and clinically relevant shortening of WASO (from 40.8 to 25.9 min, $p = 0.02$) from the sleep diary was also found. Conclusion: We found positive clinical efficacy of BII for insomnia in community dwelling older adults, especially about subjective sleep quality and WASO. This finding implies that BII can be effectively applied for the management of elderly insomnia patients in community settings. Financial Disclosure: This work was supported by the 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 to E. Lee) and the Korean Mental Health Technology R&D Project funded by the Ministry of Health & Welfare, Republic of Korea (Grant number: HM15C0995 to E. Lee). Key words: Insomnia, Elderly, Cognitive behavioral therapy for insomnia, Community, Sleep.

No. 172

Difference in Power Spectral Density of EEG Frequency Bands Between Patients With Simple Snoring and Those With Obstructive Sleep Apnea

Poster Presenter: Jae Myeong Kang
Lead Author: Seung-Gul Kang
Co-Authors: Kee Hyung Park, Seon Tae Kim

SUMMARY:

Patients with simple snoring (SS) often complain of poor sleep quality despite a normal apnea-hypopnea index (AHI). We aimed to identify the difference in power spectral density of electroencephalography (EEG) frequency bands between patients with SS and those with obstructive sleep apnea (OSA). Power spectral analysis was performed using SpectralTrainFig developed by the National Sleep Research Resource. We compared the absolute power spectral density values of standard EEG frequency bands between SS (n = 42) and OSA (n = 129) groups during the first non-rapid eye movement (NREM) sleep period, after controlling for age and sex. Furthermore, we analyzed the partial correlation between AHI and the aforementioned absolute values of the EEG frequency bands. The absolute power spectral density values observed in the beta (15-20 Hz, F = 7.64, p = 0.006, p corrected = 0.036) and delta (1-4 Hz, F = 10.54, p = 0.001, p corrected = 0.006) bands during NREM sleep were found to be higher in the OSA group than in the SS group. The AHI was also positively correlated with absolute values of the beta band in the OSA group (r = 0.251, p = 0.004, p corrected = 0.027), as well as with both groups combined (SS + OSA; r = 0.340, p < 0.001, p corrected < 0.001). The higher absolute values of the beta band in the OSA group versus the SS group, and the positive correlation between AHI and absolute values of the beta band in the same group were as expected, since OSA is considered to be a more severe sleep disorder than SS. However, the higher absolute values of the delta band in the OSA group versus the SS group was relatively unexpected. The lower absolute values of the delta band in the latter group are presumed to be the cause of subjective sleep quality deficits in these patients.

No. 173

WITHDRAWN

No. 174

Clinical Polysomnography Trial of Suvorexant for Treating Insomnia in Alzheimer's Disease

Poster Presenter: William Joseph Herring
Co-Authors: Paulette Ceesay, Ellen Snyder, Donald Bliwise, Kerry Budd, Jill Hutzelmann, Joanne Stevens, David Michelson

SUMMARY:

Background: Sleep disturbance and insomnia are common in patients with Alzheimer's disease (AD) but evidence for the efficacy of sleep medications in this population is limited. Furthermore, potential worsening of cognitive impairment/next-day function is a concern. Suvorexant, a first-in-class orexin receptor antagonist that enables sleep to occur via competitive antagonism of wake-promoting orexins, is approved for treating insomnia in elderly and non-elderly adults. Its clinical profile may help to address an important unmet medical need in patients with AD who have insomnia. We conducted a clinical trial to evaluate suvorexant for treating insomnia in patients with AD using gold-standard sleep laboratory polysomnography (PSG) assessments. Methods: This randomized, placebo-controlled trial consisted of a 3-week screening period followed by a double-blind 4-week treatment period (clinicalTrials.gov NCT02750306). Patients were required to meet diagnostic criteria for both AD and insomnia and have a qualified trial partner/caregiver. Eligible participants were randomized to an initial dose of suvorexant 10 mg, that could be increased to 20 mg based on clinical response, or matching placebo. Assessments included overnight sleep laboratory PSG visits, a sleep diary completed by the trial partner, an activity/sleep watch worn by the patient, and exploratory measures of cognition and neuropsychiatric behavior. The primary objective

was to test the hypothesis that suvorexant would be superior to placebo in improving PSG-derived total sleep time (TST) at Week-4. Results: A total of 285 participants (suvorexant N=142, placebo N=143) were randomized from 35 sites in 8 countries worldwide. Of these, 277 (97%) completed the study (suvorexant N=136, placebo N=141). One patient in each group discontinued study treatment due to an adverse event. Baseline TST was similar in each group (mean (SD): suvorexant = 278 (77) minutes, placebo = 274 (84) minutes). At Week-4, the model-based least squares mean changes from baseline were 73 minutes for suvorexant and 45 minutes for placebo. The increase in TST for suvorexant relative to placebo was 28 minutes [95% CI:11,45], p<0.005. Regarding safety, 22.5% and 16.1% of patients experienced one or more adverse events when treated with suvorexant or placebo, respectively. Somnolence was reported in 4.2% of suvorexant-treated patients relative to 1.4% in those administered placebo. Conclusions: Suvorexant was effective and generally well-tolerated for treating insomnia in patients with AD. Support: Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ, USA (MSD).

No. 175

Solriamfetol for Excessive Daytime Sleepiness in Narcolepsy or OSA: Pooled Analyses of 12-Week, Randomized, Controlled Studies by Demographic Factors

Poster Presenter: Colin Shapiro
Co-Authors: Helene Emsellem, Russell Rosenberg, Paula Schweitzer, Dan Chen, Michelle Baladi, Kimberly Babson, Kris Liu, Michael J. Thorpy

SUMMARY:
Introduction Solriamfetol, a selective dopamine and norepinephrine reuptake inhibitor, demonstrated robust wake-promoting effects in 12-week studies of excessive daytime sleepiness (EDS) in obstructive sleep apnea (OSA) or narcolepsy. Efficacy and safety by demographic factor were evaluated from pooled analyses of these studies. Methods Data from 12-week studies (2 narcolepsy, 1 OSA) were evaluated by age (<65, =65 years), body mass index (BMI; <30, =30 kg/m2), and gender (male, female). Efficacy assessments included change from baseline to week 12 on mean sleep latency on the Maintenance of Wakefulness Test (MWT), Epworth Sleepiness Scale (ESS) score, and patient-reported improvement on the Patient Global Impression of Change (PGI-C) scale. Subgroup analyses of the pooled studies were based on the efficacy population; no multiplicity adjustments were made. Treatment-emergent adverse events (TEAEs) were assessed. Results For the overall population in pooled studies, 558 participants received any dose of solriamfetol in the efficacy population. Of these, most were =65 years (n=496; mean age ˜48 years), 239 had BMI <30kg/m2 and 319 BMI =30kg/m2 (mean BMI ˜31 kg/m2); 283 were male and 275 female. For age, across dose groups (37.5, 75, 150, 300 mg), the effects of solriamfetol were similar between groups on the MWT (least squares [LS] mean difference: 3.2, 5.8, 9.6, and 12.0 for <65 years and 3.2, 6.8, 9.6, and 9.5 for >65 years); effects were similar on the ESS (LS mean difference: -2.3, -1.7, -4.4, and -5.1 for <65 years and -1.2, -3.1, -4.4, and -3.7 for >65 years), and on the PGI-C. For gender, across dose groups (37.5, 75, 150, 300 mg) the effects of solriamfetol were numerically higher for women vs men across measures: MWT (LS mean difference: 1.9, 4.3, 7.8, and 9.9 for men and 4.7, 7.4, 11.6, and 13.8 for women); ESS (LS mean difference: -0.7, -0.6, -3.3, and -3.7 for men and -4.1, -3.1, -5.6, and -6.3 for women), and on the PGI-C. For BMI, across dose groups (37.5, 75, 150, 300 mg) the effects of solriamfetol were similar between groups on the MWT (LS mean difference: 5.3, 5.7, 10.0, and 10.5 for <30 kg/m2 and 2.6, 6.1, 9.3, and 12.8 for =30 kg/m2); effects were similar on the ESS (LS mean difference: -2.2, -1.8, -4.1, and -5.0 for <30 kg/m2 and -2.1, -1.9, -4.5, and -4.9 for =30 kg/m2), and on the PGI-C. TEAEs were similar by age or BMI category; 61.4% of males and 77.0% of females reported =1 TEAE. Conclusion The effects of solriamfetol were similar across endpoints in pooled 12-week studies, suggesting consistency of treatment effect across subpopulations defined by major demographic factors. For gender, differences in magnitude of drug effect may reflect lower solriamfetol exposures in men; however, this does not warrant dose adjustments. Subgroup analyses of safety by age and BMI did not show meaningful differences; the percentage of females with at least 1 TEAE was higher than in males. Support: Jazz Pharmaceuticals.

No. 176

Assessment of Sleep Quality in Opioid Use Disorder Patients Who Are Compliant Versus Non Compliant With Buprenorphine

Poster Presenter: Nuzhat Hussain, M.D.
Co-Authors: Salima Jiwani, M.D., Venkatesh Krishnamurthy

SUMMARY:

Introduction: Sleep disturbance is common in up to 70% of subjects with opioid use disorders treated with Buprenorphine (OUDB)(1). Persistent insomnia is a risk factor for relapse in substance use disorders (2), including opioid use disorder. The purpose of this study is to access sleep problems in patients with a history of substance use disorder, who are compliant vs non compliant with Buprenorphine treatment. Methods:123/260 OUDBs enrolled in the study provided follow up data regarding compliance with Buprenorphine atleast six months after initial enrollment. Subjects completed a sociodemographic survey and the Pittsburgh Sleep Quality Index (PSQI) to measure sleep quality. Sociodemographic questionnaire included information about their age, sex, marital status, life time duration of abstinence, duration of opioid use prior to treatment with Buprenorphine, duration of treatment with Buprenorphine, number of rehabilitation admissions, reported severity of depression and anxiety, adherence to Buprenorphine treatment and onset of sleep disturbance before or with starting opioid use. We used cross tabulation -chi square test and independent t- test to compare demographics, sleep parameters and PSQI scores between patients compliant and non compliant with Buprenorphine treatment were assessed. Results: The mean age of subjects was 35 (±9.5) years, life time duration of abstinence was 27 (±39) months, with 2.3 (±3) rehabilitation admissions. The mean duration on Buprenorphine treatment was 16 (±24) months. No significant differences were found in the demographic information between the two groups. 82.4 percent of patients compliant with Buprenorphine treatment had PSQI scores > 5 and 72.8 percent of patients non compliant with treatment had PSQI scores > 5 indicating poor sleep quality.The difference in the PSQI scores between the 2 groups were not statistically signficant (p= 0.25). In patients reporting sleep problems, the total PSQI scores in the compliant group was 11.2 (±2.9)[p=0.000] and non compliant group was 12.2 (± 3.8)[p=0.000].In both groups (compliant& non compliant) with PSQI score > 5 sleep dysfunction appears to be similar with prolonged sleep latency, less hours of sleep , lower sleep efficiency and worse day time functioning compared to patients with PSQI scores of < 5 (p < 0.005).There was no statistically significant difference in most of the sleep parameters in compliant vs non compliant subjects . Conclusion: Our study reveals that a high proportion of patients with history of opioid use disorder have sleep problems. Complaint and non compliant subjects had similar sleep parameters with no significant difference between the groups. This strongly indicates that poor sleep quality is an independent component in both compliant and non compliant OUDBs. Sleep disturbance should therefore be treated independently as it can significantly affect the quality of life and increase risk of relapse in this population .

No. 177

Sleep Misperception in Patients With Insomnia and Sleep Apnea

Poster Presenter: Shin Gyeom Kim
Co-Authors: Jeewon Lee, Soyoung Lee, Jung Han Yong

SUMMARY:

Background: Insomnia is characterized by subjective complaints of difficulty in initiating and sustaining sleep. While objective data is not usually available in the clinical settings, mismatch between subjective and objective sleep parameters has been reported in people with insomnia. The purpose of the present study was to evaluate the amount of discrepancy between subjective and objective sleep parameters in patients with insomnia and how it is affected by the presence of obstructive sleep apnea Methods: A total of 101 adults (mean age= 40.67±11.70 years, 55.4% female) with insomnia were enrolled in the study. Subjects with major psychiatric disorder and those who had been taking hypnotics for the past 3 months were excluded. Participants underwent a full-night polysomnography study and completed self-reports including Insomnia Severity Index (ISI), Center for Epidemiologic Studies Depression Scale

(CES-D), and Beck Anxiety Inventory (BAI). They also self-reported their subjective Total Sleep Time (TST) and subjective Sleep Onset Latency (SOL). According to the Apnea-Hypopnea Index (AHI), subjects were divided into two groups: Insomnia Group (n=67) and Apnea Group (n=34). Sleep misperception of TST and SOL was calculated by subtracting objective TST from subjective TST and objective SOL from subjective SOL, respectively. Results: The scores of ISI, CES-D, BAI, subjective TST and subjective SOL didn't show any difference between the Insomnia Group and the Apnea Group. In the polysomnography, TST and SOL of the two groups didn't show any difference, but N1 was longer in the Apnea Group while N2 and N3 were longer in the Insomnia Group. The sleep misperception of TST and SOL in the participants was -82.70±98.23 and 42.22±45.57, respectively. Participants in both groups underestimated their TST and overestimated their SOL. Between the two groups, the mean difference between subjective SOL and objective SOL were significantly greater in the Insomnia Group. Conclusion: The present study revealed that subjects with insomnia who doesn't have obstructive sleep apnea have a higher tendency to overestimate their SOL than those who have obstructive sleep apnea. Further study is needed to elucidate the complex relationships between subjective perception of sleep and objective measurements

No. 178

Perampanel in Patients With Resistent Insomnia

Poster Presenter: Eugenio Suarez Gisbert
Co-Author: Maria Jose Abenza

SUMMARY:

BACKGROUND: Insomnia is one of the most frequent reasons for consultation in the Sleep Units. Perampanel is an antiepileptic also effective on the structure of sleep, and in restless legs syndrome. We describe the response to treatment in biterapia with perampanel in patients with chronic insomnia in our Multidisciplinary Unit. MATERIAL AND METHODS: Retrospective observational descriptive analysis of 33 patients, treated for chronic insomnia over 2 years. All with insomnia resistant to more than 4 drugs, attended in the sleep consultations from November 2017 to November 2018. All diagnosed with the clinic, imaging tests, and in some cases, with nocturnal polysomnography. We reviewed sex, age, etiology of insomnia, years of evolution, proven treatments, and the response to treatment measured in hours, and quality of sleep by the Insomnia Severity Index (ISI scale). RESULTS: 33 patients with resistant insomnia, 20 women (60,6%), 13 men (39.4%). Average age: 53.48 years; mean time of evolution: 11.21 years; 5 different drugs tested on average. Main etiology: 13 primary psychophysicists (39.4%). After the combination of perampanel at 2-4 mg (100%) with antidepressants (17 cases, 51.5%), or anxiolytics (11 cases, 33.33%), at 3 months, improves the number of hours (average 2.5 hours), and ISI scale improves 6 average points. The main adverse effect was irritability. Neglect occurred due to lack of efficacy in 4 cases (12,12%). CONCLUSIONS: The combination of perampanel with an antidepressant, or an anxiolytic, improves the quality of sleep by ISI scale. More studies are needed to corroborate these results.

No. 179

Parallels Between Social Determinants of Psychiatric Health Care in the U.S. Armed Forces and General Health Care in the U.S. Homeless Population

Poster Presenter: Zachary Dace Brooks

SUMMARY:

While it has been well documented that barriers exist in both the general health care of the U.S. homeless population and the psychiatric health care of the U.S. Armed forces, recent studies examining these barriers demonstrate striking similarities between the two groups. Knowing what these barriers are allows for further research into innovative ways to address the issues and provide quality health care. There are 3 primary parallels between the two groups: perceived stigma, insufficient support system, and lack of trust in the provider. This poster was intended to demonstrate the similarities between the social determinants of psychiatric health care in the United States Armed Forces and general health care in the United States homeless population.

No. 180

Changes in Military Service Members' Social Interactions Following Discharge From Inpatient Psychiatric Care for Suicidal Crisis

Poster Presenter: Su Yeon Lee-Tauler
Co-Authors: Jessica LaCroix, Kanchana Perera, Alyssa A. Soumoff, M.D.

SUMMARY:
Introduction: Suicide is a major public health concern in the United States military. As a standard practice, service members at acute risk of suicide receive inpatient psychiatric care. Given that patients within three months of psychiatric discharge are most vulnerable to suicide deaths (Chung et al., 2017), it is important to examine opportunities for "time-limited interventions" including social support and coordinated care. Methods: This study assessed data from a randomized controlled trial testing the efficacy of Post Admission Cognitive Therapy (PACT; Ghahramanlou-Holloway et al., 2014). Study participants were primarily military personnel who were admitted to military inpatient psychiatric care facilities after their acute suicidal ideation or attempt. One month after discharge, participants were asked to report any perceived changes in the way their (1) family, (2) peers, or (3) commanders interacted with them. Their responses to the open-ended questions were typed into a database, and coding categories were derived directly from the text using the NVivo software version 11. Results: Of 128 participants who provided their responses at one-month post discharge, the majority (65%; n=82) reported changes in their family interactions since discharge. About a third of participants reported changes in their peers' and commanders' interactions (36-7%; n=46 and 45, respectively). Participants most frequently noticed changes in the way their social circles, primarily their family, 'showing more care and understanding' (62 responses). 44 responses noted that their family (24 responses), peers (11 responses), and commanders (9 responses) 'talked or checked in' with them more than before. However, a number of participants interpreted that 'increased concerns' (39 responses) primarily by family and commanders and 'caution' (22 responses) primarily expressed by peers and commanders as being 'overprotective,' 'nosey,' or 'walking on egg shells'. Negative changes in social interactions included others 'keeping more distance' (18 responses) and 'avoiding or ignoring' the participants' recent hospitalization (9 responses) possibly due to 'not knowing what to say' (6 responses). Conclusion: Understanding how social circles interact with service members recently discharged from suicide-related inpatient psychiatric care provides a step towards informing interventions to raise awareness of patients conditions, improve communication strategies, and serve as gatekeepers to facilitate continuity of care. Improving the quality of social interactions with family, peers, and commanders is a ripe avenue for suicide prevention for service members at a particularly vulnerable time following their psychiatric discharge.

No. 181

Memantine Augmentation of Escitalopram in Geriatric Depression

Poster Presenter: Helen Lavretsky, M.D.

SUMMARY:
Background: Late-life depression (LLD) is associated with significant cognitive impairment, and suboptimal treatment response compared to depression in younger adults. More efficacious treatment to improve mood, cognition and quality of life in LLD are urgently needed. Drugs that target glutamate neuronal transmission, such as memantine, offer novel approaches to treat depression, especially in older patients with cognitive impairment. We present the results of the double-blind placebo-controlled study of the combination of an antidepressant and cognitive enhancer (escitalopram + memantine; EsCIT+MEM) compared to escitalopram + placebo (EsCIT+PBO). Methods: We conducted a double-blinded, placebo-controlled trial to assess the efficacy of escitalopram + memantine therapy compared to escitalopram + placebo for the treatment of geriatric depression (ClinicalTrials.gov NCT01902004). 97 randomized subjects (N=48 Namenda; N=47 Placebo) were followed for up to 12 months to assess mood and cognitive outcome. The primary outcome was improvement in depressive symptoms on Montgomery Asberg Depression Rating Scale (MADRS), and remission of depressive symptoms was defined as MADRS scores of <10 at end of treatment. Results: 35 EsCIT+MEM and 30

EsCIT+PBO subjects completed the study at 6 month. Dropout rate did not differ significantly between the two arms (Fisher's exact p=0.4). Escitalopram daily doses ranged between 10-20 mg; memantine daily doses ranged between 10-20 mg. Mean escitalopram dose (EsCIT+MEM: 10.5 (3.9) mg; EsCIT+PBO: 11.7 (3.5) mg) did not differ between groups. Mean memantine dose was 19.3 (2.6) mg in the EsCIT+MEM group. Remission rate in EsCIT+MEM group was 79.4% while that in EsCIT+PBO group was 62.1%; this difference was not statistically significant (Fisher's exact p-value = 0.2). While both groups demonstrated significant improvement in MADRS scores (EsCIT+MEM: change in MADRS = -9.9 (5.7), t=-10.0, p < .0001; EsCIT+PBO: change in MADRS = -5.9 (4.9), t=-6.5, p < .0001), the improvement in the memantine augmented group was significantly greater than in the placebo group (F(18,93) = 2.3, p = 0.005). Similarly, though both groups improved in apathy (EsCIT+MEM: change in AES = 9.7 (8.7), t=6.5, p < .0001; EsCIT+PBO: change in AES = 4.5 (8.1), t=2.9, p < .001), the between-group difference was significant (F(3,93) = 3.0, p = 0.03). Tolerability and number of side-effects (EsCIT+MEM: 1.9 (2.4); EsCIT+PBO: 2.3 (2.9)) did not differ between treatment groups. Conclusions: Our data indicate that combination of memantine with escitalopram was more effective compared to escitalopram treatment alone in reducing symptoms of depression and apathy. Underlying mechanisms will be explored in ongoing studies.

No. 182

Anxiety Symptoms Are Associated With Smaller Insular and Orbitofrontal Cortex Volumes in Late-Life Depression

Poster Presenter: Kitikan Thana-Udom, M.D.
Co-Author: Helen Lavretsky, M.D.

SUMMARY:

Background. Increasing understanding of the neural correlates of anxiety symptoms in late-life depression (LLD) could inform the development of more targeted and effective treatments. Methods. Grey matter volume (GMV) was assessed with volumetric magnetic resonance imaging in a sample of 113 adults ?60 years with MDD using the following regions of interest: amygdala, anterior cingulate cortex (ACC), insula, orbitofrontal cortex (OFC), and temporal cortex. Results. After controlling for demographic (age, sex, education) and clinical (antidepressant use, medical comorbidity) variables, greater severity of anxiety symptoms was associated with lower GMV bilaterally in the insula, F(1,108) = 6.23, p = 0.01, and OFC, F(1,108) = 7.44, p = 0.008. By contrast, depressive symptom severity was significantly associated with lower bilateral insula volumes, F(1,108) = 6.48, p = 0.01, but not OFC volumes, F(1,108) = 4.62, p = 0.03. Limitations. Limitations include 1) the relatively mild nature of anxiety symptoms in our sample; 2) the cross-sectional research design, which prohibits inferences of directionality; 3) the relatively homogenous demographic of the sample, and 4) the exclusion of participants with other comorbid psychiatric disorders. Conclusions. Decreased OFC volumes may serve as a unique biomarker of anxiety in LDD. Future longitudinal and clinical studies with long-term follow up and more diverse samples will help further elucidate the biological, psychological, and social factors affecting associations between anxiety and brain morphology in LLD.

Poster Session 8

No. 1

Risk of Perinatal Depression Among Women Screened Within a Mobile Application

Poster Presenter: Christina Cobb
Lead Author: Adam Wolfberg, M.D., M.P.H.
Co-Authors: Danielle Bradley, M.P.H., M.S., Louis Faust, Erin Landau, Alex Baron, Ph.D.

SUMMARY:

Background: Per American College of Obstetrics and Gynecology (ACOG) guidelines, many OBGYNs screen their patients for depression at the six week postpartum visit; however, onset can occur at any time during the perinatal period. According to the CDC, 11% of women in the United States suffer from postpartum depression, though this rate reaches 25% in some states. This research set out to identify the temporality of depressive symptoms during the perinatal period. Methods: Between April 2017 and May 2018, users of a pregnancy and parenting mobile application had the opportunity to take the Edinburgh Postnatal Depression Scale (EPDS) at five time points — twice during pregnancy and three

times in the first year postpartum. Results: Of the 202,948 women who took the EPDS, 164,237 (81%) elected to take it once while 38,711 (19%) completed it at least twice. Of those who completed the EPDS once, 78,187 (47.6%) scored =10, indicating symptoms of depression, and 48,639 (29.6%) scored =13, indicating the presence of depression. The lowest average scores were collected during the first three months postpartum (See Figure 1). Of those who took the screener more than once, 30,798 (79.5%) resulted in the same EPDS score. Of the other 7,913 women, 4,085 (51.6%) scored higher during subsequent screenings while 3,619 (45.7%) had improving (lower) scores during subsequent screenings. Conclusions: EPDS scores were lowest during the three months following delivery. Earlier and more frequent screening may help identify more women with depressive symptoms at a time when early intervention and disease avoidance is possible.

No. 2

Effects of Ketamine and Esketamine on the Levels of Brain-Derived Neutrophic Factor in Patients With Treatment-Resistant Depression

Poster Presenter: Ana Teresa Caliman Fontes
Co-Authors: Gustavo Leal, Fernanda Correia-Melo, Graziele Beanes, Lucas Quarantini

SUMMARY:

Background: In recent years, ketamine has emerged as a therapeutic option for treatment-resistant depression, exerting a rapid-onset antidepressant effect, with two forms available, racemic ketamine and its S(+) enantiomer, esketamine. Current literature suggests that BDNF (brain-derived neurotrophic factor) might play an important role on ketamine's complex mechanism of action and that peripheral measurements of this neurotrophin can help to predict response patterns, serving as a biomarker for ketamine treatment. The aim of this study was to evaluate the impact of ketamine and esketamine on BDNF levels and its association with response patterns in individuals with treatment-resistant depression. Methods: This study was a part of a larger two-site randomized, double-blind clinical trial comparing treatment with racemic ketamine and esketamine. Depression severity was assessed before, 24 hours, 72 hours and 7 days after the infusion of the drug, using the Montgomery-Asberg Depression Rating Scale (MADRS). Peripheral blood samples were collected before infusion, 24 hours and 7 days afterwards for measurement of serum BDNF. The study is registered at the UMIN Clinical Trials Registry (ID: UMIN000032355). Results: 53 patients were evaluated, of which 26 received esketamine and 27 racemic ketamine. There was no statistically significant difference between the MADRS score and BDNF levels at all time points comparing the different drugs. We found no correlation between the baseline severity of depression measured through the MADRS scale and initial BDNF levels (?=0.055, p=0.694), as well as for MADRS score and BDNF levels 24 hours and 7 days after the treatment. Also, there were no significant changes on BDNF levels comparing baseline to 24 hours post-infusion (t=0.630, p=0.532), baseline to 7 days post-infusion (t=-0.098, p=0.922) and 24 hours to 7 days (t=-0.958, p=0.343). A fixed-effect longitudinal regression model attested the absence of effect of BDNF levels at different time points or intervention groups as predictors for MADRS scores. Conclusion: In this study, we did not observe impacts of the treatment – neither with racemic ketamine nor with esketamine – on the serum levels of BDNF, despite the therapeutic response. These findings suggest that serum BDNF may not be a good biomarker for the antidepressant effect of ketamine. Furthermore, measuring BDNF in serum instead of plasma might possibly influence the results, since the platelet pool of BDNF released in serum during clotting could mask possible acute variations of this neurotrophin. This study was supported by the Programa de Pesquisa para o SUS (PPSUS/BA, research grant number 003/2017).

No. 3

Previous Dissociation Predicts Intrainfusional Dissociation by Ketamine and Esketamine in Treatment-Resistant Depression

Poster Presenter: Rodrigo Mello
Co-Authors: Ana Paula De Jesus Nunes, Acioly Lacerda, Mariana Echegaray, Gustavo Leal, Fernanda Correia-Melo, Lucas Quarantini, Guilherme Magnavita

SUMMARY:

Background: Ketamine and its S(+)-enantiomer esketamine are dissociative anesthetics nowadays

used for treatment of depression disorder. Dissociative symptoms are common side effects associated with ketamine use in depression and prominent dissociation is a reported cause for patient withdrawal from studies. We investigated whether previous dissociative symptoms predict intrainfusional dissociation caused by ketamine and esketamine. Methods and Design: This study is part of a larger randomized controlled double-blind non-inferiority trial. A total of 63 adults individuals diagnosed with TRD were randomly assigned to a single intravenous infusion lasting 40 minutes of either the two drugs: esketamine 0.25mg/kg or ketamine 0.5mg/kg. 34 participants received esketamine and 29 received ketamine. We assessed previous dissociative experiences with the Dissociative Experience Scale (DES), measured before drug administration. To evaluate dissociative symptom intensity during the infusion, we applied the 23-item Clinician-Administered Dissociative States Scale (CADSS). Assessment with CADSS was initiated 20 minutes after the beginning of the infusion. This trial has been registered in the Japan Primary Registries Network (JPRN)/ World Health Organization (WHO): UMIN000032355. Results: The mean DES score for the esketamine group was 70.2 points (SD: 53.9) and for the ketamine group was 60.6 (SD: 52.4). The mean CADSS score for the esketamine group was 14.9 (SD: 16.2) similar to the mean of the ketamine group 18.0 (SD: 16.1). Each 10 points increment in the DES was associated with a 7.71% increase in the CADSS in an exponential fashion (R-squared 0.24). Even in patients with high CADSS score, the dissociative symptoms were not considered serious adverse effects, and there was no need to stop the infusion. Conclusions: A positive and exponential relation was found between prior dissociation and intrainfusional dissociation values after infusion of both drugs. Although the levels of prior dissociative symptoms found in both groups in this study were as high as those found in populations with dissociative disorders, intrainfusional dissociation levels were well tolerated and similar to those found in previous studies. Thus, high rates of prior dissociative symptoms may not be a contraindication for the use of both drugs to treat TRD. This project was supported by the Programa de Pesquisa para o SUS – PPSUS/BA – research grant number 003/2017.

No. 4

Gender-Specific Association Between Types of Childhood Abuse and Major Depressive Disorder: A Cross-Sectional Study

Poster Presenter: Jia Zhou

SUMMARY:

Background: Prevalence of depression has been found to be nearly twice as prevalent in women as in men. but explanations of the sex differences in depression remain inconclusive. Gender differences in the effects of childhood abuse maybe partially account for females' greater vulnerability to depression. This study aims to examine the gender-specific association between different types of childhood abuse and major depressive disorder. Methods: This is a cross-sectional study recruited 227 patients diagnosed with major depressive disorder (MDD) and 221 healthy controls. The self-report Childhood Trauma Questionnaire (CTQ) was completed by each participants for the assessment of emotional, physical and sexual abuse as well as emotional and physical neglect. Logistic regression models were used to analyses the association between forms of childhood abuse and MDD. Likelihood ratio tests was used to determine the interaction effects of gender. As such effects are extremely difficult to detect, a more liberal P value of 0.10 was employed for the interaction tests. Results: Emotional abuse/ neglect and physical abuse/ neglect were more common in patients than controls and reached statistically significant level($p<0.01$), even when adjusted for age, smoking or alcohol drinking history, family history of mental illness in first-degree relatives (FMDR), gender. A likelihood ratio test of the difference in odds ratios between the genders indicated an interaction with reports of physical abuse/ neglect (OR_Female=2.398 OR_Male=1.619 ?2=6.748, P=0.009) and emotional abuse/ neglect (OR_Female=2.780 OR_Male=4.800 ?2 =3.739, P = 0.053). No evidence of the interaction between genders and sexual abuse was found according to the result of a likelihood ratio test (?2=0.363, P=0.547). Conclusions: Men reporting emotional abuse/ neglect are more likely to suffer major depression in adulthood than women. Women reporting physical abuse/ neglect are more likely to

suffer major depression in adulthood than men.
Keywords: Childhood abuse/ neglect, Depression, Gender

No. 5

Associations Among Depressive Symptoms, Childhood Abuse, Neuroticism, Social Support, and Coping Style

Poster Presenter: Jia Zhou

SUMMARY:

Background: Childhood abuse has been identified as a salient risk factor for the severity of depressive symptoms. However, there is a long time interval between childhood abuse and adult depressive symptoms. It is assumed that there are various mediating factors that affect symptom development and severity after abuse exposure. This study aims to investigate how childhood abuse, neuroticism, social support, and coping style interact with one another and affect depressive symptoms in the population covering general adults, depressed patients, bipolar disorder patients, and high risk population for depression. Methods: This is a cross-sectional study. Five validated questionnaires were used to measure the psychological outcomes (Childhood Trauma Questionnaire CTQ-SF, Eysenck Personality Questionnaire EPQR-S, Simplified Coping Style Questionnaire SCSQ, and Patient Health Questionnaire-9 PHQ-9) in 312 subjects in tertiary hospitals. Structural equation modeling (AMOS17.0) and multiple regressions were used to analyze the data. Results: Multiple regression analysis and structural equation modeling showed that emotional abuse, neuroticism, active coping, use of social support, and gender predicted the PHQ-9 summary score significantly. A good fit of the structural equation model was obtained with GFI=0.944. The effect of emotional abuse on the PHQ-9 summary score was indirectly and significantly mediated by neuroticism, active coping, use of social support (standardized indirect path coefficient=0.208, P=0.001). The effect of the EPQR-S neuroticism score on the PHQ-9 summary score was indirectly and significantly mediated by use of social support and active coping (standardized indirect path coefficient=0.065, P=0.002). The effect of use of social support on the PHQ-9 summary score was indirectly and significantly mediated by active coping score (standardized indirect path coefficient=0.086, P=0.002). The squared multiple correlation coefficient for the PHQ-9 summary score was 0.456, indicating that this model explains 45.6% of the variability in PHQ-9 score. Conclusions: This study suggested that childhood emotional abuse, neuroticism, use of social support, and active coping style directly and indirectly predicted the severity of depressive symptoms. Neuroticism, social support, and coping style are the mediating factors for the effect of childhood abuse on adulthood depressive symptoms.

No. 6

Effectiveness of Mirtazapine as Add-on Versus Paroxetine or Mirtazapine Monotherapy in MDD Patients Without Early Improvement in the First Two Weeks

Poster Presenter: Le Xiao, M.D.

SUMMARY:

Background Some evidence suggests that treatment response can be predicted with high sensitivity after 2 weeks of antidepressant treatment in patients with major depressive disorder (MDD), which indicates that changes in treatment strategy should be considered earlier than the conventional 6-8 weeks. This study aimed to examine the efficacy of combining paroxetine and mirtazapine vs switching to mirtazapine for patients with MDD who have had an insufficient response to SSRI monotherapy (paroxetine) after the first 2 weeks of treatment. Methods This double-blind, randomized, placebo-controlled, 3 arm study recruited participants from 5 psychiatric hospitals in China. Eligible participants were aged 18-60 years with MDD of at least moderate severity, which was defined as a Hamilton Rating Scale for Depression 17-item (HAMD-17) score = 20. Participants received paroxetine during a 2-week open label phase and patients who had not achieved early improvement (=20% HAMD-17 score reduction at week 2) were randomized to double-blind paroxetine, mirtazapine or paroxetine combined with mirtazpine for 6 weeks. The primary outcome was the change of HAMD-17 scores 6 weeks after randomization, and data was analyzed based on intention to treat. This study was prospectively registered in ClinicalTrials.gov (Identifier: NCT01458626). Results: Between

November 2012 and August 2016, a total of 525 participants with major depressive disorder were recruited and treated with paroxetine monotherapy for 2 weeks. 204 patients without early improvement were randomly assigned (68 to mirtazapine and placebo, 68 to paroxetine and placebo, 68 to mirtazapine and paroxetine), with 164 patients completing the outcome assessment. At week 8, the change of HAMD-17 score did not significantly differ among 3 groups (mirtazapine: 13.65 ±7.50, paroxetine: 12.24±7.32, mirtazapine plus paroxetine: 12.82±6.63, p=0.5143), Consistent with primary analysis, the proportion of patients who had a response (mirtazapine plus paroxetine: 70.6%, paroxetine: 63.2%, mirtazapine: 73.5%) and remission (mirtazapine plus paroxetine: 50.0%, paroxetine: 47.1%, mirtazapine: 55.9%) at week 8 did not differ among 3 treatment groups. During the trial, 29 (42.6%) of 68 participants in the mirtazapine group, 15 (22.1%) of 68 participants in the paroxetine group and 29 (42.6%) of 68 participants in the mirtazapine plus paroxetine group had at least one adverse events. 2 serious adverse events were reported but none of which were related to the drugs. Conclusion Paroxetine monotherapy, mirtazapine monotherapy and paroxetine/mirtazation combination treatment were equally effective in the non-improvers after 2-week paroxetine monotherapy. The results of this trial do not support a recommendation to routinely offering additional treatment or switching treatment strategies to major depressive patients without early improvement after 2 weeks initial antidepressant treatment.

No. 7

Effect of Ketamine and Esketamine in Suicidal Ideation: Relationship to Depression

Poster Presenter: Lucas Quarantini
Lead Author: Flávia Vieira
Co-Authors: Acioly Lacerda, Manuela Telles, Roberta Marback, Felipe Argolo, Fernanda Correia-Melo, Ana Paula De Jesus Nunes, Gustavo Leal, Rodrigo Mello

SUMMARY:

Background: Suicide is a major public health problem and one of the leading causes of death worldwide. Previous studies have suggested that ketamine (in its different forms), a glutamatergic N-methyl-D-aspartate (NMDA) receptor antagonist, has been associated with a rapid reduction in suicidal ideation. However, the participation of depressive symptoms in the reduction of suicidality by ketamine is still not clear. This study aimed to assess whether the effect of ketamine and esketamine in suicidal ideation occurs independently of the improvement of non-suicidal depressive symptoms in individuals with treatment-resistant depression (TRD). Methods and Design: This study is part of a larger non-inferiority, bicentric, randomized, controlled, double-blind clinical trial conducted in Brazil. Adults participants diagnosed with TRD were randomly assigned under double-blind conditions to receive a single subanesthesic infusion of esketamine (0.25mg/kg) or ketamine (0.5mg/kg), both administered intravenously over 40 minutes, and assessed at baseline, 24h, 48h and 7 days post-infusion. Depressive symptoms, including suicidality, were assessed using the Montgomery-Åsberg Depression Rating Scale (MADRS). We tested quantitative temporal diferences among time points, controlling for items 1 to 9 of MADRS, number of previous suicide attempts and two interventions, through a linear mixed effects model. This trial is registered in the JPRN (UMIN000032355). Results: Our sample consisted of 55 participants. Patients from the ketamine and esketamine groups had a mean initial MADRS suicide item score of 2.00 +/- 1.13 and 2.03 +/- 1.52, respectively. Participants had improvement in MADRS suicide item at 24h, 72h and 7 days post-infusion in both drugs, when compared with baseline, even controlling for non-suicidal depressive symptoms (non-suicidal items of MADRS) and number of previous attempts. The relationships were similar in both interventions (ketamine e esketamine). The highest reduction of the MADRS suicide item occurred in the interval between baseline and 24h after medication. The reduction of the score of the MADRS suicide item persisted at the other time points. There was also a positive correlation between reduction of suicidal ideation and reduction of depression (non-suicidal items of MADRS). For each 1 point of variation of non-suicidal MADRS, there was an increase of 0.12 in suicidal MADRS. Conclusions: The results of this study suggest that there was a significant reduction of suicidal ideation over time. There was an association between improvement of suicidal ideation and non-

suicidal depressive symptoms, but this does not completely explain the improvement in suicidal ideation after ketamine and esketamine infusions. This project was supported by the Programa de Pesquisa para o SUS (PPSUS) - 003/2017.

No. 8

Exploring Comorbidity of Borderline Personality Disorder and Major Depressive Disorder as a Predictor of Length of Stay in an Inpatient Population

Poster Presenter: Ana Ruiz, B.S.
Co-Authors: Brandi Karnes, M.D., Haitham Salem, M.D., Ph.D., Madeline E. Gabe, Tyler S. Kimm, M.D., Sarah Hernandez, B.S., Scott Lane, Ph.D., Teresa Pigott, M.D.

SUMMARY:

Background: The presence of Borderline Personality Disorder (BPD) is often underrecognized because of its comorbidity with mood, anxiety, or substance use disorders [1-2]. The use of self-administered questionnaires to assess the presence of BPD could aid in the early detection of the disorder and predict mental health outcomes. Methods: The electronic medical records of 173 patients admitted to an acute psychiatric hospital between September 2011 and May 2018 were retrospectively analyzed. The patients were admitted with a primary diagnosis of Major Depressive Disorder (MDD) by DSM-IV-TR criteria and were given the Borderline Personality Questionnaire (BPQ) within 24 hours of admission. Univariate, bivariate (Chi-square and t-tests) and multivariate analyses were conducted to examine the potential relationship between MDD, length of stay (LOS) and the BPQ. Demographic co-variates were also investigated including race, gender, age, number of admissions and 30 day readmission rates. Results: Upon admission, 17.34% of the inpatient population (n=173) diagnosed with MDD scored =56 on the BPQ consistent with a diagnosis of BPD with a mean total score of 63.53 ± 5.72. The overall MDD population scored a mean total of 35.63 ± 19.01 (US national mean is 21.06 ± 12.28). Compared to the US sample mean total score for females (20.45 ± 12.28), our female inpatient sample scored a mean total of 32.83 ± 18.29, while our male sample scored a mean total of 38.43 ±1 9.41. Our sample of 50% male and female patients maintained an average LOS of 5.99, while inpatients who scored = 56 on the BPQ (60% male and 40% female) had an average LOS of 6.46. Of the sample that met criteria for BPD, 60% were White, 33.33% were Black and 6.67% were Hispanic reflecting the total sample race which consisted of approximately 60% White, 32% Black and 7% Hispanic patients. A majority (approximately 53%) of our sample population were made up of ages 18 to 40, with 33.14% between ages 18 and 30. The regression analysis revealed that patients with MDD who scored higher on the BPQ tended to have longer LOS (B= 0.035, p=.036). Additionally, the subscales Abandonment (B= 0.19, p=0.058), Relationship (B= 0.275, p=0.051), Self-Image (B= 0.334, p=0.004) and Emptiness (B= 0.332, p=.000) had positive correlations with LOS. Conclusion: These preliminary results suggest that certain mental health outcomes, such as longer LOS, might be predicted for hospitalized patients with comorbid MDD and BPD. Certain BPQ subscales may also be similarly predictive. Limitation: Our study population is confined to only a single inpatient sample reducing the ability to generalize the results to broader samples of those with MDD and BPD. The BPQ also presents its own limitations due to its self-report structure and warrants further validation in this sample. Keywords: Borderline Personality Disorder, Major Depressive Disorder, length of stay

No. 9

Utilization of Health Care Among Perinatal Women in the United States: The Role of Depression

Poster Presenter: Grace Masters
Co-Author: Nancy Byatt, D.O., M.B.A., M.S.

SUMMARY:

Purpose Individuals with depression have increased healthcare utilization. This has not been studied in perinatal women, despite that depression occurs 1 in 7 perinatal women. We examined patterns of healthcare utilization in women with symptoms of perinatal depression, expecting more frequent use of acute services while being less likely to have routine care. Methods We identified 1,103 perinatal women using the National Health and Nutrition Examination Survey (NHANES) database from 2005-2016 and used survey weighting data for analyses, making results representative of the US population. The Patient Health Questionnaire (PHQ-9) was used

to identify depression (score =10). Associations between perinatal depressive symptoms and healthcare utilization were examined and additive interaction was evaluated from multivariable models. Additive interaction was evaluated by estimating relative excess risk due to interaction (RERI) from multivariable models. Results In the US, 7.3% of perinatal women had depression symptoms. Relative to those without, women experiencing depression symptoms were younger, unmarried, less educated, more impoverished, and uninsured (p<0.05). Women with depression symptoms had twice the odds of being without routine care (21.6% v. 12.5%, adjusted odds ratio (aOR): 2.1, 95% Confidence Interval (CI): 1.1-4.1) and of using urgent care more frequently (26.5% v. 15.1%, aOR: 1.9, 95% CI: 1.0-3.9). Depressive symptoms combined with lack of insurance exacerbated the odds of not having routine care (RERI: 8.4, 95% CI: -0.5-17.3) and more frequent use of urgent care (RERI: 7.1, 95% CI: -2.7-17.0). Conclusions Perinatal depression is a prevalent, high-risk disease and often requires more healthcare services. Approaches that facilitate establishing a place for routine care, with the goal of also decreasing acute care use, are necessary.
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No. 10

Effects of Desvenlafaxine Versus Placebo on MDD Symptom Clusters: A Pooled Analysis

Poster Presenter: Martin A. Katzman, M.D.

SUMMARY:

Background: Major depressive disorder (MDD) is characterized by the presence of =5 of 9 specific symptoms that contribute to clinically significant functional impairment. Given the number of possible symptoms, and the resulting patient heterogeneity, monitoring specific symptom clusters becomes useful in measurement-based care of patients with MDD. This analysis examined the effect of desvenlafaxine (50 or 100 mg) vs placebo on HAM-D and MADRS symptom clusters and the association between early improvement in symptom clusters and remission at week 8. Methods: Data were pooled from 9 double-blind, placebo-controlled studies of desvenlafaxine for the treatment of MDD in which patients were randomly assigned to receive placebo or a fixed dose of desvenlafaxine (10 mg/d-400 mg/d). Early improvement in symptom clusters (HAM-D clusters: Maier, Retardation, Sleep, Anxiety/Somatization, and HAM-D6; MADRS clusters: Dysphoria, Retardation, Vegetative, Anhedonia, and MADRS6) was defined as =20% improvement from baseline at week 2. Remission at week 8/LOCF was defined as (1) HAM-D17 total score =7; (2) MADRS total score =10; (3) SDS total score <7; (4) HAM-D17 total score =7 and SDS total score <7; or (5) MADRS total score =10 and SDS total score <7. The treatment effect on change from baseline in HAM-D and MADRS cluster scores at week 8/LOCF was analyzed using analysis of covariance. The association between early improvement in symptom clusters and remission rate at week 8 was assessed for each definition of remission using logistic regression. Results: The analysis included 4317 patients from 9 studies (desvenlafaxine 50 mg, n=1727; desvenlafaxine 100 mg, n=883; and placebo, n=1707). Desvenlafaxine was associated with significant improvement from baseline at week 8/LOCF compared with placebo for all HAM-D and MADRS symptom clusters (all P<0.001), except the HAM-D Sleep cluster for desvenlafaxine 100 mg. For all symptom clusters, early improvement was significantly associated with achievement of all definitions of remission at week 8/LOCF for all treatment groups (all P=0.0254). For patients with early improvement in HAM-D symptom clusters, those treated with desvenlafaxine 50 mg or 100 mg vs placebo had significantly higher rates of HAM-D remission and SDS remission at week 8/LOCF (P=0.0384), except SDS remission in patients treated with desvenlafaxine 100 mg with early Maier or HAM-D6 cluster improvement. Among those without early improvement, separation from placebo was observed in fewer symptom clusters. Results based on MADRS symptom clusters were similar. Conclusion: Early improvement in symptom clusters significantly predicts symptomatic or functional remission at week 8/LOCF in MDD patients receiving desvenlafaxine (50 or 100 mg) or placebo. Importantly, patients without early improvement were less likely to remit, suggesting that monitoring

specific symptom cluster scores can help guide treatment decisions for individual patients.

No. 11

Empowerment and Stigma as Mediator Variables Between Illness Severity and Quality of Life of Patients With Affective Disorders

Poster Presenter: Karel Joachim Frasch, M.D.

SUMMARY: Objective: The investigation of moderating or mediating effects of empowerment and stigmatization on the association between depressive symptoms and subjective quality of life in patients with affective disorders. Method: Depressive Symptoms (BDI-II), internalized and perceived stigmatization (ISMI; PDDQ), empowerment (EPAS) and subjective quality of life (WHOQOL-BREF) were assessed in 37 patients with affective disorders (F31-F33; ICD-10), age 18+ in inpatient, day hospital and outpatient psychiatric treatment. Data analyses were conducted by means of path-analysis. Results: Empowerment and in low proportion internalized and perceived stigma turned out to be mediating variables between the severity of depression and subjective quality of life. 57% of the variance of the subjective quality of life could be explained by the path model. Conclusion: Empowerment has meaningful influence mediating between depression and subjective quality of life. In order to improve the quality of life of patients with an affective disorder, strategies for increasing empowerment are to be integrated into treatment.

No. 12

Cognitive Function of Patients With Treatment-Resistant Depression After a Single Low Dose of Ketamine Infusion

Poster Presenter: Muhong Chen

SUMMARY:

Background: Clinical and animal studies have reported conflicting results regarding the effect of ketamine on cognitive function, although increasing evidence supports a rapid and sustained antidepressant effect of a subanesthetic dose of ketamine infusion for patients with treatment-resistant depression (TRD). However, the cognitive function before and after ketamine infusion was rarely investigated in patients with TRD. Methods: A total of 71 adult patients with TRD were enrolled and randomized to 0.5-mg/kg ketamine, 0.2-mg/kg ketamine, or normal saline infusion groups. Depressive symptoms were measured using the Hamilton Depression Rating Scale at baseline and at different time points post ketamine infusion. Cognitive function was evaluated using working memory and go/no-go tasks at baseline, Day 3, and Day 14 post ketamine infusion. Results: A single low dose of ketamine infusion did not impair the cognitive function of patients with TRD. The paired t test revealed that patients with TRD receiving 0.5 mg/kg of ketamine infusion exhibited a slight improvement in sustained attention and response control measured using the go/no-go task at Day 14 post ketamine infusion. A significant association was also observed between depressive symptoms and cognitive function changes at Day 3 in the 0.5-mg/kg ketamine infusion group. Discussion: A 0.5 mg/kg dose of ketamine infusion was not harmful, but slightly beneficial, for the cognitive function of patients with TRD. Additional studies are necessary to elucidate the effects of repeated ketamine infusion on cognitive function.

No. 13

Persistent Antidepressant Effect of Ketamine Infusion and Activation in the Supplementary Motor Area and Anterior Cingulate Cortex

Poster Presenter: Muhong Chen

SUMMARY:

Background: A single low-dose ketamine infusion exhibited a rapid antidepressant effect within 1 hour. Despite its short biological half-life (approximately 3 hours), the antidepressant effect of ketamine has been demonstrated to persist for several days. However, changes in brain function responsible for the persistent antidepressant effect of a single low-dose ketamine infusion remain unclear. Methods: Twenty-four patients with treatment-resistant depression (TRD) were randomized into three groups according to the treatment received: 0.5 mg/kg ketamine, 0.2 mg/kg ketamine, and normal saline infusion. Standardized uptake values (SUVs) of glucose metabolism measured through 18F-FDG positron-emission-tomography before infusion and 1 day after a 40-min ketamine or normal saline infusion were used for

subsequent whole-brain voxel-wise analysis and were correlated with depressive symptoms, as defined using the Hamilton Depression Rating Scale-17 (HDRS-17) score. Results: The voxel-wise analysis revealed that patients with TRD receiving the 0.5 mg/kg ketamine infusion had significantly higher SUVs (corrected for family-wise errors, P?= 0.014) in the supplementary motor area (SMA) and dorsal anterior cingulate cortex (dACC) than did those receiving the 0.2 mg/kg ketamine infusion. The increase in the SUV in the dACC was negatively correlated with depressive symptoms at 1 day after ketamine infusion. Discussion: The persistent antidepressant effect of a 0.5 mg/kg ketamine infusion may be mediated by increased activation in the SMA and dACC. The higher increase in dACC activation was related to the reduction in depressive symptoms after ketamine infusion. A 0.5 mg/kg ketamine infusion facilitated the glutamatergic neurotransmission in the SMA and dACC, which may be responsible for the persistent antidepressant effect of ketamine much beyond its half-life.

No. 14

Depressive Disorder in Ring Chromosome 22: A Case Report

Poster Presenter: Ruchi Vikas
Lead Author: Benjamin DeLucia

SUMMARY:
Ring chromosome 22 [r(22)] is a rare chromosomal anomaly which commonly features developmental disorder and behavioral disturbances for which use of psychotropic agents have been reported in addition to sparsely diagnosed cases of mood disorders. Methods: Case report and PUBMED literature review of Ring Chromosome 22 including published psychiatric assessments and treatments in this disorder. Results: A 23 year old Caucasian male with r(22), confirmed by genetic testing, developed a major depressive episode with emergence of an uncharacteristic behavioral disturbance. Discussion: Prior literature has included autism spectrum diagnoses as well as select cases that cite psychopharmacological treatment for behavioral symptoms along with the few limited instances of diagnoses of mood disorders in r(22). Conclusion: The presented case describes a major depressive episode in a patient with r(22) as well as effective use of aripiprazole for antidepressant augmentation concurrent with targeting acute behavioral symptoms in the inpatient setting, highlighting a unique clinical scenario and treatment modality in this rare patient class.

No. 15

Optimizing First- and Second-Line Treatment Strategies for Untreated Major Depressive Disorder—the SUND Study: A Pragmatic Randomized Trial

Poster Presenter: Toshiaki A. Furukawa, M.D., Ph.D.

SUMMARY:
BACKGROUND: Every year several million people begin new antidepressant therapy for their depression. Guidelines recommend titrating antidepressant dosage up to the maximum of the licensed range if tolerated. Within several weeks, however, more than half of these patients do not achieve remission. Guideline recommendations for such patients include augmentation with or switching to another agent. The relative merits of these strategies remain unestablished. METHODS: This multi-center, open-label, assessor-blinded, pragmatic trial involved two randomizations. In Step 1, clinics managing patients with hitherto untreated major depression were randomized to offer sertraline titrated up to 50 mg/day or up to 100 mg/day by week 3. In Step 2, patients who did not remit after three weeks of treatment were randomized to continue sertraline, to add mirtazapine, or to switch to mirtazapine. The primary outcome was depression severity measured with the Patient Health Questionnaire-9 (PHQ-9) (scores between 0 and 27; higher scores, greater depression) at week 9. We applied mixed model repeated measures analysis adjusted for baseline covariates. The continuation treatment after week 9 was at clinicians' discretion, with a final assessment at week 25. This study is registered with ClinicalTrials.gov, number NCT01109693. RESULTS: We screened 56,261 patients, found 7,895 patients with untreated unipolar major depression, and finally included 2,011 eligible participants at 48 clinics in Japan. In Step 1, 2,011 patients randomized, 1,953 (97.1%), 1,927 (95.8%) and 1,910 (95.0%) participants were successfully followed up at weeks 3, 9 and 25, respectively. In the 50 mg/day

arm, 92.2% had reached 50 mg/day by week 3; in the 100 mg/day arm, 82.0% had reached 100 mg/day. At week 9 the 100 mg/day arm had 0.25 (95% confidence interval, -0.58 to 1.07) points higher PHQ-9 scores than the 50 mg/day arm. Other outcomes proved similar in the two groups through 25 weeks. In Step 2, of 1,647 patients randomized, 1,614 (98.0%) underwent assessment at week 9. Strategies to augment sertraline with mirtazapine (adjusted difference in PHQ-9 at week 9, -1.07, 95% confidence interval [CI], -1.75 to -0.38, P=0.004) or to switch to mirtazapine (difference -1.05, 95% CI, -1.73 to -0.37, P=0.004), were more effective than continuing sertraline. The augmentation increased the percentage of patients who achieved remission by 12.2% (6.0% to 18.9%) and the switching strategy by 8.1% (2.3% to 14.5%), over the continuation strategy. None of these differences persisted at week 25. There were no differences among the three strategies in adverse effects. CONCLUSIONS: In patients with new onset depression, we found no advantage of titrating sertraline to the maximum over the minimum licensed dosage. Patients unremitted by week 3 gained small but important reductions in depressive symptoms at week 9 by switching sertraline to mirtazapine or adding mirtazapine.

No. 16

Toward Precision Psychiatry for Major Depression: An Umbrella Review of Psychosocial Factors in Treatment Resistance

Poster Presenter: Austin Lemke, M.A.
Co-Authors: Dan Barnhart, M.A., Vitaliy Voytenko, Psy.D.

SUMMARY:

Background: Approximately one third of patients who receive evidence-based care for major depression do not sufficiently improve even after multiple treatment trials and so meet the criteria for treatment-resistant depression (TRD). There are many plausible causes for TRD, including undiagnosed/under-treated comorbid physical illness and substance abuse, pharmacogenetic and pharmacometabolomic variations, and other biological and psychosocial factors. The vast majority of published studies and current research efforts in TRD in psychiatry have focused almost exclusively on the biological domain (e.g. biomarkers, somatic therapies, etc.) of the gold-standard biopsychosocial model. Nevertheless, a growing body of literature has explored the possible role of non-biological factors, including sociodemographic and clinical predictors of non-response/non-remission and psychosocial risk factors for treatment resistance in major depression. The present study synthesizes the available body of knowledge on this topic by utilizing the umbrella review methodology. This type of evidence synthesis only includes the highest level of evidence available, that is, systematic literature reviews and meta-analyses. Methods: We systematically searched the PubMed, PsycINFO, and Cochrane Reviews databases and gray literature for English-language peer-reviewed systematic reviews and meta-analyses addressing sociodemographic, psychosocial and non-biological clinical factors in non-response/non-remission in major depression. Two authors independently conducted the screening, quality assessment, and data extraction, and resolved discrepancies through consensus. Results: The initial search resulted in 227 articles. After removing duplicates and screening by title, abstract, and full text, a total of 3 articles were included in the umbrella review. The methodological quality of the included articles ranged from High to Low. Comorbid anxiety as a clinical factor associated with treatment resistance in major depression had the strongest available research evidence, as supported by two systematic literature reviews. In addition, a meta-analysis included in the umbrella review revealed that adult patients with a history of childhood maltreatment were almost twice as likely (OR=1.90, 95% CI 1.05-3.46) not to respond to depression treatment than individuals without such a history. The findings related to other factors, such as the patient's age, duration of depressive episode, and comorbid personality disorders, were mixed. Conclusion: The present umbrella review identifies common psychosocial factors associated with TRD. Precision psychiatry for major depression which "takes into account each person's variability in genes, environment, and lifestyle" requires a truly bio-psycho-social approach to TRD research and treatment. More original studies investigating the role of psychosocial factors in non-response to evidence-based treatments for depression are urgently needed.

No. 17

Framing CBT Using Video Games: A 'Rocket League' Based Therapy

Poster Presenter: Daniel J. Olson, M.D.

SUMMARY:

Rapport can be difficult to build with a depressed adolescent whom has little interest in engaging in typical CBT approaches. Fortunately, many young patients have an intense interest in video games and this can be used to our advantage as clinicians. Many popular video games are built on a tiered structure, where one advances in the game and gains "rank" as skills increase. This process is directly analogous to therapy and can be used to establish rapport and communicate in ways with young patients that increases their successes in therapy. This poster provides one such example of a 28 year-old patient with major depression whom struggled with a straightforward CBT approach but flourished with therapy framed through the lens of the video game "Rocket League" (a game where participants drive race-cars and play soccer with an enormous ball. Other video games and approaches will be mentioned for others to be better able to connect with their young patients in order to build rapport, trust, and have fun in therapy with their patients.

No. 18

Aripiprazole Monotherapy Induces Psychotic Symptoms in a Treatment-Resistant Depressed Patient: A Case Report

Poster Presenter: Courtney Liebling, M.D.

SUMMARY:

Nearly one-third of patients diagnosed with major depressive disorder (MDD) do not respond to standard treatment with antidepressants (1). Furthermore, comorbid anxiety disorders have been found to be predictors of lower rates of response to typical antidepressants (2). Aripiprazole, a second generation antipsychotic, has demonstrated clinical efficacy in the treatment of MDD and anxiety disorders that have not responded to existing antidepressants (3). Whereas cases demonstrating worsening psychosis after aripiprazole administrated to patients with underlying psychotic diseases have been reported (4, 5, 6), cases of patients without a history of psychosis have not been described in the literature. This study focuses on one such case in which aripiprazole, prescribed to a female patient with MDD and anxiety but with no history of psychosis, led to the development of auditory and visual hallucinations approximately 21 days after the initiation of aripiprazole; the symptoms resolved 1 day after the cessation of the antipsychotic medication. The patient had not been prescribed any other medications during the time of the development of the auditory and visual hallucinations. Medical workup including urinalysis, urine toxicology, and head imaging were non-contributory, and other causes of psychosis were ruled out. We speculate that the development of auditory or visual hallucinations after the administration of aripiprazole is likely due to its unique mechanism of action in which this medication acts as a partial agonist at the dopamine D2 receptor (7). In particular, in a hypo-dopaminergic state (such as in depressed or anxious patients with diminished dopaminergic neurotransmission), the administration of aripiprazole can act as an agonist and promote dopaminergic effects, potentially leading to the development of hallucinations. Future studies that demonstrate the utility of neuroimaging techniques to elucidate pre-dopaminergic states in patients with MDD and anxiety are warranted to guide treatment in patients with refractory depressive and anxiety illnesses prior to aripiprazole administration.

No. 19

Relief From Two Courses of Intravenous Ketamine in a Patient With Medication- and Transcranial Magnetic Stimulation-Resistant Bipolar Depression

Poster Presenter: Austen Smith, B.A.
Co-Authors: Subhdeep Virk, M.D., Anne-Marie Duchemin, M.D.

SUMMARY:

Mr. B., a 21-year-old Caucasian male with a past psychiatric history of bipolar II disorder, major depressive disorder (MDD), anxiety, attention-deficit/hyperactivity disorder (ADHD), cannabis use disorder, and trichotillomania, presents to outpatient clinic with depressed mood. The patient describes his hypomanic episodes as rare, and he feels that his depressive symptoms are much more

debilitating. These include sadness, anhedonia, mental fogginess, irritability, and occasional passive death wishes. The patient failed multiple psychotropic medication trials, including sertraline, fluoxetine, escitalopram, lamotrigine, risperidone, dexmethylphenidate, amphetamine-dextroamphetamine, lisdexamfetamine, methylphenidate, and guanfacine. He was referred for transcranial magnetic stimulation (TMS) and began an index course of 36 treatments. Early in the course of treatment, the patient reported that his mood improved and that TMS had been helpful; however, several months after initiating treatment with TMS, the patient endorsed increasing anxiety and depression. At this time, interventional psychiatry discussed with the patient the option of ketamine infusions, and the patient consented to treatment. The patient had a score of 38 on the Montgomery-Asberg Depression Scale (MADRS) prior to his first ketamine infusion, which dramatically improved to a score of 11 by the third week of treatment. The patient received twice-weekly ketamine infusions, 0.5 mg/kg over 40 minutes, for six weeks, and then switched to once-weekly infusions for an additional three weeks. The patient completed his course of ketamine with improvement in mood and resolution of suicidal thoughts. The patient endorsed a MADRS of 6 at this time and denied adverse effects from the ketamine treatment. Several months after completing his first course of intravenous ketamine, the patient deteriorated with marked depression and social withdrawal. Desiring improved symptoms, the patient expressed interest in maintenance ketamine treatments. He resumed ketamine treatments, twice per week, at a dose of 0.5 mg/kg delivered over 60 minutes. The patient had a MADRS of 19 early in the course of treatment. After eight weeks the patient endorsed a MADRS of 3 before his tenth and final infusion. Thus, ketamine infusions may be an efficacious option for treatment-resistant depression (TRD) that is refractory to TMS and may also demonstrate efficacy as a maintenance therapy. With limited data on the serial use of ketamine infusions, such a regimen should be approached with great caution until safety and efficacy data are available on longer-term use of ketamine infusions. Further investigation is needed regarding the safety of long-term ketamine use in a controlled clinical setting.

No. 20

Low-Dose Naltrexone in Treating Fibromyalgia and Major Depressive Disorder

Poster Presenter: Jeeha Park
Co-Author: Rachael Murphy

SUMMARY:
Low-dose naltrexone (LDN) can modulate CNS microglial cells and is being used as an experimental treatment to reduce inflammatory autoimmune processes in a number of diseases, including fibromyalgia. Additionally, LDN has been shown to demonstrate antidepressant effects by enhancing dopaminergic signaling. These mechanism suggests LDN as a possible concurrent treatment of both fibromyalgia and associated major depressive disorder. Fibromyalgia is considered a chronic disorder of central nervous system pain regulation. It is an inflammatory rheumatic disease that presents as widespread musculoskeletal pain and stiffness. Fibromyalgia does not have a clear pathogenesis and consequently does not have a targeted treatment. Chronic pain and major depressive disorder are often diagnosed simultaneously; 40-60% of chronic pain patients also have depression and require concurrent treatment. There is no direct cause-and-effect relationship between chronic pain and depression; however, two illness share many biochemical, physical and cognitive symptoms. J.B. is a 32 year old Caucasian female with a past psychiatric history of major depressive disorder, generalized anxiety disorder and panic attacks and medical history of fibromyalgia diagnosed in 2010. Patient has recurring depressive episodes with multiple etiologies including problems with her family and work and post-partum. However, many of the depressive episodes concurred with painful symptoms of her fibromyalgia and “dictated by the pain level.” Patient’s fibromyalgia and major depressive disorder did not respond to duloxetine. There was significant symptomatic relief of both chronic pain and depression with the initiation of 6mg naltrexone. Patient reported improvements in mood, energy, and concentration from suboptimal level. We discuss the indications of this case and future possibility of using LDN as a treatment option

for patients with concurrent fibromyalgia and major depressive disorder.

No. 21

The Hamilton Depression Rating Scale Measures Side Effects and Thereby Underestimates the True Antidepressant Effect of SSRIs and SNRIs

Poster Presenter: Soren D. Ostergaard, M.D., Ph.D.

SUMMARY:

Background: Previous studies have shown poor efficacy of selective serotonin reuptake inhibitors (SSRIs) with respect to certain items of the 17-item Hamilton Depression Rating Scale (HDRS-17). The objective of this study was to explore if this outcome may be explained by the HDRS-17 capturing common side effects of the studied drugs. Methods: Data from seven placebo-controlled trials of duloxetine (n = 2,517), some also including an SSRI arm, were pooled in an individual patient-level meta-analysis. Patients were stratified according to whether or not they had reported side effects related to sleep, somatic anxiety, gastrointestinal function, sexual function or weight loss at endpoint. Efficacy was assessed I) on the HDRS-17, II) on the depressed mood item or the core depressive symptoms captured by the unidimensional HDRS-6 subscale, and III) on HDRS-17 items putatively reflecting side effects. Results: When compared to their absence, the presence of side effects as described above was associated with higher sum scores on the HDRS-17 (beta = 1.27 (0.28), p < .0001), but did not affect HDRS-6 (beta = 0.23 (0.17), p = .17) or depressed mood (beta = 0.05 (0.05), p = .26) ratings. Conclusions: The sum rating of HDRS-17 as a measure of antidepressant efficacy is contaminated by the fact that this instrument record common side effects of SNRIs and SSRIs as symptoms of depression. The use of the HDRS-17 sum score as outcome measure in research and in clinical practice thus likely results in a significant underestimation of the efficacy and effectiveness of SSRIs and SNRIs.

No. 22

Association Between Protein Intake and Depression in the United States and South Korea

Poster Presenter: Oh Jihoon

Co-Author: Tae-Suk Kim

SUMMARY: Objective: It is well known that dietary patterns are associated with the development and prevention of many chronic illnesses, such as a coronary heart disease and diabetes. Although the risk for depression appears to be related to daily dietary habits, how the proportion of major macronutrients affects the occurrence of depression remains largely unknown. This study aims to estimate the association between macronutrients (i.e., carbohydrate, protein, fat) and depression through national survey datasets from the United States and South Korea. Method: Prevalence of depression as the proportion of each macronutrient increased by 10% of the daily calorie intake was measured from 60,935 participants from the National Health and Nutrition Examination Survey (NHANES) and 15,700 participants from the South Korea NHANES (K-NHANES) databases. Results: When the proportion of calories intake by protein increased by 10%, the prevalence of depression was significantly reduced both in the United States (Odds Ratio, OR [95% CI], 0.621 [0.530-0.728]) and South Korea (0.703 [0.397-0.994]). An association between carbohydrate intake and the prevalence of depression was seen in the United States (1.194 [1.116-1.277]), but not in South Korea. Fat intake was not significantly associated with depression in either country. Subsequent analysis showed that the low protein intake groups had significantly higher risk for depression than the normal protein intake groups in both the United States (1.648 [1.179-2.304]) and South Korea (3.169 [1.598-6.286]). Conclusions: In the daily diet of macronutrients, the proportion of protein intake is significantly associated with the prevalence of depression in both the United States and South Korea. These associations were more prominent in adults with insufficient protein intake, and the pattern of association between macronutrients and depression in Asian American and South Korean populations were similar.

No. 23

Effects of Early Life Stress on the Development of Depression and Epigenetic Mechanisms of P11 Gene

Poster Presenter: Seon-Gu Kim

SUMMARY: Objective: Early life stress (ELS) increases the risk of depression. Effects of ELS persist throughout adulthood. ELS may be involved in the susceptibility to subsequent stress exposure during adulthood. We investigated whether epigenetic mechanisms of p11 gene promoter affect the vulnerability to chronic unpredictable stress (CUS) induced by the maternal separation (MS). Material and methods: Mice pups were separated from their dams (3 h/day from P1-P21). When the pups reached adulthood (8 weeks old), we applied CUS (daily for 3 weeks). The levels of hippocampal p11 expression were analyzed by quantitative real-time PCR. The levels of acetylated (H3ace) and methylated (H3K4met3 and H3K 27met3) histone H3 at the promoter of p11 were measured by chromatin immunoprecipitation followed by real-time PCR. Depression-like behavior was measured by the forced swimming test (FST). Results: The MS and CUS group exhibited significant decreases in p11 mRNA level and the MS plus CUS group had a greater reduction in this level than CUS group alone. The MS plus CUS group also resulted in greater reduction in H3 acetylation at p11 promoter than CUS group alone. This hypoacetylation was associated with an upregulation of histone deacetylase (HDAC) 5. Additionally, the MS plus CUS group showed a greater decrease in H3Kmet3 level and a greater increase in H3K27met3 level than CUS group alone. Consistent with the reduction of p11 expression, MS plus CUS group displayed longer immobility times in the FST compared to control group. Conclusion: Mice exposed to MS followed by CUS had much greater epigenetic alterations in the hippocampus compared to adult mice that only experienced CUS. Our results suggest that ELS can exacerbate the effect of stress exposure during adulthood through histone modification of p11 gene promoter.

No. 24

Adherence Predictors in an Internet-Based Intervention Program for Depression

Poster Presenter: Margalida Gili
Co-Authors: Miguel Angel Roca Bennasar, M.D., Azucena Garcia-Palacios, Javier García-Campayo, Rosa Maria Banos, Cristina Botella, Mauro Garcia-Toro, María Ángeles Pérez-Ara, Andrea Seguí, Adoracion Castro Gracia

SUMMARY: Objective: To analyze predictors of adherence in a primary care Internet-based intervention for depression Background and aims: Internet-delivered psychotherapy has been demonstrated to be effective in the treatment of depression. Nevertheless the study of the adherence in this type of the treatment reported divergent results. The main objective of this study is to analyze predictors of adherence in a primary care Internet-based intervention for depression in Spain. Materials and methods: A multi-center, three arm, parallel, randomized controlled trial was conducted with 194 depressive patients, who were allocated in self-guided or supported-guided intervention. Sociodemographic and clinical characteristics were assessed using a case report form. The Mini International Neuropsychiatric Interview (MINI) diagnoses major depression. Beck Depression Inventory was used to evaluate depression severity. The visual analogic scale assesses the respondent's self-rated health and Short Form Health Survey was used to measure the health-related quality of life. Results: Age results a predictor adherence for both intervention groups (with and without therapist support). Perceived health is a negative adherence predictor for the self-guided intervention when change in depression severity was included in the model. Change in depression severity results a predictor of adherence in the support-guided intervention. Conclusions: In our sample there are specific adherence predictors in each intervention condition of this Internet based program for depression (self-guided and support-guided). It is important to point that further research in this area is essential to improve tailored interventions and to know specific patients groups can benefit from these interventions.

No. 25
WITHDRAWN

No. 26

Brexanolone Injection, a GABA-a Receptor Modulator, in Postpartum Depression: Integrated Analysis of Multiple Depression Measures

Poster Presenter: Samantha E. Meltzer-Brody, M.D., M.P.H.
Co-Authors: Helen Colquhoun, Robert Alan Riesenberg, M.D., C. Neill Epperson, Kristina M.

Deligiannidis, M.D., David Russell Rubinow, M.D., Haihong Li, Christine Clemson, Stephen J. Kanes, M.D., Ph.D.

SUMMARY:
Background: Postpartum depression (PPD) is the most common complication of childbirth, with prevalence estimates of mothers in the United States ranging from 8-20% by state, with an overall average of 11.5%. Brexanolone injection (BRX), an investigational, proprietary intravenous formulation of the GABA-A receptor positive allosteric modulator allopregnanolone, was evaluated in three pivotal trials in women with PPD. An umbrella protocol facilitated a pre-planned analysis of multiple measures of depressive symptoms in an integrated dataset of all three trials. Methods: Women ages 18-45, =6 months postpartum, with a diagnosis of PPD and a qualifying Hamilton Rating Scale for Depression total score (Study A: NCT02614547, HAM-D =26; B: NCT02942004, HAM-D =26; C: NCT02942017, HAM-D 20-25) were enrolled and randomized either 1:1:1 (Study B) to receive 60-hour infusions of placebo (PBO), brexanolone iv 90 µg/kg/h (BRX90), or 60 µg/kg/h (BRX60) or 1:1 (Studies A and C) to receive PBO or BRX90. All treatments were administered over 60 hours. The primary endpoint in each study was the change from baseline in HAM-D total score at the end of dosing (Hour 60), and secondary efficacy endpoints included assessment of HAM-D total score at other time points, the Montgomery–Åsberg Depression Rating Scale (MADRS), and Clinical Global Impression-Improvement (CGI-I). Safety and tolerability were assessed by adverse event reporting and standard clinical assessments. Efficacy and safety were assessed through Day 30. BRX90 datasets were integrated for efficacy analyses, while safety assessments also included the additional BRX60 cohort. Results: In these pivotal studies, 107 subjects received PBO, and 140 subjects received BRX (102 BRX90 and 38 BRX60). Each study and all BRX doses achieved the primary endpoint. In the integrated dataset, at Hour 60, the BRX90 group showed a significant least-squares (LS) mean reduction from baseline in HAM-D total score versus PBO (17.0 vs. 12.8, p<0.001). These significant improvements versus PBO were sustained through Day 30 (p=0.021). BRX90 subjects also showed significant improvements versus PBO in MADRS at Hour 60 (23.5 versus 17.7, p<0.001) that remained statistically significant versus PBO through Day 7 (p=0.012). No return to baseline was observed in the BRX90 group by either HAM-D or MADRS. Additionally, statistically significant improvements in CGI-I response were observed from Hour 24 (p=0.018) through Day 30 (p=0.003). The most common (=10%) adverse events across all BRX groups were headache, dizziness, and somnolence. Conclusions: Across three pivotal, double-blind, randomized, placebo-controlled studies, BRX administration demonstrated statistically significant, rapid (by Hour 60), and sustained (over the study period) reductions in depressive symptoms by multiple measures, and BRX was generally well tolerated.

No. 27
WITHDRAWN

No. 28
Patient-Reported Outcomes in Major Depressive Disorder With Suicidal Ideation: A Real-World Data Analysis Using Patientslikeme Platform
Poster Presenter: Stephane Borentain, M.D.
Co-Authors: Abigail Nash, Rachna Dayal, Allitia DiBernardo, M.D.

SUMMARY:
Background: Patients with major depressive disorder (MDD) are at an increased risk of suicide. However, as these suicidal patients are often excluded from clinical studies, limited data are available to study their disease or treatment characteristics. PatientsLikeMe (PLM) is a web-based community and research platform that allows patients to voluntarily record and share their disease characteristics and outcomes. The current analysis utilized data from PLM to compare patient-reported experiences in patients with MDD with suicidal ideation (MDSI) to those with MDD but without suicidal ideation. Methods: Patients who were PLM members at the time of analysis, joined PLM between May 2007 and February 2018, and reported a diagnosis of MDD were included. The MDSI cohort included patients with MDD who reported at least one suicide-related symptom (“suicidal thoughts or urges,” “suicidal,” “depression with suicidal

thoughts," "suicidal ideation," "suicide attempt," "suicidal behavior") at a severity greater than "none." Demographics, comorbidities, symptoms, treatment effectiveness, adherence, and side effects were compared between MDSI and MDD cohorts. Factors correlated with suicidal ideation were also determined. Results: Patients in the MDSI cohort (n=266) were younger (median age, 36 years vs 44 years, p<0.001), reported a younger age at disease onset (before 30 years, 83% vs 71%, p<0.001), and a longer diagnosis latency (median, 4 years vs 2 years, p<0.001) than those in the MDD cohort (n=11,963). Though the majority of patients were women in both cohorts (73% vs 83%), the proportion of men was significantly higher in the MDSI cohort (p<0.001). The proportion of patients who reported comorbid psychiatric illnesses including generalized anxiety disorder (63% vs 44%, p<0.001), social anxiety disorder (45% vs 18%, p<0.001), and dysthymia (35% vs 18%, p<0.001) was higher in the MDSI cohort compared to the MDD cohort (median number of comorbidities, 4 vs 3, p<0.01). Unprompted symptoms, such as loneliness (24% vs 1.1%), feelings of hopelessness (23% vs 0.7%), social anxiety (18% vs 0.9%), impulsivity (16% vs 0.3%), and self-hating thoughts (16% vs 0.5%) were more frequently (p< 0.001) reported in the MDSI cohort than the MDD cohort. Hopelessness, loneliness, anhedonia, social anxiety and younger age were highly correlated with suicidal ideation. Conclusions: This analysis utilized patient-reported data to better understand the symptoms and experiences of patients with MDSI, who significantly differ across various characteristics from patients with MDD. The results also identify various risk factors correlated with suicidal ideation that can help guide clinical judgement to identify a pattern of risk in patients with MDD who do not voluntarily report suicidal ideation to health care providers.

No. 29

Hematopoietic Distress in Patients With Major Depressive Disorder and Suicidal Behavior: Gender Related Differences

Poster Presenter: Pilar A. Sáiz
Lead Author: Patricia Martínez-Botía
Co-Authors: Angela Velasco, Julia Rodriguez-Revuelta, Iciar Abad, Lorena de la Fuente Tomás, Tamara Arias Fernández, Maria Carmen Muñoz, Leticia Garcia-Alvarez, Leticia Gonzalez-Blanco, Luis Jimenez-Trevino, Laura Gutierrez, Maria Paz Garcia-Portilla, Julio Bobes, M.D., Ph.D.

SUMMARY:
Background and Aims:Major depressive disorder(MDD) is the most common psychiatric disorder associated with suicidal behavior (SB). Data suggest a possible role of the immune system in the pathophysiology of SB. We aimed to investigate differences in hematopoietic parameters between MDD patients [with or without suicide attempt (SA)] and their community controls and to elucidate potential gender-related differences. Methods: A complete blood count was performed from 79 MDD patients that were assigned to three clusters: 1) with recent SA (=1 month, n=19); 2) with past SA (>1 month, n=29); 3) without SA (n=31). As control, samples from 96 healthy individuals randomly included from a cohort of qualified blood donors from the local blood bank center, were taken. Assessment included an ad hoc protocol, (including sociodemographic and clinical data), Hamilton Depression Rating Scale, Childhood Trauma Questionnaire, List of Threatening Experiences and Medical Damage Scale. Statistical analysis was performed using SPSS platform (Chi-Square, ANOVA and multi-parameter correlations); Principal Component Analysis was performed using Perseus software. Results:When compared with healthy controls, MDD patients presented elevated Neutrophil Lymphocyte Ratio (NLR), and increased platelet counts (PLTs) with reduced mean platelet volume (MPV), suggesting reactive secondary thrombocytosis. These values were clearly pronounced in concurrence with SA. However, independently of concurrence with SA or not, MDD patients presented reduced Red Blood Cell (RBC) counts and increased Mean Corpuscular Volume (MCV), indicative of potential mild stress erythropoiesis. Correlation of parameters (i.e. RBC vs MCV, PLTs vs MPV or PLTs vs Neutrophil count) in MDD patients, did not adjust to the correlations in control subjects, supporting the notion of subjacent hematological distress. Principal Component Analysis of hematological parameters showed a clear separation of MDD patients with SA (=1 month followed by >1 month), while MDD patients without SA distributed closer to healthy control.

Furthermore, when stratifying the MDD categories by gender, we observed different hematological parameter alterations in women compared to men. Globally, women presented with a higher tendency to stress erythropoiesis with inflammation markers being markedly positive in concurrence with SA, while inflammation markers where more pronounced in men independently of concurrence of SA or not. Interestingly, concurrence of SA >1 month was accompanied by an in increased Platelet Lymphocyte Ratio (PLR) and NLR in women, but not in men. Conclusions:Grades of hematopoietic distress and inflammation were associated with SA in MDD. Hematopoietic distress could be underlining the basis for systemic alterations, including those affecting the immune response and inflammation.How these hematological arms regulate each other in the context of mood disorders and gender-related differences remains to be elucidated.

No. 30

Managing Esketamine Treatment Frequency Toward Successful Outcomes: Analysis of Phase 3 Data

Poster Presenter: Michel Nijs, M.B.A., M.S.
Co-Authors: Ewa Wajs, M.D., Ph.D., Leah Aluisio, M.D., Benoit Rive, Ph.D., Ella Daly, M.D., Adam Janik, M.D., Stephane Borentain, M.D., Jaskaran B. Singh, M.D., Frank Wiegand, M.D., Ph.D., Allitia DiBernardo, M.D.

SUMMARY:
Background: Esketamine nasal spray, a first-in-class glutamate modulator, is currently being developed for treatment-resistant depression (TRD). The aim of the current analysis was to evaluate the impact of symptom-based dosing frequency changes during esketamine treatment on clinical outcomes. Methods: An open-label, long-term (up to 1 year), multicenter, phase 3 study of esketamine nasal spray enrolled 802 adults with TRD (NCT02497287, SUSTAIN-2 trial). During the initial 4-week induction period, eligible patients self-administered esketamine nasal spray twice weekly (28 [elderly only], 56, or 84 mg) and started a new oral antidepressant daily. In responders, esketamine dosing frequency was decreased to weekly (QW) for the next 4 weeks and then adjusted to the lowest frequency dosing interval (QW or every other week [EOW]) needed to maintain remission (as assessed by Montgomery-Åsberg Depression Rating Scale [MADRS] =12) in the Optimization/Maintenance (OP/MA) phase, with re-evaluation every 4 weeks. Symptom response was evaluated using Clinical Global Impression–Severity (CGI-S) score and MADRS total score. In post hoc analyses, the relationship between assigned dosing frequency of esketamine and treatment response was evaluated. For CGI-S, treatment response (from the time of dosing frequency change to 4 weeks later) was defined as improved (?-1 to -4), stable (? 0), or worsened (? 1 to 4). The proportion of visits with remission were summarized by the following subgroups of patients by dosing frequency: required QW dosing throughout, switched to EOW once, and dosing frequency alternated back-and-forth (ALT) in the OP/MA phase. Results: Of 778 patients treated with esketamine in the induction phase, 580 proceeded to the OP/MA phase. After 4 weeks of induction and based on the change in CGI-S, patients who responded had a 54% likelihood of maintaining the clinical benefit achieved and 26% likelihood of continued improvement despite a reduction in dosing frequency to QW for the first 4 weeks. Thereafter, when dosing frequency could be further reduced from QW to EOW, 19% further improved, 50% maintained the benefit, and 31% worsened. For the patients no longer in remission after dosing frequency was reduced, an increase from EOW back to QW was correlated with positive outcomes: Based on 4 week change in CGI-S, 48% improved, 42% maintained benefit, and 10% did not improve 4 weeks after increasing the dosing frequency to QW. Conclusions: Symptom-based lowering of the esketamine dosing frequency to QW after induction was successful in 80% of patients; 69% of regimen changes to EOW resulted in improvement/maintained clinical benefit. For patients who needed a temporary increase in dosing frequency, 90% of regimen changes back to QW resulted in improvement/maintained benefit. These data support individualization of esketamine nasal spray dosing frequency to optimize treatment response.

No. 31

Cardiac Safety of Esketamine Nasal Spray in Treatment-Resistant Depression: Results From the Clinical Development Program

Poster Presenter: Teodora Doherty, M.D.
Co-Authors: Ewa Wajs, M.D., Ph.D., Rama Melkote, M.P.H., M.Sc., Christian Funck-Brentano, M.D., Ph.D., Michael Weber, M.D., Janice Miller, M.D., Jaskaran B. Singh, M.D.

SUMMARY:
Background: Esketamine, the S-enantiomer of racemic ketamine, is being developed for treatment-resistant depression (TRD). Transient sympathomimetic effects have been reported with ketamine, beginning shortly after dosing. Methods: Cardiovascular (CV) effects of esketamine nasal spray (28-84 mg twice weekly, once weekly, or every other week), in combination with an oral antidepressant (AD), were evaluated in 1,708 esketamine-treated adults with TRD enrolled in 5 double-blind (DB), placebo-controlled and 1 open-label trials (1 Ph 2; 5 Ph 3). Patients with uncontrolled hypertension or clinically significant ECG abnormalities were excluded. Risk mitigation for high blood pressure (BP) was implemented in Ph 3 (i.e., no dosing if SBP =140 mmHg [=150 for age >65] or DBP =90 mmHg). Assessments: seriousness, outcomes, and severity of CV adverse events (AEs) including frequency and odds ratio (OR) [95% CI] for esketamine+AD vs. AD+placebo; changes in vital signs; and ECG. Results: AEs of increased BP occurred in 12.8% of all esketamine-treated patients, with a ~3-fold higher rate in esketamine+AD vs. AD+placebo groups (11.6% vs. 3.9%; OR 3.2 [1.9, 5.8]). AEs related to abnormal heart rate (e.g. palpitations, tachycardia) were reported in 3.0% of all esketamine-treated patients (in DB trials: 1.6% vs. 0.8%; OR 1.9 [0.5, 8.6]), of which 96% of CV events were mild or moderate and 88% of the events resolved. In the all-clinical trials population, 3 AEs were reported as serious (SAE) and severe: BP increase, hypertensive crisis, sinus tachycardia; 3 severe (not SAE): palpitations (1), BP increase (2); in addition, 1 fatal unrelated SAE: acute cardiac failure. BP increases reached maximum within 40 minutes of esketamine dosing (consistent with peak plasma levels) and typically returned to predose range by 1.5 hours postdose. In 2 studies (4-week; age 18-64 years), the largest mean maximum SBP/DBP increases across all intranasal dosing days were 13.3/8.7 mmHg for esketamine+AD and 6.1/4.9 mmHg for AD+placebo; in elderly study (age =65) were 16.0/9.5 mmHg and 11.1/6.8 mmHg, respectively. The percentage of patients (age 18-64) with markedly abnormal BP elevation (SBP =180 and/or DBP =110) ranged from 2.0–4.9% in esketamine+AD vs. 0¬–0.9% in AD+placebo treatment groups across studies/phases and was higher in patients with (5.5–7.6%) vs. without (2.9–4.3%) histories of hypertension; in elderly, BP elevations were higher (11.1% in esketamine+AD vs. 6.2% in AD+placebo). No clinically relevant effect on ECG parameters was observed in the esketamine clinical program. Conclusions: In TRD patients, the CV safety of intranasal esketamine administration was acceptable. BP elevations following dosing of esketamine are generally transient, asymptomatic, self-limiting without rescue medications, and not associated with serious CV safety sequalae. Further monitoring for long-term CV outcomes of these transient BP changes is needed.

No. 32

Rapastinel for the Treatment of Major Depressive Disorder: A Patient-Centric Clinical Development Program

Poster Presenter: Armin Szegedi
Co-Authors: Robert Hayes, Raffaele Migliore, Debelle Marc, Anju Starace, Kavneet Kohli, Richard Shelton

SUMMARY:
Depression/major depressive disorder (MDD) is the leading cause of ill health and disability worldwide according to the World Health Organization, affecting ~300 million people globally. Approved antidepressants require several weeks of continued treatment before acceptable response is achieved, and many patients fail to respond adequately. Novel pharmacological approaches that modulate central N-methyl-D-aspartate receptors (NMDARs) are in development as rapid-acting antidepressants. Rapastinel, a novel NMDAR modulator with a unique mechanism of action, promises rapid-acting and long-lasting antidepressant effects in MDD with weekly intravenous (IV) injections, a good safety and tolerability profile compared with the current standard of care or investigational NMDA antagonists, and a low propensity for abuse or

dissociative/psychotomimetic side effects. Rapastinel received FDA Fast Track and Breakthrough Therapy designations based on Phase 2 data. The late-stage development program for MDD has been designed to thoroughly evaluate rapastinel's acute and long-term efficacy, as well as its safety and tolerability. Two separate Phase 3 programs are being conducted for rapastinel: as adjunctive treatment to standard antidepressants in MDD (aMDD; US only, N=~1500) and as monotherapy (global; N=~2000), each with acute studies, maintenance study, and an opportunity for continued long-term treatment. • Acute treatment: Three 3-week studies are conducted in aMDD (MD-01, -02, -03). Three 6-week studies evaluate rapastinel monotherapy (MD-30, -31, -32). • Maintenance treatment: In maintenance studies, patients are stabilized with weekly rapastinel injections (8-16 weeks) to determine stable responders, who are then randomized to double-blind IV injections of rapastinel or placebo. In the aMDD trial (MD-04), patients receive weekly rapastinel, biweekly rapastinel, or placebo for up to 2 years of individual treatment. In the monotherapy trial (MD-33), patients receive weekly rapastinel or placebo for up to 1 year; this study also includes an individualized treatment arm, in which patients are assigned placebo or rapastinel in a blinded manner depending on weekly clinical assessments. • Continued long-term treatment: Completers or patients who relapsed from MD-04 can continue open-label treatment in MD-06 for 1 year. In addition, rapastinel is also being evaluated as a treatment for MDD patients with imminent risk of suicide in addition to standard of care (MD-20; US only, N=~300). First results from the acute aMDD trials are expected in the first half of 2019, with the option to present first data at the APA 2019 Annual Meeting. First results from the monotherapy and suicidality trials are expected in 2021. Supported by Allergan plc.

No. 33

Rapid and Sustained Antidepressant Effects of Rapastinel: Mechanistic Differences From Ketamine

Poster Presenter: Pradeep Banerjee
Co-Authors: Yong-Xin Li, John Donello

SUMMARY:

Background: Antagonism of N-methyl-D-aspartate receptors (NMDARs) produce rapid and sustained antidepressant effects, but drugs like ketamine also induce psychotomimetic or dissociative side effects that limit clinical use. Rapastinel, a positive NMDAR modulator with rapid antidepressant effects, is currently in development to treat major depressive disorder and has received FDA Fast Track and Breakthrough Therapy designations based on Phase 2 clinical evidence. Here we present a series of preclinical experiments that evaluate the mechanistic differences between rapastinel and ketamine. Methods: Antidepressant-like effects were assessed in the rat forced swim test (FST); subsequent pharmacological characterization were done using radioligand displacement assays, mutational analysis, calcium imaging, and electrophysiology assays. Neurotransmitter levels in rat medial prefrontal cortex (mPFC) were measured using microdialysis. Effects of rapastinel on ketamine-induced cognitive deficits were assessed in the novel object recognition (NOR) test. Results: Rapastinel and S-ketamine (10 mg/kg and 30 mg/kg for both) demonstrated rapid-acting and sustained antidepressant-like effects in the FST ($P<.05$ vs vehicle). While ketamine significantly displaced radioligand binding at the NMDAR PCP/MK-801 site, rapastinel did not exhibit binding affinity for any known NMDAR site, including the glycine co-agonist site and the PCP/MK-801 site. Preliminary mutational analysis demonstrated that rapastinel binds to a unique NMDAR site. In rat primary cortical neurons, rapastinel acted to moderately enhance, at therapeutic concentrations (10-300 nM), NMDAR-dependent calcium influx but also weakly inhibited calcium influx at concentrations >=1 µM; in contrast, S-ketamine was an antagonist at all concentrations tested. Rapastinel concentration-dependently enhanced NMDAR-dependent long-term potentiation (LTP) in mPFC slices (20-500 nM; $P<.01$ vs control slices); in contrast, S-ketamine inhibited LTP formation at all concentrations tested, with complete blockade observed at 3 µM ($P<.001$ vs control slices). Unlike ketamine, rapastinel doesn't affect glutamate or dopamine efflux in mPFC. Rapastinel also lacks ketamine-like discriminative stimulus properties and reinforcing potential in rodents and nonhuman primates. Ketamine's effects on glutamate/dopamine efflux and its high

reinforcing potential have been linked to its psychotomimetic/dissociative effects and abuse liability, respectively. Interestingly, rapastinel exhibits “anti-ketamine”-like effects in preserving episodic memory in the NOR test. Conclusion: These results show that rapastinel interacts with a novel NMDAR binding site and is mechanistically distinct from ketamine, although both compounds show antidepressant properties. These pharmacological differences may explain the lower potential of rapastinel than ketamine to induce psychotomimetic or dissociative effects and abuse liability. Supported by Allergan plc.

No. 34

Lack of Casp1, Ifngr, and Nos2 Genes Alter Depressive- and Anxiety-Like Behavior and Gut Microbiota

Poster Presenter: Ma-Li Wong, M.D.
Lead Author: Julio Licinio, M.D.

SUMMARY:

BACKGROUND: Mounting evidence implicates neuroinflammatory pathways in the development and treatment response of MDD. Pre-clinical and clinical studies suggest that decreasing pro-inflammatory signaling may be beneficial to MDD. Dysregulation of three major inflammatory systems is evident in this condition: A) increased oxidative stress by means of nitric oxide (NO) overproduction, driven by NOS2 (NO synthase 2), B) low-grade chronic pro-inflammatory status driven by caspase 1 (CASP1) overproduction, and C) interferon gamma (INFG) over production driven by type 1 T helper (Th1) cells. METHODS: The chronic unpredictable mild stress (CUMS) paradigm was used to evaluate whether triple knockout male mice lacking the pro-inflammatory CASP1, INFG receptor, and NOS2 (Casp1, Ifngr, Nos2)-/- display altered depressive- and anxiety-like behavior. We collected fecal pellets to perform gut microbiome studies at baseline after CUMS; we also measured plasma adrenocorticotropic hormone (ACTH) and corticosterone (CORT) levels using enzyme-linked immunosorbent assay. RESULTS: Triple knockout (Casp1, Ifngr, Nos2)-/- mice exhibit decreased depressive- and anxiety-like behavior, and increased hedonic-like behavior and locomotor activity at baseline, and resistance to developing anhedonic-like behavior and a heightened emotional state following stress compared to wild-type (wt) mice. Plasma ACTH and CORT levels did not differ between the triple knockout and wt mice following CUMS. The fecal microbiome of the triple knockout mice differed from that of wt mice at baseline and displayed reduced changes in response to chronic stress. CONCLUSIONS: Simultaneous deficit in multiple pro-inflammatory pathways has antidepressant-like effects at baseline and confers resilience to stress-induced anhedonic-like behavior. Concomitant changes in the gut microbiome composition suggest that CASP1, IFNGR and NOS2 play a role in maintaining microbiome homeostasis.

No. 35

WITHDRAWN

No. 36

Comparing Measured and Self-Reported Hypertension by Race/Ethnicity Among Major Depressed Individuals: (NHANES), 2009?2010

Poster Presenter: Nusrat Kabir
Co-Authors: Azad Bhuiyan, Afifa Adiba, M.D.

SUMMARY:

Abstract: According to Center of Disease Control (CDC), the prevalence of depression with moderate or severe depressive symptoms is 7.6%, whereas, hypertension among US adults are approximately 30.2%. Although depression is associated with hypertension, limited information is available for comparing measured vs. self-reported hypertension among the depressed individuals in the US general population. We hypothesize that self-reported hypertension is overstated among depressed individuals than actually measured hypertension. This study aimed to examine (1) the prevalence of measured and self-reported hypertension among depressed individuals in the US adult general population and (2) the prevalence of hypertension status (measured vs. self-reported) by ethnicity/race among depressed individuals. To test this hypothesis, we analyzed data of 5629 participants from the NHANES, 2009-2010. This data is a multistage cluster sample design and represents non-institutionalized US population. Depression was assessed using the Patient Health Questionnaire (PHQ-9). A total PHQ-9 =10 is considered as having

major depression. According to the new proposed guideline, hypertension was considered as systolic BP = 130 or diastolic BP = 80 mm of Hg. Self-reported hypertension was considered as hypertension told by a health professional. Data were analyzed using SAS 9.4 version, proc survey procedure. The weighted sample, and the weighted percentages were reported. In univariate analysis, results showed that 67.4% participants were whites, 14.2% were Hispanic, 11.3% were African Americans (AA), and 7.2% were other races. Among the participants 51% were females, and 70% were in the age limit of 18 to 54 years. The prevalence of major depression is 7.7%. The measured hypertension and self-reported hypertension is observed as 32.0 % (95% CI: 29.4%-34.6%), and 27.4% (95% CI:25.1%-30.0%) respectively. In the bivariate analysis, the prevalence of measured hypertension (yes vs. no) among major depression was 8.7% vs. 7.3% respectively (p=0.14). On the other hand, self-reported hypertension (yes vs. no) significantly higher, 10.9% vs. 6.6% (p-value< 0.0001). Stratified by ethnicity/race, the prevalences of self-reported hypertension among major depressed individual were 37.3 % among Hispanic, 37.9% among white, 52.8% among African Americans and 17.3% among other races. This study is significant as Rao-Scott Chi-square 14.09, the degree of freedom 3 and p-value < 0.003. The national data revealed that disparities exist in self-reported hypertension status among depressed individuals. The clinicians should be concerned regarding the discrepancies in hypertension while treating depression to ensure a better outcome.

No. 37

Development of a Real-World Ketamine Database Registry: Centers of Psychiatric Excellence (COPE)

Poster Presenter: Steven Taylor Szabo, M.D., Ph.D.
Co-Authors: Ashwin Anand Patkar, M.D., Michael D. Banov, M.D., Tammy Rader, Manish Zinzuvadia, M.D., Elena Vidrascu, Nelson Handal, M.D., Prakash S. Masand, M.D.

SUMMARY:

Background: Subanesthetic doses of intravenous ketamine exert rapid benefits in patients with depressive disorders, anxiety disorders, posttraumatic stress disorder, obsessive compulsive disorder and chronic pain. Nearly all studies reflect treatment resistant patients receiving limited infusions to ketamine monotherapy in government and academic research settings. A deficit of research knowledge exists in real-world patients receiving multiple infusions of adjunctive ketamine to treatment as usual. The Centers of Psychiatric Excellence (COPE) created a research infrastructure to obtain registry data that tethers patient characteristics to treatment outcomes in efforts to personalize ketamine treatment based on real-world data. Methods: An on-line database registry was created by COPE to obtain real-world data in patients receiving adjunctive ketamine. Board-certified psychiatrists at six community treatment centers provided patients with ketamine infusions (Atlanta, Charlotte, Houston, New York, Philadelphia, St Louis). Prospective patients completed screening scales and a telemedicine or in-person psychiatric assessment conducted by a psychiatrist determined eligibility for ketamine treatment. Once a patient was deemed medically and psychiatrically appropriate, pretreatment and posttreatment scales to each infusion were completed during acute, sustained, and maintenance phase treatments. Results: Patient and provider data from two of six COPE clinics were primarily used in this analysis. Out of 979 inquires, 84 patients were considered appropriate, signed informed consent, and received ketamine treatments. Fifty-eight patients were captured in our database registry. Validated patient and provider rating scales on symptoms severity, treatment efficacy, and side-effects were obtained. As an example, mean scores on the Montgomery-Asberg Depression Rating Scale (MADRS) in patients at baseline was 36 (n=58; SD=8) and reduced to 12 by infusion 6 (n=41; SD=10). This represents a 67% reduction in depressive symptoms by infusion 6 and a 30% reduction by infusion 2. Depression scores at infusion 5 (MADRS=13, n=44) were no different than at infusion 6 (MADRS 12, n=41). Only 2 of 58 patients had a MADRS score that was higher at their last treatment than at baseline. Approximately 70% of patients received all six acute phase treatments. Conclusion: This real-world data set in patients receiving six adjunctive infusions of ketamine over two-weeks demonstrated robust decreases in depression scores during the acute phase treatment (30% at infusion 2 and 67% at infusion 6). Development of treatment algorithms based on

patient characteristics using objective measures while monitoring for comorbid symptoms and abuse liability will help direct appropriateness of ketamine in the real-world setting. These data are also poised to inform on ketamine dosing, time course to characterize treatment response, and maintenance schedules to sustain treatment benefit.

No. 38

The Prevalence of Involuntary Alcohol Drinking and Its Association With Depression and Anxiety Among Nurses in China

Poster Presenter: Ying Wang

SUMMARY:

Alcohol is a psychoactive substance with dependence-producing properties that has been widely used in Chinese culture for thousands of years. Involuntary alcohol drinking, which is defined as alcohol drinking with subjective reluctance by this study, is likely to occur among occupational population as drinking with clients and colleagues is seen as vital to career advancement in Chinese culture. However, while excessive alcohol dinking has been well recognized to cause behavior and mental disorders, involuntary alcohol drinking has never been proposed and studied before. To explore the prevalence of involuntary alcohol drinking and its association with depression and anxiety, a cross-sectional study was conducted among 3682 nurses in China. Alcohol drinking status and social-demographic information was self-reported by nurses using questionnaires. The Self-Rating Depression Scale (SDS) and Self-Rating Anxiety Scale (SAS) were used to evaluate the status of depression and anxiety. According to the Chinese norm, nurses whose standard scores were higher than 53 for SDS or 50 for SAS were respectively classified to have depression or anxiety. The prevalence of alcohol drinking, involuntary alcohol drinking and voluntary alcohol drinking and was 15.43%, 9.86% and 5.57%, respectively. Compared with nurses who did not drink, nurses exposed to alcohol drinking(odds ratio (OR)=1.46; 95% confidence interval (CI):1.34, 1.88) and involuntary alcohol drinking (OR=1.65; 95%CI: 1.23, 2.20) had an increase depression risk after adjusted for age, sex, body mass index, income, education, working years, marriage and smoking status, while voluntary alcohol drinking was not associated with depression(OR=1.07; 95%CI: 0.86,1.34). Nevertheless, alcohol drinking (including involuntary alcohol drinking and voluntary alcohol drinking) showed no statistical association with anxiety. This poster first proposed the definition of involuntary alcohol drinking and provided evidence that involuntary alcohol drinking was associated with depression among nurses.

No. 39

Salivary Aldosterone Concentrations and Major Depressive Disorder

Poster Presenter: Lubomira Izakova

Co-Authors: Maria Kralova, Natasa Hlavacova, Viktor Segeda, Daniela Jezova

SUMMARY:

Introduction: Biomarkers for major depressive disorder are needed. In this context, attention is given to mineralocorticoid hormone, aldosterone. The results of our recent studies suggest a possible role of aldosterone in the pathophysiology of depressive disorder and its potential role as a biomarker (1-3). Aim: The aim of this study was to explore the dynamics of salivary aldosterone concentrations in patients during the treatment of depression and compare the values to those in healthy subjects. Methods: We conducted a prospective non-interventional clinical study, which enrolled 39 patients with depressive episode (ICD-10 criteria), meeting the inclusion and exclusion criteria. Patients were examined three times, the first visit was in the acute phase of the depressive episode (admission to hospital, V1), the second visit after achieving a clinical remission (discharge from hospital, V2) and the third visit after six months of clinical remission (V3). The severity of the depressive syndrome was assessed by psychometric scales (MADRS, CGI, Beck's anxiety questionnaire). The reference group consisted of 39 sex- and age-matched healthy subjects. Summary of results: Significantly different aldosterone concentrations compared to healthy subjects were found in the acute phase, and they persisted at the time of substantial clinical improvement. The concentrations of salivary aldosterone normalized after 6 months of remission. Significant impairment of physiological diurnal variations of aldosterone levels, found in acute phase, normalized after 6 months of

remission. Conclusion: From neurobiological point of view, salivary aldosterone concentrations could be a potential "state"bio marker of depression. Key words: aldosterone, biomarker, depression The study was supported by grant of Vega 2/0022/19.

No. 40

Prevalence of Depression in Primary Care Settings in Latvia: The Results of the National Research Project BIOMEDICINE 2014?2017

Poster Presenter: Elmars Rancans, M.D.

SUMMARY:

Introduction. Worldwide the prevalence of depressive disorders in primary care has been estimated to be between 10-20% [1]. Despite rich data from studies of depression in primary care in Western Europe [2], there still is a need for studies from Eastern Europe. Under-diagnosis of depression is particularly salient for the Eastern European Republic of Latvia where the point prevalence of depression in the general population has been measured at 6.7% [3], but the Latvian National data arrays show that in 2013 general practitioners (GP's) saw only 4423 unique patients with a diagnosis of mood disorder[4]. This is the first study conducted at the national level that was aimed to estimate the point and lifetime prevalence of depression, associated factors in primary care settings in Latvia. Methods. During one week period in 2015 all patients aged 18 or older who visited GP for medical reasons at 24 primary care facilities all over the country, were invited to participate in the study. All study subjects during the same visit were interviewed with structured sociodemographic questionnaire. The MINI (Mini International Neuropsychiatric Interview) was conducted over the telephone by psychiatrist not more than 2 weeks after visit to primary care physician. To identify factors associated with increased odds of depression univariate and multivariate analysis (using binary logistic regression) was carried out. Results. A total 1585 patients were invited to participate in the survey, of whom 1485 patients were interviewed with the MINI. According to MINI 10.2% (8.7-11.8; here and further 95% confidence intervals are shown in brackets) had current and 28.1% (25.9-30.4) had lifetime depression. Odds ratio (OR) adjusted by all sociodemographic factors for current and lifetime depression was higher in women than men, 1.92 (1.22-3.00, p=0.005) and 1.97 (1.49-2.62, p<0.001), respectively. Odds of having current and lifetime depression was higher in older age groups (>55 y.o.), but not statistically significant. Those with education lower than secondary had 1.97 (1.11-3.47, p=0.02) times odds of current depression compare to the group of education higher than secondary. Higher odds both for current and lifetime depression were identified for respondents who are divorced or live separated, 1.83 (1.25-2.69, p=0.002) and 1.76 (1.35-2.29, p<0.001), respectively compare to those who were married or cohabiting. Gastroenterological diseases as a reason to visit GP had the highest OR for both prevalences, 3.14 (1.69-5.83, p<0.001) and 1.76 (1.35-2.29, p<0.001). Being absent at work 15 days and more during last 3 months was associated with 2.32 (1.28-4.21, p=0.006) times higher odds for current depression compare to those who did not have absent days at work. Conclusions. Prevalence of depression in primary care is in line with other European studies. Certain sociodemographic and clinical variables are associated with higher odds of morbidity with depression.

No. 41

Case of the Forgotten NMS: The Cost of Perpetuated Misdiagnosis and Inadequate Medicine Reconciliation

Poster Presenter: Mustafa M. Tai, M.D.

SUMMARY:

INTRODUCTION: Medication reconciliation is defined by The Joint Commission as "the process of comparing a patient's medication orders to all of the medications that the patient has been taking … to avoid medication errors such as omissions, duplication, dosing errors, or drug interactions and should be performed at every transition of care".[1] In 2005, identified as a National Patient Safety Goal by The Joint Commission.[2] Became requirement in 2006. Medication errors have been a leading cause of patient injury with over 7000 medication related deaths/year.[3] CASE: AK is a 37 yo M, direct admission from skilled NH in December 2017 for agitation, disinhibition and decompensation. Notably, patient was chewing on a lamp cord. Patient is known to have severe TBI from MVA 10 years ago which resulted in significant, permanent,

cognitive decline. Per records it was noted that the patient has multilobar damage causing personality change, decreased IQ, apraxia and aggression. At this time pt is on Quetiapine 25mg, Bromocriptine 5mg BID, Rivastigmine 3mg BID, Venlafaxine 75mg Qdaily and Clonazepam 0.5mg TID. On admission pt was unable to provide a complete history due to global disorientation. Medical records consisted of current medications and a diagnosis of Personality Change due to TBI. Patient was seen making delusional statements and had laconic speech. Per H&P by inpatient primary care, patient had been prescribed Bromocriptine for Parkinsons Disease but no pre-existing diagnosis of PD was found in past medical records. Neurology Consult during previous admission stated that there is no diagnosis of PD and medication should be tapered and discontinued. On this admission, patient had been restarted on this medication at the Nursing Home for unknown reasons and continued during inpatient course by PCP. Per patients wife, pt was started on this for NMS some years ago (no documentation seen) and never stopped. Wife denied any past diagnosis of PD. Bromocriptine was discontinued and Rivastigmine was titrated during hospital course, with patient showing significant improvement. Pt became more engaging and alert with decreased aggression, resolution of psychomotor retardation and improved compliance with treatment plan. Patient was discharged on 7th post admission day with a diagnosis of Brief Psychotic Disorder. DISCUSSION: Cornish et al. evaluated medication discrepancies at hospital admission with an average age of 77±10 years. 54% had at least 1 discrepancy with 32% causing harm and 6% causing severe discomfort and clinical deterioration.[4] An increasing elderly population with intellectual disability and multiple venues of care, medication reconciliation is paramount.[5] Most errors are due to a ineffective communication during transition of care.[6] A multidisciplinary, planned approach[7] along with changes in clinician attitude and promotion of medication accuracy[8] have been repeatedly identified as areas of improvement with greatest benefit

No. 42

Improvements in Workplace Productivity in Working Patients With Major Depressive Disorder: Results From the AtWoRC Study

Poster Presenter: Pratap Chokka, M.D.
Co-Authors: Anders Holmegaard Tvistholm, Joanna Bougie, Guerline Clerzius, Anders Ettrup

SUMMARY:
Background: Working patients with major depressive disorder (MDD) experience impairments in their work productivity. In addition to having to take time off from work (absenteeism), most patients are not fully productive when being at work (presenteeism). The AtWoRC study (NCT02332954) primarily analyzed the association between improvements in cognitive symptoms and workplace productivity (Chokka, et al. 2018. CNS Spectrums). Here, we report changes from baseline to week 12 and 52 across different domains of workplace functioning in the AtWoRC study. Methods: AtWoRC was an interventional, 52-week, open-label study in gainfully employed patients with MDD treated with vortioxetine (10–20 mg/day) at routine care visits that emulated a real-world setting in Canada. Self-reported workplace functioning was assessed using the 4-domain Work Limitations Questionnaire (WLQ), 3-subscale Sheehan Disability Scale (SDS), and the absenteeism and presenteeism items from the Work Productivity and Activity Impairment (WPAI) questionnaire. Changes from baseline and correlations between subscales and domains were assessed in the full analysis population (n=199). Results: Working patients with MDD improved significantly from baseline across measures of work functioning after 12 and 52 weeks of vortioxetine treatment (mean dose at week 52 was 15.2±5.1 mg/day). The most pronounced percentage point improvements from baseline to week 52 in WLQ were for domains of time management, mental-interpersonal demands, and output demands (-38.4, -35.4, and -37.6, respectively, all $p<0.0001$) which was greater than in the WLQ physical-demands domain (-16.2, $p<0.0001$). This was consistent with the profile of baseline impairments. After 52 weeks of vortioxetine treatment, the improvement across WLQ mental work functioning domains also showed stronger correlations with improvement in WPAI presenteeism and the SDS work/school item, than did the WLQ physical domain. In addition, WPAI

presenteeism consistently showed stronger correlations with other measures of workplace productivity measures (SDS work/school and the overall WLQ productivity loss score) compared with WPAI absenteeism. Conclusion: In gainfully employed patients with MDD, significant improvements were observed across domains and items assessing different aspects of workplace productivity after 12 and 52 weeks of vortioxetine treatment. At week 52, the most pronounced improvements were observed in domains related to mental rather than physical work functioning, reflecting the profile of impairments at baseline in patients experiencing a depressive episode. Improvements in WLQ domain measures were also strongly associated with improvement in a self-reported measure of productivity while working (WPAI presenteeism). These results highlight that in addition to getting patients with MDD back to work, antidepressant treatments should also aim to restore patients' functioning at work. This study was supported by Lundbeck.

No. 43

Pain on the Brain: Evaluating Outpatient Treatment Utilization in Patients With Depression With Comorbid Pain

Poster Presenter: Sohrab Mosaddad, M.D.
Lead Author: Carlos A. Salgado, M.D.
Co-Author: Angela Mooss

SUMMARY:

Background: The co-existence of depression and pain is a common source of impairment in both behavioral health and primary care settings, creating several challenges in their diagnosis and treatment. Several studies have demonstrated the negative impact of pain and depression on overall health care utilization, however the impact of pain on treatment of depression in a behavioral health setting remains poorly understood. This study aimed to evaluate the impact of pain on treatment utilization of patients with depression, defined as the number of follow-up appointments attended and number of anti-depressants prescribed, as reported via a routine pain screening of patients with depression at a community mental health center. Methods: The study consisted of a two-year retrospective analysis of 2,641 patients (mean age: 44, 68.7% female) with an established or new diagnosis of a depressive disorder. A group of patients who reported co-occurring pain during evaluation was compared with a representative group of patients with a diagnosis of depression alone who denied existence of pain during assessment. The total number of appointments attended, the number of anti-depressant(s) prescribed and patient characteristics such as age, gender, ethnicity, race, income, household size, and smoking status were compared between the two groups using a multi-linear regression model, chi-square test and correlation tables. Results: Of a total of 2,641 patients, 7% (n=196) had a co-occurring diagnosis of pain with depression (mean age 54, 67.5% female). Older patients with depression reported more pain, had a higher number of scheduled and attended appointments and were more likely to have been prescribed an anti-depressant. For each additional year in age, the number of attended appointments increased by 0.02. Household size was negatively correlated with the presence of pain and positively correlated with the prescription of more than one anti-depressant. When adjusting for age and household size, the presence of pain predicted the number of follow-up appointments attended ($p<0.001$). Depressed patients with concomitant pain attended 4.5 times more appointments than those with depression alone. Conclusion: In our retrospective analysis, the presence of pain in a depressed patient population was found to correlate positively with the number of attended outpatient appointments, a finding that supports previous findings on the effect of pain on treatment utilization. The presence of pain did not affect the total number of anti-depressants prescribed in treatment of depression. Factors such as age and household size point to the complex interaction between pain and depression on the burden of each disorder. These findings demonstrate the need for additional studies to identify unique diagnostic and treatment approaches for patients suffering from pain with co-occurring depression in order to improve adherence while decreasing ineffective treatment utilization.

No. 44

Association of Habenula Volume With Anhedonia, Pathological Rumination and Electrocortical

Response to Motivationally Relevant Stimuli in Depression

Poster Presenter: Lyubomir I. Aftanas, M.D., Ph.D.
Co-Authors: Elena Filimonova, Natalia Novozhilova, Svetlana Pustovoyt, Mariia Rezakova, Tatiana Lipina

SUMMARY:

Background. In Major Depressive Disorder (MDD), symptoms relating to motivational processing, such as anhedonia and pathological rumination, result in poorer treatment prognosis. Contemporary theoretical accounts have suggested that they may be, at least partly, driven by the habenula dysfunction that plays a key role in reward and punishment processing and motivated behavior1,2,4. The main objective of the study was to investigate associations of habenula volume with anhedonia, pathological rumination and electrocortical response to motivationally relevant stimuli in MDD. Materials and Methods. High-resolution images (0.5 mm3) were acquired using a GE Discovery 3T MR-system, with 3D FSPGR pulse sequence. The habenula was manually segmented according to the previously described algorithm3. Forty-two healthy controls (HC) were compared to MDD patients (n=59). General depressive symptoms were assessed with the Hamilton Depression Rating Scale (HDRS-17), the Beck Depression Inventory (BDI-II). Rumination was assessed by the Ruminative Responses Scale (RRS), anhedonia scores was indexed by the item #4 of BDI-II. EEG brain response to motivationally relevant visual stimuli of misery (mutilations) and reward (scenes of heterosexual petting and intercourse) was examined using the late positive potential (LPP) among 30 patients with MDD and 24 HC in addition. Results. Average right habenula volume (RHV) was 28.34 mm3 (s. d. 5.92) in the MDD patients and 27.72 mm3 (s. d. 5.91) in HC, left habenula volume (LHV) - 28.74 mm3 (s. d. 5.64) in the MDD patients and 27.05 mm3 (s. d. 5.23) in HC. Analysis of habenula volume, corrected for whole brain volume, revealed no effect of group ($p > 0.05$), as well as no effect of sex, age, and disease severity ($p > 0.05$). Correlational analyses (linear Pearson correlation) were performed with normalized LHV and RHV values. Among all the patients with MDD, only men but not women exhibited significant negative correlations of their total BDI-II scores with LHV and RHV ($r = -0.54$ and $r = -0.59$; $p < 0.05$), as well as anhedonia scores with both LHV and RHV ($r = -0.61$ and $r = -0.60$; $p < 0.05$). Total RRS scores correlated with both LHV and RHV ($r = -0.59$ and $r = -0.79$; $p < 0.05$), whereas RRS brooding and RRS reflection subscales scores correlated only with RHV ($r = -0.55$ and $r = -0.62$, $p < 0.05$). As for EEG dependent variables, LHV significantly correlated with LPP amplitudes to stimuli of reward ($r = -0.47$) and misery ($r = -0.44$, $p < 0.05$) in the latency time window of 500-700 ms. There were no significant correlations for female patients as well as for the HC group (both males and females). Conclusion. Overall, it has been shown that in male but not female patients with MDD decreased habenula volume is significantly associated with enhanced depression, anhedonia and rumination scores as well as with attenuated LPP response to motivationally relevant stimuli of misery and reward.

No. 45

Personality Trait: Impact on Repeated Subcutaneous Esketamine Infusions in Treatment-Resistant Depression

Poster Presenter: Camila Puertas
Lead Author: Acioly Lacerda
Co-Authors: Eduardo Jorge Muniz Magalhaes, M.D., Ana Cecilia Lucchese, Marco Aurelio Oliveira, Sérgio Barros, M.D., Frederico Cohrs, Luciana Sarin

SUMMARY:

Background: Approximately one-third of patients with major depression fail to respond adequately to antidepressants and there are limited options for treatment-resistant depression (TRD). Personality traits are relatively enduring patterns of thoughts, feelings and behaviors that reflect the tendency to respond in certain ways under certain circumstances. Its dysfunction is associated with the severity of depression and it usually predicts a poor treatment outcome in mood disorders. Esketamine has proven to have rapid and robust antidepressant effect on treatment-resistant depression. Whether esketamine response to repeated infusions would be impacted by personality traits is not clear. Our aim was to investigate the impact of personality traits on response after repeated esketamine infusions in, unipolar and bipolar, TRD patients. Methods: 51 TRD patients, unipolar and bipolar, received repeated esketamine infusions as adjunctive treatment in an

university ketamine clinic, at São Paulo Federal University, Brazil. Response criteria was defined as = 50% reduction in baseline MADRS scores. Personality traits were assessed by NEO-FFI-R, which includes five trait domains: Neuroticism, characterized by emotionality and sensitivity; Extroversion, characterized by sociability and positive affectivity; Openness to Experience, characterized by innovation and curiosity; Agreeableness, characterized by compassion and modesty; and Conscientiousness, characterized by responsibility and motivation. Results: The response rate at MADRS was 54,90% after repeated infusions. The impact of personality traits on outcome was examined in both groups (responder vs non-responder) using Wilcoxon test and no differences were found. Neo-FFI-R indicated following results for each trait: Neuroticism (p=0,2091), Extraversion (p=0,8700), Openness (p=0,1009), Agreeableness (p=0,4837), Conscientiousness (p=0,8405). Conclusion: Although personality traits usually influence treatment outcome, our findings in this sample indicate no significant differences between responders and no responders, which brings esketamine as a promissing treatment for TRD.

No. 46

Management of Depression in Late-Stage ALS: A Case Report and Literature Review

Poster Presenter: Joyce Nguyen, M.D.
Co-Author: Mya Sabai, M.D.

SUMMARY:
Introduction: Amyotrophic lateral sclerosis (ALS) is a neurodegenerative disease causing progressive upper and lower motor neuron loss. It has no known effective treatment or cure and is invariably fatal. Depression is an under-recognized comorbidity associated with ALS. With most patients ultimately succumbing to neuromuscular respiratory failure or paralysis, many assume that patients will experience clinically significant depression. The existing literature confirms that transient depressive symptoms occur in ALS patients, but it is unclear what the prevalence of Major Depressive Disorder is. The prevalence rate is reported to be 4-56% depending on assessment measure. We present the case of a geriatric ALS patient with depressive symptoms as he transitioned from living in the community to a nursing home. Additionally, we present a literature review regarding proposed assessment measures, pre-morbid contributing factors, and treatment of depression in ALS. Case Report: Mr. E is an eighty-four-year-old man with a past medical history of ALS diagnosed in 2009 and past psychiatric history of anxiety. He was highly functional, oversaw hundreds of employees at his company, and lived in the community with his wife until a fall resulted in a cervical fracture in 2016. He was subsequently admitted to a nursing home for long-term care. On admission, he was on fluoxetine 10 mg daily to target anxiety. On initial evaluation by the Geropsychiatry team, his Geriatric Depression Scale score was 0/30 and Montreal Cognitive Assessment score was 29/30 (missing one item on delayed recall). Within a month, he began endorsing depressed mood and frustration at his worsening functional status and loss of independence. He frequently got into arguments with staff members and declined visits from his wife. The team discussed increasing fluoxetine but he was not amenable to this change. Thus, behavioral interventions were initiated. He was moved to his own room, allowed to self-administer medications, and other modifications were made to create a more independent living environment. Supportive psychotherapy was also started. During weekly follow-up visits, his mood and frustration tolerance greatly improved, and he began to establish rapport with medical providers. After a year of treatment, he requested to discontinue fluoxetine as he denied depressed mood or anxiety. In collaboration with his primary medical team, the Geropsychiatry team discontinued medication and closely monitored his symptoms. The patient has had sustained remission of depression despite continued progression of ALS symptoms. Conclusion: There is limited literature regarding prevalence, diagnosis, and treatment of depressive disorders in ALS patients, a population that face unique challenges as the disease progresses. We present learning points from a case of a geriatric ALS patient with depression who was treated with low-dose antidepressant medication, psychotherapy, & behavioral interventions.

No. 47

Major Depression and Borderline Personality Disorder: Lifetime Correlates of Dual Diagnosis

Poster Presenter: Nur Sena Uzunay
Co-Authors: Vedat Sar, M.D., Hale Yapici Eser, M.D., Ph.D., Dorte Helenius

SUMMARY:
Background: Almost 30-40% of the patients with Major Depressive Disorder (MDD) are treatment resistant. Reasons for this resistance are known as comorbidities of both psychiatric, and other medical disorders, and persistent etiological risk factors, as infections, inflammation, and ongoing stress or adverse life events. One of these comorbidities is borderline personality disorder (BPD) which is related to earlier age of onset of depression, more chronic depressive symptoms, comorbid substance use disorders, and more self-harm behavior or suicide attempt. Furthermore, many studies showed that treatment of MDD patients with comorbid BPD is harder than treatment of only MDD patients. Trauma-related depressive disorders, in particular those related to childhood adversity, are also associated with increased psychiatric comorbidity (including BPD) and general health problems. Recognizing the importance BPD comorbidity with MDD, we aimed to search the effect of BPD comorbidity on all comorbidities of MDD and on the course of MDD. Methods: The study was conducted on Danish Health Registry System which contained health information of Danish citizens (ICD-10) regularly since 1980. First, patients with a lifetime single and recurrent depressive disorder (F32-33, n = 17539) diagnosis were defined by excluding participants with comorbid bipolar disorder (F31), schizophrenia and related disorders (F20-29), organic mental disorders (F00-09), mental retardation (F70-79), and pervasive developmental disorders (F84). 1670 of these people were diagnosed with a lifetime BPD diagnosis. Chi-square tests or t-tests for each of the chosen 48 covariates were done to evaluate if there is a significant difference between the group with BPD comorbidity compared to the group with no BPD comorbidity. Results: Two groups did not differ on migraine, epilepsy, OCD, anorexia nervosa or any autoimmune disease comorbidity. However, in a comparison with non-BPD depressives, those with BPD had significantly higher mental and behavioral disorders due to alcohol or cannabis usage, anxiety disorders, acute stress reaction, PTSD, antisocial personality disorder, childhood onset behavioral and emotional related disorders, ADHD and bacterial and viral infections. In addition, patients with BPD comorbidity had significantly higher depression severity, higher number of suicide attempts, higher inpatient hospitalization days due to both psychiatric and other medical conditions, and higher supported housing usage. In an analysis according to gender, comorbidities were significantly elevated in women with BPD comorbidity. On the other hand, for men, BPD was related to severity of depression, and suicide attempts and hospitalizations. Conclusion: Concurrent BPD may cause treatment resistance in MDD through various factors such as increased psychiatric and medical comorbidities while this relationship may also be valid in the reversed direction.

No. 48
Risk Factors for Treatment-Resistant Depression
Poster Presenter: Suhayl Joseph Nasr, M.D.
Co-Authors: Anand Popli, Burdette Wendt

SUMMARY:
Background: Many patients treated for major depression have a hard time achieving remission. The percentages vary with the criteria utilized to define this resistance to remission(1,2). It is intuitive to assume that a healthier lifestyle of adequate sleep, diet and exercise will help patients recover from a particular episode. Following is an analysis of factors that separate remitters from non-remitters obtained from an online self reported psychosocial history of patients eventually diagnosed with major depression. Methods: A retrospective chart review was performed on patients seen in a private psychiatric outpatient clinic. Data collected included PHQ-9 scores from every visit, medication and diagnostic history, and results of a psychosocial questionnaire taken online prior to their first visit. Patients were included if they had made at least ten visits with a psychiatrist and had a current diagnosis of unipolar depression. They were considered to have treatment resistance if they scored more than 5 points on the PHQ-9 in at least 40% of their visits. In this clinic 94.1% of the patients score less than 5 points by the 5th visit. Results: 750 patients met criteria for inclusion in this analysis. 20% of patients were considered treatment resistant. Several items

on the psychosocial history showed significant differences between patients who responded to treatment and those who were resistant. Self-rated physical health was a strong predictor, with only 5% of patients who rated themselves in excellent health being treatment resistant, compared to 45% of patients who rated themselves in poor health. Patients who described their childhoods as abusive (40% vs 19%) or unstable (42% vs 19%) were also more likely to be resistant to treatment. Not eating a balanced diet (27% vs 13%), lack of exercise (27% vs 13%), and early insomnia (29% vs 14%) were also significantly different between the 2 groups. Additional predictors of treatment resistance were lower current income level, listing current mental state as hopeless or numb, and a self rating of poor ability to cope with stress. Conclusion: Several factors were identified that separate patients who respond to treatment compared to those who do not. This longitudinal analysis of real life patients lends further support to the benefit of modifying lifestyle factors such as diet, exercise and sleep may improve the outcome of depression treatment.

No. 49

CLARITY: A Phase 2 Double-Blind, Placebo-Controlled Study to Evaluate the Efficacy and Safety of Adjunctive Pimavanserin in Major Depressive Disorder

Poster Presenter: Bryan Dirks
Lead Author: Maurizio Fava, M.D.
Co-Authors: Marlene Picus Freeman, M.D., Michael Edward Thase, M.D., Madhukar H. Trivedi, M.D., Keith Liu, Srdjan Stankovic

SUMMARY:
Introduction: Depression is the leading cause of disability worldwide and represents a leading unmet medical need, with fewer than 50% of treated patients achieving full remission. Studies have shown antidepressant activity of compounds acting as antagonists or inverse agonists at 5-HT2A receptors. This study examined one such compound, pimavanserin (PIM), as a potential adjunct to SSRIs or SNRIs for major depressive disorder (MDD). Methods: Adult female and male patients with a DSM-5 primary diagnosis of a depressive episode as part of MDD, inadequate response to ongoing SSRI/SNRI therapy of adequate dose and duration, and a MADRS total score >20 were randomized to PIM 34 mg/day or placebo (PBO) added to their SSRI/SNRI treatment. A sequential parallel comparison design was used, consisting of two 5-week stages. PBO nonresponders in Stage-1 who met appropriate criteria were randomly reassigned to PIM or PBO for the second period (Stage-2). The primary efficacy measure was the weighted average of Stage-1 and Stage-2 total scores of the HAMD-17. Results: Of the 207 patients enrolled, 52 received PIM and 155 received PBO in Stage 1. Mean age was 46.2 years, and 72.9% of patients were female. Mean MADRS total score at baseline was 31.5. PIM met the primary endpoint, reducing the weighted Stage-1/Stage-2 HAMD-17 total score relative to PBO (least-square means difference, –1.7; standard error [SE], 0.9; P=0.04). Stage-1 PIM patients demonstrated highly significant 5-week improvement on the HAMD-17 (difference=–4.0, SE=1.1; P<0.001; effect size, Cohen's d: 0.626), separating from placebo by the end of Week 1 (difference=–1.7, SE=0.8; P=0.04). Stage-2 results showed no significant separation among Stage-1 placebo nonresponders (P=0.69). In Stage 2, a substantively smaller number of subjects (n=58) were rerandomized than planned, likely due to restrictive criteria for rerandomization. Greater overall improvement was seen with PIM relative to PBO on the key secondary endpoint, the Sheehan Disability Scale (difference=–0.8, SE=0.3; P=0.004), and positive results were also seen on 7 of the 11 other secondary endpoints, including responder rate (=50% reduction in HAMD-17 total; P=0.007), Massachusetts General Hospital Sexual Functioning Index (P<0.001), and Karolinska Sleepiness Scale for daytime sleepiness (P=0.02). Discontinuations due to adverse events were low (PIM 1.2%, PBO 3.2%). One serious adverse event was reported in each treatment group, deemed unrelated to treatment. No deaths were reported. Laboratory assessments, electrocardiography, and changes in vital signs were unremarkable, and no new safety signals were reported. Conclusions: Study data provide evidence of the efficacy, safety, and tolerability of adjunctive pimavanserin in treating MDD inadequately responsive to SSRI or SNRI therapy. ACADIA plans to confirm these results in Phase 3 studies to be initiated in the first half of 2019.

No. 50
WITHDRAWN

No. 51
Psilocybin-Assisted Psychotherapy for the Treatment of Major Depressive Disorder: Preliminary Results From a Randomized Controlled Trial
Poster Presenter: Alan Davis, Ph.D.
Co-Authors: Darrick Gary May, M.D., Mary Cosimano, M.S.W., Matthew Johnson, Ph.D., Frederick Barrett, Ph.D., Roland Griffiths, Ph.D.

SUMMARY:
Background: Major Depressive Disorder (MDD) is a prevalent condition that confers substantial public health burden. Current approved treatments, including pharmacotherapy and psychotherapy, are limited in effectiveness and adherence. Recent evidence suggests that one or two administrations of psilocybin under psychologically supported conditions produces antidepressant effects in cancer and treatment-resistant depression populations. Further examination of the efficacy of this intervention among patients with MDD is warranted. Method: This is a randomized waitlist control trial investigating the immediate and enduring antidepressant effects of two psilocybin administration sessions (20mg/70kg and 30mg/70kg) given in the context of supportive psychotherapy in patients diagnosed with MDD. Outcome measures include the GRID-Hamilton Depression Rating Scale (GRID-HAMD) scores at Baseline (>17 required for enrollment) and 1- and 4-weeks after the second psilocybin session. Twelve participants have completed the intervention and the 1- and 4-week assessments (n=12; Mean age=39, SD=14; female=67%; Mean GRID-HAMD=22.8, SD=3.1; Mean Years w/Depression=16.8, SD=13.7). In this preliminary analysis we combined Baseline and 1- and 4-week follow-up data from the waitlist and immediate treatment groups to examine overall treatment effect of the psilocybin intervention. Results: Compared to Baseline, the mean reduction in depression scores was 63% at 1-week and 62% at 4-weeks. Across the entire sample, 83% of participants had a clinically significant drop (>50%) in depression scores at both 1- and 4-weeks. Moreover, at 1- and 4-weeks, respectively, 58% and 58% of participants no longer met clinical cutoffs for diagnosable depression. Paired samples t-tests revealed a significant decrease in depression scores from Baseline (M=22.8; SD=3.1) to 1-week follow-up (M=8.3, SD=6.9), $t(11)=6.04$, $p<.001$, Cohen's $d = 3.64$, and a significant decrease from Baseline to 4-week follow-up (M=8.0, SD=5.9), $t(11)=6.91$, $p<.001$, Cohen's $d = 4.17$. There was no significant difference in depression scores between the 1- and 4-week follow-up, $t(11)=0.27$, $p=.795$. The overall effect sizes are approximately five times over the threshold needed to be considered a "large" treatment effect. Conclusion: These preliminary data extend previous studies in depressed cancer patients and patients with treatment-resistant depression by suggesting that psilocybin may be efficacious for treatment of MDD in the general population. Future analyses of a larger patient sample will include comparison of waitlist and immediate treatment conditions as well as assessment at long-term follow-up time points at 3, 6, and 12-months.

No. 52
A P-Curve Analysis Exploring the Evidential Value of Selective Serotonin Reuptake Inhibitor Randomized Controlled Trials
Poster Presenter: Alexander Chaitoff
Co-Authors: Emily Rose, Selena Pasadyn, Jason Ya, Perry Dinardo, Shuvro Roy

SUMMARY:
Background: Many fields are recognizing the importance of assessing studies for p-hacking. As opposed to risk-of-bias assessments, which determine if study design elements may lead to biased results, p-hacking assessments determine whether statistical analysis plans may have been designed to obtain significant results. Like biased studies, p-hacked studies are also of little evidentiary value, but unlike risk-of-bias assessments, p-hacking assessments are rarely reported in meta-analyses. Specifically, while meta-analyses report the risk-of-bias present in randomized controlled trials of the effects of selective serotonin reuptake inhibitors (SSRI), there are no studies assessing whether the trials underlying the effects of SSRIs have been p-hacked. Methods: The randomized controlled trials included in a 2017 meta-analysis that explored the effects of SSRIs on depressive symptoms were

obtained. Four reviewers, each reviewing one half of the randomized controlled trials, used a standardized template to extract all reported p-values pertaining to the effect of SSRIs vs placebo on depressive symptoms as they were reported in the randomized controlled trials. P-values were compared across reviewers to ensure agreement, with discrepancies decided by a fifth reviewer. Significant p-values (defined as $p<0.05$) were plotted to generate a p-curve which was evaluated for evidence of right skew using the p-checker application. When exact p-values were not given, p-values were coded to approximate both a conservative estimate (i.e. $p<0.05$ becomes $p=0.011$) and skew-heavy estimate (i.e. $p<0.05$ becomes $p=0.049$). Results: 114 randomized controlled trials, published between 1983 and 2015, were obtained. They contained 1676 p-values associated with outcomes comparing the effect of SSRIs to placebo. Of these, 1291 p-values (77%) were significant at $p<0.05$. 349 (27%) of these significant p-values were reported as $p<0.05$ without an exact value or test statistic. Using the conservative estimate of reported p-values, there was no evidence of p-hacking ($Z=-33.41$, $p<0.001$). Using the skew-heavy estimate of reported p-values, there was evidence of intense p-hacking ($Z=-5.815$, $p<0.001$). Conclusion: The presence of p-hacking in randomized controlled trials comparing the effect of SSRIs to placebo on depressive symptoms was difficult to determine given that most p-values are reported as inequalities, not as exact values. If p-values reported as <0.05 are clustered around 0.05, then there would be concern for inadequate statistical evidence to reject the claim that SSRI and placebo are equivalent for affecting depressive symptoms. However, if p-values reported as <0.05 are clustered around 0.01, then there would be no evidence that the trials had been p-hacked. This study underscores the importance of providing test statistics when reporting statistical results. Furthermore, p-curve analyses may be valuable additions to the risk-of-bias portion of meta-analyses.

No. 53

The Role of Mental Illness and Ecological Factors in Targeted School Shootings

Poster Presenter: Janice Hill-Jordan

Co-Authors: Sheryl Reminger, Albert Botchway, Ph.D., Ayame Takahashi, M.D.

SUMMARY:

Background: Columbine. Virginia Tech. Red Lake. Sandy Hook. Parkland. Images of school shootings are seared on our collective consciousness. Inevitably, such shootings produce calls to the mental health system to 'do something' about individuals with mental health problems who may pose a threat to their communities. However, a lack of understanding of risk factors exists resulting from the case definition problem, in which the number of victims is the main inclusion criteria. This study fills a gap in the literature by examining a sample of school shootings from 2005 to 2012, including all incidents regardless of the number of victims (N=224). The primary objective is to assess the presence of mental illness and other individual-level factors when accounting for ecological school and community factors. Methods: Data sources include previous scholarship, grey literature, and media reports, a commonly-used method for studying school shootings. Due to missing or incomplete data, 114 incidents were excluded resulting in a sample size of 110 for preliminary analyses. Cluster analysis was implemented via the two-step procedure in SPSS. Clustering input variables were perpetrator age, day of week, month, completed suicide, type of incident (intentional or not), county high school graduation rate, percent in county living below poverty level, average FTE teachers, number of female victims, number of male victims, number killed, and number wounded. Results: Mental illness was indicated in 86% (n=56) of incidents for which we have data. Zero fatalities occurred in 74% of incidents, with one person killed in 20%. Fewer than 3% of incidents involved 4 or more fatalities. Ninety percent of incidents took place at urban schools, and 80% of shootings took place in communities that on average were above the poverty level. Two clusters were identified. Approximately 85% (n=94) of incidents were in Cluster A with 15% in cluster B (n=16). Internal validation was achieved by using the cluster membership variable as a predictor in linear models. Cluster membership distinguished between the number of fatalities (Cluster A mean=0.25, Cluster B mean=1.8, p=0.22); urbanicity (Cluster A percentage urban=92.5%, Cluster B percentage urban=81.2%,

p=0.14; completed suicide (Cluster A=0%, Cluster B=100%); presence of mental illness (Cluster A=91%, Cluster B=100%, p=0.42; and teacher FTE (Cluster A mean=63.1, Cluster B mean=74.0, p=0.36). Conclusions: Using a data-driven rather than a theoretical approach, in preliminary analyses, we found two clusters of shooting incidents. Cluster A is defined by incidents with lower fatalities, urban location, shooter less likely to complete suicide, a lower prevalence of mental illness, and lower teacher FTE. The majority of school shootings involve fewer than 4 fatalities and deserve more scholarly attention. An ecological analysis of school and community variables is essential to inform prevention and intervention efforts.

No. 54

Solriamfetol Treatment of Excessive Daytime Sleepiness in Participants With Narcolepsy or Obstructive Sleep Apnea With a History of Depression

Poster Presenter: Andrew Darrell Krystal, M.D.
Co-Authors: Ruth Myra Benca, M.D., Ph.D., Russell Rosenberg, Paula Schweitzer, Atul Malhotra, Kimberly Babson, Lawrence Lee, Shay Bujanover, Kingman Strohl

SUMMARY:
Background: Excessive daytime sleepiness (EDS) has been reported in patients with depression. Solriamfetol, a dopamine and norepinephrine reuptake inhibitor, improved EDS in randomized controlled trials in narcolepsy and obstructive sleep apnea (OSA). This analysis evaluated solriamfetol treatment of EDS in participants with narcolepsy or OSA with a history of depression. Methods: Two 12-week randomized, placebo-controlled, parallel group trials were performed in participants with EDS in narcolepsy or OSA; participants were randomized to 12 weeks of treatment with placebo or solriamfetol 37.5-mg (OSA only), 75-mg, 150-mg, or 300-mg once daily. Endpoints were change from baseline to week 12 in the Maintenance of Wakefulness Test (40-minute MWT) and Epworth Sleepiness Scale (ESS), and percent of participants improved in Patient Global Impression of Change (PGI-C) at week 12. This post-hoc analysis evaluated participants with a positive history of depression (DHx+), as identified by the terms “affective disorder”, “depression”, “depressed mood”, “major depression”, “postpartum depression”, or “seasonal affective disorder” in their complete medical history at screening, and participants without a medical history of depression (DHx-). The two trials were analyzed separately. Results: 27.5% (65/236) of participants with narcolepsy and 23.4% (111/474) of participants with OSA were DHx+. No meaningful differences were seen between DHx+ and DHx- groups in MWT or ESS at baseline. Solriamfetol treatment resulted in dose-dependent increases from baseline in MWT and PGI-C scores and decreases in ESS scores at week 12 in both populations. In narcolepsy the least squares (LS) mean (95% CI) difference from placebo in MWT was 5.4 (-0.2, 11.1) min for solriamfetol (combined doses) for DHx+ and 7.0 (3.3, 10.7) min for DHx-; in OSA the difference in MWT was 7.7 (3.2, 12.3) min for DHx+ and 10.7 (8.0, 13.3) min for DHx-. For ESS, the LS mean (95% CI) difference from placebo was -3.8 (-6.3, -1.2) points for DHx+ and 3.5 (-5.3, -1.6) points for DHx- in narcolepsy; in OSA the difference was -3.5 (-5.4, -1.6) points in DHx+ and -3.7 (-4.9, -2.5) points for DHx-. For PGI-C, the percentage (95% CI) difference from placebo in participants reporting improvement was 31.7% (5.2, 58.3) for DHx+ and 39.4% (22.7, 56.0) for DHx- in narcolepsy and 41.1% (19.8, 62.3) for DHx+ and 29.4% (18.1, 40.7) for DHx- in OSA. The most common treatment-emergent adverse events observed with solriamfetol were headache, decreased appetite, nausea, and anxiety, which were generally observed at similar rates in DHx+ and DHx- subgroups. Conclusions: Solriamfetol was effective in the treatment of EDS in narcolepsy or OSA regardless of medical history of depression in two randomized, controlled trials. The safety and tolerability of solriamfetol were consistent with previously reported studies and were similar in both subgroups. Support: Jazz Pharmaceuticals

No. 55

A Study to Assess Digitally Enabled Engagement in Major Depressive Disorder

Poster Presenter: Maggie McCue
Co-Authors: Christopher Blair, M.S., B.A., Ben Fehnert, Francesca Cormack, Sara Sarkey, Anna Eramo, Ellen Rhodes, Christopher Kabir, David E. Kemp, M.D.

SUMMARY:

Background Enhanced patient-provider engagement can improve patient health outcomes for multiple chronic conditions, including major depressive disorder (MDD). However, time constraints and the need to frequently manage multiple conditions during a single visit in a primary care setting may make it difficult to fully engage with patients in their MDD treatment. Mobile health applications (apps) may expand health interventions beyond traditional face-to-face contacts but need to be integrated into the clinical care pathway and easy to use for both patient and provider. Apps that connect the patient and provider may provide an opportunity to enhance engagement and patient outcomes. Objective This study aims to assess an app-enabled care pathway designed to improve patient-provider engagement using a patient interface to track data and early quantitative assessment of treatment progress for patients with MDD. Methods This ongoing study enrolled and randomized 40 patients (n=20 usual care with app, n=20 usual care) diagnosed with MDD starting a new antidepressant monotherapy (newly diagnosed or medication switch). Eighty percent of the patients randomized were females, with mean age of 36.3± 11.2 years, and a baseline mean PHQ-9 score of 14.7 ± 5.0. Patients in the app arm are instructed to engage with the app daily, and a report is generated at 6-week intervals. The app records mood and cognitive symptoms, emotional well-being, medication adherence, and side effects. The data are communicated at regular intervals to the healthcare provider to help facilitate shared patient-provider treatment decision-making discussions. The primary endpoint is change from baseline in the Patient Activation Measure (PAM-13) and Patient Provider Engagement Scale (PPES-7) at week 18. Secondary outcomes include depression severity (PHQ-9), cognitive dysfunction (PDQ-D5), medication switches and adherence, quality of life (WHO-5), employment productivity (LEAPS), resource utilization (RUQ-D), patient and provider satisfaction with the level of provider engagement (week 18), and measure of healthcare utilization at 1 year. Discussion: Study results expected in early 2019 will help determine whether the use of this app-enabled clinical care pathway is beneficial for measurement-based care and can enhance patient-provider engagement. It is anticipated that study results will highlight the advantages of integrating this app-enabled care pathway to monitor patient progress and enhance patient-provider communication. Clinical implications for improving outcomes and minimizing resource utilization for patients with MDD will also be discussed. Sponsorship The study was funded by Takeda Pharmaceuticals U.S.A., Inc., and Lundbeck LLC. Disclosure and Acknowledgments: We thank Jennifer Schuster for her contribution to this study. MM, SS, and ER are employees of Takeda Pharmaceuticals. BF and FC are employees of Cognition Kit. CB, CK, and DK are employees of Advocate Heal

No. 56

Cardiovascular Effects of Repeated Subcutaneous Esketamine in Treatment-Resistant Depression

Poster Presenter: Lorena Catarina Del Sant, M.D.
Co-Authors: Eduardo Jorge Muniz Magalhaes, M.D., Ana Cecilia Lucchese, Victor Augusto Fava, Rodrigo Simonini Delfino, Frederico Cohrs, Luciana Sarin, Acioly Lacerda

SUMMARY:

Background: There has been an increasing use of ketamine as a rapid-onset antidepressant. However, there is limited data about the potential clinical risks of this treatment. We investigated the impact of multiple subcutaneous (SC) esketamine infusions on blood pressure and heart rate of unipolar and bipolar treatment resistant depression (TRD) patients. Methods: 70 TRD patients, referred to an academic ketamine clinic, in São Paulo Federal University Psychiatry Department, received a total of 394 SC esketamine infusions between April and November 2018. Esketamine was an add-on treatment and patients were allowed to remain on their medications. SC esketamine infusions were administered up to 6 infusions (minimum of 3 infusions), once a week, with escalating doses (0.5, 0.75 and 1 mg/kg), according to patient's response. Systolic blood pressure (SBP), diastolic blood pressure (DBP) and heart rate (HR) were measured before each infusion and every 15 minutes thereafter for 120 minutes (15, 30, 45, 60, 75, 90, 105 and 120). The primary outcome was change in SBP, DBP and HR from baseline to highest post-infusion measurement. Results: There was a transient elevation on blood pressure and heart rate

in response to SC esketamine repeated infusions. At first infusion (dose of 0,5mg/kg), mean baseline SBP was 122,22 mmHg (SD = 15,46) and DBP was 77.29 (SD = 11.67) mmHg; at sixth infusion mean baseline SBP was 119,67 mmHg (SD = 13,23) and DBP was 78.00 (SD = 12,87) mmHg. First infusion maximum changes in blood pressure at 30 minutes and 45 minutes were respectively 4,35 mmHg and 3,55 mmHg for SBP, for DBP were 4,26 mmHg and 5,74 mmHg. At sixth infusion, maximum changes in blood pressure at 30 minutes and 45 minutes were respectively 5,42 mmHg and 5,02 mmHg for SBP; 3,07 mmHg and 1,54 mmHg for DBP. At the end of monitoring (120 minutes post infusion) vital signs returned to pretreatment levels, in both infusions: at first infusion final SBP mean was 122,15 mmHg (SD = 14,92) and DBP was 78,64 (SD =11,19) mmHg and at sixth infusion we observed similar values, mean SBP was 120,15 mmHg (SD = 12,77) and DBP was 79,10 (SD = 11,52) mmHg. Mean of maximum SBP was 146,88 mmHg (SD=17,78) and DBD was 101,57mmHg (SD=12,33). There was no significant differences in blood pressure ratings between different doses (0.5, 0.75 and 1 mg/kg). Mean heart rate (MHR) was similar to baseline for all six infusions and didn't show significant differences through treatment. Obese patients presented SBP and DBP peaks in response to infusions, on average 5 mmHg and 4 mmHg, respectively, higher than those observed for non-obese patients ($P < 0.05$ for both). Conclusions: Blood pressure changes observed with repeated SC esketamine infusions, with escalating doses up to 1mg/kg are mild and well tolerated. Our study demonstrated that SC route is a simpler and well tolerated alternative of administration, even for patients with clinical comorbidities.

No. 57

Dose Dependent Effects of Ketamine Anesthesia on Electroconvulsive Therapy (ECT) in Depressed Patients: Review of Literature

Poster Presenter: Amit Jagtiani, M.D.
Co-Authors: Saurabh Somvanshi, M.D., Ankit Jain, M.D., Tarika Nagi, M.D., Eric Rubin, M.D., Ph.D., Sabish Balan, M.D.

SUMMARY:
Background: Intravenous Ketamine (NMDA antagonist) infusions in sub-anesthetic doses have been proved to be helpful in achieving rapid remission of depressive symptoms. Role of intravenous ketamine bolus as an anesthetic in ECT for major depression has been examined in few studies, however the results have been conflicting. Objective: To review the available literature to examine whether the dose of ketamine used during the ECT procedure determines the response of subjects to the ECT. Methods: A literature search with search words ketamine, ECT and Depression was conducted on Pubmed to find out all published studies within last 10 years that compared ketamine anesthesia during ECT for major depression with another anesthetic of choice. The studies were reviewed to evaluate whether doses of ketamine used, had any impact on efficacy of ECT for major depression as measured through depression rating scales. Results: Superior efficacy of ECT with ketamine as anaesthetic agent has been demonstrated in case reports, open label studies, chart review studies and in a few randomized double blind ECT studies whereas some other randomised ECT studies did not confirm the antidepressant effects of ketamine. Different meta-analyses of such randomized controlled trials have also reported conflicting findings. [1, 2, 3] We examine the possibility of any confounding effect or bias introduced due to dose dependent effects of Ketamine. This might be due to the anticonvulsant effects of Thiopentone or Propofol which were administered along with ketamine during the ECT in some studies, or due to different doses of Ketamine used. Conclusion: There might be a bias introduced while comparing Ketamine with Thiopentone or Propofol due to dose dependent effects of Ketamine. Further studies are required to analyze and un-bias any confounding effect.

No. 58

WITHDRAWN

No. 59

Real-World Psychiatric Medication Usage Preceding a Diagnosis of Suicidal Ideation or Suicide Attempt in Patients With Major Depressive Disorder

Poster Presenter: Cheryl Neslusan
Co-Authors: Tony Amos, Kun Wang, Ayush Srivastava, Elissa Min, Jennifer H. Lin, Nancy Connolly, Ella Daly, M.D., Brian Ahmedani

SUMMARY:
Background: Suicide rates have risen sharply in the U.S. from 1999-2016. Patients with major depressive disorder (MDD) are at an increased risk for suicide. Understanding psychiatric treatment patterns prior to a diagnosis of suicidal ideation (SI) or suicide attempt (SA) is important to optimize care. Methods: Adult patients with diagnosis codes indicating MDD and SI or SA (SI/SA) between 01/01/2014 and 12/31/2016 were selected from the Optum de-identified electronic health records database. Only those who were observable for >/= 3 months post and 12 months prior (baseline period) to their 1st SI/SA diagnosis were retained. Patients were excluded if they had a diagnosis code for psychosis, schizophrenia, bipolar disorder, mania or dementia at any point during the study. Prescriptions in the following classes of medications during the baseline period were examined: antidepressants (ADs), anxiolytics, anticonvulsants, antipsychotics (APs), psychostimulants and lithium. Chi-squared tests were used to assess differences in usage between age groups (18-25, 26-35, 36-45, 46-55, 56-64, 65+ years), gender, race (White, African American [AA], Asian and Other) and insurance status (insured and uninsured). Results: A total of 63,855 patients diagnosed with MDD and SI/SA were in the final sample (mean [SD] age: 39 [16] years, 59% female). In the baseline period, the percent of patients prescribed at least one medication from each class were: ADs (42%), anxiolytics (32%), anticonvulsants (22%), APs (14%), psychostimulants (9%) and lithium (0.4%). 47% had none of these recorded. Increasing age was positively associated with medication use. For example, compared to those >/=65 years old, patients aged 18-25 were less commonly prescribed ADs (33% vs 54%, p<0.01), anxiolytics (18% vs 42%, p<0.01), anticonvulsants (10% vs 30%, p<0.01), APs (9% vs 16%, p<0.01) and psychostimulants (4% vs 8%, p<0.01). Women were more likely to be prescribed ADs (47% vs 37%, p<0.01), anxiolytics (33% vs 29%, p<0.01) and anticonvulsants (24% vs 19%, p<0.01); and less likely than men to be prescribed psychostimulants (8% vs 11%, p<0.01). White patients were more likely than African Americans to be prescribed ADs (45% vs 30%; p<0.01), anxiolytics (34% vs 24%; p<0.01), anticonvulsants (23% vs 16%; p<0.01), APs (14% vs 12%; p<0.01) and psychostimulants (9% vs 7%; p<0.01). Compared with insured patients, uninsured patients were less likely to be prescribed ADs (25% vs 43%, p<0.01), anxiolytics (25% vs 32%, p<0.01), anticonvulsants (12% vs 22%, p<0.01) and APs (11% vs 14%, p<0.01). Conclusions: Consistent with other research, psychiatric medication usage among patients with MDD prior to receiving a diagnosis of SI or SA was notably low and varied across socio-demographic characteristics. Understanding actual healthcare utilization patterns in this vulnerable population can assist in optimizing treatment.

No. 60

Length of Stay and Readmission/Subsequent ED Visit Risk Among Patients With Major Depressive Disorder and Suicide Ideation or Suicide Attempt

Poster Presenter: Cheryl Neslusan
Co-Authors: Tony Amos, Holly Szukis, Wing Chow, Melissa Lingohr-Smith, Jay Lin, Ella Daly, M.D., John J. Sheehan

SUMMARY:
Background: Patients with major depressive disorder (MDD) and suicidal ideation (SI) or suicide attempt (SA) often require hospitalization. The objective of this study was to evaluate whether the duration of the hospital stay influences the risk of a subsequent hospitalization or an ED visit. Methods: Patients =18 years of age diagnosed with MDD and SI or SA (SI/SA) during an inpatient admission were identified from the Premier Hospital database 1/1/2014-6/30/2017. Patients were required to have either MDD as the primary and SI/SA as the secondary discharge diagnosis, or SI/SA as the primary and MDD as the secondary discharge diagnosis. Patients were excluded if they had diagnoses of psychosis, schizophrenia, bipolar disorder, mania, or dementia. During a 6-month follow-up after initial (index) hospital discharge, all-cause, MDD-related, and SI/SA-related readmissions (RA) or ED visits (RA/ED) were evaluated and compared for patients by inpatient length of stay (categorized as short: 1-3 days; medium: 4-5 days; long: =6 days). Multivariable Cox regressions were carried out to evaluate whether initial hospital length of stay (LOS) influenced the likelihood of an RA/ED event. Covariates in the analyses included age, gender, geographic region, race, payer type, and hospital

characteristics (urban/rural, teaching status, size). Results: Among the study population of patients hospitalized for MDD and SI/SA (n=160,343), 41.2% (n=66,073; mean age: 38.1 years; female: 57.4%) had a short LOS, 26.7% (n=42,866; mean age: 40.0 years; female: 54.7%) had a medium LOS, and 32.1% (n=51,404; mean age: 45.2 years; female: 51.4%) had a long LOS. In the short, medium, and long LOS groups, 15.9%, 18.2%, and 24.2% respectively had an RA/ED event for any cause during the 6-month follow-up period; 13.7%, 15.5%, and 20.9% respectively had an MDD-related RA/ED event; 7.4%, 9.1%, and 13.2% respectively had an SI/SA-related RA/ED event. Patients with a long LOS vs. those with a short LOS were at an increased risk for any cause (hazard ratio [HR]=1.40; 95% confidence interval [CI]: 1.36-1.44; p<0.001), MDD-related (HR=1.41; 95% CI: 1.37-1.45, p<0.001), and SI/SA-related (HR=1.72; 95% CI: 1.65-1.78; p<0.001) RA/ED events. Patients with a medium LOS vs. those with a short LOS were also at an increased risk for any cause (HR=1.11; 95% CI: 1.08-1.15; p<0.001), MDD-related (HR=1.11; 95% CI: 1.07-1.14, p<0.001), and SI/SA-related (HR=1.21; 95% CI: 1.16-1.26; p<0.001) RA/ED events. Conclusions: The findings of this study show that among patients hospitalized with MDD and suicide ideation or suicide attempt, increasing LOS was associated with a higher risk of a subsequent hospitalization or an ED visit, even after adjusting for sociodemographic and hospital characteristics. Future analyses that explore the potential effects of disease severity and variation in treatment pathways would complement these results.

No. 61

Care Setting Type and Readmission/Subsequent ED Visit Risk Among Patients With Major Depressive Disorder and Suicide Ideation or Suicide Attempt

Poster Presenter: Cheryl Neslusan
Co-Authors: Tony Amos, Holly Szukis, Wing Chow, Melissa Lingohr-Smith, Jay Lin, Ella Daly, M.D., John J. Sheehan

SUMMARY:

Background: Patients with major depressive disorder (MDD) and suicidal ideation (SI) or suicide attempt (SA) often present to the emergency department (ED) and/or require hospitalization. The objective of this study was to evaluate whether the care setting (i.e. inpatient or ED visit only) is associated with the risk of a readmission (RA) or subsequent ED visit. Methods: Patients =18 years of age diagnosed with MDD and SI or SA (SI/SA) during an inpatient admission or ED visit were identified from the Premier Hospital database 1/1/2014-6/30/2017. Patients were required to have either MDD as the primary and SI/SA as the secondary discharge diagnosis, or SI/SA as the primary and MDD as the secondary discharge diagnosis. Patients were excluded if they had diagnoses of psychosis, schizophrenia, bipolar disorder, mania, or dementia. All-cause, MDD-related, and SI/SA-related RAs or ED visits (RA/ED) were evaluated during the 6-month period following the 1st qualifying inpatient stay or ED visit (the index event). Multivariable Cox regressions were carried out to evaluate whether the care setting of the index event was associated with the likelihood of a RA/ED event. Covariates in the regression analyses included age, gender, geographic region, race, payer type, and hospital characteristics (urban/rural, teaching status, size). Results: Among the overall study population of 251,259 patients, 63.8% (n=160,343; mean age: 40.9 years; female: 54.8%) were admitted into the inpatient setting and 36.2% (n=90,916; mean age: 36.9 years; female: 51.9%) had an ED visit only. Of those admitted to the inpatient setting, 19.2% (n=30,732) had an RA/ED event for any cause during the 6-month follow-up period; 16.5% (n=26,449) had an MDD-related RA/ED event and 9.7% (n=15,600) had an SI/SA-related RA/ED event. Of those with an ED visit only, 16.9% (n=15,378) had an RA/ED event for any cause during the 6-month follow-up period; 15.3% (n=13,894) had an MDD-related RA/ED event and 7.9% (n=7,182) had an SI/SA-related RA/ED event. Patients who were admitted vs. those with only an ED visit had a ~10% higher risk for all-cause RA/ED events (hazard ratio [HR]=1.09, 95% confidence interval [CI]: 1.07-1.11; p<0.001), a marginally higher risk for MDD-related RA/ED events (HR= 1.03, 95% CI: 1.01-1.05, p=0.004), and a more markedly higher risk for SI/SA-related RA/ED events (HR=1.22, 95% CI: 1.19-1.26; p<0.001). Conclusions: These results demonstrate that a significant proportion of patients presenting to the hospital with MDD and suicide ideation or a suicide attempt had readmissions or subsequent ED visits within 6 months. The risk of such subsequent events was

higher among those with an index inpatient visit after adjusting for sociodemographic and hospital characteristics, suggesting greater clinical severity among these patients.

No. 62

Vagus Nerve Stimulation (VNS) Versus Deep Brain Stimulation (DBS) Treatment for Major Depressive Disorder and Bipolar Depression: Meta-Analysis

Poster Presenter: Ali M. Khan, M.D.

SUMMARY:

Background: Patients who suffer from major depressive episodes and bipolar disorder often exhibit pharmaco-resistance. Therefore, novel treatment methodologies are being proposed to treat the disease or provide symptomatic relief. VNS and DBS are two such techniques, both of which utilize neurostimulation to achieve therapeutic relief. However, it is necessary to establish the comparative efficacies of these methods in treating MDD in patients. Objective: To assess the relative difference in the efficacy of VNS versus DBS for treatment of Major Depressive Disorder and bipolar depression and to provide evidence for the superior technique. Methods: To compare the efficacy of VNS versus DBS for the reduction of depressive symptoms in patients who meet the criteria for a major depressive episode, we conducted a meta-analysis of studies of the subject. Twenty-six studies were selected, consisting of 1160 patients who were treated with either VNS (Mean age = 47.75 years old, mean duration of illness = 22.86 years) or DBS (Mean age = 33.11 years old, mean duration of illness = 9.9 years) treatment arms and analyzed them to determine the amount of improvement in mood. The primary outcome measures were evaluated in terms of change between pre-test and post-test scores over a period of three months, as measured by HDRS and MADRS rating scales. Results: A comparison of the summary effect size produced by VNS (HDRS = 1.247, MADRS = 1.110) to that produced by DBS (HDRS = 2.063, MADRS = 1.996) seems to demonstrate that DBS is the more effective treatment. The effect size for VNS was lower than that of DBS groups, indicating that DBS is more effective than VNS. The finding is corroborated by the tests of heterogeneity; while the VNS group of studies indicated a high level of heterogeneity Vs. DBS group indicated insignificant level of heterogeneity. Conclusion: Current meta-analysis demonstrates that Deep Brain Stimulation (DBS) is a better treatment modality for Major Depressive Disorder and Bipolar Depression than Vagus Nerve Stimulation (VNS). However, as the VNS and DBS groups differed concerning the clinical profiles of the patients (both in terms of age and regarding the duration of the illness. Research studies with larger, synchronous sample sizes and control groups are required for a meta-analysis to draw a steadfast conclusion.

No. 63

Cognitive Behavior Therapy Versus Eye Movement Desensitization and Reprocessing in Patients With Posttraumatic Stress Disorder: Meta-Analysis

Poster Presenter: Ali M. Khan, M.D.

SUMMARY:

Background: Post-traumatic stress disorder (PTSD) is prevalent in children, adolescents and adults. It can occur alone or in comorbidity with other disorders. A broad range of psychotherapies such as cognitive behavioral therapy (CBT) and eye movement desensitization and reprocessing (EMDR) have been developed for the treatment of PTSD. Aim: Through quantitative meta-analysis, we aimed to compare the efficacy of CBT and EMDR: (i) relieving the post-traumatic symptoms, and (ii) alleviating anxiety and depression, in patients with PTSD. Methods: We systematically searched EMBASE, Medline and Cochrane central register of controlled trials (CENTRAL) for articles published between 1999 and December 2017. Randomized clinical trials (RCTs) that compare CBT and EMDR in PTSD patients were included for quantitative meta-analysis using RevMan Version 5. Results: Fourteen studies out of 714 were finally eligible. Meta-analysis of 11 studies (n = 547) showed that EMDR is better than CBT in reducing post-traumatic symptoms [SDM (95% CI) = -0.43 (-0.73 – -0.12), p = 0.006]. However, meta-analysis of four studies (n = 186) at three-month follow-up revealed no statistically significant difference [SDM (95% CI) = -0.21 (-0.50 – 0.08), p = 0.15]. The EMDR was also better than CBT in reducing anxiety [SDM (95% CI) = -0.71 (-1.21 – -0.21), p = 0.005]. Unfortunately, there was no difference between CBT and EMDR in reducing

depression [SDM (95% CI) = -0.21 (-0.44 – 0.02), p = 0.08]. Conclusion: The results of this meta-analysis suggested that EMDR is better than CBT in reducing post-traumatic symptoms and anxiety. However, there was no difference reported in reducing depression. Large population randomized trials with longer follow-up are recommended to build conclusive evidence.

No. 64

A Computerized Cognitive Behavior Therapy for Residual Symptoms in Major Depressive Disorder

Poster Presenter: Xiaolong Zhang
Co-Authors: Sha Sha, Xiaohan Huang

SUMMARY:

Background: Depression is one of the most significant public health problems in the world. In China, the prevalence of MDD is 6.1%, and the disease burden will rise to 7.3% in 2020. The remission rate of MDD after acute phase treatment is very law, which means most patients still suffering from residual symptoms. This study aims to develop and to test a computerized cognitive behavioral therapy to target residual symptoms in MDD. This is the first study to investigate CCBT for residual symptoms in MDD in China. Methods: The study is a randomized controlled trial. 240 MDD patients will be recruited and will be randomly assigned to: a) CCBT group vs. b) internet-based psychoeducation group. The CCBT program has 20 sessions, which contents cognitive therapy, mindfulness meditation, interpersonal therapy, relaxation music, video game training. Both interventions last for 12 weeks, and there are 6 months follow up. The primary outcome measure changes in depressive symptoms measured by the 16-item Quick Inventory of Depressive Symptomatology Self-Report Scale (QIDS-SR16). We also developed a survey to ask about the feedback and satisfactory from participants. Results: To date, 102 participants finished the intervention period, 52 in CCBT group and 50 in control group. 70.59% participants completed more than 5 sessions, 54.9% completed more than 10 sessions, 37.25% completed more than 15 sessions, and 29.41% completed more than 20 sessions. According to participants' feedback, they think cognitive reconstruction, mindfulness meditation, and relaxation music are most helpful modules. Meanwhile, negative feedbacks of the CCBT focus on technology issues (e.g., trans platform adaptation, the stability of internet connection), content (e.g., content too simple, wordiness). Discussion: This is the first clinical trial on treating residual depressive symptoms by CCBT. The compliance of the CCBT program is acceptable. Because the program is based on PC, some participants think it is not very convenient. Further adaption to other platforms such as Android and IOS need to be considered. Also, the content needs to be modified in the future to tailor individual needs. Overall, CCBT is a convenient tool to reach more patients that need standard evidence-based treatment. Due to China's large population size, an internet-based psychotherapy tool is a potential solution.

No. 65

Adapting START NOW, a Novel Psychotherapy, to Different Populations: From Corrections to Forensic Psychiatry to Opioid Use Disorder and Beyond

Poster Presenter: Robert L. Trestman, M.D., Ph.D.
Co-Authors: Albert Y. Truong, B.S., Anita S. Kablinger, M.D.

SUMMARY:

START NOW is a free, manual-guided skills training program that integrates cognitive behavior therapy, motivational interviewing, trauma-informed care, and elements of cognitive neuro-rehabilitation. Entirely available in the public domain, START NOW was originally designed for low-resource settings and as a psychotherapy for incarcerated individuals who present with mood dysregulation, impulsivity, aggression, and interpersonal discord. START NOW is currently implemented in correctional and forensic psychiatric institutions in 5 countries and in over a dozen states in the USA. We discuss the available research evaluating START NOW in various settings and the process by which START NOW is currently being adapted for other settings and patient populations. A retrospective cohort analysis of 850 patients in state prison demonstrated a significantly reduced risk of disciplinary infractions and future inpatient psychiatric inpatient days with a dose response effect (Kersten et al. 2016; Cislo and Trestman 2016). Furthermore, START NOW has been associated with reduced risk of criminal recidivism in an evaluation of a specialized alternative-to-

incarceration program for individuals with serious mental illness and co-occurring substance use disorder (Frisman et al. 2017). Supported by these studies and its generalizable skills-training content, START NOW psychotherapy continues to be adapted for different patient populations and indications. In Germany, Switzerland, and the Netherlands, START NOW is being used in a cluster-randomized, multi-center controlled trial testing the effectiveness of adapted START NOW for treating female adolescents with oppositional defiant disorder and/or conduct disorder in youth welfare settings. At Virginia Tech Carilion, START NOW has been adapted for treating opioid use disorder (OUD); a hybrid cluster-randomized and individual randomized clinical trial investigation is evaluating START NOW's effectiveness for treating OUD when combined with buprenorphine/naloxone medication-assisted treatment. Of the first 40 participants out of an enrollment goal of 120: 66% of participants are female, average age is 41 years, and 94% are Caucasian. In addition to tracking weekly urine drug screens, standardized assessments utilized before, during, and after psychotherapy intervention will measure participants' impulsivity, aggression, interpersonal problems, and rates of delayed discounting, defined as the decline in value of a reward with temporal delay to its receipt. A subset of the participants will undergo delayed discounting tasks with functional magnetic resonance imaging in order to elucidate the neural correlates associated with intertemporal choices before and after psychotherapy. In this poster, we explore implementation science methodology by which START NOW psychotherapy can be adapted for, applied to, and evaluated empirically in different patient populations, and we provide current data in ongoing clinical trials.

No. 66

Challenges Involved in Using Interpreters for Psychotherapy

Poster Presenter: Neeru Madan

SUMMARY:

According to the US census, more than 25 million people in the U.S. speak English less than "very well." With more non-English speaking clients seeking psychotherapy and a dearth of bilingual clinicians, therapists have to rely on language interpreters to offer treatment to non-English speakers. There is very little known about how the use of interpreters affects the process or the outcome of therapy (e.g. Miller et al, 2005). This poster will highlight the potential impact of interpreters on the psychotherapy process along with some case examples. Building trust with clients who speak a different language is often a challenging process and use of interpreters in therapy has its pros and cons. Although therapists prefer the interpreters to be "almost invisible" in sessions, interpreters are "quite real" for clients as evidenced by their body language and eye contact. Clients may find it easier to trust interpreters from the same culture and form a strong alliance with interpreters even before they form an alliance with the therapist. Interpreters can sometimes help the therapists in understanding the cultural context of the clients' lives. In the case of a 50-year-old Hispanic male who found "talk therapy" culturally alien, it helped to have a supportive interpreter who normalized the experience of seeking help for mental health issues. The presence of a third person in the therapy room is often an uncomfortable experience for therapists, as it may make them feel nervous or self-conscious. Sometimes, an interpreter may try to summarize clients' experience while omitting important content that can deprive the therapist's access to nuances of the clients' experience. In the case of a 69-year-old Hispanic woman, the therapist felt frustrated when an overenthusiastic young interpreter continued to ask clarifying questions until he elicited the "right response" from the client, while the therapist was not able to participate in this critical exchange. Interpreters can often be unfamiliar with the process of psychotherapy and may need additional training to participate in therapy sessions. They may also adversely affect the therapeutic progress when the clients are unable to express certain feelings, since they can only communicate with the therapist "indirectly." For example, a 57-year-old Hispanic woman decided to terminate after several sessions in which she was left feeling confused and anxious due to a mismatch between the therapist's facial expressions and interpreter's words. However, she did not feel comfortable discussing her dissatisfaction with the interpreter which would have required her to communicate through the

same interpreter. In conclusion, it is essential for both therapists and interpreters to be aware of the above-mentioned factors and address them appropriately using adequate training and supervision to effectively facilitate therapy with non-English speaking clients.

No. 67

Evaluation of Consistency of Reports of the Behavioral and Emotional Problems of Adolescents in a Combined Adolescent and Parent DBT Group

Poster Presenter: Britney Galantino, M.D.
Co-Authors: Shane Burke, M.D., Pooja Agarwal, Tiffany Chanell Abrego, Ph.D.

SUMMARY:

Background: Dialectical behavior therapy is an evidence-based treatment modality for emotional and behavioral problems presenting in adolescents. Self-report measures are frequently used to examine the severity of emotional and behavioral problems in adolescents and to quantify the degree of improvement throughout treatment. Prior studies by Achenbach indicate that self-report measures collected between parents and adolescents are inconsistent in reporting of emotional and behavioral problems of the adolescent, such as in using the Child Behavior Checklist (Achenbach, T. 1987). The aim of this study is to examine the level of consistency between adolescents and their parents enrolled in a dialectical behavior therapy group on a standardized adolescent measure of emotional and behavioral problems of the adolescent. Methods: Patients and their parents (n = 20) were recruited from an ongoing dialectical behavior therapy group to complete a standardized adolescent measure of four areas of interest: confusion about self, emotion dysregulation, impulsivity, and interpersonal chaos (Rathus et al, 2015). Their ranking of the severity of symptoms in each of these categories were calculated and given a numerical value in each of the four categories. IRB approval was obtained. Using a t-test, each adolescent's score in each category was compared to their parent's score for the adolescent in each category to evaluate the degree of consistency in reporting between parent and adolescent. Results: Regarding the four areas of interest, there was no statistically significant difference between parents and adolescents. However, in terms of emotion regulation, results were approaching statistical significance (p-value of 0.185). Conclusion: Although there was no statistical difference between both groups in all four areas of interest, results were approaching statistical significance in terms of emotion regulation. In a patient population with borderline personality traits, this underscores the difficulty of treating patients largely due to their lack of insight.

No. 68

Lithium-Induced Bradycardia: Effect of Lithium on Sinoatrial Node Function in a Patient With Syncope

Poster Presenter: Britney Galantino, M.D.
Co-Authors: Amanda Vastag, M.D., Therese Woodring

SUMMARY:

CASE: A 69-year-old woman with history of bipolar disorder was admitted from the emergency department with syncope and frequent falls for the past 3-4 months. Her dose of lithium had recently been modified from 300 mg twice daily to 600 mg nightly. Initial workup found serum lithium levels above therapeutic range, and EKG showed sinus bradycardia with junctional escape. As lithium was held, serum lithium levels decreased and bradycardia improved. The patient was discharged without symptoms on a reduced dose of 300 mg lithium daily. However, she was readmitted for syncope 8 months later with sub-therapeutic lithium levels. Lithium was discontinued, and the patient was started on divalproex titrated to 500 mg daily. Despite this adjustment, her heart rate remained significantly lower compared to baseline on lithium 300 mg twice daily (55 vs. 67 beats per minute; $P < 0.0001$). DISCUSSION: EKG abnormalities including T-wave inversion and sinoatrial node dysfunction are among the adverse effects of chronic lithium therapy [1]. At nodal cardiomyocytes, lithium is believed to reduce pacemaker automaticity by competing with sodium for slow voltage-gated sodium channels and attenuating the membrane hyperpolarization required for their activation [2]. Previous cases have described sinus bradycardia with serum lithium levels in toxic as well as therapeutic ranges, typically improving after discontinuation of lithium [3-6]. In our patient, sinus bradycardia persisted after the

drug was stopped. This case suggests more lasting alteration of cardiomyocyte function and warrants increased attention to heart rate in patients on chronic lithium therapy.

No. 69

Specifying the 'Not Otherwise Specified': The Ability of Screening Tools to Differentiate Bipolar Subgroups in an Inpatient Population

Poster Presenter: Sarah Hernandez, B.S.
Co-Authors: Sarah Beasley, M.D., Haitham Salem, M.D., Ph.D., Ana Ruiz, B.S., Miranda Taing, Melissa K. Allen, D.O., Scott Lane, Ph.D., Teresa Pigott, M.D.

SUMMARY:

Background: Bipolar disorder not otherwise specified (BD-NOS) is a diagnosis used to describe Bipolar disorder (BD) with manic, mixed or hypomanic episodes that are too short to fit within established sub-types, and is sometimes referred to as a sub-threshold BD. Given the frequency of co-occurring substance abuse, some authors identify it as a dual diagnosis disorder with an underlying substance abuse pathogenesis [1]. While the diagnostic utility of the patient-rated Borderline Personality Questionnaire (BPQ) is controversial [2], prior work has demonstrated that total BPQ score > 56 correlated with an overall diagnostic accuracy of 85% for borderline personality disorder (BPD). The present study examined the potential role of using each of the 9 BPQ subscales as predictors of the severity in bipolar disorder (BD) in an inpatient setting. Methods: This retrospective study analyzed medical records from 678 hospitalized patients with a primary diagnosis of BD by DSM-IV-TR criteria admitted between July 2011 and July 2018. All subjects were given the BPQ within 24 hours of admission. Patients were categorized into 2 subgroups: a general BD subgroup (manic/dep/mixed) (n=471), and a BD not otherwise specified (NOS) subgroup (n=207). Statistical analysis using bivariate and multivariate tests were conducted to investigate relationships among BD subtypes and the BPQ subscales controlling for the covariates of age, gender and race. Length of stay, 30 day readmissions and NIDA scores were also analyzed (not shown). Results: Within the BD-NOS group, 16.4% (n=34/207), 19 females and 15 male, scored =56 on the BPQ, consistent with a diagnosis of BPD. The mean age was 33.04 (SD ± 10.6). The BD NOS group scored higher (32.68 ± 19.5) on the overall BPQ scores relative to the general BD group (29.35 ± 18.3), a statistically significant difference, p = 0.033. Comparing each of the 9 subscales of the BPQ separately showed that the BD-NOS group had significantly higher mean scores than the general BD group on 3 out of the 9 BPQ subscales: Suicide/Self-mutilation (2.91± 2.2 vs 2.52 ± 2.2, p=0.034), Intense anger (4.17 ± 3.2 vs 3.55 ± 2.9, p=0.012), and Emptiness (3.98 ± 3.2 vs 3.24 ± 2.9, p=0.003). Conclusion: Our preliminary data suggests that the presence of co-existing BPD in acutely hospitalized bipolar disorder patients may be helpful in differentiating between general BD and BD-NOS subtypes. Further studies are warranted to replicate the findings and investigate the other potential benefits of BPQ in early detection and possibly prevention programs in addition to its correlation with NIDA screening. Limitation: The study population was limited to a high acuity inpatient sample which may limit generalizability of the results to the broader BD population. Additionally, as the BPQ is a self –report measure the accuracy and reliability of the BPQ warrants further examination.
Keywords: Bipolar disorder, borderline personality, bipolar NOS, dual diagnosis

No. 70

The Use of Borderline Personality Questionnaire as a Predictive Tool for Length of Stay Among Bipolar Inpatient Population

Poster Presenter: Sarah Beasley, M.D.
Co-Authors: Haitham Salem, M.D., Ph.D., Sarah Hernandez, B.S., Justin P. Pesek, Elaheh Ashtari, Ana Ruiz, B.S., Teresa Pigott, M.D.

SUMMARY:

Background: To date, the role of the patient-rated Borderline Personality Questionnaire (BPQ) as a diagnostic tool in clinical populations has been controversial [1-2]. However, previous studies identified total BPQ score > 56 correlates with an overall diagnostic accuracy of 85% for borderline personality disorder (BPD). The current study used the BPQ to examine the potential role of co-existing Borderline Personality traits on severity and Length of stay (LOS) in inpatients diagnosed with bipolar disorder (BD). Methods: This retrospective study

analyzed electronic medical records from 714 (375 female; 339 male) inpatients with a primary diagnosis of BD consistent with the DSM-IV-TR admitted July 2011 - July 2018. All subjects completed the BPQ within 24 hours of admission. Statistical analysis using t-tests, chi square, ANOVA and regression analyses was conducted to investigate relationships between BD severity, LOS and the BPQ, controlling for covariates of age, gender, race, and the total number of hospital admissions. Results: Among the sample, the mean total BPQ score was 30.63 (SD ± 18.7) which is higher than the US national mean 21.06 (SD ± 12.28); 13.88% (n=99/714) scored =56 on the BPQ consistent with a diagnosis of BPD. ANOVA tests identified a significant difference ($p < 0.05$) between the depressive BD subgroup (38.5 ± 2.25) who scored higher on the BPQ compared to the manic BD subgroup (24.8 ± 1.186). Regression analysis revealed the presence of BPD among BD patients predicted shorter LOS (B= -0.023, p=0.03). Examining each of the 9 subscales of the BPQ against the LOS revealed 4 subscales had a significant negative correlation with LOS including Affective instability (B= -0.167, p=0.003), Relationships (B= -0.188, p=0.035), Suicide/Self-mutilation (B= -0.285, p=0.001), Intense anger (B= -0.129, p=0.046). Suicide/self-mutilation scale had the highest prediction value (F=10.498, p=0.001). Other covariants did not yield significant differences. Conclusion: Preliminary data suggests the presence of co-existing BPD, as identified by the BPQ, among inpatients diagnosed with BD may predict LOS. Future studies are warranted to replicate the findings and investigate other potential benefits of BPQ in early detection and prevention programs. Limitation: The high-acuity inpatient sample limits generalizability. The BPQ is a self-report measure and individuals with BD often experience known cognitive impairments, which may impact the accuracy and reliability of the BPQ results. Although an elevated BPQ score has been positively associated with a diagnosis of BPD, systematic diagnostic interviews were not conducted to assist with integrating contextual factors (e.g., interpersonal dynamics, psychosocial functioning/stressors, etc.) in diagnostic formulations. Thus, it is plausible some subjects with elevated BPQ scores may not have met sufficient diagnostic criteria for BPD. Keywords: Bipolar disorder, Borderline personality, Length of stay

No. 71

Co-Occurring Bipolar Disorder and Borderline Personality: State or Trait?

Poster Presenter: Brandi Karnes, M.D.
Co-Authors: Erin Elizabeth Andrews, Haitham Salem, M.D., Ph.D., Ana Ruiz, B.S., Sarah Hernandez, B.S., Fei Cao, M.D., Ph.D., Elaheh Ashtari, Teresa Pigott, M.D.

SUMMARY:
Background: The Borderline Personality Questionnaire (BPQ)1 is an 80-item true/false self-report measure comprised of nine subscales corresponding to the nine DSM-IV BPD criteria including impulsivity (I), affective instability (AI), abandonment (AB), unstable relationships (R), self-image (S-I), suicide/self-mutilation (SSM), emptiness (E), intense anger (IA), and quasi-psychotic states (QP). A total BPQ score > 56 correlated with an overall diagnostic accuracy of 85% for BPD in previous literary reports. The current study examined the potential association between each of the BPQ subscales and symptom severity in patients hospitalized for Bipolar I Disorder (BD). Methods: Data from 714 patients admitted to free-standing academic psychiatric facility with a primary diagnosis of BD by DSM-IV-TR criteria between July 2013 and July 2018 completed the BPQ within 72 hours of admission. Statistical analysis using t-tests, chi square and ANOVA tests were used to examine the prevalence of BPD in the BP patients as well as to investigate the potential relationship between BD severity and each the BPQ subscales. Results: 13.88% of the BP inpatients also met criteria for BPD based on a total BPQ score =56. ANOVA comparing mood states revealed that Bipolar inpatients admitted in acute depressive episodes had significantly higher mean scores on 7 of the 9 BPQ subscales ($p<0.05$) in comparison to the Bipolar inpatients admitted in acute manic episodes. Specifically, the depressed BP inpatients had significantly greater severity than the manic BP inpatients as measured by the BPQ subscales of Affective Instability (6.38 ± 3.3 vs 4.21 ± 3.2), Abandonment (4.88 ± 3.4 vs 3.15 ± 2.8), Suicide/Self-mutilation (3.43 ± 2.3 vs 2.02 ± 2.0), Self-Image (3.6 ± 2.6 vs 1.8 ± 1.9), Emptiness (4.78 ± 3.2 vs 2.53 ±

2.6), Intense Anger (4.65 ± 3.1 vs 3 ± 2.6), and Quasi-Psychotic (2.71 ± 1.9 vs 1.76 ± 1.7). Conclusion: This preliminary data suggests that relatively few Bipolar inpatients (<14%) meet full threshold criteria for BPD but that Bipolar patients admitted during depressive episodes endorse more borderline traits than those admitted during manic episodes.

No. 72

Post Lithium Delirious Mania in Patients With Bipolar Disorder

Poster Presenter: Tzvetelina D. Dimitrova, M.D.

SUMMARY:

Delirious Mania was first described by Calmeil in 1832 as a potentially lethal form of acute psychosis, disorientation, emotional lability and hallucinations. A full understanding of what constitutes Delirious Mania is still lacking. There is no such diagnosis in DSM. Our interest in the condition was precipitated by 3-cases on our service in a course of a year. A subsequent literature review on PubMed yielded primarily case publications. Considered rare, Delirium has high incidence in hospitalized Bipolar patients (35.5%). The incidence of Delirious Mania is imprecise. The exact pathophysiological mechanisms implicated in the development of Delirious Mania are unknown; however likely acetylcholine is the primary neurotransmitter of the ascending reticular activating system (RAS) and the resulting hypocholinergic state leading to reduced awareness and orientation. The other major neurotransmitter implicated in the state is dopamine leading to perceptual disturbances. There is dysregulation of the circadian rhythm, associated with sleep abnormalities. Primary symptoms like waxing-waning level of consciousness, echolalia, echopraxia, various symptoms of psychosis and mania, along with some medical and neurological rule-out complicating the presentation will be discussed through the three cases on the service and the literature review. All three cases were long-term Lithium treated patients who developed chronic kidney disease as a result of that. They were subsequently tried on a plethora of antipsychotics and gradually developed complications of the treatment, both medical and psychiatric, and ultimately delirious mania. One of the patients was treated with ECT and recovered and remained on maintenance ECT with excellent results, the other one received only five initial sessions of ECT with incomplete response. The family opted to rechallenge the Veteran with Lithium where she became encephalopathic at borderline therapeutic levels of Lithium and delirious again and was institutionalized. The third patient recovered with medication management alone. The diagnosis of Delirious Mania should be considered in every patient with bipolar disorder whose presentation is complicated by worsening clinical track of delirium and psychosis. Work includes the general, CBC-diff, CMP, UA, U-tox, along with ruling out space occupying lesions with CT/MRI, other neurological conditions like seizures (EEG), encephalitis, metabolic abnormalities like B-12 deff, folic acid, infectious diseases (HIV, syphilis), etc. Delirious Mania can have a benign or malignant course and depending on the presentation, can be treated with high doses of benzodiazepines or ECT. Recognizing the condition early on the paramount for the successful recovery of the patient as Delirious Mania even today has a high mortality rate.

No. 73

Evaluation of Factors Associated With Medication Adherence in Patients With Bipolar Disorder Using a Medication Event Monitoring System

Poster Presenter: HyunChul Youn
Co-Authors: Seung Hyun Kim, Minjung Kim

SUMMARY:

Background: The Medication Event Monitoring System (MEMS) is known to be an accurate method of assessing medication adherence. We aimed to measure MEMS adherence in patients with bipolar disorder and evaluate factors associated with MEMS adherence and 6-month changes in MEMS adherence. Methods: Fifty participants with bipolar disorder were recruited. Medication adherence of each participant was assessed using the MEMS, a self-report, pill count, and clinician rating. MEMS adherence was re-assessed after 6 months. Patient demographics were recorded and clinical assessments (the Clinical Global Impressions-Severity, Brief Psychiatric Rating Scale [BPRS], Young Mania Rating Scale, Hamilton Rating Scale for Depression, Multidimensional Scale of Perceived Social Support, Drug Attitude Inventory, Mood

Disorder Insight Scale, and Udvalg for Kliniske Undersøgelser Side Effect Rating Scale [UKU-SERS]) were conducted. Data were analyzed using Kappa statistics and Pearson's correlation analysis. Results: Adherence and the rate of adherence as assessed by the MEMS were lower than other measures. MEMS adherence correlated more closely with pill count than with the other 2 adherence measures. MEMS adherence was negatively associated with the length of hospital stay at recent admission, prescription duration, and the BPRS affect subscale score. The 6-month changes in MEMS adherence were positively associated with attitude toward drugs and negatively associated with weight gain assessed by UKU-SERS. Conclusions: These findings may assist clinicians in the assessment and enhancement of medication adherence in patients with bipolar disorder and consequently may be useful in the treatment and prevention of recurrence of bipolar disorder.

No. 74

High-Fructose Corn Syrup Consumption in Adolescent Rats Causes Bipolar-Like Behavioral Phenotype With Hyperexcitability in CA3-CA1 Synapses

Poster Presenter: Baris Alten, M.D., Ph.D.

SUMMARY:

Children and adolescents are the top consumers of high-fructose corn syrup (HFCS) sweetened beverages. Even though the cardiometabolic consequences of HFCS consumption in adolescents are well known, the neuropsychiatric consequences have yet to be determined. Here, adolescent rats were fed for a month with 11% weight/volume carbohydrate containing HFCS solution, which is similar to the sugar-sweetened beverages of human consumption. The metabolic, behavioural and electrophysiological characteristics of HFCS-fed rats were determined. HFCS-fed adolescent rats displayed bipolar-like behavioural phenotype with hyperexcitability in hippocampal CA3-CA1 synapses. This hyperexcitability was associated with increased presynaptic release probability and increased readily available pool of AMPA receptors to be incorporated into the postsynaptic membrane, due to decreased expression of the neuron-specific a3-subunit of Na+/K+-ATPase and an increased ser845-phosphorylation of GluA1 subunits of AMPA receptors respectively. TDZD-8 treatment was found to restore behavioural and electrophysiological disturbances associated with HFCS consumption by inhibition of GSK-3B, the most probable mechanism of action of lithium for its mood-stabilizing effects. This study shows that HFCS consumption in adolescent rats led to a bipolar-like behavioural phenotype with neuronal hyperex- citability, which is known to be one of the earliest endophenotypic manifestations of bipolar disorder. Inhibition of GSK-3B with TDZD-8 attenuated hyperexcitability and restored HFCS-induced behavioural alterations.

No. 75

Alteration of Plasma Dopamine-ß-Hydroxylase Activity in Bipolar Disorder and Major Depressive Disorder

Poster Presenter: Qijing Bo
Lead Author: Chuanyue Wang
Co-Author: Zuoli Sun

SUMMARY: Objectives: Dopamine-ß-hydroxylase (DßH) is an enzyme which converts dopamine (DA) to norepinephrine (NE), a key neurotransmitter in mood disorders, such as major depressive disorder (MDD) and bipolar disorder (BD). The aim of this study was to explore the role of DßH in modifying the vulnerability to MDD and BD. Methods: Plasma DßH activity was analyzed in 104 patients with MDD, 101 patients with BD in non-manic period, and 160 healthy controls by high performance liquid chromatography (HPLC). Mood was assessed using the Young Mania Rating Scale (YMRS), Hamilton Depression Scale (HAM-D), Hamilton Anxiety Scale (HAM-A), and Patient Health Questionnaire-9 (PHQ-9). Meanwhile, the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) was used to assess neurocognitive function of enrolled subjects. A Wechsler Adult Intelligence Scale brief form was utilized to evaluate intelligence quotient (IQ). Results: We found that the plasma DßH activity was significantly decreased in patients with BD, not MDD, compared with healthy controls ($p = 0.005$). However, plasma DßH activity showed slight, not significant reduction in patients with BD compared with patients with MDD. In addition, significant negative correlations were found between DßH activity and HAM-D scores ($r = -0.278$, $p = 0.005$), HAM-A scores ($r = -0.272$, $p = 0.006$) or

PHQ-9 scores (r = -0.259, p = 0.032) in BD. However, there was no correlation in DßH activity and cognitive function in patients with BD. Contrary to BD, no significant association was found between plasma DßH activity and mood assessment scores or cognitive function in patients with MDD or in healthy controls. Conclusion: Our data suggest that patients with BD have lower plasma DßH activity than healthy controls, and this decreased DßH activity has a strong associate with symptom severity in BD. The present study provides evidence that BD is associated with decreased levels in circulating DßH activity.

No. 76

Valproate Acid (Depakote) Induced Hyperammonemic Encephalopathy in Pediatric Population

Poster Presenter: Vijay Chandran, M.D., M.B.A.
Co-Author: Zaki Ahmad, M.D.

SUMMARY:

A 17 year old girl brought in by police to ER department with chief complaint of altered mental status. Upon asking for identification, patient mumbles incoherently. She is not oriented for time and place. The patient complained of diminished short-term memory, confusion, disorientation, hypersomnia and blurred vision for 2 to 3 weeks. Lab results are unremarkable. Her past medical history was significant for Obsessive compulsive disorder and bipolar disorder. She denied any recent alcohol intoxication. Her prescribed medications included VPA 1,500mg/day and Fluovoxamine 400mg BID. Patient was on VPA 8 months prior to this admission. Patient reports one month before this admission, her VPA was increased from 1,000mg to 1,500mg and her PCP was not aware of this increase. Physical exam is unremarkable while she is in ER, except her speech was slurred and her responses were sluggish. In the ER comprehensive metabolic panel and hepatic panel were within normal limits. Her VPA level was 120mcg/mL (normal is 50 to 100), and her ammonia level was 186mcg/L (normal is 10 to 47). Emergency physician decided to keep her couple days for monitoring her VPA and Ammonia level, VPA was discontinued, and the next day her VPA level was 110mcg/mol, and her ammonia level was 82mcg/L. And the next day, her VPA level normalized to 36mcg/mol and her ammonia normalized to 42mcg/mol, and her mental status improved. And the next day after, her mental status totally improved. In-house psychiatrist decided to discharge her, and VPA was discontinued and replaced with Gabapentin and Topiramate, and followed up as outpatient at her PCP office. Clinical Findings: Patients with VHE present with varying degrees of cognitive and behavioral dysfunction. With respect to drug-drug interactions, other anticonvulsants may potentiate the effects of VPA. Phenobarbital and phenytoin may increase ammonia levels in patients taking VPA, mechanism will be discussed under Pathophysiology. Topiramate has been shown to inhibit the urea cycle and glutamine synthetase activity, both attributed into development of VHE. Laboratory findings: VPA levels may be normal and don't necessarily correlate with the degree of hyperammonemia or the severity of the symptoms. Treatment: L-carnitine has shown to reduce mortality in patients with severe VPA-induced hepatotoxicity, and also in reducing ammonia levels, improving symptoms of hperammonemia. It may be given orally or IV at the dose of 50 to 100mg, and is generally safe. Mechanism of action of L-Carnitine, L-carnitine is essential for the transfer of long-chain fatty acids from the cytoplasm to the inner mitochondrial membrane, thereby facilitating mitochondrial energy metabolism. Pathophysiology: VPA inhibits the activity of carbonyl phosphate synthetase one, thus hindering the excretion of ammonia. Conclusion: The use of VPA will often cause VHE, physicians and clinicians should be aware of possible cause of AMS.

No. 77

Impulsivity Is Associated With Suicide Attempts, Hospitalizations and Sexual Prevention Strategies in Brazilian Patients With Bipolar Disorder

Poster Presenter: Luiz Henrique Costa Neto
Lead Author: Joao Paulo Nascimento
Co-Authors: Dhynne Kelley Lima de Menezes, Aliny Hellen Lima Pinheiro, André Luis de Castro Gadelha, Lídia Mara Sousa da Cunha, Emanuela Araújo da Silva, Luísa Bisol, Fabio G. Souza, M.D.

SUMMARY:

Background: Several studies show that impulsivity is related to Bipolar Disorder (BD). The Barratt

Impulsiveness Scale (BIS-11) is an instrument widely used to assess it. This scale is based on three dimensions of impulsivity: 1) attentional; 2) motor and 3) by non-planning. Objectives: To examine how patients with high scores in BIS-11 differ from those with low scores in the total BIS-11 and in these three different aspects of impulsivity in patients with BD. Methods: 46 individuals (M=15; F=31) with BD followed by the Psychiatric Service of Walter Cantídio University Hospital of the Federal University of Ceará in Fortaleza - Brazil were screened. A questionnaire about sociodemographic data, psychiatric history and the Barratt Impulsiveness Scale (BIS-11) were applied. The cut-off point considered for total score BIS-11 was 70 and for each dimension (attentional, motor and by non-planning) the cut-off was 30. Groups were defined as follows: those above 70 in total scale and 30 in each subscale were compared to those scoring below 70 and 30. Data were analyzed with SPSS version 22 using pairwise comparisons (chi-square). A statistically significant result was considered if $p<0.05$. The research was approved by the Walter Cantídio University Hospital Ethics Committee. Results: Patients with higher scores in total BIS-11 attempted suicide more frequently than those with lower scores [62.5% and 29.6%, respectively (x²= 4.5; p=0.03)]. Interestingly, patients with lower impulsivity in total BIS-11 had more hospitalizations than those patients with higher scores [58.3% and 22.2%, respectively (x²=5.5; p=0.02)]. In relation to sexual preventive strategies, a majority of 90% of patients with lower scores in the non-planning subscale used condom, while only 10% of higher scores patients have used it (x²=7.2; p=0). There were no significant differences in these two groups related to the attentional and motor dimensions of BIS-11. Conclusion: The differences found in the total BIS-11 indicate that patients with higher scores attempted more suicide, which means the impulsivity should be evaluated systematically in BD. The finding that lower hospitalization rates were observed in the higher impulsive patients may indicate that patients with high impulsivity are less prone to seek proper professional help, especially in the acute phase. The use of condom was neglected in patients with higher scores in the non-planning subscale, which may highlight that sexual education is needed to prevent STI and non-planned pregnancies. Limitations: This is a transversal study with a small sample size and it has a skewed distribution towards female gender.

No. 78

Delirious Mania Versus Lithium Toxicity: A Diagnostic Challenge

Poster Presenter: Maureen Cassady, M.D.
Co-Authors: Marissa A. Flaherty, M.D., Mark Mollenhauer

SUMMARY:
Introduction Delirious mania is syndrome which includes symptoms of mania, delirium, and psychosis, not caused by underlying toxicities or medical illness, and characterized by a rapid onset and often associated with symptoms of catatonia. Lithium is an effective and commonly used treatment of bipolar disorder, however, use can be limited by well-characterized adverse effects and a narrow therapeutic index. Case Presentation A 22 year old African American male, with a past psychiatric history of seasonal affective disorder, presented to a hospital after arrest for trespassing, after reportedly believing that he had secured a new job at a road-side gym and refusing to leave the premises. History revealed approximately one month of uncharacteristic behavior, reportedly “feeling very driven,” increased involvement in projects, new grandiosity, poor sleep, and reports of responding to internal stimuli. This was thought to be a likely first presentation of mania with psychotic features. He was started on Lithium and Risperidone 2 mg total daily. Lithium was titrated to a level of 1.0 on 600 mg every morning and 900 mg nightly. Initially, he had an improvement in symptoms, with decreased racing thoughts, less grandiose ideas, better organization, and improved sleep. However, he experienced symptom decompensation starting in the second week of hospitalization. He was noticed to be more dysphoric, with increased mood lability, and over the course of days progressed to a return of symptoms of mania. His symptoms peaked with waxing and waning attention, disorientation, posturing, and episodes of sedation alternating with episodes of increased energy and excitement. Lithium level drawn at this time was found to be 1.5, and he was sent to a general hospital for hydration and management. Lithium was discontinued, and

these acute symptoms diminished and resolved quickly on return to the psychiatric hospital with treatment with only antipsychotic medication. Discussion: This case illustrates the complexity of making a diagnosis of delirious mania, and also highlights the importance of a thorough workup for underlying causes. In this case, it is likely that these symptoms would have persisted without a diagnosis and a targeted medical intervention. This poster will also review the diagnostic challenge of differentiating between delirious mania, catatonia, and bipolar mania.

No. 79

Treating Tardive Dyskinesia With Parkinsonianism Treatment Complication: A Case Report and Brief Review

Poster Presenter: Edward Victor Singh, M.D.

SUMMARY:

Introduction: The pathophysiology of tardive dyskinesia (TD) is not fully understood. It is believed to be caused by dopamine receptor hypersensitivity and/or an imbalance between dopamine type 1 and type 2 receptors mediate effects in the basal ganglia. Other possibilities for the cause of TD include loss of striatal interneurons in the basal ganglia or the chronic blockade of D2 receptors leading to an increase in glutamate release and excitotoxic destruction of striatopallidal GABA neurons. TD appears after exposure to a dopamine antagonist and can be exacerbated after a reduction/ discontinuation in antipsychotic drug dose or switching to a less potent antipsychotic drug. TD may present as dyskinesia, athetosis, dystonia, chorea, and/or tics affecting the orofacial, neck, truck or limbs. Velbenazine (Ingrezza) has been used to treat TD; it is a vesicular monoamine transporter 2 inhibitor (VMAT2), which act centrally by depleting dopamine storage in presynaptic vesicles. Methods: 36- year- old African American women with a past psychiatric history of bipolar disorder I, who was initially seen at our clinic on December 2016. She was stable for 1.5 years on Invega sustenna 156 mg IM monthly. On 2/27/18 she expressed distress regarding her shoulder and mouth movement (significant oraofacial movements, neck, upper extremities and truncal movements). She states that these symptoms started and progressed while on her current medication. AIMS scale at that time was 13. Results: Invega sustenna 156 mg was discontinue on 4/25/18 and the patient was started on Ingrezza 40 mg PO DAILY for 1 week and increased to 80 mg PO DAILY thereafter. After two weeks (5/8/18) of 80 mg PO DAILY her symptoms resolved, with residual tremors in the patient's arm and mouth, with only mild solamnace with the medication. On 5/29/18 her TD was controlled however patient displayed slow movement and parkinsonian side effect (Masked face, cogwheel rigidity). Patient stated "I can't move." Patient was started on Rexulti 1 mg PO DAILY, and EPS side effect were monitored. After a 1 week follow up patient stated she ran out of ingrezza 80 mg and her TD symptoms came back, however her parkinsonian side effects improved. Attempts to address these side effect included, starting amantadine 100 mg PO BID (no effect), Starting cogentin 1 mg PO BID (Worsened TD), decreasing Ingrezza to 40 mg (TD worsened) and alternate day dosing (2 days on and 1 day off). Discussion: Vesicular monoamine transporter 2 is a presynaptic protein that regulates the packaging and release of dopamine from neuronal vesicles into the synapse. Velbenazine (ingrezza) is a vesicular monoamine transporter 2 (VMAT2) inhibitor which acts to suppress central dopaminergic systems. Dopamine depletion from the basal ganglia, which includes the substantia nigra, striatum, globus pallidus, subthalamic nucleus, and thalamus, leads to bradykinesia, a parkinsonian sign.

No. 80

Cariprazine Efficacy in Patients With Bipolar Depression and Concurrent Manic Symptoms: Post Hoc Analysis of 3 Randomized, Placebo-Controlled Studies

Poster Presenter: Stephen Michael Stahl, M.D., Ph.D. Co-Authors: Trisha Suppes, M.D., Ph.D., Willie R. Earley, M.D., Mehul Patel, Roger S. McIntyre, M.D.

SUMMARY:

Background: Cariprazine, a dopamine D3 preferring D3/D2 receptor and serotonin 5-HT1A receptor partial agonist, is approved for the treatment of schizophrenia (1.5-6 mg/d) and bipolar mania (3-6 mg/d) in adults. Cariprazine has demonstrated efficacy vs placebo (PBO) in 3 phase 2/3 studies of patients with bipolar depression (NCT01396447,

NCT02670538, NCT02670551). These analyses investigated the efficacy of cariprazine in patients with bipolar depression and concurrent manic symptoms (mixed features). Methods: Data were pooled from 3 randomized, double-blind, PBO-controlled trials in patients with bipolar I disorder and a current major depressive episode. Concurrent baseline manic symptoms were identified using a Young Mania Rating Scale total score cutoff >=4. Efficacy outcomes were assessed for cariprazine 1.5 mg/d and 3 mg/d groups vs PBO and included least squares (LS) mean change from baseline to week 6 in Montgomery-Åsberg Depression Rating Scale (MADRS) total score, Hamilton Depression Rating Scale (HAMD17) total score, and Clinical Global Impressions-Severity (CGI-S) score, analyzed using mixed-effects model for repeated measures. MADRS response (>=50% improvement), MADRS remission (total score <=10), and CGI-S remission (score <=2) were analyzed using logistic regression with last observation carried forward. Results: A total of 808 (58.4%) of 1383 patients had bipolar depression and concurrent manic symptoms. For MADRS score change, the LS mean difference (LSMD) vs PBO was statistically significant in favor of cariprazine 1.5 mg (-2.5, P=.0033) and 3 mg (-2.9, P=.0010) in patients with manic symptoms and for cariprazine 1.5 mg (3.3, P=.0008) in patients without manic symptoms. Similarly, the LSMD vs PBO for HAMD17 total score change was significant for cariprazine 1.5 and 3 mg (-1.9 and -1.5; P<.05 both) in patients with manic symptoms and for cariprazine 1.5 mg (-2.2, P=.0042) in patients without manic symptoms. On CGI-S score change, the LSMD vs PBO was significantly greater for cariprazine 1.5 and 3 mg, respectively, in patients with manic symptoms (-0.24 and -0.25; P<.05 both) and in patients without manic symptoms (-0.40 and -0.26; P<.05 both). Rates of MADRS response and remission, respectively, were significantly greater for cariprazine 1.5 mg (46.6% and 31.3%; P<.05 both) and 3 mg (49.8% and 31.4%; P<.01 both) than PBO (37.8% and 21.0%) in patients with manic symptoms and for cariprazine 1.5 mg (45.2% and 32.3%; P<.05 both) vs PBO (33.3% and 20.7%) in patients without manic symptoms. Rates of CGI-S remission were significantly greater than PBO for all cariprazine doses in both patient subgroups (P<.05 all). Conclusion: In a post hoc analysis of data from patients with bipolar depression and concurrent manic symptoms, significant improvement in depressive symptoms was demonstrated for cariprazine vs PBO, suggesting that cariprazine may be an appropriate treatment option for this patient population. Supported by Allergan plc.

No. 81

Electroconvulsive Therapy Impact on Suicidal Behavior in Refractory Bipolar Depression: A Case Report

Poster Presenter: Adriana Bueno
Co-Authors: Ana Cecilia Lucchese, Guilherme Abdo, Luciana Sarin, Acioly Lacerda

SUMMARY:

Introduction: Bipolar disorder (BD) is one of the psychiatric conditions most related to suicide attempts and it is important to recognize these quickly in order to prevent suicide and suicidal attempts. Electroconvulsive therapy (ECT) has been considered one of the most effective treatments for refractory bipolar depression, especially in acute phase of chronic patients, which are associated with most cases of suicide attempts. In this report we described a very successful case of reduction of suicide attempts, independent of depressive symptoms improvement. Case report: a 41-year-old female patient was referred to an university's mood disorders outpatient unit from an ER service after been admitted because of 3 recent suicide attempts and been diagnosed with BD, severe depressive episode. Mood symptoms began when she was 17 years old, during postpartum period of her first child, with sadness, irritability, insomnia and psychotic symptoms as visual and auditory hallucinations. The patient described that since she was 18 years of age, she had episodes of euphoria, agitation, angry outbursts and constantly suicidal thoughts. Two years ago, depressive symptoms worsened and the suicidal behavior became more frequent, almost all suicide attempts were due to exaggerated medication ingestion. She was treated with risperidone and valproic acid, without response and didn't respond also to lithium plus quetiapine. Suicide attempts became progressively frequent, up to once a week. After 9 months of her first visit her total score on Hamilton Depression Rating Scale (HDRS) was 34 and she scored 4 points on HDRS suicide item (item 3). Electroconvulsive therapy was

started twice a week and after 10 sessions, due to no improvement, simultaneously, she started a treatment protocol that includes weekly subcutaneous ketamine injection. After the fourth ketamine injection without reduction in depressive symptoms, patient dropped-out protocol because of the side effects, maintaining ECT. After 14 sessions, she had a mild improvement of the depressive symptoms, with a HDRS total score of 27, but had a drastic reduction in suicide attempts, while HDRS suicide ideation scored 1. She completed 20 ECT sessions and there were no suicide attempts in the past 9 months. Conclusion: This case report described a refractory bipolar depression that responded poorly to all pharmacological treatments. ECT exerted a protective effect against suicidal behavior, independently of depressive symptoms improvement. Suicidal attempts frequency dropped from once a week frequency to zero, even after the end of ECT treatment and this protective effect was sustained effect after 9 months, demonstrating the long-term effectiveness of ECT in suicidal behavior.

No. 82

Improving the Diagnosis and Treatment of Pediatric Bipolar Disorder Through a Series of Online Educational Interventions

Poster Presenter: Piyali Chatterjee
Co-Authors: Roger S. McIntyre, M.D., Susan Gitzinger

SUMMARY:

Background and Introduction: Although pediatric bipolar disorder (PBD) is estimated to have increased 10-fold in recent years, the diagnosis, and therefore the subsequent treatment, eludes many psychiatrists and pediatricians. Methods: A study was conducted to determine whether a series of two online educational interventions could address underlying educational needs in diagnosis and treatment of PBD. Two video-based educational interventions were conducted, one a clinical conversation between two experts in PBD (data collected between 3/9/18 and 4/11/18), and a second, video-based discussion between three expert BPD faculty (data collected between 6/14/18 and 8/20/18). The educational effects were assessed using a repeated pairs pre-assessment/post-assessment study design, where individual participants served as his/her own control. For all questions combined, the chi-squared test assessed whether the mean post-assessment score differed from the mean pre-assessment score. P values <.05 are statistically significant. Results: When surveyed about the presentation and assessment of PBD, and its impact, the following results were found in specific topic areas including (data expressed as % correct pre-assessment vs % correct post-assessment; all P<.001); (Psychiatrists n=636; Pediatricians n=241): • How bipolar disorder presents differently in children and adolescents vs. adults (70% vs 82% of psychiatrists and 44% vs 66% of pediatricians) • The risk of a child or adolescent with 1 parent with bipolar disorder has for developing any type of mood disorder compared with the general population (29% vs 54% of psychiatrists and 38% vs 62% of pediatricians) • Of note, nearly all (87%) program participants committed to improving diagnostic screening practices and modifying treatment plans When asked about the treatment of PBD, the following results were found (data expressed as % correct pre-assessment vs % correct post-assessment; all P<.001); (Psychiatrists n=569; Pediatricians n=302): • FDA-approved agents for the treatment of acute PBD (21% vs 47% of psychiatrists and 12% vs 40% of pediatricians) • Additionally, 38% of learners reported an intent to modify treatment plans, and 20% reported an intent to change screening practices with 86% of these learners reporting being committed to making these changes in clinical practice Conclusions: As a result of participation in this series of educational interventions, significant improvement in knowledge and competence regarding PBD was demonstrated in several important areas including psychiatrists' and pediatricians' ability to recognize and diagnose PBD in clinical practice, knowledge of its impact, and FDA-approved treatment strategies. These significant results highlight the potential impact of the education on clinical practice changes among psychiatrists and pediatricians. Further educational efforts tailored to address identified gaps for each audience are warranted.

No. 83

Distinct Neural Processing of Social Rejection Found in Youth With Bipolar Disorder

Poster Presenter: Donna Roybal, M.D.

Co-Authors: Victoria Cosgrove, Ph.D., Jennifer Pearlstein, M.S., Paige Staudenmaier, B.A., Rose Marie Larios, M.S., Kiki Chang, M.D., Amy Garrett, Ph.D.

SUMMARY: Objective: To examine the neural correlates of social rejection in youth with bipolar disorder (BD). Background: Youth with BD and a comorbid anxiety disorder have lower rates of recovery. Anxiety, particularly social anxiety, also predicts progression of illness. Youth with BD, even when mildly ill and subthreshold for a social anxiety diagnosis, demonstrate deficits in social behavior and interpersonal functioning. These deficits can contribute to worse psychosocial functioning that can trigger mood episodes. However, little is known about the social cognitive functioning in youth with BD. We therefore examined the neural correlates of social cognition in youth with BD using an fMRI social rejection task. Methods: Participants: Youth ages 10-17 years old (n=19, 14.7 +/- 2.3 years) diagnosed with BD per DSM-IV TR criteria and age- and gender-matched healthy controls (HC; n=14, 15.1 +/- 2.1 years). fMRI task: Participants underwent an fMRI scan while playing Cyberball, a computer game using representative cartoon avatars with faces that toss a ball to each other and to the participant that has been frequently used to study the effects of social rejection. Analyses: Whole-brain voxel-wise analyses were conducted in SPM8, using two-sample t-tests. Thresholds for inference were set at $p<.05$ with family-wise error (FWE) correction at the cluster level. For significant clusters, we conducted functional connectivity (FC) analyses using the general Psychophysiological Interaction toolbox to test for group differences in connectivity. Results: Youth with BD showed significantly greater activation in the left fusiform gyrus and the left lateral occipital region. Connectivity between the fusiform gyrus cluster and the posterior cingulate cortex was significantly greater in the HC compared with the BD group. Conversely, connectivity between the lateral occipital cluster and the dorsolateral prefrontal cortex was greater in the BD relative to the HC group. Conclusions: Youth with BD showed greater neural activation in regions salient to higher level visual processing and implicated in facial perception. These areas are important to effects further downstream in the social cognitive circuit. HC had greater FC to areas associated with autobiographical memory, suggesting an ability to recall social experiences over the BD group that may play an important role in processing future social interactions. The BD group also showed greater FC to areas associated with regulation of emotion and the processing of pleasant or unpleasant emotional states. Youth with BD may therefore process social rejection in a manner different from HC that focuses on faces and processes early in the social cognitive circuit while HC uses past social experiences to inform them of current social encounters. This difference in processing may pose clinical implications for improving social cognition in youth with BD and preventing mood symptoms.

No. 84

Comparison Between Regular-Dose and Low-Dose Lithium Treatment for Patients With Bipolar Disorder According to Their Symptom Severity

Poster Presenter: Tae-Sung Yeum
Co-Authors: Ole Köhler-Forsberg, Louisa Sylvia, Andrew Nierenberg

SUMMARY:
Background: Lithium is still one of the best treatment options for bipolar disorder, but there is no consensus for the optimal dose of lithium according to symptom severity. Since long-term use of lithium may cause serious side effect such as renal damage, it is worthwhile to investigate the appropriate dose of lithium for bipolar disorder. Methods: Data of our two previous clinical trials, Bipolar Clinical and Health Outcomes Initiative in Comparative Effectiveness (CHOICE) and Lithium Treatment Moderate-Dose Use Study (LiTMUS), were used in this study. Participants were bipolar I or II disorder outpatients over 18 years of age and the majority were in a depressive phase (i.e., 78%). They were administered lithium combined with other medications consistent with typical clinical practice and followed up to 6 months. Participants were included in this analysis if they were randomized to either the regular-dose lithium treatment group in the CHOICE study, (N=240) (i.e., treated with lithium dosage of maximum tolerability; mean maximum dose=1,007.5 mg), or to the low-dose lithium treatment group in the LiTMUS study, (N=141) (i.e., the lithium dosage was fixed at 600

mg/day for the first 2 months and thereafter adjustments were made as clinically indicated). The two groups were divided into subgroups based on their baseline Montgomery–Åsberg Depression Rating Scale (MADRS) score; < 20 as mild symptom subgroup (N=51 for low-dose group and N=81 for regular-dose group) and = 20 as moderate to severe symptom subgroup (N=89 for low-dose group and N=155 for regular-dose group). We performed mixed effects linear regression analyses reporting ß-values and 95%-CI. Results: The baseline characteristics including gender distribution, age, race, education, employment and marital status as well as the baseline MADRS score were not significantly different between the two groups. For the low-dose lithium group, lithium levels over time were 0.43 ± 0.19 mEq/L at week 2, 0.44 mEq/L ± 0.29 at week 12, and 0.47 ± 0.34 mEq/L at week 24, and for the regular-dose lithium group, the levels were 0.50 ± 0.28 mEq/L at week 2, 0.62 ± 0.34 mEq/L at week 16, and 0.97 ± 0.33 mEq/L at week 24. Both groups improved significantly during the study period, but we found significant clinical outcome differences of MADRS score between the two treatment groups from week 6 to week 24. The regular-dose group improved more (ß= -0.34, 95% CI= -0.28; -0.40) compared to the low-dose group (ß= -0.20, 95% CI= -0.12; -0.28) ($p<0.05$ for interaction). The effect was similar in the sub-analysis for the participants with moderate to severe depressive symptoms, whereas the differences were not as prominent for the participants with mild depressive symptoms. Conclusion: These findings indicate that higher lithium dosage is superior to low-dose lithium for moderate to severe depressive symptoms of bipolar disorder, but the effect is not as prominent for mild depressive symptoms.

No. 85

Anxiety Plays a Great Role in the Quality of Life of Patients With Bipolar Disorders Regardeless of Their Mood State

Poster Presenter: Maria Paz Garcia-Portilla
Lead Author: Julio Bobes, M.D., Ph.D.
Co-Authors: Lorena de la Fuente Tomás, Leticia Garcia-Alvarez, Luis Jimenez-Trevino, Leticia Gonzalez-Blanco, Francesco Dal Santo, Angela Velasco, Pilar A. Sáiz

SUMMARY:
Introduction: Bipolar disorder (BD) is a chronic and severe mental illness associated with a negative impact on functioning and quality of life (QoL)1-2. Despite advances in psychiatric care, QoL improvement in patients with BD remains a considerable challenge. The objective of this research is to identify the main determinants of the QoL of life in both, euthymic and non-euthymic BD patients. Methods: Subjects: Data from 99 patients with BD –DSM-5 criteria- who gave their written informed consent were analyzed. Assessment: Depressive, manic, and anxiety symptoms, and severity of insomnia were evaluated using HDRS, HARS, YMRS, and COS respectively. We used the SCIP for assessing cognition, the FAST for functioning, and the SF-36 for subjective health-related quality of life. Also, biological parameters (PCR and HOMA-IR) were employed. We classified patients into euthymic [HDRS<8 + YMRS<7 (n= 45)] and non-euthymic (n= 54). For each group, we made linear regressions using each subscale of the SF-36 as the dependent variable and all variables with significant correlations with the dependent variables as independent plus age, gender, PCR and HOMA-IR index. Results: Euthymic patients showed better functioning ($p<0.001$), global and in all life domains of the FAST, and better quality of life ($p<0.005$), in the eight SF-36 subscales and in both summary components. In addition, their BD was diagnosed at an early age ($p=0.043$) In the case of euthymic patients, HARS score was retained in the models for the following SF-36 areas: bodily pain (BP), vitality (V), role emotional (RE), mental health (MH) and summary mental component (SMC). It was the unique variable retained in the case of V, RE, MH, and SMC. In non-euthymic patients, HARS score was retained in the following models: role physical (RP), BP, general health (GH), V, RE, MH, and SMC. In this group of patients, functioning was also retained in V (laboral), SF (global), RE (cognitive), and SMC (global). Conclusions: We showed that both, in euthymic and non-euthymic patients, anxiety plays a main role in the patients' perception of their health-related quality of life. Functioning also plays a role in the case of non-euthymic patients. Clinicians should be aware of this in designing patient-centred interventions.

No. 86

Psychopharmacological Approach of the Obsessive-Compulsive-Bipolar Comorbidity

Poster Presenter: Raquel Serrano
Co-Author: Pedro Cabral Barata

SUMMARY: Objectives: It is known that the comorbidity of obsessive-compulsive disorders and syndromes and bipolar spectrum disorders is common, although its treatment remains a clinical challenge. The authors aim to review the psychopharmacological treatment of obsessive-compulsive symptoms in patients with a bipolar spectrum diagnosis. Methods: Literature research in MedLine/Pubmed and Cochrane Library using the keywords "Bipolar disorders"; "Obsessive-compulsive disorders" and "Treatment", followed by the application of database-specific filters and eligibility criteria. Results/ Conclusion: Although serotonin reuptake inhibitors (SSRIs) are the first line treatment for OCD, they can induce or exacerbate mood instability in bipolar disorder. Based on the available literature, the first choice in treatment appears to be with mood stabilizers or second-generation antipsychotics. Addition of SSRIs agents seems pointless in most cases, although they may be required in a minority of patients with a bipolar spectrum diagnosis with refractory OCD. More studies are needed regarding the clinical management of this highly prevalent comorbid disorder.

No. 87

Efficacy and Safety of Lurasidone in Children and Adolescents With Bipolar Depression: Results From a 2-Year Open-Label Extension Study

Poster Presenter: Melissa Delbello
Co-Authors: Michael Tocco, Andrei A. Pikalov, M.D., Ph.D., 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 pediatric populations. The aim of the current study was to evaluate the long-term safety and efficacy of lurasidone in children and adolescents with bipolar depression. Methods: Patients 10-17 years with 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. The primary efficacy measure was the Children's Depression Rating Scale, Revised (CDRS-R); response was defined as =50% reduction from DB baseline in the CDRS-R total score. Results: A total of 306 patients completed the 6-week DB study and entered the extension study; 195 (63.7%) completed 52 weeks, and 168 (54.9%) completed 104 weeks of treatment. In the DB study, mean CDRS-R total score at baseline was 59.4 in the lurasidone group and 58.7 in the placebo group; and mean CDRS-R total score at week 6-endpoint (baseline of the OL study) was 36.6 in the lurasidone group and 41.9 in the placebo group. For all patients treated with lurasidone in the OL study, mean change (from OL baseline) in the CDRS-R score was -13.4 at week 52 and -16.4 at week 104. Responder rates were 51.0% at OL baseline, 88.4% at week 52, and 73.2% at week 104. During OL treatment with lurasidone, the most commonly reported adverse events were headache (23.9%), nausea (16.4%), and somnolence (9.8%). OL treatment with lurasidone was associated with few effects on metabolic parameters or prolactin. Mean change from DB baseline in weight was 4.25 kg at week 52 (vs. an expected weight gain of 3.76 kg based on CDC normative data), and 6.75 kg at week 104 (vs. CDC expected weight gain of 6.67 kg). Conclusions: In children and adolescents with bipolar depression, long-term treatment with lurasidone was generally well-tolerated, and was associated with high rates of study completion at 2 years. Treatment with lurasidone was associated with few effects on weight, metabolic parameters, or prolactin. Continued improvement in depressive symptoms was observed during long-term treatment with lurasidone.

No. 88

Prevalence of Bipolar Disorder in Multiple Sclerosis: Systematic Review and Meta- Analysis

Poster Presenter: Aiswarya Lakshmi Nandakumar

Co-Authors: Ahmed Ahmed, M. Hassan Murad, Neethu Gopal, Patricia Erwin, Balwinder Singh, M.D., M.S.

SUMMARY:
Background Multiple sclerosis (MS) is a chronic disabling, demyelinating disease of the central nervous system and is often associated with psychiatric comorbidities. Bipolar disorder (BD) is a chronic and severe mental health disorder with a significant risk of relapse of mood episodes. Bipolar disorder may lead to decreased treatment compliance, poor outcomes with lowered functional status, and diminished quality of life in patients with MS. We conducted a systematic review and meta-analysis to evaluate the prevalence of BD in adults with MS. Methods We registered this review with PROSPERO and searched electronic databases (Ovid MEDLINE, EBM reviews, Embase, PsycINFO) for eligible studies from earliest inception to June 2018. Two reviewers independently screened titles and abstracts and completed full-text reviews of potentially eligible studies. Prevalence data of BD in adult patients with MS were extracted. Meta-analysis was conducted using random-effects model. Results Of the 618 articles that were screened, 18 studies were included in the systematic review. Twelve studies enrolling a total of 63,736 patients with MS (mean age 45.9±6.5 years and 71.9% females) and 2,469 patients with BD were included in the meta-analysis. The prevalence rate of BD in patients with MS was 2% (95% CI, 0%-3%) and was similar in studies conducted in North America (2%) and Europe (1%). The lifetime prevalence of BD in patients with MS, estimated from 4 studies was 9% (95% CI, 6%-11%). On subgroup analysis, the lifetime prevalence rate of BD in MS was similar in studies conducted in North America (8%) and Europe (9%). The lifetime prevalence of BD in MS in females (6%) was demonstrated to be significantly higher than in males (1%) in two studies ($p<0.01$). Conclusion This meta-analysis suggests a higher lifetime prevalence of bipolar disorder in patients with multiple sclerosis. Patients with MS should be routinely screened for BD. Further assessments of bipolar comorbidity in MS through prospective studies may help in developing effective management strategies and may potentially improve treatment outcomes in patients with MS.

No. 89

Impulsivity Between the Acute Manic Episode and Euthymia in Bipolar Patients

Poster Presenter: Junho Song
Co-Authors: Jong Won Lee, Won Sub Kang

SUMMARY:
Object : Bipolar disorder has been considered a disease with a favorable long-term outcome. However suicidality among bipolar patients is higher than the general population, and they are more likely to have comorbidities such as substance abuse. This could be explained by their relation with impulsivity. Previous studies have investigated the presence of impulsiveness among bipolar patients and the association between impulsivity and bipolar disorder is state-related, trait-related, or both. This current study longitudinally investigates the impulsivity change in bipolar patients when the clinical course changes from the acute manic phase to the remission state. Methods : The Seventeen acute manic bipolar patients hospitalized in a single tertiary medical center in Seoul were evaluated with The Korean Version of the Young Mania Rating Scale(K-HDRS), and The Korean Version of the Hamilton Depression Rating Scale for the current mood state among subjects. Self-reported scales (The Korean version of Mood Disorder Questionnaire, Hypomania/mania symptom Checklist-32, The Korean Version of the Beck Depression Index, Korean version of Barratt Impulsiveness Scale-11-revised, Temperament and Character Inventory-Revised Short Version) were obtained and the behavioral impulsivity was accessed by Conner's Continuous Performance Task, Stroop Test. After starting drug treatment, we followed up the mood state of subjects, to see whether subject developed euthymia by K-HDRS. In subjects who achieved euthymia, the self-report and neuropsychology test were retested. Result: Compared with manic state during euthymic state, the inattention subscale of BIS-11-R ($p=0.002$), commission error ($p=0.027$), color ($p=0.024$), word ($p=0.022$), color-word ($p=0.007$), error score ($p=0.034$), NS scale of TCI-RS ($p=0.003$) were significantly decreased. However, there were no significant difference in K-MDQ($p=0.519$), HCL-32($p=0.053$), BDI($p=0.331$), the total scaled of BIS-

11-R (p=0.254), motor (p=0.142), unplanned (p=0.661) between the manic state and euthymia. Conclusion: Inattention impulsivity improved following the course of bipolar disorder but motor and unplanned Impulsivity persisted across the course, thereby representing potential state markers, and this can be applied for diagnosis and method of treatment. Key words: bipolar disorder· impulsivity ·acute manic episode · euthymia

No. 90

Hoarding Behavior in Obsessive-Compulsive Disorder: An Indian Study

Poster Presenter: Dinesh Narayanan

SUMMARY:

INTRODUCTION: Hoarding as primary symptom has been traditionally related with Obsessive Compulsive Disorder (OCD) but in clinical practice it can be seen as a symptom in other psychiatric conditions as well. Hoarding Disorder follows a chronic and progressively deteriorating course.In adults, prevalence of hoarding is estimated to be 2% - 6%.Hoarding symptoms tends to be a poor indicator of treatment response. As there was very limited Indian literature available on hoarding in OCD, we took up this study. OBJECTIVES: To study and compare the Prevalence and Phenomenology of Hoarding Behavior in patients and their relatives. METHODS: It was a cross-sectional,observational study including 100 patients, 50 in each group (OCD patients and relatives).Data collected included demographic details,Yales Brown Obsessive Compulsive Scale,Hoarding Rating Scale (HRS). RESULTS: The prevalence of hoarding in OCD patients was 14% and none in control group.The phenomenology data revealed most common item hoarded were newspapers (28.6%) and scrap (28.6%) as patients considered them important item (57.1%). Hoarding behaviour showed increased relation with OCD(71.4%) leading to irritable reaction on discarding(57.1%) and causing mild socio-occupational impairment(57.1%). CONCLUSION: Hoarding symptom have early onset than OC symptoms with poor predictor to treatment response and socio- occupational functioning. The complaint of hoarding is neglected by the treating doctor. So this study implies that enquiring into hoarding behaviour and treating it can improve the quality of life of these patients.

No. 91

Experiences of Cannabinoid Use Among Obsessive-Compulsive Disorder Patients: An Internet Survey

Poster Presenter: Meredith Stacy Senter, M.D.
Co-Authors: Reilly Reyns Kayser, Marissa Raskin, Sapana Patel, Helen Blair Simpson, M.D., Ph.D.

SUMMARY:

Obsessive-compulsive disorder (OCD) is a common and disabling illness that affects roughly 2% of the population. The two first line treatments for OCD are serotonin reuptake inhibitors (SRIs) and a type of cognitive behavioral therapy called exposure and response prevention (EX/RP). More than a third of OCD patients, however, do not respond to these treatments, and less than half become well. Thus, new treatment approaches are needed. The role of cannabis and cannabinoid substances in OCD has been an area of increasing study, with a growing body of research suggesting that the endocannabinoid system (eCBS) may play a role in the pathophysiology underlying OCD symptoms. Moreover, recent data indicates that cannabinoids may play a role in the treatment of OCD. Nonetheless, the exact relationship between cannabinoids, the eCBS, and OCD remains unclear. Both anecdotal reports from patients with OCD and findings from several case reports suggest that cannabinoids may reduce obsessions, compulsions, and anxiety. On the other hand, other cannabis users feel that it increases anxiety, and a number of studies have linked cannabis use with the development of psychotic symptoms. A recent study also found an association between OCD symptoms and problematic cannabis use. The landscape of cannabis availability in the United States is rapidly changing. Expanding legalization (medical or recreational) and decriminalization have increased both the availability of different cannabinoid products and their accessibility to users. Thus, it is an ideal time to clarify how these substances affect OCD symptoms. In particular, it remains unclear whether the potential benefits of cannabinoids outweigh the risks in this population, and whether their effects might vary depending on the methods and circumstances related to their use. In this study,

we use an internet-based questionnaire to collect information from adults with self-reported OCD symptoms about their experiences using cannabinoids. In particular, we will assess whether OCD symptoms as measured by the Obsessive-Compulsive Inventory, Revised (OCI-R) are associated with specific patterns of cannabis use; whether symptom severity correlates with cannabis use and/or misuse; and how severity of obsessions, compulsions and anxiety changes with cannabinoid use. We will also collect qualitative data about experiences with cannabinoid use among this population in order to better understand their motivations for using and perceptions of cannabinoid effects. Our results will aid in the design of future clinical studies, and help to clarify the risk/benefit profile of cannabinoids in adults with OCD. We are on track to start collecting data by the end of this month (December 2018) and plan to present results in this poster.

No. 92

Exploring BDNF Val66Met Polymorphism and Extinction Learning-Based Treatment Outcome in OCD: A Pilot Study

Poster Presenter: Omer Linkovski
Co-Author: Carolyn Rodriguez, M.D., Ph.D.

SUMMARY:

Background A common single-nucleotide polymorphism (SNP) in the human brain derived neurotrophic factor (BDNF) gene (Val66Met; rs6265) has been reported to alter extinction learning in human carriers and knock-in mice with the SNP. Extinction learning is a major component of behavioral therapies for anxiety disorders. Our recent, open-label pilot study in unmedicated obsessive-compulsive disorder (OCD) subjects found that abbreviated CBT, delivered during the 2 weeks when ketamine putatively facilitates extinction learning, helps individuals maintain ketamine-related improvement. We performed a secondary analysis to explore whether the BDNF Val66Met polymorphism is associated with treatment response to either exposure-based CBT or ketamine. Given the BDNF Met allele impairs activity-dependent BDNF secretion that is critical for extinction learning, we hypothesized that patients without the BDNF Met allele would have a better OCD outcome than BDNF Met allele carriers. Methods 10 unmedicated outpatients with OCD (ages 18–55) received a single 40-minute ketamine infusion and then completed 10 hours of exposure and response prevention treatment with a trained psychologist over 2 weeks. At baseline, 20, 90, 110, and 230 minutes after infusion, patients rated their obsessional severity using the OCD visual analog scale. At baseline and weekly for 4 weeks post ketamine, an independent evaluator evaluated the patient's OCD severity using the YBOCS. Treatment response was defined a priori as 35% or greater YBOCS reduction at week 2. Results 9 participants completed the infusion, 6 had Val/Val polymorphism, and 3 carried 1 or both Met substitutions. Baseline YBOCS scores were similar in Met carriers (median, 33; range, 28–34) and Met noncarriers (median, 28; range, 21–35). 8 participants reported a rapid reduction in obsessive severity, as measured by the OCD visual analog scale, on the day of infusion. BDNF variation was not significantly associated with ketamine response on the infusion day. Two weeks after infusion, only 1 of 3 Met carriers was a responder, compared with 4 of 6 Met noncarriers. One month after infusion, 3 of 6 Met noncarriers were responders, versus none of the Met carriers. Conclusion In this first study examining the association between the BDNF Val66Met SNP and treatment response to ketamine and CBT in OCD, BDNF variation was not associated with acute ketamine response on the infusion day and BDNF variation was associated with differential response rate to subsequent brief, two-week, exposure-based CBT. Our findings suggest that ketamine may provide only short-term relief to individuals with BDNF-mediated extinction learning deficits that impair response to exposure-based CBT. In parallel, exposure-based CBT may maintain gains in individuals with intact BDNF-mediated extinction learning. If replicated, our BDNF allele genotyping may help guide treatment personalization.

No. 93

"Something Bad Can Happen": The Case of a 73-Year-Old Man With Obsessive-Compulsive Disorder Due to Right Hemispheric Infarcts

Poster Presenter: Asa L. Cheesman, M.D.
Co-Author: Marieliz V. Alonso, M.D.

SUMMARY:

This is a case of a 73 year old man with history of Type 2 Diabetes and hypertension, no reported psychiatric history or developmental issues, who was referred to our psychiatry clinic after reporting a two year history of repeated daily checks and rituals in his home which were becoming more distressing and disruptive to his daily activities. These included checking outlets, faucets, lights, and even his own clothes for dirt, and excessive hand washing. Patient reported that these checks took up to four hours per day causing him to frequently miss prior engagements. During the interview he cleaned the chair before sitting and asked the interviewer to check for stains on his coat. He described related nonspecific obsessive and intrusive thoughts that "something bad can happen" and was worried about contamination. He expressed relief of tension when performing these compulsions. Neurological examination was unremarkable and MMSE 28. CT scan of the brain without contrast, done two years prior to presentation, showed that the patient suffered from a lacunar infarct in the right external capsule and right peri-ventricular posterior parietal white matter. A diagnosis of Obsessive-Compulsive and Related Disorder (OCD) due to Cerebral Infarction was made and he was started on an ongoing trial of Sertraline. Although orbitofrontal cortex, basal ganglia and anterior cingulate cortex are most consistently associated with OCD in imaging studies, many other interconnecting brain structures may be implicated. Here we see a case of late onset OCD where symptoms were directly related to infarct of right hemispheric regions. There is not much literature and recommendations on late onset OCD, which should be considered when symptoms occur above age 50. Presentations such as these stress the importance of careful workup of older patients with recently acquired OCD symptoms, and should prompt physicians to look for underlying causes of OCD. This case allows us to explore neuropathological mechanisms responsible for late onset OCD and how these findings impact the response to treatment. A topic which is in the early stages of research.

No. 94

Alterations of Leukocyte Telomere Length and Mitochondrial DNA Copy Number in Obsessive-Compulsive Disorder

Poster Presenter: Jun Ho Seo
Lead Author: Se Joo Kim
Co-Authors: Chun Il Park, Jee In Kang

SUMMARY: Objectives: Alterations of telomere length and mitochondrial biogenesis are implicated as a key biomarker of cellular aging process. Telomere shortening and altered mitochondrial DNA copy number (mtDNAcn) have been reported under chronic stress and several neuropsychiatric conditions. No study has examined whether telomere shortening or altered mtDNAcn occur in obsessive-compulsive disorder (OCD). The present study examined telomere length and mtDNAcn in men and women with OCD compared to healthy controls. Methods: 239 patients with OCD (93 women) and 236 healthy controls (99 women) participated in the present study. Telomere length and mtDNAcn were quantified from leukocyte DNA by quantitative polymerase chain reaction. Multivariate analyses of covariance and post-hoc comparisons were performed with the two biomarkers as dependent variables, OCD status as an independent variable, and age as a covariate separately for men and women. Results: Leukocyte mtDNAcn was positively associated with telomere length ($r=0.174$, $p<0.001$). There were significant overall effects of OCD status on cellular aging markers in men (Wilks ?=0.875, $F(2, 279)=19.85$, $p<0.001$) and women (Wilks ?=0.744, $F(2, 188)=32.42$, $p<0.001$). In post-hoc comparisons, men with OCD had significantly reduced leukocyte mtDNAcn compared to healthy men ($p<0.001$), but there was no significant difference of relative telomere length between them ($p=0.505$). On the other hand, women with OCD had significantly reduced mtDNAcn ($p<0.001$) and shortened telomere length ($p=0.048$) compared to healthy women. Conclusions: The present study provides the first evidence of alterations of mitochondrial biogenesis in patients with OCD and telomere shortening in women with OCD. The results suggest that aging-associated molecular mechanisms in patients with OCD may be important in the pathophysiology of OCD. Our findings indicate that further research on mitochondrial dysfunction and shorter telomere may help elucidate the biological underpinnings of OCD and their relation to cellular aging. This study was supported by Basic Science

Research Program through the National Research Foundation of Korea.

No. 95

The Neural Correlates of Thought-Action Fusion in Healthy Adults: A Functional Magnetic Resonance Imaging Study

Poster Presenter: Seung Jae Lee

SUMMARY:

Background: Thought-action fusion (TAF) represents one individual's belief that a thought is like an action. Inflated TAF has been considered a central mechanism for developing obsessional thoughts. However, the neural mechanisms underlying TAF remain to unravel. Purpose: In this study, we adapted an experimental paradigm that have been used to evoke TAF responses to fMRI and characterized the neural circuits related to TAF (Rachman et al., 1996). In this paradigm, participants are asked to fill the name of their close friend or relative in the blank space of a negative sentence "I hope …… is in a car accident." We also aimed to explore the extent to which activity in TAF-related areas may relate to psychopathological processes by examining correlations with clinical information collected in several validated clinical questionnaires. Methods: We recruited thirty-two healthy men to participate in a functional magnetic resonance imaging (fMRI) study. While in a 3T scanner, participants were asked to read negative sentences describing expectation of bad events for close (CP condition) or neutral persons (NP condition) to them. After reading each sentence, we asked participants to rate how uncomfortable they were with each event. They also completed measures of TAF and obsessive-compulsive symptoms. Results: Negative sentences involving close persons made participants more uncomfortable than those involving neutral persons during the performance of TAF induction task. Both the CP and NP conditions commonly activated the lingual gyrus, several areas of the frontal cortex, the caudate nucleus and the precuneus. Importantly, many of these regions were positively correlated with measures of obsessive-compulsive symptoms, especially for the CP condition. The CP condition, when compared to the NP condition, showed higher activation in the insula and in the temporal gyrus. In contrast, the NP condition evoked higher activation in regions associated with mentalizing, such as the medial prefrontal cortex and the dorsal anterior cingulate cortex. Conclusions: We introduce and validate a TAF-induction paradigm suitable for fMRI studies and characterized the neural circuits engaged during this paradigm. Further studies using this task may help us to understand how dysfunction of TAF neural processing may contribute to several psychiatric disorders such as obsessive-compulsive disorder.

No. 96

Identication, Validation, and Characterization of Obsessive Disorder Case Samples in a Large U.S. Biobank

Poster Presenter: Takahiro Soda, M.D., Ph.D.
Lead Author: Lea Davis, Ph.D.
Co-Authors: Evonne McArthur, B.S., Patrick McGuire, M.D., James Crowley, Ph.D., Donald Hucks, M.S.

SUMMARY:

The availability of biosamples from patients with obsessive compulsive disorder (OCD) have been low relative to other psychiatric disorders, hampering the discovery of genetic associations with this disorder. The use of existing electronic medical records (EMR) in the US and other countries could represent a rapid and cost-efficient strategy to increase ascertainment for OCD genomic studies. Here we develop and test an algorithm for such ascertainment of such cases treated at the Vanderbilt University Medical Center and possessing DNA in the Biobank at Vanderbilt University (BioVU). Methods: To build an EMR algorithm, we utilized ICD 9 and 10 codes (300.3 and F42.*) along with natural language processing (NLP) to detect context-aware diagnostic keywords (e.g., Obsessive-compulsive, etc.), treatment keywords (e.g., cognitive-behavioral, etc.), and medications (e.g., fluoxetine, etc.) commonly prescribed for the treatment of OCD. Contextual information from 50 cases identified by the algorithm was then abstracted by trained non-expert reviewers and abstracted charts were reviewed by two clinicians to determine the positive predictive value (PPV) of the algorithm. The algorithm underwent several iterations of modifications until acceptable PPVs were obtained. Resuts: The final algorithm incorporated discrete elements in the EMR as well as natural-language

processing to identify charts which reference obsessive-compulsive disorder and related symptoms, as well as exclusionary criteria from these elements. Validation of the algorithm by clinician-based chart review revealed that the positive predictive value of an algorithm incorporating both discrete elements and NLP (0.84) was higher than that obtained by utilizing discrete elements or NLP alone (0.73 and 0.79, respectively). The heritability of OCD from subjects identified using this method, and genetic correlation to the latest OCD genome-wide association study mega-analysis (OCD GWAS), as well as polygenic risk scores using the latest OCD GWAS will be presented. Discussion: The PPV obtained by our methods are similar to those obtained in EMR-based phenotyping of bipolar disorder, indicating that our method is effective in identifying OCD cases for inclusion into genetic studies. The applicability of our methods to other biobanks and electronic medical records will be discussed.

No. 97

Do the Impact of 'Risk Factors' or 'Protective Factors' for Suicidality Change in Response to Effective Treatment? A Case Study

Poster Presenter: David V. Sheehan, M.D., M.B.A.
Co-Author: Jennifer M. Giddens

SUMMARY:

Background: This case study reports the treatment effect on the impact of known 'risk and protective factors' on an individual's suicidality. Such factors are usually deemed immutable and not considered sensitive to change in direct response to effective treatment for suicidality, in the way that suicidality thoughts and behaviors are. Assessment of risk and protective factors is usually considered a necessary component of any thorough assessment of suicidality. Methods: A 31-year-old female subject who experienced suicidality almost daily for over 20 years prospectively collected a self-report data series over 80 weeks using the Sheehan-Suicidality Tracking Scale Clinically Meaningful Change Measure version (S-STS CMCM), covering a timeframe before, during and after effective treatment for suicidality. This extended version of the scale contains a section on the dimensional assessment of a wide range of both 'risk' and 'protective' factors for suicidality. These can be assessed over time within each individual. Results: The data show a change in the subject's perception of the impact the 'risk' and 'protective' factors had on her following effective treatment, in a way that differed from the impact these factors had on her while she was chronically suicidal before effective treatment. Conclusion: Effective treatment for suicidality can impact the 'risk factors' and 'protective factors' within a single individual, although there was no evidence of objective change in these external risk factors themselves. Both 'risk' and protective factors for suicidality may not be as immutable within each individual as previously thought and may be sensitive to treatment effects.

No. 98

Does Citalopram Increase the Frequency of Up-Switches of Impulsive Suicidality in a Subject With Impulse Attack Suicidality Disorder? A Case Study

Poster Presenter: David V. Sheehan, M.D., M.B.A.
Co-Author: Jennifer M. Giddens

SUMMARY:

Background: This case study reports the effect of the SSRI citalopram in causing up-switches of impulsive suicidality. Methods: A 29-year-old female subject who experienced suicidality almost daily for over 20 years prospectively collected a self-report data series over 248 days using the computerized versions of the Suicidality Modifiers Scale (SMS) and the Sheehan - Suicidality Tracking Scale (S-STS), covering a timeframe before, during and after a 116-day trial of citalopram. The S-STS data was mapped into the C-CASA 2010 and FDA-CASA 2012 categories and compared to the scores for the severity of impulsive suicidality from the SMS. Results: The SMS data show a 39% increase in up-switches in suicidal impulsivity while the subject was taking the citalopram. The data show the C-CASA 2010 and FDA-CASA 2012 categories were unable to detect this signal of increased up-switches in suicidal impulsivity. The data in some of these C-CASA 2010 and FDA-CASA 2012 categories suggest that the subject's suicidality was improving while these danger signals were worsening. Conclusion: The SSRI citalopram is associated with an increase in up-switches in suicidal impulsivity in a non-Bipolar Disorder subject. That the existing safety detecting

classification algorithms used by the US Food and Drug Administration (2010 and 2012) can fail to detect a serious suicidal adverse event such as the one described above is a cause for serious concern and needs to be corrected. Any rating instrument or classification "algorithm" used to detect safety signals of suicidality needs to include an item on impulsive suicidality.

No. 99

Is the Count of Suicidal Events an Acceptable Substitute for the Seriousness of Suicidal Events in Rating Each Suicidal Phenomenon? A Case Study

Poster Presenter: David V. Sheehan, M.D., M.B.A.
Co-Author: Jennifer M. Giddens

SUMMARY:

Background: This case study investigates which of the following is a more sensitive measure of the gravity of suicidality: 1) the count of suicidality events of each suicidality phenomenon, or 2) the dimensional measurement of the seriousness of each suicidality phenomenon. Methods: A 30-year-old female subject who experienced suicidality almost daily for over 20 years prospectively collected a self-report data series over 552 days using the computerized versions of the Sheehan - Suicidality Tracking Scale (S-STS). The seriousness of each suicidality phenomenon was captured using the S-STS. The count of suicidality events was captured using the Tampa - Classification Algorithm for Suicidality Assessment (T-CASA). Results: Most of the time the seriousness of the suicidality event was more sensitive in detecting the gravity of the suicidality, than the count of the suicidality events, for each suicidal phenomenon, within a timeframe. This was particularly true for impulsive suicidality. Conclusion: The count of suicidal events is not an acceptable substitute for the dimensional assessment of the seriousness of each suicidal phenomenon. Any rating instrument used to detect safety signals of suicidality, should include a dimensional assessment of seriousness of each suicidal phenomenon, rather than relying on the count of suicidality events.

No. 100

Age-Sex Differences in Suicide Patterns Across the Americas

Poster Presenter: Melanie Yoko Brown
Co-Author: Robert Kohn, M.D.

SUMMARY: Objectives: To describe changes in the male/female suicide ratio over the lifespan in four subregions of the Americas, along with the changes these ratios undergo over time. Background: Globally, suicide is a leading cause of mortality. Rates are known to differ between males and females, across age groups, and between regions. Globally, males have a higher rate of suicide, though rates differ from country to country [1]. However, little is known about how the male/female ratio of suicide differs across age groups or between countries. Evidence shows the male/female ratio can differ by national economic development; from 3 males for each female in high income countries to 1.5 males for each female in low- and middle-income countries [2]. Little research has been conducted comparing countries within the Americas, where the suicide rate is 11.5/100,000 in males and 3.0/100,000 in females [3]. Methods: This epidemiologic descriptive study was conducted using yearly mortality data reported to the Pan American Health Organization / World Health Organization by individual member states from 1990-2009, categorized by age, sex, and cause of death. The countries of the Americas were divided into four subregions: 1. North America; 2. Mexico, Central America, and the Latin Caribbean; 3. South America; and 4. the Non-Latin Caribbean. Populations were divided into age groups: 10-19, 20-24, 25-44, 45-59, 60-69, and 70 and older. Rates for males and females in each group were described separately. To compare male and female rates, the male/female ratio was calculated for each age range within each subregion. The rates were further divided into four 5-year periods between 1990-2009 to measure changes in suicide patterns over time. The final data comprised of age-stratified male/female suicide ratios for each subregion and time period. Results: The male/female suicide ratio ranged from 0.96 to 8.64. The highest ratio occurred in North America in those age 70 and older, while the lowest ratio was in age 10-19 in the Non-Latin Caribbean. In all subregions, the highest male/female ratio occurred in the 70 and older age group. However, the North American age-related pattern in male/female ratio was unique in that the lowest point occurs in age 45-

59. The male/female ratio remain relatively stable across the last two decades in each subregion of the Americas. Conclusions: These results show that the age-related male/female suicide ratio patterns differ across geographic regions beyond the well-established differences in suicide rates. These differences in male/female ratio are age-specific. Although global data suggests a higher male/female suicide ratio in high-income countries, in the Americas, this finding is not consistently the case when stratified by age [4]. The differences between high-income and low- and middle-income countries was not as wide as previously reported. Finally, age-related male-female patterns of suicide appear to hold stable across time.

No. 101

Ketamine Infusions Stop Suicidal Ideation in Outpatients and Avert ER Visits and Hospitalizations

Poster Presenter: Lori Calabrese, M.D.

SUMMARY:

Background: Recent inpatient studies examining the effect of single sub-anesthetic ketamine infusions in treatment resistant depression (TRD) have shown promising results in diminishing suicidal ideation (SI). We describe the efficacy of serial titrated ketamine infusions in stopping suicidal ideation and averting ER visits and hospitalizations in a large, naturalistic sample of adult and adolescent outpatients with TRD and complex psychiatric comorbidity in a real-world psychiatry office practice. Methods: This is a retrospective chart review of 235 adults and adolescents presenting with TRD and complex psychiatric comorbidity in a large real-world psychiatry office practice with > 5400 visits/year. Each patient underwent a 60-90 min comprehensive diagnostic consultation by the single treating psychiatrist. Medical, psychiatric, and psychotherapy records were requested and reviewed when available. Appropriate patients were treated with 6 sub-anesthetic escalating dose ketamine infusions (0.5-1.2 mg/kg over 40-50 min) over 2-3 weeks. PHQ-9 was obtained at baseline and before each infusion. The presence, frequency, and intensity of PHQ-9 Item 9 was analyzed over the course of treatment and correlated to overall decrease in PHQ-9. Suicides, suicide attempts, ER visits and hospitalizations were analyzed over the course of treatment and for an additional 4 weeks. Results: 64% of TRD patients presented with SI. There were no suicides, attempts, ER visits or hospitalizations in this large real-world cohort. SI markedly diminished in 81.8%, and ceased completely in 68.4%. Remission of SI was bimodal, occurring after 1 infusion in 30.6%; the remainder required 3.3 infusions and a dose of 0.75mg/kg for remission of SI. Notably, suicidal patients experienced higher rates of response and remission of TRD to IV ketamine than non-suicidal patients. Conclusions: This is the first report of using serial IV ketamine infusions in a real-world psychiatry office for adults and adolescents with TRD and complex psychiatric comorbidity to safely and rapidly treat severe suicidal ideation and avert ER evaluation and hospitalization. It represents the largest number of patients to date reported from a single site in studies of IV ketamine infusions for TRD and suicidality, and a breakthrough treatment option for psychiatrists to provide in the office.

No. 102

Association Between Childhood Trauma and Suicidal Behavior in the General Population

Poster Presenter: Cheol Park

SUMMARY: Objective This study was performed to examine the association between childhood trauma and suicidal behavior in the general population of a metropolitan city in South Korea. Method A questionnaire was administered to investigate suicidal behavior, including suicide ideation and attempts, and childhood trauma before age 12, including bullying, emotional abuse, sexual abuse, and physical abuse. Sociodemographic factors and psychiatric scales were administered: Hospital Anxiety and Depression Scale (HADS), Rosenberg Self-esteem Scale (SES), Connor-Davidson resilience scale (CDRS), and Perceived Stress Scale (PSS). Suicidal behavior and scores on these scales were compared according to the presence of childhood trauma. Results Among 713 members of the general population, 22.3% reported having experienced any kind of childhood trauma. Sexual abuse was more common in women ($p<0.001$) and physical abuse was more common in men ($p=0.002$). Participants with experience of childhood trauma scored significantly higher in HADS and PSS, but showed

significantly lower scores on SES and CDRS. All types of childhood trauma were significantly associated with suicide ideation over the past year and a history of planned and attempted suicide. Multivariate association adjusted for age, sex, Medicaid insurance, HADS, SES, CDRS, and PSS indicated that bullying and sexual abuse were significantly associated with suicide ideation and suicide attempts. Conclusion Our findings indicated that childhood trauma is associated with higher levels of suicidality, anxiety, depression, and perceived stress and lower resilience and self-esteem in the general population. In particular, bullying and sexual abuse were significantly associated with high suicidality after adjusting for psychological status.

No. 103

Associations Between Clinicians' Emotional Responses, Therapeutic Alliance and Patient Suicidal Ideation

Poster Presenter: Allison Schuck
Co-Authors: Shira Barzilay, Ph.D., Sarah Bloch-Elkouby, Ph.D., Raffaella Calati, Ph.D., Ram Suresh Mahato, M.D., Igor I. Galynker, M.D., Ph.D.

SUMMARY:
Background: Mental health professionals often experience negative emotional responses to suicidal patients, and this can be related to treatment outcome. However, the mechanisms underlying this relationship are currently unknown. This study tested a mediational model to understand the relationship between clinicians' negative emotional responses, patient-reported therapeutic alliance, and patients' suicidal ideation (SI). Methods: Psychiatric outpatient participants (N=378) and their treating clinicians (N=61) were recruited from outpatient clinics in New York City. Patient participants completed the Working Alliance Inventory (WAI) for therapeutic alliance at initial study assessment and the Beck Scale for Suicide Ideation (BSS) for SI at both the initial study assessment and one month after. Clinician participants completed the Therapist Response Questionnaire-Suicide Form (TRQ-SF) for negative emotional responses immediately following their first encounter with the patient. Multilevel analyses were conducted using the lme4 package for R to account for within-clinician variability. Results: Patient-reported therapeutic alliance significantly mediated the relationship between clinicians' negative emotional responses and current SI (indirect effect estimate = 0.18, $p < .001$). Patient-reported therapeutic alliance also significantly mediated the relationship between clinicians' negative emotional responses and prospective SI at one-month follow-up (indirect effect estimate = 0.15, $p < .001$). Conclusions: The results of this study suggest that patients' initial experience of the therapeutic alliance plays a significant role in the relationship between clinicians' negative emotional responses and SI both concurrently and prospectively. Future research is needed to replicate these findings and to develop training programs aimed at helping clinicians to manage their emotional responses to suicidal patients

No. 104

The Relationship Between the Big Five Personality Traits and the Suicide Crisis Syndrome in an Outpatient Population

Poster Presenter: Zara Habib, M.B.B.S.
Co-Authors: Raffaella Calati, Ph.D., Xufei Guo, Igor I. Galynker, M.D., Ph.D.

SUMMARY:
Background: The Suicide Crisis Syndrome (SCS) is an acute state of cognitive and affective dysregulation that develops within hours or days leading up to suicide; affected patients are at risk for imminent suicide. While personality traits associated with increasing risk of suicide are well defined and include anxiety related traits (neuroticism, harm avoidance), impulsivity and hostility, those specifically predisposing to the development of SCS have yet to be identified. In this study, we explore personality traits assessed by the Big 5 Factor Personality Test (neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness) in relation to the SCS. Method: Adult participants (N = 466) were recruited from psychiatric outpatient clinics in New York City. Intake patients were screened for SCS by multiple scales, including: The Suicide Crisis Inventory, Affective Intensity Rating Scale, Brief Symptom Inventory, the Beck Depression Inventory and the Visual Analogue of Social Connectedness Scale. General Linear Model was performed using SPSS version 25. Results: The presence of SCS is

negatively correlated to extraversion (r=-0.263, p<0.001), openness (r=-0.134, p=0.004), agreeableness (r=-0.203, p<0.001), and conscientiousness (r=-0.328, p<.001), and positively correlated to neuroticism (r=0.496, p<0.001). When controlling for age, gender and years of education, participants meeting SCS criteria showed significantly lower scores on extraversion (F=6.228, p=0.013), agreeableness (F=6.959, p=0.009) and conscientiousness (F=8.651, p=0.003) compared to participants not meeting SCS criteria. On the contrary, patients meeting the SCS criteria had a significantly higher neuroticism score than patients not meeting the criteria (F=21.65, p<0.001). Of note, openness was not found to differ significantly between the two groups. Conclusion: Extraversion, agreeableness and conscientiousness are protective against the development of SCS. However, neuroticism confers increased risk of development of SCS. This is the first study defining personality traits associated with SCS. Further investigation is necessary to better define and characterize SCS and those patients especially at risk of imminent suicide.

No. 105

Risk Factors for Suicide and Suicide Attempts Among Patients With Treatment-Resistant Depression: A Population Based Nested Case-Control Study

Poster Presenter: Johan Reutfors, M.D., Ph.D.
Lead Author: Philip Brenner, M.D., Ph.D.
Co-Authors: Therese Andersson, Ph.D., Allitia DiBernardo, M.D., Gang Li, Ph.D., Lena Brandt, M.Sc.

SUMMARY:

Background: In clinical studies, up to 50% of patients with major depressive disorder (MDD) may experience treatment resistant depression (TRD), defined as two adequate antidepressant (AD) treatment trials without achieving remission. The risk for suicide is markedly elevated in TRD compared to other patients with MDD. However, risk factors for suicide and attempted suicide have not been investigated in this clinical population. The aim of this study was to investigate risk factors for suicide and attempted suicide in TRD. Methods: Swedish health care registers provided data for a case-control study nested within a cohort of 121,669 AD treated patients, 18 years and older, who were diagnosed with MDD in specialized health care services during 2006-2014. Patients who started a third sequential AD treatment during the same depressive episode were classified as having TRD. Among the patients with TRD, each identified case of suicide or attempted suicide was individually matched by age, sex and treatment start to three living controls with TRD. The potential sociodemographic and clinical risk factors of income, marital status, education level, country of birth, history of suicide attempts, comorbidity of substance use, anxiety or personality disorders, recurrent MDD episodes, somatic comorbidity, were assessed using univariable and multivariable conditional logistic regression analyses. Results: Of the 15,631 patients identified with TRD (58% women), 178 (1.1%) died by suicide and 1,242 (7.9%) experienced a suicide attempt during follow-up. In multivariable analyses, a suicide attempt was associated with an eight-fold increase in risk of suicide within 1 year (OR 8.8, 95% CI 4.5-16.9), and a three-fold increase thereafter (OR 3.6, 95% CI 1.9-6.7). A higher education of 10-12 years increased the suicide risk by 70%, compared to lower education (OR 1.7, 95% CI 1.02-2.8). Factors associated with attempted suicide were: a previous suicide attempt (OR 5.1, 95% CI 4.0-6.5 within 1 year; OR 2.5, 95% CI 2.0-3.1 thereafter), substance use disorder (OR 2.6, 95%CI 2.2-3.1), anxiety disorder (OR 1.3, 95% CI 1.1-1.5), personality disorder (OR 1.9, 95% CI 1.5-2.3), recurrent depressive episodes (OR 1.2, 95% CI 1.01-1.5 within 1 year; OR 1.4, 95% CI 1.1-1.7 thereafter), and somatic comorbidity (Charlson's comorbidity index [CCI] OR 1.4, 95% CI 1.2-1.7 within 1-2 years; CCI OR 2.0, 95% CI 1.04-3.9 thereafter). Results were similar for both outcomes when stratified by age and sex. In a separate analysis performed only on the 93 suicide cases without any history of suicide attempts in the registers, substance use disorder emerged as an independent risk factor (OR 2.1, 1.2-3.6). Conclusion: Suicide attempt, especially if recent, is a strong risk factor for completed suicide in TRD. Several established risk factors for suicide attempts among patients with MDD were identified also in TRD.

No. 106

Systematic Suicide Risk Assessment Utilizing Safe-T

Poster Presenter: Britta Ostermeyer, M.D.

Co-Authors: Anim Shoaib, Sarah Anwar

SUMMARY:

Suicide is a leading cause of death and remains a large, complex public health issue challenging practitioners of all specialties. The burden of suicide is evidenced by the expanding rates across the globe, and its prevention is an imperative focus of society as a whole. Research shows that (1) access to care and (2) removal of lethal means to commit suicide help suicide prevention. Recent efforts in suicide prevention have focused on performing systematic suicide risk assessments on patients. One such systematic risk assessment is the Suicide Assessment Five-Step Evaluation and Triage (SAFE-T) by the Substance Abuse and Mental Health Administration (SAMHSA). The five steps of SAFE-T entail elicitation of: (1) suicide risk factors; (2) suicide protective factors; (3) information about the patient's suicide conduct, i.e., thoughts, plans, behavior, and intent; (4) determination of suicide risk level and assignment of interventions, and (5) documentation of the risk assessment. Suicide risk factors can be divided into static risk factors, such as age, gender, or ethnic origin, and dynamic factors, such as substance abuse, homelessness, or interpersonal conflicts. While static factors cannot be modified, dynamic risk factors are modifiable and, therefore, become subject to interventions. On the other hand, those protective factors that can be enhanced lend itself to interventions as well. This poster will (1) explain the SAFE-T suicide risk assessment tool; (2) demonstrate a SAFE-T risk assessment using an illustrative clinical case vignette; and (3) utilize the OU FIPPS© Suicide Risk Reduction Intervention Chart to demonstrate how risk factors and enhancable protective factors, interventions, persons assigned to carry out interventions, problems pertaining to interventions, and status update on each planned intervention can be charted.

No. 107

Bipolar Disorder and Comorbid Synthetic Cannabis Use in a Patient: A Case Report

Poster Presenter: Keun Lee, M.D.
Co-Author: Samuel Adam Neuhut, M.D.

SUMMARY:

Ms. O is a 20 year old female with a psychiatric history of bipolar disorder, presents to the inpatient psychiatric unit for worsening depression and suicidal thoughts after smoking synthetic cannabinoids. Patient reported that after the effect of synthetic cannabinoids weaned off, she started having unmanageable surge of temptations to throw herself into water, cut herself, and drink bleach. Patient has been stable on her outpatient medication regimen including risperidone 3 mg PO bedtime and lamotrigine 100 mg PO daily for her bipolar disorder; however, the medication did not help, so she came in for additional treatment. Upon interview, patient reported depressed mood, problems with sleep, feeling guilty about her action to her friends and mother, and low energy. Pt also endorsed difficulty with organizing her thoughts. Patient stayed socially isolated and did not attend the group therapy in our inpatient unit. We restarted the patient on her risperidone 3 mg PO bedtime and lamotrigine 100 mg PO daily. After a few days, the patient reported no improvement of suicidal thoughts. We increased her risperidone to 4 mg PO bedtime and her lamotrigine to 200 mg PO daily for mood. Even with the augmentation for several days, patient reported minimal improvement, so we added bupropion 100 mg PO daily to her treatment. Then, the patient started making improvements and approaching her baseline. Over the rest of her hospital stay, she started interacting with other people, and attending both individual and group therapy. The effect of synthetic cannabinoids on chronic bipolar disorder is not well understood. In this poster, we discuss the efficacy of antidepressants and the requirement to increase medication dosages to treat worsening depression in patients with bipolar disorder who smoke synthetic cannabinoids.

No. 108

Detection of Suicide Ideas on Social Networks: Review of the Literature and a Pilot Study

Poster Presenter: Alexandra Pham-Scottez
Lead Author: Charles Malley
Co-Authors: Helene Kourio, Anne Kristelle Trebalag, Raphael Gourevitch

SUMMARY:

Young people are more and more numerous on social networks, and some of them express suicidal ideas there. It seems then relevant to think about new ways of preventing suicide using social networks. These platforms can provide opportunities to identify published warning signs of suicide thoughts, and also offers immediate access to a large online audience. The recent initiative of the dominant Facebook network to propose tools for reporting suicidal behavior is moving towards a practical organization of this new prevention pathway. In our study, we interviewed 32 patients between the ages of 16 and 25 who were observed for suicide ideations in our emergency psychiatric department (CPOA – Centre Psychiatrique d'Orientation et d'Accueil- located in Paris, France). All patients were asked about their use of social networks to communicate and identify suicidal ideation through a questionnaire. 28 % of the patients have already published their own suicidal ideation. 40% have seen suicidal thoughts from another user of a social network. Through this publication, the majority of young people express the wish to interact with other users sharing their difficulties. But most of youths also feels that the intervention of others or directly Facebook could be an intrusion of their privacy. The results of our pilot study are discussed in light of other data from the literature, and illustrate new detection and intervention opportunities associated with suicidal expression on social networks. In the future, the wealth of online information about suicidal users could offer privileged spaces for early detection and support, boosted by the development of computer tools and artificial intelligence. Current and future challenges include difficulty in assessing and recognizing suicidal risk. Privacy and confidentiality issues are also important issues. And last but not least, the risk of suicidal contagion should be evoked. In conclusion, social networks seem to have significant potential for suicide prevention. However, further research on their safety and effectiveness in this process is needed and ethical issues must be taken into account.

No. 109

Effectiveness of a Prompt Psychiatric Appointment After a Suicide-Related Emergency Department Visit in Older Adults

Poster Presenter: Gonzalo Martínez-Alés
Lead Author: Daniel Hernandez Calle
Co-Authors: Eva Román, Eduardo Jimenez, Maria Fe Bravo

SUMMARY:
Background and Aims: Older adults have the highest suicide rates. Emergency visits for Deliberate self-harm (DSH) are relatively rare in this age since their rate for completed suicide is extremely higher. Therefore, its management in the Emergency Department (ED) extremely valuable. Planning and a psychiatric appointment soon after the a DSH episode effectively reduces the risk of a suicide reattempt in the general population, but there is a lack of data in this age. The aim of this study is to evaluate the effectiveness of this intervention in the older adults. Methods: We conducted an observational study including 1616 patients receiving medical care after a DSH episode at a general hospital between years 2013 and 2016. One group received a psychiatric appointment after a week of the ED visit (ARSUIC group) and the was studied before implementing the ARSUIC program. The principal outcome measure was ED return due to DHS. Time to relapse was obtained from hospital records. We derived Kaplan-Meier survival functions comparing both groups including all patients (figure 1) and only older adults (figure 2). Cox proportional hazard regression models were used to estimate unadjusted and adjusted hazards of relapse by social and clinical covariates. Results: A statistically significant difference was founded between ARSUIC and control groups in all ages, which is preserved in the older adults subanalysis. Cox regression model shows that this difference between both groups in older adults remains after adjusting to relevant covariates with a HR 0.70 (0.53-0.88). Conclusions: In our cohort, planning and a psychiatric appointment one week after the a DSH episode effectively reduces the risk of a suicide reattempt in the general population and in older adults.

No. 110

Perceived Burdensomeness and Thwarted Belongingness Mediate the Relationship Between Depression and the Suicide Crisis Syndrome

Poster Presenter: Gelan Ying

Co-Authors: Sarah Bloch-Elkouby, Ph.D., Igor I. Galynker, M.D., Ph.D.

SUMMARY:
Background: The Suicide Narrative Crisis Model (NCM; Galynker, 2017) posits that trait vulnerabilities and long-term risk factors put individuals at risk for developing a suicidal narrative (SN) when they face stressful life events, eventually leading them to experience an acute mental state referred to as the Suicide Crisis Syndrome (SCS). The goal of this study was to test the validity of the NCM by investigating the potential mediation effect of key components of the SN on the relationship between depression, a long-term risk factor for suicide (Fawcett et al, 1987), and the SCS. Perceived burdensomeness (PB), and thwarted belongingness (TB), two key components of the SN and well documented risk factors for suicide ideation and behaviors, especially among older adults (Cukrowicz, Cheavens, Orden, Ragain, & Cook, 2011; Van Orden, Cukrowicz, Witte, & Joiner, 2012; O'connel, Chin, Cunningham, & Lawlor, 2004), were selected for this study. Methods: Adult psychiatric inpatient and outpatient participants were recruited in three clinic sites in New York. Among the 646 participants, 51 were older than 60. For all participants, self-reported questionnaires were administered to assess PB, TB (Suicide Narrative Inventory; SNI), depression (Beck Depression Inventory; BDI), and the severity of the SCS (Suicide Crisis Inventory; SCI) at their intake. Mediation analyses were performed to investigate the mediation effects of PB and TB on the relationship between depression and the SCS among older adults, as well as in the entire sample. Results: PB was a significant mediator for the relationships between depression and the SCS in the entire sample (b=0.03, BCa 95% CI=[0.02, 0.04]; N=598) as well as in the older participants (b=0.06, BCa 95% CI=[0.01, 0.10]; N=45). TB was also a significant mediator of the relationship between depression and SCS in the entire sample (b=0.03, BCa 95% CI=[0.02, 0.05]; N=598), but not among the older participants (b=0.05, BCa 95% CI=[-0.01, 0.09]; N=45). Conclusion: PB mediated the relationship between depression and the SCS in the general sample as well as among older psychiatric populations. However, TB mediated the relationship between depression and the SCS in the general psychiatric population only. This finding may be accounted for by the small size of the older participants or by age-related differences in psychological process underlying suicidal behavior. Our findings are consistent with the NCM, in which specific trait vulnerabilities and long-term risk factors, such as depression, are thought to predict individuals' tendency to develop an SN as a consequence of highly stressful life events (Cohen et al, 2018), itself predictive of individuals' proclivity to engage in the SCS.

No. 111

Esketamine's Antisuicidality Effects on Treatment-Resistant Depression: A Role for the Subcutaneous Route

Poster Presenter: Rodrigo Simonini Delfino
Co-Authors: Juliana Surjan, Eduardo Jorge Muniz Magalhaes, M.D., Lorena Catarina Del Sant, M.D., Marco Aurelio Oliveira, Ana Cecilia Lucchese, Luciana Sarin, Acioly Lacerda

SUMMARY:
Background: Suicide is a public health problem, with very limited treatment alternatives. Treatment with endovenous ketamine has lately been emerging as an important measure for managing suicidal thoughts and behaviour, due to its rapid and robust effect. Esketamine, the S- enantiomer of ketamine, has shown similar antidepressant efficacy, but with fewer side effects. The use of the subcutaneous route for ketamine administration grants benefits in comparison with the endovenous route, with fewer side-effects, lower costs and lower complexity of the procedure, while maintaining its antidepressant efficacy. Methods: 62 treatment-resistant depression (TRD) patients with suicidal ideation, who took part in a treatment program in an university ketamine clinic, were included in this study. Resistance to treatment was defined as failure to achieve adequate clinical response to two adequate treatments. Data were collected retrospectively from outpatients charts. The primary outcome measures of suicidal ideation were assessed by the suicide item of Montgomery-Asberg Depression Rating Scale (MADRS item 10) and Beck's Scale for Suicide Ideation (BSSI). Ratings were obtained at baseline and 24 hours post-infusion. Treatment with esketamine was delivered through the subcutaneous

route, once a week, up to 6 weeks. The initial dose was 0.5mg/kg, and doses were titrated up to 0.75mg/kg and 1mg/kg if the patient hadn't achieve response criteria, defined as = 50% reduction in baseline MADRS scores. Results: 54 (87%) patients completed the 6 infusions treatment course. Mean MADRS total score at baseline was 34,2, and mean MADRS suicidality (item 10) was 2,65. After treatment a reduction of 71% in MADRS suicidality score was observed, in comparison to a 51,8% in MADRS total scores reduction. The vast majority (84%) of the antisuicidality effect was observed within the first 24h of treatment. Reduction in suicidality was also observed through the decrease in BSSI scores, from 11,93 at baseline to 4,68 after 6 infusions (60,8% reduction). Conclusion: Treatment with subcutaneous esketamine for suicidal ideation was robustly effective, had a rapid onset, and effects were sustained and improved with repeated weekly infusions. This findings suggest that in "real world" TRD patients esketamine has a specific effect on suicidal ideation that depends only partly on depressive symptoms improvement.

No. 112

Resilience Moderates the Relationship Between Suicidal Narrative and Suicidal Behaviors

Poster Presenter: Xufei Guo
Co-Authors: Raffaella Calati, Ph.D., Lisa J. Cohen, Ph.D., Allison Schuck

SUMMARY:

Background: According to the Narrative Crisis Model of Suicide (NCM), trait vulnerabilities for suicide may moderate the relationship between the Suicidal Narrative (SN) and Suicide Crisis Syndrome (SCS), an acute mental state preceding imminent suicidal behavior (SB). Within this framework, resilience is an important personality trait which could be a potential protective factor against suicide The purpose of this study was to test the hypothesis that resilience moderates the relationship between the interpersonal factor of SN and near-term SB (Cohen et al., 2018). Methods: Adult participants (N=455) were recruited from psychiatric outpatient clinics of the Mount Sinai Health Care System in New York City. At intake, they were screened with the Suicidal Narrative Inventory (SNI), which includes the interpersonal factor subscales for social defeat, thwarted belongingness, humiliation, and perceived burdensomeness (Cohen et al, 2018). The Connor–Davidson Resilience Scale (CD-RISC) was also administered to assess resilience. At one-month follow-up, participants (N=344) completed the Columbia Suicide Severity Rating Scale (C-SSRS); SB was defined as a combination of actual attempt, interrupted attempt, aborted attempt in the past month. Moderation analyses were conducted using logistic regression analysis through the PROCESS Macro for SPSS. Results: The moderation analysis showed significant interaction effects for resilience on the relationship between social defeat and SB (b=-0.0037; p=.013), as well as thwarted belongingness and SB (b=-0.0052; p=.0033), but not perceived burdensomeness and humiliation, when controlling for age, gender, ethnicity and years of education. Thus, for participants with low levels of resilience, high scores on social defeat and high scores on belongingness were more likely to predict near-term SB. Conclusion: The results of this study provide partial support for the hypothesis that resilience could be a protective factor in the relationship between the SN and future near-term suicidal behaviors. Further research is needed to understand how resilience may impact the relationship between interpersonal factors of the SN and near-term SB. Research into the role of resilience training in people with high-intensity suicidal narrative is also therefore warranted.

No. 113

Extreme Anxiety Moderates the Relationship Between Hopelessness and Suicidal Thoughts and Behaviors

Poster Presenter: Cindy Forestal
Co-Authors: Allison Schuck, Sarah Bloch-Elkouby, Ph.D., Igor I. Galynker, M.D., Ph.D.

SUMMARY:

Background: Suicidal thoughts and behaviors continue to rise as a major public health issue in the United States. Hopelessness has been established as a significant predictor of suicide. Recent research has proposed the use of an acute suicide-specific diagnosis, such as the Suicide Crisis Syndrome (SCS), to identify individuals at imminent risk for suicide. The SCS is characterized by a pervasive sense of entrapment, accompanied by extreme anxiety, aside

cognitive, affective and social disturbances. This study's goal was to examine the extent to which extreme anxiety, a central component of the SCS, acts as moderator of the relationship between hopelessness, another component of the SCS, and prospective suicidal thoughts and behaviors (STB). Methods: Adult psychiatric patients (N=373) were recruited from outpatient clinics in New York City. Participants' hopelessness and extreme anxiety were respectively measured using the Beck Hopelessness Scale (BHS) and the Brief Symptom Inventory (BSI) during the initial interview. Prospective STB were assessed one month thereafter using the Columbia Suicide Severity Rating Scale (C-SSRS). A moderation analysis was conducted using PROCESS for SPSS. Results: The results revealed that the interaction between hopelessness and extreme anxiety was significant ($b = .02$, $p < .05$). Further, hopelessness and extreme anxiety were not significant predictors of STB ($b = .02$, $p = .64$; $b = -.19$, $p = .11$, respectively) supporting the moderation hypothesis. Conclusion: Our findings suggest that extreme anxiety is a significant moderator of the relationship between hopelessness and prospective STB. Specifically, at high levels of extreme anxiety, high levels of hopelessness were predictive of prospective STB. In the moderation analysis, hopelessness and extreme anxiety were not independently significant, suggesting that it is the interaction between these two mental processes that significantly predicts STB. Future research is needed to uncover the acute mental state that is associated with short-term STB.

No. 114

Challenges in the Assessment of Suicide Risk in Patients With Self-Inflicted Firearm Brain Injury Resulting in Aphasia

Poster Presenter: Muhammad Zeshan, M.D.
Co-Authors: John Glazer, Serena Fernandes, Jessica Bayner

SUMMARY:

Background: Firearms are responsible for a large part of childhood and adolescent morbidity and mortality in the United States. Firearm injuries are one of the top three causes of death among children, and the cause of one in four deaths in adolescents ages 15 to 19 years in the United States, and national data from the Centers for Disease Control and Prevention reports that firearm injuries led to 3459 deaths in 2010. Among the 1.7 million people who sustain TBI each year in the US, suicide is a major public health problem with those with a history of TBI about 1.55 to 4.05 times more likely to die by suicide than in the general population. Previous studies address how to assess suicide risk in patients with TBI but there is a paucity of literature on how to assess suicide risk in patients with self-inflicted TBI by firearm resulting in aphasia and other neurocognitive symptoms. The main objective of our literature review and case presentation are to describe our approach to evaluate suicide risk in such patients. We also address the challenges of determining whether such patients are best served, after recovery from acute brain trauma, in an acute rehabilitation or inpatient psychiatric facility. Methods: Literature was searched using key terms "suicide", "TBI", "aphasia", "risk assessment", "firearm" for articles indexed in Medline/PubMed and Google Scholar during last 10 years. Results and Conclusion: We present a case of an adolescent male with no reported previous psychiatric history who was admitted to the hospital after a self-inflicted gunshot wound to the left fronto-temporal region. The resulting injury left the patient with expressive aphasia and a dense right-sided hemiplegia, and presented a major challenge in assessment of suicidal risk, engagement in psychotherapeutic treatment, and determining appropriate level of medical and psychiatric care. Assessment of risk of suicide in patients with aphasia and neurocognitive deficits resulting from a recent suicidal attempt is challenging. Collaborative decision making by the psychiatric and trauma clinical services teams regarding whether to transfer the patient to a rehabilitation or psychiatric facility, perform risk assessments, and minimize risk while receiving clinical care is essential.

No. 115

Description of Sociodemographic and Clinical Factors in Elders Admitted for Suicide Risk

Poster Presenter: Sónia Farinha Silva
Co-Authors: Paulo Barbosa, Miguel Nascimento, M.D.

SUMMARY:

In Portugal, suicide rates are higher in the elderly, but the data on suicide attempts is scarce, since there is no systematic surveillance system implemented in the country. This lack of information compromises efforts to intervene in the community regarding suicide prevention. Aim To determine the socio-demographic and psychopathological variables associated with suicide risk in the elderly (=65 years old) in patients admitted at the acute psychiatric ward due to suicide behavior. Methods We collected data from the electronic clinical records of the Unidade Local de Saúde do Baixo Alentejo, EPE (Beja, Portugal) and identified patients that were admitted in 2016 and 2017 with suicidal risk. The elderly group was described and compared with other patients with suicide risk according to sociodemographic (age, marital status, professional status) and clinical variates (suicide attempt [and method, if present], presence of psychotic symptoms and depressed mood, diagnosis and length of stay in acute psychiatry ward). Results We identified 104 admissions with suicide risk, of which 22 were elderly (21,1%). The elders were in average 75,91 years old (±6,4). Most were male (54,5%); married (63,6%) and retired (95,5%). A suicide attempt was found 15 times (68,2%); psychotic symptoms were present in 13,6% and depressed mood in 95,2% of the admissions. Of these elder patients, 72,7% were given a mood disorder diagnosis (F30-39, ICD-10). The median of length of stay in the Psychiatry service was 13 days (interquartile range=6-17). Of the 15 admissions of elders due to a suicide attempt we found cases of self-poisoning with drugs (n=5) or chemicals (n=1), hanging (n=2), drowning (n=1), firearm discharge (n=2), cutting (n=1) and jumping from a high place (n=3). In the multivariate analysis, we found an association between being elder and attempted suicide by gunfire discharge (p=0,015), jumping from a high place (p=0,020), which are both more prevalent in the elderly and with suicide attempt by drug self-poisoning (p=0,021), which was less prevalent in the elderly. Conclusion The results of this study showed that the trends of suicide attempts in the old age are different of those of other age groups. This might help us to develop and promote prevention strategies that better suit the needs of these individuals.

No. 116

A Novel Training Modality for Identifying Suicidal Ideation and Empathetic Interaction

Poster Presenter: Chelsea R. Cosner
Co-Authors: Aniuska Luna, Benjamin Lok, Ph.D., Adriana E. Foster, M.D., Christina Rios, Igor I. Galynker, M.D., Ph.D.

SUMMARY:
Introduction/Aim Suicide risk assessment is traditionally taught with lectures, workshops, videos, and standardized patient encounters (1). Virtual Human Interactions (VHIs) allow safe and repetitive online practice with a virtual patient, including sensitive clinical encounters such as performing a suicide risk assessment. VHIs offer immediate user feedback, including the individual interaction transcript, key history elements elicited, the user's individual empathic responses towards the virtual human and suggestions for alternative responses. To our knowledge, so far, suicide risk assessment and empathy have not been taught and evaluated within the same virtual human interaction. We aimed to 1) determine whether VHI is a feasible tool for teaching healthcare trainees to perform a suicide risk assessment, 2) determine trainees' ability to engage empathically with a VHI, and 3) elicit trainees' attitudes toward VHI as a teaching modality. Methods Healthcare trainees (medical, nursing and social work) interacted anonymously with a VHI by typing questions in order to elicit history and assess suicide risk. Participants' responses to the empathic opportunities offered by the virtual human were coded via the Empathetic Communication Coding System (ECCS) (2). Additionally, VHIs were evaluated for trainees' recognition of suicide risk based on APA guidelines (3). A post-interaction survey measured participants' satisfaction with the VHI. Results In an ongoing study (expected to be completed Spring 2019) so far five participants engaged with the VHI, with a response accuracy of 0.49% (by comparison, a mature developed VHI allows 0.85 response recognition (1). Among them, two elicited SI and performed a full suicide risk assessment. Participants responses to empathic opportunities' in the VHI were coded with a score of 1.86 (SD=1.32) on 0-6 ECCS scale empathic opportunities (e.g. 0=denial of empathic opportunity; 6=shared feeling). Participants found the VHI transcript as useful with an average rating of 4.25 (SD=0.83) on a 1-5 scale.

Conclusion Study participants identified suicide risk and responded empathically in a VH although the tool is still in development. With further development, we aim for the VHI to viably augment existing suicide risk training modalities as well as recognize and offer feedback on users' empathic responses. Future research should assess patient-level outcomes for professionals trained with VHI versus those trained with traditional methods to perform suicide risk assessment and communicate empathically

No. 117

Relation of Rapid Eye Movement Sleep Disturbances and Coronary Artery Calcium With Posttraumatic Stress Disorder

Poster Presenter: Naser Ahmadi, M.D., Ph.D.

SUMMARY:

Background: Posttraumatic-stress-disorder(PTSD) is independently associated with coronary-artery-calcium(CAC) and predicts mortality. This study investigated the relation of sleep disturbances with CAC and PTSD in subjects with polysomnography(PSG) diagnosed sleep-disordered-breathing(SDB). Methods: This study includes 634 subjects with SDB, with(n=83) and without(n=551) PTSD, who underwent CAC-scanning. Subjects were free of other mental-health-disorders(MHD) and were without known coronary-artery-disease. Severity of PTSD nightmares were measured using clinical-global-impression-severity scale(CGI-S). Regression-analyses were employed to assess the relation of rapid-eye-movement(REM) sleep disturbances and CAC in subjects with comorbid SDB and PTSD. Results: There was a significant correlation between the severity of PTSD nightmares with reduced REM-duration(r^2=0.56,p=0.001), increased CAC(r^2=0.58,p=0.001) and increased REM-AHI(r^2=0.69,p=0.0001). Regression-analyses shows that CAC reduced REM sleep duration and increased REM AHI are independently associated with PTSD, where risk of CAC>0, reduced REM-sleep duration and increased REM-AHI was 70%, 62% and 101% higher in SBD subjects with PTSD compared to those without PTSD(p<0.005). Regression-analyses revealed a significant-link between CAC>0 and the severity of REM-AHI with increased risk of PTSD(p<0.05) where risk of PTSD was 5.45 times higher in subjects with CAC>0&REM-AHI>30/hr. The ROC curve showed a significant prognostic-value of CAC, REM-AHI and substantially with their combination in terms of predicting the severity of PTSD (p<0.001). Conclusion: Increased REM-AHI and CAC are independently associated with the severity of PTSD nightmares. A significant-link between CAC and REM-AHI in subjects with increased risk of PTSD was noted. These highlight an important role for CAC and REM-AHI in risk stratification of at risk individuals with PTSD.

No. 118

Endocannabinoid System Modulation in Posttraumatic Stress Disorder

Poster Presenter: Ketan A. Hirapara, M.B.B.S.
Co-Authors: Robert Rymowicz, D.O., Petros Levounis, M.D.

SUMMARY:

Posttraumatic stress disorder (PTSD) is characterized by poor adaptation to a traumatic experience, resulting in the heightened salience of traumatic memories and the failure of an extinction process to diminish its impact. The neurobiology of PTSD involves the amygdala-hippocampal-cortico-striatal circuit as a key brain circuit responsible for memory consolidation, fear conditioning, and fear extinction, mediated by endocannabinoid (ECB) signaling. The ECB system consists of CB1 and CB2 receptors, N-arachidonylethanolamine (AEA) and 2-arachidonoylglycerol (2-AG). AEA and 2-AG are metabolized by fatty acid amide hydrolase (FAAH) and monoacylglycerol lipase (MGL), respectively. Under normal stressful circumstances, adrenal release of glucocorticoids results in increased cAMP and protein kinaseA activity in the amygdala. This synaptic transmission sequence results in the inhibition of GABA release and increased noradrenergic release into the amygdala through the activation of CB1 receptors by ECB signal. This complex interaction of cannabinoids at the level of the amygdala and prefrontal cortex reduces traumatic memory by affecting its retrieval or reconsolidation, or by stimulating the process of aversive memory extinction. Glucocorticoids also inhibit FAAH activity resulting in increased AEA level, which suppresses the sympathetic stress response by inhibiting the release of excitatory

neurotransmitters. In PTSD, there is a dysregulation of glucocorticoid signaling with sensitized negative feedback from the HPA axis, which results in increased CRH and a blunted glucocorticoid response to CRH. Elevated CRH level promotes FAAH activity, resulting in a chronically low AEA level. Therefore, facilitation of ECB signaling may have a therapeutic effect in the early period following exposure to trauma. This mechanism also holds a significant therapeutic promise, especially when considering the success of exposure-based psychotherapies, through which extinction mechanisms are thought to be engaged. The two FDA-approved medications for PTSD (paroxetine and sertraline) often produce only 60% response. Literature suggests that exogenous cannabinoids may have effect on decreasing PTSD symptoms, but to date, there have been no large-scale, randomized, controlled studies investigating their efficacy. Also, their long-term use has been associated with persistent impairment of attention, verbal and working memory, and executive function. ECB system modulation by inhibiting FAAH and MGL may present a novel therapeutic approach by promoting neurogenesis in diseases that are associated with anxiety and deficits in fear extinction. In some animal models, targeting FAAH to prolong the activity of ECB signaling by slowing the breakdown of endogenous cannabinoids has demonstrated improvement in the extinction of aversive memories. Further studies are needed to develop a better understanding of the potential for ECB system modulation in the treatment of PTSD in humans.

No. 119

Mental Disorder Symptoms Among Correctional Workers in Canada

Poster Presenter: Anees Bahji, M.D.
Co-Authors: Dianne Groll, Ph.D., R. Nicholas Carleton, Ph.D., Rosemary Ricciardelli, Ph.D.

SUMMARY:
Background: Correctional workers are regularly exposed to potentially traumatic events (PTEs). Such exposures increase risk for mental disorders involving substantial personal and social costs. Unfortunately, available data on exposure to PTEs and associations with mental disorders in Canadian correctional workers remains sparse. The current research was designed to provide estimates of the frequencies of PTE exposure within Federal correctional workers and symptoms of mental health disorders. Methods: The data for the current study were collected as part of a larger study, using a web-based self-report survey made available to participants in English or French. The survey included established self-report measures for exposures to PTEs and mental disorder symptoms. Results: 1308 Federal correctional workers (43.3% male) from across Canada responded and reported exposures to 16 PTE types (M=9.88, SD=3.88). 88.7% reported being exposed to physical assault, 85.6% to sudden violent death, 80.6% to sudden accidental deaths, and 78.8% to assault with a weapon. When asked to identify their worst traumatic experience, 24.0% reported exposure to sudden violent death, while 'physical assault' was ranked highest by 13.0%. There were statistically significant relationships between PTE exposures and operational stress injuries (OSIs) such as PTSD, Depression, Anxiety Disorders, Disorder, and Alcohol Use Disorder. Discussion: For Federal correctional workers, the most disturbing PTE exposures were related to violent death and physical assault. Given PTE exposure prevalence, and the association with OSIs, policy makers should ensure evidence-based mental health resources are readily available for correctional workers.

No. 120

Operational and Organizational Stressors, and the Mental Health of Canadian Correctional Officers

Poster Presenter: Anees Bahji, M.D.
Co-Authors: Dianne Groll, Ph.D., R. Nicholas Carleton, Ph.D., Rosemary Ricciardelli, Ph.D.

SUMMARY:
Introduction: Operational and organizational stressors occur to some degree in all work environments, and if they are severe enough they may affect the mental health of the employees. The current study was designed to: (1) examine the operational and organizational stressors in male and female Canadian correctional workers; and (2) examine whether operational and occupational are associated with symptoms of mental illness. Methodology: Data were collected using web-based survey collected by the Canadian Institute for Public

Safety Research and Treatment, and included 1,308 correctional officers. The survey tools included established self-report measures for occupational stressors (20 organizational and 20 operational), and mental disorder symptoms such as PTSD, anxiety, and depression. Analyses included descriptive and non-parametric bivariate statistics. Results: There were slightly more female respondents (56.7%) than males. Females reported slightly lower mean organizational and statistically significantly lower operational stress than males (2.8/6 vs 2.9/6 , and 1.9/6 vs 2.1/6 respectively). The three highest mean organizational stressors were the same for both male and female workers - inconsistent leadership style, bureaucratic red tape, and feeling that different rules apply to different people. The top four operational stressors were the same for males and females, but in different orders of priority. Fatigue, finding time to stay in good physical condition, occupation-related health issues, and paperwork caused the most stress. Operational and organizational stress was significantly correlated with increased symptoms of PTSD, anxiety, alcohol use disorder, depression, stress, and anger, and lower resiliency. Significant differences were found between genders and years of work experience. Conclusion: Male and female Canadian correctional officers reported the same top four operational and three organizational stressors. Both operational and occupational stressors, are significantly associated with increased mental health symptoms. It is important for management and government officials to identify sources of stress in order to potentially improve the mental health of correctional officers in Canada.

No. 121

Comparing Occupational Stressors and the Mental Health of Male and Female Canadian Correctional Officers

Poster Presenter: Anees Bahji, M.D.
Co-Authors: Dianne Groll, Ph.D., R. Nicholas Carleton, Ph.D., Rosemary Ricciardelli, Ph.D.

SUMMARY:
Introduction: Occupational stressors occur to some degree in all work environments, and if they are severe enough they may affect the mental health of the employees. The current study was designed to: (1) examine two elements of occupational stress (operational and organizational) in male and female Canadian correctional workers; and (2) examine whether operational and occupational stressors are associated with symptoms of poor mental health. Methodology: Data were collected by the Canadian Institute for Public Safety Research and Treatment using a web-based survey procedure, and included 1,308 correctional officers. The survey tools included established self-report measures for occupational stressors (20 organizational and 20 operational), and various aspects of mental health. Analyses included descriptive and non-parametric bivariate statistics. Results: There were slightly more female respondents (56.7%) than males. Females reported slightly lower mean organizational and significantly lower operational stress than males (2.8vs 2.9, and 1.9 vs 2.1, respectively). The three highest mean organizational stressors were the same for both male and female workers - inconsistent leadership style, bureaucratic red tape, and feeling that different rules apply to different people. The top four operational stressors were the same for males and females, but in different orders of priority. Fatigue, finding time to stay in good physical condition, occupation-related health issues, and paperwork caused the most stress. Operational and organizational stress was significantly correlated with increased symptoms of PTSD, anxiety, depression, stress, anger, and lower resiliency in both males and females, and with alcohol use disorders in males only. Conclusion: Male and female Canadian correctional officers reported the same top four operational and three organizational stressors. Both operational and occupational stressors, are significantly associated with increased mental health symptoms. It is important for management and government officials to identify sources of stress in order to potentially improve the mental health of correctional officers in Canada.

No. 122

Psychotherapy for Borderline Personality Disorder in Children and Adolescents: Systematic Review and Meta-Analysis

Poster Presenter: Anees Bahji, M.D.
Co-Authors: Jennifer Wong, M.D., Sarosh Khalid-Khan, M.D.

SUMMARY:

Background and Aims: Borderline personality disorder (BPD) is a debilitating condition, but several psychotherapies are considered effective in children and adolescents. To date, however, their efficacy has not been systematically reviewed or synthesized. Objective: Here, the authors conduct a systematic review and meta-analysis of randomized clinical trials to assess the efficacy of psychotherapies for BPD in children and adolescent populations. Methods: Search terms were combined for borderline personality and randomized trials into 4 online databases in accordance with the PRISMA criteria. Randomized clinical trials of children/adolescents with diagnosed BPD randomized to psychotherapy exclusively or to a control intervention were included. Study selection differentiated stand-alone designs (in which an independent psychotherapy was compared with control interventions) from add-on designs (in which an experimental intervention added to usual treatment was compared with usual treatment alone). Statistical analysis was conducted on efficacy outcome variables using fixed- and random-effects meta-analysis with Review Manager 5.3. Results: Psychotherapy had a significant and large effect on BPD symptoms at posttest (g = -0.89 [-1.75, -0.02], I2 = 90%), but not in follow-up (g = 0.06 [-0.26, 0.39], I2 = 0%) or overall (g = -0.56 [-1.17, 0.06], I2 = 89%). Similarly, psychotherapy did not have a statistically significant effect on externalizing symptoms (g = -0.28 [-0.69, 0.13]), internalizing symptoms (g = 0.02 [-0.26, 0.31]), or functioning (g = -0.04 [-0.26, 0.18]). Conclusions: Psychotherapies, most notably dialectical behavior therapy approaches, are effective for BPD symptoms and related problems. Nonetheless, effects are small, inflated by risk of bias and publication bias, and particularly unstable at follow-up.

No. 123

Classifying Rates of Students With Autism and Intellectual Disability in North Carolina: Roles of Race and Economic Disadvantage

Poster Presenter: Gary R. Maslow, M.D., M.P.H.

SUMMARY:

Background: We sought to characterize rates and classifications of students receiving special education and related services throughout the state of North Carolina, with a particular focus on intellectual and developmental disabilities (IDD) including autism spectrum disorder (ASD). The goal was twofold: 1) provide an estimate of the total number of children/young adults aged 3-21 years in the state with IDD, and 2) examine the degree to which racial or economically disadvantaged variables would be associated with the prevalence of IDD classification by county. We hypothesized that racial and economically disadvantaged variables would be differentially associated with exceptionality classifications. Methods: Data from the North Carolina Education Research Data Center (NCERDC) allowed us to identify children are served through the special education system with a primary classification of ASD or intellectual disability (ID). Further, data were categorized by county, race/ethnicity, and economic disadvantaged status. Linear regressions explored predictors of variability in rates of students with ASD vs. ID by county. Results: In North Carolina in 2017, there were approximately 35,000 children between the ages of 3 and 21 with a primary exceptionality classification of intellectual disability (ID) or ASD (16,360 students with primary classification of ID, and 18,499 with ASD). Results highlighted wide variability by county in the percentage of students with ID and/or ASD. For example, while approximately 1.05% of students had a primary exceptionality classification of ID and 1.19% ASD, county rates ranged from 0.26% to 3.66% for ID, and 0.34% to 1.95% for ASD. Further, the ratio of students with primary ID vs. ASD classifications also appeared to vary by county (ID/ASD), ranging from 0.15 (for every 1 student with ID, 6.8 students with ASD) to 7.76 (for every 1 student with ID, 0.13 students with ASD). Preliminary analyses indicate that variability may be associated with race and economic disadvantage. Further analyses will continue to attempt to explain these differences and ideally link with Medicaid/MCO data to determine whether individuals identified through the school system are also receiving state funding for which they may be eligible. Conclusion: Rates of ID and ASD varied by county and as a function of race and economic disadvantage. Identifying sociodemographic characteristics associated with exceptionality classifications may provide a greater understanding

of access to services (or lack thereof) and possible health disparities. This project conveys clear implications for policy in ensuring that North Carolina's children with disabilities receive necessary and appropriate special education services.

No. 124

The Broad Impact of Childhood Trauma: Physical-Psychiatric Comorbidity in a Cohort of Individuals Exposed to 9/11 in Childhood

Poster Presenter: Lawrence Amsel
Co-Authors: Keely Cheslack-Postava, George Musa, Michaeline Bresnahan, Larkin McReynolds, Raz Gross, M.D., Christina Hoven

SUMMARY:
Background: There has been extensive research into the long term psychiatric consequences of childhood trauma. However there has been less work on how traumatic experiences occurring during developmentally sensitive periods affect physical-psychiatric comorbidities throughout the lifespan. From a clinical perspective, an understanding of the relationship between childhood trauma. psychiatric symptoms and physical symptoms is extremely important for the holistic assessment and treatment of our patients. Methods: The Stress and Well Being (S&W) study is an ongoing longitudinal epidemiologic study that compares individuals directly exposed to 9/11 as children (N= 844) and a control group (N= 491). Physical health conditions were assessed through self or parent-reported data collected in that study; psychiatric conditions were examined based on a DISC interview. Results: Any psychiatric disorder in the past year was more prevalent among directly-exposed versus non-exposed subjects (35.7% vs. 27.9%), as was any lifetime physical health condition (26.9% vs. 10.3%). Demographic-adjusted multinomial logistic regression models estimated the association between 9/11 exposure and a 4-level outcome variable (physical-psychiatric comorbidity; psychiatric condition only; physical condition only; neither). 13.0% of directly-exposed versus 3.7% of unexposed subjects had physical-psychiatric comorbidity. Direct 9/11 exposure was associated with an increased odds of physical-psychiatric comorbidity vs. neither (aOR (95% CI) = 4.60 (2.75-7.71); p<0.0001), and of physical morbidity only vs. neither (aOR (95% CI) = 2.49 (1.63-3.81); p < 0.0001). The association with physical-psychiatric comorbidity was marginally significantly greater than that with physical morbidity alone (p=0.055), indicating that the increased comorbidity was not due simply to an increase in physical conditions. Conclusion: Individuals who were exposed as children to a uniform mass trauma (9/11) show a higher rate of physical disorders, a higher rate of psychiatric disorders, and a higher rate of physical-psychiatric comorbidities than those without the exposure. Clinicians treating individuals with any trauma exposure should pay attention to holistic mind-body consequences regardless of whether the presentation is with physical or psychiatric complaints.

No. 125

Mental Health Service Utilization Among Victims of Violent Injury

Poster Presenter: Adaobi Nwabuo
Co-Authors: Catherine Juillard, Rebecca Plevin, Anamaria Robles, Catherine Classen, Sarah Metz, Martha Shumway, Carla Richmond, Rochelle Dicker, Alicia Boccellari

SUMMARY:
Background: Violent injury is a pervasive health issue in the US. Homicides are the third leading cause of death for all individuals aged 15-34 [1]. There are also significant disparities in homicide rates across race and ethnic groups. Homicide is the leading cause of death for blacks aged 15-34, with age-adjusted homicide rates of 21.18 per 100,000 in blacks compared to 3.54 per 100,000 in whites. Furthermore, for every homicide, there are an estimated 89 non-fatal injuries. For many victims of these non-fatal injuries, the psychological trauma persists long after their physical injuries have healed, making obtaining full-time employment or education difficult. In addition, mental health disorders have even been shown to increase the risk of re-hospitalization and mortality following injury. This puts victims of violent injury who do not receive adequate mental health services at even higher risk of re-injury. The patterns of mental health service utilization in victims of violent injury are not well known; we aim to identify factors which predispose victims of violent injury to completing treatment for

mental health. Method: Hospital-based Violence Intervention Programs (HVIPs) have been developed to navigate victims of violent injury through critical resources to decrease their likelihood of re-injury. HVIPs employ culturally competent intervention specialists to identify and address the needs of victims of violent injury, chief among which is mental health services [2]. This study uses data pooled from one such HVIP, The Wraparound Project (WAP), and its main mental health service provider, The Trauma Recovery Center (TRC). Clients were determined to have completed treatment if they attended the number of sessions recommended by their clinicians. Results: Of the 762 clients WAP served between 2005-2017, 345 were referred to a mental health service provider. Of these, 137 were referred specifically to TRC – this subset was used for the completion prediction analysis. The majority of the population was male (85%), Latino (48%), or black (40%). Unadjusted, whites and Latinos were 5.75 and 2.86 times more likely to complete their mental health service treatment than blacks. Unemployed clients were 0.39 times as likely to complete treatment as employed clients. When adjusted for race and ethnicity, employment status, mechanism of injury, age at intake, and English fluency, males were only 0.3 times as likely as females to complete treatment. Conclusion: Among victims of urban violence, males, blacks and unemployed individuals were significantly less likely than their counterparts to complete mental health treatment. Special consideration must therefore be given to the delivery of mental health services to members of these groups to reduce attrition.

No. 126
WITHDRAWN

No. 127
Combat-Related PTSD in Veterans: Relationship Between Self-Reported Executive Function Problems and Alterations in Eye Movement
Poster Presenter: Bikram Sharma, M.D.

SUMMARY:
Among Veterans with combat-related PTSD, general findings have shown significantly impaired executive functioning and alterations in eye movement. Executive functioning is not only pivotal in daily functioning, but also for participation in therapeutic interventions and pharmacological treatment. Recent studies using eye tracking technology have indicated promising results of eye movement as a biomarker for identifying PTSD. This investigation explores the relationship between executive functioning, eye movement, and PTSD in the military population. The objective is to exemplify evidence of eye tracking technology as a more effective alternative diagnostic tool, eye movement as a possible biomarker of PTSD, and a self-report measure as more sensitive to identifying executive function deficits in the everyday environment. This exploratory pilot study uses a two group randomized control design with 30 participants per group. Each group will be counterbalanced relative to the order of study procedures. Participants will be administered the PTSD Checklist-Military Version (PCL-M), Behavior Rating Inventory of Executive Function-Adult Version (BRIEF-A), and a 2 to 3-minute eye tracking task. SR Research EyeLink 1000 Plus system, a non-invasive eye and gaze monitoring program, will be used to administer the eye tracking task. The EyeLink 1000 Plus desktop mounted camera will operate with an adjustable head and chin support to minimize the effects of head movements and increase tracking stabilization. The participant will sit comfortably in a chair at the computer console while viewing 25 to 30 standardized images from International Affective Picture System (IAPS). Images will be specially selected to ensure no explicit trauma-related stimuli (e.g., people, infants/children, and/or vehicles) are present. Only neutral images (e.g., scenes of landscape and nature) will be used. This minimizes the likelihood of complicated patterns of negative emotion and other PTSD-related symptoms being evoked during stimuli presentation. All selected images will have one or more interest area (IA), which will not be visible to the participant. The pattern of gaze position and fixation duration to each IA will be analyzed using SR Research Eyelink Data Viewer proprietary algorithms and statistical analysis software to distinguish between individuals with and without PTSD. Following the study, participants will receive a short debriefing. This ensures any uncomfortable feelings, memories, or mental health symptoms that may have emerged are addressed. An emergency contact list including

information for mental health, crisis intervention, and contact to the PIs will be made available. Findings of the study are expected to be in accord with a growing body of evidence that Veterans with combat-related PTSD sustain deficits in executive functioning and marked changes in eye movement.

No. 128

Severity and Symptom Trajectory in Combat-Related PTSD: A Review of the Literature

Poster Presenter: Michael Able
Co-Author: David Benedek, M.D.

SUMMARY:
Background: Combat-related Post-traumatic Stress Disorder is increasingly recognized as having a variable course in returning veterans. There have been relatively few studies identifying predictors of severity or duration of illness in this population. This review sought to synthesize the existing literature. Methods: 331 manuscripts were identified via online databases using key words including "ptsd," "posttraumatic stress disorder," "combat disorder," "factor analysis," "cluster analysis," "symptom cluster," "symptom trajectory," "military," "active duty," "combat," "deployment," "predictor," and "risk factor." Exclusion criteria eliminated articles that did not focus on psychosocial mediators of PTSD symptoms and trajectory while inclusion criteria opened the review only to articles focusing on combat-exposed military populations. With full application of our criteria, the number of eligible articles was reduced to 22. Conclusions from the remaining article were categorized in an iterative fashion and sorted into six core themes: 1) Combat Experiences, 2) Emotional Regulation and Personality, 3) Social Environment, 4) Dissociation, 5) Illness Trajectory, and 6) Co-Morbidities. Results: Results were generally heterogeneous, with few findings replicated between included studies. However, reviewed literature consistently identified hyperarousal as predictive of disease severity. Although observed in a limited number of studies, pre-deployment dissociation was found to predict disease severity and symptom trajectory, while re-experiencing was predictive of suicidal ideation in veterans with combat-related PTSD. Conclusion: For the clinician caring for patients with combat-related PTSD, predicting disease severity or symptom trajectory is difficult as there have been few consistently identified clinical predictors in the published literature. However, important factors may now include hyperarousal and a history of dissociation as the extent of these may predict disease severity, and re-experiencing as this has been identified as a significant predictor of suicidal ideation. Replication studies are needed to thoroughly evaluate the predictive value of these factors, and may prompt further study evaluating biological and more sensitive psychosocial predictors for illness severity and prognosis.

No. 129

Treatment Dropout Among Veterans and Their Families Receiving Care at a University-Based Treatment Center: Quantitative and Qualitative Findings

Poster Presenter: Doron Amsalem, M.D.

SUMMARY: Objective: Treatment dropout rates for veterans and their families are high (36-68%). This study sought to measure dropout rate of such patients at a university-based treatment center, compare dropout rates between veterans and their family members, identify predictors for dropout, and explore clinicians' perspective on treatment dropout. Finally, we compared overall dropout rates to historical rates at Veterans Administration (VA) hospitals. Methods: This study used both quantitative and qualitative approaches. We analyze all demographic and clinical variables of 88 individuals who began treatment at the Military Family Wellness Center (MFWC) at Columbia University Irving Medical Center (CUIMC). In addition, a semi-structured interview was created to ascertain clinicians' perspectives regarding the reasons for their patients' dropout. Three independent raters reviewed the interviews, discussed and agreed on themes. The kappa inter-rater coefficient, calculated separately for each dyad of three raters, ranged from 0.74 to 1. Dropout was defined as not completing the time-limited therapy contract. Results: Dropout rate was 26% for this sample, with no difference between veterans and family members. Low level of education, unemployment, severe depression, ongoing depressive symptoms, and military sexual trauma were associated with dropout. Three themes

emerged from the clinician interviews as main reasons for dropping out of treatment: coping with intense emotions, readiness for change, and perceived suitability for outpatient treatment. Conclusion: Dropout rates appeared lower in the MFWC than in traditional VA settings. People with lower education and economic status, severe depression and military sexual trauma might be at higher risk for dropping out of treatment. Additional research is needed to develop strategies to reduce the likelihood of discontinuation from treatment among veterans and their family members.

No. 130

The Resting State Functional Connectivity in Amygdala Subregions Associated With Posttraumatic Stress Symptom and Sleep Quality in Trauma Survivals

Poster Presenter: Zuxing Wang
Co-Authors: Minlan Yuan, Hongru Zhu, Wei Zhang

SUMMARY:

Background-Neuroimaging findings suggest that amygdala perform a primary role in the both psychopathology of posttraumatic stress disorder (PTSD) and sleep quality, which are common in trauma survivors. However, the neural mechanisms of these two problems in trauma survivors associated with amygdala are still unclear. In the current study, we aimed to explore the role of functional connectivity of amygdala in both PTSD and sleep quality. Methods-108 trauma-exposed subjects were scanned on a 3T MR system using resting-state fMRI. Based on previous research, functional connectivity seeds included basolateral amygdala (BLA), centromedial amygdala (CMA), posterior cingulate cortex (PCC), orbitofrontal cortex (OFC), and hippocampus. Multiple linear regressions were used to determine the association of PTSD and sleep with rs-FC in amygdala subregions. Results-A significant positive relationships between Clinician Administered PTSD Scale (CAPS) and rs-FC of left BLA-right PCC was observed. There was a negative relationship between Pittsburgh Sleep Quality Index (PSQI) and right BLA-left OFC rs-FC while positive association was found between PSQI and left CMA-left HIP rs-FC. Conclusion-Our findings suggest that disruption of rs-FC in amygdala subregional may play an important role in both post-traumatic stress symptom and sleep quality in trauma-exposed individuals.

No. 131

Altered Resting-State Functional Connectivity of Basolateral and Centromedial Amygdala Subregions in PTSD Comorbid With Major Depression

Poster Presenter: Minlan Yuan
Co-Authors: Hongru Zhu, Joseph John Mann, M.D., Wei Zhang

SUMMARY:

Background: Individuals with both post-traumatic stress disorder and major depressive disorder (PTSD+MDD) often show greater social and occupational impairment and poorer treatment response than individuals with PTSD alone. Increasing evidence reveals that the amygdala, a brain region implicated in the pathophysiology of both of these conditions, is a complex of structurally and functionally heterogeneous nuclei. Whether there are differences in amygdala functional connectivity (FC) at the subregional level between PTSD-alone and PTSD+MDD within a single trauma type remains unclear. Quantifying the connectivity of two key amygdala subregions, the basolateral (BLA) and centromedial (CMA), in PTSD+MDD and PTSD-alone could advance our understanding of the neurocircuitry of these conditions. Methods: 18 patients with PTSD+MDD, 28 with PTSD-alone, and 50 trauma exposed healthy controls (TEHC), all from a cohort who survived the same large earthquake in China, underwent resting-state functional magnetic resonance imaging. Bilateral BLA and CMA FC maps were created using a seed-based approach for each participant. The analysis of covariance of FC was used to determine between-group differences. Results: A significant interaction between amygdala subregion and diagnostic group suggested that differences in connectivity patterns between the two seeds were mediated by diagnosis. Post-hoc analyses revealed that PTSD+MDD patients showed weaker connectivity between right BLA and a) left anterior cingulate cortex/supplementary motor area, and b) bilateral putamen/pallidum, compared with PTSD-alone patients. No significant between-group difference was observed for CMA connectivity. An inverse relationship between the connectivity of right BLA with right putamen/pallidum and MDD

symptoms was found in PTSD+MDD. Conclusions: Weaker BLA-ACC/SMA connectivity in PTSD+MDD may be related to difficulties in distinguishing relevant salient cues and avoidance of situations that could generate interoceptive or environmental stimulus overload and deficits in emotion regulation. Weaker BLA-right putamen/pallidum connectivity was more closely related to severity of MDD comorbidity, as opposed to greater PTSD symptom severity in PTSD+MDD, indicating an important role of MDD comorbidity in the neural pathophysiology in PTSD. These findings indicate a relationship between the neural pathophysiology of PTSD+MDD compared with PTSD-alone and TEHC and may inform future clinical interventions.

No. 132

Hidden in Plain Sight: Universal Screening to Assess and Treat Trauma-Related Symptoms in Undocumented Immigrants at a Student-Run Free Clinic Project

Poster Presenter: Linda Chou

SUMMARY:

Background: Based on diagnostic interview data from National Comorbidity Survey Replication, the annual prevalence of posttraumatic stress disorder (PTSD) for adults living in the United States was estimated to be 3.6 percent over the survey's year-long data collection period. Subsequent studies have demonstrated that immigrants are at elevated risk of developing PTSD compared to those who were born in the United States. A recent study of 284 undocumented immigrants residing along the US-Mexico border revealed that 82.7 percent had experienced a traumatic event at some point in their lives, with 47.0 percent meeting criteria for clinically-significant psychological distress. Methods: The UC San Diego Student-Run Free Clinic Project provides free primary and specialty medical care to uninsured individuals in San Diego, many of whom are undocumented immigrants. All clinic patients are routinely screened with the Patient Health Questionnaire to assess for the presence of depressive symptoms. Prior to this study, there was no universal screening for clinically-significant trauma-related symptoms for free clinic patients. We administered the Trauma History Questionnaire (THQ), a 24-item self-report measure that assesses lifetime exposure to traumatic events, to patients attending the clinic. Those patients who endorsed a history of traumatic experiences were offered the opportunity to be further evaluated in a psychiatry specialty clinic. Patients seen in the psychiatry clinic were assessed by UC San Diego medical students who were partnered with UC San Diego Community Psychiatry residents and supervised by attending psychiatrists. If clinically-significant trauma-related symptoms were present, patients were provided with and/or referred to appropriate treatment (i.e. medication management, psychotherapy referral). Results: A total of 46 patients were screened from July to December of 2018. Of those screened, 36 patients (78.3%) endorsed at least one lifetime traumatic event listed in the THQ. Of these 36 patients, 24 requested a full psychiatric intake appointment to assess for the prevalence of clinically-significant trauma-related symptoms. As of this poster's publication, ten patients have completed the intake appointment. Of these ten, six (60.0%) have been assessed to have clinically-significant trauma-related symptoms. Discussion: Consistent with previous research, our study population of undocumented immigrants had a high rate of exposure to traumatic events, and subsequently, a high rate of clinically-significant trauma-related symptoms following formal psychiatric assessment. Our study suggests that universal screening for trauma-related symptoms in the primary care setting and free clinic setting may be beneficial for immigrant populations.

No. 133

Associated Psychological Factors for Developing Emotional Exhaustion in Workers Had Secondary Traumatic Experiences: A Path Analysis

Poster Presenter: Hwa-Young Lee

SUMMARY: Objective: Although there is plenty of report that various environmental and psychological factors are associated with the exhaustion in workers who had secondary traumatic experience, no study has been explored the path to develop emotional exhaustion in those population. The present study aimed to find the path for emotional exhaustion and reveal the risk and protective factors for emotional exhaustion. Methods: 582 workers who had a job to be vulnerable for secondary

traumatic experiences such as nurses, social workers, firefighters and police officers were enrolled for the study. The participants completed the Maslach Burnout Inventory, a measure of emotional exhaustion. Psychological characteristics were also evaluated, including self-esteem, experience of secondary trauma, resilience, and perceived stress. Structural equation modeling was used to evaluate the results. Results: Our results demonstrated that perceived stress is a meaningful mediator between secondary traumatic experiences and emotional exhaustion in participants. The experience of secondary trauma had direct and indirect effect to develop emotional exhaustion in a model (SC = 0.176; SC = 0.093, respectively). The resilience affected the development of emotional exhaustion as a protective factor directly and indirectly (Standardized coefficient [SC] = -0.096; SC = -0.045, respectively). The self-esteem affected emotional exhaustion directly (SC=0.257) Conclusions: This study showed the role of various risk and protective factors for emotional exhaustion. Understanding the needs of focusing for distinct psychological factors offers valuable direction for the development of intervention programs to prevent burnout among the workers.

No. 134

Attachment Style of Women With PTSD Following Sexual Assault: Predictors of Attachment Security and Influence of Attachment on Treatment Response

Poster Presenter: Mariana Rangel Maciel, M.D.
Co-Authors: Cecília Zylberstajn, Cecília Roberti Proença, M.D., Bruno Coimbra, Euthymia A. Prado, M.D., Ph.D., John C. Markowitz, M.D., Marcelo F. Mello, M.D., Ph.D., Andrea Feijo-Mello, M.D., Ph.D.

SUMMARY:
Introduction: PTSD is a severe, debilitating illness, with frequently inadequate response to pharmacological and psychological treatments. We are conducting a clinical trial treating women who developed PTSD after sexual assault, who are randomized to 14 weeks of either sertraline or interpersonal psychotherapy (IPT) (PTSD adaptation). Attachment style relies heavily on early experience and shapes how people deal with adversities throughout life. Both attachment style and early trauma have been associated with greater risk of developing PTSD after trauma, poorer treatment response, and higher dropout rates. Methods: We have so far randomized 70 adult female patients (18-44 years old). PTSD symptoms were evaluated with the CAPS-5 (Clinician Administered PTSD Scale), early abuse and neglect with the CTQ (Childhood Trauma Questionnaire), and attachment style through the Collins Revised Adult Attachment Scale. We also collected sociodemographic data, and Beck Depression (BDI) and Anxiety (BAI) Inventories. We established what influenced attachment style at study baseline through simple logistic regressions and performed a multiple regression model with statistically significant variables ($p<0.05$). Our initial question was whether attachment would be influenced by the current psychopathology. Improvement of PTSD symptoms was analyzed in relation to attachment and early trauma, and a multiple regression model was conducted to assess these variables simultaneously . We hypothesized was that secure attachment would predict lower dropout rates and higher improvement of PTSD symptoms. Results: At the time of this interim analysis, 40 patients had completed the 14-week treatment period, and 18 dropped out (25% attrition). Attachment was classified as anxious in 30% of patients, avoidant in 45%, and secure in 54%. Dropout did not significantly correlate with attachment avoidance or anxiety. In the simple regression analysis, attachment style was influenced by BAI and BDI scores, with higher levels of anxiety and depressive symptoms contributing to greater attachment insecurity, and by history of early trauma – subscale of emotional abuse . However, in the multiple regression model, only early emotional abuse remained significantly related to attachment – for each additional point on the CTQ scale, likelihood of secure attachment decreased by 13%. Bivariate analysis showed association of early emotional abuse and reduced change in the CAPS-5 (PTSD symptom) score. In the multiple linear regression model, attachment did not influence this improvement, but presence of early emotional abuse did: such patients had a mean final CAPS-5 score 9 points higher. Conclusions: Only the history of early emotional abuse significantly influenced attachment style in this sample. Treatment

decreased PTSD symptoms regardless of attachment style, but presence of early emotional abuse had negatively moderated their improvement.

No. 135

The Investigation of the Behavior of Runaway Teenagers After Earthquake Disaster

Poster Presenter: Youran Dai
Co-Author: Deng Hong

SUMMARY: Objective: This study aimed to investigate the related factors of runaway teenagers after earthquake, and further explored the risk factors of runaway thoughts, plans, and actions. Methods: The general information questionnaire and the Youth Risk Behavior Survey (YRBS) was used to investigate the students of grade 1 to grade 9 in the nine worst-hit areas of the Wenchuan earthquake in 2008. Cluster random sampling was adopted as the sampling method to extract random students from 110 primary and middle schools. Their general information, disaster-related situation and scores of YRBS were collected. Due to different types of data, various statistical methods were used to analyze the data such as descriptive statistics, t-test, Chi-square test, and Logistic regression analysis. Respectively single factor analysis and multivariate logistic regression were used to analyze runaway thoughts, plans, and actions. Results: A total of 7833 questionnaires were sent out and a total of 7521 questionnaires were collected, with a rate 96.02%. Among them, there were 5766 valid questionnaires (73.61%) and 1755 invalid questionnaires. According to the investigation, the prevalence of the students which had runaway thoughts was 11.40%; which had plans and actions of runaway was 5.80%. The Logistic regression analysis which used to analyze the population information and the disaster situation with the runaway thoughts, plans and actions showed that: Getting injured and family structure variation were the common risk factors of runaway thoughts, plans, and actions. Female was the protective factor of runaway plans and actions. Age was positively correlated with runaway thoughts. The Suicidal idea, substance abuse, online games, negative attitude, bullied, weight anxiety were the common risk factors of runaway thoughts, plans, and actions. Spiritual support from family and friends was the protective factor of runaway thoughts, plans, and actions. Conclusion: Teenagers who had several risk factors, such as getting injured, family structure variation, suicidal idea, substance abuse, online games, negative attitude, bullied, weight anxiety, should be given more psychological assessment and psychological intervention. Parents should give children not only material support, but much more spiritual support. Teenagers should also be guided to face real life positively after earthquake. Moreover, different psychological guidance should be carried out for male and female adolescents, for reducing the risk of runaway after earthquake. This study was supported by Mercy Corps.

No. 136

MDMA-Assisted Psychotherapy Reduces PTSD Symptoms: Pooled Analysis Across Randomized, Controlled Trials

Poster Presenter: Lisa Jerome
Co-Authors: Alli Feduccia, Michael C. Mithoefer, M.D., Berra Yazar-Klosinski

SUMMARY:
Background: Posttraumatic stress disorder (PTSD) affects 4% of the global population (8% in the US), and many do not respond to or tolerate established psychopharmacological and psychotherapeutic treatments. 3,4-methylenedioxymethamphetamine (MDMA)-assisted psychotherapy is an innovative, promising treatment under investigation for people with PTSD. The Multidisciplinary Association for Psychedelic Studies (MAPS) received Breakthrough Therapy Designation from the Food and Drug administration (FDA) after review of combined Phase 2 study data presented in this poster. Methods: Data from six randomized, double-blind, placebo-controlled studies of MDMA-assisted psychotherapy were combined to examine the response across control (0-40 mg MDMA) and active group (MDMA 75-125 mg). Study sites were located in the US, Canada, Israel and Switzerland. Participants included adult men and women with chronic PTSD with a Clinical-Administered PTSD Scale for DSM-IV (CAPS-IV) total score of >50 at enrollment. The treatment included 3 non-drug preparatory therapy sessions, 2-3 blinded experimental (MDMA or placebo/active placebo) sessions combined with nondirective psychotherapy, followed by integration sessions with

a team of two co-therapists. The CAPS-IV, administered and assessed by an independent rater 1-2 months after the second or third blinded experimental sessions, served as primary outcome measure. Symptoms of depression were assessed via Beck Depression Inventory–2 (BDI-II) and self-reported sleep quality with Pittsburgh Sleep Quality Index (PSQI). Participants assigned to the control group had 2-3 open-label experimental sessions after unblinding, and active-dose participants had a third open-label session. Safety was assessed by collecting vital signs and adverse events and reaction. Participants completed a long-term follow-up at least 12 months after treatment exit. Outcomes: At the primary endpoint, the active-dose group had significantly reduced CAPS-IV severity scores when compared to the control group ($p < 0.001$, Cohen's $d = 0.9$), with 23% (n=31) of the control group and 53% (n=72) of active-dose group not meeting PTSD criteria. Significant improvements in depression (BDI-II, $p<0.05$) and sleep quality (PSQI, $p<0.05$) were also observed for the active group. Adverse events were transient, without any unexpected serious adverse events or suicidal behavior post-experimental sessions. Conclusion: Data from these studies strongly supports that MDMA-assisted psychotherapy is a powerful tool for addressing PTSD symptoms. Phase 3 trials are underway to evaluate this promising treatment in a larger sample of people with PTSD. Funding: Multidisciplinary Association for Psychedelic Studies (MAPS) Trial Registration: clinicaltrials.gov Identifiers: NCT00090064, NCT00353938, NCT01958593, NCT01211405, NCT01689740, NCT01793610

No. 137

The Functional Connectivity Between Posterior Cingulate Cortex and Dorsolateral Prefrontal Cortex Mediates Period2 Gene and PTSD in Trauma Survivors

Poster Presenter: Hongru Zhu
Co-Authors: Yuchen Li, Minlan Yuan, Wei Zhang

SUMMARY: Objective: The neural substrates of sleep problems and the symptoms of posttraumatic stress disorder (PTSD) are still unclear. Previous studies suggested that the cingulate gyrus related circuits are related to both sleep and PTSD, while it is regulated by genetic predisposition. Among these genes, the Period2 is considered associates sleep and emotion regulation, which implicates it may play an essential role in the interaction of sleep and PTSD through cingulate gyrus related circuits. Thus, to explore the neural substrates of the interaction of sleep and PTSD, we investigated resting-state functional connectivity (rs-FC) of anterior cingulate cortex FC (ACC) and posterior cingulate cortex (PCC) associated with Period2 C polymorphism (PER2 C+) and PTSD diagnosis in Trauma survivors (TS). Methods: A total of 52 patients with PTSD and 53 trauma-exposed healthy controls (TEHCs) completed clinical assessments, provided blood samples for genotyping, and underwent resting-state functional MRI (R-fMRI) scans. Two-way analysis of covariance (ANCOVA) was performed to explore the effects of PTSD and the Period2 rs2304674 C polymorphism on whole brain rs-FC of ACC and PCC. Results: The interaction of PTSD and the Period2 C polymorphism decreased rs-FC between PCC and the right dorsolateral prefrontal cortex (DLPFC), which was correlated with both subjective sleep quality and the Clinician-administered PTSD Scale. Besides, rs-FC between PCC and the right occipital lobe were increased in patients with PTSD compared with TEHCs, which was positively correlated with subjective sleep quality. Conclusion: We found that the functional connectivity between PCC and DLPFC mediating Period2 gene and PTSD associated with both sleep deficit and the severity of PTSD symptoms in trauma survivors. Considering PCC and DLPFC are core hubs of default mode network (DMN) and executive control network (ECN) separately, it suggested that the interaction between the DMN and the ECN reflects the neural substrate of the interaction between sleep and PTSD.

No. 138

Implementing Adverse Childhood Experience (ACE) Screening and Trauma-Informed Care in Primary Care

Poster Presenter: Kathryn Kelly Ridout, M.D., Ph.D.
Co-Authors: Brooke Harris, Francis Chu, Alec Uy, Michael Vu, Lucia Martinez, Samuel James Ridout, M.D., Ph.D.

SUMMARY:

Background: Approximately 60% of the American population experience one or more ACEs, defined as abuse, neglect, parental separation or a caregiver with a psychiatric or substance use disorder (1). ACE exposure increases risk for mental health disorders and other chronic conditions (2-4), exacting costs greater than $124 billion over the lifespan (5). There is great interest in identifying ACEs clinically to facilitate trauma-informed care as tertiary prevention and ACE screening has been suggested as a quality measure to improve health-related quality of life (3). Despite reports of ACE screening feasibility and acceptability, ACE screening clinical implementation is low due to the lengthy and time intensive nature of most screening tools (6-7). We aimed to implement a streamlined ACE screening tool and trauma-informed care practices in adult primary care. Methods: A review of factor analyses of ACEs that commonly co-occur was completed to develop an abbreviated screening tool. Key stakeholders were interviewed to develop an initial screening workflow in primary care. Screening rates, along with referrals to resilience-building resources, were measured. Feedback from stakeholders regarding the screening and referral process, along with strategies to build provider knowledge of trauma-informed care, were gathered and informed workflows disseminated to our larger population. Results: A review of the literature resulted in a 4-question abbreviated ACE screening tool. Screening and referral did not significantly impact clinic workflow; over the course of implementation screening for ACEs and referral to resiliency resources increased to 100%. Rates of reported ACE exposure were similar to nationwide data ($p > .05$). Qualitative results show that patients appreciate ACE screening and resilience-building supports. We identified a number of barriers to screening, which included paper screening tools, streamlining referral resources, and addressing staff ACEs. Conclusions: ACE screening in adult primary care patients is feasible and acceptable to providers and patients. Future work will be aimed towards characterizing the ACE screening tool as related to health outcomes.

No. 139

Timing of Initiation of Evidence-Based Psychotherapy for Posttraumatic Stress Disorder Among Veterans in the Veterans Health Administration

Poster Presenter: Nicholas Holder
Co-Authors: Yongmei Li, Erin Madden, Brian R. Shiner, M.D., Callan Lujan, Thomas Coogan Neylan, M.D., Olga Patterson, Scott DuVall, Shira Maguen, Ph.D.

SUMMARY:
Background: Despite widespread dissemination of evidence-based psychotherapies (EBPs) for posttraumatic stress disorder (PTSD), only 20.2% of Veterans of the wars in Iraq and Afghanistan (OIF/OEF/OND) with a diagnosis of PTSD initiated an EBP. Providers indicate that comorbidities (e.g., substance use disorders [SUD], traumatic brain injury [TBI]), difficulties accessing care, and patient readiness (e.g., motivation for treatment, development of coping skills) affect decisions to delay or ever initiate an EBP. Considering the potential consequences to delaying or never initiating an EBP (e.g., poorer treatment outcomes), it is important to identify predictors of EBP timing and receipt to ensure consistent access to effective treatments. Method: Participants included OIF/OEF/OND Veterans who were diagnosed with PTSD and had at least one psychotherapy note (N=265,566). Of these Veterans, 60,634 attended at least one EBP session. A logistic regression analysis was utilized to predict receipt of an EBP (vs. no EBP). A multinomial logistic regression analysis was utilized to predict initiation of an EBP more than one year after first mental health visit (vs. early EBP) and no initiation of an EBP (vs. early EBP). Potential predictors included sociodemographic characteristics, prescription of medications recommended to treat PTSD, and psychiatric comorbidities. Results: Sociodemographic characteristics, PTSD medication, and psychiatric comorbidities were shown to predict EBP receipt and delay. Some of the strongest predictors of EBP receipt (vs. no EBP) were psychiatric comorbidities: chronic pain (OR=1.49, CI95: 1.45-1.53), depressive disorder (OR=1.45, CI95: 1.41-1.49), and TBI (OR=1.43, CI95: 1.40-1.47). Additionally, some of the strongest predictors of EBP delay (vs. EBP within one year of first mental health visit) also were psychiatric comorbidities: chronic pain (RRR=1.52, CI95: 1.44-1.61), depressive disorder (RRR=1.48, CI95: 1.40-

1.56), and SUD (RRR=1.35, CI95: 1.29-1.41). Interestingly, prescription of medications recommended to treat PTSD (RRR=0.50, CI95: 0.48-0.52) was strongly associated with reduced likelihood of EBP delay. Conclusion: Consistent with manual recommendations, most psychiatric comorbidities did not reduce likelihood of receiving an EBP. Instead, having psychiatric comorbidities typically increased likelihood of receiving an EBP. However, those with comorbidities were more likely to delay EBP initiation. Importantly, prescription of medication indicated for PTSD was associated with reduced likelihood of EBP delay. This may be a result of an emphasis on multidisciplinary care, increased engagement in mental health care, or initial symptom management facilitating engagement in EBPs. Importantly, some sociodemographic characteristics (e.g., gender, race) were predictive of EBP receipt and delay. Additional research is needed to understand the clinical services offered to Veterans with PTSD who delay or never initiate EBPs.

No. 140

Treatment-Resistant Posttraumatic Stress Disorder and Depression—Effectiveness of Repeated Subcutaneous Esketamine Infusions: A Case Report

Poster Presenter: Marco Aurelio Oliveira
Co-Authors: Matheus Steglich, Camila Puertas, Renata De Alves, Guilherme Abdo, Rodrigo Bernini De Brito, M.D., Luciana Sarin, Acioly Lacerda

SUMMARY:
This case is about a 43-year-old female patient whose symptoms of posttraumatic stress disorder (PTSD) started 14 years ago after being a victim of assault following a kidnapping. Four years later, she started depressive symptoms, characterizing a Major Depressive Disorder episode. She underwent several drug therapies, however, never obtained satisfactory improvement. Three years ago, she had her one and only remission period that lasted 3 months. In the last 3 years, she had extreme difficulty to carry out her work and received medical leave several times. She made 3 suicide attempts while living in deep social isolation. The patient was referred for treatment at a university ketamine clinic (UNIFESP), due to the severity and resistance of her condition. In order to measure treatment outcomes Clinical Global Impression Scale was used (CGI-S baseline: 5), depressive symptoms were evaluated by the Montgomery-Asberg Depression Rating Scale (MADRS baseline: 38), the Impact of Events Scale-Revised (IES-R baseline: 57) assessed PTSD symptoms and patient's functioning was rated by Functioning Assessment Short Scale (FAST baseline: 35). The oxygen saturation, blood pressure and dissociative symptoms (CADSS questionnaire at 30 'and 60') were parameters to procedure control and safety. In all infusions, the patient received subcutaneous (SC) esketamine once a week, for 6 weeks (total of 6 infusions). The initial dose was 0.5mg / kg due to the absence of a response, defined as MADRS total score reduction <50%), progressive increases of 0.25mg / kg were applied up to a maximum dose of 1mg / kg. Thus, she received 0.5mg / kg in the first and second infusions, 0.75mg / kg in the third and fourth infusions and 1mg / kg in the fifth and sixth infusions. After raising the dose to 1mg /kg, at fourth infusion, she achieved a sustained remission (MADRS=7). At the end of the 6 infusions, the patient presented remission (MADRS final score: 3; CGI-S: 1) as well as at 1-month follow-up (MADRS score: 7). The PTSD symptoms had also an improvement throughout infusions (IES- R final score: 21). Furthermore, recovery of functioning was outstanding. The few symptoms she presented 1 week after the last infusion (FAST score: 14) no longer impacted her life. She was able to return to work and maintained this improvement at 6-months follow-up (MADRS score: 1, IES-R score: 12, FAST score: 19; CGI-S: 0). This case report showed a dramatic improvement of symptoms and functionality after repeated SC esketamine infusions in treatment-resistant chronic PTSD with depression comorbidity. These findings are in line with recent studies that demonstrated the relevance of action on glutamate pathway. Besides its rapid action and robust anti-suicidal effects in treatment-resistant patients ketamine also promotes fear extinction. This case illustrates the potential of ketamine as a safe and effective alternative to treat such disabling conditions.

No. 141

Help for Our Hurting Heroes: Challenges of Diagnosing and Treating PTSD in First Responders

Poster Presenter: Phuong Le
Co-Author: Melinda Ann Thiam, M.D.

SUMMARY:

Americans are starting to recognize and treat PTSD in combat veterans, otherwise known as “the silent wounds of war”. While our troops are heroes that protect our borders, heroes within our communities - first responders - are also struggling. First responders are the first individuals on site in a tragedy such as one of the many mass shootings, natural disasters, and acts of terrorism. Furthermore, similar to service members in combat, first responders have to continue with the mission despite the emotional and mental toll of working in such environment, which leads to many first responders to develop Post-Traumatic Stress Disorder (PTSD) and depression. Like the military, first responders often fear seeking treatment due to the fear of discrimination or career jeopardy. Untreated PTSD in our first responders can have deadly consequences. According to a survey of 4000 first responders, the suicide rate among first responders is 10 times greater than the general population. Given the challenge of identifying and treating PTSD in this population, we present two cases of first responders who struggled with PTSD. One case is of a firefighter who exposed to many smaller or daily traumas of witnessing death, severe injury, or inability to save victims. The other case is of a SC police officer who struggled with PTSD from dealing with daily threat of harm, prior injury, and witnessing death. Both patients experienced symptoms of PTSD for years before seeking treatments due to fear of repercussion. Both patients ended up dropping out of treatment, which is a key feature in PTSD - avoidance. The firefighter ended up leaving the force, but still struggles with daily struggles/reminders of his time in service. The police officer dropped out of treatment, likely due to the fear of repercussion. Additionally, in SC, PTSD in first responders is not recognized as injury under workmen’s comp or medical retirement because it is seen as accepted hazard of the job. Both of these patients could have significantly benefited from treatment. Unfortunately, these cases are two out of many across the country. According to a recent study, first responders are more likely to die from suicide than in the line of duty: 103 firefighter suicides and 140 police officer suicides, in comparison to 93 firefighters and 129 police officers died in the line of duty in 2017. We hope that by presenting these two cases, we can bring increased awareness to problem of PTSD in first responders, erase the taboo against mental issues, and increase access to mental care for first responders.

No. 142

Impact of Trauma Symptoms on Acceptability of Sexual Health Interventions Among Justice-Involved Youth

Poster Presenter: Sarah Velez
Co-Authors: Lili Ramos, Brooke Rosen, M.D., Emily Dauria, Marina Tolou-Shams, Ph.D.

SUMMARY:

Background Justice-involved youth have higher rates of adolescent pregnancy and sexually transmitted infections than general adolescent populations. Contact with the justice system might be an opportunity for sexual and reproductive health interventions; however, the acceptability of such interventions with this population has not been assessed. Acceptability is particularly important to understand in this population, given that they experience higher rates of trauma exposure, sexual abuse and post-traumatic stress symptom severity, which may influence their openness to receiving sexual health interventions. Therefore, the aims of the present study are twofold: 1) Characterize the acceptability of sexual health interventions (SHI) in a court or school setting for justice-involved youth and 2) Assess whether PTSD symptoms and history of sexual trauma are associated with SHI acceptability. Methods Observational cohort study of 291 first-time offending, community-supervised youth (ages 12-18) recruited from a large Family Court in the Northeast, followed for 24 months to examine trajectories of substance use, HIV/STI risk behavior, psychiatric symptoms and recidivism. Baseline data were collected from youth the following primary measures: demographic survey, National Stressful Events Survey PTSD Short Scale (NSESSS), Acceptability of Sexual Health Intervention (ASHI) scale, and the Childhood Trauma Questionnaire (CTQ). Acceptability of four sexual health interventions (sexual health discussion, STI testing, HIV testing, and pregnancy testing) was assessed with Likert scales (0 – 4; higher numbers indicating greater acceptability). Results The sample includes

141 (48.5%) girls, 147 (50.5%) boys, with a mean age of 14.6 (±1.6). Only a little over a quarter (27%) endorsed acceptability of all interventions. However, acceptability rates for individual interventions ranged from 72-77%, with the notable exception of sexual health discussion at just 37.5%. Acceptability of SHI was not associated with a history of trauma exposure (n = 225), even when controlling for demographic variables. Among those with a trauma history, symptom severity did not correspond to acceptability of any SHI. Ongoing analyses will use CTQ data to examine the specific effects of sexual trauma on acceptability of SHI. Conclusions Overall, reported acceptability of all four sexual health interventions was low, at 27%, which is much lower than rates of other prior studies conducted in pediatric emergency departments. Acceptability of individual interventions was high, at approximately 75% for all interventions except for sexual health discussion, indicating that youth are much more open to receiving sexual health tests than discussions in the court setting. Acceptability of SHI was not correlated with exposure to trauma or overall PTSD symptom severity; however, sexual trauma may exert a unique, differential impact on acceptability, which will be examined in planned analyses.

No. 143

Effect of Combat Exposure and Posttraumatic Stress Disorder on Telomere Length and Amygdala Volume

Poster Presenter: Jee In Kang
Co-Authors: Synthia Mellon, Ph.D., Gwyneth Wu, Victor Ivar Reus, M.D., Rasha Hammamieh, Rachel Yehuda, Ph.D., Owen Mark Wolkowitz, M.D.

SUMMARY: Objectives: Traumatic stress can adversely affect physical and mental health through neurobiological stress response systems. Here, we examined the effects of trauma exposure and posttraumatic stress disorder (PTSD) on telomere length, a biomarker of cellular aging, and volume of the amygdala, a key structure of stress regulation, in veterans exposed to combat trauma. In addition, the relationships of psychological symptoms and autonomic activity-related variables with telomere length and amygdala volume were examined. Methods: A total of 213 American male veterans, all exposed to combat trauma, were categorized as having combat-related PTSD diagnosis (n = 102) and no lifetime PTSD diagnosis (n = 111) based on the clinician-administered PTSD scale (CAPS). Subjects were assessed for stress-related psychopathology, combat trauma exposure severity, and autonomic function including resting pulse rates, blood pressure, and 24-hr urinary catecholamine levels. In addition, amygdala volumes from 87 non-PTSD and 74 PTSD veterans were obtained from a T1 weighted magnetic resonance imaging using FreeSurfer 5.1. Analysis of covariance was conducted to examine main and interaction effects of trauma exposure severity and PTSD status on telomere length and amygdala volume while controlling for multiple confounders. Results: A significant interaction effect was found between combat trauma exposure severity and PTSD status for telomere length and for amygdala volume after adjusting for multiple confounders including age and early life trauma. Subjects with PTSD showed significantly shorter telomere length and larger amygdala volume than those without PTSD among veterans exposed to high trauma, while there was no significant group difference in these parameters among those exposed to low trauma. Among all veterans exposed to high trauma, telomere shortening was significantly correlated with elevated norepinephrine and high diastolic blood pressure, and larger amygdala volume was correlated with higher CAPS scores, more severe psychological symptoms and higher pulse rates. Conclusions: Our data suggest that PTSD status combined with high trauma severity exposure, but neither alone, is associated with shorter telomere length and greater amygdala volume. Also, severely combat trauma exposed individuals with certain indices of increased sympathetic activity show shorter telomere length and greater amygdala volume. These data suggest that the intensity of the index trauma event plays an important role in interacting with current PTSD symptomatology and indices of autonomic activity in predicting telomere length and amygdala volume. These results highlight the importance of trauma severity in predicting certain biological outcomes.
This study was supported by the U.S. Department of Defense.

No. 144

WITHDRAWN

No. 145
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No. 146
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No. 147
Elementary Education Disciplinary Disparities and Single-Parent Households
Poster Presenter: Matthew C. Fadus, M.D.
Co-Authors: Emilio Valadez, Lindsay Squeglia, Ph.D.

SUMMARY:
Introduction: Detentions and out-of-school suspensions are standard practices of discipline in the educational system, despite evidence that they are largely ineffective in deterring disruptive and maladaptive behaviors. Previous studies have indicated that ethnic and racial minority students are disproportionately disciplined compared to white students. Single-parent households can be particularly affected by out-of-school suspensions, as the primary caregiver may need to take time off from work in order to care for their child if they are not able to attend school. Methods: Participants were 4521 children (mean age=10.0 years) drawn from a representative nationwide sample of participants in the Adolescent Brain Cognitive Development (ABCD) Study. The participant's primary caregiver reported the participant's race/ethnicity and whether the participant received a disciplinary action of suspension or detention within the last year, including the reason (e.g., fighting, talking back to a teacher, truancy). The participant's primary caregiver also reported if they had a partner (i.e., significant figure who has helped raise participant and participates in at least 40% of participant's daily activities). Results: African American participants were more likely to have received disciplinary action of detention or out-of-school suspension when compared to white participants (16.0% vs. 3.0%) and were more likely to have been disciplined for physical fighting (8.6% vs. 1.0%) and oppositional/defiant behaviors to school officials (7.1% vs. 0.6%, all ps < .001). There were no significant differences among other behaviors that led to school disciplinary action between white participants and participants of ethnic or racial minorities. Over 17% of participants were from single-parent homes, and these participants were significantly more likely to have detentions and suspensions than participants of partnered parents (10.3% vs. 3.3%; $p < .001$). Participants of single-parent homes were more likely to receive detentions or suspensions for fighting (4.3% vs. 1.4%; $p < .001$), talking back to a teacher (3.8% vs. 1.1%; $p < .001$), and threatening a teacher (0.8% vs. 0.1%; $p = .037$) compared to participants with partnered parents. Conclusion: African American students are disciplined with out-of-school suspensions and detentions over four times more often than white students, and participants of single-parent homes were more likely to receive detentions or out-of-school suspensions than those of partnered parents. Additional studies should examine potential relationships of implicit bias, socioeconomic status, family structures, and educational disciplinary outcomes. Future research should also examine the effects of exclusionary disciplinary practices of youth from single-parent households, given the financial burden and strains on caregiver employment that suspensions and out-of-school detentions can create.

No. 148
Relationships Between Early Trauma, and Emotional Regulation Strategies and Mental Health Among North Korean Refugee Youths
Poster Presenter: Subin Park

SUMMARY:
It is estimated that there are 31,827 North Korean refugees with 4,877 people under 20 years of age in South Korea. The previous studies consistently suggested that youths in North Korean families are vulnerable to psychological disturbances including depression. Early trauma experience and emotional regulation strategies have been suggested their relationship with mental health problems such as depression. This study was conducted to investigate the relationship of early trauma and emotional regulation strategies with depressive symptoms among North Korean refugee youths. In 2017 and 2018, we surveyed students who attend alternative schools for North Korean refugee adolescents in Seoul. A total of 157 students (54 boys and 103 girls;

mean age = 18.66, SD=2.82 years) completed self-reporting questionnaire including Adverse Childhood Experiences questionnaire (ACE), Emotional Regulation Questionnaire (ERQ) and Center for Epidemiological Studies Depression Scale (CES-D). Early trauma experience had significant and adverse effects on depressive symptoms among North Korean refugee youths. The moderation analysis revealed that use of the expressive suppression strategy significantly aggravated the effect of early trauma experience on depressive symptoms. By contrast, cognitive reappraisal seemed to buffer the effect of the expressive suppression strategy on depressive symptoms. A tailored intervention aimed at promoting emotional regulation strategies to prevent depressive symptoms among North Korean refugee youths is necessary.

No. 149

The Impact of Creating a Coalition on Public Policy and Improving Mental Health Care for Children

Poster Presenter: Jacob White

Co-Author: Jessica Bayner

SUMMARY:

Background: The publishing of the white paper in November 2006 entitled “Children’s Mental Health in the Commonwealth: The Time is Now” raised awareness of the deficits in the mental health delivery system in the state of Massachusetts. Foundational legislation was subsequently passed which has laid the groundwork for progress and improvement. In the process, a diverse group of people and organizations formed a coalition of mental health providers, families and advocates to address the underlying issues and work towards solution. These stakeholders have made efforts to close the gaps in care identified in the original white paper, along with other and other concerns in children’s mental health care as they have arisen. Abstract: The aim of this project is to document the changes that have been made in the 10 years since the white paper was disseminated. Methods that have led to public policy changes will be analyzed, in addition to addressing areas of focus for future advocacy. The effects of the coalition on the realization of its goals will be highlighted and explored. Conclusion Specific advocacy efforts in children’s mental health in Massachusetts have proven successful, and demonstrate the benefit of a unified voice to lead to evolution in public policy. An analysis of such achievements can consequentially illuminate strategies that are applicable to a broader population.

No. 150

Mental Illness and Resliance in Rohingya Refugees

Poster Presenter: Rihan Javid, D.O., J.D.

SUMMARY:

The Rohingya people are a minority group in modern day Myanmar who have suffered through unimagineable horrors over the years leading to mass violence, including systemic rape, killings and beatings, eventually forcing them to seek refugee status near Cox Bazaar, Bangladesh. In November and December 2017, a few months after the latest series of violence, I went to work with an orphanage and women's health center over the course of 2 weeks and this paper details the challeneges faced by these people, trauma they suffered and the efforts to help them.

No. 151

Addressing Racial Trauma in Our Psychiatric Practice: A Call for Change

Poster Presenter: Gali Hashmonay, M.D.

Co-Author: Chanelle Ramsubick, M.D.

SUMMARY:

As a psychiatry resident working in an inner-city hospital in Brooklyn that provides care for mainly black patients, the issue of racial trauma arises in my practice every day. Despite this, our current psychiatric practice fails to be inclusive of the black experience in the United States, which has been historically traumatic and remains so to this day. Racial trauma affects and forms black identity, yet current psychiatric guidelines for addressing race-based trauma are underdeveloped. As racism causes negative effects on the general well-being and mental health of black patients, it is critically important to address its impact and screen for race-based trauma. Discrimination has been linked to PTSD, and PTSD is more prevalent in the black community. In addition, racial microaggressions have been shown to lead to suicidal ideation. Despite these findings, mental illness secondary to racism is

underrecognized due to a lack of understanding of the black experience and the lack of available tools tailored for assessing racial trauma. In this poster, we aim to review the traumatizing nature of various forms of anti-black racism and its effect on the mental health of the black population. We review the current literature on racial trauma as well as the existing recommendations for how to address race-based trauma in our psychiatric patients. We also make suggestions for possible modifications that can be made in our practice in order to improve our treatment of this patient population.

No. 152

"Isn't Life Itself Really Just One Big MMORPG?" What Video Game Habits Can Tell Us About Our Patients

Poster Presenter: John J. Sobotka, M.D.

SUMMARY:

Introduction: For decades, video games have held a polarizing position in society. Once viewed as a meaningless novelty, they now spark debate about their characterization as a hobby, sport, or even their own unique art form. The field of psychiatry has not been immune to debate on the subject of video games as we've be tasked to, amongst other thing, weigh in on the effects of violent video games on youths or determine if one could be addicted to gaming. What is perhaps lost in these contentions is how we as practioners may use the video game habits and preferences of our patients to provide information about their personalities, moods, and even their current level of risk to selves and others. We present examples of patients who discussed their video game proclivities and their possible association with psychiatric symptoms or diagnoses. Objective: Encourage psychiatrists to take greater interest in video game preferences and use among their patients to perhaps better inform their diagnosis and treatment. Case Reports: We discuss a patient whose habit of secluding himself in his room and playing video games hid what later became obvious symptoms of prodromal schizophrenia. Another patient, with known diagnosis of Bipolar disorder, had been playing online multi-player games for years, viewed initially as a healthy alternative to prior risky behaviors including marathon trips to casinos. Unbeknownst to his significant other and provider, his game of choice contained "loot boxes", something now being classified as akin to a form of gambling. Only after accruing significant debt did it become clear that the patient had been experiencing well-disguised symptoms of mania. We compare two patients' preferences online multi-player games, one team-based and another not, and how the former's demand for strict behaviors by it's players portrayed one's symptoms of ADHD and the other's symptoms of ASD. Finally, we look how various gamers describe how their preferred video game genre changes in step with their symptoms of depression and even sucidality. Discussion: Despite their ubiquity, a patient's use and preference of video games remain largely ignored by most psychiatrists. This unique form of entertainment purposely taps into gamers' psyche at a level apart from things like television, movies, or literature. Be it the exposing of previously unseen symptoms of mania, depression, or issues with socialization- a psychiatrist with even basic knowledge of video game genres, features, dynamics, and expectations can enjoy a more in depth understanding of their patients. Conclusion: -Video games create a never-before-seen blank canvas for patient and provider alike to realize insight into psychiatric symptoms -The field of psychiatry may see benefit in embracing understanding of video games and their players

No. 153

Attitude Toward Mental Health in a Cohort of Undergraduate Nursing Students: An Observational Study

Poster Presenter: Shuchi Khosla, M.D.
Co-Author: Maninderpal Singh Dhillon, D.O.

SUMMARY:

WHO postulates that mental, neurological, and substance use disorders make up 14% of the global burden of disease (WHO, 2017). Nearly two-thirds of people with a known mental disorder never seek help from a health professional, with social and cultural factors postulated as the leading barriers for seeking help. As the prevalence of mental illness continues to climb, stigma against it, among healthcare professionals, is a major public health issue. In the United States, nurses comprise the largest single component of hospital staff, (U.S.

Bureau of Labor Statistics, 2016). It is imperative to ascertain whether the training of nursing students impacts these attitudes towards mental illness. The depth and direction of such an impact warrants an unbiased evaluation. Much of the published literature on stigma and attitudes among nurses, over the last 5 years, has originated from European and Asian countries. However, there is paucity of such evidence-based evaluation within the United States. The objective of the study was to examine, among the nursing students rotating in a hospital in a semi-urban setting, the attitudes and perceived stigma towards mental illness; to compare and contrast these attitudes on the first and the last day of their rotation, over a period of twelve weeks; and analyze and determine if the exposure to mental illness through the psychiatry rotation effects any change in these attitudes and perceptions. This pilot study design consisted of 35 students, on their first day of rotation, viewing a video "Bad day at work". Following the video, modified attitude towards mental illness questionnaire (AMIQ) was administered. Additional questionnaires including; A semi-structured questionnaire to record socio-demographic details, modified perceived stigma questionnaire (PSQ), and modified attitudes towards ECT questionnaire were also administered. On the last day of rotation, the students were asked to think of the patient that they had perceived as requiring the highest intensity of care, and answer the AMIQ. The additional questionnaires, as before, were administered again. The hypothesis is that this would be a specific tool to evaluate the attitudes towards mental illness. It would help delineate stigma against violence, from that against mental illness, which in the population at large perception is often intertwined. It would ascertain if a twelve-week rotation on an inpatient unit is sufficient to effect any change in stigma. It would analyze gender, race, age and other social-cultural influences on stigma towards mental illness. Attitudes toward treatments such as electroconvulsive therapy would be simultaneously evaluated.

No. 154

Comparison of Psychological and Cognitive Characteristics Between Professional Internet Game Players and Professional Baseball Players

Poster Presenter: Jino Kang

Co-Authors: Doug Hyun Han, M.D., Sun Mi Kim, M.D., Ph.D., Ji Sun Hong, M.D., M.A., Wonshik Seong

SUMMARY:

Introduction Since Esports industry is becoming more and more popular, it is now at professional level, and considered as "mental sports" or "brain sports". As Esports is now discussed as a regular traditional sports event, Esports players are thought to be professional and expert of their field. There are already several studies of professional sports players to describe psychological and cognitive characteristics. To study Esports players' strengths of psychological and cognitive aspects, we compared the psychological and cognitive characteristics between Esports players, professional baseball players and healthy comparison subjects. In addition, we compared elite and non-elite among the players. Hypothesis Esports players would have a significant advantage over psychological and cognitive characteristics over the general population, which might be similar to professional baseball players. Also, we assumed that Esports players might have more challenging trait and higher working memory abilities compared to general population and professional baseball players. Methods We recruited three participant groups ; Esports players(n=55), pro-baseball players(n=57), and age-matched and sex-matched healthy comparison subjects(n=60). Esports players were devided into elite(n=12), and non-elite(n=43), and pro-baseball players were devided into elite(n=14) and non-elite(n=43). All the Esports players were registered in the Korean e-SPorts Association(KeSPA), and all the pro-baseball players were players in the Korea Baseball Organization(KBO). The inclusion criteria of healthy comparison subjects was 1)male, 2)aged 19-23, 3)non-history of baseball players, and 4)internet game play time less than 30 hours/week. We assessed temperament and character inventory(TCI) and state and trait anxiety inventory Korean version(STAI-KY) to estimate players' psychological characteristics. We also assessed , , and to estimate players' cognitive characteristics. Conclusions In terms of temperament and characters as well as anxiety controls, Esports players have similar psychological characteristics with pro-baseball players, which are different from general population. Both players groups showed higher novelty seeking,

self-directedness, and self-transedence scores, and showed decreased scores in state anxiety. However, Esports players showed higher working memory and lower intuitive ability, compared to pro-baseball players. At the similar point of view, elite Esports players and elite pro-baseball players showed similar superiority over non-elite players. Some psychological and cognitive characteristics might be crucial to become professional Esports player or professional sports player, and also crucial to be elite sports player among professionals. Keywords Esports players, pro-baseball players, Character, Temperament, Anxiety, Working memory, Intuitive perception, Time-space perception

No. 155

The Effects of Personality and Psychological Factors on Both Healthy and Problematic Gaming

Poster Presenter: Wonshik Seong
Lead Author: Doug Hyun Han, M.D.
Co-Authors: Ji Sun Hong, M.D., M.A., Sun Mi Kim, M.D., Ph.D.

SUMMARY:
Introduction Previous studies on internet gaming disorder (IGD) reported an association between personality traits and impulsive or problematic use of internet or internet game, although the results obtained have been inconsistent. We hypothesized that personality traits would be associated with internet gaming and that the psychological status would closely correlate with problematic internet game play. Methods Of the 429 participants recruited in the current study, 139 were non-gamers, 138 healthy gamers, and 152 problematic gamers. Hierarchical logistic regression analyses were conducted among each set of variables. Furthermore, participants' demographic factors (i.e., sex, age, and years of education), personality traits (i.e., temperament and character), and psychopathological status (i.e., depression, anxiety, and attention deficit) were evaluated in a stepwise fashion. Results Both temperament and character represented the strongest factors directing internet gaming. Additionally, model 2, which comprised both demographic factors and personality traits, significantly enhanced the predictability of internet gaming, reaching an accuracy of 96.7%. Furthermore, psychological status was the main factor associated with problematic internet game play. In contrast, model 3, which included demographic factors, personality traits, and psychological status, significantly increased the predictability of internet game play, showing an 83.4% prediction accuracy. Discussion The current study found personality traits, namely temperament and character, to be associated with internet gaming, although problematic internet gaming was more strongly correlated with the psychological status, specifically with depressive mood and attention deficit. Keywords: Healthy Internet Use, Internet Gaming Disorder, Temperament and Character, Depression, Attention Deficit

No. 156

Effectiveness of Art Exercises as a Form of Raising Awareness of Mental Disorders in LMICs

Poster Presenter: Saumya J. Dave, M.D.
Co-Author: Samir Sheth

SUMMARY:
Depression is the leading cause of disability worldwide. In low-and-middle-income countries (LMICs), women are almost two times more likely than men to experience depression in their lifetimes. According to the WHO, half of people suffering from depression are not diagnosed or treated, with higher numbers in LMICs. Stigma and lack of education are two of the leading factors contributing to this. Although trained psychiatrists, psychologists, and mental health counselors have traditionally provided mental health education, there is a shortage of these professionals. An educational program was designed to test effectiveness of raising awareness and disclosing symptoms in young and middle aged women in one LMIC, Uganda. Participants were recruited by partnering with existing non-governmental organizations (NGOs) working with at-risk women and girls in areas such as poverty, education, or domestic violence. Instead of traditional presentations, teaching was done through interactive art exercises, repurposed from standard art therapy exercises done during therapy. Discussions were co-led by local leaders of the NGOs. Topics covered included depression, anxiety, resilience, and self esteem. A survey was given before and after the sessions, and an additional survey 6 months after the initial test program is

currently being processed to test items. These surveys assessed attitudes towards mental illness, knowledge of the symptoms of Major Depressive Disorder and Generalized Anxiety Disorder, and retention of information. Additional data is being collected. However, initial results indicate that educational initiatives and partnering with local leaders can lead to increased awareness and decreased stigma towards mental illness.

No. 157
WITHDRAWN

No. 158
The Comparison of the Level of Depression, Anxiety, Anger, and Sleep Between Taiwan and U.S. for Persons With Mental Illness
Poster Presenter: Ay-Woan Pan, Ph.D.

SUMMARY:
The purpose of the presentation is to examine if there are significant differences between normal subjects and persons with mental illness of their level of depression, level of anxiety, level of anger, sleep disturbance and sleep related impairment. We applied patient reported outcome measure to examine the differences. The PRO measurement system we adapted is Patient Reported Outcome Measurement Information System (PROMIS) developed by Cella et al. (1). We applied scales of depression, anxiety, and anger, sleep disturbance and sleep related impairment. All scales were translated into traditional Chinese following the PROMIS translation principles and were validated (2,3,4). A total of 557 subjects were recruited into the study. Among the samples, 309 subjects were normal health subjects, recruited from the universities and their relatives. 248 subjects were persons with mental illness recruited from the community residential settings and outpatient clinics. The average age for normal and patient groups were 27.8 (SD=9.48) and 48.8 (SD=11.28) years old. 75% of the normal subjects were college students or graduate students. 22% of the patients were college or higher graduates. There were significant differences between normal and patient groups on variables of age, educational status, and marital status. 53.6% of the patients were diagnosed as Schizophrenia, 18.1% of the patients were first time onset, whereas 21.4% of the patients were admitted to hospital more than 8 times. The average self-rated quality of life index (one item only, rate between 0-100) for normal subjects were 73.9(SD=17.63) and were 75.3 (SD=22.77) for patients. The average T scores for normal and patient groups were listed as following: depression-65.9(SD=19.01), 63.8(SD=23.92); anxiety-68.4 (SD=20.41), 66.3(SD=25.43); anger-53.2(SD=11.95), 47.5(SD=15.90); sleep disturbance-58.6(SD=20.72), 63.5(SD=20.89) and sleep related impairment-43.6(SD=10.46), 39.1(SD=11.48). There were no significant differences on T score for two groups after control for the variables of age, educational status and marital status. The results of the study showed that the mental and physical health between normal subjects and subjects with mental illness were similar. The results of study also showed that the level of depression and anxiety for normal subjects (most of them were studying at college, 75%) were way higher than the norm in the USA. The level of depression, anxiety and sleep disturbance for subjects with mental illness were also higher than the norm in the USA but was as expected. The results may signal that we need to pay attention to the normal subjects, especially college students, of their mental health condition. It would be necessary for college to implement psychological screening and counseling services to help those students when they are distressed.

No. 159
Suicidal Ideation and Sobriety: How Definitive Is the Determination of Suicidality in the Inebriated Emergency Department Patient? A Pilot Study
Poster Presenter: Philip G. Talarico, D.O.
Co-Authors: Brandon G. Moore, M.D., M.B.A., Daniel Keyes, M.D., Alexander Molter, M.D., Hisham Valiuddin, D.O., Honesty Lee, D.O.

SUMMARY:
Background: Data from the National Hospital Ambulatory Medical Care Survey reveals that there are over 400,000 emergency department (ED) visits annually involving suicidal patients with one third of these visits resulting in hospital admissions. According to the CDC in 2013 there were 42,826 deaths due to suicide and 383,000 ED visits for “self-inflicted injury” with or without suicidal ideation in

the US alone. Suicide is the 10th most common cause of death, and more specifically, the second most common cause of death between the ages of 15 and 34. Acute alcohol ingestion is commonly present in patients presenting with suicidal ideation. According to data from the National Violent Death Reporting System, alcohol was detected in 36% of male and 28% of female suicide decedents (Kaplan et. al 2012). However, little empiric research has examined the role acute alcohol intoxication can play in increasing the proximal risk of suicidal behavior (Hufford 2001). It is commonly assumed that patients intoxicated with alcohol are unreliable with respect to their statements of suicidal intent, however no prior literature evaluates the impact of sobriety on suicidal ideation (SI). In typical ED settings a common practice is to wait until intoxicated suicidal individuals have reached a legally sober limit (ethanol level less than 80mg/dL) to evaluate safety. We are not aware of any study that establishes the diagnostic reliability of the clinical suicidal ideation evaluation as a function of sobriety. Methods: This study examines the reliability of the determination of suicidal ideation in patients who are inebriated with alcohol. The primary outcome is diagnosis of suicidal ideation upon sobriety. This is a retrospective review of medical records for patients evaluated in a moderate-sized Midwestern ED, for the year 2017. Patients were evaluated for the presence of alcohol on routine testing and evaluated for suicidal ideation when the patient was sober. Definitive diagnosis of suicidal ideation was based on the evaluation by the behavioral health specialist evaluating the patient after sobriety. Fisher's exact and chi-square analysis was used for comparing dichotomous variables of SI and descriptive statistics for demographic data. Our hypothesis is that only 50% of intoxicated patients presenting with suicidal ideation will be found to still have suicidal ideation upon evaluation compared to 80% of those presenting without intoxication. Results: Suicidal ideation was identified in 103 of 399 charts reviewed. 27/103 were positive for SI and alcohol intoxication. 11/27 continued to have SI upon sobriety, while 16/27 did not. 76/103 were positive for SI and had an alcohol level less than 80mg/dL. 39/73 continued to have SI upon reevaluation, while 34/73 did not. Conclusion: Our goal is to better define this often experienced but ill-defined phenomenon with the intention of guiding best practices and reducing risks for intoxicated and suicidal patients.

No. 160

Benperidol IV Administration and QTc Prolongation Risk

Poster Presenter: Joachim Karl Scharfetter, M.D.

SUMMARY:

The antipsychotic agent Haloperidol is - intravenously administered - infamous for pronounced QTc prolongation. It is therefore no longer regarded as a safe therapy. Benperidol is a butyrophenone with an antipsychotic potency superior to Haloperidol steming from the same chemical group. Pertaining to QTc prolongation a group effect of butyrophenones is assumed but there is sparse evidence for this assumption. We compared Benperidol and Haloperidol regarding risk for QTc prolongation when intravenously administered for the purpose of acute sedation of psychotic patients. QT values were corrected using Bazett's formula. Mann-Whitney U-test was applied for statistical calculations. Benperidol shows significant QTc prolongation when administered intravenously. This is to our knowledge the first data on Benperidol`s QTc prolonging potency. However QTc prolongation from Benperidol is only half of the QTc prolongation from haloperidol (p=0,049).

No. 161

Medical Health of Patients in a Psychiatric Emergency Service in the Netherlands: Results of Somatic Screening

Poster Presenter: Melissa Chrispijn, M.D., Ph.D.
Co-Author: Elnathan Prinsen

SUMMARY:

Background: Medical comorbidity is a major problem within psychiatry, metabolic disturbances are one of the largest causes of 10-15 year shorter life expectancy in patients with severe mental illness. To prevent of at least reduce the medical risk it is important to know which variables are responsible for causing this problem. Furthermore, somatic screening is crucial in tracking and treating metabolic disturbances. By surveying results of somatic screening in patients with acute mental illness we

want to give an overview of medical health in this population. Methods: All patients who were in treatment of the psychiatric emergency service in Deventer, The Netherlands and underwent somatic screening were included in the study. The measured variables were disease specific variables (diagnosis, medication use), metabolic risk factors (weight, BMI, blood pressure, lipids, blood glucose), and somatic comorbidity (cardiovascular disease, diabetes mellitus, obesity). We analysed the data using t-tests and multiple regression analysis. Results: Ninety patients were included in the analyses, they had a mean age of 38,8±12,8 years. In this group 86 patients (96%) used an antipsychotic agent, 41 (46%) of them used low dose quetiapine (= 100 mg). Furthermore, 39 patients (43%) used an antidepressant agent. Mean BMI was significantly higher in patients who used a TCA (29,7±6,8) than in patients who used an antipsychotic agent (26,1±5,2) or another antidepressant agent (25,6±3,9). This effect sustained after correction for confounders. No difference in outcome was found by medication use in other metabolic risk factors. Conclusion: BMI is significantly higher in patients using a TCA than in patients using another antidepressant agent. No difference in BMI was found between use of antipsychotic agents or other antidepressant agents. Based on these findings we advise to inform patients who (are about to) use a TCA and monitor them on weight and other metabolic risk factors.

No. 162

SNAP 101: Randomized, Crossover, Active/Placebo-Controlled, Safety and Pharmacokinetic/Pharmacodynamic Study of 3 Ascending Doses of POD® Olanzapine

Poster Presenter: Stephen Shrewsbury
Co-Authors: Meghan Swardstrom, Kelsey Satterly, Jacki Campbell, John Gillies, John Hoekman, Niquita Tugiono, Jasna Hocevar-Trnka

SUMMARY: Objectives: 1) Establish safety and tolerability of 3 doses of INP105 2) Compare PK data for olanzapine (OLZ) from 3 INP105 doses with OLZ IM (5 mg) and orally disintegrating tablets (OLZ-ODT) 10 mg 3) Establish and compare PD effects of INP105 to OLZ IM, OLZ-ODT and placebo 4) Explore PK/PD and dose-response relationships for INP105 Background: A survey of US Emergency Department (ED) staff in 2008 found 65% had witnessed physical attacks, 32% reported ?1 verbal threat per day and 18% had been assaulted once or more with a weapon but only 40% of EDs trained staff on how to respond. An estimated 1.7 million events/year occur for which OLZ IM is a preferred option due to a shorter Tmax than oral, but IM administration can be painful, humiliating, invasive and requires cooperation, or restraint which reduces trust, increases healthcare worker injuries and may be interpreted as an assault. In addition, heavily medicated patients may then require “boarding” until sedative effects have worn off. Oral treatment is preferred but has slower onset of effect and requires observation of the medicated patient. INP105 is a drug-device combination product of OLZ powder delivered by the Precision Olfactory Delivery (POD®) device to the vascular rich upper nasal space. It is being developed for rapid control of agitation in a cooperative or uncooperative patient (by a caregiver administered dose) to provide fast onset of relief in an accessible dosage form without a needle. INP105 may also be suitable for early use by patients who have insight into their condition and recognize early symptoms of agitation. This may avoid escalating agitation leading to violence and injury to the patient, their caregivers and/or healthcare workers. Methods: Randomized, double-blind, placebo- and active comparator-controlled, ascending-dose, 2-way, 2 period, incomplete block, crossover Phase 1 trial to compare the safety, tolerability, PK and PD of 3 doses of INP105 (5 mg, 10 mg and 15 mg) or placebo with either OLZ IM (5 mg) or OLZ-ODT (10 mg). Period 1 is open label; Period 2 is double-blind with at least 14 days between periods. Dose escalation will be staggered to allow a safety monitoring committee to assess tolerability of INP105 between doses. All subjects will be observed as in-patients for at least 72 hours post-dosing with follow-up occurring 4, 5 and 14 days after dosing in both periods. Study design: [Image of complex study design] Results: 36 subjects were dosed and SMCs 1 and 2 reviewed safety data in real time and approved dose escalation. PD and PK data is being collected, reviewed and analyzed – and will be presented at the APA meeting. Conclusions: This study investigated POD delivery of OLZ prior to further studies to confirm it is rapidly

effective treatment to abort episodes of acute agitation.

No. 163

Drug-Induced Brugada Syndrome in a Middle-Aged Female Patient: Drugs, EKG Diagnosis, Electrophysiology, and Surveillance Recommendation

Poster Presenter: Frank William Meissner, M.D.
Co-Authors: Cynthia Elizabeth Garza, M.D., J.D., Sarah L. Martin, M.D.

SUMMARY:

Screening of EKG's prior to initiation of psychopharmacological drug therapy for underlying QTc prolongation is a routine best practice. However, Brugada syndrome, a loss-of-function mutation of the SCN5A gene which encodes for the voltage-gated cardiac sodium channel responsible for the generation of the rapid upstroke of the myocardial action potential is a rare but important cause of sudden cardiac death (SCD). Brugada induced SCD is characterized by ventricular fibrillation and the EKG pattern of ST-segment elevation in leads V1–V3 (unrelated to ischemia, electrolyte abnormalities, or structural heart disease) while distinctive (right bundle branch block [RBBB] pattern with =2-mm coved ST-segment elevation in the right precordial leads), is largely unknown to practicing Psychiatrists. Its clinical importance relates to the high rate of ventricular fibrillation (13% in a recent review) treated with offending drugs, as well as the inability to detect pre-exposure EKG predictive markers on baseline EKG necessitating serial EKG surveillance. A 48-year-old Caucasian female on Amitryptiline/Fluoxetine for more than 5 years had an unremarkable baseline EKG 15 April 2013. She presented for evaluation of dizziness. EKG demonstrated Type 1 Brugada Syndrome, with PR prolongation (218 msec) and with uncharacteristic but extreme QTc prolongation (548 msec). Her psychopharmacological drug therapy had been unchanged for years. Discontinuation of Amitriptyline resulted in some improvement in the EKG pattern at 24 hours, but a demonstration of drug-induced Brugada pattern mandated ICD implantation. The most recent review identified 74 cases of Brugada syndrome induced by non-cardiac drugs occurring in 62 reports. The duration of the exposure of the majority of cases was weeks to years. The most frequently reported oral agents were lithium and amitriptyline accounting for 20% and 16% of cases respectively. The case highlights the following points: 1. Drug-Induced Brugada Syndrome while rare, has a high risk of SCD. 2. Baseline EKG analysis is insensitive for detection of a patient's increased risks for Drug-induced Brugada syndrome 3. Consequently, serial EKG evaluation at 1 month, 3 months, 6 months and annually thereafter when the patient is on a drug known to result in Drug-induced Brugada syndrome is a reasonable follow-up plan.

No. 164

Multiple Bifrontal Infarctions Presenting as Abulia and Catatonia in a Patient With an Anterior Communicating Artery Aneurysm

Poster Presenter: Veronica Searles Quick, M.D., Ph.D.
Co-Author: Vivek Datta, M.D., M.P.H.

SUMMARY:

Ms. Z, a 38 year old woman with a history of major depressive disorder and cannabis use, was brought by police to a psychiatric emergency room with concern for altered mental status. The family believed the patient had spent the previous four to five days lying in her shower, as no one had been able to reach her during that time and when they arrived she was lying in her shower conscious but altered and unable to communicate. She was admitted to a psychiatric facility for presumed catatonia and treatment with lorazepam was initiated. During her first two days in the hospital she demonstrated no response to treatment, and became increasingly somnolent, mute and abulic. She was sent to a medical emergency room for further workup, which identified bilateral frontal intraparenchymal and subarachnoid hemorrhages caused by a ruptured anterior communicating artery aneurysm. She was transferred to our facility for management, and MRI demonstrated infarcts involving the bilateral anterior cingulate gyri (likely the cause of her abulia) and left middle frontal gyrus (relevant to word production and possibly the cause of her speech hesitancy). She received emergent endovascular intervention and demonstrated significant postsurgical improvement in communication, orientation and reactivity. She was

discharged to an acute rehabilitation facility and six weeks later was recovering well with only intermittent speech hesitancy on examination. She is expected to make a full recovery. This case illustrates how a history of psychiatric disorder may lead to misdiagnosis of psychiatric presentations of neurological disease, and the importance of considering anterior cingulate lesions causing abulia in the differential diagnosis of catatonia.

No. 165

Malingering in Psychiatric Emergency Department by Feigning a Language Barrier

Poster Presenter: Zohaib A. Abbasi, M.D.
Co-Author: Christopher Sola, D.O.

SUMMARY:

BACKGROUND: Language barriers can pose an obstacle in assessing a patient, especially in a psychiatric emergency. However, malingerers can make volitional efforts to evade questions. An assessment can become complicated if a malingerer speaks a language not understood by the clinician. We present a case study with literature review to illustrate this phenomenon. METHODS: A Hispanic male in his 30s presented to the psychiatric emergency for suicidal ideation. Per the EMS report, he was requesting to be admitted to the hospital, stating that if he was sent back to the streets he would kill himself. Upon attempted interview, he preferred to focus on eating lunch rather than answering questions, and repeatedly said “No English...Spanish!” except when asked about thoughts of suicide, when he answered only “yes, yes.” In discussion with nursing, it was reported that the patient initially denied being able to speak English and asked for food repeatedly. When the nurse told him he can have the lunch box once the nursing assessment is completed, the patient immediately started speaking English fluently and answered all the nursing questions. A chart review revealed a similar presentation a few weeks earlier during which the patient had also claimed to not speak English but then spoke English after being pressed for answers, and no interpreter services were required. During that encounter he was eventually admitted for suicidal ideation, only to be discharged quickly when the inpatient psychiatry team came to believe that he had sought hospitalization primarily to substantiate housing and social security benefits. He was prescribed, but refused, venlafaxine. Given a history of substance use, he was referred to a drug rehab program, which he also refused, instead demanding to be discharged. On this second ED visit, to ensure that language was not a barrier, a Spanish phone interpreter was arranged. However, when the interpreter asked him questions in Spanish, the patient often gave single word answers or answers which did not pertain to the question being asked, instead repeating that he was suicidal and needed hospitalization. He refused to elaborate as to why he was depressed, verbalizing no recent stressors or changes. He then reported persistent auditory hallucinations and fully formed visual hallucinations of “dead babies and blood,” without ever appearing to respond to internal stimuli or to be distracted by these experiences. He became visibly irritated when attempts were made to counsel him regarding chemical dependency treatment and maintaining sobriety. He then abruptly spoke English and stated “please, I have to stay here,” admitting he wanted to avoid being discharged because he was homeless. CONCLUSION: When assessing a patient with language barriers, it is essential to make use of all available resources including interpreter services, chart review and discussion with other team members to differentiate malingering from psychopathology.

No. 166

Paliperidone Injection Induced Neuroleptic Malignant Syndrome

Poster Presenter: Utsmai Mary Menezes
Co-Author: Viral Goradia

SUMMARY:

Neuroleptic Malignant Syndrome (NMS) is a rare but potentially life threatening condition that can occur after administration of antipsychotic medications. There is an increased risk with high potency first generation neuroleptics (haloperidol, fluphenazine), notably as a result of massive D2 dopamine receptor blockade in the CNS. Clinical manifestations of neuroleptic malignant syndrome include: altered mental status, elevated temperature, autonomic dysfunction and severe, global, muscular rigidity that develops within 24-72 hours of antipsychotic use.

Other findings that may help support the diagnosis are elevated creatinine phosphokinase, leukocytosis and myoglobinuria. Estimates of mortality in NMS cases have ranged as high as 76% due to complications such as cardiovascular collapse, renal failure, and respiratory failure. Recent data suggest an incidence of 0.01%–0.02% and a national prevalence of 2.2% in 2017, with a twofold increase in young males. NMS is historically associated with the classic or "typical" antipsychotic drugs, and it is also a potential adverse effect of atypical antipsychotic drugs. Paliperidone is a newer second generation atypical antipsychotic drug available in extended-release formulation. It has efficacy and adverse effects similar to risperidone. Cases of oral paliperidone-induced neuroleptic malignant syndrome have previously been reported, however, current literature is lacking data regarding depot injection-paliperidone association with NMS. It is essential to review guidelines on how to introduce depot neuroleptics (after an oral dose?) and recommendations to recognize NMS in association with antipsychotic medications. We present a case of a 43 year old male with history of schizophrenia, started on a long acting injection of paliperidone as an outpatient. An oral dose challenge was not performed initially. Within 24 hours of receiving paliperidone depot injection, our patient started to have symptoms of fever, chills, hypertension, tachycardia, muscle rigidity and bizarre behavior. Laboratory workup revealed leukocytosis (WBC count 12.7×109/L vs normal 11.0 ×109/L), elevated creatinine phosphokinase levels (CPK of 9140 mcg/L vs normal <120mcg/L) and elevated liver transaminases (AST 284, ALT 214 vs normal AST <40 , normal ALT <56). Our patient was found to have NMS in the setting of new antipsychotic use. As with new onset altered mental status and sepsis symptoms, organic causes were ruled out with negative findings on head CT, negative blood and urine cultures; normal serial EKG's and echocardiogram. Our patient was ultimately admitted to the ICU, antipsychotic medications were stopped with remittance of his NMS symptoms after treatment with IV hydration and dantrolene. In addition to highlighting pertinent aspects of this case we will present a literature review discussing the evaluation, diagnosis, and treatment of patients with NMS in the setting of new depot antipsychotic use

No. 167

Inhaled Loxapine Versus Intramuscular Haldol and Lorazepam in the Management of Acute Agitation in the Emergency Department

Poster Presenter: Christopher Coyne, M.D., M.P.H.
Lead Author: Michael Wilson, M.D., Ph.D.
Co-Authors: Gary Vilke, M.D., Evan Simonsen, B.S.

SUMMARY:
Background: Agitation and physical violence are frequently encountered in the emergency department (ED), and is dangerous for both patients and staff. Medication for the treatment of agitation is therefore of extreme importance in the emergency setting. Classically, the medications most frequently utilized for this purpose in the ED have been combined intramuscular haloperidol and lorazepam. Recent literature, however, has suggested that inhaled loxapine may be an ideal, non-invasive alternative to classic intramuscular sedatives. Methods: We conducted a naturalistic, prospective, observer-blinded, observational, nonrandomized clinical trial to compare the effectiveness of inhaled loxapine 10mg (study group) versus intramuscular haloperidol 5mg + Lorazepam 2mg (control group) in the management of acute agitation in the ED. Baseline agitation was assessed prior to medication and at 15, 30, 45, 60, 90, 120, and 150-minute intervals using the Positive and Negative Syndrome Scale Excited Component (PANSS-EC). We also measured need for physical restraints and collected general demographic data. . Results: During our study period from March 2017 to December 2018, we enrolled 35 patients, which included 22 in the study group and 13 in the control group. The groups were similar with respect to age, sex, race/ethnicity and payer status. Compared to baseline scores, loxapine had a significantly larger decrease in agitation relative to controls by 15 minutes (50% reduction vs 39% in the control group, p=.001 assessed through an ANCOVA analysis). We noted lower levels of agitation in the test group relative to control over nearly all subsequent observations. Additionally, we noted that, at baseline, there were similar numbers of patients restrained in each group (3 in control, 2 in test), though by the 60 minute observation, 3 additional control patients required restraints, while all

patients in the test group had been removed from restraints by 60 minutes. Finally, we found that a lower percentage of patients in the study group required subsequent medications for agitation than those in the control group (40.9% vs 46.2%,). Conclusions: In the emergent setting, loxapine may be an effective medication in the management of acute agitation. Relative to intramuscular medications, it may improving calming while allowing for a less invasive route of administration. Further investigation will be needed to uncover additional patient characteristics that may affect response to sedation including underlying psychiatric diagnoses and illicit drug use.

No. 168

Ketamine for Acute Agitation as Illustrated by a Case of Genital Self-Mutilation and Review of the Literature

Poster Presenter: Robin Martin, D.O.
Co-Authors: Tanya Zaist, D.O., Neil Allen Gray, M.D., Ph.D.

SUMMARY:
A man in his 20's presented to our emergency department in an apparent methamphetamine-induced psychosis actively attempting to cut off his penis. Patient required multiple staff for hands on and mechanical restraint, was given IM Haloperidol and lorazepam. However he broke out of his nylon restraints, requiring additional hands-on and 4-point leather restraints. Patient continued to be agitated and was given IV ketamine after which his acute agitation resolved. Patient subsequently was able to tolerate laceration repair and slept for several hours. Upon waking he no longer appeared psychotic and was able to be discharged. While this patient's act of self-harm is particularly morbid, emergency departments around the country commonly treat acutely agitated patients who are a danger to themselves or to staff. Intramuscular antipsychotics and benzodiazepines are considered first line treatment for dangerous agitation; however onset of action or need for repeat dosing leaves a window of time where patient or staff harm can occur. Ketamine is increasingly being utilized as a safe, effective, and rapid-acting agent to treat acute agitation in emergency settings. This case represents an example where ketamine showed utility in protecting staff, preventing further grievous harm to this patient and reducing requirements for physical restraint. The current literature on use of ketamine for acute agitation is briefly reviewed.

No. 169

Why Is My Patient Still Here? Patient Level Factors Affecting "Super Stays"

Poster Presenter: Tiffany Prout DeHondt, M.D.

SUMMARY: Objective: It is well established that mental health patients are disproportionally affected by prolonged boarding times in the Emergency Department (ED), resulting in increased morbidity, cost of care, and burden. There have been some investigations into patient level factors that are associated with prolonged boarding, but there are many individual factors that have never been studied. Furthermore, there is no literature on what happens to patients who present for psychiatric crisis and endure "super stays" – an ED length of stay totaling 48 hours or longer. Our aim is to identify patient factors that may be associated with prolonged boarding and what eventually happened to these patients in our urban ED: hospitalization or discharge. Method/Preliminary Findings: This is a retrospective chart review of ED patients who had super stays between January 2017 and December 2018 – Preliminary data from January 2017 to June 2018 is included in this abstract. In that time period, there were a total of 4616 psychiatric consults. 166 of these consults (3.6%) had length of stays which were 48 hours or longer. Of those super stays, 97 patients (58.4%) were admitted to psychiatric hospitals, 60 patients (36.1%) were discharged, and 9 patients (5.4%) were admitted for non-psychiatric reasons to a medical floor. Thus far, data on patient level factors associated with super stays indicates that 74.8% were Male, 62.1% had psychotic symptoms, 45.3% had medical problems that contributed to delay, 44.2% were in restraints at some point, 25.3% presented with illicit substance intoxication, 14.6% had documented developmental delay or cognitive impairment, 10.5% presented with alcohol intoxication, 9.5% demonstrated sexually inappropriate behavior, and 4.2% presented with a suicide attempt that required medical intervention. We are continuing to work on statistical analysis of these patients and will be presenting data from all

24 months of study for our final project. Discussion: Our goal is to identify factors that may put a patient at risk for a super stay in the ED. Presently, we do not have a good understanding of this population, as most of the current information is anecdotal or overgeneralized. By determining objective frequencies of specific individual factors, we can improve identification of patients with higher risk for a long stay. Furthermore, we can start determining specific interventions that may address or reduce the risk of a super stay. Preliminary findings are pointing towards a need for more specialized psychiatric beds, improved medical support in psychiatric hospitals, and better developmental delay resources. By improving our understanding of this population and targeting their specific needs, we hope to impact the effort to improve timeliness of care for our mental health patients in the ED.

No. 170

Suicide Survivors With Psychiatric Care Demonstrate Lower 5-Year Post-Discharge Mortality Than Other Trauma Patients at a Level 1 Trauma Center

Poster Presenter: Julian Lagoy, M.D.
Co-Authors: Katherine Howe, M.D., Tracey W. Criss, M.D., Mark Hamill, M.D., Jennifer Bath, M.S.N., Tonja Locklear, Ph.D., Michael Nussbaum, M.D.

SUMMARY:

Introduction Worldwide more than 800,000 people die from suicide each year (WHO 2014), 95% of suicide victims have a previous psychiatric diagnosis (Litman 1989), and half of suicide deaths have a history of suicide attempt (Cooper 2005). Unfortunately, only 25-30% of patients who commit suicide had psychiatric contact within the year of their death (Walby 2018), and one of every 100 suicide survivors will die by suicide within one year of their first attempt, a risk 100 times that of the general population (Hawton 1992). We hypothesized suicide survivors would have higher inpatient mortality and post discharge mortality than other trauma patients. Methods Our level 1 trauma center registry was queried, and adult patients identified were matched with 2008-2013 mortality data from the National Death Index. Suicide attempts were identified using E-Codes. Recidivists were identified and analyzed. Suicide attempt patients who died in hospital were compared with those surviving to discharge, along with their discharge disposition. Univariate analysis was performed using Chi Square, Fisher's Exact with Bonferroni correction, and Wilcoxon two sample tests. Kaplan-Meier curves were plotted to compare mortality up to 5 years after hospital discharge between patients who survived suicide versus all other trauma mechanisms. Results 8716 patient records were evaluated with 245 (2.8%) classified as suicide attempts. 212 patients had single evaluations for suicide while 18 (7.8%) were suicide attempt recidivists. For comparison 7934 other trauma evaluations included 7352 single patients and 352 (4.4%) recidivists. This difference in recidivism was significant (p=0.0210). Survival analysis demonstrated that those who attempted suicide had significantly lower post-discharge mortality at multiple time points. 49 (26%) patients were discharged home (with outpatient psychiatric care) and 138 (74%) patients were sent to a facility (including inpatient psychiatry). After discharge, 167 (89%) patients did not present again, 10 (5%) patients presented again and 10 (5%) patients died during the post discharge period. Conclusion As expected, patients presenting after suicide attempts have higher inpatient mortality than other trauma patients, likely due to high lethality mechanisms (Spicer 2000). Accordingly, suicide survivors' recidivism rates are significantly higher than other trauma patients. Surprisingly, however, post suicide attempt patients have lower post-discharge mortality. There are many possible explanations for these findings, including the impact of post-discharge psychiatric follow up. All patients admitted for suicide attempt are referred to psychiatric care after discharge. Further study of follow-up is warranted to improve psychiatric care for patients at risk of future suicide attempt.

No. 171

Medical Emergencies in an Inpatient Psychiatric Unit (IPU) Requiring Transfer for Medical Treatment

Poster Presenter: Kayvon Milani

SUMMARY:

Background: Medical emergencies in an acute inpatient psychiatric unit (IPU) can be difficult to anticipate, evaluate, and treat. Recognizing and

responding appropriately to medical emergencies among psychiatric patients is paramount to avoid adverse outcomes. Prior to admission to an IPU, patients typically undergo medical screening in an emergency department. However, serious or underlying medical conditions may go undetected. Moreover, little research exists concerning the educational needs of resident physicians on how to manage medical emergencies among psychiatric patients in inpatient psychiatric units. To address these key challenges, a proposed solution includes determining the nature of medical emergencies among patients admitted to an IPU in a residency-training program at Kern Medical in Bakersfield, CA. Methods: Internal hospital data tracking patient transfers identified fifty-nine medical emergencies in the IPU requiring transfer for further medical treatment from May 1, 2015 to June 30, 2018. A retrospective chart review extracted clinical data such as patient demographics, length of hospitalization, admitting diagnosis, nature of the medical emergency, time of adverse event, discharge diagnosis, and need for additional consults. Data abstraction stratified patients according to the basis of transfer and their unique characteristics. Results: Retrospective chart review of fifty-nine events identified fifty-two patients (some patients with more than one adverse event) and eleven cases where the adverse event culminated in a rapid response. A breakdown of the fifty-nine events revealed the following: forty-eight transfers to the medical floor, four transfers to the intensive care unit, three transfers to the direct observation unit, two transfers to a diagnostic treatment center, one transfer to the obstetrics and gynecology floor, and one transfer to the operating room. The most common basis for transfer was seizure or seizure-related event (22%), followed by infection (20%) and electrolyte imbalances (19%). Furthermore, the mean age among patients was 46.51 years and 65% of patients had a co-morbid medical condition. Most medical emergencies occurred during day shift (64%) compared to night shift (36%). Patients with medical emergencies also had longer lengths of stay and higher rates of readmission compared to the facility average. Conclusion: Co-morbid medical disorders are common among psychiatric patients who experience medical emergencies. The clinical implications of these findings will help resident physicians, identify the clinical risk factors for adverse events in the short-term based on commonly gathered data such as co-morbidities, vital signs, and laboratory risk factors. In addition, we can utilize the data to innovate an educational initiative or targeted training focused on the most common emergencies in psychiatric units so that resident physicians are better equipped to assess and treat emergencies.

No. 172

Your Trauma Does Not Define My Trauma: Our Approach in the Psychiatric ER

Poster Presenter: Lidia Klepacz, M.D.

SUMMARY:

Trauma is the number one cause of death to Americans between the ages of 1 and 46 years. In the US, this rate contributes to the lifespan reduction and exceeds 12 other developed countries. Each year, trauma account for 41 million ER visits and 2 million hospital admissions. We will discuss the physician's role in treating trauma including SAMHSA's 4 R's-- Realize the impact of trauma, Recognize signs and symptoms of trauma, Respond to patient using trauma informed approach and Resist re-traumatization. Our Approach-- 1. We do an immediate triage to prevent re-traumatization and create a trusted environment. Re-traumatization occurs when the patient feels as if he or she is undergoing another trauma. 2. We inform the patient what to expect in the screening process. 3. Adjustment of tone and volume of speech to suit the patient's level of engagement and degree of comfort in the interview. 4. Approach the patient in a supportive manner. 5. Elicit only the information relevant for determining a history of trauma and possible existence of trauma. Give the patient as much personal control as possible during the assessment. 6. Avoid being judgmental. We will discuss the principles of patient centered care which have led our rates of restraints being 0.1% in the ER. We will also discuss the six core principles of Trauma-Informed Approach including Safety, Trustworthiness and Transparency, Peer Support, Collaboration and Mutuality, Empowerment, Voice and Choice, and Cultural, Historical and Gender Issues.

No. 173

Cross-Cultural Understanding of Interoceptive Awareness and Implications for Psychosomatic Health

Poster Presenter: Hiroe Hu
Co-Authors: Aaron Freedman, Soraya I-Ting Huai-Ching Liu, Wolf Mehling

SUMMARY:
Introduction: Accurate interoception, the perception of bodily sensations, has been associated with adaptive emotion regulation, while interoceptive dysfunction has been linked to psychosomatic and psychiatric disorders. The Multidimensional Assessment of Interoceptive Awareness (MAIA) is a self-report questionnaire measuring interoceptive awareness, a mechanism of action for mind-body therapeutic approaches. Recently, a Japanese version of the MAIA (MAIA-J) was developed, but the factor structure differed from the original English version. We aimed to explore why MAIA-J demonstrated drastically different psychometrics and to better understand cross-cultural variations in mind-body interactions. Method: We invited focus groups of bilingual and bicultural Japanese-Americans. Participants completed the MAIA in both languages [scale score range 0-5]. Data on cultural and social orientation were collected via General Ethnicity Questionnaire (GEQ), Bicultural Identity Integration Scale (BIIS-P), and Singelis Self-Construal Scale (SSCS). Two moderators facilitated discussions on the understanding of mind-body interaction and differences in bodily awareness due to the self-concept in both cultures. Qualitative data were analyzed using iterative categorization of codes and thematic analysis. Questionnaire data were analyzed using a median split of BIIS-P, categorizing individuals into high versus low bicultural identity integration (BII). Qualitative Results: The following themes emerged from the focus group (N=16) discussion regarding cross-cultural differences in interoceptive bodily awareness: external versus internal orientation [of attention], social expectations, self-regulation, emphasis on form, context dependency, translation difficulties, personal space, differences in the expression of emotions, and mind-body relationship. Quantitative Results: Participants represented a unique population of bicultural individuals, the majority of whom (n=11) had well-developed self-construal in both independent and interdependent domains of social orientation. Participants with low bicultural integration (n=6) scored significantly lower in Not-Worrying, a scale of both MAIA (M=1.61+/-0.80 vs. M=3.47+/-0.96, p=0.0067) and MAIA-J (M=1.61+/-0.80 vs. M=3.17+/-1.13, p=0.015). Conclusion: Qualitative accounts from this study indicate specific elements that are associated with cultural differences in interoception and mind-body interaction that may be important for mental health. Quantitative results suggest that bicultural individuals who view their dual cultural identities in conflict with each other (as opposed to well-integrated) may be prone to enhanced negative reappraisal of unpleasant bodily sensations. Future studies should investigate cultural mediators of psychosomatic disorders and responses to mind-body practice.

No. 174

Impact of Prior Treatment Trials on Remission With Repetitive Transcranial Magnetic Stimulation for Treatment-Resistant Depression

Poster Presenter: Jonathan Hsu, M.D.
Co-Authors: Jonathan Downar, Fidel Vila-Rodriguez, M.D., Jeff Daskalakis, Daniel Blumberger

SUMMARY:
Background: Multiple prior treatment failures is associated with reduced remission rates with various antidepressant treatments including repetitive transcranial magnetic stimulation (rTMS). Intermittent theta burst stimulation (iTBS) is a newer form of rTMS where less is known regarding clinical predictors of response. The theta burst versus high-frequency repetitive transcranial magnetic stimulation in patients with depression (THREE-D) study (NCT01887782) demonstrated that iTBS was non-inferior to traditional 10 Hz rTMS for the treatment of treatment resistant depression (TRD), supporting the recent US FDA approval. Objective: Determine if prior pharmacotherapy trials affect the rate of remission from depression with two types of rTMS (iTBS and 10Hz) delivered to the left dorsolateral prefrontal cortex. Method: Compare remission rates based on prior and type of pharmacotherapy using data from the THREE-D trial, a randomized non-inferiority clinical trial in adult

participants with a treatment-resistant major depressive episode. Remission was defined as Hamilton Rating Scale for Depression-17 score <8. Participants received 10 Hz rTMS (120% resting motor threshold; 10 Hz frequency; 4 s on and 26 s off; 3000 pulses per session; total duration of 37.5 min) or iTBS (triplet 50 Hz bursts, repeated at 5 Hz; 2s on and 8 s off; 600 pulses per session; total duration of 3 min 9 s). We used Pearson's chi square tests to compare remission rates between participants categorized by different degrees of treatment resistance at the primary endpoint following the treatment protocol. We also investigated the impact of medication class type on remission rates using Fisher's exact test by comparing remission rates for those who were taking a particular class of antidepressant in the current episode with those who had not. Results: 414 participants were included in the current analysis with 385 achieving the primary completion timepoint. Among all participants, 217/414 (52.4%) had one or fewer antidepressant trial, 116/414 (28.0%) had two and 81/414 (19.6%) had three. Participants with 3 versus <3 treatment failures had a statistically significant difference in remission: 17.3% versus 29.4% (?2 4.87;df=1;p=0.03). There was no significant difference observed in remission rates for lower levels of treatment failures or between the different rTMS protocols. The most common prior pharmacotherapy was selective serotonin reuptake inhibitors 143/414 (34.5%) and serotonin norepinephrine reuptake inhibitors 124/414 (30.0%). There were no statistically significant differences in remission rates based on previous medication trial types. Conclusions: Three or more treatment failures are associated with statistically significant lower remission rates with rTMS. The findings suggest that a particular level of treatment resistance with three failed trials may confer a uniquely poor prognosis compared to lower levels of treatment resistance with rTMS.

No. 175

Repetitive Transmagnetic Stimulation May Reduce Cue-Induced Craving in Methamphetamine Use Disorder

Poster Presenter: Brandon John Cornejo, M.D., Ph.D.
Co-Author: Holly McCready

SUMMARY: Objective: The primary aim of this project was to use a randomized single-blind sham-controlled study to investigate if high frequency (HF-)rTMS can modulate cue-induced craving in adult methamphetamine (METH) users. Background: Methamphetamine Use Disorder (MUD) is a significant public health problem with 4.7% of the U.S. population having tried METH in their lifetime. METH is highly addictive and can result in significant psychiatric burden. Current treatments for MUD are not effective and new approaches are needed. We hypothesized that left dorsolateral prefrontal cortex (DLPFC) HF-rTMS would result in a reduction in craving for METH compared to sham-controlled rTMS in adults with MUD. We anticipated rTMS mediated stimulation of the DLPFC would result in inhibition of cue-induced craving through potential disruption of neuronal circuitry. Methods: Participants with MUD were randomly assigned to sham or active coil condition and measured on validated scales. All participants were shown METH cues prior to rTMS treatment. Visual Analog Scales (VAS) were measured prior to cues, after viewing cues and after rTMS treatment. Subjects received 10 daily treatments within 2 weeks, followed by maintenance phase for a month. rTMS protocol consisted of 50 pulses, 10 Hz, 100% RMT, 20 trains/day, and an inter-train interval of 15 seconds. Results: Preliminary VAS results indicate that MUD subjects exposed to the active coil demonstrated a 18.73% reduction in craving compared to those participants who were assigned to the sham coil condition who exhibited a 0.5% increase in METH craving from baseline. Conclusions: These early results suggest that HF-rTMS may reduce cue induced craving in MUD. Further work and expansion of the current data set are underway.

No. 176

Supplementary Motor Area Low Frequency rTMS Added to Theta Burst Stimulation to Enhance Response of Depression Treatment

Poster Presenter: Jorge Davila

SUMMARY:

Background: Intermittent theta burst stimulation (iTBS) of the left dorsolateral prefrontal cortex (L-DLPFC) is an effective treatment for patients with treatment-resistant major depressive disorder

(TRMDD). A significant number of these patients do not respond to iTBS treatment. Objective: To compare the effectiveness of iTBS of the L-DLPFC vs iTBS of the L-DLPFC in addition to low frequency rTMS of the supplementary motor area (SMA) in patients with TRMDD. The additional SMA spot for the 1 Hz rTMS was selected given its effectiveness in highly ruminative patients with OCD. Methods: Patients aged 18-65 years, diagnosed with TRMDD (n=44) were randomly allocated to two groups. Group 1 (n=18) received daily sessions of iTBS of the L-DLPFC (50 Hz, 80% of MT, 20 trains, 8s intertrain interval, 1200 to 1800 pulses/session, 8-minute pause between each 600 pulses). Group 2 (n=26) received mixed treatment with iTBS (same protocol as Group 1) added to rTMS of the SMA (1 Hz, 100% of MT, 2000 pulses/session). Both groups were treated for a period of 4-6 weeks (20-30 sessions). Depression and ruminations were evaluated with the 17-item Hamilton Depression Rating Scale (HDRS-17) and the Ruminative Response Scale (RRS) respectively. Patients had to score at least 18 in the HDRS-17. The Clinical Global Impression (CGI) and Global Assessment of Functioning Scale (GAF) were also applied. Results: HDRS-17 scores improved from 24.5 (SD 4.6) to 14.6 (SD 5.7) in Group 1, and from 25.1 (SD 4.2) to 11.6 (SD 4.4) in Group 2 (p=0.05). The RRS score in Group 1 decreased from 60 (SD 6.3) to 47.6 (SD 9.2) and in Group 2 from 63.7 (SD 7.2) to 43.5 (SD 9.3) (p=0.01). A decrease of =50% from the HDRS-17 baseline was presented by 50% of patients in Group 1 vs 69% of patients in Group 2. Conclusions: Mixed protocol of iTBS of the L-DLPFC in addition to low frequency rTMS of the SMA decreased depressive symptoms and rumination in TRMDD patients more effectively than the iTBS of the L-DLPFC only protocol. This suggests that highly ruminative TRMDD patients constitute a subgroup that can particularly benefit from the mixed protocol proposed here. The relation of the SMA with diverse networks related to the physiopathology of depression offers a rationale for the stimulation of this region.

No. 177

Severe Mental Disorder Attention Program. Impact and Outcomes of a Structured Intervention Program in a Population of Patients in Bogota, Colombia

Poster Presenter: Martha Patricia Saavedra
Co-Authors: Juan Cano, M.D., M.Sc., Rodrigo Nel Cordoba, M.D., Carlos Pedraza, Catalina Gamboa, Erika Bermeo, Nathalia Cubillos

SUMMARY:
Introduction: Disability in people with severe mental disorders it is not limited to health interventions. Cognitive alterations, lack of autonomy, social isolation, labor insertion and family issues are among the common problems this populations have. Psychosocial interventions are focused not only the symptoms, but the different vulnerabilities according to people needs. Objective: To implement a psychosocial rehabilitation program within a specific population to minimize the impact of severe mental disorders on quality of life, global functioning, lowering the impact and burden of disease. Methods: A program was created directed to people with severe mental disorders including diagnosis of schizophrenia, bipolar disorder, recurrent depression, among others. Splitting the population in three groups according to disease staging, nor diagnosis. Several key performance indicators (involving functionality, treatment adherence, health resources utilization, support network, and quality of life) were measured. As soon as patients entered the group a comprehensive diagnosis was performed, including clinic, occupational, psycho-social, and nutritional status. Patients entered to a structured program of 52 weeks long according to group classification. Here we will show the results of the program according to the impact by each diagnostic category.

No. 178
WITHDRAWN

No. 179
WITHDRAWN

No. 180

Mental Health Educational Needs of Clergy in African American Faith Communities in the D.C. Metropolitan Area

Poster Presenter: Alexis Lighten Wesley, M.D.
Co-Author: Suzan Song, M.D., Ph.D., M.P.H.

SUMMARY: Objectives: To determine the mental health needs of a focus group of clergy across 10 predominantly African American Christian churches within the DC metropolitan area. The needs assessment is based upon an inquiry to clergy regarding their greatest challenges when addressing mental health problems among their congregants. Clergy often serve as the first point of contact for those with mental health concerns in the African American community. Outlining their highest rated needs with respect to mental health will ultimately provide guidance for educational interventions. Methods: The study comprised of a focus group of N=10 clergy from 10 churches across the 4 quadrants within Washington D.C. as well as churches from suburbs in MD and VA. The clergy consisted of pastors, ministers, and deacons, all of whom have different training backgrounds and varying levels of exposure to mental health education. The selected clergy were drawn from a socioeconomically diverse group of churches. Interviews were recorded and transcribed for analysis. Qualitative data was analyzed using thematic analysis. Results: Initial data from the focus group of local pastors suggests that distinguishing normal syndromes of distress (grief, demoralization, spiritual crises, loneliness, etc.) from depression and detection of serious suicide risk are two major concerns. Participants reported barriers that included a lack of information about mental health resources and avenues for referrals. Finally, the participants discussed their limited comfort with addressing mental health concerns for their congregants. Conclusions: According to the U.S. Department of Health and Human Services, African Americans are at least twenty percent more likely to suffer from serious mental health problems than the general population. However, data shows that African Americans largely underutilize traditional mental health services. Much of this service gap is filled by clergy in predominantly African American churches and, accordingly, they have been deemed by scholars as the "gatekeepers" to formal mental healthcare given their position of respect within the African American Christian communities. In this poster, we discuss the mental health educational needs of African American clergy within the larger DC metropolitan area. This study offers direction for mental health educational endeavors to bridge the gap between informal and formal mental health care.

No. 181

Attitudes and Perceptions of Psychiatrists and Psychiatry Residents Working in Public Hospitals in Singapore Toward Spirituality in Psychiatry

Poster Presenter: David Choon Liang Teo
Co-Authors: Andrew Lai Huat Peh, Jared Ng, Yong Lock Ong, Qian Hui Chew, Kang Sim

SUMMARY:
Background: Spirituality is concerned with the transcendent and the individual's connection to a larger reality or context of meaning. Religion is the form that spirituality takes within given traditions, with basic tenets or beliefs often set within a historical context (Josephson and Peteet, 2007). There is increasing awareness of the relevance of spirituality to mental health issues. However, there is currently limited formal training for psychiatrists in this area in Singapore. We aimed to survey the attitudes and perceptions of psychiatrists and psychiatry residents in Singapore's public hospitals toward spirituality in psychiatry. We also aimed to examine their interest and past learning experiences, identify gaps in knowledge, and barriers to discussing spirituality with patients. Methods: All psychiatrists and psychiatry residents from Singapore's public hospitals were invited by email to participate in a web-based survey on spirituality in psychiatry. Recruitment lasted for 3 months. Spirituality and religion were defined as above in the invitation to ensure a uniform understanding of the terms and face validity. The survey was adapted from a previous study on Canadian psychiatry residents' attitudes toward spirituality in psychiatry. Additional questions were formulated using curriculum suggestions by the Royal College of Psychiatrists. Descriptive statistical analysis was performed on the data. Results: 123 respondents (77 psychiatrists, 46 residents) completed the survey (45.6% response rate). 96 respondents (78.1%) felt that spirituality is an important aspect of psychiatric care. However, majority (66.6%) had not received specialist training in spirituality and psychiatry, and were interested in learning how to do so. There were mixed opinions on the appropriateness and ethical implications of discussing spirituality with

patients. This included concerns that discussing spirituality may be interpreted by patients as an attempt to influence their beliefs. Insufficient time and knowledge were the main barriers to discussing spirituality with patients. Patient care and interpersonal and communication skills were the Accreditation Council for Graduate Medical Education (ACGME) competencies that respondents felt could be improved with more training to address patients' spiritual issues. Psychiatrists and residents had significantly different opinions on whether: spiritual beliefs can compound mental illness; insufficient time, concern about offending patients, and disapproval from other psychiatrists were barriers to discussing spirituality with patients (all $p < .05$). Conclusions: Majority of psychiatrists and psychiatry residents in Singapore feel that addressing spiritual issues is an important aspect of psychiatric care. However, most feel insufficiently trained or knowledgeable to do so, and are interested to learn more. Insufficient time and ethical concerns are other barriers to discussing spirituality in psychiatry.

No. 182

Patient Responses to Spiritual Psychotherapy in an Acute Psychiatric Setting

Poster Presenter: Sarah Salcone
Co-Authors: David Harper, Brent P. Forester, M.D., David H. Rosmarin, Ph.D.

SUMMARY:
Background: Even in this modern age, more than eight in ten Americans assert belief in God or a higher power (Gallup Poll, 2016). Additionally, a recent study reported that over half of acute psychiatric patients express interest in addressing spirituality as part of their care (Rosmarin, Forester, Shassian, Webb, & Bjorgvinsson, 2015). However, there are very few spiritually-integrated interventions available to accommodate high levels of acuity and various diagnostic profiles. Methods: Twenty clinicians of diverse spiritual/religious affiliations (4 psychologists, 4 group/expressive therapists, 7 mental health counselors/specialists, 3 social workers, 1 nurse, 1 chaplain; 50% Christian/Catholic, 10% Jewish, 10% Buddhist, 5% Muslim, 10% spiritual not religious, 15% no affiliation) provided spiritually-integrated treatment to patients on 14 units (8 inpatient, 2 residential, 2 partial). Clinicians utilized a clinical protocol developed at McLean called Spiritual Psychotherapy for Inpatient, Residential, and Intensive Treatment (SPIRIT). Patients were asked to complete surveys at the end of each group. Since February 2018, we have logged over 2,350 patient visits to SPIRIT groups, and 1350 patients have completed surveys. Of our current sample, average age is 40.6 with 46.2% male, 52.5% female, 1.3% other gender. Primary diagnoses include: schizophrenia and related disorders 13.1%, bipolar and related 21.3%, depressive disorders 30.2%, anxiety disorders 3.0%, obsessive compulsive and related 0.7%, trauma and stressor-related 4.1%, eating and feeding disorders 5.7%, substance use and addictive disorders 19.7%, personality disorders 0.3%, and other disorders 1.8%. We anticipate having 1,900 responses by the end of March. Results: In preliminary analyses, 81.2% of patients reported that the group clarified how spirituality can be integrated into treatment ($n = 474$), 75.2% reported that the group helped identify spiritual resources that can be utilized to reduce distress ($n = 471$), and 62.2% reported that the group helped identify spiritual struggles that were contributing to distress ($n = 473$). Chi square analyses found that these responses did not vary depending on patients' diagnostic profiles ($p = 4.93$, $p = 11.81$, $p = 17.33$) or spiritual/religious affiliation ($p = 0.38$, $p = 0.20$, $p = 0.33$). Conclusion: These findings suggest that spiritually-integrated psychotherapy can be delivered by a diverse staff to acute psychiatric patients with heterogeneous diagnostic profiles across multiple levels of care, regardless of spiritual/religious affiliation.