New Research

New Research Program & Abstracts

A DANCING BEAR SYMBOLIZES RENEWAL AND STRENGTH TO MANY NATIVE AMERICAN CULTURES

American Psychiatric Association
Annual Meeting • May 30 - June 4, 1998
Toronto, Ontario, Canada

Program & Abstracts

PROGRAM
AND
ABSTRACTS ON NEW RESEARCH

IN SUMMARY FORM

151ST ANNUAL MEETING OF THE AMERICAN PSYCHIATRIC ASSOCIATION

TORONTO, ONTARIO, CANADA
May 30-June 4, 1998

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151st Annual Meeting
Toronto, Canada
May 30-June 4, 1998

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May 30, 1998

Dear Fellow Research Practitioners and Consumers:

On behalf of the members and staff of the Scientific Program Committee, I would like to welcome you to the 1998 New Research Program. This year's program reflects the increasing importance of basic and clinical neuroscience to psychiatry. The sessions are organized by topic and have been expanded to accommodate a myriad of excellent submissions.

The program begins Monday, June 1, at 9:00 a.m. with the first of two Young Investigators' Poster Sessions. It continues at 10:30 a.m. with "Research Advances in Psychiatry: An Update for the Clinician," with special emphasis on substance abuse, advances in neuropsychiatry, and use of transcranial magnetic stimulation in psychiatry. The Young Investigators' Oral/Slide Sessions will begin at 1:00 p.m. on Monday afternoon, followed by a Young Investigators' Poster Session beginning at 3:00 p.m.

The New Research Oral/Slide Sessions will be held Tuesday through Thursday, from 9:00 a.m.-10:30 a.m. Sessions will focus on psychopharmacology and mood disorders (Tuesday); health services; psychopharmacology; and anxiety (Wednesday); psychopharmacology; mood disorders; brain imaging; psychoimmunology; and sexual abuse (Thursday). Poster Sessions will be held Tuesday and Wednesday from 12 noon-2:00 p.m. and 3:00 p.m.-5:00 p.m. and on Thursday from 12 noon-2:00 p.m. These sessions will be devoted to mood; pmdd; personality and eating disorders; psychoimmunology; behavior/cognitive and somatic therapies; psychotherapy and pharmacotherapy; suicide; epidemiology; research issues; AIDS; geriatric; biological, addiction, and cross-cultural and minority psychiatry; cognitive sexual and gender disorders; brain imaging; genetics; neurobiology; neuropsychiatry; and violence (Tuesday); schizophrenia; child and adolescent psychiatry; diagnostic issues; ethics; forensic; psychiatric education; psychiatric rehabilitation; treatment techniques and outcome studies; health services; and anxiety (Wednesday); psychopharmacology (Thursday).

The 48 oral/slide papers (including 12 Young Investigators) and 696 poster presentations (including 189 Young Investigators) are a diverse and, we believe, a representative sampling of that which is new and significant in psychiatric research. We hope that you will find them informative and provocative.

We are highlighting "health services posters" being displayed by the Young Investigators, and all health services posters will be displayed during the Wednesday Poster Session from 3:00 p.m.-5:00 p.m.

Sincerely,

Andrew Skodol

Andrew E. Skodol, II M.D.
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New Research Subcommittee of the
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The following presenters have indicated a significant financial interest or other affiliation with a commercial supporter of the session and/or with the manufacturer(s) of a commercial product(s) and/or provider of commercial service(s). The presenter's name, the manufacturer's name, and the page number(s) the presenter appears on in this *New Research Program & Abstracts Book* are listed below:

Presenter	Manufacturer(s)	Final Program #
Addington, Donald E.	U.S. Pharmaceuticals, Pfizer Inc; Eli Lilly and Company; Zeneca Pharmaceuticals; Janssen Pharmaceutica and Research Foundation; Abbott Laboratories	NR545
Aguiar, Loren M.	Wyeth-Ayerst Laboratories *(employer)*	NR215, NR216, NR643
Albertini, Ralph S.	Solvay Pharmaceuticals, Inc.; Glaxo Wellcome Inc.	NR601
Allard, Stephane	Lorex Pharmaceuticals	NR374
Allison, David B.	Allegheny University; American Psychological Association; American Society for Parentaral and Entreal Nutrition; Amylin; Amgen; Autogen; Bayer; BioAnalogics; Bristol-Myers Squibb; Campbell Soup Company; Celgene; Centers for Disease Control and Prevention; Ciba Geigy Corporation, Pharmaceuticals Division; Coca-Cola; Corning HTA/ Covance; The Cortland Group; Decision Resources; Engelwood Hospital & Medical Center; Ergo Science; Federal Bureau of Prisons; Federation of American Societies of Experimental Biology; Food and Drug Administration; Gemini; Gene/Networks; Genentech; Genetics Institute; Glaxo Wellcome Inc.; Henry A. Murray Research Center at Radcliffe College; Hershey; Hoffman-LaRoche; International Food Information Council; International Life Sciences Institute; Interneuron; Isotech; Jenny Craig; Kelloggs; Knoll; Kraft; Life Measurement Instruments; Lilly Research Laboratories, a division of Eli Lilly and Company; M&M Mars; Medeva; Merck & Co.; Millennium Pharmaceuticals; Monsanto; Nabisco; National Institutes of Health; National Science Foundation; Neurogen; New England Deaconess Medical Center; North American Association for the Study of Obesity; North Atlantic Treaty Organization; Original Marketing, Inc.; Pepsi-Cola; U.S. Pharmaceuticals, Pfizer Inc; Research Testing Laboratories/Slim America; Schering-Plough; Sequana; Servier Amerique; SlimFast Foods Company; SuperGen, Inc.; Tanita; Terrapin Technologies; United Soybean Board; University of Colorado; University of Pennsylvania; VimRx Pharmaceuticals; Weight Control Digest; Weight Watchers International; Wyeth-Ayerst Laboratories; Zeneca Pharmaceuticals	NR497
Alpert, Jonathan E.	Eli Lilly and Company	NR238
Altman, Edward G.	Glaxo Wellcome Inc.	NR476
Arato, Mihaly	U.S. Pharmaceuticals, Pfizer Inc	NR464
Attia, Evelyn	Eli Lilly and Company	NR438
Balon, Richard	Bristol-Myers Squibb; Glaxo Wellcome Inc.; U.S. Pharmaceuticals, Pfizer Inc; Wyeth-Ayerst Laboratories; Organon Inc.	NR660
Blier, Pierre	SmithKline Beecham Pharmaceuticals; Bristol-Myers Squibb; Wyeth-Ayerst Laboratories	NR715
Bouchard, Roch H.	Janssen Pharmaceutica and Research Foundation	NR420

Presenter	Manufacturer(s)	Final Program #
Bowden, Charles L.	Abbott Laboratories; Glaxo Wellcome Inc.; SmithKline Beecham Pharmaceuticals; Solvay Pharmaceuticals, Inc.; Merck & Co.; U.S. Pharmaceuticals, Pfizer Inc; Lilly Research Laboratories, a division of Eli Lilly and Company; Wyeth-Ayerst Laboratories; Parke-Davis, Division of Warner-Lambert Company; National Institute of Mental Health	NR654, NR741
Brecher, Martin B.	Janssen Pharmaceutica and Research Foundation	NR342
Brook, Schlomo	U.S. Pharmaceuticals, Pfizer Inc	NR506
Burt, Tal	Redtop Company, L.L.C.	NR23
Calabrese, Joseph R.	Abbott Laboratories; Merck & Co.; Glaxo Wellcome Inc.; Lilly Research Laboratories, a division of Eli Lilly and Company; Parke-Davis, Division of Warner-Lambert Company; SmithKline Beecham Pharmaceuticals; Wyeth-Ayerst Laboratories	NR202
Calhoun, Joshua W.	Janssen Pharmaceutica and Research Foundation	NR513
Cantillon, Marc	Zeneca Pharmaceuticals	NR444, NR445
Cassano, Giovanni B.	Bristol-Myers Squibb	NR707
Chappell, Phillip B.	U.S. Pharmaceuticals, Pfizer Inc	NR517
Costa, Alexandru D.	Riverfront Medical Evaluations, Inc.; Halifax; Liberty Mutual; Guardian; Axa; Lombard; State Farm; Economical Mutual; Lumberman's Mutual; Royal; Gore Mutual; Pilot; Citadel; Allstate; Adjusters of Canada; Iacono Brown; Sameis Blouin; Dunn; Amsterdam Peroff; Daniel & Wilson; Hughes Ames; Parouin and Raphael; Thompson, Tooze, McLean, Rollo and Alkin; Cassels, Brock & Blackwell; Sims, Clement, Eastman; Toronto Transit Commission	NR521
Costa, Jerome F.	Bayer	NR351
Costilla, Antonio	Wyeth-Ayerst Laboratories	NR471
Cunningham, Lynn A.	Glaxo Wellcome Inc.	NR222
Dardennes, Roland H.	Eli Lilly and Company (France); Rhone-Poulenc Rorer	NR244
Davis, John M.	Janssen Pharmaceutica and Research Foundation; Eli Lilly and Company; Abbott Laboratories	NR448
De la Gandara, Jesus J.	Pharmacia & Upjohn Company, Inc.; Solvay Pharmaceuticals, Inc.; U.S. Pharmaceuticals, Pfizer Inc; Eli Lilly and Company	NR624, NR659
Delbressine, Leon P.C.	NV Organon Inc. *(employer)*	NR735
Demopulos, Christina M.	Glaxo Wellcome Inc.; Parke-Davis, Division of Warner-Lambert Company; Roche Laboratories, a member of the Roche Group; SmithKline Beecham Pharmaceuticals; Massachusetts General Hospital	NR37, NR38
Dixon, Lisa B.	Zeneca Pharmaceuticals	NR487
Donogahue, John M.	Eli Lilly and Company; Novartis Pharmaceuticals Corporation; Zeneca Pharmaceuticals	NR719
Doraiswamy, P. Murali	U.S. Pharmaceuticals, Pfizer Inc	NR743
Dunn, Rodney	The MEDSTAT Group	NR573, NR662
Edgell, Eric T.	Eli Lilly and Company *(employer)*	NR691
El-Mallakh, Rif S.	Eli Lilly and Company; U.S. Pharmaceuticals, Pfizer Inc	NR223
Emmanuel, Naresh P.	Glaxo Wellcome Inc.	NR302
Engelhart, Luella M.	Janssen Pharmaceutica and Research Foundation *(employer)*	NR577
Entsuah, Richard	Wyeth-Ayerst Laboratories *(employer)*	NR644
Eriksson, Elias	H Lundbeck AB	NR259
Fava, Maurizio	Eli Lilly and Company; SmithKline Beecham Pharmaceuticals; U.S. Pharmaceuticals, Pfizer Inc; Glaxo Wellcome Inc.; Wyeth-Ayerst Laboratories; Roche Laboratories, a member of the Roche Group; Synthelabo Pharmaceuticals; Organon Inc.; Bristol-Myers Squibb; Lorex Pharmaceuticals	NR230, NR407
Findling, Robert L.	Bristol-Myers Squibb; Eli Lilly and Company; U.S. Pharmaceuticals, Pfizer Inc; Wyeth-Ayerst Laboratories; Abbott Laboratories; Solvay Pharmaceuticals, Inc.; Janssen Pharmaceutica and Research Foundation; Zeneca Pharmaceuticals	NR510
Flicker, Charles	Forest Laboratories, Inc. *(employer)*	NR692
Flint, Alastair J.	Forest Laboratories, Inc.	NR327, NR440
Friedhoff, Lawrence T.	Eisai Inc. *(employer)*	NR346
Frye, Mark A.	Abbott Laboratories	NR260, NR664
Ganguli, Rohan	Janssen Pharmaceutica and Research Foundation; Novartis Pharmaceuticals Corporation; Eli Lilly and Company	NR701
Gasquet, Isabelle	Eli Lilly and Company (France)	NR564

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Gauthier, Serge	Eisai Inc.; Pfizer Inc. (Canada)	NR281
Gergel, Ivan P.	SmithKline Beecham Pharmaceuticals	NR718
Ghaemi, S. Nassir	Eli Lilly and Company; Janssen Pharmaceutica and Research Foundation; Parke-Davis, Division of Warner-Lambert Company; Abbott Laboratories	NR57, NR254
Ghanbari, Hossein A.	Nymox Corporation; MGC; MTW	NR347
Goldberg, Joseph F.	Abbott Laboratories; Glaxo Wellcome Inc.	NR63
Goldstein, Jeffrey M.	Zeneca Pharmaceuticals *(employer)*	NR665, NR666
Goodnick, Paul J.	Bristol-Myers Squibb; Glaxo Wellcome Inc.; Janssen Pharmaceutica and Research Foundation; U.S. Pharmaceuticals, Pfizer Inc; Organon Inc.	NR684, NR685
Grilo, Carlos M.	National Institutes of Health; Eli Lilly and Company	NR273, NR274
Gutierrez, Marcelo	Forest Laboratories, Inc. *(employer)*	NR682
Guttmacher, Laurence B.	Solvay Pharmaceuticals, Inc.	NR283
Hakkarainen, Heikki	Forest Laboratories, Inc. *(employer)*	NR681
Hales, Robert E.	Bristol-Myers Squibb	NR591
Hamner, Mark B.	Abbott Laboratories; Janssen Pharmaceutica and Research Foundation; Eli Lilly and Company; Otsuka Pharmaceuticals; Zeneca Pharmaceuticals; U.S. Pharmaceuticals, Pfizer Inc	NR610, NR611
Harvey, Annie	Wyeth-Ayerst Laboratories; U.S. Pharmaceuticals, Pfizer Inc	NR663
Harvey, Philip D.	U.S. Pharmaceuticals, Pfizer Inc; Janssen Pharmaceutica and Research Foundation	NR480
Hays, Lon R.	U.S. Pharmaceuticals, Pfizer Inc; SmithKline Beecham Pharmaceuticals	NR312
Healy, David T.	Pharmacia & Upjohn Company, Inc.	NR213
Helsdingen, Jon T.H.	NV Organon (Netherlands)	NR724
Hoog, Sharon L.	Eli Lilly and Company *(employer)*	NR211, NR623
Hutchins, David S.	PCS Health Systems, Inc.	NR586
Jacobsen, Frederick M.	U.S. Pharmaceuticals, Pfizer Inc; Eli Lilly and Company; Abbott Laboratories; Merck & Co.	NR225
Jeste, Dilip V.	Janssen Pharmaceutica and Research Foundation; Abbott Laboratories; Zeneca Pharmaceuticals; Eli Lilly and Company; Otsuka Pharmaceuticals	NR212
Johnstone, Bryan M.	Eli Lilly and Company *(employer)*	NR541
Katona, Cornelius L.	Eli Lilly and Company; SmithKline Beecham Pharmaceuticals; Pharmacia & Upjohn Company, Inc.; Wyeth-Ayerst Laboratories; Lundbeck; Novartis Pharmaceuticals Corporation; U.S. Pharmaceuticals, Pfizer Inc; Roche Laboratories, a member of the Roche Group	NR337
Katz, Ira R.	Eisai Inc.; U.S. Pharmaceuticals, Pfizer Inc; Zeneca Pharmaceuticals; Janssen Pharmaceutica and Research Foundation; Abbott Laboratories	NR330
Katzelnick, David J.	Ciba Geigy Corporation, Pharmaceuticals Division; Solvay Pharmaceuticals, Inc.; Glaxo Wellcome Inc.; Abbott Laboratories; Astra/Merck Group, Division of Merck & Co.; U.S. Pharmaceuticals, Pfizer Inc; Eli Lilly and Company; SmithKline Beecham Pharmaceuticals; Watson Laboratories, Inc.; Pharmacia & Upjohn Company, Inc.; Johnson and Johnson	NR205, NR630
Kavoussi, Richard J.	Glaxo Wellcome Inc.; U.S. Pharmaceuticals, Pfizer Inc	NR231
Keitner, Gabor I.	Bristol-Myers Squibb	NR568
Keller, Martin B.	U.S. Pharmaceuticals, Pfizer Inc; Bristol-Myers Squibb; Forest Laboratories, Inc.; Wyeth-Ayerst Laboratories; SmithKline Beecham Pharmaceuticals; Pharmacia & Upjohn Company, Inc.; Eli Lilly and Company; Organon Inc.	NR206
Kelsey, Jeffrey E.	Abbott Laboratories; Bristol-Myers Squibb; Eli Lilly and Company; U.S. Pharmaceuticals, Pfizer Inc; Pharmacia & Upjohn Company, Inc.; SmithKline Beecham Pharmaceuticals; Wyeth-Ayerst Laboratories; Solvay Pharmaceuticals, Inc.	NR632
Kessler, Ronald C.	Bristol-Myers Squibb	NR596
Kettl, Paul A.	U.S. Pharmaceuticals, Pfizer Inc; Wyeth-Ayerst Laboratories; Abbott Laboratories; Manor Health Care	NR561
Kinon, Bruce	Eli Lilly and Company *(employer)*	NR449, NR739
Kopala, Lili C.	Janssen Pharmaceutica and Research Foundation	NR484
Kremer, Charlotte	Organon Inc. *(employer)*	NR675
Lemmens, Philippe	Janssen Pharmaceutica and Research Foundation	NR343, NR493
Loo, Henri	International Institute of Research	NR537
Luchins, Daniel J.	Janssen Pharmaceutica and Research Foundation; Eli Lilly and Company	NR590
Mackle, Mary	Forest Laboratories, Inc. *(employer)*	NR693
Maguire, Gerald A.	Janssen Pharmaceutica and Research Foundation	NR519, NR546

Presenter	Manufacturer(s)	Final Program #
Mahmoud, Ramy A.	Janssen Pharmaceutica and Research Foundation *(employer)*	NR578
Malla, Ashok K.	Janssen Pharmaceutica and Research Foundation (Canada)	NR483
Markovitz, Paul J.	Wyeth-Ayerst Laboratories	NR727
Masand, Prakash S.	Eli Lilly and Company; Janssen Pharmaceutica and Research Foundation; U.S. Pharmaceuticals, Pfizer Inc; SmithKline Beecham Pharmaceuticals; Solvay Pharmaceuticals, Inc.; Pharmacia & Upjohn Company, Inc.; Searle; Wyeth-Ayerst Laboratories; Bristol-Myers Squibb; Abbott Laboratories; Zeneca Pharmaceuticals; Novartis Pharmaceuticals Corporation; Glaxo Wellcome Inc.	NR348, NR349
McElroy, Susan L.	Abbott Laboratories; U.S. Pharmaceuticals, Pfizer Inc; Pharmacia & Upjohn Company, Inc.; Glaxo Wellcome Inc.; Alza Pharmaceuticals; Wyeth-Ayerst Laboratories; Parke-Davis, Division of Warner-Lambert Company; Janssen Pharmaceutica and Research Foundation; Eli Lilly and Company; SmithKline Beecham Pharmaceuticals; Solvay Pharmaceuticals, Inc.	NR424
McGurk, Susan R.	U.S. Pharmaceuticals, Pfizer Inc; Janssen Pharmaceutica and Research Foundation; Eli Lilly and Company	NR355
Miceli, Jeffrey	U.S. Pharmaceuticals, Pfizer Inc *(employer)*	NR504
Michelson, David	Eli Lilly and Company *(employer)*	NR649
Montoya, Francisco	Organon Inc. (Mexicana)	NR661
Moriarty, Patrick J.	Janssen Pharmaceutica and Research Foundation	NR706
Morphy, Murray A.	Abbott Laboratories; Eli Lilly and Company	NR580
Mundo, Emanuela	Solvay Pharmaceuticals, Inc.	NR621
Nasrallah, Henry A.	Abbott Laboratories; Janssen Pharmaceutica and Research Foundation; Eli Lilly and Company; U.S. Pharmaceuticals, Pfizer Inc; Zeneca Pharmaceuticals	NR592
Newhouse, Paul A.	Japan Tobacco Inc.	NR356
Nicholas, Linda M.	Glaxo Wellcome Inc.; U.S. Pharmaceuticals, Pfizer Inc	NR363
Nierenberg, Andrew A.	Eli Lilly and Company; U.S. Pharmaceuticals, Pfizer Inc; Wyeth-Ayerst Laboratories; Organon Inc.; Bristol-Myers Squibb; Sanofi	NR236, NR237, NR651
Ninan, Philip T.	U.S. Pharmaceuticals, Pfizer Inc; SmithKline Beecham Pharmaceuticals; Eli Lilly and Company; Organon Inc.; Wyeth-Ayerst Laboratories; Solvay Pharmaceuticals, Inc.; Bristol-Myers Squibb	NR258
Ontiveros, Alfonso	Roche Laboratories, a member of the Roche Group; Organon Inc. (Mexicana); Pfizer Inc; SmithKline Beecham Pharmaceuticals; Pharmacia & Upjohn Company, Inc.; Wyeth-Ayerst Laboratories; Eli Lilly and Company (Mexico)	NR672
Papp, Laszlo A.	Wyeth-Ayerst Laboratories; Bristol-Myers Squibb; SmithKline Beecham Pharmaceuticals; Interneuron; U.S. Pharmaceuticals, Pfizer Inc; Eli Lilly and Company	NR284, NR606
Pattenier, Annemiek	Organon Inc. *(employer)*	NR709
Pearlstein, Teri B.	U.S. Pharmaceuticals, Pfizer Inc	NR650
Petitjean, Francois	Eli Lilly and Company	NR319
Phillips, Katharine A.	Solvay Pharmaceuticals, Inc.; Eli Lilly and Company; Gate Pharmaceutical; Wyeth-Ayerst Laboratories; Glaxo Wellcome Inc.; Pharmacia & Upjohn Company, Inc.	NR602, NR603
Pitts, Cornelius D.	SmithKline Beecham Pharmaceuticals *(employer)*	NR696
Plewes II, John M.	Eli Lilly and Company *(employer)*	NR703, NR704, NR705
Pollack, Mark H.	Bristol-Myers Squibb; Glaxo Wellcome Inc.; Eli Lilly and Company; U.S. Pharmaceuticals, Pfizer Inc; Roche Laboratories, a member of the Roche Group; SmithKline Beecham Pharmaceuticals; Solvay Pharmaceuticals, Inc.; Wyeth-Ayerst Laboratories	NR605
Post, Robert M.	Glaxo Wellcome Inc.; Abbott Laboratories	NR218, NR726
Procyshyn, Ric M.	Janssen Pharmaceutica and Research Foundation	NR544
Rabins, Peter V.	Novartis Pharmaceuticals Corporation	NR550
Rapaport, Mark H.	U.S. Pharmaceuticals, Pfizer Inc; Solvay Pharmaceuticals, Inc.	NR303, NR637
Reeves, Karen R.	U.S. Pharmaceuticals, Pfizer Inc *(employer)*	NR494, NR495
Reichman, William E.	U.S. Pharmaceuticals, Pfizer Inc	NR402, NR451
Reinstein, Michael J.	Eli Lilly and Company; Novartis Pharmaceuticals Corporation; Johnson and Johnson	NR699, NR700
Rizzo, Fortunato	Wyeth-Ayerst Laboratories *(employer)*	NR647
Romano, Steven J.	Eli Lilly and Company *(employer)*	NR648

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Rothschild, Anthony J.	Eli Lilly and Company; U.S. Pharmaceuticals, Pfizer Inc; Zeneca Pharmaceuticals; Otsuka Pharmaceuticals; Glaxo Wellcome Inc.; Pharmacia & Upjohn Company, Inc.; Bristol-Myers Squibb; Abbott Laboratories; SmithKline Beecham Pharmaceuticals	NR679, NR680
Russell, James M.	U.S. Pharmaceuticals, Pfizer Inc	NR585
Sajatovic, Martha	Eli Lilly and Company	NR331, NR667
Salomon, Ronald M.	U.S. Pharmaceuticals, Pfizer Inc	NR365
Sanger, Todd	Eli Lilly and Company *(employer)*	NR729
Sayler, Mary	Eli Lilly and Company *(employer)*	NR714
Schleifer, Steven J.	Pharmacia & Upjohn Company, Inc.	NR280
Schneider, Lon S.	Bayer; Eisai Inc.; U.S. Pharmaceuticals, Pfizer Inc; Novartis Pharmaceuticals Corporation; Parke-Davis, Division of Warner-Lambert Company; Somerset; SmithKline Beecham Pharmaceuticals; American Association of Geriatric Psychiatrists; Johnson and Johnson; Wyeth-Ayerst Laboratories; Eli Lilly and Company; Abbott Laboratories	NR426
Schneier, Franklin R.	Eli Lilly and Company	NR628
Schulz, S. Charles	Abbott Laboratories; Eli Lilly and Company; U.S. Pharmaceuticals, Pfizer Inc; Zeneca Pharmaceuticals; Janssen Pharmaceutica and Research Foundation	NR270
Seay, Sheila M.	Organon Inc.	NR299
Shapira, Nathan A.	R.W. Johnson Pharmaceutical Research Institute	NR157
Sharma, Tonmoy	Eli Lilly and Company Ltd. U.K.; Janssen Pharmaceutica and Research Foundation; Zeneca Pharmaceuticals U.K.	NR158, NR159, NR160
Smoller, Jordan W.	U.S. Pharmaceuticals, Pfizer Inc	NR381, NR547
Sprouse, Jeffrey S.	U.S. Pharmaceuticals, Pfizer Inc *(employer)*	NR496
Stein, Dan J.	Lundbeck	NR520
Stoppe, Alberto	Pfizer Inc (Brazil)	NR165
Stowe, Zachary N.	Eli Lilly and Company; U.S. Pharmaceuticals, Pfizer Inc; SmithKline Beecham Pharmaceuticals; Wyeth-Ayerst Laboratories	NR394, NR689
Strakowski, Stephen M.	Zeneca Pharmaceuticals; Janssen Pharmaceutica and Research Foundation; Otsuka Pharmaceuticals; Hoechst Marion Rousell; Abbott Laboratories; U.S. Pharmaceuticals, Pfizer Inc	NR655
Sullivan, Erin M.	Wyeth-Ayerst Laboratories	NR574
Swift, Rachel H.	U.S. Pharmaceuticals, Pfizer Inc *(employer)*	NR465, NR466
Tanghoj, Per	Lundbeck *(employer)*	NR740
Tanielian, Terri L.	American Psychiatric Association *(employer)*	NR432
Teicher, Martin H.	CirceSoft Inc.	NR286
Thase, Michael E.	Bristol-Myers Squibb; Eli Lilly and Company; Organon Inc.; U.S. Pharmaceuticals, Pfizer Inc; Wyeth-Ayerst Laboratories; Glaxo Wellcome Inc.; Cerenex; Lipha Pharmaceuticals, Inc.; SmithKline Beecham Pharmaceuticals; Solvay Pharmaceuticals, Inc.	NR328
Tohen, Mauricio	Abbott Laboratories; Glaxo Wellcome Inc.; Parke-Davis, Division of Warner-Lambert Company; Eli Lilly and Company *(employer)*	NR570, NR571
Tran, Pierre V.	Eli Lilly and Company *(employer)*	NR452, NR453
Trivedi, Madhukar H.	Solvay Pharmaceuticals, Inc.; Bristol-Myers Squibb; SmithKline Beecham Pharmaceuticals; Eli Lilly and Company; Wyeth-Ayerst Laboratories	NR697
Tune, Larry E.	Eisai Inc.	NR345
Tunis, Sandra L.	Eli Lilly and Company *(employer)*	NR477, NR542
Unutzer, Jurgen	Abbott Laboratories	NR105
Van Den Berg, John	Solvay Pharmaceuticals, Inc. *(employer)*	NR233, NR234
Versiani, Marcio	U.S. Pharmaceuticals, Pfizer Inc; Pharmacia & Upjohn Company, Inc.	NR676, NR677, NR678
Waslick, Bruce D.	Eli Lilly and Company	NR512, NR722
Weihs, Karen L.	Glaxo Wellcome Inc.; SmithKline Beecham Pharmaceuticals	NR239
Weiss, Kenneth J.	Bristol-Myers Squibb	NR708
White, Leonard	Janssen Pharmaceutica and Research Foundation	NR450
Whitney, Diane K.	Bristol-Myers Squibb; Abbott Laboratories	NR539
Wicker, Pierre	U.S. Pharmaceuticals, Pfizer Inc *(employer)*	NR304
Wilcox, Charles S.	Bristol-Myers Squibb	NR255
Wilner, Keith D.	U.S. Pharmaceuticals, Pfizer Inc *(employer)*	NR505
Wirshing, Donna A.	Eli Lilly and Company; Janssen Pharmaceutica and Research Foundation; U.S. Pharmaceuticals, Pfizer Inc; Abbott Laboratories; Otsuka Pharmaceuticals	NR540
Wong, Eric H.F.	Pharmacia & Upjohn Company, Inc. *(employer)*	NR336

Presenter	Manufacturer(s)	Final Program #
Young, L. Trevor	Abbott Laboratories; Glaxo Wellcome Inc.; Janssen Pharmaceutica and Research Foundation; SmithKline Beecham Pharmaceuticals	NR219, NR220
Yudofsky, Stuart C.	Bristol-Myers Squibb; Diamond Health Care; U.S. Pharmaceuticals, Pfizer Inc; Eli Lilly and Company	NR395
Zajecka, John M.	Abbott Laboratories; Boehringer Ingelheim; Bristol-Myers Squibb; Eli Lilly and Company; Glaxo Wellcome Inc.; Organon Inc.; Parke-Davis, Division of Warner-Lambert Company; U.S. Pharmaceuticals, Pfizer Inc; Wyeth-Ayerst Laboratories; Zeneca Pharmaceuticals; SmithKline Beecham Pharmaceuticals; Pharmacia & Upjohn Company, Inc.	NR716
Zarate, Jr., Carlos A.	Abbott Laboratories	NR733
Zisook, Sidney	Glaxo Wellcome Inc.; SmithKline Beecham Pharmaceuticals; Bristol-Myers Squibb; U.S. Pharmaceuticals, Pfizer Inc; Wyeth-Ayerst Laboratories; Eli Lilly and Company	NR599
Zivkov, Milana V.	NV Organon Inc. *(employer)*	NR668

Voting members of the Board of Trustees, Assembly officers, and members of the Scientific Program Committee cannot receive honoraria or travel reimbursement for participation in Industry-Supported Symposia. In accordance with this policy, the following members are participating in Industry-Supported Symposia and will not receive any compensation:

Presenter	Final Program #
Balon, Richard	NR660
Bowden, Charles L.	NR654, NR741

The following presenters on this year's scientific program failed to return the APA disclosure form. The presenter's name and the page number(s) the presenter appears on in this New Research Program & Abstracts Book are listed below:

Balis, Theodora G. NR185
Chastang, Francoise ... NR290, NR291
Lemoine, Patrick NR723
Lenzi, Alessandro NR713
Petersen, H.E. Hopfner NR642
Schweizer, Edward E. NR229
Striegel-Moore, Ruth H. NR277

NEW RESEARCH

Monday, June 1, 1998, 9:00 a.m.-10:30 a.m.

New Research 1 – Poster Session – Room 106, Lower Level, Convention Centre

YOUNG INVESTIGATORS' POSTER SESSION

Moderator: Andrew E. Skodol II, M.D.

NR1 Risperidone in Rapid-Cycling Bipolar Disorder
Vivian I. Acevedo, M.D., Paul J. Goodnick, M.D., Blanche Freund, Ph.D.

NR2 Psychotherapy for HIV-Infected Patients: A Literature Review
Evangelia L. Amirali, M.D., J. Christopher Perry, M.D.

NR3 Personality Disorders in Monolingual Hispanics
Luis M. Anez, Ph.D., Carlos M. Grilo, Ph.D., Charles A. Sanislow, Ph.D., Thomas H. McGlashan, M.D.

*NR4 Pathways to Care for Patients with First-Episode Psychosis in Mexico
Rogelio Apiquian, M.D., Francisco Paez, M.D., Cristina Loyzaga, M.D., Humberto Nicolini, Ph.D., Ana Fresan, M.D., Gabriela Vallejo, M.D., Ma. Elena Medina-Mora, Ph.D.

NR5 Randomized Controlled Trials Presented at APA Annual Meetings of 1968, 1978, 1998: A Cohort Study
Noorulain Aqeel, M.D., Nuzhat Sultana, M.D., Clive E. Adams, M.B., Irshad Ahmed, M.D.

*NR6 Common Mental Disorders and Socioeconomic Inequalities in Santiago, Chile: Preliminary Results
Ricardo Araya, M.D., Graciela Rojas, Rosemarie Fritsch, Julia Acuna

NR7 Postconcussional Disorder: Clarifying the Diagnosis, Selecting Treatments and the Role of Valproic Acid: Three Cases
David B. Arciniegas, M.D., Thomas P. Beresford, M.D., Martin L. Reite, M.D.

NR8 Ego Defense Mechanisms in Relation to Medical Compliance: A Pilot Study
David B. Arciniegas, M.D., Jeanette Geesey, Thomas P. Beresford, M.D.

NR9 A Population-Based Study of the Relation Between Mental Illness and Accident Involvement
Abbas Azadian, M.D., John S. Arrowood, Ph.D.,Anne E. Rhodes, M.Sc., Paula N. Goering, Ph.D.

NR10 Assessment of OCD
Carrie Beckstein, M.D., Marjan Ghahramanlou, M.A., Juliana R. Lachenmeyer, Ph.D., Sharon DiGiacopo, M.A., Regina Uccello, B.A., Andrew Shack, M.A.

**** Indicates Health Services Posters***

*NR11 Treatment Utilization by Patients with Personality Disorders
Donna S. Bender, Ph.D., Regina T. Dolan, Ph.D., Robert Stout, Ph.D., Danika L. Altman, Ph.D., Paul J. Erickson, Jr., M.D., Andrew E. Skodol II, M.D.

NR12 Prolactin Response to Risperidone in BPD Patients
Sally A. Berry, M.D., Kelly L. Camlin, L.S.W., S. Charles Schulz, M.D.

NR13 Hospital Anxiety and Depression Scale or Beck Depression Inventory: Which Is the Best in Detecting Depression in HIV-Infected Patients?
Jordi Blanch, M.D., Astrid Morer, M.D., Miquel Gasol, M.D., Esteve Cirera,Manuel Valdes

NR14 A Comparison of Neuropsychological Deficits in Chronic Cocaine Abusers Versus Controls
Patrick Bordnick, Ph.D., Michelle Shenberger, M.Ed., Lynn Ratkos, R.N., Leanne Vogelson, B.S., David Huang, B.S., Angela Kimble, B.S., Bankole Johnson, M.D.

NR15 Dose-Dependent Noradrenergic and Serotonergic Properties of Venlafaxine in Animal Models Indicative of Antidepressant Activity
Michel S. Bourin, M.D., J. Paul Redrobe, M.Sc., Glen B. Baker, Ph.D.

NR16 Sexual Side Effects of Mirtazapine in Depression
Beth K. Boyarsky, M.D., Waheedul Haque, M.D., Mark Rouleau, M.Ed., Robert M.A. Hirschfeld, M.D.

NR17 Recent Trends in Crack Cocaine and Heroin Use: Implications for Clinical Practice
Thomas M. Brady, M.S., Joseph A. Flaherty, M.D., Susan Adams, Ph.D., Sonja Nelson, M.S., Norman S. Miller, M.D.

NR18 Acupuncture and Serotonin in Neuropathy: Interaction with Nefazodone
Karen Breakstone, M.D., Paul J. Goodnick, M.D., Xue-Lan Wen, M.D.,Adarsh Kumar, Ph.D.

NR19 Nefazodone in Diabetic Neuropathy
Karen Breakstone, M.D., Paul J. Goodnick, M.D., Adarsh Kumar, Ph.D.

NR20 Acetylmethadol: An Alternative for Problem Methadone Patients
Mark Brudniak, M.D., John A. Renner, Jr., M.D., Brian F. Sands, M.D.

NR21 Dissociative Identity Disorder: Axis I and II Comorbidity
Gary S. Bruss, Ph.D., Alan M. Gruenberg, M.D., Reed Goldstein, Ph.D., Howard S. Sudak, M.D., Jacques P. Barber, Ph.D.

NR22 Drug Interactions of Clozapine Metabolism by Liver Microsomes
Dr. Hot Bun, Dr. Claude Aubert, Dr. Jacques Catalin

NR23 Donepezil in Treatment-Refractory Mania
Tal Burt, M.D., Gary S. Sachs, M.D., Christina M. Demopulos, M.D., Amy E. Shriver, B.S., Carolyn L. Dufault, B.A.

NR24 Attitudes Toward Mental Illness in Dominica
Christopher P. Camilleri, M.D., David Sharma, M.D., Robert Kohn, M.D., Itzhak Levav, M.D.

NR25 Personality Disorder in Panic Attack
Adolfo Canovi, M.D., Viviana Horigian, M.D., Ricardo Perez Rivera, M.D., Adrian Trajterman, M.D., Alejandro Begue, M.D., Cecilia De Simone, M.D., Gustavo Rozadilla, M.D.

NR26 Requests for Protective Custody of the Mentally Ill: The Family's Role in Rapid Intervention and the Prevention of Harm
David W. Carrington, M.D., Jose M. Pena, M.D., Robert R. Franklin, M.D., Stephanie Posner, Ph.D., John W. Thompson, Jr., M.D., Valerie Eckert

NR27 Gabapentin in Mental Retardation with Bipolar Disorders
Mauro Giovanni Carta, M.D., Carolina Hardoy, M.D., Julieta Hardoy, M.D., Bernardo Carpiniello, M.D., Pierluigi Cabras, M.D.

NR28 Tattoos and Body Piercing and Their Implications in Psychiatric Disorders
Salvador Ceniceros, M.D., George R. Brown, M.D., Conrad M. Swartz, M.D.

NR29 Psychiatric Morbidity in Children of Bipolar Parents
Kiki D. Chang, M.D., Terence A. Ketter, M.D., Hans Steiner, M.D.

NR30 REM Density and Antidepressant Response to Partial Sleep Deprivation: Preliminary Data
Camellia P. Clark, M.D., Renee M. Dupont, M.D., Shahrokh K. Golshan, Ph.D., J. Christian Gillin, M.D.

NR31 Effect of Haloperidol on Intracellular Signaling System Coupled to Alfa1-Adrenergic Receptor in Rat Frontal Cortex
Graciela A. Cremaschi, Ph.D., Tania Borda, Psy., Ana Maria Genaro, Ph.D.

NR32 Cholinergic Muscarinic Coupled Intracellular Signals in Cerebral Frontal Cortex from Hypoxic Mice
Graciela A. Cremaschi, Ph.D., Tania Borda, Psy., Ana Maria Genaro, Ph.D.

NR33 Family and Coping Skills Therapy: A Pilot Study
John Curry, Ph.D., Shannon R. Barnett, M.D.

NR34 The Continuing Education Needs of Community Psychiatrists
Sarah B. Danial, M.D., Ivan L. Silver, M.D., Carla Zucchero-Sarracini, Richard G. Tiberius, Ph.D.

NR35 Ketamine Anesthesia Augments ECT Seizure Duration
Margaret D. Dean, M.D., Andrew D. Krystal, M.D., Richard D. Weiner, M.D., Virginia Lindahl, B.A

NR36 Comorbidity of Medical Conditions in Schizophrenia
Janine C. Delahanty, M.A., Lisa B. Dixon, M.D., Leticia T. Postrado, Ph.D.

NR37 Effects of Chronic Choline and Lithium Administration in Rapid-Cycling Bipolar Disorder
Christina M. Demopulos, M.D., Constance M. Moore, Ph.D.,Suzanne Babb, M.S.,Perry F. Renshaw, M.D., Amy E. Shriver, B.S., Gary S. Sachs, M.D.

NR38 Chronic Lithium Administration and Renal Function in Bipolar Patients
Christina M. Demopulos, M.D., Constance Dufault, B.A., Gary S. Sachs, M.D.

NR39 Oxidative Stress and Outcome of Psychosis
Judith K. Denton, M.D., Elizabeth E. Correnti, M.D., Russell E. Scheffer, M.D., Sahebarao P. Mahadik, Ph.D., Lawrence M. Correnti, M.D.

NR40 Cortical Gray, White and CFS Volumes in Schizotypal Personality Disorder
Chandlee C. Dickey, M.D., Martha E. Shenton, Ph.D., Tanya Kisler, B.S., Martina M. Voglmaier, Ph.D., Iris A. Fischer, B.S., Margaret Niznikiewicz, Ph.D., Robert W. McCarley, M.D.

NR41 Plasma Concentrations of Clozapine and Metabolites in Patients with Schizophrenia
Dr. Beatrice Disdier, Dr. Jean Farisse, Dr. Christophe Lancon, Dr. Hot Bun, Dr. Pierre Marie Llorca, Dr. Martine Cornet

NR42 Cognitive Deficits in Liver Transplant Patients
Saila B. Donepudi, M.D., James M. Hill, Ph.D., Baburao Koneru, M.D., Mario Finkelstein, M.D., Adrian Fischer, M.D., Nicole Andrisano, M.A., Jacqueline A. Bartlett, M.D.

NR43 Alexithymia and Suicide Risk in Panic Disorder Patients
Pinhas Nedim Dannon, M.D., Iulian Iancu, M.D., Schumuel Hirschmann, Leon J. Grunhaus, M.D.

NR44 Repetitive Transcranial Magnetic Stimulation Is As Effective As ECT in the Treatment of MDD
Pinhas Nedim Dannon, M.D., Leon J. Grunhaus, M.D., Schaul Schreiber, M.D., Ornah T. Dolberg, M.D.

NR45 Neurocognitive Correlates of Anxiety Disorders in Children
Paz Toren, M.D., Leo Wolmer, M.A., Sofia Eldar, M.D., Sharon Koren, B.A., Ronit Weizman, M.D., Nathaniel Laor, M.D.

NR46 Fluvoxamine and Enuresis in Children and Adolescents
Paz Toren, M.D., Sofia Eldar, M.D., Nathaniel Laor, M.D., Leo Wolmer, M.A., Eliahu Samuel, M.D., Ronit Weizman, M.D.

NR47 CT Scan Screening in a Geriatric Psychiatry Unit
Elaine J. Douglas, M.D., Paul A. Kettl, M.D.

NR48 Bupropion Versus Desipramine for Treatment of Bipolar Depression
Carolyn L. Dufault, B.A., Gary S. Sachs, M.D., Christina M. Demopulos, M.D., Claudia F. Baldassano, M.D., Beny Lafer, M.D.

NR49 Beck Depression Inventory and Regional Cerebral Metabolism
Robert T. Dunn, M.D., David Luckenbaugh, M.A., Mark A. Frye, M.D., Timothy A. Kimbrell, M.D., Elizabeth A. Osuch, M.D., Andrew M. Speer, M.D., Robert M. Post, M.D.

NR50 Buprenorphine and Methadone: A Comparison Trial
Harald Eder, Gabriele Fischer, M.D., Wolfgang Gombas, M.D., Dr. Reinhold Jagsch, M.A.G., Christine Nagy, M.D., Claudia Lennkh, M.D., Prof. Siegfrid Kasper

*NR51 Psychiatric Geriatric Caregivers: Factors Contributing to Burden
Joanne Fenton, M.D., Lisa B. Dixon, M.D., Jill A. Rachbeisel, M.D.

NR52 Continuation and Maintenance ECT in Clinical Practice: Efficacy and Cognitive Safety
P.H. Fossati, M.D., Gilles Amar, M.D., J.F. Allilaire, Ph.D.

NR53 Extreme Childhood Shyness in Agoraphobic Adults
Steffany J. Fredman, B.A., Dina R. Hirshfeld, Ph.D., Jerrold F. Rosenbaum, M.D.

NR54 Lack of Autonomic and Cognitive Changes with Repetitive Transcranial Magnetic Stimulation
Andrew M. Speer, M.D., Lori A. Stallings, Ziad H. Nahas, M.D., Jeff Loberbaum, M.D., Charlotte C. Teneback, Monica Molloy, R.N., S. Craig Risch, M.D., Mark S. George, M.D.

NR55 Differential Changes in rCBF with One Versus 20 Hz rTMS in Depressed Patients
Andrew M. Speer, M.D., Timothy A. Kimbrell, M.D., Robert T. Dunn, M.D., Elizabeth A. Osuch, M.D., Mark A. Frye, M.D., Mark W. Willis, Eric M. Wassermann, M.D.

*NR56 Alcohol Dependence and Hospitalization in Schizophrenia
Lori B. Gerding, M.D., Lawrence A. Labbate, M.D., Michael O. Measom, M.D., George W. Arana, M.D., Alberto B. Santos, Jr., M.D.

NR57 Olanzapine Treatment of Mood Disorders
S. Nassir Ghaemi, M.D., Erica R. Lee-Cherry, B.A., Jacob J. Katzow, M.D., Frederick K. Goodwin, M.D.

NR58 Self-Reported Levels of Distress in OCD Patients
Marjan Ghahramanlou, M.A., Carrie Beckstein, M.D., Juliana R. Lachenmeyer, Ph.D., Regina Uccello, B.A., Sharon DiGiacopo, M.A., Andrew Shack, M.A.

NR59 Patient Satisfaction with ECT
Jesse A. Goodman, M.D., Lois E. Krahn, M.D., Glenn E. Smith, Ph.D., Teresa A. Rummans, M.D., Thomas S. Pilegge, R.N.

NR60 Blood Pressure and Heart Rate Response to Stress in Psychotic Patients
Karen A. Graham, M.D., Diana O. Perkins, M.D., Joanna J. Regan, B.A., Sherry D. Broadwell, M.A., Kathleen C. Light, Ph.D.

NR61 WITHDRAWN

NR62 SSRIs Versus Other Antidepressants for Melancholia
Gina M. Guadagno, M.D., Conrad M. Swartz, M.D.

NR63 Retrospective Life Charting: Reliability in Affective Disorders
Joseph F. Goldberg, M.D., Joy Whiteside, B.A., Wilfred Van Gorp, Ph.D., James H. Kocsis, M.D., Andrew C. Leon, Ph.D.

NR64 A Clinical Monitoring Format for Mood Disorders
Constance Guille, B.A., Gary S. Sachs, M.D., Amy E. Shriver, B.S., Christina Dempolus, M.D.

NR65 Seasonal Variation of Mood Symptoms in an Arctic Inuit Community
John M. Haggarty, M.D., Harold Merskey, M.D., Zack Z. Cernovsky, Ph.D., Patricia Kermeen, R.N.

NR66 Impact of Abuse History on Suicidality and Clinical Features in Psychiatric Inpatients
Lacresha L. Hall, B.S., Claudia M. Lizarralde, M.D., Claudia M. Lizarralde, M.D., Jean M. Goodwin, M.D., Sheila M. Seay, M.A., Teresa A. Pigott, M.D.

NR67 Gabapentin for Aggressive Behavior
Maria C. Hardoy, M.D., Pierluigi Cabras, M.D.

NR68 Neuropsychological Assessment in the Schizophrenic Spectrum
Maria C. Hardoy, M.D., Pierluigi Cabras, M.D.

*NR69 Diagnosis and Treatment of Depression in Primary Care: A Patient Survey
Debra L. Heck, M.D.

NR70 Gender Differences in Symptomatology and Diagnostic Profiles of Depression
Malene G. Hildebrandt, Kurt B. Stage, M.D., Per Kragh-Sorensen, M.D., Danish University Antidepressant Group

NR71 Syndrome of Inappropriate Antidiuretic Hormone Secretion Induced by Venlafaxine
Niamh M. Holohan, M.D., Paul A. Kettl, M.D.

NR72 The Chronic Mental Health Effects of Volcanic Eruption As Assessed in a Cross-Sectional Epidemiologic Survey of Mount Pinatubo Resettlement Sites
William T. Howard, M.D., Fausto R. Loberiza, Jr., M.D., Bruce M. Pfohl, M.D., Peter S. Thorne, Ph.D., Robert F. Woolson, Ph.D., Rio L. Magpantay, M.D., Bernardo L. Conde, M.D.

NR73 Treatment Can Enhance the Effectiveness of Substance Abuse Self-Help Groups
Keith Humphreys, Ph.D., Penny L. Dearmin, B.A., John W. Finney, Ph.D., Rudolf H. Moos, Ph.D.

NR74 Analysis of the Most Cost-Effective Treatment for Major Depression After Initial SSRIs Nonresponse
Charles B. Baker, M.D., Scott W. Woods, M.D.

NR75 Antipsychotic Drug Use in a National Survey of Office-Based Physician Practices
Richard C. Hermann, M.D., Susan L. Ettner, Ph.D., Robert A. Dorwart, M.D.

NR76 Correlation of Cognitive Function and Proton MRS Findings in Subclinical Hepatic Encephalopathy
Bum-Seok Jeong, M.D., Seong-Yoon Kim, M.D., Dong Wan Seo, M.D., Jung Hee Lee

NR77 Risperidone Versus Haloperidol for Perception of Emotion in Treatment-Resistant Schizophrenia: Preliminary Findings
Kimmy S. Kee, Ph.D., Robert S. Kern, Ph.D., Barringer D. Marshall, Jr., M.D., Michael F. Green, Ph.D.

NR78 Carbon Dioxide-Induced Panic in Premenstrual Dysphoric Disorder
Justine M. Kent, M.D., Laszlo A. Papp, M.D., Jeremy D. Coplan, M.D., Jose Martinez, M.A., Jack M. Gorman, M.D.

NR79 Pattern of Somatoform Disorders in North India
Sanjay Khanna, M.D., Manjeet Singh Bhatia, M.D.

NR80 Failure to Demonstrate Borna Disease Virus Genome in Peripheral Blood Mononuclear Cells of Korean Psychiatric Patients
Yong-Ku Kim, M.D., Sang-Jin Kim, M.D., Leen Kim, M.D., So-Hyun Choz, M.D., Min-Soo Lee, M.D., Young-Hoon Ko, M.D., Jin-Won Song, M.D.

NR81 Physostigmine and Cognition in Schizophrenia Spectrum
Richelle M. Kirrane, M.D., Vivian Mitropoulou, M.A., Melissa Nunn, B.S., Larry J. Siever, M.D.

*NR82 Review of Sertaline Dosing in a Teaching Clinic
Jack L. Koch, Jr., M.D., Nana A. Landenberger, M.A., Ronald M. Salomon, M.D.

NR83 Juvenile Psychotic Depression Could Unmask an Underlying Vulnerability for Bipolar Disorders: A Two-Year Prospective Study
Frederic Kochman, M.D., Francois Ducrocq, M.D., Laurent Lauwerier, M.D., Philippe Parquet, P.R.

NR84 Atypical Antipsychotic Treatment of BPD
Mary J. Kujawa, M.D., Sally A. Berry, M.D., Kelly L. Camlin, L.S.W., S. Charles Schulz, M.D.

NR85 Predictors of Comorbid Personality Disorders in Patients with Panic Disorder with Agoraphobia
Milan Latas, M.D., Vladan Starcevic, M.D., Goran Trajkovic, M.D., Goran Bogojevic, M.D.

NR86 Predictors of Chronicity in Late-Life Depression
Helen Lavretsky, M.D., Ira M. Lesser, M.D., Marcy Wohl, R.N., Bruce L. Miller, M.D., C. Marc Mehringer, M.D., Harry Vinters, M.D.

NR87 Relationship Between Physical Activity and Mental Health in a Taiwanese Population
Chau-Shoun Lee, M.D., Yi-Ching Yang, M.D.

NR88 The Effects of Total Sleep Deprivation on Neurocognitive Function
Heon-Jeong Lee, M.D., Leen Kim, M.D., Kwang-Yoon Suh, M.D.

NR89 Plasma HVA and 5-HIAA Levels in Abstinent Male Alcoholics
Jung-Sik Lee, M.D., Jae Hong Park, M.D., Kwang Soo Han, M.D.

NR90 Accuracy of the CAGE Questionaire in Elderly Schizophrenia Patients
Michael S. Lehman, B.S., Paul A. Kettl, M.D., Niamh M. Holohan, M.D.

NR91 Tardive Dyskinesia and EPS in Chronically Mentally Ill Older Adults
Michael S. Lehman, B.S., Paul A. Kettl, M.D., Niamh M. Holohan, M.D.

NR92 Neuroleptics Regulate Neuroprotective Genes
Xin-Min Li, M.D., Jennifer Chlan-Fourney, B.A., Augusto V. Juorio, Ph.D., Vern Bennett, M.D., Alan A. Boulton, Ph.D.

NR93 A Comparison of Recent Suicide Attempters Versus Ideators in Psychiatric Inpatients
Claudia M. Lizarralde, M.D., Claudia M. Lizarralde, M.D., Melisa Y. Martinez, B.S., Jean P. Goodwin, M.D., Joseph A. McDaniel, M.S., Karen D. Wagner, M.D., Teresa A. Pigott, M.D.

NR94 Cultural Factors and Diagnostic Reliability of a Structured Psychiatric Instrument
Fausto R. Loberiza, Jr., M.D., William T. Howard, M.D., Bruce M. Pfohl, M.D., Ronald C. Talens, M.D., Robert F. Woolson, Ph.D., Jose Bienson Mamangun, M.D., Bernardo L. Conde, M.D.

NEW RESEARCH

Monday, June 1, 1998, 1:00 p.m.-2:30 p.m.

New Research 2 – Oral/Slide Session – Room 205B, Street Level, Convention Centre

YOUNG INVESTIGATORS' ORAL/SLIDE SESSION

Chp.: Charles P. O'Brien, M.D.

NR95 Suicidality, Substance Abuse and Diagnoses: Impact of Gender — 1:00 p.m.
Melisa Y. Martinez, B.S., Claudia M. Lizarralde, M.D., Sheila M. Seay, M.A., Jean P. Goodwin, M.D., Teresa A. Pigott, M.D.

NR96 Death Among Alcoholic Men After 10-14 Years — 1:15 p.m.
Sunil Chhibber, M.D., Barry I. Liskow, M.D., Elizabeth J. Nickel, M.A., Barbara J. Powell, Ph.D., Elizabeth C. Penick, Ph.D., Jan L. Campbell, M.D., Dennis Wallace, Ph.D.

NR97 A Multivariate Genetic Analysis of the Use of Tobacco, Alcohol and Caffeine in a Population-Based Sample of Male and Female Twins — 1:30 p.m.
John M. Hettema, M.D., Linda A. Corey, Ph.D., Kenneth S. Kendler, M.D.

NR98 Sex Differences in Social Adjustment in a Sample of Patients with Major Depression — 1:45 p.m.
Maureen Attiullah, M.D., Caron Zlotnick, Ph.D.

NR99 Mood Changes During Corticosteroid Therapy: Preliminary Data — 2:00 p.m.
E. Sherwood Brown, M.D., Trisha Suppes, M.D., David A. Khan, M.D., Thomas J. Carmody, Ph.D.

NR100 Neuroendocrinology of Depression During Pregnancy — 2:15 p.m.
Donald J. Newport, M.D., Zachary N. Stowe, M.D., James R. Strader, Jr., B.S., James C. Ritchie, Ph.D., Alexis M. Llewellyn, B.A., Charles B. Nemeroff, M.D.

NEW RESEARCH

Monday, June 1, 1998, 1:00 p.m.-2:30 p.m.

New Research 3 – Oral/Slide Session – Room 205D, Street Level, Convention Centre

YOUNG INVESTIGATORS' ORAL/SLIDE SESSION

Chp.: Michael B. First, M.D.

NR101	Outcome After Two Years of Lithium Treatment: Continuation Versus Discontinuation Julie E. Peters, B.A., Eric D. Peselow, M.D., Ronald R. Fieve, M.D., Michael Sobel, M.D.	1:00 p.m.
NR102	Relative Risk of Death After Antidepressant Medication Overdose Donna T. Chen, M.D., Mark Olfson, M.D., J. John Mann, M.D.	1:15 p.m.
*NR103	Prescribing Patterns by Psychiatrists, Scott and White, for Patients with OCD from 1993 to 1997 Jim B. Airhart, M.D., Greg D. Blaisdell, M.D.	1:30 p.m.
NR104	Religiosity, Ethnicity and Psychological Distress G. Eric Jarvis, M.D., Laurence J. Kirmayer, M.D.	1:45 p.m.
NR105	Quality of Care for Depressed Older Adults in a Large HMO Jurgen Unutzer, M.D., Wayne J. Katon, M.D., Joan Russo, Ph.D.	2:00 p.m.
*NR106	Prevalence of Depression in Asian and Pacific Islanders with HIV Gene A. Nakajima, M.D., David T. Takeuchi, M.D., Barbara Leake, Ph.D., Kenneth B. Wells, M.D.	2:15 p.m.

NEW RESEARCH

Monday, June 1, 1998, 3:00 p.m.-5:00 p.m.

New Research 4 – Poster Session – Room 106, Lower Level, Convention Centre

YOUNG INVESTIGATORS' POSTER SESSION

Moderator: Carol A. Tamminga, M.D.

*NR107 Practice Patterns of International and United States Graduate Psychiatrists
Carlos Blanco-Jerez, M.D., Cletus S. Carvalho, M.D., Mark Olfson, M.D.

NR108 Medical, Psychiatric and Sociodemographic Correlates of Hypochondriacal Worry
Karl J. Looper, M.D., Laurence J. Kirmayer, M.D.

NR109 Bupropion Sustained Release in Atypical Depression
Luis Lopez, M.D., Paul J. Goodnick, M.D., Robert N. Golden, M.D., C. Lindsay DeVane, Ph.D., Charles L. Bowden, M.D.

NR110 Psychiatric Admissions Due to Antidepressant-Induced Psychosis
Rebecca W. MacLean, M.D., Erica Weiss, M.D., Malcolm B. Bowers, Jr., M.D., Carolyn M. Mazure, Ph.D.

NR111 Mania in HIV Illness
Linda Mah, M.D., Pascale DesRosiers

*NR112 Does a Day Hospital Lower Rehospitalization Rates?
Milica A. Markovic, M.D., Jeffrey W. Aston, Ph.D., Beverly Catt, B.S.N., Charles D. Hanson, M.D., Jan Hruby, M.D., Bill Fenn

NR113 Neurotrophins in Amniotic Fluid
Christine E. Marx, M.D., Brandon J. Vance, B.A., L. Fredrik Jarskog, M.D., Nancy C. Chescheir, M.D., John H. Gilmore, M.D.

NR114 Children's Responses and Recovery Following Parental Military Deployment
Lisa J. McCurry, M.D., Peter S. Jensen, M.D., Henry K. Watanabe, M.D.

*NR115 Defining Subgroups by Service Use in Programs for Assertive Community Treatment
Scot W. McNary, M.A., Lisa B. Dixon, M.D., Anthony F. Lehman, M.D.

NR116 Sertraline in Diabetic Neuropathy
Liana Mendoza, M.D., Paul J. Goodnick, M.D., Adarsh Kumar, Ph.D.

NR117 Psychotic Depression in a Hispanic Population: Diagnostic Dilemmas and Implications for Treatment
David Mischoulon, M.D., Isabel T. Lagomasino, M.D., Chris Harmon, M.D.

*NR118 Transfer of Psychopharmacology Patient Syndrome: A Resident Survey
David Michoulon, M.D., Edward Messner, M.D., Jerrold F. Rosenbaum, M.D.

NR119 Separation Anxiety and Eating Attitudes in a Cross-Cultural Perspective
Cameron S. Morhaliek, M.D., Alayne Yates, M.D., Deborah Goebert, M.S.

NR120 The Mechanism of Venlafaxine Action: Noradrenergic and Serotonergic Activity
Meera Narasimhan, Robert M. Berman, M.D., Amit Anand, M.D., Angela C. Cappiello, M.D., Dan A. Oren, M.D., Dennis S. Charney, M.D.

NR121 Hippocampal Volume in MDD
Meena Narayan, M.D., Eric Anderson, Helen L. Miller, M.D., Lawrence H. Staib, Ph.D., Dennis S. Charney, M.D., J. Douglas Bremner, M.D.

*NR122 Services to Families in a Community Program
Patricia N. Nnadi, M.D., Lisa B. Dixon, M.D., Letecia Postrando, Ph.D., Bette Stewart, Eileen Hastings, R.N.

NR123 Cholesterol and Aggression in Personality Disorders
Sherie Novotny, M.D., Antonia S. New, M.D., Elizabeth Sevin, B.S., Ann M. Callahan, M.D., Larry J. Siever, M.D.

NR124 Gender and Cognitive Deficits in Schizophrenia Patients
Demetra Pappas, B.S., Christina Wu, B.A., Rogelio D. Bayog, M.D., David N. Osser, M.D., Ileana Berman, M.D.

NR125 Assessment of Evidence-Based Practice Guidelines in Psychiatry
Jagoda Pasic, M.D., Efthimis Efthimiadis, Ph.D.

NR126 Abrupt Versus Gradual Lithium Discontinuation: Relationship to Outcome
Julie E. Peters, B.A., Eric D. Peselow, M.D., Ronald R. Fieve, M.D., Michael Sobel, M.D.

NR127 Occupational Stress and Psychiatric Illness in the Military
Steven E. Pflanz, M.D., Brian P. Skop, M.D.

NR128 Characterization of a Novel Forebrain-Specific Neurodevelopmental Gene
Tony A. Pham, M.D., Kyuson Yun, Ph.D., John L.R. Rubenstein, M.D., Michael P. Stryker, Ph.D.

NR129 Dopamine D2 Receptor Density and Personal Detachment
Lisa J. Picken, B.A., Alan F. Breier, M.D., Caleb M. Adler, M.D., Igor Elman, M.D., Neil Wiesenfeld, B.S.E., Anil K. Malhotra, M.D., David Pickar, M.D.

NR130 Frontal Activation on fMRI in Schizophrenia Patients
Srinivasan S. Pillay, M.D., Abigail A. Baird, Stacey A. Gruber, Deborah A. Yurgelun-Todd, Ph.D.

NR131 Olfactory Stimulation Acutely Elevates Mood in Depressed Patients with SAD
Teodor T. Postolache, M.D., Erick H. Turner, M.D., Jeffery R. Matthews, M.D., Ling Han, M.D., Lulu A. Jimma, M.D., Mulon Luo, Norman E. Rosenthal, M.D.

*NR132 Medical Comorbidity, Mental Health and Insurance Status
Leticia T. Postrado, Ph.D., Lisa B. Dixon, M.D., Janine C. Delahanty, M.A.

NR133 Cholesterol and Suicidality: A Retrospective Study
Prasad Potaraju, M.D., Gabriel Ghitan, M.D.

NR134 Efficacy of Brain SPECT in Assessment of Dementia
Emily M. Pressley, D.O., Paul A. Kettl, M.D.

NR135 Measuring the Rate of Cognitive Decline in Patients with Alzheimer's Disease: A Meta-Analysis
Ling Han, M.D., Martin G. Cole, M.D., Francois J. Primeau, M.D., Jane McCusker, M.D., Francois Bellavance, Ph.D.

NR136 Treatment Response Predictors for Unipolar and Bipolar Depression
Jeffrey M. Pyne, M.D., Dale P. Bullock, B.S., Shahrokh K. Golshan, Ph.D., Robert M. Kaplan, M.D.

NR137 Obsessive-Compulsive Symptoms in Patients with Parkinson's Disease
Alex S. Maia, Adriana S. Pinto, M.D., Egberto R. Barbosa, Ph.D., Paulo R. Menezes, Ph.D., Helema S. Prado, Euripedes C. Miguel, M.D.

NR138 Schizophrenia Patients With and Without OCD
Shakir R. Meghani, M.D., Elizabeth C. Penick, Ph.D., Elizabeth J. Nickel, M.A., Ekkehard Othmer, M.D., William F. Gabrielli, Jr., M.D., Barbara J. Powell, Ph.D., Marsha R. Read, Ph.D.

NR139 Tropical Rainfall and Increase in Schizophrenia Births
Erick Messias, M.D., Nidia Cordeiro, M.S., Brian Kirkpatrick, M.D., Jose J. Sampaio, M.D.

NR140 Temperament Differences in Bipolar Disorder Patients
Mirene C. Winsberg, M.D., Debbie L. Tate, Connie Strong, M.S., Terence A. Ketter, M.D.

NR141 Tracking Quality and Availability of Heroin in Boston
Anthony J. Ramirez, M.D., John A. Renner, Jr., M.D.

NR142 Gender and Depression in Santiago, Chile: Preliminary Results
Graciela Rojas, Ricardo Araya, M.D., Rosemarie Fritsch, Julia Acuna

NR143 Meteorologic Predictors of Symptoms in Bipolar Disorder
Dena G. Rosenberg, M.S., Sheri L. Johnson, Ph.D., Ivan W. Miller, Ph.D., Gabor I. Keitner, M.D., Christine E. Ryan, Ph.D., David A. Solomon, M.D.

NR144 OCD in Patients with Huntington's Disease
Ignacio Ruiz, M.D., Elisa Alonso, M.D., Rosario Macias, C.P.B., Petra Yescas, C.P.B., Roberto Suastegui, M.D., Adriana Ochoa, S.W.

NR145 Comorbidity of Panic Disorder and Schizophrenia
Paul C. Young, M.D., Larry A. Labatte, M.D., George W. Arana, M.D.

NR146 Association of Gz-alpha Gene Polymorphism in Bipolar Disorder
Takuya Saito, M.D., Demitri F. Papolos, M.D., John R. Kelsoe, Jr., M.D., Herbert M. Lachman, M.D.

NR147 Cultural Differences in Perceived Caregiver Burden
Rachel H. Salguero, B.A., Robert Kohn, M.D., Luis F. Salguero, M.D., Charles Anthony Marotta, M.D.

NR148 The Spanish Translation and Cultural Adaptation of the Overt Aggression Scale for Adult Psychiatric Inpatients in Puerto Rico
Antonio Sanchez, M.D., Dhilma L. Alicea, M.D.

NR149 Genetic Linkage Study of Male Homosexuality
Alan R. Sanders, M.D., Juliet J. Guroff, M.S.W., Elliott S. Gershon, M.D., Pablo V. Gejman, M.D.

NR150 Sensation Seeking and Evoked Auditory Potentials
Christine Sarramon, M.D., Bernard Doyon, M.D., Helene Verdoux, M.D., Henri Sztulman, M.D., Laurent Scmitt, Ph.D.

NR151 The Effect of Pain on End-of-Life Decision Making, Life Satisfaction and Depression
David A. Sayles, M.D., Allen Raskin, Ph.D., Paul E. Ruskin, M.D., Kumar Menon, M.D.

NR152 Schizotypal Personality Disorder: The Search for Subtypes
Elizabeth H. Schaefer, Ed.M., John G. Gunderson, M.D., Melissa Culhane, B.A., Ana Ruiz-Sancho, M.D., Thomas H. McGlashan, M.D.

NR153 Divalproex Sodium Versus Valproic Acid: Is There a Difference?
Thomas L. Schwartz, M.D., Jose L. Massa, M.D., Prakash S. Masand, M.D.

NR154 Patient Violence Against Residents: A Survey
Thomas L. Schwartz, M.D., Tricia L. Park, M.S.

NR155 Description of an Inpatient Multiprofessional Treatment Program for the Treatment of Morbid Obese Patients with Mild to Severe Psychiatric Comorbidity
Adriano Segal, M.D., Taki A. Cordas, Ph.D.

NR156 Quality of Life and Side Effects of Neuroleptics
Serge M. Sevy, M.D., Carolyn E. Forman, M.P.A., George Fulop, M.D.

NR157 Psychiatric Evaluation of Individuals with Problematic Use of the Internet
Nathan A. Shapira, M.D., Toby D. Goldsmith, M.D., Paul E. Keck, Jr., M.D., Uday M. Khosla, Susan L. McElroy, M.D.

NR158 The Effects of Risperidone on Verbal Fluency and Executive Function in Schizophrenia
Tonmoy Sharma, M.D., Robin Morris, Ph.D., Shaun O'Neill, B.sc., Darren Mockler, Ph.D., Susan Gill, B.sc., William Soni, M.D.

NR159 Dissecting the Components of Linguistic Processing in Schizophrenia Using Functional MRI
Tonmoy Sharma, M.D., Edward T. Bullmore, M.D., Garry Honey, M.Phil., William Soni, M.D., Chris Andrew, B.sc., Robin Morris, Ph.D.

NR160 Evidence of Abnormal Lateralization of Motor Systems in Schizophrenia Using Functional MRI
Tonmoy Sharma, M.D., Steven Williams, Ph.D., Garry Honey, M.Phil., William Soni, M.D., Edward T. Bullmore, M.D., Chris Andrew, B.sc.

NR161 Mania and Hypomania Following Antidepressant Discontinuation
Amy E. Shriver, B.S., Gary S. Sachs, M.D., Claudia F. Baldassano, M.D.

NR162 Operationalizing DSM-IV Criteria for Premenstrual Dysphoric Disorder
Mark J. Smith, M.D., Peter J. Schmidt, M.D., David R. Rubinow, M.D.

NR163 Olanzapine in the Treatment of Adolescent Acute Mania: Preliminary Report of Seven Cases
Cesar A. Soutullo, M.D., Michael T. Sorter, M.D., Keith D. Foster, M.D., Susan L. McElroy, M.D., Paul E. Keck, Jr., M.D.

NR164 Fluoxetine Action on T-Lymphocyte Proliferation
Leonor J. Sterin-Borda, Ph.D., Valeria Ayelli Edgar, M.D., Ana Maria Genaro, Ph.D., Graciela A. Cremaschi, Ph.D.

NR165 Antidepressant Efficacy and Tolerability Comparison of Sertraline and Imipramine in Brazilian Elderly Outpatients
Alberto Stoppe, M.D., Orestes V. Forlenza, M.D., Edson Hirata, M.D., Rita Cecilia Ferreira, M.D., Osvaldo P. Almeida, Ph.D.

NR166 Relationship Between Childhood Disturbances and Severity of Symptoms in Adult Patients with Anxiety Disorder
Boglarka Szabo, B.A., Rudolf Hoehn-Saric, M.D.

NR167 Prevalence of Depression in Menopause
Leslie W. Tam, M.D., Barbara L. Parry, M.D.

NR168 Religiosity and Religious Obsessions in OCD
Cenk Tek, M.D., Berna Ulug, M.D., Ahsen Orhon, M.D.

NR169 Phenomenology of OCD in a Turkish Sample
Cenk Tek, M.D., Berna Ulug, M.D., Aylin Ulusahin, M.D., Ahsen Orhon, M.D.

*NR170 Trend in Teens Using Physicians for Drug Abuse Help
Kamara Thompson, B.A., Paul A. Kettl, M.D.

NR171 Personality Disorders and Self-Rated Global Assessment of Functioning Score
Gudlaug Thorsteinsdottir, M.D., Kristinn Tomasson, M.D.

NR172 Suicidal Behavior in Buenos Aires City
Guillermo Tortora, M.D., Alicia Sotelo Lago, M.D., Liliana Ines Florio, Ph.D., Claudia Rodriguez, Ph.D., Eduardo Rodriguez Garin, M.D., Benigno Gutierrez, M.D., Graciela Nazar, M.D.

NR173 Good Clinical Practice in Psychopharmacology
Guillermo Tortora, M.D., Pablo A. Liuboschitz, Ph.D., Roxana Alvarez, Ph.D., Liliana Ines Florio, Ph.D., Dario Bonetti, M.D., Pablo Mateos, Ph.D., Juan Carlos Groppa, M.D.

*NR174 Patients and Therapists Perceptions of a Representative Payee Program
Joseph Turner, M.A., Lisa B. Dixon, M.D., Nancy Krauss, M.S.W., Jack Scott, Sc.D., Scot W. McNary, M.A.

NR175 Comorbid Conditions Fail to Predict Patterns of Response to Fluoxetine
Miguel Uribe, M.D., Bronwyn R. Keefe, B.A., Nelson A. Vega, B.A., Andrew A. Nierenberg, M.D., David Mischoulon, M.D., Joyce R. Tedlow, M.D., Maurizio Fava, M.D.

NR176 Efficacy and Safety of Combining Risperidone and Clozapine in Patients with Treatment-Refractory Psychoses
Prathap R. Vaadyala, M.D., Santhi S. Ratakonda, M.D., Christine Miller, B.A., Zafar A. Sharif, M.D.

NR177 Comparison of Two Lithium Group Education Programs
Dr. Eduard M. van Gent, Dr. Linda M. Vogtlander, Jose L. Vredendaal, R.P.C.

NR178 Risperdone in Child Psychiatry
Dominique A. Van Gool, Ph.D., Paul M. Igodt, M.D.

R179 Diagnosis of Dementia by Family Physicians and Memory Clinic: A Comparison
Hein P. Van Hout, Ms.c., Myrra J. Vernooy-Dassen, Ph.D., Prof. Richard M. Grol, Prof. Willibrord H. Hoefnagels

NR180 Suicidality and Homelessness
Honaid H. Vasi, M.D., Lisa B. Dixon, M.D., Mark Ehrenraich, M.D.

NR181 Non adherence in Heart Transplant Patients
Adriana R. Vasquez, M.D., Sheila G. Jowsey, M.D., Chistopher McGregor, M.D., William N. Friedrich, Ph.D., Kathy Schwab, R.N., Tammy Adams, R.N.

NR182 Benzodiazepine Receptor SPECT in Schizophrenia
Nicolaas P. Verhoeff, M.D., Jair C Soares, M.D., Cyril D. D'Souza, M.D., Roberto B. Gil, M.D., Kathleen Degen, M.D., Anissa Abi-Dargham, M.D., Robert B. Innis, M.D.

NR183 Sex Differences in Discontinuation of Risperidone Over One Year of Treatment
Sarah J. Warden, Ms.c., Ruth A. Dickson, M.D.

NR184 The Effect of Race on the Prevalence of Dementia Upon Admission to Nursing Homes
Daniel Weintraub, M.D., Paul E. Ruskin, M.D., Bruce A. Kaup, M.D., Allen Raskin, Ph.D., Jay Magaziner, Ph.D.

NR185 Differences in Admission Diagnosis by Race
Theodora G. Balis, M.D., Lisa B. Dixon, M.D.

NR186 Concurrent Cardiovascular Illness and Depression
Terrence A.R. Whiteman, Dale A. D'Mello, M.D., Rafael Villicana

NR187 Cognitive Dysfunction in Positive and Negative Type Schizophrenia Patients With or Without Tardive Dyskinesia
Jong-Min Woo, M.D., Bum-Hee Yu, M.D., Ji-Hae Kim, Ph.D., Joo-Mi Bae, M.A., Kang-Uk Lee, M.D., S. Peter Kim, M.D.

NR188 Negative Symptoms and Executive Function in Patients with Schizophrenia
Amanda Ernst Woods, Ph.D., Lori Secrest, O.T., Andre Tapp, M.D.

NR189 Geropsychiatry Versus General Psychiatry Inpatient Treatment of Elderly
Izzet C. Yazgan, M.D., Blaine S. Greenwald, M.D., Neil J. Kremen, M.D., Joan Strach, R.N., Elisse Kramer-Ginsberg, Ph.D.

NR190 Factors Used in Tarasoff Decisions: A Survey of Forensic and General Psychiatrists
Donald D. Saint-Just, M.D., R. Andrew Schultz-Ross, M.D., Jon M. Streltzer, M.D., Deborah Goebert, M.S.

NR191 Drug Use in a Spanish Methadone Multidimensional Treatment Program: A Four-Year Follow-Up
Juan J. Fernandez-Miranda, M.D., Maria P. Gonzalez, Ph.D., Pilar A. Saiz, M.D., Eduardo Gutierrez, M.D., Manuel Bousono-Garcia, M.D., Julio Bobes, M.D.

NR192 Addiction Severity in a Spanish Methadone Multidimensional Treatment Program: A Four-Year Follow-Up
Juan J. Fernandez-Miranda, M.D., Eduardo Gutierrez, M.D., Pilar A. Saiz, M.D., Maria P. Gonzalez, Ph.D., Manuel Bousono-Garcia, M.D., Julio Bobes, M.D.

NR193 Parasuicidal Patients: A Three-Year Follow-Up
Pilar A. Saiz, M.D., Maria P. Gonzalez, Ph.D., Isabel Cocana, Manuel Bousono-Garcia, M.D., Julio Bobes, M.D.

NR194 Dual Pathology in Personality Disorders in Heroin Abusers Undergoing Two Different Maintenance Programs of Naltrexone and Methadone
Eduardo Gutierrez, M.D., Pilar A. Saiz, M.D., Maria P. Gonzalez, Ph.D., Juan J. Fernandez, M.D., Manuel Bousono-Garcia, M.D., Julio Bobes, M.D.

NR195 Panic Disorder and Season of Birth
Fulvio Pieraccini, M.D., Claudia Pacchierotti, M.D., Sonia Iapiehino, M.D., Paolo Castrogiovanni, M.D.

NR196 Season of Birth and Course of Panic Disorder
Sonia Iapiehino, M.D., Fulvio Pieraccini, M.D., Claudia Pacchierotti, M.D., Paolo Castrogiovanni, M.D.

NR197 Aggressive Behavior in OCD
Angela DiMuro, M.D., Livia Luccarelli, M.D., Paolo Castrogiovanni, M.D.

NR198 Shyness and Social Phobia in Students
Angela DiMuro, M.D., Claudia Pacchierotti, M.D., Paolo Castrogiovanni, M.D.

NR199 Outcome After ECT for Depressed Dementia Patients
Vani A. Rao, M.D., Constantine G. Lyketsos, M.D., Jeannie Sheppard, B.A.

NR200 Event- Related Potentials and Attention in Autism
Christine M. Oliver, M.D., Jennifer K. Williams, M.S., David W. Shucard, Ph.D.

NR201 Antipsychotic Use in Patients with Schizophrenia
Philip S. Wang, M.D., Deborah A. Zarin, M.D., Harold Alan Pincus, M.D.

NEW RESEARCH

Tuesday, June 2, 1998, 9:00 a.m.-10:30 a.m.

New Research 5 – Oral/Slide Session – Room 205B, Street Level, Convention Centre

MOOD DISORDERS

NR202 Topiramate in Severe Treatment-Refractory Mania — 9:00 a.m.
Joseph R. Calabrese, M.D., M.D. Shelton III, M.D., Paul E. Keck, Jr., M.D., Susan L. McElroy, M.D., Janet E. Werkner, Ph.D.

NR203 A Trial of the Protein Kinase C Inhibitor Tamoxifen in the Treatment of Acute Mania — 9:15 a.m.
Joseph M. Bebchuk, M.D., Cynthia L. Arfken, Ph.D., Suzanne Dolan-Manji, R.N., Joanne M. Murphy, R.N., Husseini K. Manji, M.D.

NR204 Thyroid and Serotonin Abnormalities in Depression — 9:30 a.m.
Fabrice Duval, M.D., M-Claude Mokrani, Ph.D., Marc-Antoine Crocq, M.D., Paul Bailey, M.D., Than Son Diep, M.D., Humberto Correa, M.D., Jean-Paul Macher, M.D.

NR205 Randomized Trial of a Depression Management Program in High Utilizers of Medical Care — 9:45 a.m.
David J. Katzelnick, M.D., Gregory E. Simon, M.D., Steve D. Pearson, M.D., Willard G. Manning, Ph.D., Cindy P. Helstad, Ph.D., Henry J. Henk, M.S.

NR206 Paroxetine and Imipramine in the Treatment of Adolescents Depression — 10:00 a.m.
Martin B. Keller, M.D., Neal D. Ryan, M.D., Boris Birmaher, M.D., Rachel G. Klein, Ph.D., Michael Strober, Ph.D., Karen D. Wagner, M.D., Elizabeth B. Weller, M.D.

NR207 Depressive Symptoms: A Risk for Mortality in Elderly — 10:15 a.m.
Junji Takeshita, M.D., Kamal Masaki, M.D., Iqbal Ahmed, M.D., Daniel Foley, M.S., Yuan Qing Li, M.S.C., Daryl Fujii, Ph.D., G. Webster Ross, M.D., Helen Petrovitch, M.D., Lon White, M.D.

NEW RESEARCH

Tuesday, June 2, 1998, 9:00 a.m.-10:30 a.m.

New Research 6 – Oral/Slide Session – Room 205D, Street Level, Convention Centre

PSYCHOPHARMACOLOGY

Chp.: Andrew J. Cutler, M.D.

NR208 Utilization of Valproate — 9:00 a.m.
Leslie L. Citrome, M.D., Jerome Levine, M.D., Baerbel Allingham, M.S.

NR209 Intermittent Neuroleptic Treatment Is a Risk Factor for Tardive Dyskinesia — 9:15 a.m.
Peter N. van Harten, M.D., Hans W. Hoek, M.D., Glenn E. Matroos, M.D., Maarten Koeter, Ph.D., Rene S. Kahn, M.D.

NR210 D-Cycloserine Added to Neuroleptics in Schizophrenia — 9:30 a.m.
Donald C. Goff, M.D., Guochuan Tsai, M.D., James J. Levitt, M.D., Edward Amico, M.Ed., David Schoenfeld, Ph.D., Robert W. McCarley, M.D., Joseph T. Coyle, Jr., M.D.

NR211 Fluoxetine Versus Sertraline and Paroxetine in Major Depression: Tolerability and Efficacy in Patients with High- and Low-Baseline Insomnia — 9:45 a.m.
Maurizio Fava, M.D., Jerrold F. Rosenbaum, M.D., Sharon L. Hoog, M.D., Rosalinda Tepner, R.Ph., Joan Kopp, M.S., Mary Sayler, M.S., and the Fluoxetine Collaborative Study Group

NR212 Incidence of Tardive Dyskinesia with Risperidone Versus Haloperidol — 10:00 a.m.
Dilip V. Jeste, M.D., Jonathan P. Lacro, Pharm.D., Hoang A. Nguyen, M.D., Mihaela E. Petersen, M.D., Enid Rockwell, M.D., Daniel D. Sewell, M.D., Michael P. Caligiuri, Ph.D.

NR213 Reboxetine: The First Selective Noradrenaline Reuptake Inhibitor — 10:15 a.m.
David T. Healy, M.D.

NEW RESEARCH

Tuesday, June 2, 1998, 12 noon-2:00 p.m.

New Research 7 – Poster Session – Room 106, Lower Level, Convention Centre

MOOD, PMDD, PERSONALITY AND EATING DISORDERS; PSYCHOIMMUNOLOGY; BEHAVIOR/ COGNITIVE AND SOMATIC THERAPIES; PSYCHOTHERAPY AND PHARMACOTHERAPY; SUICIDE; EPIDEMIOLOGY; RESEARCH ISSUES; AIDS; ADDICITON

Moderator: Robert L. Hendren, D.O.

NR214 Fluvoxamine and Pindolol: A New and Faster Strategy in the Treatment of Delusional Depression
Raffaella Zanard, M.D., Linda Franchini, M.D., Mariangela Gasperini, M.D., Adelio Lucca, M.D., Enrico Smeraldi, M.D., Jorge Perez, M.D.

NR215 Randomized, Double-Blind, Placebo-Controlled 52-Week Trial of Venlafaxine for the Prevention of Recurrent Depression
Loren M. Aguiar, M.D., Richard Entsuah, Ph.D., David Hackett, M.Sc., Susan Miska

NR216 Double-Blind, Placebo-Controlled Study of Once-Daily Venlafaxine Extended Release and Fluoxetine in Depressed Outpatients
Loren M. Aguiar, M.D., Richard L. Rudolph, M.D., Albert T. Derivan, M.D.

NR217 New Findings from the Collaborative Depression Study: Recurrence After Five Years of Recovery from the Index Episode of MDD
Timothy I. Mueller, M.D., Andrew C. Leon, Ph.D., Martin B. Keller, M.D., David A. Solomon, M.D., William H. Coryell, M.D., Jean Endicott, Ph.D., Merideth Warshaw, M.S.S.

NR218 Sustained Lithium Response in Bipolar Illness
Robert M. Post, M.D., Gabriele S. Leverich, M.S.W., Nancy K. Palmer, B.A., Tina R. Goldstein, B.A.

NR219 Treatment of Bipolar Depression
L. Trevor Young, M.D., Janine Robb, B.ScN., Cathy MacDonald, R.N., Glenda M. MacQueen, M.D., Russell T. Joffe, M.D.

NR220 Gabapentin in Bipolar Disorder
L. Trevor Young, M.D., Glenda M. MacQueen, M.D., Janine Robb, B.ScN., Cathy MacDonald, R.N., Irene Patelis-Siotis, M.D., Russell T. Joffe, M.D.

NR221 Which Relapse Factors Does Maintenance Treatment Modify?
Rosa Catalan, M.D., Julio Vallejo, M.D., Guillen Masana, Aurora Otero, M.D., Cristobal Gasto, M.D.

NR222 Bupropion SR 150 mg Once and Twice Daily Versus Placebo for the Treatment of Depressed Outpatients
Lynn A. Cunningham, M.D., Sharyn R. Batey, Pharm.D., Rafe M.J. Donahue, Ph.D., John A. Ascher, M.D.

NR223 Digoxin-Like Factor in Bipolar Illness
Rif S. El-Mallakh, M.D., Glenna Grider, M.A., Mary O. Huff, Ph.D., Tamella J.R. Buss, B.S., James Miller, Ph.D., Roland Valdes, Jr., Ph.D.

NR224 Lost Human Capital from Early-Onset Chronic Depression
Ernst R. Berndt, Ph.D., Lorin M. Koran, M.D., Stan L. Finkelstein, M.D., Alan J. Gelenberg, M.D., Ivan W. Miller, Ph.D., George Trapp, M.D., Martin B. Keller, M.D.

NR225 Donepezil Reverses Antidepressant-Induced Side Effects in Nongeriatric Depressives, But May Trigger Mania
Frederick M. Jacobsen, M.D.

NR226 Relationship of Prior Course of Illness and Neuroanatomical Structures by MRI in Bipolar Disorder
Kirk D. Denicoff, M.D., Syed O. Ali, B.S., Lori L. Altshuler, M.D., Peter Hauser, M.D., Gabriele Leverich, M.S. W., M.D., Earlian E. Smith-Jackson, R.N., Robert M. Post, M.D.

NR227 In Severe Depression, Reboxetine Is As Effective As Imipramine and More Effective than Fluoxetine
Juan Massana, M.D.

NR228 Risk Factors for Postpartum Depression and Infant Outcome at Twelve Months
Beverley D. Cassidy, M.D., Susan Goldberg, Ph.D., Kirsten Blokland, M.A., Diane Benoit, M.D.

NR229 Comparison of Research and Clinical Antidepressant Data
Edward E. Schweizer, M.D., Philip Perera, M.D.

NR230 An Open Trial of Mirtazapine in the Treatment of Depressed Outpatients Refractory to or Intolerant of Treatment with SSRIs
Maurizio Fava, M.D., John M. Zajecka, M.D., Madhukar H. Trivedi, M.D., David L. Dunner, M.D., John Greist, M.D., Miriam Cohen, Ph.D.

NR231 Comparison of the Efficacy and Safety, Including Sexual Functioning, of Bupropion Sustained Release in Depressed Outpatients
Richard J. Kavoussi, M.D., R. Taylor Segraves, M.D., Sharyn R. Batey, Pharm.D., Arlene Hughes, Ph.D., John A. Ascher, M.D., Rafe M.J. Donahue, Ph.D.

NR232 Comparative Efficacy of Psychotherapy, Pharmacotherapy and Combined Treatments for MDD: A Meta-Analysis
Nicola Casacalenda, M.D., Karl J. Looper, M.D., J. Christopher Perry, M.D.

NR233 Fluvoxamine is As Effective As Clomipramine in Severe Depression
John Van Den Berg, M.D., Chantal Vekens, Ph.D.

NR234 Fluvoxamine Versus Fluoxetine: A Double-Blind, Randomized Comparison in Major Depressive Episode
John Van Den Berg, M.D., Adrian Honig, M.D.

NR235 Cytokine Production in Dysthymia
Arun V. Ravindran, M.D., Jenna Griffiths, M.Sc., Zul Merali, Ph.D., Hymie Anisman, Ph.D.

NR236 Negative Life Events Initiate First But Not Recurrent Depressive Episodes
Andrew A. Nierenberg, M.D., Mark G. Pingol, B.A., Heather J. Baer, B.A., Jonathan E. Alpert, M.D., Joel Pava, Ph.D., Joyce R. Tedlow, M.D., Maurizio Fava, M.D.

NR237 Increased Perception of Stress in Atypical Depression: A Confirmation of Mood Reactivity
Andrew A. Nierenberg, M.D., Andrea R. Kolsky, B.A., Mark G. Pingol, B.A., Jonathan E. Alpert, M.D., David Mischoulon, M.D., Shamsah B. Sonawalla, M.D., Maurizio Fava, M.D.

NR238 Delinquent Behavior Among Children of Parents with Depressive Subtypes
Jonathan E. Alpert, M.D., Heather J. Baer, B.A., Bronwyn R. Keefe, B.A., Andrew A. Nierenberg, M.D., Jerrold F. Rosenbaum, M.D., Joseph Biederman, M.D., Maurizio Fava, M.D.

NR239 Comparison of the Safety and Efficacy of Bupropion Sustained Release and Paroxetine in Elderly Depressed Outpatients
Karen L. Weihs, M.D., Edmund C. Settle, Jr., M.D., Rafe M.J. Donahue, Ph.D., Trisha L. Houser, B.A., Sharyn R. Batey, Pharm.D., John A. Ascher, M.D., Lydia L. Alvarez, M.D.

NR240 Relationship of Neuropsychological Performance and Neuroanatomical Structures by MRI in Bipolar Disorder
Syed O. Ali, B.S., Kirk D. Denicoff, M.D., Lori L. Altshuler, M.D., Peter Hauser, M.D., Allan F. Mirsky, M.D., Earlian E. Smith-Jackson, R.N., Robert M. Post, M.D.

NR241 Number of Episodes and Outcome in Bipolar Disorder
Glenda M. MacQueen, M.D., Janine Robb, B.ScN., Michael Marriott, M.Sc., Robert G. Cooke, Russell T. Joffe, M.D., L. Trevor Young, M.D.

NR242 Mathematics Deficits in Bipolar Youth
Diane C. Bird, B.Sc., Stanley P. Kutcher, M.D., Heather A. Robertson, M.A.

NR243 Use and Misuse: Antidepressants in General Practice
Nick M. Kosky, M.D., Jill G.C. Rasmussen, M.D.

NR244 A French Study of Comorbidity Social Phobia in Depression
Roland H. Dardennes, M.D., Elema Bonett-Perrin, M.D., Serge Barry, M.D., Samuel Mercier, STAT.

NR245 Attentional Deficit and Antidepressant Response in Depression
Paul Jacques, M.D., Sophie Lemelin, Ph.D., Pierre Vincent, M.D., Marie-Josee Filteau, M.D., Philippe Baruch, M.D.

NR246 Thyroid Axis and Treatment Response in Depression
Bettina Knight, B.S.N., Philip T. Ninan, M.D., Charles B. Nemeroff, M.D., Dominique L. Musselman, M.D., Jeffrey E. Kelsey, M.D.

NR247 Quality of Life in Depressed Spanish Patients After Six-Months of Treatment with Venlafaxine
Julio Bobes, M.D., Enrique Baca-Garcia, M.D., Leonardo Casais, M.D., Miguel Roca, M.D., Maria P. Gonzalez, Ph.D.

NR248 Depression in Clinical and Analogue Samples
Brian J. Cox, Ph.D., Murray W. Enns, M.D., Sharon C. Borger, B.A., James D.A. Parker, Ph.D.

NR249 Antipsychotic Agents in Bipolar Disorder
Jose de Leon, M.D., Ana Gonzalez-Pinto, M.D., Miguel Gutierrez, M.D., Jose L. Perez Deheredia, M.D., Fernando Mosquera, M.D., Juan L. Figuerido-Poulain, M.D., Edorta Elizagarate, M.D.

NR250 Observational Study of the Response and Tolerance to Venlafaxine in Patients with Depression
Jeronimo Saiz-Ruiz, M.D., Dr. Angela Ibanez, Dr. Laura Ferrando, Dr. Francisco Arias, Dr. Jesus Padin, Dr. Manuel Martin, Prof. Jose Luis Carrasco, M.D.

NR251 Atypical Depression in Private Practice Outpatients
Franco Benazzi, M.D.

NR252 Bipolar Versus Unipolar Psychotic Outpatient Depression
Franco Benazzi, M.D.

NR253 Screening for Bipolar Disorder in Substance Users
Kevin L. Sloan, M.D., Dan R. Kivlahan, Ph.D., Andrew John Saxon, M.D.

NR254 Bipolar Disorder and Antidepressants
S. Nassir Ghaemi, M.D., Erica E. Boiman, B.A., Frederick K. Goodwin, M.D.

NR255 Nefazodone in the Treatment of Elderly Patients with Depression
Charles S. Wilcox, Ph.D., Robert David Linden, M.D., M. Frances D'Amico, M.S., Robert McQuade, Ph.D., Alan L. Schneider, M.D., Judy L. Morrissey, M.S.N., Jon F. Heiser, M.D.

NR256 Influence of ECT in the rCBF Studied by HMPAO-SPECT
Edorta Elizagarate, M.D., Ana Gonzalez-Pinto, M.D., Miguel Gutierrez, M.D., Jose L. Perez Deheredia, M.D., Julia Cortes, M.D., Ignacio Alonso, M.D., Pilar Alcorta, M.D.

NR257 Antenatal Depression and Early Development Milestones of the Offspring
Matti Joukamaa, Ph.D., Pirjo Maki, M.D., Matti K. Isohanni, M.D., Juha Veijola, Ph.D., Marjor-Riitta Jarvelin, Ph.D.

NR258 OCD with Comorbid Depression: A Comparison of Sertraline and Desipramine Treatment
Philip T. Ninan, M.D., Rudolf Hoehn-Saric, M.D., Stephen M. Stahl, M.D., Cathryn M. Clary, M.D., Wilma Marcia Harrison, M.D.

NR259 Citalopram for Premenstrual Dysphoria: Intermittent Versus Continuous Administration
Elias Eriksson, Ph.D., Ida Wikander, M.D., Bjorn Andersch, M.D., Inger Dagnell, M.D., Dimitri Zylberstein, M.D., Finn Bengtsson, M.D., Charlotta Sundblad, Ph.D.

NR260 Gender Differences in CSF Thyrotrophin Releasing Hormone
Mark A. Frye, M.D., Keith A. Gary, Ph.D., Teresa Huggins, Ph.D., John T. Little, M.D., Robert T. Dunn, M.D., Timothy A. Kimbrell, M.D., Robert M. Post, M.D.

NR261 Tryptophan Depletion in Premenstrual Dysphoric Disorder
A. Chris Heath, M.D., Kimberly A. Yonkers, M.D., Paul Orsulak, Ph.D., Michael J. Bennett, Ph.D., Robert Koonce, M.S., A. John Rush, M.D.

NR262 Effect of Gonadal Steroids on HPA Axis Function
Catherine A. Roca, M.D., Margaret Altemus, M.D., Peter J. Schmidt, M.D., Patricia Deuster, Ph.D., Philip W. Gold, M.D., Dennis L. Murphy, M.D., David R. Rubinow, M.D.

NR263 Serotonin Genetics in Personality Disorders
Antonia S. New, M.D., Joel Gelernter, M.D., Vivian Mitropoulou, M.A., Larry J. Siever, M.D.

NR264 Differences Between Clinical and Research Practice in Diagnosing Personality Disorders
Mark Zimmerman, M.D., Jill I. Mattia, Ph.D., Sharon Younken, B.A., Melissa Torres, B.A.

NR265 The Prevalence of the DSM-IV Impulse Control Disorders in Psychiatric Outpatients
Mark Zimmerman, M.D., Jill I. Mattia, Ph.D., Sharon Younken, B.A., Melissa Torres, B.A.

NR266 Body Dysmorphic Disorder in Psychiatric Outpatients
Mark Zimmerman, M.D., Jill I. Mattia, Ph.D., Sharon Younken, B.A., Melissa Torres, B.A.

NR267 History of Childhood Abuse and Personality Traits in Non-Psychiatric Adult Population
Stanley W. Raczek, M.D., Lindsay D. Paden, M.D.

NR268 Neuropsychological Assessment in Schizotypal Personality Disorder
Antonis Kotsaftis, Ph.D., Kay Kambfrakis, B.A., John Neale, Ph.D., Jean-Pierre Lindenmayer, M.D.

NR269 Personality Disorders in Penal Populations
Antonio Perez-Urdaniz, M.D., Vicente Rubio-Larrosa, M.D., Yolanda Riesco Perez, M.D., Juan A. Izquierdo Torre, M.D., Santiago Sanchez Iglesias, M.D., Juan Santos, M.D.

NR270 A Double-Blind Study of Risperidone for BPD
S. Charles Schulz, M.D., Kelly L. Camlin, L.S.W., Sally A. Berry, M.D., Lee Friedman, Ph.D.

NR271 Polypharmacy of BPD: Prescribing Patterns from a Naturalistic Setting
Karen J. Rosen, M.D., Elizabeth B. Simpson, M.D., Teri B. Pearlstein, M.D., Jacqueline Pistorello, Ellen Costello, Ph.D., Ann Begin, Ph.D.

NR272 Pindolol Augmentation of Fluoxetine for Bulimia
Robert M. Berman, M.D., Carlos M. Grilo, Ph.D., Robin Masheb, Ph.D., Elayne Daniels, Ph.D., Diane Mickley, M.D., David Greenfield, M.D., Dennis S. Charney, M.D.

NR273 Controlled Clinical Trial for Binge Eating Disorder
Carlos M. Grilo, Ph.D., Robert M. Berman, M.D., Elayne Daniels, Ph.D., Robin Masheb, Ph.D., Thomas H. McGlashan, M.D., Terence G. Wilson, Ph.D., George R. Heninger, M.D.

NR274 Suicide Risk Predictors in Abused Adolescents
Carlos M. Grilo, Ph.D., Dwain C. Fehon, Ph.D., Charles A. Sanislow, Ph.D., Deborah Lipschitz, M.D., Steve Martino, Ph.D., Thomas H. McGlashan, M.D.

R275 Childhood Anorexia Nervosa and the Possibility of Antibiotic Treatment
Mae S. Sokol, M.D.

NR276 Serotonin-1A Receptor Sensitivity in Bulimia
Barbara E. Wolfe, Ph.D., Eran D. Metzger, M.D., David C. Jimerson, M.D.

NR277 Eating Disorders in a National Sample of Hospitalized Female and Male Veterans: Prevalence and Psychiatric Comorbidity
Ruth H. Striegel-Moore, Ph.D., Vicki Garvin, Ph.D, Faith-Anne Doam, Ph.D., Robert A. Rosenheck, M.D.

NR278 Body Image Satisfaction in the United States Versus India School Kids
Arnold E. Andersen, M.D., Sanjay Gupta, M.D., Jeffery Van Engelenhoven, B.S., Rohit Jaiman, M.B.

NR279 Psychiatric Disorders in Patients with Rheumatic Fever
Marcos T. Mercadante, M.D., Lisa P.G. Prado, Paul J. Lombroso, M.D., M.Conceicao do Rosar Campos, M.D., James F. Leckman, M.D., Maria J. Marques-Dias, M.D., Euripedes C. Miguel, M.D.

NR280 Panic Disorder and the Immune System
Steven J. Schleifer, M.D., Steven E. Keller, Ph.D., Jacqueline A. Bartlett, M.D.

NR281 Donepezil Produces Both Clinical Global and Cognitive Test Improvement in Patients with Alzheimer's Disease
Serge Gauthier, M.D., Martin Rosser, M.D., Jane Hecker, M.B., H. Petite, M.D., Sharon Rogers, M.D., Erich Mohr, Ph.D., Alistair Burns, M.D., Lawrence T. Friedhoff, M.D.

NR282 Can Cognitive-Behavior Therapy Substitute Medication for Controlling Panic Attacks and Anxiety Symptoms?
Young Hee Choi, M.D., Jung Heum Lee

NR283 Sequencing Medication and Cognitive Behavioral Therapies for OCD
Laurence B. Guttmacher, M.D., Jeffrey C. Levenkron, Ph.D., Katharyne M. Sullivan, M.D.

NR284 Psychosocial Treatment in Late-Life Anxiety
Laszlo A. Papp, M.D., Ethan Gorenstein, Ph.D., Marc Kleber, Ph.D., Marybeth de Jesus, B.A.

NR285 Cognitive-Behavior Therapy and Medication in the Treatment of OCD: A Pilot Study
Christo G. Todorov, M.D., Kieron O'Connor, Ph.D., Sophie Robillard, M.S.C., Francois Borgeat, M.D., Mathilde Brault, M.S.C.

NR286 Strong Association Between Suicidal Ideation and Ratings of Limbic System Irritability in Children with a History of Early Abuse
Martin H. Teicher, M.D., Yutaka Ito, M.D., Carol A. Glod, Ph.D., Erika Ackerman, B.S.

NR287 Neurophysins and Temperature Responses to Flesinoxan, Serotonin Agonist, in Major Depression: Relationship with Suicidal Behavior
William Pitchot, Ph.D., Michel Hansenne, B.Sc., Marc M. Ansseau, Ph.D., Jean-Jacques Legros, Ph.D.

NR288 Eating Attitudes in Rural Zulu Adolescents in South Africa
Christopher P. Szabo, M.D., Clifford W. Allwood, M.D.

NR289 Suicidal Ideation During Pregnancy
Alexis M. Llewellyn, B.A., Zachary N. Stowe, M.D., Amy Hostetter, B.A., James R. Strader, Jr., B.S.

NR290 Repetition of Para-Suicide in Young French People
Francoise Chastang, M.D., Isabelle Dupont, M.D., Patrice Rioux, M.D., Vivianne Kovess, M.D., Edouard Zarifian, M.D.

NR291 Repeated Suicide Attempters in French People Over Age 30
Francoise Chastang, M.D., Isabelle Dupont, M.D., Patrice Rioux, M.D., Vivianne Kovess, M.D., Edouard Zarifian, M.D.

NR292 Association Between the Tryptophan Hydroxylase Gene and Suicidal Behavior
Philippe Courtet, M.D., Catherine Buresi, M.D., Mocrane Abbar, M.D., Jean-Philipe Boulenger, M.D., Didier Castelnau, M.D., Alain Malafosse, M.D.

NR293 Age and Suicidal Ideation in Older Inpatients
Paul R. Duberstein, Ph.D., Yeates Conwell, M.D., Christopher Cox, Ph.D.

NR294 Child Sexual Abuse and Suicide Attempts in Elders
Nancy L. Talbot, Ph.D., Paul R. Duberstein, Ph.D., Yeates Conwell, M.D., Diane Gill, M.Ed.

NR295 Suicide Risk in Adolescents with Substance Use Disorders
Keith Cheng, M.D., Kathleen M. Myers, M.D., Laura A. Proud, B.A., Louis Homer, Ph.D., Randy Riedel, B.S.

NR296 Assessment of Psychoactive Substance Use Disorders
Keith Cheng, M.D., Kathleen M. Myers, M.D., Laura A. Proud, B.A., Louis Homer, Ph.D., Randy Riedel, B.S.

NR297 Child Psychiatric Disorders in United Arab Emirates
Valsamma Eapen, Ph.D., L.S. Al-Ghazali, S. Bin Othman, M.T. Abou-Saleh, M.D.

NR298 Flumazenil Challenge Test in Social Phobia
Nick J. Coupland, M.D., Caroline Bell, M.D., John P. Potokar, M.D., Jayne E. Bailey, B.Sc., David J. Nutt, M.D.

NR299 Mirtazapine in Patients with Irritable Bowel Syndrome
Sheila M. Seay, M.A., Claudia M. Lizarralde, M.D., Corrina Ferguson, M.S.W., Teresa A. Pigott, M.D.

NR300 Variability of ECT Peak and Baseline Heart Rates
Conrad M. Swartz, M.D.

NR301 Repetitive Transcranial Magnetic Stimulation of the Left Dorsolateral Pre-Frontal Cortex in Depressed Patients
Richard A. Greer, M.D., William J. Triggs, M.D.

NR302 Herb Use in Subjects Assessed for Clinical Trials
Naresh P. Emmanuel, M.D., Carolyn Cosby, R.N., Marsha Crawford, R.N., Olga Brawman-Mintzer, M.D., Sarah W. Book, M.D., Rebecca Kapp, R.N., Alex Morton, Pharm.D., Michael R. Johnson, M.D., Jeffrey P. Lorberbaum, M.D., Cathie Jones, B.A., R. Bruce Lydiard, M.D.

NR303 Quality of Life Difference: Sertraline and Placebo Panic Responders
Mark H. Rapaport, M.D., Robert Wolkow, M.D., Cathryn M. Clary, M.D.

NR304 Effect of Oral Sildenafil on Intercourse Success in Patients with Erectile Dysfunction of Broad-Spectrum Etiology
Pierre Wicker, M.D., Michael W. Sweeney, M.D.

NR305 The Temperament and Character Inventory in a French Community Sample
Antoine Pelissolo, M.D., Eric Guillem, M.D., Dr. Stephany Orain, Jean-Pierre Lepine, M.D.

NR306 The Psychophysiologic Response in Korean Patients with Conversion Disorder
Sang Keun Chung, M.D., Ik-Keun Hwang, M.D.

NR307 Validation of a Computer Version of the Hamilton Anxiety Scale Administered Over the Telephone via Interactive Voice Response
Kenneth A. Kobak, Ph.D., John H. Greist, M.D., James W. Jefferson, M.D., David J. Katzelnick, M.D., Revere Greist, B.A.

NR308 Depression in Cancer Patients Treated with Bone Marrow Transplantation: A One-Year, Longitudinal Study
Jesus M. Prieto, M.D., Jorge Atala, M.D., Jordi Blanch, M.D., Esteve Cirera, Enric Carreras, M.D., Cristobal Gasto, M.D.

R309 Depression, Coping, Social Support and Electrogastrography of the Functional Dyspepsia
Sang-Yeol Lee, M.D., Min-Cheol Oark, M.D., Suk-Chei Choi, M.D., Yong-Ho Nah, M.D.

NR310 Mental Disorders in Bone Marrow Transplantation Patients During the Germ-Free Isolation Period
Rie Akaho, M.D., Tsukasa Sasaki, M.D., Miyo Yoshino, Ph.D., Katsuko Hagiya, Ph.D., Yutaka Shinohara, M.D., Hideki Akiyama, M.D., Hisashi Sakamaki, M.D.

NR311 Use of Carbohydrate Deficient Transferrin in Liver Transplantation
Mario Finkelstein, M.D., James M. Hill, Ph.D., Saila B. Donepudi, M.D., Baburao Koneru, M.D., Adrian Fischer, M.D., Dorothy Nolan, R.N., Barbara Smith, R.N., Jacqueline A. Bartlett, M.D.

NR312 Trait Impulsivity As a Predictor of HIV Risk and Criminality Among Substance Abusers
Lon R. Hays, M.D., David Farabee, Ph.D., T.K. Logan, Ph.D.

NR313 Effect of Alcohol on Testicular Histology
Jin-Sook Cheon, M.D., Byoung-Hoon Oh, M.D.

NR314 WITHDRAWN

NR315 Pregnancy and Buprenorphine Maintenance
Gabriele Fischer, M.D., Dr. Reinhold Jagsch, M.A.G., Christine Nagy, M.D., Claudia Lennkh, M.D., Harald Eder, Wolfgang Gombas, M.D., Martin Langer, P.O.Z.

NR316 Chronic Cocaine Reverses Prepulse Inhibition Discruption in Rats
Ronald P. Hammer, Ph.D., John J. Byrnes, Ph.D.

NR317 Access to Follow-Up Care by Dual Diagnosis Patients
Lawrence Appleby, Ph.D., J.D., Vida Dyson, Ph.D., Daniel J. Luchins, M.D.

NR318 Contingency Treatment of Cocaine Use in Herion Addicts Receiving Methadone
Chandresh Shah, M.D., Marites Del Rosario, M.D., Lena Simitian, Pharm.D.

NR319 Dual Diagnosis in the Paris Area
Francois Petitjean, M.D., Corinne Launay, M.D., Delphine Antoine, M.D., Fabienne Perdereau, M.D.

NR320 Fluoxetine in Severe Alcohol Dependence
David Huertas, M.D., Santiago Bautista, M.D., Juan Molina, M.D., Lorenzo Chamorro, M.D., Inmaculada Gilaberte, M.D.

NR321 A Six-Month Prospective Study of the Treatment of Sedative-Hypnotic Dependence
Dara A. Charney, M.D., Antonios M. Paraherakis, M.Sc., Kathryn J. Gill, Ph.D.

NR322 Suicide Notes: A Content Analysis Between Younger and Older Victims
Daniel Castellanos, M.D., Noel A. Cabrera, M.D., Jon A. Shaw, M.D.

NR323 Clinical and Psychological Characteristics of Familial Alcoholism Reevaluated
Frederic Limosin, M.D., Philip A. Gorwood, M.D., Jean Ades, M.D.

NR324 Childhood Trauma and Depression in Alcoholics
Alec Roy, M.D.

NR325 Alcohol Problems and Age of Onset
Bankole Johnson, M.D., Patrick Bordnick, Ph.D., Michelle Shenberger, M.Ed., Lynn Ratkos, R.N., Leanne Vogelson, B.S., Angela Kimble, B.S.

NEW RESEARCH

Tuesday, June 2, 1998, 3:00 p.m.-5:00 p.m.

New Research 8 – Poster Session – Room 106, Lower Level, Convention Centre

GERIATRIC, BIOLOGICAL, ADDICTION, AND CROSS-CULTURAL AND MINORITY PSYCHIATRY; COGNITIVE, SEXUAL AND GENDER DISORDERS; BRAIN IMAGING; AIDS; GENETICS; NEUROBIOLOGY; NEUROPSYCHIATRY; AND VIOLENCE

Moderator: Richard Balon, M.D.

NR326 MRI Signal Hyperintensities in Hypertensive Elderly Patients With and Without Depression
Blaine S. Greenwald, M.D., Elisse Kramer-Ginsberg, Ph.D., K. Ranga Rama Krishnan, M.D., Manzar Ashtari, Ph.D., J. Hu, M.D., Mahendra C. Patel, M.D., Neil J. Kremen, M.D., Simcha Pollack, Ph.D.

NR327 Recurrence Following Discontinuation of Maintenance Antidepressant Medication for First-Episode Geriatric Depression
Alastair J. Flint, M.B., Sandra L. Rifat, Ph.D.

NR328 Venlafaxine and Blood Pressure: A Meta-Analysis of Original Data in Depression
Michael E. Thase, M.D.

NR329 Negative Symptoms and Their Relationship with Other Neuropsychiatric Symptoms in Patients with Alzheimer's Disease
Arnaldo E. Negron, M.D.

NR330 Risperidone in the Treatment of Psychosis and Aggressive Behavior in Patients with Dementia
Ira R. Katz, M.D., Dilip V. Jeste, M.D., Jacobo E. Mintzer, M.D., Christopher Clyde, M.S., Judy Napolitano, R.N., Martin B. Brecher, M.D., Risperidone Study Group

NR331 Olanzapine Therapy in Elderly Patients with Schizophrenia
Martha Sajatovic, M.D., Dalia Perez, M.D., Debra W. Brescan, M.D., Lucita Ching Pimentel, M.D., Luis F. Ramirez, M.D.

NR332 Anxiety in Older Primary Care Patients
Ajaya K. Upadhyaya, M.D., Jeffrey M. Lyness, M.D., Christopher Cox, Ph.D., Larry Seidlitz, Ph.D., Eric D. Caine, M.D.

NR333 Visual Hallucinations in Charles Bonnet Syndrome
Janis G. Chester, M.D., Daniel A. Monti, M.D.

NR334 Sertraline Versus Nortriptyline in the Depressed Elderly
Arnold J. Friendhoff, M.D., Murray Alpert, Ph.D., Cathryn M. Clary, M.D., Ellen Richter, Ph.D.

NR335 Safety And Efficacy of Long-Term ECT in the Very Old
Mustafa M. Husain, M.D., Tommie Tipton, R.N., Aaron Van Wright, M.D., Aneela Ahmed, M.D., A. John Rush, M.D.

NR336 Pharmacokinetics of Reboxetine in Elderly Volunteers and Depressed Patients
Erik H.F. Wong, Ph.D.

NR337 Reboxetine Is As Effective and Better Tolerated than Imipramine in Elderly Patients with Depression
Cornelius L. Katona, M.D.

NR338 The Impact of Social Support on End-of-Life Treatment Preferences
Sid M. Hosseini, D.O., Paul E. Ruskin, M.D., Kumar Menon, M.D., Allen Raskin, Ph.D.

NR339 Relationship of Alcohol Use and APOE Genotype to Age of Onset in Alzheimer's Disease
Krishnaswamy Gajaraj, M.D., Raymond L. Ownby, M.D., Dylan Harwood, M.A., Warren W. Barker, M.S., Ranjan Duara, M.D., Peter St George-Hyslop, M.D.

NR340 Profile of Discrete Emotions in Major and Minor Depression in Older Primary Care Patients
Larry Seidlitz, Ph.D., Jeffrey M. Lyness, M.D., Yeates Conwell, M.D., Paul R. Duberstein, Ph.D., Christopher Cox, Ph.D.

NR341 Delusional Parasitosis in Young and Elderly Patients
Michael Musalek, M.D., Elizabeth Denk, M.D., Ali Zoghlami, M.D., Ullrike Moosbacher, M.D.

NR342 Follow-up Study of Risperidone in the Treatment of Patients with Dementia: Interim Results on Tardive Dyskinesia and Dyskinesia Severity
Martin B. Brecher, M.D.

NR343 Risperidone in the Treatment of Behavioral Disturbances in Dementia
Philippe Lemmens, Ph.D., Peter DeDyne, M.D., Goedele DeSmedt, M.D.

NR344 Past Utilization of Geriatric Psychiatry Outpatient Services by a Cohort of Major Depressives
Peter M. Aupperle, M.D., Andrew C. Coyne, Ph.D., Rebecca Lifchus, B.A.

NR345 Functional Brain Activity in Alzheimer's Disease
Larry E. Tune, M.D., Paul J. Tiseo, Ph.D., John M. Hoffman, M.D., Carlos A. Perdomo, M.S., John R. Votow, Ph.D., Sharon L. Rogers, Ph.D., Lawrence T. Friedhoff, M.D.

NR346 Donepezil Improves Cognitive and Clinical Global Function in Patients with Alzheimer's Disease
Lawrence T. Friedhoff, M.D., Sharon L. Rogers, Ph.D., John R. Ieni, Ph.D., Raymond D. Pratt, M.D.

NR347 AD7C-NTP Is Specifically Elevated in Alzheimer's Disease
Hossein A. Ghanbari, Ph.D., Michael Munzar, M.D., Kasra Ghanbari, Paul Averback, M.D.

NR348 Olanzapine in the Treatment of Delirium
Prakash S. Masand, M.D., Anil Sipahimalani, M.D.

NR349 Schizophrenia and Irritable Bowel Syndrome: A Cross-Cultural Study
Prakash S. Masand, M.D., Charles Pinto, M.D., Sanjay Gupta, M.D., David E. Kaplan, M.D.

NR350 Memory and Aging in Adults with Down's Syndrome
Karen L. Brugge, M.D.

NR351 A Bridging Study of Metrifonate in Patients with Probable Alzheimer's Disease
Jerome F. Costa, M.D., Pamela Ann Cyrus, M.D., John J. Sramek, Pharm.D., Florian Bieber, M.D., Paul Tanpiengco, M.S., Barbara Gulanski, M.D., Neal R. Cutler, M.D.

NR352 Delirium in Terminal Cancer: A Prospective Study on Incidence and Prevalence
Pierre R. Gagnon, M.D., Pierre Allard, M.D., Benoit Masse, Ph.D.

NR353 Relationship of Negative Symptoms to Functional Status in Alzheimer's Disease
William E. Reichman, M.D., Andrew C. Coyne, Ph.D., Sudarshan Bagchi, M.D., Sandra Egan, R.N.C.

NR354 Donepezil Safety in a Large-Scale, Open-Label Alzheimer's Disease Trial Compares to That in Pivotal Trials
William E. Reichman, M.D., Thomas D. McRae, M.D., Donepezil 313 Study Group

NR355 The Effects of Atypical Antipsychotic Drugs on Cognitive Function in Schizophrenia
Susan R. McGurk, Ph.D., Herbert Y. Metzler, M.D.

NR356 The Effects of Nicotine in Parkinson's Disease
Paul A. Newhouse, M.D., Jaskaran Singh, M.D., Christina Conrath, M.S., Megan Kelton, B.S.

NR357 Enhanced Cortisol Response to Ipsapirone in Mania
Lakshmi N. Yatham, I.S. Shiah, M.D., Raymond W. Lam, M.D., Edwin M. Tam, M.D., A.P. Zis, M.D.

NR358 Comparison of Prolactin Levels in Post-Menopausal Women Treated with Risperidone or Conventional Neuroleptics
Giovanni Caracci, M.D., Renuka Ananthamoorthy, M.D.

NR359 Tryptophan Depletion Challenge in Depressed Outpatients: Relationship with Response Pattern
Maya K. Spillmann, M.D., Meridith Rankin, B.A., Rachel D. McColl, B.A., Jonathan E. Ipert, M.D., Andrew A. Nierenberg, M.D., Jerrold F. Rosenbaum, M.D., Maurizio Fava, M.D.

NR360 Serotonin Receptors of Type 2C in Human Brain
Donatella Marazziti, M.D., Alessandra Rossi, Ph.D., Gino Giannaccini, Ph.D., Antonio Lucacchini, Ph.D., Giovanni B. Cassano, M.D.

NR361 ECT-Induced Amnesia and Cholinergic Mechanisms
Gary M. Hasey, M.D., Robert G. Cooke, Jerry J. Warsh, M.D., Isaac Smith, M.Sc., Barry Martin, M.D.

NR362 Clinical Features of Psychosis in Deaf Adults
Barbara G. Haskins, M.D.

NR363 Mirtazapine's Effect on Plasma Prolactin Levels
Linda M. Nicholas, M.D., Sharon M. Esposito, M.D., Amy L. Ford, M.A., Amy D. Heine, M.S., R. David Ekstrom, Ph.D., Robert N. Golden, M.D.

NR364 Delayed Phase Synchronization of EEG Response to 40 Hz Auditory Stimulation in Schizophrenia
Jun Soo Kwon, M.D., Brian F. O'Donnell, Ph.D., Gene V. Wallenstein, Ph.D., Robert W. Greene, M.D., Yoshio Hirayasu, M.D., Paul G. Nestor, Ph.D., Robert W. McCarley, M.D.

NR365 CSF Monoamines During Tryptophan Depletion in Depression: Implications for Pathophysiology and Antidepressant Pharmacodynamics
Ronald M. Salomon, M.D., John S. Kennedy, M.D., Dennis Schmidt, Ph.D., Benjamin Johnson, M.D., Pedro L. Delgado, M.D., Richard C. Shelton, M.D., Michael H. Ebert, M.D.

NR366 Sertraline Versus Paroxetine in Major Depression: A Multicenter Double-Blind, 24-Week Comparison
Hans Agren, Ph.D., Anna Aberg-Wistedt, M.D., Ann-Charlotte Akerblad, M.Sc.

NR367 Neurochemical Effects of Amphetamine in Chronic Schizophrenia Patients
Tung-Ping Su, M.D., Alan Breier, M.D., David Pickar, M.D.

NR368 QEEG in Dissociative Disorders
James S. Lawson, Ph.D., Susan J. Adams, B.M., Donald W. Brunet, M.D., Margarita Criollo, M.D., Howard Galin, M.A., Pierre P. Leichner, M.D., Duncan J. MacCrimmon, M.D.

NR369 Neuroanatomical Correlates of Anticipatory Anxiety: A PET Study of CCK-4-Induced Anxiety
Mahan Javanmard, B.S.C., Jakov Shlik, M.D., Sidney H. Kennedy, M.D., Jacques Bradwejn, M.D.

NR370 A Time Course Study of CCK-4-Induced Panic Attacks in Healthy Volunteers: A PET Study
Mahan Javanmard, B.S.C., Jakov Shlik, M.D., Sidney H. Kennedy, M.D., Jacques Bradwejn, M.D.

NR371 Activation Paradigm in fMRI with Depression: A Study with Passive Viewing of Emotionally-Laden Films
Emmanuel Stip, M.D., Mario Beauregard, Ph.D., Pierre Bourgouin, M.D., Gilles Beaudouin, Ph.D.

NR372 Clinical Response to Antidepressants Is Associated with Reduced Frontal CBF in Late-Life Depression
Mitchell S. Nobler, M.D., Harold A. Sackeim, Ph.D., Judy Louie, B.A., Isak Prohovnik, Ph.D., Steven P. Roose, M.D., Ronald Van Heertum, M.D.

NR373 Functional Imaging: A Necessary Prerequisite to Neuropsychological Assessment
Edward H. Tobe, D.O., Theodore I. Lidsky, Ph.D., P. David Mozley, Jr., M.D., Jay S. Schneider, Ph.D.

NR374 Pharmacokinetic and Pharmacodynamic Study of Multiple Doses of Fluoxetine and Zolpidem When Coadministered to Healthy Women
Stephane Allard, M.D., Steve Sainati, M.D.

NR375 Behavioral Disorders and rCBF in Alzheimer's Disease
Philippe H. Robert, M.D., Ina Dygai, M.D., Octave Migneco, M.D., Jacques Darcourt, M.D., Sophie Vincent, M.D., Dominique Pringuey, M.D.

NR376 MRI in Pervasive Development Disorder During Adulthood
Francois P. Monnet, M.D., Liliana Feldman, M.D., Dung Chu-Ba, M.D., Mary S.E. Mahe, S.N., Catherine Milcent, M.D.

NR377 Brain Imaging and Neurometabolite Levels in Chronic Fatigue Syndrome
Subhendra N. Sarkar, Ph.D.

NR378 Mild Brain Trauma in Psychiatry and Radiology
Subhendra N. Sarkar, Ph.D., Jay W. Seastrunk II, M.D., Steven R. Kreibaum, Ph.D., G. Gregory, M.D., John C. Krusz, M.D.

NR379 HLA-DR1 and Schizophrenia in the Japanese Population
Tsukasa Sasaki, M.D., Rie Akaho, M.D., Masaki Matsushita, B.Sc., Shinichiro Nanko, M.D., Katsushi Tokunaga, Ph.D.

NR380 Association Between Sex and Serotonin Transporter Gene in OCD
Maria Cristina Cavallini, M.D., Daniela DiBella, M.D., Emanuela Mundo, M.D., Laura Bianchi, M.D., Livia Martucci, M.S., Laura Bellodi, M.D.

NR381 Mouse Candidate Loci for Panic Disorder
Jordan W. Smoller, M.D., Jerrold F. Rosenbaum, M.D., Mark H. Pollack, M.D., Joseph Biederman, M.D., Maria Bulzachelli, B.A., Derek Moody, B.S., Lisa Helbling, B.S.

NR382 OCD with Tics: Analysis of Dopamine System Genes
Margaret A. Richter, M.D., Fariba Sam, B.Sc., Laura J. Summerfeldt, M.A., Richard P. Swinson, M.D., Wendy J. Hiscox, R.N., James L. Kennedy, M.D.

NR383 Molecular Genetics Studies of Panic Disorder
Nicole A. King, Diana Koszycki, Ph.D., Jacques Bradwejn, M.D., James L. Kennedy, M.D.

NR384 Genetics of Tardive Dyskinesia: Role of Dopamine D3 Receptor and Serotonin
Fabio MacCiardi, M.D., Roberto Cavallaro, M.D., James L. Kennedy, M.D., Enrico Smeraldi, M.D.

NR385 Bulimia and SAD: Serotonin Gene Analysis
Mario Masellis, M.Sc., Robert D. Levitan, M.D., Emily Strong, Sidney H. Kennedy, M.D., Allan S. Kaplan, M.D., Fariba Sam, B.Sc., James L. Kennedy, M.D.

NR386 Dopamine Receptors Gene: Association with Tardive Dyskinesia
Vincenzo Basile, BSC, Mario Masellis, M.Sc., Andrew D. Paterson, M.B., Herbert Y. Meltzer, M.D., Jeffrey A. Lieberman, M.D., Steven G. Potkin, M.D., James L. Kennedy, M.D.

NR387 Genetic Association of Serotonin System Genes with Bipolar Disorder
Wendy J. Hiscox, R.N., John B. Vincent, Ph.D., Mario Masellis, M.Sc., Sagar V. Parikh, M.D., J. Lawrence, H.M.D. Gurling, James L. Kennedy, M.D.

NR388 Is Unstable DNA Involved in the Etiology of Bipolar Disorder?
John B. Vincent, Ph.D., Sagar V. Parikh, M.D., Art Petronis, Ph.D., Wendy J. Hiscox, R.N., Hesther M. Tims, R.N., Catherine Moravac, B.Sc., James L. Kennedy, M.D.

NR389 Is Serotonin Transporter Gene Associated with Pathological Gambling?
Dr. Angela Ibanez, Jeronimo Saiz-Ruiz, M.D., Ignacio Perez de Castro, Jose Fernandez-Piqueras

NR390 Dopamine Receptor Genes and Pathological Gambling
Jeronimo Saiz-Ruiz, M.D., Dr. Angela Ibanez, Ignacio Perez de Castro, Jose Fernandez-Piqueras

NR391 Genetic Analysis of Serotonin System Genes in OCD
Fariba Sam, B.Sc., Margaret A. Richter, M.D., Richard P. Swinson, M.D., Xiao-Yan Dai, M.D., Laura J. Summerfeldt, M.A., James L. Kennedy, M.D.

NR392 Once-Daily Venlafaxine XR Versus Fluoxetine in Outpatients with Depression and Concomitant Anxiety
Peter H. Silverstone, M.D., Arun V. Ravindran, M.D., Rene Hamel

NR393 CSF Monoamine Metabolites in Tryptophan Depletion
Francisco A. Moreno, M.D., Cameron McGavin, Philip Malan, M.D., Alan J. Gelenberg, M.D., George R. Heninger, M.D., Aleksander A. Mathe, M.D., Pedro L. Delgado, M.D.

NR394 Impact of Neonatal Stress on Neuronal Activity
Zachary N. Stowe, M.D., Zhongliang Tang, Ph.D., Paul M. Plotsky, Ph.D.

NR395 The Overt Agitation Severity Scale for the Objective Rating of Agitation
Stuart C. Yudofsky, M.D., Heather J. Kopecky, Ph.D., Jean Endicott, Ph.D., Mark E. Kunik, M.D., John M. Silver, M.D.

NR396 Effects of Acetylcholinesterase Inhibitor Rivastigmine on PET Scan in Alzheimer's Disease
Mahmoud A. Parsa, M.D., Bijan Bastani, M.D., Nora K. McNamara, M.D., Gregory P. Leisure, Flora D. Miraldi, M.D.

NR397 Asperger's Disorder: Neuropsychological Profile, Developmental Trends and Comorbidity
Gahan J. Pandina, M.A., Robert L. Hendren, D.O., Janean Dilworth, Alyson Aviv, Ph.D., Katy Butler, Ph.D.

NR398 Deconstructing Speech Fluency in Alogia
Antonis Kotsaftis, Ph.D., Murray Alpert, Ph.D., Enrigue Pouget, B.A., Fotini-Sonia Aperghi, M.A., Jean-Pierre Lindenmayer, M.D.

NR399 Emotion Mediated Startle Response in Schizophrenia
Antonis Kotsaftis, Ph.D., John Neale, Ph.D., Themistoklis Theofilaktidis, B.A., Jean-Pierre Lindenmayer, M.D.

NR400 Baseline Asymmetry in Right Temporal Lobe
Fredric Schiffer, M.D., Carl Anderson, Ph.D., Perry F. Renshaw, M.D., Louis Maas, Martin H. Teicher, M.D.

NR401 The Safety and Efficacy of Sertraline in the Treatment of Depression Concomitant to Parkinson's Disease
R. Jolyon Meara, M.D., Bimal K. Bhowmick, M.D., Peter Hobson, B.S.

NR402 A Pilot Study to Evaluate the Efficacy of Sertraline in the Management of Emotional Liability Following Stroke
Alistair Burns, M.D., Eve Russell, M.D., Hilary Stratton-Powell, R.M.N.

NR403 Prevalence and Clinical Significance of OCD in Schizophrenia Patients
Stephanie Krueger, M.D., Peter Braeunig, M.D., Juergen Hoeffler, M.D., Ingrid Boerner, M.D.

NR404 The General Health Questionnaire in Screening for Rape Victim PTSD
Jean-Michel Darves-Bornoz, M.D., Jean-Pierre Lepine, M.D., Andree Degiovanni, Philippe Gaillarp

NR405 Discontinuation of SSRIs in Traumatized Refugees
Stevan M. Weine, M.D., Amer Smajkic, M.D., Zvezdana Djune Bijedic, M.D., Nenad Brkic, M.D., Ivan Pavkovic, M.D.

NR406 Correlates of Community Violence Exposure
Dwain C. Fehon, Ph.D., Carlos M. Grilo, Ph.D., Deborah Lipschitz, M.D., Robin Jilton, Ph.D., Steve Martino, Ph.D.

NR407 Blunted Prolactin Response to Phenfluramine Challenge in Unipolar Major Depression with Anger Attacks
Maurizio Fava, M.D., Rachel D. McColl, B.A., Emma C. Wright, B.S., Andrew A. Nierenberg, M.D., Jonathan E. Alpert, M.D., Jerrold F. Rosenbaum, M.D.

NR408 Correlates of Dissociative Symptoms in Adolescents
Deborah Lipschitz, M.D., Carlos M. Grilo, Ph.D., Robin Jilton, Ph.D.

NR409 Correlates of Community Violence Exposure in Adolescents
Deborah Lipschitz, M.D., Carlos M. Grilo, Ph.D., Robin Jilton, Ph.D., Dwain C. Fehon, Ph.D., Thomas H. McGlashan, M.D.

NR410 Peritraumatic Dissociation in a Group of Plane Crash Survivors
Philippe J.R. Birmes, M.D., Alexandre Arrieu, M.D., A. Payen, M.D., Barbara A. Warner, M.D., P.A. Delpla, M.D., Laurent J. Schmitt, M.D.

NR411 Characteristics of Domestic Violence in a Mentally Ill Population
Janet E. Johnson, M.D., Jessica L. McMahon, B.S., Phillip T. Griffin, Ph.D., Robert G. Ellis, M.D., J. Kevin Jackson, M.D., David Harry Mielke, M.D.

NR412 Patterns of Cocaine Utilization, Availability of Funds and Acute Care
Ronald C. Rosenberg, M.D., Melanie E. Schwarz, M.D., Michael H. Allen, M.D.

NR413 Survey of Hepatitis B and C in an Addiction Treatment Unit
Vasant P. Dhopesh, M.D., Keitha Taylor, R.N., Wayne Macfadden, M.D., Elmer Yu, M.D.

NR414 Depressive Symptoms in Dually Diagnosed Patients
Cynthia A. Pristach, M.D., Cedric M. Smith, M.D.

NR415 The Ability of Pregnant Women to Complete a Detox Program
Wendy L. Weinstein, M.D., Michele T. Pato, M.D.

NR416 Searching for Universals: Evidence for the Validity of Substance Abuse Subtypes in a Sample of Mexican-American Youths
Jose M. Pena, M.D., Joan D. Koss-Chioino, Ph.D, Curt Bay, Ph.D.

NR417 The Influence of Social Networks on Sexual Risk Behavior
Cheryl Gore-Felton, Ph.D., Cheryl Koopman, Ph.D., David Spiegel, M.D.

NR418 Changes in Ways of Coping Across the Phases of Brief Psychotherapy for Persons with HIV: Do the Poor Get Richer?
Ari E. Zaretsky, M.D.

NR419 Sexually Transmitted Disease Risk Behaviors of Male Psychiatric Outpatients
John H. Coverdale, M.D.

NR420 Risperidone Versus Classical Neuroleptics: Preliminary Results of a Prospective Naturalistic One-Year Study
Roch H. Bouchard, M.D., Chantal Merette, Ph.D., Marie-France Demers, M.Sc., Marie-Helene Roy-Gagnon, M.Sc., Study Group Quebec

NR421 Cognitive Reserve Effects on HIV-1 Disease Progression: A Survival Analysis
Susan G. Silva, Ph.D., Eric D. Jackson, B.S., Kristi Lanning, B.S., Jane Leserman, Ph.D., Robert N. Golden, M.D., Diana O. Perkins, M.D., Dwight L. Evans, M.D.

NR422 Cognitive Impairment in HIV-1 Infected Patients: The Role of Education
Vittorio Volterra, M.D., Diana De Ronchi, M.D., Laura Fratiglioni, Ph.D., Marco Degli Esposti, M.D.

NR423 Depression and Social Support in Mexican-American Gay Men with AIDS
Cervando Martinez, Jr., M.D., Ellen Slaten, Ph.D., Margaret Hoppe, Ph.D.

NR424 Psychiatric Features of 30 Sex Offenders
Susan L. McElroy, M.D., Cesar A. Soutullo, M.D., Purcell Taylor, Jr., Ed.D., Erik B. Nelson, M.D., DeAnna A. Beckman, M.S.W., Paul E. Keck, Jr., M.D., Stephen M. Strakowski, M.D.

NR425 New Antipsychotic-Induced Sexual Dysfunction: Comparative Incidence with Risperidone and Olanzapine Using a Questionnaire
Angel L. Montejo, M.D., Gines Llorca, M.D., Juan A. Izquierdo, M.D., Jesus Ciudad, M.D., Santiago Sanchez Iglesias, M.D., Alfonso Ledesma-Jimeno, M.D., Enrique Daniel, M.D.

NR426 Estrogen Replacement Therapy Status and Antidepressant to Sertraline
Lon S. Schneider, M.D., Gary W. Small, M.D., Cathryn M. Clary, M.D.

NR427 The Diagnostic Interview Summary for Deaf Patients on Interactive Video: A Preliminary Investigation
Annie G. Steinberg, M.D., Marjorie Goldstein, Ph.D., Elizabeth Eckhardt, C.S.W., Doug Lipton, Ph.D., Vicki J. Sullivan, R.D.T.

NR428 Low Incidence of Schizophrenia in Hmong Patients Compared to Other Southeast Asian Refugee Groups
Jerome L. Kroll, M.D., Moua Vang, B.A.

NR429 Ethnic Differences in Depression and Its Correlates
Sukanya Ray, Ph.D., Vinita Leslie, M.A., Karen Sullivan, B.A., Kalenga Munungo, B.A., Maurizio Fava, M.D.

NR430 Extrapyramidal Side Effects and Antipsychotic Use in India
H.S. Dhavale, M.D., A. Rane, M.D., J. Apte, M.D., Charles Pinto, M.D., Mantosh J. Dewan, M.D.

NR431 BPD Exists in India
Charles Pinto, M.D., H.S. Dhavale, M.D., Shanta Nair, M.D., B. Patil, M.D., Mantosh J. Dewan, M.D.

NEW RESEARCH

Wednesday, June 3, 1998, 9:00 a.m.-10:30 a.m.

New Research 9 – Oral/Slide Session – Room 205B, Street Level, Convention Centre

HEALTH SERVICES

Chp.: Joshua W. Calhoun, M.D.

NR432 Characterizing Psychiatric Patients and Treatments — 9:00 a.m.
Terri L. Tanielian, M.A., Harold Alan Pincus, M.D., Deborah A. Zarin, M.D., Julie L. Johnson, M.A.

NR433 Managed Care and Psychiatric Treatment Patterns — 9:15 a.m.
Joyce C. West, M.P.P., Deborah A. Zarin, M.D., Harold Alan Pincus, M.D.

NR434 Mental Disorders and Access to Health Care in the United States — 9:30 a.m.
Benjamin G. Druss, M.D., Robert A. Rosenheck, M.D.

NR435 Psychiatric Factors and Homicide Residivism in Finland — 9:45 a.m.
Markku E.J. Eronen, M.D., Jari Tiihonen, Ph.D.

NR436 Clinical Usefulness of the Canadian Edition of the Wisconsin Quality-of-Life Index in Individuals with Schizophrenia — 10:00 a.m.
Pablo Diaz, M.D., Celine Mercier, Ph.D., Sylvie Gibeau, John Leblanc, M.D., Raymonde Hachey, Ph.D, Marion Becker, Ph.D., Genevieve Boyer, M.S.

NR437 Early Adverse Life Events of Single Mothers — 10:15 a.m.
Ellen L. Lipman, M.D., Harriet L. MacMillan, M.D., M. Wong, M.Sc.

NEW RESEARCH

Wednesday, June 3, 1998, 9:00 a.m.-10:30 a.m.

New Research 10 – Oral/Slide Session – Room 205D, Street Level, Convention Centre

PSYCHOPHARMACOLOGY AND ANXIETY

NR438 Does Fluoxetine Augment the Inpatient Treatment of Anorexia Nervosa? 9:00 a.m.
Evelyn Attia, M.D., Claire Haiman, B.A., B. Timothy Walsh, M.D., Suzanne R. Flater, R.N.C.

NR439 Serotonergic Function and Aggression in Alzheimer's Disease 9:15 a.m.
Nathan Herrmann, M.D., Krista L. Lanctot, M.Sc., Goran M. Eryavec, M.D., Robert van Reekum, M.D., Claudio A. Naranjo, M.D.

NR440 The Effect of Treatment on the Four-Year Outcome of Elderly Patients with Recurrent Major Depression 9:30 a.m.
Alastair J. Flint, M.B., Sandra L. Rifat, Ph.D.

NR441 Estrogen Use Enhances Cognitive Performance in Non-Demented, Community-Dwelling Older Women 9:45 a.m.
David C. Steffens, M.D., Maria C. Norton, JoAnn T. Tschanz, Ph.D., Bonita W. Wyse, Ph.D., Brenda Plassman, Ph.D., Kathleen A. Welsh-Bohmer, Ph.D., Ann M. Saunders, Ph.D.

NR442 Comparison of Panic Symptoms in Women and Men 10:00 a.m.
Vladah Starcevic, M.D., Ana Djordjevic, Milan Latas, M.D., Goran Bogojevic, M.D.

NR443 Drug Reinstitution in OCD Patients 10:15 a.m.
Luigi Ravizza, M.D., Giulio Barzega, M.D., Silvio Bellino, M.D., Giuseppe Maina, M.D., Filippo Bogetto, M.D.

NEW RESEARCH

Wednesday, June 3, 1998, 12 noon-2:00 p.m.

New Research 11 – Poster Session – Room 106, Lower Level, Convention Centre

SCHIZOPHRENIA, CHILD AND ADOLESCENT PSYCHIATRY, DIAGNOSTIC ISSUES, ETHICS, FORENSIC, PSYCHIATRIC EDUCATION, PSYCHIATRIC REHABILITATION, AND TREATMENT TECHNIQUES AND OUTCOME STUDIES

Moderator: Marian I. Butterfield, M.D.

NR444 Quetiapine Fumarate Reduces Aggression and Hostility in Patients with Schizophrenia
Marc Cantillon, M.D., Jeffrey M. Goldstein, Ph.D.

NR445 Efficacy of Quetiapine Fumarate in Affective Symptoms of Schizophrenia
Marc Cantillon, M.D., Jeffrey M. Goldstein, Ph.D.

NR446 Antipsychotic Response to Clozapine in the Treatment of Patients with Refractory Schizophrenia
Vittorio Volterra, M.D., Diana De Ronchi, M.D., Giovanni Viscanti, M.D., Maria Augusta Raggi, M.D., Rossella Michetti, M.D., Diana Gentile, M.D., Nicolo Baldini Rossi, M.D.

NR447 Pharmacotherapy of Anxiety of Schizophrenia
Marko Munjiza, Ph.D., Snezana Kuzmanovic, M.D., Smildka Popovic-Deusic, Ph.D., Milorad Veliekovic, Ph.D., Natasa Ljubomirovic, M.D., Dejan Mandic, M.D., Marija Nikolic, M.D.

NR448 Comparisons of the Effects of the Newer Atypical Antipsychotics in the Treatment of Schizophrenia: A Meta-Analysis
John M. Davis, M.D., Philip G. Janicak, M.D., Rajiv P. Sharma, M.D., Radmilla Manav, M.D.

NR449 Gender-Specific Prolactin Response to Treatment with Olanzapine Versus Risperidone in Schizophrenia
Bruce Kinon, M.D., Bruce Basson, M.S., Gary D. Tollefson, M.D.

NR450 Symptom Severity in Homeless Men and Women with Schizophrenia
Leonard White, Ph.D., Lewis A. Opler, M.D., Patrick E. Shrout, Ph.D., Carol L.M. Caton, Ph.D., PANSS Study Group

NR451 Effects of Acute Tryptophan Depletion on Clozapine-Responsive Schizophrenia Subjects
Tony P. George, M.D., Marc N. Potenza, M.D., Kathleen Degen, M.D., Michael J. Sernyak, M.D., Christopher J. McDougle, M.D., Scott W. Woods, M.D.

NR452 Olanzapine Versus Fluphenazine in Schizophrenia
Pierre V. Tran, M.D., Gary D. Tollefson, M.D., Ann Marie Crawford, Ph.D., Martin Dossenbach, M.D., P. Friedel, V. Folnegovic, M. Jaklovljevic

NR453 Switching Psychotic Patients with Symptomatic Extrapyramidal Symptoms from Haloperidol to Olanzapine: Results of a Multi-Center, Collaborative Trial in Latin-America
Pierre V. Tran, M.D., Mauricio Tohen, M.D., G. Mazzoti, Costa Silva, Jorge Ospina, M.D., W.F. Gattaz, V. Larach

NR454 A Longitudinal Study of Schizophrenia's Factors
Joanne T. Marengo, Ph.D., Martin Harrow, Ph.D., James R. Sands, Ph.D.

NR455 Minor Dysmorphic Features in Schizophrenia and Velocardiofacial Syndrome
Laura E. Scutt, B.A., Eva W. Chow, M.D., Kathy A. Hodgkinson, M.Sc., Jackie Hogan, R.N., William G. Honer, M.D., Claire Jones, M.D., Rosanna Weksberg, M.D., Anne S. Bassett, M.D.

NR456 First-Rank Symptoms and Outcome in New-Onset Nonaffective Psychosis
John M. Hawkins, M.D., Stephen M. Strakowski, M.D., Susan L. McElroy, M.D., Kenji W. Sax, Ph.D., Paul E. Keck, Jr., M.D.

NR457 Recognizing a Genetic Subtype of Schizophrenia
Anne S. Bassett, M.D., Eva W. Chow, M.D., Laura E. Scutt, B.A., Kathy A. Hodgkinson, M.Sc., Rosanna Weksberg, M.D.

NR458 Impact of Proband Sampling Strategies on the Relationship Between Age at Onset and Familial Occurrence of Schizophrenia
Janice A. Husted, Ph.D., Anne S. Bassett, M.D., Laura E. Scutt, B.A.

NR459 Gender Differences in Cognitive Function in Schizotypal Personality
Martina M. Voglmaier, Ph.D., Larry J. Seidman, Ph.D., Margaret Niznikiewicz, Ph.D., Chandlee C. Dickey, M.D., Martha E. Shenton, Ph.D., Robert W. Teh, M.D.

NR460 Stable P300 Asymmetry at Schizophrenia Onset
Dean F. Salisbury, Ph.D., Iris A. Fischer, B.S., Martha E. Shenton, Ph.D., Paola Mazzoni, Carlos A. Zarate, Jr., M.D., Robert W. McCarley, M.D.

NR461 Gender Differences in Poor Outcome Schizophrenia
Dana G. Lieber, M.A., Ashley Bennett, M.A., Patrick J. Moriarty, M.A., Leonard White, Ph.D., Michael Parrella, Ph.D., Philip D. Harvey, Ph.D.

NR462 Psychometric Properties of the Canadian Edition of the Wisconsin Quality-of-Life Index in Individuals with Schizophrenia
Celine Mercier, Ph.D., Pablo Diaz, M.D., Isabelle Pare, Raymonde Hachey, Ph.D, Caron Jean, Ph.D., Genevieve Boyer, M.S., John Leblanc, M.D.

NR463 Premorbid Functioning, Duration of Untreated Psychosis and Outcome in Psychosis
Tor K. Larsen, M.D., Lars C. Moe, Ph.D., Lars Vibe-Hansen, M.D., Inge Foa, R.N.

NR464 Long-Term Ziprasidone in Schizophrenia
Mihaly Arato, M.D., Rory O'Connor, M.D., Jean E. Bradbury, Ph.D., Herbert Meltzer, M.D.

NR465 A Comparison of Intramuscular Ziprasidone with Intramuscular Haloperidol
Rachel H. Swift, M.D., Edmund P. Harrigan, M.D., Daniel P. van Kammen, M.D.

NR466 Behavioral Activity Rating Scale Validation
Rachel H. Swift, M.D., Edmund P. Harrigan, M.D., Joseph Cappelleri, Ph.D., David Kramer, Ph.D., Linda P. Chandler, Ph.D

NR467 Prognosis of Brief Reactive Psychosis in Comparison with First-Episode Schizophrenia
Mark Weiser, M.D., Yehuda Baruch, M.D., Auraham Reichenberg, M.A., Yoau Grossman, D.D.M., Michael Davidson, M.D.

NR468 Response Bias and Positive Symptomatology in Schizophrenia
Gildas Brebion, Ph.D., Mark J. Smith, M.D., Xavier F. Amador, Ph.D., Dolores Malaspina, M.D., Jack M. Gorman, M.D.

NR469 Memory and Schizophrenia: Links with Processing Speed and Selective Attention
Gildas Brebion, Ph.D., Mark J. Smith, M.D., Jack M. Gorman, M.D., Dolores Malaspina, M.D., Xavier F. Amador, Ph.D.

NR470 Correlates of Crime in Schizophrenia
Zack Z. Cernovsky, Ph.D., Johan Landmark, M.D., L. Kola Oyewumi, M.D., Larry Litman, Ph.D.

NR471 DSM-III-R and ICD-10 Psychotic Disorders Criteria
Antonio Costilla, M.D., Adelina Alcorta, M.D., Alfonso Ontiveros, M.D., Horacio Garcia, B.S., Rosario Alonso, M.D.

NR472 Regional Asymmetry and the Subtyping of Schizophrenia
Thamilarasi R. Nair, M.D., James D. Christensen, Steven J. Kingsbury, M.D., David L. Garver, M.D.

NR473 Pain Insensitivity and Pressure Pain Thresholds in Patients with Schizophrenia
Jiyoung Song, M.D., Jang-Ho Yi, M.D., Du-Hun Jung, M.D., Soo-Kwang Chae

NR474 The French Concept of Chronic Psychotic Hallucinations and Schizophrenia: Similarities and Differences
Caroline Dubertret, M.D., Philip A. Gorwood, M.D., Jean Ades, M.D.

NR475 Neurophysiologic Mechanisms of Attention Deficits in Schizophrenia
Barry D. Schwartz, Ph.D., William J. Evans, Ph.D., Matthew A. Fogarty, M.D., Daniel K. Winstead, M.D.

NR476 Ward Behavior Rating Scale for Negative Symptoms
Edward G. Altman, Psy.D., James L. Peterson, B.S., James Watson, Nancy Chen, B.S., John M. Davis, M.D.

NR477 Changes in Health Status of Patients with Schizophrenia
Sandra L. Tunis, Ph.D., Thomas W. Croghan, M.D., Douglas K. Heilman, M.S., Bryan M. Johnstone, Ph.D., Robert L. Obenchain, Ph.D.

NR478 Reward-Related Learning in Patients with Schizophrenia
Richard J. Beninger, Ph.D., Katherine L. Mark, B.A., Danielle Charbonneau, Ph.D., Simon J. Meltzer, M.D., Jennifer A. Mangels, Ph.D., Bruce V. Beninger, B.Eng.

NR479 A Quantitative EEG Stuay of Patients with Schizophrenia and Bipolar Disorder Versus Normal Controls
Alexandra L. Berezovskaya, M.D., Dean F. Salisbury, Ph.D., Paola Mazzoni, Iris A. Fischer, B.S.

NR480 Functional Decline in Poor Outcome Schizophrenia
Philip D. Harvey, Ph.D., Ashley Bennett, M.A., Patrick J. Moriarty, M.A., Dana G. Lieber, M.A., Michael Parrella, Ph.D., Leonard White, Ph.D.

NR481 Does Adjunctive Nefazodone Turn a Conventional Neuroleptic into a Typical One?
Grigori Joffe, M.D., Bjorn Appelberg, M.D.

NR482 Cognitive Impairment and Genetic Risk in Schizophrenia
Stephanie Roberts, B.S.C., Eva W. Chow, M.D., Jackie Hogan, R.N., Kathy A. Hodgkinson, M.Sc., William G. Honer, M.D., Anne S. Bassett, M.D.

NR483 Treatment Effectiveness: A Comparison of Risperidone and Typical Antipsychotics
Ashok K. Malla, M.D., Sandra Ficca, B.A., Vinod Kotteda, M.D.

NR484 Rate of Onset and Duration of Untreated Psychosis
Lili C. Kopala, M.D., Lynne Peters, B.Sc., Bradley W. Frankland, M.Sc., Sheryl Clain, M.D., David Whitehorn, Ph.D., Kathy Black, M.D.

NR485 Age of Onset and Motor Lateralization in Schizophrenia
Theo C. Manschreck, M.D., Brendan A. Maher, Ph.D., Laura L. Winzig, B.A.

NR486 Hemispheric Asymmetry of Frontal and Temporal Gray Matter, Age of Onset, and Hyper-associativity in Schizophrenia
Brendan A. Maher, Ph.D., Theo C. Manschreck, M.D., Deborah A. Yurgelun-Todd, Ph.D., Ming T. Tsuang, M.D.

NR487 Diabetes in Schizophrenia
Lisa B. Dixon, M.D., Anthony F. Lehman, M.D., Leticia T. Postrado, Ph.D., Janine C. Delahanty, M.A.

NR488 An MRI Study of Posterior Fossa Structures in Schizophrenia
James J. Levitt, M.D., Creola Petrescu, B.A., Martha E. Shenton, Ph.D., Paul G. Nestor, Ph.D., Ronald Kikinis, M.D., Ferenc A. Jolesz, M.D., Robert W. McCarley, M.D.

NR489 Gender Differences in Onset of Schizophrenia
Aida T. Ruiz, M.D., Rafael Blanco, M.D., Jaime Santander, M.D., Eduardo Miranda, M.D.

NR490 Three Different Criteria Onset of Schizophrenia
Aida T. Ruiz, M.D., Rafael Blanco, M.D., Jaime Santander, M.D., Eduardo Miranda, M.D.

NR491 Coping Responses and Neurocognitive Functioning in Schizophrenia
Joseph Ventura, Ph.D., Keith H. Nuechterlein, Ph.D., Kenneth L. Subotnik, Ph.D., Michael J. Gitlin, M.D., George Bartzokis, M.D., Julie Sharou, B.A.

NR492 Neurocognitive Functioning in Schizophrenia
Jean M. Addington, Ph.D., Donald E. Addington, M.D.

NR493 Effects of Risperidone on Affective Symptoms in Patients with Schizophrenia
Philippe Lemmens, Ph.D., Joseph Peuskens, M.D., Bart Van Balen

NR494 Ziprasidone Intramuscular 10 mg and 20 mg in Acute Agitation
Karen R. Reeves, M.D., Rachel H. Swift, M.D., Edmund P. Harrigan, M.D.

NR495 Intramuscular Ziprasidone 20 mg in Acute Agitation
Karen R. Reeves, M.D., Rachel H. Swift, M.D., Edmund P. Harrigan, M.D.

NR496 Ziprasidone: In Vivo Evidence of Central Serotonin Agonist Activity
Jeffrey S. Sprouse, Ph.D., Hans Rollema, Ph.D., Yi Lu, Ph.D., Linda S. Reynolds, Ph.D., John P. Braselton, Ph.D., Stevin H. Zorn, Ph.D.

NR497 Weight Gain Associated with Conventional and Newer Antipsychotics: A Meta-Analysis
David B. Allison, Ph.D., Janet L. Mentor, M.S., Moonseong Heo, Ph.D., Peter J. Weiden, M.D., Linda P. Chandler, Ph.D, Joseph Cappelleri, Ph.D.

NR498 Prodromal Indicators of Schizophrenia
Julia A. Becker, M.D., Michael Obuchowski, Ph.D., Karen Baruch-Feldman, Ph.D., Tak Chun Chan, M.A., Barbara Cornblatt, Ph.D.

NR499 The Familial Morbidity on the Clinical Characteristics and Intelligence of Schizophrenia Patients
Kuy-Haeng Lee, M.D.

NR500 CT Scan Study of Pineal Gland and Choroid Plexus Calcification in Schizophrenia
Professor Giuseppe Bersani, Alessandra Garavini, Ines Taddei, Giulio Tanfani, Paolo Pancheri

NR501 Clozapine Improves Insight and P300 in Schizophrenia Patients
Stefano Pallanti, Ph.D., Leonardo Quercioli, M.D., Adolfo Pallagli, M.D.

NR502 P300 Abnormalities and Basic Cognitive Disturbances in Young Schizophrenia Patients
Stefano Pallanti, Ph.D., Leonardo Quercioli, M.D., Adolfo Pallagli, M.D.

NR503 Neuropsychological Functioning in Patients with Velocardiofacial Syndrome and Schizophrenia
Eva W. Chow, M.D., Donald Young, Ph.D., Edward Janiszenski, B.A., Rosanna Weksberg, M.D., Anne S. Bassett, M.D.

NR504 Use of Population Pharmacokinetic Modeling to Characterize the Intramuscular Pharmacokinetics of the Novel Antipsychotic Agent Ziprasidone in Schizophrenia Patients
Jeffrey Miceli, Ph.D., Carol Folger, M.S.N., Keith D. Wilner, Ph.D., Sheldon H. Preskorn, M.D.

NR505 Pharmacokinetics of Ziprasidone in Normal and Impaired Renal Function
Keith D. Wilner, Ph.D., Jennifer Sherwood, M.S., Richard J. Anziano, M.S., Francesca T. Aweeka, Pharm.D.

NR506 Intramuscular Ziprasidone Versus Intramuscular Haloperidol
Schlomo Brook, M.D., Michael Krams, M.D., Kevin P. Gunn, M.D.

NR507 Serum Prolactin and Atypical Neuroleptics in Schizophrenia
Amresh Srivastava, M.D., Manoj Tamhane, M.D., Chaarmi M. Kathrani, M.A.

NR508 Factor-Analysis of Catatonic Schizophrenia
Juergen Hoeffler, M.D., Peter Braeunig, M.D., Ingrid Boerner, M.D., Stephanie Krueger, M.D.

NR509 A Comparison of Hispanic and African-American Sexually Abused Children and Their Families
Jon A. Shaw, M.D., John Lewis, Ph.D., Claudia Lang, Ph.D., Susan Tanner, Ph.D., Andrea Loeb, P.S.Y.

NR510 An Open-Label Pharmacokinetic Trial of Nefazodone in Depressed Children and Adolescents
Robert L. Findling, M.D., Ryan D. Magnus, M.D., Ronald N. Marcus, M.D., Sheldon H. Preskorn, M.D., Punit H. Marathe, Ph.D., Jeffrey L. Blumer, M.D., M. Frances D'Amico, M.S.

NR511 Adverse Childhood Events Among Men Involved in Teen Pregnancy
Robert F. Anda, M.D., Vincent J. Felitti, M.D., Dale Nordenberg, M.D., Janet B. Croft, Ph.D., John S. Santelli, M.D., Daniel P. Chapman, Ph.D., James S. Marks, M.D.

NR512 Open Trial of Fluoxetine in Youth with Dysthymic Disorder
Bruce D. Waslick, M.D., B. Timothy Walsh, M.D., Mara Eilenberg, M.S.W.

NR513 Use of Risperidone in Adolescents: A Retrospective Chart Review
Joshua W. Calhoun, M.D., Gretchen Barry, R.Ph., Karen Guskin, Ph.D., Deloris D. Calhoun, Pharm.D.

NR514 Sertraline in Adolescent Depression and Dysthymia: A Six-Month Open Trial
Jovan G. Simeon, M.D., Mary K. Nixon, M.D., Robert P. Milin, M.D., Wendy Spenst, Debbie Smith

NR515 A Comparison of Parental Support in Sexually Abused Children and Their Families
Juandalyn Peters, John Lewis, Ph.D., Claudia Lang, Ph.D., Susan Tanner, Ph.D., Andrea Loeb, P.S.Y., Jon A. Shaw, M.D.

NR516 Diagnostic Comorbidity of BPD in Hospitalized Adolescents: Comparison with Hospitalized Adults
Daniel F. Becker, M.D., Carlos M. Grilo, Ph.D., William S. Edell, Ph.D., Thomas H. McGlashan, M.D.

NR517 Ziprasidone in Tourette's Syndrome
Phillip B. Chappell, M.D., Floyd R. Sallee, M.D.

NR518 Neurological Soft Signs in an Adolescent Population at Psychometric Risk for Schizophrenia Spectrum Disorders
Jordi E. Obiols

NR519 Risperidone in the Treatment of Stuttering: A Double-Blind, Placebo-Controlled Study
Gerald A. Maguire, M.D., Louis A. Gottschalk, M.D., Glyndon D. Riley, Ph.D., David L. Franklin, M.S., Steven G. Potkin, M.D.

NR520 Functional Imaging and Medication in Hair Pulling
Dan J. Stein, M.D., Ben Van Heerden, M.D., Charmaine Wessels, B.A., Jeanine Van Kradenburg, B.A., Geoffrey Van Der Linden, M.D., Annamarie Schmidt, M.D., James Warwick, M.D.

NR521 Psychiatric Determination of Feigned Memory Deficit
Alexandru D. Costa, M.D.

NR522 Low Dose of Alprazolam and Psychometric Performance
Michel S. Bourin, M.D., Marie-Claude Colombel, B.Sc., Bernard Guitton, M.D.

NR523 Polycystic Ovaries in Women with Epilepsy on Inducing and Non-Inducing Antiepileptic Drugs
Cairn G. Seale, M.S., Sherine F. Hamdy, M.S., Elizabeth A. Springer, M.S., Linda C. Giudice, M.D., Martha J. Morrell, M.D.

NR524 Associated Symptoms in Adults with ADHD
Atilla Turgay, M.D., Keith Cameron, M.B.A., Hashem Khoshroshahi, M.D.

NR525 Gender Differences in Children with ADHD
Atilla Turgay, M.D., Stacey Bloom, M.A., Levent Tonga, M.D., Michael Schwartz, Ph.D., Steven Singerman, M.S.W., Rubaba Ansari, M.A., David Ng, M.D.

NR526 Heart Treatment: Meaning and Desired Donor Traits
Kristi S. Williams, M.D., Joy D. Skeel, M.Div., Marijo B. Tamburrino, M.D., Austin J. McSweeny, M.D.

NR527 How Attorneys Pick Psychiatric Experts: A Survey
Douglas Mossman, M.D., Marshall B. Kapp, J.D.

NR528 Psychiatric Residents' Views on Their Training and Experience Regarding Issues Related to Child Abuse
Pierre P. Leichner, M.D., Kathleen L. Barnard-Thompson, M.H.A.

NR529 The Effect of a Psychiatry and Family Medicine Educational Intervention on the Empathy Level of Medical Students
Chantal M. Brazeau, M.D., Linda Boyd, D.O., Susan Rovi, Ph.D.

NR530 Serotonin and Antidepressant Treatment Outcome
Fabrice Duval, M.D., M-Claude Mokrani, Ph.D., M-Antoine Crocq, M.D., Paul Bailey, M.D., Than Son Diep, M.D., Humberto Correa, M.D., Jean-Paul Macher, M.D.

NR531 Evaluation of Olanzapine Therapy in Schizophrenic and Schizoaffective Patients Resistant to Risperidone
Shyam D. Karki, Ph.D., Terrance J. Bellnier, M.P.A., Herman Burliss, M.D.

NR532 Cognitive Effect of Olanzapine
Ileana Berman, M.D., Rogelio D. Bayog, M.D., Christina Wu, B.A., David N. Osser, M.D., Alan R. Kershaw, R.P.H., Demetra Pappas, B.S.

NR533 Outcome and Six-Month Follow-Up of Ultra-Rapid Opiate Detoxification
Bennett L. Oppenheim, Ph.D., Anthony Albanese, M.D., Jean Field, Ph.D., John Eurtace, M.D., Phyllis Harrison-Ross, M.D., Clifford Gevirtz, M.D., John Ables, M.D.

NR534 SSRIs in Pregnancy: Dose Management
Amy Hostetter, B.A., Zachary N. Stowe, M.D., Alexis M. Llewellyn, B.A.

NR535 Effective Treatment Schedule for the Continuation of ECT
Mustafa M. Husain, M.D., Nicholas V. Camperlengo, M.D., Thomas J. Carmody, Ph.D., A. John Rush, M.D.

NR536 Clinical and Quality of Life Superiority of Risperidone
Charles H. Merideth, M.D., Ramy A. Mahmoud, M.D., Luis F. Ramirez, M.D., Luella M. Engelhart, M.S.

NR537 Double-Blind Study Comparing Tianeptine and Fluoxetine in Patients With ICD-10 Criteria for Depressive Disorders With or Without Somatic Syndrome
Henri Loo

NEW RESEARCH

Wednesday, June 3, 1998, 3:00 p.m.-5:00 p.m.

New Research 12 – Poster Session – Room 106, Lower Level, Convention Centre

HEALTH SERVICES, ANXIETY

NR538 Comparison of Day Treatment and Inpatient Treatment for Substance Abuse
Kristinn Tomasson, M.D.

NR539 Season and Admissions for Manic Depressive Illness
Diane K. Whitney, M.D., Verinder Sharma, M.D., Karen Kuneneman, B.A.

NR540 The Community Re-Entry Program for Schizophrenia Patients
Donna A. Wirshing, M.D., Elizabeth H. Rossotto, Ph.D., Jennifer B. Watson, M.S., Robert E. Benveniste, B.S., Stephen R. Marder, M.D., Robert P. Liberman, M.D., William C. Wirshing, M.D., Jim Mintz, Ph.D.

NR541 To Evaluate the Cost-Effectiveness of Olanzolpine Compared to Haloperidol for Schizophrenia
Bryan M. Johnstone, Ph.D., Robert L. Obenchain, Ph.D., Thomas W. Croghan, M.D., Sandra L. Tunis, Ph.D., Thomas J. Kniesner, Ph.D.

NR542 Validity of SF36 for Severely Mentally Ill Patients
Sandra L. Tunis, Ph.D., Thomas W. Croghan, M.D., Douglas K. Heilman, M.S.

NR543 Access to Psychiatric Care in Early Psychosis: Impact of an Early Psychosis Program in the Province of Nova Scotia
David Whitehorn, Ph.D., Qing Rui, M.D., Sheryl Clain, M.D., Lili C. Kopala, M.D.

NR544 Drug Utilization Patterns and Outcomes Associated with In-Hospital Treatment with Risperidone and Olanzapine
Ric M. Procyshyn, Ph.D., Sylvia Zerjav, Pharm.D.

NR545 Costs of Novel Antipsychotics in Clinical Practice
Donald E. Addington, M.D., Jean M. Addington, Ph.D.

NR546 The Impact of Risperidone on Seclusion and Restraints at a State Psychiatric Hospital
Kadiamada N. Chengappa, M.D., Jaspreet S. Brar, M.D., Haranath Parepally, M.D., Rick Brienzo, M.S., Rebecca Zoretich, M.Ed., Anthony Palmer, Ph.D., Aziz Gopalani, M.D., James Baird, Ph.D., Nina R. Schooler, Ph.D.

NR547 How Clinicians Respond to Missed Appointments
Jordan W. Smoller, M.D., Renee McLean, B.A., Michael W. Otto, Ph.D., Mark H. Pollack, M.D.

Health Services Posters are NR538-NR596

NR548 Compliance with SSRI Treatment in Adolescents
David L. Pogge, Ph.D., Julie Kraus, B.A., Susan R. Borgaro, M.A., Anne Lloyd, M.A., John Stokes, Ph.D., Melissa Singer, B.A., Philip D. Harvey, Ph.D.

NR549 Children in Foster Care: Unmet Need for Services
Bonnie T. Zima, M.D., Regina Bussing, M.D., Mel Widawski, M.A., Aaron Kaufman, B.A., Thomas R. Belin, Ph.D., Madeleine Zwart, B.A.

NR550 Effectiveness of Outreach to Elderly Residents of Public Housing
Peter V. Rabins, M.D., Betty S. Black, Ph.D., Robert P. Roca, M.D., Marsden H. McGuire, M.D., Pearl German, Sc.D.

NR551 Somatic Issues in Persons with Severe Psychiatric Illness and Homelessness
Ann L. Hackman, M.D., Lisa B. Dixon, M.D., Leticia T. Postrado, Ph.D., Janine C. Delahanty, M.A.

NR552 How do Gastroenterologists Address the Psychosocial Components of Irritable Bowel Syndrome?
Bradley N. Gaynes, M.D., Mark W. Russo, M.D., Douglas A. Drossman

NR553 Do Patients and Clinicians Agree on Medication Compliance?
Marcia T. Valenstein, M.D., Kristen L. Barry, Ph.D., Frederic C. Blow, Ph.D., Laurel Copeland, M.P.H., Esther Ullman, M.S.W.

NR554 Psychiatric Diagnosis and Treatment in Elderly Primary Care Patients
Marcia T. Valenstein, M.D., Helen C. Kales, M.D., Alan M. Mellow, M.D., Kristen L. Barry, Ph.D., Frederic C. Blow, Ph.D., Gregory W. Dalack, M.D., Sara R. Figueroa, M.D.

NR555 Collaborative Care of Depressed Patients in the Community
Marcia T. Valenstein, M.D., Sherry Becker, M.P.H., Michael Klinkman, M.D., Frederic C. Blow, Ph.D., Kristen L. Barry, Ph.D., Anjan Sattar, M.D., Elizabeth Hill, Ph.D.

NR556 Chronic Medical Conditions and Major Depression in the Canadian General Population
Scott B. Patten, M.D.

NR557 Psychiatric Morbidity in Primary Health Care of an Urban Area
Snezana Kuzmanovic, M.D., Marko Munjiza, Ph.D., Smildka Popovic-Deusic, Ph.D., Dejan Mandic, M.D., Vladah Starcevic, M.D., Natasa Ljubomirovic, M.D., Milorad Veliekovic, Ph.D.

NR558 Rural Patients' Satisfaction with Telepsychiatry
Beverly N. Jones, M.D., Anthony A. Frasca, Wayne Cohen

NR559 Quality-of-Life Correlates in Community Living Older Adults
Cheryl A. Kennedy, M.D., Bart Holland, Ph.D., Neil Kothari, B.S., Matthew Ryan, B.S., Martin Kron, B.S., Saima Latif, B.S., Mohamed Gaffoor, B.S., Beena Jani, B.S., Laura Aizenman, B.S.

NR560 Depressive Symptoms, Medical Illness and Functional Status in Older Primary Care Patients
Telva E. Olivares, M.D., Jeffrey M. Lyness, M.D., Deborah A. King, Ph.D., Christopher Cox, Ph.D., Cynthia Doane, M.S., Eric D. Caine, M.D.

NR561 Family Treatment Decisions in Alzheimer's Disease
Paul A. Kettl, M.D.

NR562 Rehabilitation and Quality of Life in Schizophrenia
Mario Guazzelli, M.D., Laura Palagini, M.D., Paolo Ardito, M.D., Loretta Giuntoli, Ph.D., Roberta Nassi, M.D., Patricia Panicucci, M.D., Pietro Pietrini, M.D.

NR563 Cost Effectiveness: Screening for Clinical Trials
Nina L. Miller, Ph.D., John C. Markowitz, M.D., James H. Kocsis, M.D., Susan Brisco, B.A., Andrew C. Leon, Ph.D., Jessica L. Garno, B.S.

NR564 Do Psychiatrists Prescribe Neuroleptics in the Same Manner to Men and to Women?
Isabelle Gasquet, M.D., Annie Fourrier, M.D., Bernard Begaud, P.R., Marie-Pierre Allicar, M.D., Myriam Bouhassira, M.D., Jean-Pierre Lepine, M.D.

NR565 Response By Police to a Therapist's Warning
Michael G. Huber, M.D., Lawrence A. Labbate, M.D., Jill S. Hayes, M.S., Vidya H. Upadhyaya, M.D., Owen C. Grush, M.D., George W. Arana, M.D.

NR566 Suicide and Physical Illness Among Elders Treated by Primary Care Physicians
Yeates Conwell, M.D., Jeffrey M. Lyness, M.D., Paul R. Duberstein, Ph.D., Christopher Cox, Ph.D., Larry Seidlitz, Ph.D., Eric D. Caine, M.D.

NR567 The Social Supports of Formerly Maltreated Adults
Robert T. Muller, Ph.D.

NR568 Polypharmacy Trends in Inpatient Treatment
Gabor I. Keitner, M.D., Christine E. Ryan, Ph.D., David A. Solomon, M.D., Joan E. Kelley

NR569 Antidepressant Change in a Clinical Treatment Setting
Paula L. Hensley, M.D., Peter M. Thompson, M.D., H. George Nurnberg, M.D.

NR570 Symptomatic and Functional Outcome of First-Episode Psychosis: Prospective, Six-Month Study of 257 Patients
Mauricio Tohen, M.D., Priscilla Gebre-Medhin, M.S., Ross J. Baldessarini, M.D., Carlos A. Zarate, Jr., M.D., John Hennen, Ph.D.

NR571 Neuroleptic Use in Bipolar Disorder: A Pharmacoepidemiologic Review
Mauricio Tohen, M.D., Fan Zhang, Ph.D., Carlos A. Zarate, Jr., M.D., Cindy Taylor, Ph.D., Todd Sanger, Ph.D., Patrick Burns, Pharm.D., Gary D. Tollefson, M.D.

NR572 Comparing Subjective Medication Adherence with an Objective Method
Esperanza Diaz, M.D., Vincent Barry, M.D., Herbert Rowland Pearsall, M.D., Michelle Sullivan, R.N., Scott W. Woods, M.D.

NR573 SSRI Antidepressant Use in Primary Care in the United Kingdom: A Multivariate Analysis
Rodney Dunn, M.S., John M. Donogahue, B.Sc., Ronald Ozminkowski, Ph.D., Timothy R. Hylan, Ph.D.

NR574 One-Year Costs of Alternative Second-Line Therapies for Depression
Erin M. Sullivan, M.P.H., Robert I. Griffiths, Sc.D., Richard G. Frank, Ph.D., Robert J Herbert, M.D., Michael J. Strauss, M.D., Howard H. Goldman, M.D.

NR575 Outcomes Study of a Residential Rehabilitation Center
Cynthia L. Arfken, Ph.D., Jacquelyn G. Wilson, Pharm.D., Husseini K. Manji, M.D., Anita J. Chawla, Ph.D., Thomas W. Croghan, M.D., Mark P. Hanna, M.S., Kate Sredl, B.A., Sean Kennedy, B.A.

NR576 Effect of Adherence to Guidelines on Relapse
Catherine A. Melf, Ph.D., Anita J. Chawla, Ph.D., Thomas W. Croghan, M.D., Mark P. Hanna, M.S., Kate Sredl, B.A., Sean Kennedy, B.A.

NR577 Outcomes After Schizophrenia Relapse: Findings from a Prospective 684 Patient Cohort
Luella M. Engelhart, M.S., Ramy A. Mahmound, M.D., Outcomes Study of Risperidone Effectiveness Group

NR578 Psychiatric Resource Use Under Usual Care Conditions: Does Risperidone Increase Resource Use?
Ramy A. Mahmoud, M.D., Luella M. Engelhart, M.S., G. Oster, Ph.D., D. Ollendorf, M.P.H., Outcomes Study of Rispendone Effectiveness Group

NR579 Evaluation of a Therapeutic Interchange Program
Shyam D. Karki, Ph.D., Terrance J. Bellnier, M.P.A., Herman Burliss, M.D.

NR580 Six-Year Outcome for Cognitive-Behavioral Treatment of Residual Symptoms in Depression
Murray A. Morphy, M.D., Chiara Rafanelli, M.D., Giovanni A. Fava, M.D., Silvana Grandi, M.D., Cristina Valacchi, M.D.

NR581 WITHDRAWN

NR582 Dialectical-Behavior Therapy Applied to a Partial Hospital Setting: A Hospital Diversion Program
Elizabeth B. Simpson, M.D., Karen J. Rosen, M.D., Jacqueline Pistorello, Ellen Costello, Ph.D., Ann Begin, Ph.D., Teri B. Pearlstein, M.D.

NR583 Day Treatment Helps Reduce Hospitalizations
Jeffrey B. Freedman, M.D.

NR584 A Group Intervention for Sexually Abused Women
Rory P. Houghtalen, M.D., Nancy L. Talbot, Ph.D., Paul R. Duberstein, Ph.D., Lyman C. Wynne, M.D.

NR585 Course and Cost of Treatment with SSRIs
James M. Russell, M.D., Ernst R. Berndt, Ph.D., Robert Miceli, Ph.D.

NR586 Duration of SSRIs Therapy: A Consistent Pattern
David S. Hutchins, M.B.A., Catherine A. Melfi, Ph.D., William F. Signa, B.S., Christopher Young, Ph.D.

NR587 SF-36 Outcome for Anxiety Diagnoses by Clinicians
William R. Yates, M.D., Rick Jones, Ph.D., Sally Williams, B.A., Miranda Zhou, M.S., Lisa Hardman, M.A.

NR588 The Impact of a New High Acuity Subunit on Very Long-Term Psychiatric Inpatients in a State Hospital
Eric S. Cole, Ph.D., Cheryl K. Cantrell, M.D.

NR589 Evaluation of an Automated Standardized Method for Completing Mental Health Evaluations in a Military Population
Charles D. Magruder, M.D., Michael B. First, M.D., Stephen Stein, Ph.D.

NR590 Computerized Monitoring of Medication Use Guidelines
Daniel J. Luchins, M.D., Mohsin Qayyum, M.D., David B. Klass, M.D., Valerie Davis Raskin, M.D., Patricia Hanrahan, Ph.D., Randy Malan, R.P.H.

NR591 Telemedicine: Patient Satisfaction in Mental Health and Non-Mental Health Consultation in the Primary Care Network of an Academic Health System
Robert E. Hales, M.D., Edward J. Callahan, Ph.D., Donald M. Hilty, M.D., Thomas S. Nesbitt, M.D.

NR592 Higher Cost of Olanzapine Compared to Risperidone in Acute Psychotic Relapse
Henry A. Nasrallah, M.D., Yiu-Chung Chan, M.D., Nicholas A. Votolato, R.P.H.

NR593 Psychiatric Referral by Managed Care Interviewers
Donald S. Ciccone, Ph.D., Myron Leopold Pulier, M.D., Cherie Castellano, M.A., Karen Marcus, M.S.W., Steven J. Schleifer, M.D.

NR594 Equitable Funding for Psychogeriatric Services
John P. Hirdes, Ph.D., Gary F. Teare, Ph.D., Trevor F. Smith, Ph.D.

NR595 Primary Care Doctors on Access to Psychiatric Care
Miriam Shuchman, M.D., Robert F. St. Peter, M.D.

NR596 Advocacy Groups: A Cross-National Comparison
Ronald C. Kessler, Ph.D., Mary T. Guardino, Jeanine Christiana, Paolo Morselli, M.D.

NR597 Personality Traits in Schizophrenia
Ronald J. Gurrera, M.D., Naheed Akhtar, M.D., Sare Akdag, B.S., Brian F. O'Donnell, Ph.D., Paul G. Nestor, Ph.D., Robert W. McCarley, M.D.

NR598 Sensory Phenomena in OCD and Response to Clomipramine
Roseli G. Shavitt, M.D., M.Conceicao do Rosar Campos, M.D., Marcos T. Mercadante, M.D., Raquel C. Valle, Euripedes C. Miguel, M.D.

NR599 Nefazodone in Patients with Treatment-Refractory PTSD
Sidney Zisook, M.D., Yulia Chentsova-Dutton, B.A., Gary Ellenor, Pharm.D., Angela Kodsi, Pharm.D., Alison Smith-Vaniz, M.D., Neal A. Kline, M.D.

NR600 The Influence of Pretreatment with Medroxyprogesterone on the Response to Pentagastrin
Jean-Michel Le Melledo, M.D., Paula Lott, Michelle Van Driel, Abdullah Al-Mulhim, M.D., Gian S. Jhangri, M.Sc.

NR601 Body Dysmorphic Disorder in Children and Adolescents
Ralph S. Albertini, M.D., Katharine A. Phillips, M.D.

NR602 Medical and Surgical Treatment Received in Body Dysmorphic Disorder
Katharine A. Phillips, M.D., Jon Grant, B.A., Lynne M. DeMarco, M.S.P.H.

NR603 Insight and Treatment Response in Body Dysmorphic Disorder
Katharine A. Phillips, M.D., Susan L. McElroy, M.D., Megan M. Dwight, M.D., Jane L. Eisen, M.D., Steven A. Rasmussen, M.D.

NR604 Panic Disorder and Cigarette Smoking Behavior
Michaela Amering, M.D., Bettina Bankier, M.D., Dr. Peter Berger, Hemma Griengl, M.D., Dr. Johann Windhaber, Dr. Heinz Katschnig

NR605 Sertraline Treatment of Panic Disorder: Clinical Correlates of Treatment Response
Mark H. Pollack, M.D., Mark H. Rapaport, M.D., Robert Wolkow, M.D., Cathryn M. Clary, M.D.

NR606 Low End-Tidal CO2 and Treatment Outcome in Panic Disorder
Laszlo A. Papp, M.D., Jeremy D. Coplan, M.D., Katherine Shear, M.D., Jose Martinez, M.S., David H. Barlow, Ph.D., Scott Woods, M.D., Jack M. Gorman, M.D.

NR607 Meteorological Factors in Panic Disorder
Galina Mindlin, M.D., Olga Kolosova, M.D., Ashwin A. Patkar, M.D.

NR608 Measurement of Dissociative States
J. Douglas Bremner, M.D., Carolyn M. Mazure, Ph.D., Frank Putnam, M.D., Charles R. Marmar, M.D., Steven M. Southwick, M.D., Dennis S. Charney, M.D., John H. Krystal, M.D.

NR609 OCD and Tic Disorders in Parents of Children with Pediatric Autoimmune Neuropsychiatric Disorders Associated with Streptococcal Infections
Lorraine Lougee, M.S., Susan J. Perlmutter, M.D., Marjorie Garvey, M.D., Susan E. Swedo, M.D.

NR610 Risperidone Treatment of Psychotic Features in PTSD
Mark B. Hamner, M.D., Helen Ulmer, M.S.N., Michael G. Huber, M.D., Michael O. Measom, M.D.

NR611 Psychotic Features and Symptom Severity in PTSD
Mark B. Hamner, M.D., Helen Ulmer, M.S.N., David F. Horne, B.S., Christopher Frueh, Ph.D., Timothy J. Twomey, B.S., Keith Chobot, M.S.W.

NR612 Comorbid GAD Outcome of Treatment of Panic
Vladah Starcevic, M.D., Milan Latas, M.D., Goran Bogojevic, M.D., Goran Trajkovic, M.D.

NR613 Parental Shyness and Sociability in Social Phobia
Catherine L. Mancini, M.D., Michael A. Van Ameringen, M.D., Jonathan Oakman, Ph.D., Amy Shulist

NR614 Are There Differences Between Panic Disorder With and Without Agoraphobia?
Hisanobu Kaiya, M.D., Yoshikazu Miyamae, Eiji Yoshida, M.D., Natsuko Kaiya, Manabu Yamanaka, M.D., Noriya Ishida, M.D.

NR615 Symptom Subtypes and Family History in OCD
Laura J. Summerfeldt, M.A., Margaret A. Richter, M.D.

NR616 Impulsivity in OCD and Other Anxiety Disorders
Karyn E. Hood, M.Ed., Martin M. Antony, Ph.D., Margaret A. Richter, M.D., Richard P. Swinson, M.D.

NR617 Early-Onset OCD: A Different Subtype?
M.Conceicao do Rosar Campos, M.D., Roseli G. Shavitt, M.D., Marcos T. Mercadante, M.D., Raquel C. Valle, Euripedes C. Miguel, M.D.

NR618 Cognition and Disabilities in Panic Disorder
Bettina Bankier, M.D., Dr. Peter Berger, Michaela Amering, M.D., Dr. Gabriele Sachs, Dr. Anita Holzinger, Dagmar Maierhofer, M.D., Dr. Heinz Katschnig

NR619 Interpersonal Problems in Panic Disorder
Dr. Gabriele Sachs, Dr. Peter Berger, Michaela Amering, M.D., Dr. Karl Dantendorfer, Dagmar Maierhofer, M.D., Dr. Johann Windhaber, Dr. Heinz Katschnig

NR620 Catastrophic Cognition and Avoidance Behavior in Panic Disorder
Dr. Johann Windhaber, Michaela Amering, M.D., Dr. Karl Dantendorfer, Dagmar Maierhofer, M.D., Dr. Peter Berger, Dr. Gabriele Sachs, Dr. Heinz Katschnig

NR621 Fluvoxamine Versus Clomipramine in OCD
Emanuela Mundo, M.D., John Van Den Berg, M.D.

NR622 Phenomenology of Panic Disorder in Young and Old Patients
Javaid I. Sheikh, M.D., Pamela J. Swales, Ph.D.

NR623 Fluoxetine Versus Sertraline and Paroxetine in Major Depression: Tolerability and Efficacy in Patients with High- and Low-Baseline Anxiety
Maurizio Fava, M.D., Jerrold F. Rosenbaum, M.D., Sharon L. Hoog, M.D., Rosalinda Tepner, R.Ph., Joan Kopp, M.S., Mary Sayler, M.D., and the Fluoxetine Collaborative Study Group

NR624 Skin Paleness and OCD
Jesus J. De la Gandara, M.D., Olga Sanz, M.D., Idoia Ortega, P.D.

NR625 Rating Well-Being and Distress in Mood and Anxiety Disorders
Seung-Kyoon Park, M.D., Kye Y. Kim, M.D., Murray A. Morphy, M.D., Giovanni A. Fava, M.D.

NR626 PTSD and Irritable Bowel Syndrome
Lawrence A. Labbate, M.D., Christopher Freuh, Ph.D., Mark B. Hamner, M.D., R. Bruce Lydiard, M.D.

NR627 Open Trial of Fluvoxamine in Anxious Depression
Shamsah B. Sonawalla, M.D., Maya K. Spillmann, M.D., Andrea R. Kolsky, B.A., Jonathan E. Alpert, M.D., Andrew A. Nierenberg, M.D., Jerrold F. Rosenbaum, M.D., Maurizio Fava, M.D.

NR628 Pattern Analysis of a Clinical Trial of Fluoxetine in Panic Disorder
Franklin R. Schneier, M.D., Brian A. Fallon, M.D., Shu-Hsing Lin, Ph.D., Randall D. Marshall, M.D., Donna Vermes, R.N., Jose Arturo Sanchez-Lacay, M.D., Michael R. Liebowitz, M.D.

NR629 A New Patient Diary to Study Performance Anxiety
Robert B. Pohl, M.D., Richard Balon, M.D., Patricia Chapman, M.S., Jennifer McBride, B.A.

NR630 Heart Early Link To Panic (HELP)
David J. Katzelnick, M.D., Gregory E. Simon, M.D., Willard G. Manning, Ph.D., Cindy P. Helstad, Ph.D., Steve Locke, M.D., Arthur J. Barsky III, M.D., Wayne J. Katon, M.D.

NR631 Serotonergic System and Carbon Dioxide Hypersensitivity in Panic Patients
Giampaolo Perna, M.D., Riccardo Bussi, M.S., Laura Bellodi, M.D., Liliana Allevi, M.S., Angelo Bertani, M.D.

R632 Diagnostic Accuracy In Social Phobia
Jeffrey E. Kelsey, M.D., Tanya L. Burgos, B.S.

NR633 Childhood ADHD Features Among Adults with Panic Disorder
Calvin Fones, M.D., Mark H. Pollack, M.D., Michael W. Otto, Ph.D., Lisa Susswein, B.A.

NR634 Predictors of Treatment-Response in Panic Disorder
Dr. Peter Berger, Dr. Gabriele Sachs, Michaela Amering, M.D., Dr. Anita Holzinger, Dagmar Maierhofer, M.D., Bettina Bankier, M.D., Dr. Heinz Katschnig

NR635 The Neurobiology of Social Phobia: A PET Study
Michael A. Van Ameringen, M.D., Catherine L. Mancini, M.D., Jonathan Oakman, Ph.D., Markad Kamath, Ph.D., Claude Nahmias, Ph.D., Henry Szechtman, Ph.D.

NR636 Relationship Between PTSD and Attachment Style
Michael E. Dieperink, M.D., Jennie Leskela, Ph.D., Sean Nugent, B.S.

NR637 Panic Disorder and Response to Sertraline: The Effect of Previous Treatment with Benzodiazepines
Mark H. Rapaport, M.D., Mark H. Pollack, M.D., Robert Wolkow, M.D., Cathryn M. Clary, M.D.

NR638 Therapeutic Strategies in GAD Patients
Jean-Michel Chignon, M.D., Daniel Martin, Ph.D., Daniel Gerard, M.D.

NR639 Panic Disorder in Alcoholic Outpatients
Jean-Michel Chignon, M.D., Laurent Jacquesy, M.D., Francois Huttin, M.D., Marie-Josee Cortez, M.D., Patrick Martin, Ph.D., Jean-Paul Chabannes, M.D.

NR640 Disabilities in Panic Disorder with Comorbid Phobias
Dagmar Maierhofer, M.D., Dr. Anita Holzinger, Dr. Gabriele Sachs, Dr. Peter Berger, Dr. Johann Windhaber, Dr. Karl Dantendorfer, Dr. Heinz Katschnig

NR641 Impaired Conditional Discrimination in Patients with Panic Disorder
Dagmar Maierhofer, M.D., Dr. Karl Dantendorfer, Dr. Heinz Katschnig

NR642 Double-Blind Comparison of Citalopram and Fluoxetine: Treatment of Depression With and Without Benzodiazepines
H.E. Hopfner Petersen, M. Patris, M.D., Mary Mackle, Ph.D.

NR643 Double-Blind, Placebo-Controlled Study of Once-Daily Venlafaxine Extended Release in Outpatients with GAD
Loren M. Aguiar, M.D., Thomas Haskins, Ph.D., Richard L. Rudolph, M.D., Allan Pallay, M.S., Albert T. Derivan, M.D.

NR644 Double-Blind, Placebo-Controlled Study of Once Daily Venlafaxine Extended Release and Buspirone in Outpatients with GAD
Richard Entsuah, Ph.D., Albert T. Derivan, M.D., Thomas Haskins, Ph.D., Richard L. Rudolph, M.D., Loren Aquiar, M.D.

NR645 Temperament Markers As Predictors to Treatment Response in Panic Disorder
Gabor Faludi, M.D.

NR646 The Underdiagnosis of PTSD in an Outpatient Setting
Mark Zimmerman, M.D., Jill I. Mattia, Ph.D., Sharon Younken, B.A., Melissa Torres, B.A.

NEW RESEARCH

Thursday, June 4, 1998, 9:00 a.m.-10:30 a.m.

New Research 13 – Oral/Slide Session – Room 205B, Street Level, Convention Centre

PSYCHOPHARMACOLOGY

Chp.: Richard Balon, M.D.

NR647 Double-Blind, Randomized Trial of Venlafaxine, Clomipramine and Trazodone in Elderly Depressed Patients — 9:00 a.m.
Fortunato Rizzo, M.D., Enrico Smeraldi, M.D.

NR648 Long-Term Treatment of OCD — 9:15 a.m.
Steven J. Romano, M.D., Roy Tamura, Ph.D., Karen Sundell, B.S.

NR649 Long-Term Treatment in Panic Disorder — 9:30 a.m.
David Michelson, M.D., R. Bruce Lydiard, M.D., Mark H. Pollack, M.D., Roy Tamura, Ph.D., Rosalinda Tepner, R.P.H., Gary D. Tollefson, M.D.

NR650 Sertraline Improves Psychosocial Functioning in Premenstrual Dysphoric Disorder — 9:45 a.m.
Teri B. Pearlstein, M.D., Roger Haskett, M.D., Anna Stout, Ph.D., Ellen Frank, Ph.D., Jean Endicott, Ph.D.

NR651 Black Women Receive Fewer SSRI Antidepressants — 10:00 a.m.
Andrew A. Nierenberg, M.D., Phillip S. Wang, M.D., Jerrold F. Rosenbaum, M.D., Maurizio Fava, M.D., Raia Levin, Ph.D., Jerry Avorn, M.D.

NR652 Paroxetine, Clomipramine and Cognitive Therapy in the Treatment of Panic Disorder — 10:15 a.m.
Abraham Bakker, M.D., Richard Van Dyck, M.D., Philip Spinhoven, Ph.D., Anton J.L.M. Van Balkom, M.D.

NEW RESEARCH

Thursday, June 4, 1998, 9:00 a.m.-10:30 a.m.

New Research 14 – Oral/Slide Session – Room 205D, Street Level, Convention Centre

MOOD DISORDERS; BRAIN IMAGING; PSYCHOIMMUNOLOGY, AND SEXUAL ABUSE

NR653 Suicide Attempts in Bipolar Disorder — 9:00 a.m.
Jose de Leon, M.D., Ana Gonzalez-Pinto, M.D., Miguel Gutierrez, M.D., Purificacion Lopez, M.D., Fernando Mosquera, M.D., Juan L. Figuerido-Poulain, M.D., Fernando Ramirez, M.D.

NR654 Lamotrigine in Bipolar Depression — 9:15 a.m.
Charles L. Bowden, M.D., Joseph R. Calabrese, M.D., Gary S. Sachs, M.D., Arifulla Khan, M.D., John A. Ascher, M.D., David Rudd, R.P.H., Eileen Monaghan, B.A.

NR655 MRI Brain Morphometry in Bipolar Disorder — 9:30 a.m.
Stephen M. Strakowski, M.D., Melissa P. DelBello, M.D., Kenji W. Sax, Ph.D., Molly E. Zimmerman, B.A., John M. Hawkins, M.D.

NR656 MRI Change in First-Episode Schizophrenia — 9:45 a.m.
Yoshio Hirayasu, M.D., Martha E. Shenton, Ph.D., Dean F. Salisbury, Ph.D., Jun Soo Kwon, M.D., Chandlee C. Dickey, M.D., Robert W. McCarley, M.D.

NR657 Cancer Incidence Following the Death of an Adult Son — 10:00 a.m.
Robert Kohn, M.D., Itzhak Levav, M.D., Joseph Abramson, M.B., Wei Yann Tsai, Ph.D.

NR658 Treatment Outcome in Sexually Abused Children — 10:15 a.m.
Anthony P. Mannarino, Ph.D., Judith A. Cohen, M.D.

NEW RESEARCH

Thursday, June 4, 1998, 12 noon-2:00 p.m.

New Research 15 – Poster Session – Room 106, Lower Level, Convention Centre

PSYCHOPHARMACOLOGY

Moderator: Stuart C. Yudofsky, M.D.

NR659 Long-Term Efficacy of Fluoxetine in Premenstrual Dysphoric Disorder
Jesus J. De la Gandara, M.D., Inmaculada Gilaberte, M.D.

NR660 Prescribing Characteristics of MAOIs in Michigan
Richard Balon, M.D., Cynthia L. Arfken, Ph.D., Rizwan M. Mufti, M.D.

NR661 Sexual Dysfunction on Imipramine and Paroxetine
Francisco Montoya, M.D., Alfonso Ontiveros, M.D., Miguel Valdes, M.D., Antonio Costilla, M.D.

NR662 Primary Care Antidepressant Use in the United Kingdom: A Comparison to Treatment Guidelines
Rodney Dunn, M.S., John M. Donogahue, B.Sc., Ronald Ozminkowski, Ph.D., Timothy R. Hylan, Ph.D.

NR663 Venlafaxine Inhibits Uptake of Serotonin and Norepinephrine in Male Volunteers
Annie Harvey, Ph.D., Sheldon H. Preskorn, M.D.

NR664 Thyroid Indices and Severity of Depression
Mark A. Frye, M.D., George G. Klee, M.D., Teresa Huggins, Ph.D., John T. Little, M.D., Robert T. Dunn, M.D., Timothy A. Kimbrell, M.D., Robert M. Post, M.D.

NR665 Low Reproductive and Hormonal Side Effect with Quetiapine Fumarate
Jeffrey M. Goldstein, Ph.D., Marc Cantillon, M.D.

NR666 Safety of Switching to Quetiapine Fumarate
Jeffrey M. Goldstein, Ph.D., Marc Cantillon, M.D.

NR667 Health Resource Utilization and Risperidone
Martha Sajatovic, M.D., Luis F. Ramirez, M.D., Joan Belton, S.W., Richard McCormick, Ph.D.

NR668 The Use of Mirtazapine In Primary Care
Milana V. Zivkov, M.D., Hans-Joachim Kreuzenbeck, M.D.

NR669 Differential Rates of Antidepressant Metabolism in Depressed Patients
Robert P. Kraus, M.D., Geri O. Kraus, M.Sc., Andrea K. McEachran, B.A.

NR670 Treatment of Dysphoric Mania with Olanzapine
Verinder Sharma, M.D., Lino Pistor, M.D., Karen Kueneman, B.A.

NR671 Allergy to Tartrazine in Psychotropic Drugs
Manjeet Singh Bhatia, M.D.

NR672 Clonazepam Long-Term Efficacy in Social Phobia
Alfonso Ontiveros, M.D., Antonio Costilla, M.D., Alberto Rojas, M.D., Raul Diaz, M.D.

NR673 New-Onset Diabetes Associated with Starting Olanzapine in Patients with Schizoaffective and Bipolar Disorders
Jonathan Spom, M.D., Lee Goldstein, M.D., Gary S. Sachs, M.D.

NR674 Benzodiazepines: Treatment for NMS?
Andrew J. Francis, Jr., M.D., Sanjay S. Chandragiri, M.D., Syed Rizvi, M.D., Georgios Petrides, M.D.

NR675 Mirtazapine Versus Fluoxetine: Efficacy on Symptoms Associated with Depression
Charlotte Kremer, M.D.

NR676 A Double-Blind Comparison of Fluoxetine and Amitriptyline in the Treatment of Major Depression with Associated Anxiety
Marcio V. Versiani, M.D., Antonio Ontiveiros, M.D., Guido Mazzotti, M.D., Jorge Ospina, M.D., Jorge Davila, M.D., Salvador Mata, M.D., Antonio Pacheco, M.D., John M. Plewes II, M.D., Roy Tamura, Ph.D., Moramay Palacios, M.D., Lori Vance, B.S.

NR677 Overall Efficacy and Tolerability of Reboxetine in Comparative Clinical Trials of 2,613 Patients with Depressive Illness
Marcio V. Versiani, M.D.

NR678 The Selective Noradrenaline Reuptake Inhibitor Reboxetine Has an Early Onset of Action
Marcio V. Versiani, M.D.

NR679 Olanzapine Response in Psychotic Depression
Anthony J. Rothschild, M.D., Kimberly S. Bates, B.A., Kelly L. Boehringer, B.A., Abdul Syed, M.D.

NR680 Behavioral Disinhibition on Alprazolam Versus Clonazepam
Anthony J. Rothschild, M.D., Judith A. Shindul-Rothschild, Ph.D., Margaret Murray, B.A., Adele C. Viguera, M.D., Suzanne Brewster, B.A.

NR681 Treatment Emergent Adverse Events in Elderly Depressed Patients: Double-Blind Comparison Between Citalopram and Other SSRIs
Heikki Hakkarainen, M.D., H.E. Hopfner Petersen

NR682 Gender Differences in the Response to Citalopram Treatment of Depression
Marcelo Gutierrez, Ph.D., Mary Mackle, Ph.D., Per Tanghoj

NR683 Risk Factors in Toxic Delirium Associated with Clozapine Treatment
Franca Centorrino, M.D., Giuseppina Drago, M.D., Ross J. Baldessarini, M.D.

NR684 Nefazodone in Adolescent Depression
Paul J. Goodnick, M.D., Cecilia M. Jorge, M.D., Thomas Ayres Hunter, M.D., Adarsh Kumar, Ph.D.

NR685 Mirtazapine in Generalized Anxiety and Depression
Paul J. Goodnick, M.D., Alina Puig, M.D., C. Lindsay Devane, Ph.D.

NR686 The Treatment of Adult ADHD with Mixed Amphetamine Salts
Joseph P. Horrigan, M.D., L. Jarrett Barnhill, Jr., M.D.

NR687 Serotonergic Agents in the Treatment of Neuroleptic-Induced Akathisia
Michael Poyurovsky, M.D., Michael Schneidman, M.D., Abraham Weizman, M.D.

NR688 Olanzapine Increases Weight and Triglyceride Levels
David N. Osser, M.D., Dean Najarian, R.P.H., Ileana Berman, M.D., Padideh Ghaeli, Ph.D.

NR689 SSRIs in Breastmilk and Nursing Infants
Zachary N. Stowe, M.D., Amy Hostetter, B.A., Mary Cox, Ph.D., James C. Ritchie, Ph.D., Michael J. Owens, Ph.D.

NR690 Venlafaxine in the Treatment of Postpartum Depression with Comorbid Anxiety Symptoms
Cassandra P. Morabito, M.Ed., Lee S. Cohen, M.D., Mary H. Collins, M.D.

NR691 Resource Use and Quality of Life Associated with Olanzapine Compared with Risperidone
Eric T. Edgell, M.S., David L. Grainger, B.S., Scott W. Andersen, M.S., Jeff Wang, M.S.

NR692 Meta-Analysis of Placebo-Controlled Trails of Citalopram in the Treatment of Depression
Charles Flicker, Ph.D.

NR693 Citalopram Treatment of Melancholia
Mary Mackle, Ph.D.

NR694 Buspirone Provides Relief for Sexual Side Effects Induced by SSRIs
Mikael S.G. Landen, M.D., Elias Eriksson, Ph.D., Hans Agren, Ph.D., Tom Fahlen, Ph.D.

NR695 Nonprescription Sleep Product Use in the Elderly
Beth A. Sproule, Pharm.D., Usoa Busto, Pharm.D., Carmen Buckle, Nathan Herrmann, M.D., Susan Bowles, Pharm.D.

NR696 Paroxetine in the Treatment of Depression in Elderly Patients
Cornelius D. Pitts, R.P.H., Niklas H. Morton, B.S., Wendy Goodwin, M.S., Ivan P. Gergel, M.D.

NR697 Safety of Paroxetine in the Long-Term Treatment of Depression
Madhukar H. Trivedi, M.D., Cornelius D. Pitts, R.P.H., Rosemary Oakes, M.S., Ivan P. Gergel, M.D.

NR698 Combined Therapy Using SSRI with Neuroleptics in Delusional Depression
Frank Koenig, M.D., Thomas Barg, Iris Gruenewald, Tim Petersdorff, M.D., Wolfgang Kaschka, Sigrig Braun, M.D.

NR699 Predictors of Treatment Response and Outcome in Psychotic Patients Switched from Clozapine to Olanzapine
Michael J. Reinstein, M.D., Larissa A. Sirotovskaya, M.D., Maxim A. Chasanov, M.D., Lynne E. Jones, R.N., Sangarapillai C. Mohan, M.D.

NR700 A Comparative Study of Treatment of Hypersalivation Secondary to Clozapine with Benztropine and Terazosin Hydrochloride
Michael J. Reinstein, M.D., Larissa A. Sirotovskaya, M.D., Maxim A. Chasanov, M.D., Lynne E. Jones, R.N., Sangarapillai C. Mohan, M.D.

NR701 Weight Gain with Atypical Antipsychotic Medications
Rohan Ganguli, M.D., Jaspreet S. Brar, M.D., Zenia Ayrton, B.S.

NR702 The Modulation of Glucose Metabolism by Psychotropic Agents in PC12 Cells
Harold B. Pinkofsky, M.D., Donard Dwyer, Ph.D., Ronald Bradley, Ph.D.

NR703 The Safety of Fluoxetine in the Treatment of Depression With and Without Anxiety
John M. Plewes II, M.D., Teresa Vieira-Brisson, B.S., Mary Sayler, M.S., Stephanie Koke, M.S., Tim S. Krupa, B.S., Gary D. Tollefson, M.D.

NR704 Adverse Events and Treatment Discontinuations in Fluoxetine Clinical Trials: An Updated Meta-Analysis
John M. Plewes II, M.D., Stephanie Koke, M.S., Mary Sayler, M.S.

NR705 The Efficacy of Fluoxetine in the Treatment of Depression With and Without Anxiety
John M. Plewes II, M.D., Teresa Vieira-Brisson, B.S., Mary Sayler, M.S., Stephanie Koke, M.S., Tim S. Krupa, B.S., Donna K. Pearson, B.S., Gary D. Tollefson, M.D.

NR706 Attentional Functioning and Novel Antipsychotics
Patrick J. Moriarty, M.A., Anurag Singh, M.A., Dana G. Lieber, M.A., Vanessa Franklin, M.A., Mark R. Serper, Ph.D., Philip D. Harvey, Ph.D.

NR707 Nefazodone Versus Maprotiline in Elderly Depressed Patients
Giovanni B. Cassano, M.D., Giuseppe Fazzari, M.D., Alberto Giannelli, M.D., Giuseppe Ferrari, M.D., Giampaolo Guaraldi, M.D., Carlo Maggini, M.D., Marco Zibellini, M.D.

NR708 An Open-Label Study of Nefazodone in Elderly Depressed Patients
Kenneth J. Weiss, M.D., Stephen Stahl, M.D., Jan A. Fawcett, M.D., John M. Zajecka, M.D., Frances E. Borian, R.N., Walter W. Hong, M.D., Darlene N. Jody, M.D.

NR709 A Naturalistic Study of Mirtazapine in the German Psychiatric Practice
Annemiek Pattenier, M.D., Friedrich May, M.D.

NR710 Gender and Treatment Response to Antipsychotics
Ileana Berman, M.D., Rogelio D. Bayog, M.D., Demetra Pappas, B.S., Christina Wu, B.A., David N. Osser, M.D.

NR711 Olanzapine in Pervasive Developmental Disorders
Marc N. Potenza, M.D., Janice P. Holmes, M.S.N., Stephen J. Kanes, M.D., Christopher J. McDougle, M.D.

NR712 Visuo-Manual Testing in the Diagnosis of Extrapyramidal Side Effects of Antipsychotic Drugs
Mark Weiser, M.D., Michal Schmaider-Beeri, M.A., Shoshana Reiss, M.A., Shraga Hocherman, Ph.D., Michael Davidson, M.D.

R713 Gabapentin in the Treatment of Bipolar and Correlated Disorders
Alessandro Lenzi, Donatella Marazziti, M.D.

NR714 Does Fluoxetine Cause Activation, Sedation, Both or Neither?
Mary Sayler, M.S., Joachim Wernicke, M.D., Stephanie Koke, M.S., Gary D. Tollefson, M.D.

NR715 Sertraline Versus Paroxetine Effects on Pindolol Pharmacokinetics
Pierre Blier, M.D., Marc LeBel, Ph.D., Richard Bergeron, M.D., Vratislav Hadrava, M.D.

NR716 The Safety of Abrupt Discontinuation of Nefazodone
John M. Zajecka, M.D., William S. Miles, M.D., Thomas G. Cobb, M.D., Shirley Chen, Robert McQuade, Ph.D.

NR717 Clozapine Treatment, Suicidality, Aggressiveness, Serum Lipids and Monoamine Plasma Levels
Baruch Spivak, M.D., Roberto Mester, M.D., Noach Gonen, M.D., Suzanna Roitman, M.D., Abraham Weizman, M.D.

NR718 A Double-Blind, Placebo-Controlled Evaluation of Paroxetine in the Prevention of Recurrent Depression
Ivan P. Gergel, M.D., Cornelius D. Pitts, R.P.H., Rosemary Oakes, M.S.

NR719 Length of Treatment with SSRI Antidepressants in Primary Care in the United Kingdom
John M. Donogahue, B.Sc.

NR720 Lithium and EKG Findings
Marion E. Wolf, M.D., Vasant Ranade, Ph.D., George Lutz, M.D., Aron D. Mosnaim, Ph.D.

NR721 Lithium Dosage and Blood Count in Psychiatric Patients
L. Kola Oyewumi, M.D., Maryanne McKnight, M.D., Zack Z. Cernovsky, Ph.D.

NR722 Effect of Desipramine on Exercise in Adults and Children
Bruce D. Waslick, M.D., B. Timothy Walsh, M.D., Elsa Giardina, M.D., Laurence L. Greenhill, M.D., Karina Bilich, Thomas Bigger, M.D.

NR723 Nefazodone Versus Paroxetine in Depressed Outpatients
Patrick Lemoine, M.D., Enrico Smeraldi, M.D., Tomas Palomo, M.D., Jean-Philippe Cosson, M.D., Marco Zibellini, M.D., Fernando Rico-Villademoros, Ronald N. Marcus, M.D.

NR724 Tolerability of Mirtazapine in 15 Versus 30 mg Initial Dose: A Randomized, Double-Blind Study
Jon T.H. Helsdingen, M.D., Adjm Sitsen, M.D.

NR725 A Prospective Open Trial of Olanzapine for Poorly Responsive Psychosis
Gregory W. Dalack, M.D., Ronald C. Albucher, M.D., Jane Marie Carnahan, M.D., Daniel J. Healy, M.D., Ziad A. Kronfol, M.D., James H. Meador-Woodruff, M.D.

NR726 Antidepressant Withdrawal-Related Mania? Critical Prospective Observation and Theoretical Implications in Bipolar Disorder
Robert M. Post, M.D., Tina R. Goldstein, B.A., Mark A. Frye, M.D., Kirk D. Denicoff, M.D., Earlian E. Smith-Jackson, R.N., Ann L. Bryan, B.A., S. Omar Ali, B.S.

NR727 Venlafaxine Treatment of Somatic Disorders
Paul J. Markovitz, M.D., Susan C. Wagner, M.A., Hannah D. Stern, B.A.

NR728 Mirtazapine Augmentation in the Treatment of Refractory Depression
Linda L. Carpenter, M.D., Zeljko Jocic, M.D., Joan Hall, B.A., Steven A. Rasmussen, M.D., Lawrence H. Price, M.D.

NR729 Olanzapine Versus Haloperidol in the Treatment of Psychosis
Todd Sanger, Ph.D., Jeffrey A. Lieberman, M.D., Mauricio Tohen, M.D., Gary D. Tollefson, M.D.

NR730 QEEG in Chronic Schizophrenia Patients Treated with Clozapine
Duncan J. MacCrimmon, M.D., Margarita Criollo, M.D., Howard Galin, M.A., Susan J. Adams, B.M., Donald G. Brunet, M.D., James S. Lawson, Ph.D.

NR731 Melatonin Treatment of Psychotic Tourists Experiencing Jet Lag
Haim Y. Knobler, M.D., Gregory Katz, M.D., Hilla Knobler, M.D., Sergey Raskin, M.D., Rimona Durst, M.D.

NR732 Divalproex in Alcohol and Drug Detoxification of Bipolar Affective Disorder Patients: Retrospective Chart Reviews
John R. Hubbard, M.D., Peter R. Martin, M.D.

NR733 The Adverse Effect Profile and Efficacy of Divalproex Sodium Compared to Valproic Acid
Carlos A. Zarate, Jr., M.D., Mauricio Tohen, M.D., Rajesh Narendran, M.D., Eric Tomassini, B.S., Jane McDonald, Max Sederer, B.A., Alex Madrid, M.A.

NR734 Knowledge and Attitudes of Psychiatric Inpatients and Outpatients About Their Medications
Pierre P. Leichner, M.D., Helen M. Gagne, Stephen A. Shigeishi

NR735 In Vitro Metabolism of Enantiomers of Mirtazapine
Leon P.C. Delbressine, Ph.D., Ria M.E. Vos, Ph.D., Roger M. Pinder, Ph.D.

NR736 History of Neuroleptic Use in Bipolar Patients
Melissa A. Brotman, B.A., Emily L. Fergus, B.S., Robert M. Post, M.D., Gabriele S. Leverich, M.S.W.

NR737 Risperidone in Chronic Schizophrenia During Long-Term Follow-Up
Michael Philipp, M.D., Margot Albus, M.D., Angela Klauder, M.D., Michael Linden, M.D.

NR738 Risperidone Dose Dependency in Elderly Patients
Wolfgang A. Wittgens, M.D., Ulrich Trenckmann, M.D.

NR739 Gender-Specific Prolactin Olanzapine Versus Haloperidol in Schizophrenia
Bruce Kinon, M.D., Bruce Basson, M.S., Gary D. Tollefson, M.D.

NR740 Double-Blind Comparison of the Adverse Event Profile of the Tricyclic Antidepressants and the SSRI Citalopram
Per Tanghoj, Heikki Hakkarainen, M.D.

NR741 Citalopram Versus Imipramine in the Treatment of Inpatient Depression: Results from a Double-Blind, Placebo-Controlled Trial
Charles L. Bowden, M.D.

NR742 Principal Components of the Beck Depression Inventory
Robert T. Dunn, M.D.

NR743 Efficacy and Safety of Sertraline in Depressed Geriatric Patients with Vascular Disease
P. Murali Doraiswamy, M.D., K. Ranga Rama Krishnan, M.D., Cathryn M. Clary, M.D.

NR744 Comparison of Risperidone and Olanzapine in Six Veterans Affairs Hospitals
John C. Voris, Pharm.D.

NR1 Monday, June 1, 9:00 a.m.-10:30 a.m.

Risperidone in Rapid-Cycling Bipolar Disorder

Vivian I. Acevedo, M.D., Department of Psychiatry, University of Miami, 1400 NW 10 Avenue Ste 304A,D79, Miami FL 33136; Paul J. Goodnick, M.D., Blanche Freund, Ph.D.

Summary:

Historically, antipsychotics were used extensively to treat manic symptoms; however, with the success of lithium, the use of antipsychotics was significantly reduced due to risk of EPS and tardive dyskinesia. The atypical antipsychotic group—first clozapine and then, risperidone—was found to successfully treat mania (Frankenburg et al, 1998; Tohen et al, 1996). Since lithium has been classically found to be less successful in the treatment of rapid cyclers (Dunner and Fieve, 1974), it was logical to attempt to apply the atypical antipsychotics to this group of patients. Patients with evidence of rapid-cycling mood disorder were placed on risperidone 1 mg qd or placebo in addition to their regular mood stabilizers. Patients were seen on a monthly basis with ratings of mania (Young Mania Scale) and depression (HDRS). They were instructed to keep diaries prior to entry and thereafter of daily mood state based on the 1–7 Fieve Mood Scale for bipolar disorder. Patients were maintained in the study until onset of significant mood symptoms. Risperidone could be increased to a maximum of 6 mg if needed. At this time, the first group of four patients have been entered and completed. (We expect to present data on a sample of 10 at the meeting.) Some patients have already seen significant reductions in daily mood changes in the Fieve Mood Scale (FMS) from 1.2 to 0.2 and 1.0 to 0.4; it is hypothesized that these patients are taking active medication, as others have shown no change in the FMS. The blind will be broken for the first group of patients prior to the meeting.

NR2 Monday, June 1, 9:00 a.m.-10:30 a.m.

Psychotherapy for HIV-Infected Patients: A Literature Review

Evangelia L. Amirali, M.D., Department of Psychiatry, McGill University, 2875 Douglas Avenue, Montreal PQ H3R 2C7, Canada; J. Christopher Perry, M.D.

Summary:

Objective: This study reviews the role of specific forms of psychotherapy, other than psychoeducation and counseling, for HIV-infected patients.

Method: MEDLINE, PSYCHINFO, AIDSLINE searches (1980–1997) were conducted to identify psychotherapy studies of HIV-infected patients. Five studies were identified that employed psychotherapy that included clear diagnostic and outcome measures, both observer rated and self rated, as well as definitions of treatment. Other study variables were then examined like sample size, severity of illness, form and duration of treatment, and length of follow-up.

Results: Overall psychotherapy appeared to effectively reduce distress rates and psychiatric symptoms. Effect size (ES) varied from 0.59 to 3.12 for active treatment. In one study, addition of fluoxetine did not seem to add to the ES. However, the small number of studies and the relatively small sample size did not allow for a meaningful comparison between two active treatments. In addition, treatment duration was short and follow-up was available for only up to three months.

Conclusion: To date, there are a very limited number of studies on the efficacy of specific forms of psychotherapy for HIV-infected patients. Within each treatment condition, the ES is large, but because of the short follow-up, we don't know if the effects are durable and whether psychotherapy affects the course of the underlying illness. There is great need for more studies—randomized controlled trials and naturalistic—in a less limited clinical sample.

NR3 Monday, June 1, 9:00 a.m.-10:30 a.m.

Personality Disorders in Monolingual Hispanics

Luis M. Anez, Ph.D., Department of Psychiatry, Yale Psych Institute, 184 Liberty Street, New Haven CT 06519; Carlos M. Grilo, Ph.D., Charles A. Sanislow, Ph.D., Thomas H. McGlashan, M.D.

Summary:

Objective: To perform a preliminary study of DSM-IV personality disorders in monolingual hispanic psychiatric outpatient.

Method: The Diagnostic Interview for Personality Disorders-Version 4 (DIPD-4) was translated into Spanish (backward and forward) by experienced bilingual and bicultural clinicians. The DIPD-4 was administered to adult monolingual hispanic psychiatric outpatients independently from the clinicians providing assessments at a community clinic. The internal consistency of the DIPD-4 was examined and the DIPD-4 diagnoses were compared with the final diagnoses generated by the clinicians.

Results: To date, in this ongoing study, 23 subjects (15 females and 8 males aged 18 to 50 (M = 40) years have been assessed. Internal consistency was quite variable for the DSM-IV-defined PDs; coefficient alpha was adequate (i.e., > .75) for paranoid, avoidant, obsessive-compulsive, borderline, narcissistic, and antisocial. The DIPD-4 generated significantly more diagnoses than did clinicians. The DIPD-4 revealed high rates of personality disorders; borderline (44%), depressive (35%), avoidant (30%), and obsessive-compulsive (30%) personality disorders were the most frequently diagnosed Axis II disorders. In contrast, 70% of the study group received either "no personality disorder" or "deferred" by their clinicians.

Conclusions: In this preliminary study of personality disorders in monolingual hispanic psychiatric outpatients, the newly-translated Spanish version of the DIPD-4 showed adequate internal consistency for six DSM-IV-defined personality disorders. The semi-structured DIPD-4 interview generated significantly greater personality disorder diagnoses than generated by clinicians.

NR4 Monday, June 1, 9:00 a.m.-10:30 a.m.

Pathways to Care for Patients with First-Episode Psychosis in Mexico

Rogelio Apiquian, M.D., Clinical Research, Institute of Mexican Psych, Mexico-Xochimilco 101 Huipulco, Mexico City 14370, Mexico; Francisco Paez, M.D., Cristina Loyzaga, M.D., Humberto Nicolini, Ph.D., Ana Fresan, M.D., Gabriela Vallejo, M.D., Ma. Elena Medina-Mora, Ph.D.

Summary:

The psychotic disorders present a period of untreated psychosis (mean = 2 years). Delay in the onset of the treatment was associated with a poor prognosis.

Objective: The aim of this study was to determine the pathways of care and the duration of untreated psychosis (DUP), in patients with first-episode psychosis.

Method: We recruited 50 patients. Psychiatric diagnoses were assessed with the SCAN system and to determine the pathways and DUP. Patients and their caregivers were interviewed using a semi-structured questionnaire designed by the OMS.

Results: Forty-eight percent (N = 24) of the patients were male. The mean age was 28 years (SD = 10.1). Patients were classified as having schizophrenia (N = 18), affective psychotic disorders (N = 17), or non-affective psychotic disorders (N = 17). The mean age of onset was 27 years. The first contact with treatment services was after 35 weeks of onset. The DUP was long (mean = 56 weeks, SD = 67.2). The principal reasons for seeking help were the psychotic symptoms. Schizophrenic patients delayed longer in seeking help compared with affective psychotic patients ($F = 3.55, 2, 47$ df, $p = 0.05$).

Conclusions: The results show a great interest in evaluating our care services to assure that DUP patients are cared for in a more time manner for a better prognosis.

NR5 Monday, June 1, 9:00 a.m.-10:30 a.m.

Randomized Controlled Trials Presented at APA Annual Meetings of 1968, 1978, 1998: A Cohort Study

Noorulain Aqeel, M.D., Department of Psychiatry, St. Vincent's Hospital, 101 West 15 Street Apt. 6 K-N, New York NY 10011-6700; Nuzhat Sultana, M.D., Clive E. Adams, M.B., Irshad Ahmed, M.D.

Summary:

Background: Randomized controlled trials (RCT's) are the most powerful tools by which the effects of mental health care are measured. Past studies have shown that less than 50% of RCT's presented at a large congress are finally fully published. There is also evidence from this study that abstracts that reported RCT methodology in an unclear manner were less likely to be fully published as were well reported studies not presented in English. This may reflect a language bias in academic literature as seen elsewhere. This study investigates these trends for the APA annual meetings.

Objective: (1) To identify all RCT's presented in the APA annual meetings in 1968, 1978, and 1988. (2) To produce a profile of RCT's, and the quality of reporting of randomization within the abstracts of the APA. (3) To follow-up all the RCT's in commercial bibliographic databases to see what proportion are eventually fully published in peer-reviewed journals.

Method: The APA new research presentations of 1968, 1978, and 1998 were located at the Archives in the APA headquarters and hand searched for RCT's by three independent searchers (NA, NS, IA). Abstracts were surveyed for quality of reporting, sample size, interventions, trial length, and participant profile. The RCT's were then searched for in biological abstracts, the Cochrane Library, EMBASE, MEDLINE, and PsycLIT.

Results: Small proportions of the research presented at the APA meetings are RCT's (12 RCT's-1968, 6-1978, 47-1988). Full analysis of these and their pattern of publication will be presented. From these it may be possible to predict what proportion of the 1998 RCT's will be seen in peer-reviewed journals.

NR6 Monday, June 1, 9:00 a.m.-10:30 a.m.

Common Mental Disorders and Socioeconomic Inequalities in Santiago, Chile: Preliminary Results

Ricardo Araya, M.D., Department of Psychiatry, University of Chile, AVDA La Paz 1003, Santiago, Chile; Graciela Rojas, Rosemarie Fritsch, Julia Acuna

Summary:

Objective: To estimate prevalence rates of CMD among dwellers of the capital of Chile and look at socioeconomic inequalities.

Method: A cross-sectional household survey of a representative sample from Santiago, aged 16–64, was carried out. These preliminary results comprise a probabilistic multistage sample of 1,886 adults interviewed during 1997. CMD were measured with the Clinical Interview Schedule-Revised and socioeconomic variables based on gender, civil status, education, income, type of occupation, and quality of housing.

Results: A total of 31% of the sample were cases of CMD. Women had higher prevalence rates in all age subgroups, reaching a peak among women aged 25–29. The proportion of women with respect to men increased with higher CIS-R scores. Separated and cohabiting people present higher prevalence of CMD. The higher the educational level, quality of housing, and income, the lower the prevalence of CMD. Unemployed due to ill health, unemployed seeking employment, and housekeepers presented higher scores, in that order, in the CIS-R.

Conclusions: Various studies have shown that Santiaguinos have higher scores of CMD than most cities in the world. Chile presents marked socioeconomic inequalities, which might explain some of these findings.

This study was funded by FONDECYT 1961075.

NR7 Monday, June 1, 9:00 a.m.-10:30 a.m.

Postconcussional Disorder: Clarifying the Diagnosis, Selecting Treatments and the Role of Valproic Acid: Three Cases

David B. Arciniegas, M.D., 3361 W 31st Avenue, Denver CO 80211; Thomas P. Beresford, M.D., Martin L. Reite, M.D.

Summary:

Objective: Traumatic brain injury (TBI) is a common occurrence, with nearly 400,000 new injuries per year. Cognitive and emotional disturbances may become persistent and disabling for some of these injured persons, and most frequently involve attention and memory disturbance. Emotional and neurovegetative disturbances also occur, including affective symptoms (dysphoria, irritability, and lability), sleep disturbance, and energy disturbance. Most often, these disturbances are symptomatically distinguishable from a DSM-IV mood disorder, and are better identified as the postconcussional disorder.

Method: In this report, we describe our experience managing three cases of postconcussional disorder, and discuss the role of valproate in these treatments.

Results: Our experience with these patients suggests careful evaluation can distinguish the constellation of symptoms suggesting a postconcussional disorder (by DSM-IV definition) in these patients from those of a mood disorder, with which they might easily be confused. Valproate appears to have markedly improved several of the core affective and somatic post-concussional symptoms in this set of patients, without worsening of their cognitive impairments.

Conclusions: Postconcussional disorder is clearly distinguishable from mood disorders, and treatment should follow a symptom-targeted approach. Though prospective, controlled studies are needed to definitively establish the role of valproate in the treatment of this disorder, this experience suggests it may be an important and helpful agent for improving the function of patients with postconcussional disorder.

Funding: Department of Veterans Affairs, Office of Academic Affairs, Special Fellowship Program.

NR8 Monday, June 1, 9:00 a.m.-10:30 a.m.

Ego Defense Mechanisms in Relation to Medical Compliance: A Pilot Study

David B. Arciniegas, M.D., 3361 W 31st Avenue, Denver CO 80211; Jeanette Geesey, Thomas P. Beresford, M.D.

Summary:

Objective: Predicting and managing medical compliance is an ongoing concern of clinicians across all specialties. Identifying patients' methods of coping with stress (ego defense mechanisms) is important to assist them in managing their reactions to illness.

Method: A total of 60 patients in a voluntary adult psychiatry outpatient clinic, and 22 patients in an outpatient epilepsy clinic, were surveyed using the 40-item Defense Style Questionnaire (DSQ). Responses were factored into three levels: mature, neurotic, and immature.

Results: Among the epilepsy patients, higher scores of neurotic defenses ($p < .001$) and immature defenses ($p < .01$) distinguished them from previously reported nonclinical subjects, and higher

scores of mature ($p < .01$) and neurotic ($p < .007$) defenses distinguished them from the adult psychiatry population.

In the epilepsy group, the number of missed appointments were most related to high scores on items assessing denial ($r = .79$, $p < .12$), humor ($r = -.93$, $p < .02$), and somatization ($r = -.96$, $p < .01$); and number of ER visits correlated with high scores on suppression ($r = .94$, $p < .005$), dissociation ($r = .84$, $p < .04$), undoing ($r = -.81$, $p < .05$), and rationalization ($r = -.94$, $p < .006$).

Conclusions: These findings suggest the DSQ is a useful and reliable tool for assessing ego defense mechanisms, and the notably different profile of the epilepsy patients may have specific implications for understanding the impact of this illness on the type and flexibility of coping styles used by this group. These data also suggest the DSQ may be a useful tool for proactively identifying patients with coping styles that may significantly impact the manner, and potentially the cost, of care for their medical treatment.

Funding: This study was done without specific funding.

NR9 Monday, June 1, 9:00 a.m.-10:30 a.m.

A Population-Based Study of the Relation Between Mental Illness and Accident Involvement

Abbas Azadian, M.D., Department of Psychiatry, Clark Institute, 33 Princess Street Suite 102, Toronto ON N5A 4P4, Canada; John S. Arrowood, Ph.D., Anne E. Rhodes, M.Sc., Paula N. Goering, Ph.D.

Summary:

Although the relationship between alcohol/drug use and accident involvement has been well established, the relationship between other mental illnesses and risk of involvement in accidents is relatively understudied. We employed the Ontario Health Survey (OHS) and its Mental Health Supplement (MHS) to study this relationship in 8,116 people aged 15–64. The MHS employed a structured diagnostic interview based on DSM-III-R, to assess mental illness within the year prior to interview. Accident involvement and type of accident were obtained from the OHS. Accident categories included vehicular accidents, work-related accidents, and other accidents (e.g., falls, burns, poisoning). Odds ratios (OR), adjusted for age, sex, and additional diagnoses, were obtained using logistic regression. The presence of mood disorders, substance use disorders, or antisocial personality disorder independently increased the odds of involvement in an accident (adjusted OR of 1.8, 2.1, 1.7, respectively). In addition, we found that males were more likely to be in an accident (OR of 1.68), while the odds of being in an accident dropped significantly with age. The presence of an anxiety disorder, however, did not increase the odds of involvement in an accident. Further study of these relationships and an examination of the relation between other psychiatric disorders and accident involvement appear warranted. These data may ultimately aid in preventive and therapeutic efforts.

NR10 Monday, June 1, 9:00 a.m.-10:30 a.m.

Assessment of OCD

Carrie Beckstein, M.D., Department of Psychiatry, Northshore University Hospital, 400 Community Drive, Manhasset NY 11030; Marjan Ghahramanlou, M.A., Juliana R. Lachenmeyer, Ph.D., Sharon DiGiacopo, M.A., Regina Uccello, B.A., Andrew Shack, M.A.

Summary:

Measures of adult obsessive-compulsive disorder (OCD) differ on the extent to which they assess obsessions, compulsions, or both of these dimensions. Studies using the Yale-Brown Obsessive-Compulsive Scale (Goodman, et al, 1989) try to determine whether it supports: (a) a one-factor model in which the total score is primary (Fals-Stewart, 1992); (b) a two-factor model in which the two subscales are independent (McKay, 1995); (c) a two-factor model with the first factor as the degree of disturbance caused by the OCD symptoms and the second factor as the severity of the symptoms (Coles, Amir, and Foa, 1996); and (d) a hierarchical model in which two factors load on the single higher order factor. The present study looks at the following measures: Y-BOCS, Maudsley Obsessive-Compulsive Scale (Hodgson & Rachman, 1977), Compulsive Activities Checklist (Steketee & Freund, 1993), and the Thought Inventory in an attempt to assess the roles that obsessions and compulsions play in each of these measures and the degree to which the scales and subscales are related to each other. In addition, each of the measures will be looked at in relation to degree of disturbance caused by OCD symptoms and the severity of the symptoms. For the most part, the Y-BOCS and the Maudsley assess both obsessions and compulsions, the CAC assesses only compulsions, and the Thought Inventory only obsessions. Preliminary data on 46 OCD adults in outpatient treatment found a significant correlation between the Maudsley and the CAC ($r = .65$). Implications for assessment of adult OCD will be discussed.

NR11 Monday, June 1, 9:00 a.m.-10:30 a.m.

Treatment Utilization by Patients with Personality Disorders

Donna S. Bender, Ph.D., NYS Psychiatry Institute, 722 W 168th Street Box 8, New York NY 10032; Regina T. Dolan, Ph.D., Robert Stout, Ph.D., Danika L. Altman, Ph.D., Paul J. Erickson, Jr., M.D., Andrew E. Skodol II, M.D.

Summary:

Objective: The purpose of this study was to compare recent and lifetime treatment histories of four groups of patients with personality disorders (PD's)—schizotypal (STPD), borderline (BPD), avoidant (AVPD), and obsessive-compulsive (OCPD)—and a group diagnosed with major depression and no personality disorder (MD).

Method: A total of 523 participants in the NIMH-funded Collaborative Longitudinal Study of Personality Disorders were assessed at intake with the SCID and the Diagnostic Interview for Personality Disorders. Treatment utilization data were drawn from the Health Care Utilization section of the LIFE-Base.

Results: All types of psychotherapy (i.e., individual, group, family, and self-help) and residential treatment (i.e., hospitalization, day treatment, and halfway houses) were reported more often and in greater amounts by patients with BPD than by other PD groups, either lifetime or in the past six months. A history of individual psychotherapy was more frequently reported by patients in the BPD and OCPD groups than by patients with AVPD or MD. Residential treatment was more common for patients with BPD, STPD, or MD than for patients with AVPD or OCPD. Use of antidepressants, but not other psychotropic medications, was more frequently reported by patients with AVPD, OCPD, and MD.

Conclusions: Consistent with previous research, patients with BPD receive more diverse and intensive treatments in greater amounts than patients with other PD's. Comorbidity, social functioning, recent life events, and specific personality traits may help to explain the differences in treatment utilization among these groups.

NR12 Monday, June 1, 9:00 a.m.-10:30 a.m.

Prolactin Response to Risperidone in BPD Patients

Sally A. Berry, M.D., Department of Psychiatry, Case Western, 11100 Euclid Avenue, Cleveland Heights OH 44106; Kelly L. Camlin, L.S.W., S. Charles Schulz, M.D.

Summary:

The antipsychotic medications have been associated with an increase in serum prolactin in schizophrenic patients. The effect of atypical antipsychotics on prolactin is less clear. Because of the favorable side effect profile and indications of efficacy, atypical antipsychotics are now being used in the treatment of multiple psychiatric disorders, including borderline personality disorder. Therefore, it is crucial to evaluate the effect of atypical antipsychotics, such as risperidone, on prolactin levels when used in patient populations with diagnoses other than schizophrenia. Twenty patients with borderline personality disorder per DSM III-R criteria were treated with risperidone (1-4 mg, daily) or placebo in a double-blinded, eight-week study. Serum prolactin levels were monitored at baseline and at the completion of the study (ave 7.9 weeks). Serum prolactin was determined by standard radioimmunoassay in a commercial laboratory. Substantial increases in prolactin were noted in a significant number of patients. For example, prolactin levels were observed in the range of 3.1 to 33.0 ug/L at baseline. Prolactin levels of 50–110 ug/L were not uncommon upon completion of the study. Increased prolactin levels were sometimes associated with clinical sequelae including galactorrhea. We will present data comparing serum prolactin levels in placebo- and risperidone-treated patients with borderline personality disorder.

NR13 Monday, June 1, 9:00 a.m.-10:30 a.m.

Hospital Anxiety and Depression Scale or Beck Depression Inventory: Which Is the Best in Detecting Depression in HIV-Infected Patients?

Jordi Blanch, M.D., Department of Psychiatry, Hospital Clinic, Villarroel 170, Barcelona 08036, Spain; Astrid Morer, M.D., Miquel Gasol, M.D., Esteve Cirera, Manuel Valdes

Summary:

Introduction: The cognitive-affective subscale of the Beck Depression Inventory (BDI) and the Hospital Anxiety and Depression Scale (HADS) try to avoid somatic symptoms and seem to be more useful for nonpsychiatric physicians to detect depression in HIV-infected patients.

Objective: To compare the BDI and the HADS as a screening tool for depression in HIV positive patients.

Methods: HIV-infected outpatients were interviewed using the Structured Clinical Interview for DSM-III-R (SCID) and completed the HADS and the BDI. BDI scores were calculated for the complete 21-item measure (cutoff score of 15) as well as for the cognitive-affective (12 items) subscale (cutoff score of 10). For the HADS we used the cutoff score of 10 and 8. We determined if the patients assessed as depressed using BDI or HADS got the diagnosis of major depression obtained by the SCID.

Results:

Scale	*Prevalence*	*sensitivity*	*specificity*
BDI-21	*85.5%*	*100%*	*42.2%*
BDI-12	*64%*	*85.2%*	*47.9%*
HADS-10	*41.3%*	*80.1%*	*64.5%*
HADS-8	*52%*	*80.6%*	*51.3%*

Conclusions: (1) The prevalence of depression in HIV-infected patients detected by the BDI decreases when we use the cognitive-affective (12-item) version. (2) The HADS with the cutoff score of 10 seems to be the most reliable instrument in detecting depression in HIV positive patients.

NR14 Monday, June 1, 9:00 a.m.-10:30 a.m.

A Comparison of Neuropsychological Deficits in Chronic Cocaine Abusers Versus Controls

Patrick Bordnick, Ph.D., Psychiatry, University of Texas, 1300 Moursund Street, Houston TX 77030; Michelle Shenberger, M.Ed., Lynn Ratkos, R.N., Leanne Vogelson, B.S., David Huang, B.S., Angela Kimble, B.S., Bankole Johnson, M.D.

Summary:

While recent evidence suggests that cocaine-dependent subjects may experience functional neuropsychological deficits, few of these studies have controlled for the potential confound of concomitant structural brain abnormality. Thus, the extent to which these deficits reflect structural abnormalities or more subtle changes in brain function is not well characterized. In the present study, we examined neuropsychological function in the areas of: (a) executive function, (b) recall and memory, (c) nonverbal spatial reasoning, and (d) arithmetic and spelling in nine male and female cocaine-dependent subjects with no evidence of clinically significant structural brain abnormality on their magnetic resonance image scans. Compared with standardized controls of similar age, educational level, and achievement, these cocaine-dependent subjects differed only on delayed recall. Nevertheless, compared with normative values, both the cocaine-dependent and control groups demonstrated clinically significant deficits in executive functioning, memory, spatial reasoning, and basic spelling and arithmetic skills. These data suggest that neuropsychological deficits occurring in cocaine-dependent individuals with no structural brain abnormality may be more reflective of educational underachievement than the dependent condition.

NR15 Monday, June 1, 9:00 a.m.-10:30 a.m.

Dose-Dependent Noradrenergic and Serotonergic Properties of Venlafaxine in Animal Models Indicative of Antidepressant Activity

Michel S. Bourin, M.D., Psychopharmacology, FAC of Medicine, BP 53508 1 Rus Gaston Veil, Nantes 44035, France; J. Paul Redrobe, M.Sc., Glen B. Baker, Ph.D.

Summary:

The present study was undertaken to thoroughly investigate the preclinical psychopharmacological profile of venlafaxine, testing a wide range of doses in animal models indicative of antidepressant-like effects. Venlafaxine was found to be active in mouse forced swimming test (at 8, 16, 32, and 64 mg/kg) and to increase spontaneous locomotor activity (at 16, 32, and 64 mg/kg). Venlafaxine antagonized apomorphine-induced (16 mg/kg) hypothermia (at 2, 4, 8, 16, 32, and 64 mg/kg). Pretreatment with PCPA (which decreases 5-HT brain concentrations) significantly attenuated the anti-immobility effects of venlafaxine (8 and 16 mg/kg; $p < 0.01$) in the mouse forced swimming test. Venlafaxine at a dose of 32 mg/kg remained active, despite PCPA pretreatment. DSP-4 (which decreases NA brain concentrations) significantly attenuated the anti-immobility effects of venlafaxine (16 mg/kg; $p < 0.05$), whereas venlafaxine at 32 mg/kg remained active, despite DSP-4 pretreatment. Venlafaxine was active in the forced swimming test when administered at sub-effective doses in combination with (±) pindolol (venlafaxine: 1 and 2 mg/kg), RU 24969 (venlafaxine: 1, 2, and 4 mg/kg), 8-OH-DPAT (venlafaxine: 4 mg/kg), clonidine (venlafaxine: 1, 2, and 4 mg/kg), lithium (venlafaxine: 1, 2, and 4 mg/kg) and quinine (venlafaxine: 1 and 2 mg/kg). Prior administration with NAN-190 antagonized the anti-immobility effects of venlafaxine (8, 16, and 32 mg/kg). Interaction studies did not induce changes in locomotor activity. The results of the present study indicated that, at low doses, venlafaxine inhibited serotonin reuptake, while at higher doses it inhibited both serotonin and noradrenaline reuptake.

NR16 Monday, June 1, 9:00 a.m.-10:30 a.m.

Sexual Side Effects of Mirtazapine in Depression

Beth K. Boyarsky, M.D., University of TX/Galveston, 301 University Blvd Route 0430, Galveston TX 77555; Waheedul Haque, M.D., Mark Rouleau, M.Ed., Robert M.A. Hirschfeld, M.D.

Summary:

One-third of patients with depression have sexual dysfunction manifested by decreased libido, erectile dysfunction, or delayed ejaculation. All SSRI's, first-line treatment for depression, increase sexual dysfunction to some extent. Specific serotonin receptors, primarily 5-HT3 and 4, are thought to have an effect on libido and sexual function. Mirtazapine is an atypical antidepressant with $\alpha 2$ adrenergic antagonist and 5-HT2 and 3 receptor-blocking activity. It does not decrease, and theoretically may increase, sexual function.

Fifteen sexually active adult male and female outpatients with DSM-IV-diagnosed major depression entered a 12-week, open-label, flexible-dosing study (15–45mg.). The Arizona Sexual Experiences Scale (ASEX) measured sexual functioning; general symptoms were measured using the HAM-D, Sheehan Disability Inventory, CGI, SCL-90, and Side Effects Checklist.

Preliminary data show a 52% decrease in depression as measured by the HAM-D and a 33% increase in baseline sexual functioning as measured by the ASEX. Parameters of desire, arousal, and orgasm increased by 33%, 34%, and 32%, respectively.

Results suggest that mirtazapine increases sexual functioning in depressed patients. Further research is needed to determine whether the drug itself increases sexual functioning, or whether drug antidepressant effect is responsible. Implications for long-term treatment compliance are also discussed.

NR17 Monday, June 1, 9:00 a.m.-10:30 a.m.

Recent Trends in Crack Cocaine and Heroin Use: Implications for HIV Prevention and Clinical Practice

Thomas M. Brady, M.S., Department of Psychiatry, University of IL/Chicago, 912 South Wood Street, Chicago IL 60612-7327; Joseph A. Flaherty, M.D., Susan Adams, Ph.D., Sonja Nelson, M.S., Norman S. Miller, M.D.

Summary:

Recent surveys of urban drug use and emergency room admissions show a decrease in crack cocaine and an increase in heroin use, with intranasal heroin ingestion ("snorting") an emerging route of exposure. However, high risk sexual behaviors, such as trading sex for drugs and/or money, have been linked with crack cocaine.

Methods: Between March 1996 and December 1997, 259 Risk Assessment Battery (RAB Metzger 1991) questionnaires were completed by outpatients with a substance use disorder. Respondents were over 80% African American and a majority were public aid recipients originating from economically depressed areas of Chicago. Because crack cocaine use has been associated with sex trading, this analysis focused on other HIV-related behaviors such as paying money for sex and getting paid for sex (commercial sex.) Epidemiologic methods, calculating prevalence odds ratios (OR) with 95% confidence intervals (C.I.), were utilized to illustrate the magnitude of the association between smoking crack, using any form of heroin, "snorting" or sniffing heroin, and commercial sex.

Findings: The prevalence of commercial sex may be between 25% to 35% in this small convenience sample of addiction outpatients from Chicago. Despite declining national trends, crack cocaine remains prevalent in Chicago, and other Midwestern urban areas. The association between crack cocaine use and commercial sex was marginally significant. Crack users were 1.8 times more likely than non-users to have engaged in a commercial sex act in the last six months (prevalence ratio 1.83; 95% Confidence Interval (1.03, 3.26); Wald 4.27; p=.04), although this association was moderate after adjusting for age and sex (p.=.07.) However, heroin users were not at an elevated risk of commercial sex (OR= 1.56, C.I. (.71, 3.42)); and heroin snorting users also were not associated with commercial sex (OR=1.38, C.I. (.58, 3.06)).

Discussion: Heroin's reported recent rise in drug use, in some areas at the expense of crack cocaine, may not signal an end to high risk heterosexual activities in some areas of Chicago. We emphasize that mental health clinicians routinely assess patients at risk of sexually transmitted HIV and other STDs with a sexual history as part of the psychiatric admissions interview. Established clinical procedures for appropriate referrals for STD diagnosis and treatment should be readily available. The American Psychiatric Association's Policy Guidelines for HIV/AIDS articulate the importance of AIDS education in the treatment of all psychiatric patients. Culturally-sensitive and age-appropriate educational supportive services for patients, families and staff should be available. On-site communicable disease and HIV/STD risk reduction education continues to be an important part of mental health and substance abuse treatment in urban settings.

NR18 Monday, June 1, 9:00 a.m.-10:30 a.m.

Acupuncture and Serotonin in Neuropathy: Interaction with Nefazodone

Karen Breakstone, M.D., Department of Psychiatry, University of Miami, 1400 NW 10 Avenue Ste 304A, Miami FL 33136; Paul J. Goodnick, M.D., Xue-Lan Wen, M.D., Adarsh Kumar, Ph.D.

Summary:

Acupuncture, initially developed in Chinese medicine in the 5th century BCE, has been increasingly applied to alleviation of pain, particularly in presence of cancer (Hsu 1996, Urba 1996). Serotonergic pathways have been implicated in pain relief with applications in both fibromyalgia and neuropathy (Jorge and Goodnick 1997; Goodnick et al, 1997). Thus, it was hypothesized that acupuncture might work synergistically with serotonergic therapy to improve neuropathy. Thus, patients who have completed an initial trial of open nefazodone in diabetic neuropathy have been offered a course of six acupuncture visits while monitoring platelet 5HT content. In further detail, each patient first was administered in open trial up to 450 mg/day of nefazodone. This dose was maintained during the acupuncture therapy weeks. As during the first eight weeks of nefazodone, improvement during acupuncture was measured with subjective (visual analog scale=VAS) and objective measures. Platelet 5HT content has been measured before, during, and following the acupuncture. Data on two completers to date show: (1) 61 males showed minimal improvement in VAS pain from 60 to 50 with little other change; and (2) 57 males with significant further improvement in both VAS (Pain 65 to 5, paresthesia 55 to 0, numbness 40 to 5) and observer (paresthesia 1.0 to 0, numbness 1.5 to 0.5). The differences appear to be related to 5HT function as seen in platelet measures. A larger series of patients will be shown at the meeting. Further investigation of acupuncture and psychotropics is indicated.

NR19 Monday, June 1, 9:00 a.m.-10:30 a.m.

Nefazodone in Diabetic Neuropathy

Karen Breakstone, M.D., Department of Psychiatry, University of Miami, 1400 NW 10 Avenue Ste 304A, Miami FL 33136; Paul J. Goodnick, M.D., Adarsh Kumar, Ph.D.

Summary:

Past research has shown the value of using serotonergic strategies in diabetic neuropathy (Sindrup, 1994). Previous work on sertraline has indicated usefulness in open study (Goodnick et al, 1997). Nefazodone as a combined 5HT reuptake blocker and postsynaptic $5HT_2$ receptor antagonist was hypothesized to also be valuable in pain relief. Patients with diabetic neuropathy (with an exclusion of depression) have been rated on a 100 mm VAS and a 0-2 observer scale at baseline, 1, 2, 4, and 8 weeks of treatment with doses of nefazodone gradually increased to a maximum of 450 mg/day. Patients are also rated at each visit on the BDI and HDRS. A baseline and final platelet 5HT content are also obtained. At this time, results are available on the first five entered patients; at least 10 will have been entered by meeting date. The five males, with a mean age of 60.0 years, have a mean history of diabetes mellitus of 15 yrs and of neuropathy of 3.4 years. Results show reductions in VAS pain (64.4 to 30, $p < .04$), paresthesia (51 to 20, $p = .10$), observer ratings of pain (1.5 to 0.5, $p = .01$), of paresthesias (1.3 to 0.5, $p = .10$), and of numbness (1.6 to 0.5, $p = .04$). These preliminary results support the utility of nefazodone in diabetic neuropathy; a larger series of patients and double-blind trials are indicated.

NR20 Monday, June 1, 9:00 a.m.-10:30 a.m.

Acetylmethadol: An Alternative for Problem Methadone Patients

Mark Brudniak, M.D., Department of Psychiatry, VA Outpatient Clinic, 251 Causeway Street, Boston MA 02114; John A. Renner, Jr., M.D., Brian F. Sands, M.D.

Summary:

Acetylmethadol (LAAM) has been established as an effective alternative to methadone for opiate substitution therapy. We reviewed our clinical experience switching patients to LAAM who had failed to respond adequately to methadone maintenance. Urine toxic screens were collected for the six months prior to and after the switch to LAAM. Results for each month were consolidated and each month was rated as either "clean" or "dirty." To be rated "clean," all urines in the month had to be opiate free. If there was no urine screen for the month, or if even one urine was positive, the month was counted as "dirty." For each patient the percentage of "clean" months prior to the switch was compared with the percentage of "clean" months during the initial six months on LAAM. Results demonstrated a significant improvement following the switch to LAAM. Of the 16 patients in the sample, nine improved, three deteriorated, and four showed no change.

This review suggests that LAAM may be a superior medication for patients who have failed on methadone. We are continuing to add patients to this sample. Data will also be presented comparing the demographics of those patients who did or did not show improvement after being switched to LAAM.

NR21 Monday, June 1, 9:00 a.m.-10:30 a.m.

Dissociative Identity Disorder: Axis I and II Comorbidity

Gary S. Bruss, Ph.D., Department of Psychiatry, Pennsylvania Hospital, 210 W Washington Sq Mezzanine, Philadelphia PA 19106; Alan M. Gruenberg, M.D., Reed Goldstein, Ph.D., Howard S. Sudak, M.D., Jacques P. Barber, Ph.D.

Summary:

While several studies have documented the polysymptomatic presentation of patients with dissociative identity disorder (DID), a lack of uniformity in diagnostic definitions and in the methodologies of these studies makes it difficult to draw conclusions regarding the actual comorbidity of DID and other Axis I and Axis II conditions. To our knowledge, no studies exist examining comorbidity utilizing empirically based structured diagnostic interviews for DSM-III-R or IV.

This report reflects the findings on 20 inpatients diagnosed with DID. Interviews were conducted with the primary alter.

Diagnoses were derived using: the modified SADS for Axis I; the PDE for Axis II, and the DDIS for DID. All patients met criteria for at least one other Axis I disorder. The mean number of other comorbid Axis I disorders was 4.6. A total of 90% of patients met criteria for a major mood disorder (55% for major depression, chronic; 10% for major depression, recurrent; 25% for bipolar disorder). A notable trend in 69% of patients with major depression was the deteriorating course of depressive illness over time (i.e., progression from early onset dysthymic disorder to double depression to chronic major depression). A total of 65% of patients met criteria for an anxiety disorder. PTSD and panic disorder were the most commonly diagnosed anxiety disorders (both at rates of 50%); 50% met criteria for an eating disorder; 20% for substance dependence; 10% for schizoaffective disorder. All patients met criteria for at least one Axis II disorder. The mean number of Axis II disorders was 3.0. The most common personality disorders were borderline (95%), avoidant (55%), dependent (45%), and paranoid (45%). The distribution of Axis II disorders spanned all three clusters, but were concentrated mainly in clusters B and C. The treatment implications of this clinical heterogeneity of patients with DID will be discussed.

NR22 Monday, June 1, 9:00 a.m.-10:30 a.m.

Drug Interactions of Clozapine Metabolism by Liver Microsomes

Dr. Hot Bun, Pharmacokinet, Pharmacy Faculty, 27 BD Jean Moulin, Marseille CEDEX05 13385, France; Dr. Claude Aubert, Dr. Jacques Catalin

Summary:

Clozapine has been classified as an atypical neuroleptic drug. It is metabolized in the liver and the two main metabolites are desmethyl clozapine and clozapine N-oxyde. Clozapine is used in the treatment of schizophrenic patients who did not respond to typical neuroleptic drugs. Schizophrenic patients received clozapine alone or in combination with other drugs. Only a few drug interactions have been described, which may be explained by the fluvoxamine inhibition and carbamazepine induction of the metabolism of clozapine. In the present work, we screened the effects of 53 molecules, representative of 11 different therapeutic classes, on metabolism of clozapine by rat liver microsomes.

We demonstrate that many drugs caused more than 50% inhibition of clozapine metabolism in vitro, in contrast to major calcium channel blockers (diltiazem, felodipine, isradipine, lacidipine, nicardipine, nitrendipine), antifungals (ketoconazole, miconazole, sulconazole), and some anticancer drugs (paclitaxel, teniposide). The formation of desmethyl clozapine was 35% that of clozapine with chloramphenicol. Alimemazine, cyamemazine, and levomepromazine, molecules frequently associated with clozapine, inhibited more than 50% of the formation of the desmethyl metabolite of clozapine. The degree of inhibition was decreased when drug concentrations were lower. Complementary clinical and pharmacokinetic studies should be performed to validate these assumptions.

NR23 Monday, June 1, 9:00 a.m.-10:30 a.m.

Donepezil in Treatment-Refractory Mania

Tal Burt, M.D., Department of Psychiatry, Mass General Hospital, WACC 812 15 Parkman Street, Boston MA 02114;

Gary S. Sachs, M.D., Christina M. Demopulos, M.D., Amy E. Shriver, B.S., Carolyn L. Dufault, B.A.

Summary:

Objectives: To demonstrate the efficacy of a cholinesterase inhibitor (donepezil) for the treatment of mania in patients who are resistant to or intolerant of lithium and/or valproate.

Background: Bipolar disorder is a debilitating mood disorder affecting 1% to 3% of the population. Many manic patients fail treatment with lithium and valproate. Cholinesterase inhibitors have been shown to be effective in the treatment of manic episodes. The presumed mechanism is the increase of available acetylcholine in the CNS. Most cholinomimetics, however, are poorly tolerated. Donepezil, a well-tolerated, reversible cholinesterase inhibitor, has been approved for treatment of Alzheimer dementia.

Methods: A chart review was conducted to identify patients with treatment refractory mania who received donepezil for periods of 10 days or more. The severity of their mood symptoms and level of functioning were compared before and after treatment with donepezil.

Results: Chart review identified eight patients. Six patients showed marked improvement in manic symptomatology on donepezil 5 to 10 mg. Mean CGI improvement was 1.57. Mean GAF improvement was 16.6. Mean Y-MRS improvement was 9.7. In addition, the drug was well tolerated.

Conclusion: These results with severely ill patients demonstrate that donepezil can improve the symptoms of mania and be well tolerated.

NR24 Monday, June 1, 9:00 a.m.-10:30 a.m.

Attitudes Toward Mental Illness in Dominica

Christopher P. Camilleri, M.D., Department of Psychiatry, Harvard South Shore Residency Program, VAMC, 940 Belmont St., Belmont, MA 02410; David Sharma, M.D., Robert Kohn, M.D., Itzhak Levav, M.D.

Summary:

Objective: Little is known about the perception of mental illness in the English-speaking Caribbean. This study was conducted to determine attitudes, knowledge, and help-seeking practices for emotional disorders in the Commonwealth of Dominica.

Method: Two groups were surveyed: 67 community leaders consisting of nurses, teachers, and police officers, and 135 community respondents. Respondents were asked to identify and suggest management of individuals depicted in case vignettes with psychosis, alcoholism, depression, and childhood hyperactivity.

Results: The psychotic individual was diagnosed as suffering from a mental illness by 84.0% of the leader group and 71.2% of the community group. In each of the three other vignettes, less than 30% of the respondents thought that mental illness was present. The alcoholic was viewed as having a serious problem by only slightly more than half. Less than half thought that the depressed or hyperactive individual had a serious problem. Subjects were most likely to refer a family member with emotional problems to medical professionals. The leader group did worse in recognizing mental illness than did the community group.

Conclusion: Education about mental health in Dominica is needed. Most disconcerting was the lack of knowledge among those who are directly involved in the pathway to care.

NR25 Monday, June 1, 9:00 a.m.-10:30 a.m.

Personality Disorder in Panic Attack

Adolfo Canovi, M.D., Department of Psychiatry, Italian Hospital, Gascon 450, Buenos Aires 1181, Argentina; Viviana Horigian, M.D., Ricardo Perez Rivera, M.D., Adrian Trajterman, M.D., Alejandro Begue, M.D., Cecilia De Simone, M.D., Gustavo Rozadilla, M.D.

Summary:

Objectives: The presence of comorbid personality disorder in panic disorder adversely affects course and treatment of panic disorder. Comorbidity ranges from 27% to 58% depending on the study and diagnostic instrument to assess personality. Our goal is to assess and identify the presence of personality disorders in patients with panic disorder.

Method: 278 patients were assessed for panic disorder during six months in the emergency room (ER) at a general hospital. Diagnosis was based on DSM-IV criteria. The 36 patients with panic disorder were then assessed with the Interview Guide for Evaluating DSM-IV Psychiatric Disorders.

Results: 36 patients met criteria for panic disorder; 61% (n = 22) were comorbid with personality disorders. Cluster B personalities were more frequently diagnosed. Histrionic personality disorder was diagnosed most often (41%, n = 9).

Conclusions: This study finds a significant comorbidity of panic disorder with Cluster B, while others described a predominance of comorbidity with Cluster C.

NR26 Monday, June 1, 9:00 a.m.-10:30 a.m.

Requests for Protective Custody of the Mentally Ill: The Family's Role in Rapid Intervention and the Prevention of Harm

David W. Carrington, M.D., Department of Neurol, Tulane University Med, 1430 Tulane Avenue Box SL23, New Orleans LA 70112; Jose M. Pena, M.D., Robert R. Franklin, M.D., Stephanie Posner, Ph.D., John W. Thompson, Jr., M.D., Valerie Eckert

Summary:

Objective: In Louisiana, orders for protective custody (OPCs) authorize the detention of mentally ill individuals in the community and their transportation to a treatment facility for evaluation. In this study we present new data from OPCs issued at the request of family members and report the types of behavioral disturbances identified at the time of issuance.

Methods: All OPCs issued in the city of New Orleans in calendar year 1996 were reviewed and three types of data were collected: (1) the relationship of the person requesting the order to the subject of the order, (2) the types of legal criteria mentioned—grave disability, dangerousness to self, or dangerousness to others, and (3) the type of psychiatric problem mentioned—substance abuse, other forms of psychiatric disturbance, or both.

Results: Of 1495 OPCs issued in 1996, 1372 (92%) were issued in response to requests by family members. Among these, the subject's mother was the most frequent petitioner (n = 545; 40%). Dangerousness to others was the most frequent concern (n = 912; 67%), followed by grave disability (n = 348; 25%) and dangerousness to self (n = 322; 24%). There were no significant differences on these factors between requests from mothers and other family members. A subset of the OPCs (n = 429) indicated that family members were the most frequent (86%) targets of violent or homicidal behavior. Psychiatric problems other than substance abuse were mentioned most frequently (n = 818; 60%), followed by substance abuse and other comorbid problems (n = 264; 19%) and substance abuse alone (n = 180; 13%). There were no significant differences on these factors between requests from mothers and other family members.

Conclusions: OPCs are most frequently issued in response to family members' expressed concerns that an individual's mental condition or behavior represents a danger to themselves or others. Family members, and mothers in particular, may play a crucial

role in identifying situations that require rapid intervention in order to prevent or diminish the potential for serious harm.

NR27 Monday, June 1, 9:00 a.m.-10:30 a.m.

Gabapentin in Mental Retardation with Bipolar Disorders

Mauro Giovanni Carta, M.D., Department of Psychiatry, University of Cagliari, Via Liguria 13, Cagliari-Sardegna 09197, Italy; Carolina Hardoy, M.D., Julieta Hardoy, M.D., Bernardo Carpiniello, M.D., Pierluigi Cabras, M.D.

Summary:

Objective: Anticonvulsant drugs are recognized as efficient therapeutic tools for the bipolar spectrum disorders. Recently, successful results suggested the effectiveness of gabapentin, an antiepileptic drug recommended in refractory partial seizures. The purpose of the study was to assess the efficacy of adjunctive gabapentin in the treatment of patients with mental retardation and bipolar spectrum disorders.

Method: Ten patients with mental retardation and bipolar spectrum disorders with a demonstrated worsening of symptomatology during "significant" life events that interfered or induced the interruption of the rehabilitation programs were chosen for this study. The precise meaning of "significant" was defined for every patient as the life event that caused an important worsening of symptomatology in at least two different opportunities. Gabapentin, 300–800 mg/day, was added to the standard therapy. The patient's psychopathological condition during the "significant" life event before and after the adjunctive therapy with gabapentin was assessed with the Italian version of the Assessment and Information Rating Profile.

Results: The psychopathological condition, particularly anxiety symptoms and social retirement, showed a positive response and improvement.

Conclusions: The promising response to gabapentin suggests that further study of this agent is required. Gabapentin may become an alternative treatment approach for patients with mental retardation where traditional mood stabilizing agents have frequent contraindications.

NR28 Monday, June 1, 9:00 a.m.-10:30 a.m.

Tattoos and Body Piercing and Their Implications in Psychiatric Disorders

Salvador Ceniceros, M.D., Department of Psychiatry, ETSU College Med, PO Box 70567 Hillrise Hall, Johnson City TN 37614; George R. Brown, M.D., Conrad M. Swartz, M.D.

Summary:

Objective: Tattooing and body piercing (T/BP), as forms of body adornment, have been used for centuries and have recently become more popular. This project was designed to (1) determine if psychiatric patients with T/BP differ from psychiatric patients without these forms of body modifications (BM) in regard to levels of depression, anxiety, self-mutilating behavior (including playing Russian Roulette), and dysfunctional social behavior, and (2) to determine if the severity and degree of BM (total number, location, and theme of tattoo) can be used to predict self-mutilating and dysfunctional social behavior.

Method: Psychiatric patients with BM (n = 20) and psychiatric patients without BM (n = 20) were interviewed and completed several questionnaires. The two groups were matched for age and sex. All T/BP were rated by total number, location, and theme. Independent t-tests and chi-squared tests were used to analyze the data. Correlation coefficients were used to compare a summary score of BM with psychiatric parameters.

Results: Body-modified psychiatric patients reported no more depressive symptoms than the control group ($p = 0.853$), but reported significantly higher amounts of anxiety symptoms ($p < 0.001$). The body-modified group were more involved in self-mutilating behavior ($p < 0.001$) and dysfunctional social behavior ($p < 0.001$). When participation in Russian Roulette was analyzed, the body modifiers where considerably more involved ($p < 0.001$). The rating of tattoos and body piercing by location, total number, and theme showed an $r = 0.87$ ($p < 0.001$) when related to self-mutilation and dysfunctional social behavior.

Conclusion: Tattoos and body piercing in the psychiatric patient can be significant tools in evaluating levels of anxiety, self-mutilation, and dysfunctional social behavior and can also help in determining the risk of dangerous behavior such as playing Russian Roulette. The high r implies a great degree of predictive value of some types of psychiatric disorders from the presence of these body modifications on physical examination.

NR29 Monday, June 1, 9:00 a.m.-10:30 a.m.

Psychiatric Morbidity in Children of Bipolar Parents

Kiki D. Chang, M.D., Department of Psychiatry, Stanford University, 401 Quarry Road, Palo Alto CA 94305; Terence A. Ketter, M.D., Hans Steiner, M.D.,

Summary:

Background: Children of parents with bipolar disorder (BD) are at four-fold risk of mood disorders. They can manifest prepubertal behavioral disorders, which could reflect prodromal symptoms of BD. We studied the prevalence of psychiatric disorders in children of generally high-functioning parents with BD.

Methods: We evaluated 30 children with at least one biological parent with BD with the Kiddie Schedule for Affective Disorders and Schizophrenia, Present and Lifetime (K-SADS-PL), the Kiddie and Young Adult SADS (KYA-SADS), and the Young Mania Rating Scale (YMRS), Connors Parental Scale, and family history. Parental age of onset of psychiatric problems and childhood behavioral disorders were assessed with K-SADS-PL supplements.

Results: 48% of children had some Axis I disorder. Twenty-eight percent had attention-deficit/hyperactivity disorder (ADHD), 16% BD, 16% oppositional defiant disorder (ODD), 8% obsessive compulsive disorder (OCD), and 8% enuresis. Children with Axis I disorders had significantly higher Connors and YMRS scores than those without. BD or ODD in children tended to be associated with earlier parental onset of psychiatric problems, and BD in children with greater family history of mood disorders. Behavioral disorders in children were not associated with higher prevalence of parental behavior disorders.

Conclusions: Our data support the hypothesis that children of bipolar parents have a high incidence of mood, behavioral, and anxiety disorders. The earlier age of onset of psychiatric problems in parents of children with BD or ODD may indicate more severe illness.

NR30 Monday, June 1, 9:00 a.m.-10:30 a.m.

REM Density and Antidepressant Response to Partial Sleep Deprivation: Preliminary Data

Camellia P. Clark, M.D., Psychiatry 116A, USCD/VAMC, 3350 La Jolla Village Dr., San Diego, CA 92161; Renee M. Dupont, M.D., Shahrokh K. Golshan, Ph.D., J. Christian Gillin, M.D.

Summary:

Objective: To determine which polysomnography (PSG) variables might be related to antidepressant response to partial sleep deprivation (PSD).

Methods: 23 unmedicated unipolar patients (current major depression by structured interview, baseline 17-item Hamilton De-

pression Rating Scale [HDRS17] = 16) underwent one night's PSD (awake after 3 a.m.) They underwent baseline PSG and received the HDRS17 at standard times before and after PSD. A reduction of 30% in the modified HDRS17 (omitting sleep and weight-loss items) after PSD defined clinical response.

Results: The 12 responders and 11 nonresponders had similar baseline HDRS17 (19.7 ± 1.7 vs. 20.2 ± 3.7) and baseline PSG (all variables n.s., between-groups t-test, df21.) The only PSG variable correlating with the percent of decrease in modified HDRS17 was baseline REM density (Pearson's r = −.52, n = 23, p = .01.)

REM density (reflecting number of rapid eye movements in REM sleep) has been increased in several studies of depression. Increased REM density has been linked with poor clinical outcome in some studies. Aminergic agonists and systems suppress both REM sleep and depressive symptoms; cholinergic agonists and systems promote REM and depressive phenomena.

Conclusions: Degree of antidepressant response may be related to baseline cholinergic-aminergic tone. This is the first PSD study reporting any correlation between baseline PSG and antidepressant response.

Support: VA Research Svc., VA Postdoctoral Fellowship in Psychiatric Research, NARSAD Young Investigator Award, MH54642-01A1, MH30914, MH18399.

NR31 Monday, June 1, 9:00 a.m.-10:30 a.m.

Effect of Haloperidol on Intracellular Signaling System Coupled to Alfa1-Adrenergic Receptor in Rat Frontal Cortex

Graciela A. Cremaschi, Ph.D., Cefybo, Conicet, Serrano 669, Buenos Aires 1414, Argentina; Tania Borda, Psy., Ana Maria Genaro, Ph.D.

Summary:

Haloperidol (hal) interacts with α^1-adrenoceptor in frontal cortex. Here we report the effects that it exerts on the intracellular signals coupled to α^1-adrenoceptor, specially those related to nitric oxide synthase (NOS). We found a concentration-dependent increase in phosphoinositide hydrolisis (area/mg: basal = 26 ± 2; hal 10^{-9}M = 39 ± 4; hal 10^{-5}M = 80 ± 8, n = 5). However, hal triggers a biphasic effect in NOS activity: low concentrations decreased this activity, while high concentrations increased it (pmol/g: basal = 80 ± 10; hal 10^{-9}M = 59 ± 8; hal 10^{-5}M = 130 ± 12, n = 6). We studied protein kinase C (PKC) involvement in these phenomena; hal induces translocation of PKC in all the concentrations assayed, being greater at low concentrations (%citosol/membrane: basal = 80/20; hal 10^{-9}M = 57/43; hal 10^{-5}M = 70/30, n = 5). The PKC inhibitor, staurosporine, blunted the inhibitory action of hal without modifying its stimulatory action. In contrast, trifluoperazine, a calcium-calmodulin blocker, blunted the stimulatory action of hal without modifying its inhibitory action. Low hal concentrations stimulate PKC, inducing an inhibition in NOS, while high hal concentrations increment NOS levels gated by intracellular calcium mobilization according to poor PKC activity. Therefore, we postulate a cross-talk between both enzimatic pathways in rat cerebral frontal cortex, where different degrees of activation of PKC and NOS were obtained depending on the hal concentration.

NR32 Monday, June 1 9:00 a.m.-10:30 a.m.

Cholinergic Muscarinic Coupled Intracellular Signals in Cerebral Frontal Cortex from Hypoxic Mice

Graciela A. Cremaschi, Ph.D., Cefybo, Conicet, Serrano 669, Buenos Aires 1414, Argentina; Tania Borda, Psy., Ana Maria Genaro, Ph.D.

Summary:

Biochemical signalling is involved in brain injury during hypoxia (HYP) insult. Moreover, anoxia interferes with the synthesis of various neurotransmitters, including acetylcholine. The aim of this work was to determine the cascade of intracellular events coupled to muscarinic acetylcholine receptor (mAChR) activation in cerebral frontal cortex slices from mice exposed to anoxic conditions. The mAChR agonist carbachol (CARB) was found to increase phosphoinositide hydrolysis, exerting this effect notably in HYP tissue (inositol phosphates: area/mg: NORMAL: basal (B) = 24.9 ± 3.3, CARB 10^{-8}M = 53.3 ± 4.7; HYP: B = 12.7 ± 1.9, CARB 10^{-8}M = 68.6 ± 5.2, n = 5). Nitric oxide synthase (NOS) was also increased in HYP versus NORMAL animals (pmol/g: NORMAL = 144 ± 11; HYP = 215 ± 19, n = 6). CARB abrogated NOS accumulation induced by HYP, but stimulated this enzyme activity in NORMAL animals. Furthermore, a differential translocation of protein kinase C (PKC) ocurred in NORMAL and HYP tissue, depending on the concentration of the cholinergic agonist assayed (%citosol/membrane: NORMAL: B = 70/30, CARB 10^{-8}M = 60/40, CARB 10^{-6}M = 33/67; HYP: B = 89/11, CARB 10^{-8}M = 61/39, CARB 10^{-6}M = 41/59). These results indicate that HYP would induce a major mAChR sensibilization to carbachol as a compensatory mechanism to diminish NOS hyperactivity involved in the neurotoxicity that leads to brain damage. This effect would result from lesser PKC activity.

NR33 Monday, June 1, 9:00 a.m.-10:30 a.m.

Family and Coping Skills Therapy: A Pilot Study

John Curry, Ph.D., Department of Psychiatry, Duke University, Box 3837 c/o S Barnett, Durham NC 27710; Shannon R. Barnett, M.D.

Summary:

Objective: As many as 20% of adolescents with substance abuse problems have comorbid depression, increasing their risk for chronic depression, substance dependence, and suicide. This study reports results from Stage I of a pilot test for a psychosocial treatment for depressed, substance-abusing adolescents. Family and Coping Skills (FACS) Therapy is a three-month outpatient treatment integrating systems and behavioral family therapy with cognitive behavioral adolescent group therapy. Family treatment targets include monitoring and providing consequences for substance use and improving the family's problem-solving skills. Group treatment targets include restructuring depressive and use-enhancing cognitions and increasing individual problem-solving.

Methods: Thirteen adolescents who met criteria for substance abuse and a depressive disorder (major depression, dysthymia, or depression NOS) on the Child and Adolescent Psychiatric Assessment (CAPA) were enrolled. The CAPA was readministered after treatment. Post-treatment versus pre-treatment symptom scores were compared using t-tests for correlated samples.

Conclusion: Parents and adolescents reported a decrease in adolescent substance abuse symptoms ($p < .05$ for parents and $p < .01$ for adolescents). In addition, adolescents reported fewer symptoms of depression and conduct disorder ($p < .01$). Effects of the treatment on depressive symptoms appeared to be independent of the effects on substance abuse symptoms.

Funding source: National Institute on Drug Abuse.

NR34 Monday, June 1, 9:00 a.m.-10:30 a.m.

The Continuing Education Needs of Community Psychiatrists

Sarah B. Danial, M.D., Department of Psychiatry, Hospital for Sick, 30 Robert Street Apt 1, Toronto ON M5S 2K3, Canada;

Ivan L. Silver, M.D., Carla Zucchero-Sarracini, Richard G. Tiberius, Ph.D.

Summary:

Many psychiatry departments have continuing education (CE) mandates to deliver new information and skills to varied target audiences. Yet few, if any, when designing their CE offerings, consider the needs of the "consumer" through needs-assessment surveys or empirical research. The purpose of this study is to identify the continuing education needs of psychiatrists working in the community using qualitative research methodology. A focus group of two hours' duration was conducted by a moderator and an assistant to explore the opinions of psychiatrists whose primary practice is in a nonuniversity setting. Questions were designed to investigate CE issues such as preferred locations, frequency and formats, sponsors, and attitudes toward participating in outcome research. Two additional groups are planned with specific subpopulations. The first session was audiotaped to provide a transcript for coding and analysis. Data analysis was performed using principles of qualitative methods. Preliminary findings include the following: both independent and group formats are currently utilized as CE vehicles, although study groups were found to be particularly important. Goals for pursuing CE are diverse: obtaining consensual validation, staying current with new developments, obtaining input on specific clinical validation, and obtaining input on specific CE formats were identified. These results, are important for planners developing CE programs for psychiatrists working in the community.

NR35 Monday, June 1, 9:00 a.m.-10:30 a.m.

Ketamine Anesthesia Augments ECT Seizure Duration

Margaret D. Dean, M.D., Department of Psychiatry, Duke University, Box 3309/DUMC, Durham NC 27710; Andrew D. Krystal, M.D., Richard D. Weiner, M.D., Virginia Lindahl, B.A.

Summary:

Introduction: The maximum stimulus intensity available with currently available ECT devices is limited. It is common practice to require seizures to be more than 25 seconds in duration in order to be considered adequate. Some patients cannot achieve that seizure duration with the maximum stimulus intensity available; hence, other means of prolonging seizure duration must be explored. The anesthetic agent ketamine has a lesser anticonvulsant effect than the standard anesthetic, methohexital, and has been used by some practitioners as a means to augment seizure activity.

Methods: We retrospectively studied 29 patients (16 women and 13 men, mean age 65) who were switched from methohexital to ketamine during index courses of ECT. We also quantified the incidence of complications.

Results: Ketamine effectively prolonged seizure duration in 14 of 16 who had brief seizures with methohexital and for whom the switch from methohexital to ketamine was the only change made. Three of 29 subjects had side effects following the switch to ketamine. Two patients experienced post-ictal agitation that was well managed pharmacologically; however, one patient developed flashbacks necessitating discontinuation of ketamine.

Discussion: The change to ketamine appears to prolong seizure activity effectively in patients who have short seizures with methohexital with few complications and it is well tolerated by most patients.

NR36 Monday, June 1, 9:00 a.m.-10:30 a.m.

Comorbidity of Medical Conditions in Schizophrenia

Janine C. Delahanty, M.A., Department of Psychiatry, University of Maryland, 685 W Baltimore St MSTF 300, Baltimore MD 21201; Lisa B. Dixon, M.D., Leticia T. Postrado, Ph.D.

Summary:

Objective: While there are more data available on morbidity and mortality due to specific diseases in persons suffering from schizophrenia, little is known about the impact of comorbid medical problems and the associated use of somatic services.

Methods: The Schizophrenia PORT Project surveyed a stratified, random sample of 719 persons (63% male, 54% white) with schizophrenia. The survey assessed presence of comorbid medical illnesses.

Results: Approximately two-thirds (469/719) reported having one or more lifetime medical conditions, one-half (343/719) reported currently having a medical condition, and almost one-third (256/719) were currently receiving treatment. Women ($p<.001$) were *more* likely to report a higher number of lifetime and current medical conditions and were *more* likely to be currently receiving treatment ($p<.001$). However, there were no significant differences between whites and nonwhites for lifetime and current medical conditions and treatment. Those with any medical illnesses ($p<.001$) reported a significantly lower physical health rating, as did those receiving treatment ($p<.001$). Individuals with medical problems and those receiving treatment reported significantly worse physical health ($p<.001$) and less satisfaction with health ($p<.001$). All medical conditions ($p<.001$) except STD were significantly associated with seeing a physician in the past year.

Conclusion: This study confirms the presence of significant comorbidity among persons with schizophrenia and the linkage of comorbidity with lower health satisfaction and utilization of somatic services.

NR37 Monday, June 1, 9:00 a.m.-10:30 a.m.

Effects of Chronic Choline and Lithium Administration in Rapid-Cycling Bipolar Disorder

Christina M. Demopulos, M.D., Department of Psychiatry, Mass General Hospital, 50 Staniford Street, Boston MA 02114; Constance M. Moore, Ph.D., Suzanne Babb, M.S., Perry F. Renshaw, M.D., Amy E. Shriver, B.S., Gary S. Sachs, M.D.

Summary:

Background: This is a preliminary report of a double-blind magnetic resonance spectroscopic study examining the effects of chronic choline bitartrate versus placebo administration in lithium-treated patients with rapid-cycling bipolar disorder. Pilot data suggest lithium-refractory bipolar patients with rapid cycling have an improved clinical course with adjunctive choline bitartrate. We obtained sequential scan data on eight subjects and examined the relationship between brain choline, lithium, and clinical course.

Methods: Subjects between the ages of 18 and 45 were prescribed Eskalith CR@ in a b.i.d. schedule. Basal ganglia choline and lithium MRS scans were obtained at baseline (0), weeks 2, 3, 5, 8, and 12. After baseline scan, patients were randomized to choline or placebo and administered weekly rating scales of mood and the clinical global impression (CGI) scale. We examined the relationship between brain choline and brain lithium and between improved clinical course and increased brain:serum lithium ratio.

Results: There was no positive significant relationship between increases in brain choline and increases in brain lithium. We did not observe a significant positive relationship between an increase in brain/serum lithium ratio and an improvement in clinical course.

NR38 Monday, June 1, 9:00 a.m.-10:30 a.m.

Chronic Lithium Administration and Renal Function in Bipolar Patients

Christina M. Demopulos, M.D., Department of Psychiatry, Mass General Hospital, 50 Staniford Street, Boston MA 02114; Constance Dufault, B.A., Gary S. Sachs, M.D.

Summary:

Objective: Intermittent reports of renal failure in patients treated with lithium indicated a sustained concern about the impact of chronic lithium therapy. We attempted to gauge the frequency of clinically significant changes in renal function during lithium maintenance and to examine potential risk factors.

Methods: A chart review was conducted to identify patients who received lithium for three or more years. Data harvested allowed determination of change from baseline creatnine at three-year intervals. We evaluated whether a clinically significant change in creatnine ($\geq 0.2 mg/dl)^2$ in the first three years was correlated with further increases in creatnine from three to six years.

Results: 79 patients recieved lithium for at least three years including 17 patients treated for nine years or longer and 27 with a significant increase in creatnine. A Spearman rank correlation was used to examine the relationship between significant change in creatnine in the first three years with change from three to six years. There was no significant relationship identified ($r = -.068$; $p = .67$). A larger sample population is needed to examine whether significant changes in creatnine by year three are correlated with changes in creatnine at years six to nine and nine to 12. For those who had a significant change in creatnine, potential risk factors will be identified.

NR39 Monday, June 1, 9:00 a.m.-10:30 a.m.

Oxidative Stress and Outcome of Psychosis

Judith K. Denton, M.D., Department of Psychiatry, DDEAMC, 300 Hospital Drive, Fort Gordon GA 30905; Elizabeth E. Correnti, M.D., Russell E. Scheffer, M.D., Sahebarao P. Mahadik, Ph.D., Lawrence M. Correnti, M.D.

Summary:

There is now convincing evidence that oxidative stress (i.e., imbalance between the generation of reactive oxygen species [ROS] and body's antioxidant potential) exists in schizophrenia even at the onset of psychosis. Since the treatment response varies widely in patients, we have investigated the change in the lipid peroxidation products (e.g., thiobarbituric acid reactive substances, TBARS) in plasma as an index of oxidative damage and the response to treatment in first-episode psychotic patients.

The sample comprised 26 patients (20 men and six women), all active-duty military personnel for the treatment of a first episode of psychosis. DSM-III-R diagnosis in patients was based on a best-estimate approach using information from the Structured Clinical Interview for DSM-III-R (SCID, Patient Version). Plasma TBARS in patients at the onset of psychosis was compared with 17 controls and in eight patients following six weeks of treatment with neuroleptics. The TBARS contents were significantly higher in patients at the onset of psychosis vs. matched controls ($P = < 0.002$) but did not differ after six weeks of treatment ($P = 0.25$). However, the significant positive correlations of TBARS with total BPRS and negative symptom scores before the treatment ($r = 0.65$. $P = 0.013$ and $r = 0.6$, $P = 0.015$, respectively) were changed to insignificant or slightly negative, and these were not correlated with the positive symptom scores. These data indicate that the altered lipid peroxidation following treatment at early stages of illness may reflect the treatment response.

NR40 Monday, June 1, 9:00 a.m.-10:30 a.m.

Cortical Gray, White and CFS Volumes in Schizotypal Personality Disorder

Chandlee C. Dickey, M.D., Department of Psychiatry, Harvard Medical School, 221 Longwood Avenue, Boston MA 02115; Martha E. Shenton, Ph.D., Tanya Kisler, B.S., Martina M. Voglmaier, Ph.D., Iris A. Fischer, B.S., Margaret Niznikiewicz, Ph.D., Robert W. McCarley, M.D.

Summary:

Objective: As schizotypal personality disorder (SPD) shares the same genetic diathesis as does schizophrenia, and as SPD subjects generally are free of research confounds such as chronic institutionalization and medication usage, studying SPD may offer insights into the underlying morphologic abnormalities in schizophrenia and related disorders. One issue in the schizophrenia literature is whether anatomic abnormalities are distributed throughout the brain (global) or are more focal, such as in the left temporal lobe. We have previously shown male SPD subjects to have reduced left superior temporal gyrus volumes compared with normal controls. The question of whether they also have more global abnormalities has not been explored.

Method: To answer this we acquired MRI images of 14 right-handed male SPD subjects and compared them with 13 normal controls matched for age. T2 axial images highlighting CSF and high resolution SPGR coronal images were reformated such that the automated segmentation program used optimal anatomic information.

Results: Using this reformated data set, we found that there were no differences in total intracranial contents, whole gray matter, white matter, or CSF between the SPD subjects and controls. In addition, after manually tracing and removing the subcortical gray matter structures and the cerebellum, the remaining cortical gray matter did not differ between the two groups.

Conclusion: These pilot data suggest that the abnormalities found in SPD are focal, not global, and may have implications for our understanding of the other schizophrenic spectrum disorders.

NR41 Monday, June 1, 9:00 a.m.-10:30 a.m.

Plasma Concentrations of Clozapine and Metabolites in Patients with Schizophrenia

Dr. Beatrice Disdier, Laboratory, CH E Toulouse, 118 Chenin De Ninet, Marseille Cedex 15 13917; Dr. Jean Farisse, Dr. Christophe Lancon, Dr. Hot Bun, Dr. Pierre Marie Llorca, Dr. Martine Cornet

Summary:

Clozapine has been classified as an atypical neuroleptic drug. This molecule is metabolized in the liver and the two main metabolites are N-desmethyl clozapine and clozapine N-oxide. Clozapine is used in the treatment of schizophrenic patients who do not respond to typical neuroleptic drugs.

Plasma concentrations of clozapine and its metabolites were measured in 27 patients with refractory schizophrenia. A method for simultaneous determination of clozapine and its two main metabolites using high performance liquid chromatography (HPLC) was developed. The method was highly specific in comparison with the previous HPLC technique, which used presented problems of analytical interferences. Comparisons of patients' kinetics have shown that concentrations of clozapine were found in excess because of interferences between clozapine and the N-oxide metabolite with the first method, and the new HPLC technique has removed the problem. A correlation between dose and concentration was clearly shown in the results, with an extensive inter-individual variation within the dose groups. The ratio between concentration of clozapine and dose was from 0.61 to 1.96. There was a significant correlation between concentrations of clozapine

and metabolites in plasma (r = 0.910 for N-desmethyl clozapine and r = 0.961 for clozapine N-oxide). There was also a correlation between concentrations of the two metabolites with a larger inter-patient variability (r = 0.742). Indices of N-desmethylation or N-oxidation were 0.75 ± 0.15 and 0.70 ± 0.16, respectively, without obvious dependence on the clozapine dose. Clinical studies have been done in parallel for the 27 patients and it will be very interesting to correlate plasma concentration and clinical response.

NR42 Monday, June 1, 9:00 a.m.-10:30 a.m.

Cognitive Deficits in Liver Transplant Patients

Saila B. Donepudi, M.D., Department of Psychiatry, UMDNJ-NJ Medical School, 66 Woodland Ave, West Orange NJ 07052-2929; James M. Hill, Ph.D., Baburao Koneru, M.D., Mario Finkelstein, M.D., Adrian Fischer, M.D., Nicole Andrisano, M.A., Jacqueline A. Bartlett, M.D.

Summary:

Introduction: The specific contribution of alcohol consumption to the cognitive sequelae of end-stage liver disease is poorly understood. This study examined cognitive functioning in liver transplant candidates with and without alcohol-related disease to assess the specific contribution of alcoholism to the cognitive problems associated with liver disease.

Method: Thirty-one liver transplant candidates were assessed with a battery of neuropsychological tests as part of their pretransplant psychiatric evaluations.

Results: Seventeen of the patients had alcohol-related disease, the others had either primary biliary disease or chronic hepatitis. Seventy-nine percent were male. Their average age was 43.2 years. They averaged 12.2 years of education. Seventy-two percent of the patients presented with at least one deficit (scores less than two standard deviations below the mean). Most frequent deficits were in visual memory; visual-motor coordination and problem-solving; processing speed; motor dexterity; shifting set; and constructive ability. Chi-square analysis revealed a significant difference (p = .002) between the occurrence of cognitive deficits in alcoholic versus nonalcoholic patients, with the alcoholic patients having a higher rate of deficits.

Conclusions: The incidence of cognitive deficits is high in pretransplant patients, and patients with alcohol-related disease demonstrate more deficits than those without alcohol-related disease.

NR43 Monday, June 1, 9:00 a.m.-10:30 a.m.

Alexithymia and Suicide Risk in Panic Disorder Patients

Pinhas Nedim Dannon, M.D., Department of Psychiatry, Chaim Sheba Medical Center, Dept C Tel Hashomer, Ramat Gainer 52621, Israel; Iulian Iancu, M.D., Schumuel Hirschmann, Leon J. Grunhaus, M.D.

Summary:

Objectives: The aim of the study was to compare panic disorder patients before and after a three-month course of drug treatment with normal healthy controls by using the Alexithymia and Suicide Risk Scales.

Methods: 26 panic disorder patients and 13 panic disorder and agoraphobia patients were compared with 14 demographically matched healthy controls before and at the end of three months drug treatment with the Suicide Risk Scale and Alexithymia scale. The statistical analyses were performed by two-tailed t test and ANOVA.

Results: Panic disorder patients had significantly higher scores on the Suicide Rating Scale at the beginning of the treatment (6.4 + 3.2) than the control group (0.8 + 0.9) and PD + Agoraphobia (3.7 + 2.1) patients. Two-tailed t test demonstrated significant difference ($p < 0.0001$, df::23) and in ANOVA ($p < 0.001$, f: 12.3). Interestingly there were no significant differences between the three groups in the Alexithymia Scale. After three months of drug treatment the higher score of Suicide Risk Scale became close to those of the control group. There were no significant differences between the effect of the two SSRI's (fluoxetine or paroxetine) that were used.

Conclusions: This small size study demonstrated two major points, which are that there were higher scores on the Suicide Risk Scale in panic disorder patients before the drug treatment; after three months no significant differences between groups and the efficacy of the chosen drugs.

NR44 Monday, June 1, 9:00 a.m.-10:30 a.m.

Repetitive Transcranial Magnetic Stimulation Is As Effective As ECT in the Treatment of MDD

Pinhas Nedim Dannon, M.D., Department of Psychiatry, Chaim Sheba Medical Center, Dept C Tel Hashomer, Ramat Gainer 52621, Israel; Leon J. Grunhaus, M.D., Schaul Schreiber, M.D., Ornah T. Dolberg, M.D.

Summary:

Objectives: The aim of this study was to compare the efficacy and the side effects of repetitive transcranial magnetic stimulation (rTMS) and ECT in severely depressed patients.

Methods: Twenty patients were randomized to two groups and treated with either rTMS or ECT. All the patients were suffering from severe major depression (HAMD-21>,20). Hamilton Rating Scale for Depression (HRDS-21), Brief Psychiatric Rating Scale (BPRS), Pittsburgh Sleep Quality Index (PSQI), Global Assessment Scale (GAS), and Global Depression Rating (GDR) were used for evaluation on baseline and at the end of second and fourth week of the treatment. Up to 20 rTMS sessions were administered with a magstim rapid machine to the left prefrontal region of the head, and given at 90% of motor threshold. During each session 20, two-second, trains at 10 HZ frequency, with a 45-second interval between trains were administered. ECT was given following the guidelines of APA. Seizure threshold was determined at baseline, and consecutive treatment was administered at 2.5 times baseline energy. Electrode placement was unilateral at baseline in all cases. Cases that responded slowly to ECT were switched to bilateral placement from the seventh treatment.

Results: Anova with repeated measures comparing baseline and week four clinical ratings for HRDS ($f:19.9, p < 0.0001$), BPRS ($f:12.3, p < 0.0001$), PSQI ($f:10.5, p < 0.0003$), GDR ($f:16.9, p < 0.0001$), and GAS ($f:24, p < 0.0001$) demonstrated significant effect of treatment. However, no group effect was noted.

Conclusions: Our preliminary findings are quite encouraging and suggest that rTMS and ECT are having similar potent antidepressant effects in these very sick patients.

NR45 Monday, June 1, 9:00 a.m.-10:30 a.m.

Neurocognitive Correlates of Anxiety Disorders in Children

Paz Toren, M.D., Tel-Aviv Comm Mental H C, 9 Hatzvl Street, Tel-Aviv 67197, Israel; fname-err lname-err, suff-err, Leo Wolmer, M.A., Sofia Eldar, M.D., Sharon Koren, B.A., Ronit Weizman, M.D., Nathaniel Laor, M.D.

Summary:

Objective: It has been suggested that children with anxiety disorders selectively process negative information and underscore social situations interpreted by them as threatening. A negative view of themselves and of the world is thus formed. The aim of the present study was to assess basic neuropsychological parameters

of children and adolescents with anxiety disorders, as compared with healthy matched controls.

Method: Nineteen children (aged 6 to 18) with anxiety disorders and 14 matched healthy controls participated in the study. All children underwent a neuropsychological assessment including the WISC-R, the California Verbal Learning Test (CVLT; verbal processing), the Rey-Osterrieth Complex Figure test (ROCF; nonverbal processing), and the Wisconsin Card Sorting Task (WCST; executive functions).

Results: The anxiety group scored lower than the control group on all measures of CVLT and had a significantly greater number of errors, perseverative responses, and incorrect answers given after a negative feedback (WCST). No differences were detected on comparing the WISC-R and the ROCF between the two groups.

Conclusions: Anxiety in children, as measured by basic neuropsychological parameters, is specifically processed through language and strengthened by linguistic information. Nonverbal processes do not seem to contribute to anxiety.

NR46 Monday, June 1, 9:00 a.m.-10:30 a.m.

Fluvoxamine and Enuresis in Children and Adolescents

Paz Toren, M.D., Tel-Aviv Comm Mental H C, 9 Hatzvl Street, Tel-Aviv 67197, Israel; Sofia Eldar, M.D., Nathaniel Laor, M.D., Leo Wolmer, M.A., Eliahu Samuel, M.D., Ronit Weizman, M.D.

Summary:

Objective: Tricyclic antidepressants possess antienuretic properties, yet their side effects limit their use in children and adolescents. The selective serotonin reuptake inhibitors (SSRIs) have antidepressant properties similar to the tricyclic antidepressants and a safer side-effect profile. The aim of the present study was to evaluate the antienuretic efficacy of the SSRI, fluvoxamine.

Method: Nine children aged 9 to 14 with primary enuresis that was resistant to behavioral therapy participated in the study. All received fluvoxamine, 75–100 mg per day. In four, the enuresis was the only focus of clinical attention, and five received fluvoxamine for other primary indications. Enuresis was monitored daily, and mean voiding frequency was compared between three phases: baseline, on treatment, and off treatment.

Results: Fluvoxamine had no statistically significant effect on enuresis. However, a decrease in voiding frequency was observed in three children on fluvoxamine treatment.

Conclusions: Fluvoxamine does not possess significant antienuretic properties. We suggest that the combination of serotonergic with anticholinergic activity is a major factor in the antienuretic activity. In the treatment of children or adolescents with obsessive-compulsive disorder and comorbid enuresis, clomipramine is preferred over SSRIs.

NR47 Monday, June 1, 9:00 a.m.-10:30 a.m.

CT Scan Screening in a Geriatric Psychiatry Unit

Elaine J. Douglas, M.D., Department of Psychiatry, Geisinger Penn St, PO Box 850, Hershey PA 17033; Paul A. Kettl, M.D.

Summary:

Introduction: CT brain imaging is frequently ordered on admission to a geriatric psychiatry unit as part of a comprehensive dementia workup.

Method: The records of 116 consecutive admissions to a university geriatric psychiatry unit over a five-month period were retrospectively analyzed to determine the number of patients who received a CT brain scan as part of a dementia workup and compared with the number of meaningful results.

Results: Of the 50 patients scanned, 21 (42%) were newly diagnosed with a dementia type, 18 (36%) received a changed dementia diagnosis, nine (18%) received an unclear diagnosis, and seven (14%) had no change in their admitting diagnosis. The 21 new diagnoses included Alzheimer's dementia (16, or 76%), vascular dementia (four, or 19%), and Parkinson's dementia (one, or 0.5%). The 13 corrected diagnoses included vascular dementia (six, or 46%), Alzheimer's dementia (five, or 38%), and normal pressure hydrocephalus (two, or 15%).

Conclusions: Sixty-eight percent of patients received new or changed dementia diagnoses. Twelve (18%) were directly linked to findings on CT scanning. Given the advances in dementia research and new pharmacological treatments, accurate diagnosis should be a primary goal. As brain imaging appears to enhance our diagnostic capabilities, it seems an appropriate procedure in dementia evaluations.

NR48 Monday, June 1, 9:00 a.m.-10:30 a.m.

Bupropion Versus Desipramine for Treatment of Bipolar Depression

Carolyn L. Dufault, B.A., Department of Psychiatry, Mass General Hospital, WACC812 15 Parkman Street, Boston MA 02114; Gary S. Sachs, M.D., Christina M. Demopulos, M.D., Claudia F. Baldassano, M.D., Beny Lafer, M.D.

Summary:

Objective: Breakthrough episodes of depression (recurrence despite adequate prophylactic treatment) are a common clinical problem. This report expands previously reported data comparing treatment outcome for desipramine vs. bupropion for bipolar patients who became depressed despite prophylaxis with lithium or an anticonvulsant.

Methods: Using a double-blind, double-dummy design, consenting bipolar I subjects received bupropion or desipramine. Doses were gradually titrated to bupropion 450mg or desipramine 250 mg or the highest dose tolerated over two to three weeks. Patients were followed for one year or until they met criteria for hypomania, mania, or depression. Outcome measures included Hamilton rating scale for depression and Young Mania rating scale.

Results: The antidepressant response rate at eight weeks was nearly equivalent (bupropion 42.8%, desipramine 39.9%, ns). Over the year of follow-up, however, the rate of switch to hypomania or mania was significantly greater in the desipramine group than in the bupropion group (42.6%, vs 14%, $p < 0.05$).

Conclusion: Bupropion and desipramine appear equally efficacious for treatment of breakthrough episodes of bipolar depression. Rates of switch into (hypo)mania observed in this study are consistent with open reports of high switch rates with tricyclic antidepressants and low switch rates with bupropion.

NR49 Monday, June 1, 9:00 a.m.-10:30 a.m.

Beck Depression Inventory and Regional Cerebral Metabolism

Robert T. Dunn, M.D., Biological Psychiatry, NIMH/NIH, 10 Center Drive, Bldg 10, Room 3N212, Bethesda, MD 20892; Timothy A. Kimbrell, M.D., Terry A. Ketter, M.D., Mark A. Frye, M.D., Andrew M. Speer, M.D., Elizabeth A. Osuch, M.D., Robert M. Post, M.D.

Abnormal regional cerebral blood flow and glucose metabolic rates (rCMRglu) in frontal cortex and paralimbic regions have been found in affective disorders. We explored the relationships between components of the Beck Depression Inventory (BDI) and rCMRglu topography.

Summary:

Fifty-eight treatment-refractory affective disorder patients (27 BP, age = 36.7 ± 11.3, BDI = 16.4 ± 13.4; 31 UP, age = 42.7 ±

13.2, BDI = 17.1 ± 8.4) were medication free for BDI administration and ^{18}F-deoxyglucose PET scans with auditory CPT. Principal components analysis on all patients was used to group heavily loaded BDI items into components with unique BDI items and apparent face validity. The relationships between components and absolute or globally normalized rCMRglu were examined separately for bipolar and unipolar patients utilizing voxel-by-voxel Spearman rank-order correlation analysis.

Several findings are consistent with current knowledge of cognitive, mood, reward, and motor systems in brain. Prominent correlations were found between: a negative cognitions factor and decreased absolute rCMRglu in right > left frontal and thalamic regions in unipolars, a psychomotor/anhedonia factor and decreased normalized rCMRglu in right insula in bipolars and unipolars, the psychomotor/anhedonia factor and increased normalized rCMRglu in medial prefrontal and anterior cingulate regions with opposite laterality in bipolars vs. unipolars, the psychomotor/anhedonia factor and increased normalized rCMRglu in left anterior basil ganglia in bipolars, and between a vegetative symptom factor and increased normalized rCMRglu in posterior basil ganglia in bipolars.

NR50 Monday, June 1, 9:00 a.m.-10:30 a.m.

Buprenorphine and Methadone: A Comparison Trial

Harald Eder, General Psychiatry, University of Psychiatry, Wahringer Wurtel 18–20, Vienna 1090, Austria; Gabriele Fischer, M.D., Wolfgang Gombas, M.D., Dr. Reinhold Jagsch, M.A.G., Christine Nagy, M.D., Claudia Lennkh, M.D., Prof. Siegfrid Kasper

Summary:

The efficacy of buprenorphine in opioid-dependent patients was compared with that in methadone maintenance subjects in a randomized comparison trial. Primary outcome measures were abstinence from other drugs and retention in treatment. During a 24-week study period, no significant difference in the retention rate of 20 patients on a mean dosage of 7.3 mg buprenorphine (sublingual tablets) and the retention rate of 20 patients on a mean dosage of 63 mg oral applicable methadone (racemat of L- and D-methadone) could be found. There was also no significant difference in the two groups during the treatment time in respect to additional consumption of opiates, benzodiazepines, and cocaine. The drop-out rate in the buprenorphine group was 55%, and in the methadone group was 25%. A significantly longer treatment period could be calculated for methadone-maintained subjects (p = 0.04). The patients remaining in the buprenorphine treatment program showed a lower additional consumption rate during the last weeks of the study. The results of this trial demonstrate the efficacy of using an alternative opioid with respect to oral maintenance therapy in opioid dependency. The upper dosage limit of 8 mg daily as used in this trial was probably set too low. Methadone appears to be the more successful oral opioid in a maintenance therapy program.

NR51 Monday, June 1, 9:00 a.m.-10:30 a.m.

Psychiatric Geriatric Caregivers: Factors Contributing to Burden

Joanne Fenton, M.D., Department of Psychiatry, University of Maryland, 22 South Greene Street, Baltimore MD 21201; Jill A. Rachbeisel, M.D., Lisa B. Dixon, M.D.

Summary:

Objective: While the importance of caregivers in providing support and care to adults with severe mental illness and to elderly patients with medical disorders is becoming well established, little is known about the role of caregivers in the lives of psychogeriatric patients. We assessed the extent of caregiving burden, stress, depression, and use of services by caregivers of elderly psychiatric patients.

Method: A trained physician completed a structured interview with 24 caregivers of geriatric psychiatric inpatients. The interview included the Hamilton Depression Inventory, Caregiver Burden Scale, and Perceived Stress scale. The use of community services and perceived benefits and gratifications were also solicited. Analyses summarized the association of caregiving experience with patient clinical factors and sociodemographic variables.

Results: Caregivers reported relatively low rates of stress (mean = 18.5 (SD10.4), depression (mean = 7.1 (SD = 4.6), and burden (mean = 23.2 (SD18.8). Burden, stress, and depression were highly intercorrelated ($p < .001$). Increased burden was reported by persons with more than a high school education ($p < .05$) and by children rather than spouses ($p < .05$). Few caregivers accessed additional social services. These findings were not related to patient factors.

Conclusion: This study demonstrates a low prevalence of depression, burden, and stress among psychiatric geriatric caregivers and a high degree of satisfaction. There was limited access to social services suggesting a low level of support for these individuals. Additional comparisons between patient illness and caregiver factors will be presented.

NR52 Monday, June 1, 9:00 a.m.-10:30 a.m.

Continuation and Maintenance ECT in Clinical Practice: Efficacy and Cognitive Safety

P.H. Fossati, M.D., Department of Psychiatry, Pitie Salpetriere, 47 Bd De LHopital, Paris 75013, France; J.F. Allilaire, Ph.D., Gilles Amar, M.D.

Summary:

Objective: Patients treated with prophylactic ECT were reviewed to illustrate the efficacy and cognitive safety of this treatment.

Methods: We identified all the subjects who received outpatient ECT after an acute inpatient course of ECT, from January 1, 1993 through July 31, 1997. We then selected and studied patients with ECT treatments of fewer than 24 weeks as Consolidation-ECT (C-ECT) and patients with ECT treatments of more than 24 weeks as Maintenance ECT (M-ECT).

Results: 20 patients (mean age = 65,8) were selected: 15 had a diagnosis of affective disorder; three had a major depression with Parkinson's disease; one had a depression with Alzheimer's disease; one had a schizoaffective disorder. All the patients were resistant to prophylactic pharmacotherapy. No differences were found between patients treated with M-ECT and patients treated with C-ECT. Recurrence and relapse were significantly reduced during the ECT treatments. The time spent in the hospital dropped from 13% to 6% during P-ECT ($p < 0,05$). Compared with controls, patients assessed with a cognitive battery including memory and frontal tasks had no cognitive deficits.

Discussion: We find outpatient P-ECT to be safe and effective for the prevention of recurrence and relapse of pharmacoresistant mental disorders, especially for affective disorders.

NR53 Monday, June 1, 9:00 a.m.-10:30 a.m.

Extreme Childhood Shyness in Agoraphobic Adults

Steffany J. Fredman, B.A., Department of Psychiatry, Mass General Hospital, 15 Parkman Street WAC 812, Boston MA 02114; Jerrold F. Rosenbaum, M.D., Dina R. Hirshfeld, Ph.D.

Summary:

Objective: The tendency to act withdrawn or fearful in novel social situations may be a risk factor for anxiety disorders among children of parents with panic disorder with agoraphobia. We ex-

plored whether a diagnosis of agoraphobia in adulthood is related to a history of extreme shyness in childhood.

Methods: Subjects were 320 psychiatric outpatients at the clinical psychopharmacology unit at the Massachusetts General Hospital. Staff psychiatrists and psychologists provided information regarding history of childhood shyness and presence of agoraphobia for every patient they assessed during the course of regular clinical intake evaluations for a one-month period. Based on their own retrospective self-reports, patients were classified as either very shy, shy, slightly shy, or not shy.

Results: Patients diagnosed with agoraphobia were significantly more likely than psychiatric controls to report being very shy than not shy as children ($p = .0026$). We also found a significant association between patients' shyness during childhood and the severity of their agoraphobic avoidance as adults ($p = .0025$).

Discussion: Results suggest that extreme shyness during childhood may be an antecedent to the development of agoraphobia and may subsequently affect its course during adulthood.

NR54 Monday, June 1, 9:00 a.m.-10:30 a.m.

Lack of Autonomic and Cognitive Changes with Repetitive Transcranial Magnetic Stimulation

Andrew M. Speer, M.D., Biol Psychiatry Branch, NIMH Bldg 10 Rm 3N212, 9000 Rockville Pike, Bethesda MD 20892; Lori A. Stallings, Ziad H. Nahas, M.D., Jeff Loberbaum, M.D., Charlotte C. Teneback, Monica Molloy, R.N., S. Craig Risch, M.D., Mark S. George, M.D.

Summary:

Background: Repetitive transcranial magnetic stimulation (rTMS) is a noninvasive new technology that allows direct subconvulsive stimulation over cortical brain regions implicated in depression. We present preliminary data of serial cardiovascular and cognitive measures before, during, and after rTMS.

Methods: Five depressed outpatients (UP = 4, BPI = 1; mean age 47 years) received 10 daily left dorsolateral prefrontal rTMS treatments using a figure-eight coil. 1600 stimulations were administered each session (16,000 total stimuli over the study) at either 20Hz (2 secs, 28 rest, 40 trains) or 5 Hz (8 secs, 22 rest, 40 trains). Stimulus intensity ranged between 80% and 110% MT. Mini-Mental State Examinations were obtained before and five minutes following each session. Blood pressure, heart rate, and pulse oximeter readings were recorded before, during (at five-minute intervals), and five minutes after completing each rTMS session.

Results: No significant changes in pre- to post-rTMS measures were observed: blood pressure (129/75 to 117/74), heart rate (72 to 75), oxygen saturation (95 to 98%), mental status score (29.6 to 29.6).

Conclusions: Our preliminary data suggest that rTMS at these parameters is safe and well tolerated and not associated with substantial autonomic or cognitive dysfunction.

NR55 Monday, June 1, 9:00 a.m.-10:30 a.m.

Differential Changes in rCBF with One Versus 20 Hz rTMS in Depressed Patients

Andrew M. Speer, M.D., Biol Psychiatry Branch, NIMH Bldg 10 Rm 3N212, 9000 Rockville Pike, Bethesda MD 20892; Timothy A. Kimbrell, M.D., Robert T. Dunn, M.D., Elizabeth A. Osuch, M.D., Mark A. Frye, M.D., Mark W. Willis, Eric M. Wassermann, M.D.

Summary:

Introduction: As part of an ongoing study, we are evaluating the relative efficacy of two weeks treatment with either sham, 1 Hz, or 20Hz rTMS at 100% MT over the left prefrontal cortex and associated changes in rCBF following each treatment phase. We postulated that 1 Hz would decrease and 20Hz would increase flow in frontal-subcortical circuits.

Methods: To date six patients have been serially scanned using 015 PET to measure absolute blood flow. Individual mean rCBF was determined at baseline (medication-free) and at the end of each treatment phase. Each patient's mean rCBF was then compared with an age-matched control's to assess significant blood flow changes (2 SD) from the norm.

Results: There was little evidence of blood flow change with sham compared with baseline. Consistent decrements were observed in the dorsolateral prefrontal (DLPFC) and anterior cingulate circuits following 1 Hz rTMS. In contrast, 20 Hz rTMS produced flow increases in these same regions and was able to return the 1Hz changes toward baseline in most patients. ROI analysis is in progress.

Discussion: These data suggest that 1 Hz vs. 20Hz rTMS is capable of inducing opposite changes in rCBF in patients with affective disorders with 1 Hz decreasing and 20Hz increasing frontal-subcortical activity.

NR56 Monday, June 1, 9:00 a.m.-10:30 a.m.

Alcohol Dependence and Hospitalization in Schizophrenia

Lori B. Gerding, M.D., Department of Psychiatry, Medical University S.C., 171 Ashley Avenue, Charleston SC 29425; Lawrence A. Labbate, M.D., Michael O. Measom, M.D., George W. Arana, M.D., Alberto B. Santos, Jr., M.D.

Summary:

Objective: To determine the contribution of alcohol dependence to psychiatric hospitalization among patients with schizophrenia who reliably received depot neuroleptics.

Method: A two-year retrospective archival search was conducted to assess the association of evidence of current substance use and hospital admission in a person with the DSM-IV clinical diagnosis of schizophrenia. Study eligibility criteria also included archival evidence of reliable administration of depot haloperidol or fluphenazine: no more than three total or two sequential missed injections.

Results: Twenty-six subjects, all men, mean age 46 (SD $\pm$ 7 years), were identified as meeting eligibility criteria (most were diagnosed as paranoid subtype). Fourteen of the 26 study subjects (54%) were hospitalized during the study period. Twelve of the 26 subjects (46%) were identified as carrying a DSM-IV clinical diagnosis of alcohol, marijuana, or cocaine dependence. At the time of admission, all patients with a substance dependence diagnosis were using those substances. Patients with alcohol dependence were more likely than patients without alcohol dependence to be admitted to the hospital during the two years (86% vs. 42%; $X^2 = 3.9$, $p < 0.05$). Marijuana or cocaine dependence was slightly more common among admitted patients, but was not associated with admissions during the study period (36% vs. 33%; $X^2 = 0.02$, $p = 0.9$). Moreover, patients with alcohol dependence were admitted more often (2.3 $\pm$ 0.6 (SEM) vs. 0.9 $\pm$ 0.4; $U = 31$, $p < 0.05$) and had longer hospital stays (30 $\pm$ 11 (SEM) vs. 14 $\pm$ 7 days; $U = 31$, $p < 0.05$) than patients without alcohol dependence. Marijuana or cocaine dependence did not predict length of stay (drug: 21 $\pm$ 10 (SEM) vs. no drug: 17 $\pm$ 8; $U = 68$, $p = 0.7$) or number of admissions (drug: 1.8 $\pm$ 0.6 (SEM) vs. no drug: 1.1 $\pm$ 0.4; $U = 61$, $p = 0.6$). There was no difference between frequency or dose of decanoate medication between admitted and nonadmitted patients. No significant differences in drug or dosage between admitted or not admitted patients were found.

Conclusion: There appears to be an association between alcohol dependence and relapse in schizophrenia independent of neu-

roleptic use. The cause-effect relationship between alcohol use and psychotic exacerbation remains complex.

NR57 Monday, June 1, 9:00 a.m.-10:30 a.m.

Olanzapine Treatment of Mood Disorders

S. Nassir Ghaemi, M.D., Psychiatry, George Washington University, 2150 Penn Ave, NW, 8th Floor, Washington DC 20037; Erica R. Lee-Cherry, B.A., Jacob J. Katzow, M.D., Frederick K. Goodwin, M.D.

Summary:

Objective: To ascertain whether olanzapine is safe and effective in naturalistic add-on treatment of outpatient mood disorders.

Methods: All charts of patients meeting DSM-IV criteria for bipolar disorder (n = 7, type I, type II, NOS), unipolar major depressive disorder (*n* = 1), or schizoaffective disorder (*n* = 2, 1 bipolar type, 1 depressed type) treated with olanzapine in an outpatient psychiatric practice were reviewed. Clinical response was assessed retrospectively using the Clinical Global Impression scale for Improvement (CGI-I).

Results: Among the six males and four females (age 53.5 ± 10.4 years), olanzapine (dose 8.75 ± 8.68 mg/d for 15.1 ± 16.8 weeks) was moderately effective in six (60%). The main indications for treatment were depressive in six or manic (in three) symptoms, with equal response in both groups (4/6 and 2/3, respectively). Only one patient possessed psychotic symptoms. Eight reported side effects, most commonly weight gain (n = 3); 2/10 discontinued treatment with side effects (weight gain, angioedema). Nine subjects received mood stabilizers and seven antidepressants. Five previously failed at least one mood stabilizer. Manic symptoms worsened in two, transiently in one case, and more severely in the other.

Conclusions: Olanzapine appeared effective as add-on treatment in outpatients with mood disorders. Side effects are common but usually do not lead to discontinuation.

NR58 Monday, June 1, 9:00 a.m.-10:30 a.m.

Self-Reported Levels of Distress in OCD Patients

Marjan Ghahramanlou, M.A., Northshore University Hospital, 400 Community Drive, Manhasset NY 11030; Carrie Beckstein, M.D., Juliana R. Lachenmeyer, Ph.D., Regina Uccello, B.A., Sharon DiGiacopo, M.A., Andrew Shack, M.A.

Summary:

Recent literature has reported high internal consistency and yet low divergent and criterion-related validity for the Obsessive Compulsive Scale of the Symptom Checklist-90-Revised (SCL-90-R; Woody, Steketee & Chambless, 1995). The purpose of the present study was to examine the symptom profiles of OCD outpatients as measured by the SCL-90-R and to look for correlations with the Yale-Brown Obsessive Compulsive Scale (Y-BOCS).

Preliminary results indicated a moderate correlation between the SCL-90-R OCD Scale and the Y-BOCS total score. The obsessive subscale of the Y-BOCS showed a moderate correlation with the anxiety scale of the SCL-90-R, whereas the compulsive subscale of the Y-BOCS correlated with the paranoid and phobic scales of the SCL-90-R. Within our sample of OCD patients, the highest means were obtained for the OCD (M = 1.27), depression (M = 1.13), anxiety (M = 1.11), and interpersonal sensitivity (M = 1.00) scales of the SCL-90-R. Significant correlations were reported between the anxiety and OCD scales (r = .85, p < .0001) as well as between the anxiety and depression scales (r = .66, p < .0001). The clinical significance of these correlations and their utility in diagnosis and treatment planning will be discussed.

NR59 Monday, June 1, 9:00 a.m.-10:30 a.m.

Patient Satisfaction with ECT

Jesse A. Goodman, M.D., Department of Psychiatry, Mayo Medical School, 610 1/2 2nd St NW, Rochester MN 55901-2716; Lois E. Krahn, M.D., Glenn E. Smith, Ph.D., Teresa A. Rummans, M.D., Thomas S. Pilegge, R.N.

Summary:

The authors tested the hypotheses that patients who receive ECT are very satisfied with their treatment and demonstrate more favorable attitudes about ECT compared with control subjects. Current literature lacks studies of patient satisfaction with ECT.

The authors developed a 44-statement Likert scale survey measuring treatment satisfaction and attitudes about ECT. The survey was administered to ECT patients at the end of a course of ECT and two weeks later. A modified survey was administered to a control group of psychiatric outpatients who had never received ECT. End of treatment satisfaction correlated with two-week follow-up total satisfaction (r = .57; p = .007). The mean change score from end of treatment to two-week follow-up for total satisfaction was 1.48 (SD = 21.4), which was not significantly different from 0. Of the five statements given to both the ECT and control group, the mean score was 4.4, SD = 0.7 and 2.4, SD = 0.9, respectively. The correlation between age and overall satisfaction scale was −0.43 (p < .05). The correlation between age and satisfaction with results scale was not significant (r = 0.29). The correlation between educational level and overall satisfaction scale score was 0.42 (p = .05).

Conclusions: ECT patients held very positive attitudes about ECT. ECT patients held significantly more favorable attitudes about ECT than the control group. There was no significant change in satisfaction in ECT patients at the end of treatment or two weeks later. A higher degree of satisfaction was associated with a higher level of education and younger age.

NR60 Monday, June 1, 9:00 a.m.-10:30 a.m.

Blood Pressure and Heart Rate Response to Stress in Psychotic Patients

Karen A. Graham, M.D., Department of Psychiatry, University of North Carolina, 101 Manning Drive CB 7160, Chapel Hill NC 27599; Diana O. Perkins, M.D., Joanna J. Regan, B.A., Sherry D. Broadwell, M.A., Kathleen C. Light, Ph.D.

Summary:

Introduction: Schizophrenia is a stress-sensitive disorder, with stressful events consistently preceding symptom exacerbations. Little is known about the psychophysiological responses of patients with schizophrenia to different stressors or the neurobiology that determines this stress responsivity.

Methods: Subjects underwent a standardized stress protocol consisting of a postural challenge followed by a two-minute speech task. To increase speech-task stressfulness, a research assistant critiqued task performance by telling all subjects that they "could have done better" and required subjects to repeat the task. Blood pressure (BP) and heart rate (HR) were mechanically monitored with an Accutracker device.

Results: Subjects were eight medicated patients with schizophrenia/schizoaffective disorder and nine healthy controls. Compared with controls, patients had significantly *elevated* baseline HR (62 vs 78 bpm, t = 3.3, p = .005), systolic (110 vs 121 mmHg, t = 3.4, p = .04), and diastolic (64 vs 72 mmHg, t = 2.0, p = .06) BP. Patients had a significantly *decreased* HR response to the speech stressor (change from baseline to speech stressor: t = 2.3, p = .04). There was a trend for decreased diastolic BP response to speech stressor (t = 1.5, p = 15), and no significant change in systolic BP. There were no significant HR or BP changes in response to the postural challenge.

Conclusions: Our pilot investigation suggests that patients with schizophrenia may have altered cardiovascular status, both at rest and in response to a psychosocial stressor. The cardiovascular response is consistent with increased basal sympathetic tone and resultant sympathetic down-regulation, as reflected in the blunted HR and diastolic BP responses. Planned evaluation of peripheral neurochemical responses (e.g. epinephrine, norepinephrine, MHPG/DHPG, HVA, cortisol, ACTH) in these patients will hopefully increase understanding of the neurobiology that underlies stress sensitivity in patients with schizophrenia.

NR61 WITHDRAWN

NR62 Monday, June 1, 9:00 a.m.-10:30 a.m.

SSRIs Versus Other Antidepressants for Melancholia

Gina M. Guadagno, M.D., Department of Psychiatry, ETSU, Box 70567 Clinical Ed Center, Johnson City TN 37614; Conrad M. Swartz, M.D.

Summary:

Objective: Various evidence has suggested that melancholic depression is distinct from nonmelancholic major depression. Two studies of melancholics found 40 mg/day fluoxetine inferior to nortriptyline and to 200 mg/day venlafaxine, but did not try nonresponders on other treatments. We aimed to compare SSRIs with other antidepressants in patients presenting with melancholia as to which medication they were taking while the melancholia began and which medication they then responded to.

Method: We retrospectively surveyed a defined group of psychiatric records for all patients with onset of major depression with melancholic features while taking proper doses of an antidepressant.

Results: All resulting patients, six males and three females, were taking SSRIs while the melancholia began (four sertraline, three fluoxetine, one paroxetine, one fluvoxamine). In each the SSRI was discontinued and melancholia remitted completely and rapidly in response to the next treatment: bupropion in five, nortriptyline with triiodothyronine in two, and ECT in two.

Conclusions: Patients who show onset of melancholia while taking an SSRI responded quickly to antidepressant treatment that was not an SSRI. This adds to previous evidence that melancholia is distinct from nonmelancholic major depression and that SSRIs might be less effective in melancholic depression than in other major depressions.

NR63 Monday, June 1, 9:00 a.m.-10:30 a.m.

Retrospective Life Charting: Reliability in Affective Disorders

Joseph F. Goldberg, M.D., Department of Psychiatry, Payne Whitney Clinic, 525 East 68th Street, New York NY 10021; Joy Whiteside, B.A., Wilfred Van Gorp, Ph.D., James H. Kocsis, M.D., Andrew C. Leon, Ph.D.

Summary:

Longitudinal histories of recurrent affective episodes are critical to research and clinical practice. Graphic depictions of lifetime illness course by retrospective life charting carry inherent limitations for reliability and validity. Little is known about factors that affect the reproducibility of life charts across independent ratings. We devised a manual to operationalize retrospective life charting of affective disorders and to assess reliability compared with nonmanualized retrospective life charting methods.

Retrospective life charts were constructed for 20 DSM-IV unipolar depressed and 20 DSM-IV bipolar outpatients. The same subjects were assessed blindly and independently by two raters at least two days apart either using the manual or not using the manual. Current manic and depressive symptoms were rated by CARS-M and HAM-D scales. Intraclass correlation coefficients were computed for chart ratings of lifetime months ill, number of episodes, and polarity switches, as estimated across raters and across modalities. Multiple linear regression was used to assess sources of unreliability among raters. These included patient factors (diagnosis; demographic features; clinical state when assessed; memory; years since first illness; comorbidity) and rater factors (use of collateral history; rater experience; time between ratings; and rater confidence levels).

Data are presented on factors influencing reliability for constructing retrospective life charts. We discuss potential benefits of employing a standardized rating manual to minimize sources of bias when rating course of affective illness, and achieving acceptable inter-rater reliability. We will discuss ways in which reliability using this method can be further improved.

NR64 Monday, June 1, 9:00 a.m.-10:30 a.m.

A Clinical Monitoring Format for Mood Disorders

Constance Guille, B.A., Department of Psychiatry, Massachusetts, General Hospital WACC 812, Boston MA 02114; Gary S. Sachs, M.D., Amy E. Shriver, B.S., Christina Dempolus, M.D.

Summary:

Objective: High quality systematic ratings can enhance the management of mood disorders, but standard formal rating scales are difficult to integrate into clinical practice. The Clinical Monitoring Form for Mood disorders (CMF-M) was developed for routine clinical use. Previously published reports made use of the CMF-M categorical ratings. The present report evaluates the CMF-M dimensional subscales.

Methods: Data were harvested from a double-blind clinical trial in which the CMF-M was used along with the Hamilton Rating Scale for Depression (HRSD) and the Young Mania Rating Scale (YMRS).

The CMF-M uses an alternative scoring method to rate severity of items in the SCID current mood modules. Summing items yields severity scores for depression (Sum-D) and mood elevation (Sum-ME).

Preliminary data were collected from 94 follow-up visits in a clinical trial that enrolled bipolar patients (n = 18). Sum-D and Sum-ME correlated highly with HRSD and YMRS ($r = 0.72$, $r = 0.77$, respectively). Correlations between CGI and HRSD as well as CGI and YMRS were similar to those found for the Sum-D ($R = 0.55$ and $r = .54$) and Sum-ME ($r = 0.30$ and $r = 0.29$), respectively.

Conclusion: Sum-D and Sum-ME are highly correlated with formal mania and depression scales. In routine clinical use, the CMF-M can provide high quality dimensional data.

NR65 Monday, June 1, 9:00 a.m.-10:30 a.m.

Seasonal Variation of Mood Symptoms in an Arctic Inuit Community

John M. Haggarty, M.D., Department of Psychiatry, University Western Ontario, 580 North Algoma Street, Thunder Bay ON P7B 5G4, Canada; Harold Merskey, M.D., Zack Z. Cernovsky, Ph.D., Patricia Kermeen, R.N.

Summary:

The rates of seasonal affective disorder are known to increase with higher latitudes, yet there is a paucity of research on seasonal affective disorders in the Arctic. A random household sample of 111 Inuit residents responded to a self-report questionnaire including the Hospital Anxiety and Depression Scale (HAD), the CAGE, and selected items dealing with suicidal behavior. Respon-

dents indicated whether or not their depression started and remitted at regular times of the year. Eighty-eight responded to our seasonal questions, 36 men and 52 women, with a mean age of 35.6 years (SD = 16.9) (range from 14 to 77 years). Thirty-seven of the 88 respondents (i.e., 42.1%) reported having recurrent episodes with the onset and remission occurring in a regular seasonal pattern. The seasonal episodes were not correlated with gender, anxiety, CAGE, or suicidal behavior. Seasonal variation was more common in older Inuit (Pearson r = .24, p = .024, 2-tailed) and also in those with higher HAD depression scores (Pearson r = .23, p = .034, 2-tailed). Over 60% of those with seasonal variation reported fall onset (September to December) of their depression and 53% a remission in the spring (May to July). Fourteen (38.9%) of those who exhibited the seasonal variation were already depressed as confirmed by a SCID validated cutoff of 9 on the HAD. The study is cross-sectional in design.

NR66 Monday, June 1, 9:00 a.m.-10:30 a.m.

Impact of Abuse History on Suicidality and Clinical Features in Psychiatric Inpatients

Lacresha L. Hall, B.S., Department of Psychiatry, UTMB Galveston, 301 University Blvd 433 Graves, Galveston TX 77555; Claudia M. Lizarralde, M.D., Corrina P. Ferguson, M.S.W., Jean M. Goodwin, M.D., Sheila M. Seay, M.A., Teresa A. Pigott, M.D.

Summary:

A history of trauma has been associated with an elevated risk for depression, suicidal behavior, and alcohol abuse. In the current study, consecutively admitted psychiatric patients (n = 108) were evaluated by: (a) a semi-structured interview for current and past medical, psychiatric, and abuse history; and (b) administration of several standardized psychiatric rating scales to assess suicidality, mood and anxiety symptoms, substance abuse, and dissociative phenomena within 72 hours of admission. Significantly more females (66%) than males (38%) reported a history of either physical or sexual abuse [x2 = 8.03, P < 0.005]. Although suicide attempts were common but similar in frequency between the patients with a history of abuse (HA) and patients with no history of abuse (NA) [recent: HA (51%), NA (51%); past: HA (60%), NA (40%)], suicide attempts by overdosage were more likely in the HA than NA group [HA (59%), NA (39%), x2 = 4.47, P < 0.05]. Significantly more HA than NA patients met criteria for an anxiety disorder diagnosis [HA (32%), NA (13%), x2 = 4.53, P < 0.05], particularly PTSD [HA (19%), NA (5%), x2 = 4.41, P < 0.05]; similar rates of mood [HA (80%), NA (73%)] or substance abuse [HA (71%), NA (70%)] disorder were noted. Serious and chronic medical disorders were also more common in the HA (74%) than NA (49%) group [x2 = 6.09, P < 0.05]. Sociodemographic features and scores on the Beck Depression Inventory, Beck Anxiety Inventory, the Hopkins Symptom Checklist (SCL-90-R), and the Dissociative Experiences Scale did not differentiate between the HA and NA patients. These results suggest that psychiatric inpatients with a history of abuse are more likely to be female and to have elevated rates of suicide attempts per overdosage; significant chronic medical illness; and an anxiety disorder diagnosis, especially PTSD.

NR67 Monday, June 1, 9:00 a.m.-10:30 a.m.

Gabapentin for Aggressive Behavior

Maria C. Hardoy, M.D., Psychiatry, University of Florence, VIA Belvedere 15 Fiesole, Florence FI 50014, Italy; Pierluigi Cabras, M.D.

Summary:

Objective: Aggressive behavior represents a serious problem in patients with bipolar disorder. The purpose of this study was to assess the efficacy, safety, and tolerability of adjunctive gabapentin, given as a mood-stabilizing agent during acute phases in bipolar patients.

Method: DSM IV bipolar I patients with acute episodes were given anticonvulsant gabapentin at daily dose levels of 900–1200 mg per os. Patients required concomitant psychiatric medications while taking gabapentin. Outcome measures included clinical characteristics, side effects, and aggressive behavior.

Results: The results showed a significant reduction of aggressive behavior (frequency, intensity, and/or duration of aggressive episodes). No serious side effects were recorded; some patients showed oversedation of moderate intensity. The therapy was well tolerated by most of the patients.

Conclusions: The response to gabapentin suggests that this antiepileptic drug has a good tolerability and a selective efficacy in the inhibition of aggressive behavior in patients with bipolar disorder.

NR68 Monday, June 1, 9:00 a.m.-10:30 a.m.

Neuropsychological Assessment in the Schizophrenic Spectrum

Maria C. Hardoy, M.D., Psychiatry, University of Florence, VIA Belvedere 15 Fiesole, Florence FI 50014, Italy; Pierluigi Cabras, M.D.

Summary:

Objective: A comprehensive assessment of neuropsychological functioning was applied to examine several cognitive abilities in the prospective of a rehabilitation program.

Method: A sample of 30 DSM-IV schizophrenic patients treated with neuroleptics, 15 patients with delusional disorder, and 42 healthy volunteers matched for age, sex, and educational level was assessed with a battery of 12 neuropsychological tests. The tests explored global functioning, memory, concentration, attention, problem solving, verbal fluency, visuo-spatial functioning, visual scanning, and abstraction.

Results: Patients showed significant cognitive changes in all measures except for the phonemic verbal fluency test. Changes on test performance appear to be present in variable degrees throughout the whole distribution of patients. The results showed that neuropsychological impairments in patients with delusional disorder were of intermediate nature compared with schizophrenics.

Conclusions: The results obtained seem to suggest that patients are affected by a complex neurocognitive dysfunction, rather than specific well localized deficits. Moreover, the complexity of the results do not seem to allow for a rigid determination of changes resulting from specific brain areas, but seem to allow for a circuitous disorder. Neuropsychological test data serve as a contribution to improve the quality of individualized therapeutic management and rehabilitation programs.

NR69 Monday, June 1, 9:00 a.m.-10:30 a.m.

Diagnosis and Treatment of Depression in Primary Care: A Patient Survey

Debra L. Heck, M.D., Department of Psychiatry, University of Maryland, 2709 Gibbons Ave, Baltimore MD 21214-2129

Summary:

Objective: Depression is underdiagnosed and undertreated in the primary care setting. We aim to describe patients' perceptions and attitudes regarding depression and anxiety, how often they have been asked about stress or depression, and their preferred provider for treatment.

Method: Survey was distributed to a cohort of patients in the primary care setting (N = 68; 23 men, 45 women, mean age 47). Participation was voluntary, and answers confidential.

Results: Most patients recognized that depression responds to treatment, yet the majority of patients had never been asked about depression. Of those that had wanted help in the past, 43% did not get the help they wanted. Primary care doctors were the preferred provider for treatment of depression or anxiety (61%), followed by friends/family (32%), then psychiatrists (7%). Responses regarding patient preferences for treatment of depression and anxiety were highly correlated (p = .000).

Conclusion: Primary care doctors are the preferred provider to diagnose and treat depression and anxiety in their patients. Effective diagnosis and treatment of depression would save health care dollars, save lives, and decrease human suffering.

NR70 Monday, June 1, 9:00 a.m.-10:30 a.m.

Gender Differences in Symptomatology and Diagnostic Profiles of Depression

Malene G. Hildebrandt, Department of Psychiatry, Odense University Hospital, JB Winslowvej 20, Odense DK 5000, Denmark; Kurt B. Stage, M.D., Per Kragh-Sorensen, M.D., Danish University Antidepressant Group

Summary:

Objective: Research from recent years has shown that gender differences in prevalence of depression are verifiable. The prevalence rate of unipolar depression is 1.7 to two times higher for women than for men. A possible explanation may be that men remain undiagnosed, due to a different symptomatology. This study is an attempt to uncover possible symptomatic gender differences.

Method: A retrospective study of symptomatology was performed among a sample of 1,209 depressed patients. The patient material has been collected by the Danish University Antidepressant Group (DUAG). The diagnostic instruments used were the Hamilton Depression Scale and the Newcastle Depression Scale.

Results: Gender differences were looked for in 33 items. The analysis showed only minor and clinically insignificant differences in symptomatology between men and women. The only relevant difference seems to be that women have more previous depressive episodes.

Conclusions: No clinically relevant differences were found between depressed men and women, with the exception that women seem to have a higher recurrence rate of depression, which has also been shown in other studies. Men and women have a similar symptom profile; the reason for the gender differences in prevalence of depression must be sought for elsewhere.

NR71 Monday, June 1, 9:00 a.m.-10:30 a.m.

Syndrome of Inappropriate Antidiuretic Hormone Secretion Induced by Venlafaxine

Niamh M. Holohan, M.D., Department of Psychiatry, University of Penn State, PO Box 850, Hershey PA 17033; Paul A. Kettl, M.D.

Summary:

Objective: To increase awareness of SIADH associated with venlafaxine in the elderly.

Method: We reviewed the records of four patients diagnosed with SIADH while they were patients at the Hershey Medical Center inpatient geriatric psychiatry unit between March and September 1997. Demographic data, diagnoses, and clinical laboratory results were collected.

Results: All four patients were female, ranging in age between 65 and 79 (average 73). Three had been diagnosed with major depression and the fourth had diagnoses of dementia and schizophrenia. Two were taking venlafaxine on admission and their dosages were subsequently increased. The average dose of venlafaxine was 122mg. Prior to starting the drug, serum sodium levels ranged between 131 and 140 mmol/l (average 135 mmol/l). Hyponatremia was detected five days on average following venlafaxine commencement or an increase in its dose. The sodium levels fell to between 119 and 125 mmol/l (average 123 mmol/l). Venlafaxine was discontinued and all patients made a full recovery. The average length of time for the reversal of hyponatremia was 9.25 days.

Conclusions: There is a clinically significant incidence of SIADH associated with venlafaxine use in the elderly. Sodium levels before and after instituting or adjusting venlafaxine therapy may be warranted.

NR72 Monday, June 1, 9:00 a.m.-10:30 a.m.

The Chronic Mental Health Effects of Volcanic Eruption As Assessed in a Cross-Sectional Epidemiologic Survey of Mount Pinatubo Resettlement Sites

William T. Howard, M.D., Psychiatry, University of Iowa, 200 Hawkins Drive, Iowa City IA 52242; Fausto R. Loberiza, Jr., M.D., Bruce M. Pfohl, M.D., Peter S. Thorne, Ph.D., Robert F. Woolson, Ph.D., Rio L. Magpantay, M.D., Bernardo L. Conde, M.D.

Summary:

Objective: This is a study of the relationship between mental and overall health functioning and disruptive experiences associated with volcanic eruption and subsequent resettlement.

Method: We interviewed disaster victims six years after they were displaced from their natural environment when Mount Pinatubo in Zambales, Philippines, erupted on June 1991. A cross-sectional epidemiologic survey was conducted in three of the 24 resettlement sites. These sites were chosen as representative of camps with pure highlander (tribal Filipinos called Aetas), pure lowlander (non-tribal Filipinos), and mixed highlander and lowlander population constituents. Psychopathology was assessed using a DSM-IV-based categorical approach in a structured interview format with the PRIME-MD. Overall health functioning was measured with the SF-36. Our sociodemographic questionnaire assessed individuals' eruption and resettlement site experiences.

Results: Preliminary analysis of data to date has found the existence of many cases of unrecognized and untreated depressive, anxiety, and substance abuse disorders. This suggests the presence of a significant unmet need for mental health treatment in these resettlement sites.

Conclusions: These findings support the view that mental health represents a necessary area of attention that can and should be a part of all stages of traditional disaster management.

NR73 Monday, June 1, 9:00 a.m.-10:30 a.m.

Treatment Can Enhance the Effectiveness of Substance Abuse Self-Help Groups

Keith Humphreys, Ph.D., VA Medical Center 152-MPD, 795 Willow Road, Menlo Park CA 94025; Penny L. Dearmin, B.A., John W. Finney, Ph.D., Rudolf H. Moos, Ph.D.

Summary:

Objective: This study assessed how the therapeutic orientation of professional substance abuse treatment programs influences the effectiveness of post-treatment, 12-step self-help groups such as Alcoholics Anonymous (AA).

Method: Substance abuse and psychosocial functioning were assessed at treatment intake and one-year follow-up in a sample of 3,018 male veterans being treated from a range of therapeutic

orientations (ranging from 12-step based to cognitive-behavioral) at one of 15 VA programs nationwide.

Results: Patients treated in programs with a strongly 12-step based therapeutic orientation were significantly more likely to attend 12-step self-help groups after treatment. Further, among patients attending self-help groups, those who had been treated in 12-step based programs derived greater benefit from participation (in terms of reduced likelihood of relapse) than did patients previously treated in cognitive-behavioral programs. Both of these factors contributed to patients treated in 12-step based programs having the highest rates of abstinence at one-year follow-up.

Conclusions: Treatment programs that adopt 12-step principles into treatment may better prepare patients for post-treatment involvement in AA/NA, and thereby decrease the likelihood of post-treatment relapse.

Funding source: This study was funded by the Department of Veterans Affairs.

NR74 Monday, June 1, 9:00 a.m.-10:30 a.m.

Analysis of the Most Cost-Effective Treatment for Major Depression After Initial SSRIs Nonresponse

Charles B. Baker, M.D., Department of Psychiatry, Yale University, Room 38, 34 Park Street, New Haven CT 06519; Scott W. Woods, M.D.

Summary:

Objective: The authors construct and analyze a model of the most cost-effective treatment for major depression after an initial SSRI nonresponse.

Method: Positing an initial failed treatment with sertaline, we constructed a model comparing the cost/successfully treated patient for five alternative subsequent treatments: increase sertraline dose, augment with lithium, switch to desipramine, switch to fluoxetine, or switch to paroxetine. Given the limited data on the efficacy of these options, the model was set up to yield the efficacy rates necessary for each of the five alternative subsequent treatments to be equally cost effective.

Results: An initial analysis yields an annual cost per successfully treated patient averaged across all five alternative treatments of $2,534. The analysis also suggests that the "increase dose" strategy probably is not a cost-effective competitor but the other alternatives are competitive. Both the cost of treatment failure and the cost of lithium labs could play a marked role and the cost of MD visits a potentially significant role in determining the relative rank among the competitive alternative strategies.

Conclusion: Given the large uncertainties, prospective trials are critically important to establish actual utilization rates and costs, the actual cost of treatment failure, and better efficacy rates for all the alternative treatments.

Population: Patients with refractory major depression

Funding: NIMH MH54446 ("Medication Effectiveness Research Program")

NR75 Monday, June 1, 9:00 a.m.-10:30 a.m.

Antipsychotic Drug Use in a National Survey of Office-Based Physician Practices

Richard C. Hermann, M.D., Department of Psychiatry, Harvard Med. Sch/Cambridge Hos, 1493 Cambridge Street, Cambridge MA 02139; Susan L. Ettner, Ph.D., Robert A. Dorwart, M.D.

Summary:

Antipsychotic drugs represent an important component of the psychopharmacologic armamentarium, effective in the treatment of psychotic and other disorders. These drugs can also cause significant side effects. This combination of efficacy and toxicity has generated interest in antipsychotic drug use, in particular their prevalence, clinical indications for use, monitoring for side effects, and use of newer atypical drugs with different cost-benefit profiles. Broad prescribing trends and use in specific sectors (e.g. nursing homes) have been studied. There has been less attention paid to clinical indications for use and utilization patterns during the 1990's, during which time there has been widespread growth in managed care, increased use of primary care physicians, and the introduction of atypical antipsychotic agents. This study examines the use of antipsychotic drugs in a national survey of office-based physician practices, with particular attention to the influences of these recent trends.

NR76 Monday, June 1, 9:00 a.m.-10:30 a.m.

Correlation of Cognitive Function and Proton MRS Findings in Subclinical Hepatic Encephalopathy

Bum-Seok Jeong, M.D., Department of Psychiatry, Asan Medical Center, 388-1 Pungnapdong Songpagu, Seoul 13808, Korea; Seong-Yoon Kim, M.D., Dong Wan Seo, M.D., Jung Hee Lee

Summary:

Objects: To study the biochemical changes of brain metabolites in subclinical hepatic encephalopathy patients using proton MR spectroscopy and their relations to quantified neurocognitive test results.

Methods: The authors defined 18 SCHE patients from 54 chronic liver disease patients by applying three conventionally used neurocognitive tests: block design and digit symbol test of Korean Wechsler Intelligence Scale (KWIS), and trail making test (A and B). To attain more detailed and strictly quantified neurocognitive function data, the authors applied the Cognitrone subtest in Vienna Neurocognitive Test System for attentional and visual analysis ability and the Grooved Pegboard Test for fine motor coordination. N-acetyl-L-aspartate (NAA), creatine(Cr), myoinositol(mI), and choline(Cho) levels were obtained from $2 \times 2 \times 2cm^3$ voxel using ^1H MRS (GE 1.5T Signa, TE 30 msec, TR 3 sec) in the basal ganglia (BG) and parietal white matter (PWM).

Results: (1) SCHE patients showed reduction in Cho/Cr and mI/Cr in both BG and PWM. (2) Fine motor coordination ability of patients assessed by Grooved Pegboard Test were significantly correlated with mI level in the BG and with Cho level in the PWM ($r = -0.59$, $p < .05$). (3) Speed of visual analysis assessed by the Cognitrone subtest was negatively correlated with NAA level in PWM ($r = -0.55$, $p < .05$).

Conclusion: Specific neurocognitive disturbances such as motor function and visual analysis abilities in SCHE patients seem to be related to neurochemical changes in BG and PWM. Follow-up of these changes in recovered SCHE patients will clarify the specificity of neurochemical changes in these regions.

NR77 Monday, June 1, 9:00 a.m.-10:30 a.m.

Risperidone Versus Haloperidol for Perception of Emotion in Treatment-Resistant Schizophrenia: Preliminary Findings

Kimmy S. Kee, Ph.D., Department of Psychiatry, UCLA, 11301 Wilshire Blvd 116AR, Los Angeles CA 90073; Robert S. Kern, Ph.D., Barringer D. Marshall, Jr., M.D., Michael F. Green, Ph.D.

Summary:

The pharmacological effects of the new generation of antipsychotic medications on perception of emotion in schizophrenia are not known. The present study compared the effects of risperidone versus haloperidol on the ability to perceive emotion in 18 treatment-resistant schizophrenia patients, using a randomized double-blind design. Measures of emotion perception included a facial emotion identification test (still photographs presented on video-

tape), a voice emotion identification test (audiotape), and an effect perception test (brief interpersonal vignettes presented on videotape). These measures were administered during the final week of baseline and after eight weeks of double-blind medication. Risperidone treatment produced a greater effect on patients' ability to perceive emotion compared with haloperidol treatment. Additionally, all patients who received risperidone demonstrated improvement in performance between baseline and retest, compared with four of the nine patients who received haloperidol. When changes in positive symptoms were statistically controlled, the results remained significant. These findings suggest that risperidone may facilitate patients' ability to accurately perceive emotion, an effect that may be mediated either directly by risperidone's pharmacological action or perhaps indirectly by its influence on basic neurocognition.

Funding Sources. This research was supported in part by the UCLA Clinical Research Center for the Study of Schizophrenia (R. P. Liberman, P. I.), an investigator-initiated grant from the Janssen Research Foundation, and a NIMH NRSA Grant MH-14584 (K. H. Nuechterlein, P. I.).

NR78 Monday, June 1, 9:00 a.m.-10:30 a.m.

Carbon Dioxide-Induced Panic in Premenstrual Dysphoric Disorder

Justine M. Kent, M.D., BSU, NYS Psychiatric, 722 W 168th Street Unit 24, New York NY 10032; Laszlo A. Papp, M.D., Jeremy D. Coplan, M.D., Jose Martinez, M.A., Jack M. Gorman, M.D.

Summary:

Objective: Several lines of study suggest a possible overlap in the pathophysiology of premenstrual dysphoric disorder (PMDD) and panic disorder (PD). PMDD subjects demonstrate sensitivity to many of the same panicogenic challenges that induce anxiety and panic in PDs. The purpose of this study is to: (1) investigate whether the anxiety response of PMDD patients to CO2 inhalation is affected by phase of menstrual cycle, and (2) determine whether PMDD subjects experience anxiogenic effects of CO2 comparable with PDs.

Method: A total of 16 women with PD, 14 women with PMDD, and 10 female normal controls were studied, each during five consecutive 20-minute inhalation periods: room air, 5% CO2, room air, 7% CO2, room air.

Results: There was no significant effect of menstrual phase on anxiety response to CO2 in the PMDD subjects. Based on both anxiety scales and panic rates, there were no significant differences between the PD and PMDD groups for either 5% or 7% CO2 challenge.

Conclusions: The data suggest that the anxiety responses and panic rates of PMDDs closely parallel those of women with PD. In particular, 7% CO2, which we have found to be highly sensitive in eliciting panic in PDs, was not specific in distinguishing PDs from PMDDs.

NR79 Monday, June 1, 9:00 a.m.-10:30 a.m.

Pattern of Somatoform Disorders in North India

Sanjay Khanna, M.D., Department of Psychiatry, GTB Hospital, C-51, X3 Dilshad Garden, Delhi 11095, India; Manjeet Singh Bhatia, M.D.

Summary:

Somatoform disorders are represented by the presence of physical symptoms that mimic a general medical condition. However, their presentations differ from culture to culture. Their recognition is important to save the limited valuable resources, which are usually wasted in unnecessary and costly investigations. This study was conducted in psychiatry OPD of UCMS and GTB hospital, Delhi, India (a tertiary care teaching hospital). This hospital serves a population from Delhi and neighboring states. DSM-IV criteria were used for diagnosing the somatoform disorders. A total of 100 consecutive patients with this disorder were used for the study. The most common presentation was of somatization disorder, followed by conversion disorder, and then pain disorder. Hypochondriasis and body dysmorphic disorder were very rare. There were also few patients with somatoform disorder not otherwise specified. Somatization disorder was mainly represented by pain and GIT symptoms, while conversion disorder was mainly represented by pseudoseizures or convulsions. Patients with pain disorder commonly presented with associated psychological factors. Headache was the most common complaint, followed by low back, chest, abdominal, and joint pain. Details of this study will be discussed. Cross-cultural comparison research is indicated for this study.

NR80 Monday, June 1, 9:00 a.m.-10:30 a.m.

Failure to Demonstrate Borna Disease Virus Genome in Peripheral Blood Mononuclear Cells of Korean Psychiatric Patients

Yong-Ku Kim, M.D., Psychiatry, College of Medicine, Korea University 126-1, 5-Ka, Sungbuk-Ku Seoul 136-705, Korea; Sang-Jin Kim, M.D., Leen Kim, M.D., So-Hyun Choz, M.D., Min-Soo Lee, M.D., Young-Hoon Ko, M.D., Jin-Won Song, M.D.

Summary:

Borna disease virus (BDV) is a newly classified nonsegmented negative strand RNA virus with international distribution. Originally BDV was isolated from horses with behavioral abnormalities, but has been found in sheep, cats, ostriches, and cattle. BDV has long been suspected to be a possible causative agent for human psychiatric disorders. Antibody to BDV from neuropsychiatric patients including mood disorder and schizophrenia has been reported by indirect immunofluorecence technique and western blot method. We report lack of BDV RNA from peripheral blood mononuclear cell (PBMC) of Korean psychiatric patients including 39 schizophrenia, 33 bipolar affective disorder, and nine major depression patients using a nested reverse transcription polymerase chain reaction (RT-PCR). Diagnosis was based on DSM-IV criteria. A 391-nucleotide region of p24 protein-encoding ORF-II was target for amplication. BDV genomic RNA were not amplified from any of the PBMC of Korean psychiatric patients. However, the possibility of association of BDV with human neuropsychiatric disorder may need to be explored in the future.

NR81 Monday, June 1, 9:00 a.m.-10:30 a.m.

Physostigmine and Cognition in Schizophrenia Spectrum

Richelle M. Kirrane, M.D., Department of Psychiatry, Mt. Sinai Medical Center, One Gustave Levy Place, New York NY 10029; Vivian Mitropoulou, M.A., Melissa Nunn, B.S., Larry J. Siever, M.D.

Summary:

There is evidence of reduced cholinergic activity in schizophrenia: anticholinergic drugs have psychotomimetic effects, and schizophrenia is associated with cognitive impairment, which has been associated with decreased cholinergic activity in Alzheimer's disease. Methylphenidate-induced exacerbation of schizophrenia is reduced by physostigmine. Schizotypal personality disorder (SPD) is a disorder of the schizophrenia spectrum, similar to schizophrenia in its biology, genetics, and treatment. Cognitive impairment exists in both disorders and includes abnormalities in verbal learning, attention, and memory. Studies of SPD are less

confounded by artifactual factors in the study of schizophrenic patients, including chronic psychosis and long-term antipsychotics. We hypothesize that a cholinergic agent will ameliorate the cognitive impairment of SPD, and have studied the effects of physostigmine, a cholinesterase inhibitor. Visuospatial working memory was assessed using the Dot test, learning and delayed recall with Word List Learning, and sustained attention using the Continuous Performance Test. Interim results of six SPD patients and two patients with other personality disorders (OPD) showed Dot test performance to improve in SPD patients but not in OPDs (SPD: placebo: 2.3, drug:1.5; OPD: placebo: 0.2, drug 0.5): (measure: error in position memory, higher number: worse performance). Word List Learning in the SPD patients did not appear to improve with physostigmine (measure: words recalled, higher number: better performance); [SPD placebo: (trial 1:6.8 words trial 5:14.0); drug: (trial 1:8.5, trial 5:15.0)]. Continuous Performance Test performance of three SPD patients improved on average 0.6 d' units (measure: d', higher number: better performance). While preliminary, these data raise the possibility that physostigmine may improve cognitive impairment in some SPD patients. These data will be updated to reflect the results of our pilot sample of 10 SPD patients.

NR82 Monday, June 1, 9:00 a.m.-10:30 a.m.

Review of Sertaline Dosing in a Teaching Clinic

Jack L. Koch, Jr., M.D., Department of Psychiatry, Vanderbilt University, 1500 21st Avenue S, Suite 2200, Oashville TN 37212; Nana A. Landenberger, M.A., Ronald M. Salomon, M.D.

Summary:

Objective: This study describes which dosing practices were associated with a satisfactory treatment outcome, defined as a decision to continue treatment for at least five months.

Method: Approximately 900 charts in Vanderbilt's Psychiatry Clinic were reviewed; 131 patients were found to have been treated with sertraline.

Results and Conclusions: Over the first six months of treatment with sertraline, the average doses for treatment continuers were analyzed. Physicians were found to prescribe significantly higher doses to patients with depressive disorders ($p < 0.01$) than to those with other Axis I or II diagnoses in the absence of a unipolar mood disorder.

For each diagnostic category, average doses for treatment responders (continuers) were compared with treatment failures (non-continuers). Higher doses at week 6 predicted treatment continuation for patients with either Axis II or substance use disorders ($p < 0.05$) but not for mood, anxiety, or psychotic disorders.

For sertraline naive patients, increasing the dose within the first six weeks was associated with a positive treatment response, while not increasing the dose resulted in a high risk for premature treatment termination. This finding ($p < 0.005$) held up for substance use, Axis II, and depressive disorders, but not for anxiety disorders.

NR83 Monday, June 1, 9:00 a.m.-10:30 a.m.

Juvenile Psychotic Depression Could Unmask an Underlying Vulnerability for Bipolar Disorders: A Two-Year Prospective Study

Frederic Kochman, M.D., Child Psychiatry, University Lille, Clinic Fontan Rue Laguesse, Lille NO 59037, France; Francois Ducrocq, M.D., Laurent Lauwerier, M.D., Philippe Parquet, P.R.

Summary:

Introduction: Although several recent studies suggest that bipolar disorder most commonly begins during childhood or adolescence, the illness still remains under-recognized and underdiagnosed in this age group. In this two-year prospective study, we evaluated the prevalence of onset of bipolar disorders among a sample of depressed juvenile patients.

Methods: A total of 47 depressed children and adolescents were assessed with Kiddie-SADS, according to DSM-IV criteria. They were also assessed with CDI self-evaluation questionaire and CDRS-R scale.

Results: Among those 47 patients, 14 were also suffering from psychotic symptoms. Of these, four developed a bipolar disorder (28%). A bipolar illness occured in only one case, among the 33 depressed patients without psychotic features (3%).

Conclusion: These original data strongly suggest that juvenile patients with psychotic depression are at high risk of developing a bipolar disorder. Further studies are needed, particularly to evaluate a treatment with mood stabilizers instead of antidepressants.

NR84 Monday, June 1, 9:00 a.m.-10:30 a.m.

Atypical Antipsychotic Treatment of BPD

Mary J. Kujawa, M.D., Department of Psychiatry, Case Western R.U., 11400 Euclid Avenue, Suite 200, Cleveland OH 44106; Sally A. Berry, M.D., Kelly L. Camlin, L.S.W., S. Charles Schulz, M.D.

Summary:

Numerous medications have been tested and found to be efficacious in the treatment of borderline personality disorder (BPD); however, acceptability of older medications has been problematic. The purpose of this presentation is to describe a chart review of patients with BPD, most of whom are comorbid with other illnesses, treated with the atypical antipsychotics risperidone, olanzapine, and clozapine. Twenty-five patient charts were reviewed. The adult patients, ranging in age from 22 to 54, were 84% female and 84% Caucasian. All of the patients in this study had been on numerous medications previously with minimal or partial response. Design of the study included the creation of a chart review questionnaire that was systematically applied to the patients' records. The chart review was performed by the patients' clinicians, as well as by other investigators. The impression of the investigators was that the atypical antipsychotic medications were helpful in reducing a number of the symptoms characteristic of BPD. The Clinical Global Impression (CGI) scores averaged 6.34 at the end of treatment with atypical antipsychotics. Global Assessment of Functioning (GAF) increased an average of 22.6%. The target symptoms showing the greatest response were mood and affect, paranoia and fearfulness, suicidal thoughts, affective instability, sleep, controls, and impulsivity. Additionally, the medications were found to be safe and were acceptable to patients. These newer antipsychotic medications offer hopefulness for the further development of psychopharmacological treatment of BPD.

NR85 Monday, June 1, 9:00 a.m.-10:30 a.m.

Predictors of Comorbid Personality Disorders in Patients with Panic Disorder with Agoraphobia

Milan Latas, M.D., Inst Psychiatry Clinic Center, Pasterova 2, Belgrade 11000, Yugoslavia; Vladan Starcevic, M.D., Goran Trajkovic, M.D., Goran Bogojevic, M.D.

Summary:

Objective: To ascertain predictors of comorbid personality disorders (PDs) in patients with panic disorder with agoraphobia (PDA).

Method: Sixty consecutive PDA outpatients (45 women and 15 men) were administered the Structured Clinical Interview for DSM-IV Axis II personality disorders (SCID II). Logistic regression was used to identify predictors of comorbid PDs, with presence of any personality disorder (PD), as determined by SCID-II, representing a dependent variable. Independent variables were demographic

data and variables from instruments (Parental Bonding Instrument (PI), Separation Anxiety Symptom Inventory, and Child Abuse and Trauma Scale), which assess patients' perception of their parents and childhood separation anxiety and traumatic experiences.

Results: The comorbidity rate for any PD was 45%. Logistic regression of predictors was statistically significant (χ^2 = 21.20; p = 0.0018; odds ratio = 8.82). High levels of protection on the PBI, suggesting a perception of parents as overprotective, emerged as the only statistically significant predictor of PDs (B = 0.09; p = 0.005; odds ratio = 1.10).

Conclusion: Although parental overprotection is not necessarily a unique developmental "precursor" of either PDA or PDs, this finding is consistent with the assumption that parental overprotection may affect the overall development of children adversely and contribute to the appearance of PDs, because it is linked to parental intrusive and controlling tendencies, infantilization, and prevention of independent behavior.

NR86 Monday, June 1, 9:00 a.m.-10:30 a.m.

Predictors of Chronicity in Late-Life Depression

Helen Lavretsky, M.D., Psychiatry, UCLA-VA, 10162 Hollow Glen Circle, Los Angeles CA 90077; Ira M. Lesser, M.D., Marcy Wohl, R.N., Bruce L. Miller, M.D., C. Marc Mehringer, M.D., Harry Vinters, M.D.

Summary:

Objectives: The main objectives of the study were to investigate the relationships between changes in white matter hyperintensities (WMH) size and distribution to the disease course, vascular risk factors, and apolipoprotein E status in a group of elderly depressed outpatients seen approximately seven years after their initial evaluation.

Methods: We restudied 16 patients selected from the upper and lower quartiles of the original sample according to the amount of baseline WMH. Two groups with (N = 8) and without WMH (N = 8) did not differ by sex, age, age of onset, and level of education. Follow-up assessment included a comprehensive physical, neurological, and neuropsychiatric examination; laboratory testing; and APO-E phenotyping order to establish their current diagnoses, psychosocial adjustment, quality of life, vascular risk factors, and medical comorbidity. All patients also had MRI, using protocols identical to those they received at first study. A semiquantitative scale was used to estimate the localization and extent of WMH. All data were analyzed with ANOVA and logistic regression analyses.

Results: Patients with and without WMH did not differ on major demographic and clinical characteristics. Eight (seven men and one woman) of 16 developed a chronic course of unremitting mild-to-moderate major depression that caused significant psychosocial impairment. Predictors of chronic depressive course included male sex, lower MMSE scores at baseline, presence of cerebrovascular risk factors, and large WMH size at baseline. The chronic course of depression was associated with apathy and poor quality of life as measured by the SF-36 general and subscale scores. Presence of APO-E ϵ4 allele was associated with a lower age of onset and apathy. Three of four patients with APO-E ϵ4 demonstrated increase in WMH over time, and one of 12 patients without e4 allele had an increase in WMH. Presence of APO-E e4 was also associated with WMH in the parietal areas. Increased medical burden and chronicity of depression were associated with increase in signal hyperintensities' size in basal ganglia.

Significance: The chronic course of late-life depression is associated with cerebrovascular risk factors and disease, higher cognitive impairment and apathy, and poor quality of life. Men may be at a greater risk for chronicity of depression. APO-E genotype may be an important factor influencing age of onset of depression, and the extent and distribution of WMH. Chronic course of depression may be associated with a particular distribution of WMH.

NR87 Monday, June 1, 9:00 a.m.-10:30 a.m.

Relationship Between Physical Activity and Mental Health in a Taiwanese Population

Chau-Shoun Lee, M.D., Department of Psychiatry, NCKUH, #138 Shen-Li Road, Tainan 70428, Taiwan ROC; Yi-Ching Yang, M.D.

Summary:

Objective: What are the psychological effects of physical activity at work and leisure time?

Method: A stratified random household sample was selected from a city in Taiwan. The subjects (age $\geq$ 20) were asked to attend a health screening program at a general hospital. There were a series of assessments, including Chinese Health Questionnaire (CHQ-12) and a physical activity questionnaire (PIMA).

Results: There were 1,585 subjects who completed CHQ-12. The number of males and females was not significantly different. The mean age was 43.6 $\pm$ 15.3. Three factors (somatic, depression, and worrying) were found in the CHQ-12. Physical activities took place in a common unit (MET). For women, the group with high activity at work had higher somatic scores (t = –3.27, p = 0.001), whereas those with high activity at leisure had lower worrying scores (t = 2.61, p = 0.031). For the total population, the subjects with low activity at work appeared less in the category of CHQ-12 score 4 (odds ratio = 0.76, p = 0.055) and those with low activity at leisure appeared more in this category (odds ratio = 1.29, p = 0.091).

Conclusions: There are different psychological effects of physical activities at work (detrimental) and at leisure (favorable), especially for women.

NR88 Monday, June 1, 9:00 a.m.-10:30 a.m.

The Effects of Total Sleep Deprivation on Neurocognitive Function

Heon-Jeong Lee, M.D., Department of Psychiatry, Korea University Hospital, 5- = Ka Anam Dong Sungbuk Ku, Seoul 136-705, Korea; Leen Kim, M.D., Kwang-Yoon Suh, M.D.

Summary:

Many studies have demonstrated that prolonged wakefulness led to decrement in cognitive performance, whereas some reported that there was no change or even improvement after sleep deprivation. To evaluate the neurocognitive effects of sleep deprivation, the authors used more objective, quantative methods—P300 event-related evoked potential and computerized neuropsychological test (Vienna Test System).

A total of 21 subjects remained awake for 38 hours under continuous surveillance. In the morning and the evening of two study days, the Vienna Test System (Reaction Unit, Cognitrone, Vigilance) and P300 were performed. P300 event-related potentials were recorded in a standard auditory oddball paradigm.

P300 latency was significantly prolonged during sleep deprivation and amplitudes were decreased. In vigilance, number of correct was significantly decreased. And number of missed, number of incorrect, and mean value of reaction time were significantly increased during sleep derivation. In reaction unit, median reaction time was also prolonged during sleep deprivation. But in cognitrone, there was paradoxically a tendency of functional improvement.

Taken together these findings suggest that 38-hour sleep deprivation has a substantial effect on vigilance and reaction time, but not on higher complex cognitive function such as fine perceptual analyses, visual discrimination, and short-term memory. The authors suggest that the P300 changes during sleep deprivation may be due to alteration in the alertness that prolongs reaction time.

NR89 Monday, June 1, 9:00 a.m.-10:30 a.m.

Plasma HVA and 5-HIAA Levels in Abstinent Male Alcoholics

Jung-Sik Lee, M.D., Department of Psychiatry, Yong-In Mental Hospital, 4 Sangha-Ri Kusung-Myun/Yongin, Si, Kyunggi-Do 449-910, Korea; Jae Hong Park, M.D., Kwang Soo Han, M.D.

Summary:

Objective: In this study, the authors intended to identify a possible biochemical difference, especially in dopaminergic and serotonergic fuctions, between familial and nonfamilial alcoholism. We intended to identify differences of plasma HVA and 5-HIAA concentration between alcohol dependence with and without family history.

Design: This study is a case control study.

Methods: The subjects were 41 male patients with alcohol dependence (DSM-IV) and 41 age- and sex-matched, normal controls. They had recovered from acute intoxication (at least six weeks later from admission date) and did not take any psychiatric medication (more than four weeks). Food and exercise were restricted as a rule. We divided alcoholic patients into two groups according to family history of alcoholism (alcohol dependence with family history N = 21, and alcohol dependence without family history N = 20). We measured their plasma HVA and 5-HIAA levels using HPLC-ECD (High Performance Liquid Chromatography-Electrochemical Detection) method. T-test was used for statistical analysis.

Results: Both plasma HVA and 5-HIAA levels in patients with alcohol dependence were significantly lower than normal controls ($p < .01$; $p < .05$). Alcohol dependence with family history had lower plasma HVA levels than without family history and this result was statistically significant ($p < .05$). There was no significant difference in plasma 5-HIAA levels between alcohol dependence with and without family history.

Conclusion: There was a possible functional difference of dopaminergic system in alcohol dependence under the multifactorial genetic influences.

NR90 Monday, June 1, 9:00 a.m.-10:30 a.m.

Accuracy of the CAGE Questionnaire in Elderly Schizophrenia Patients

Michael S. Lehman, B.S., Department of Psychiatry, The Penn State University, Student Box 671, P.O.Box 850, Hershey PA 17033; Paul A. Kettl, M.D., Niamh M. Holohan, M.D.

Summary:

Objective: Schizophrenia is a risk factor for alcohol abuse, with up to half of schizophrenia patients having alcohol use disorders. Because these disorders are associated with positive symptom exacerbation, treatment noncompliance, and increased rehospitalization, an accurate alcohol abuse screening modality must be identified. Previous literature questions the accuracy of the MAST and CAGE questionnaires in patients with schizophrenia.

Method: Included in this study were state hospital inpatients 60 years or older diagnosed with schizophrenia or schizoaffective disorder. The 41 subjects were asked the CAGE questionnaire (two yes answers was considered positive) and history of alcohol abuse was determined via chart review (considered positive if clinician documentation).

Results: Twelve (29.3%) were found to have a documented history of alcohol abuse. Of those with a positive history, two had a positive CAGE. Of the 29 with no documented history of alcohol abuse, no one was CAGE positive.

Conclusions: This low sensitivity strongly suggests that the CAGE questionnaire is not reliable in assessing history of alcohol abuse in older adults suffering from schizophrenia or schizoaffective disorder. Alternative means of collecting information on history of alcohol abuse in these patients, via chart review or family or case manager interview, appear warranted.

NR91 Monday, June 1, 9:00 a.m.-10:30 a.m.

Tardive Dyskinesia and EPS in Chronically Mentally Ill Older Adults

Michael S. Lehman, B.S., Department of Psychiatry, The Penn State University, Student Box 671, P.O. Box 850, Hershey PA 17033; Paul A. Kettl, M.D., Niamh M. Holohan, M.D.

Summary:

Objective: Tardive dyskinesia and extrapyramidal symptoms are seen commonly in older adults taking neuroleptics. Documented risk factors for TD have included increasing age, increased exposure to neuroleptics, and female sex. This study aims to determine the prevalence and risk factors of TD and EPS in a population of older adults.

Method: Included in this study were state hospital inpatients age 60 or greater currently receiving neuroleptics for a diagnosis of schizophrenia or schizoaffective disorder. A total of 41 patients met these criteria, with an average current hospitalization length of 10 years. Chart reviews identified demographics, medical and psychiatric illness history, and medication usage. Patients were evaluated with the MMSE, AIMS, and Simpson-Angus Rating Scale. Data were evaluated using 2-tailed Pearson Correlation Coefficients.

Results: The group had a TD prevalence of 26.9% and an EPS prevalence of 56%. No risk factors were identified for TD. Risk factors for EPS included absence of COPD, no current or history of tobacco use, diabetes mellitus, low MMSE score, and absence of cortical atrophy via CT scan. The atypical neuroleptics did not produce TD or EPS less often than did the traditional neuroleptics.

Conclusions: Among the elderly, tobacco use appears to mitigate EPS, while diabetes, low MMSE score, and cortical integrity appear to be correlated with EPS. Additionally, side-effect profiles may not differ significantly between atypical and traditional neuroleptics in older adults.

NR92 Monday, June 1, 9:00 a.m.-10:30 a.m.

Neuroleptics Regulate Neuroprotective Genes

Xin-Min Li, M.D., Dept of Psychiatry, Univ of Saskatchewan, A114 MERB 103 Wiggins Rd, Saskatoon SK S7N 5E4, Canada; Jennifer Chlan-Fourney, B.A., Jin Qi, M.D., Augusto V. Juorio, Ph.D., Vern Bennett, M.D., Alan A. Boulton, Ph.D.

Summary:

Objective: Clinical and anatomical studies of schizophrenia suggest that progressive neuropathological changes occur over the lifetime course of the disease. Since early intervention with atypical neuroleptics has been shown to prevent progression of some symptoms, we intend to identify the molecular mechanisms by which neuroleptics could exert this "neuroprotective" effect. The effects of neuroleptics on the gene (mRNA) expression of the p75 receptor (whose downregulation is associated with reduced cell death) and superoxide dismutase (SOD, an enzyme that reduces oxidative damage to neurons) was thus investigated.

Method: Three doses of olanzapine and clozapine (plus controls) were administered to PC12 (rat pheochromocytoma) cells in culture. The effects of the neuroleptics on p75 and SOD mRNA levels were analyzed by northern blot analysis after two-, 12-, and 24-hour incubation times.

Results: Both neuroleptics downregulated p75 and upregulated SOD mRNA at all time points studied vs. controls. The highest dose of clozapine (250 μM) downregulated the p75 receptor below the level of detectability.

Conclusion: Olanzapine and clozapine both demonstrate neuroprotective capabilities in culture. These studies will be consequently followed up in vivo.

Support: Sask Health, Schizophrenia Soc. of Sask, Laura A. Chapman Award

NR93 Monday, June 1, 9:00 a.m.-10:30 a.m.

A Comparison of Recent Suicide Attempters Versus Ideators in Psychiatric Inpatients

Claudia M. Lizarralde, M.D., Department of Psychiatry, UTMB Galveston, 301 University Blvd 433 Graves, Galveston TX 77555; Corrina P. Ferguson, M.S.W., Melisa Y. Martinez, B.S., Jean P. Goodwin, M.D., Joseph A. McDaniel, M.S., Karen D. Wagner, M.D., Teresa A. Pigott, M.D.

Summary:

Although suicidal ideation is a common reason for psychiatric evaluation, determining the risk for an actual suicide attempt remains difficult. In the current study, psychiatric patients admitted after suicide attempts (SA) were compared with those admitted for suicidal ideation but no suicide attempts (NSA). One hundred and eight psychiatric patients consecutively admitted for suicidal ideation were evaluated by a semi-structured psychiatric interview concerning current and past psychiatric and medical history including substance use, suicidal behavior, and a history of physical or sexual abuse, and standardized, self-rating psychiatric scales within 72 hours of admission. Fifty-seven patients (53%) attempted suicide just prior to admission (SA) and 51 (47%) had suicidal ideation but no suicide attempt (NSA). More than 50% of the patients had previous suicide attempts and/or psychiatric hospitalizations, but rates were similar in the SA versus NSA group. Similarly, rates reported for familial psychiatric disorders, a family history of suicide, and the method of previous or recent suicide attempt were not significantly different between the SA and NSA group. The presence of a mood [SA (75%), NSA (80%)], anxiety [SA (20%), NSA (26%)], or substance abuse [SA (69%), NSA (75%)] disorder had no apparent impact on suicidal behavior. Similar rates of sexual or physical abuse (54%) were reported by the SA versus NSA group. Demographic data and self-report assessments of depression, anxiety, and dissociative phenomena also failed to differentiate the SA from NSA group. These results suggest that in suicidal patients: (a) examination of even a wide array of factors including past suicidal behavior, current psychiatric diagnoses, familial psychiatric history, and standardized assessments of psychiatric symptoms cannot reliably discriminate suicide attempters versus non-attempters; and (b) evidence for a valid distinction between patients that are suicidal ideaters is needed.

NR94 Monday, June 1, 9:00 a.m.-10:30 a.m.

Cultural Factors and Diagnostic Reliability of a Structured Psychiatric Instrument

Fausto R. Loberiza, Jr., M.D., Department of Psychiatry, University of Iowa, 1900 Steindler Newton Drive, Iowa City IA 52240; William T. Howard, M.D., Bruce M. Pfohl, M.D., Ronald C. Talens, M.D., Robert F. Woolson, Ph.D., Jose Bienson Mamangun, M.D., Bernardo L. Conde, M.D.

Summary:

Objective: This study examines cultural factors that may affect inter-rater reliability for the PRIME-MD, a structured instrument assessing common psychiatric disorders in primary care.

Method: The study population consisted of three prototype resettlement camps established to provide housing and other services to those affected by the eruption of Mt Pinatubo in Zambales, Philippines. Camp 1 is composed of nontribal lowlanders, camp 3 composed of tribal and isolated highlanders called the "Aetas", and camp 2, a mixture of both cultures. Three hundred fifty-five (355) volunteers were selected using the Kish sampling method and interviews conducted by trained nurses. A second interview was conducted blindly by a separate interviewer on a subsample of 89 individuals. Reliabilities were computed using Cohen's kappa and interclass correlation. Cultural determinants were analyzed using unconditional logistic regression.

Results: The findings suggest lower reliabilities for somatic, anxiety, and alcohol items among the tribal highlanders. Reliability was higher for mood items when compared with the non-tribal lowlanders. Sociocultural indices that define culture affected rater reliability.

Conclusions: While there are reasons to believe the PRIME-MD can be applied in a community setting, investigators should be aware that cultural factors may affect the instrument's reliability and consequently, prevalence of certain psychiatric disorders. Funding: Environmental Health Science Research Center, Univ of Iowa; National Institutes for Environmental Health.

NR95 Monday, June 1, 1:00 p.m.-2:30 p.m.

Suicidality, Substance Abuse and Diagnoses: Impact of Gender

Melisa Y. Martinez, B.S., Dept Psych c/o Dr. Pigott, UTMB Galveston, 301 University Blvd 433 Graves, Galveston TX 77555; Corrina P. Ferguson, M.S.W., Claudia M. Lizarralde, M.D., Sheila M. Seay, M.A., Jean P. Goodwin, M.D., Teresa A. Pigott, M.D.

Educational Objectives:

At the conclusion of this presentation, the participant should recognize that clinical data, demographic features, suicidal behavior, and standardized self-report measures fail to differentiate male from female psychiatric inpatients.

Summary:

Most studies have suggested gender differences exist in suicidal behavior. In the current study, suicidal behavior, psychiatric symptomatology, and the prevalence of substance abuse disorders were examined in female (F) and male (M) psychiatric inpatients (n = 108). A semistructured interview concerning current and past psychiatric and medical history and standardized psychiatric rating scales were administered within 72 hours of admission. Sixty females (56%) and 48 males (44%) were evaluated (mean age ± SEM, 38.0 ± 1.4 yr.). Despite the finding that significantly more F than M patients met criteria for a mood [F (86%), M (66%), $x2 = 6.40$, $P < 0.05$] or an anxiety [F (32%), M (10%), $x2 = 7.70$, $P < 0.01$] disorder, recent suicide attempts were more likely in the M (65%) than F (43%) patient group [$x2 = 4.8$, $P < 0.05$]. Similarly, more than 50% of the patients, regardless of gender or the presence of mood or anxiety disorder diagnoses, reported previous suicide attempts [F (67%), M (59%), P = ns]. The method of suicide attempt was similar between the M and F patients [overdose: F (58%), M (50%); shooting: F (15%), M (10%); cutting: F (4%), M (20%); and asphyxiation: F (8%), M (10%)]. Approximately one out of five patients (M and F) reported a family history of suicide. Regardless of gender, more than 2/3 of the patients [F (78%), M (67%), P = ns] met criteria for a current substance abuse diagnosis; alcohol, polysubstance, and cocaine abuse, respectively, were the most common substances abused. Demographic features and the self-report measures were similar between the M and F patients. These results suggest that in psychiatric patients admitted for suicidal behavior: (a) sociodemographic data, clinical history, suicidal behavior, and psychiatric self-report measures are similar in M and F patients; (b) the presence of a mood or anxiety disorder is not associated with an increased risk of a suicide attempt in M or F; and (c) F are as likely as M to meet criteria for a substance abuse disorder.

References:

Cornelius JR, Salloum IM, Day NL, Thase ME, Mann JJ: Patterns of suicidality and alcohol use in alcoholics with major depression. Alcohol Clin Exp Res 20(8): 1451–5, 1996.

Spirito A, Bond A, Kurkjian J, Devost L, Bosworth T, Brown LK: Gender differences among adolescent suicide attempters. Crisis 14(4): 178–84, 1993.

NR96 Monday, June 1, 1:00 p.m.-2:30 p.m.

Death Among Alcoholic Men After 10–14 Years

Sunil Chhibber, M.D., Department of Psychiatry, Kansas University Medical Ctr, 3901 Rainbow Boulevard, Kansas City KS 66160; Barry I. Liskow, M.D., Elizabeth J. Nickel, M.A., Barbara J. Powell, Ph.D., Elizabeth C. Penick, Ph.D., Jan L. Campbell, M.D., Dennis Wallace, Ph.D.

Summary:

Objective: This prospective study lasting 10 to 14 years examined the rates of death, causes of death, and predictors of death among a large cohort of hospitalized male VA alcoholics.

Method: In this long-term naturalistic study, 360 consecutively admitted men alcoholics were extensively examined at intake into the study and again one and 10–14 years later. Their average age at entry into the study was 41. After 10–14 years, some information was obtained on 357 or 99% of the subjects. Death certificates and/or official record information were available on more than 80% of those who had died; information about the time and cause of death was obtained from relatives or friends in 20% of the deaths.

Results: Ninety-six of the subjects (27%) were dead after a decade, over 2 1/2 times the expected rate. Although more older than younger subjects died, the expected death rate was four to five times higher in the younger 25 to 45 year group. Eighty percent died of natural causes, 7.4% in an accident, 5.3% by suicide, and 3.2% by homicide. Of the 76 natural deaths, the majority were accounted for by heart disease, malignant neoplasms, and chronic liver disease. For the 76 deaths with sufficient information, a physician judge rated the involvement of alcohol in the immediate cause of death as unlikely in 63%. Predictors of death a decade later included age and its sociodemographic correlates, multiple physical health measures, physical withdrawal symptoms, and frequency of alcoholic drinking after one year. Alcoholism severity, family history of alcoholism, amount of treatment received, and psychiatric comorbidity, including antisocial personality, were *not* predictors of death.

Conclusion: Greater attention to the physical complaints of alcoholics may prevent untimely death. For those men who remained alive after 10–14 years, 59% had been totally abstinent or were drinking non abusively in the one-year period prior to the follow-up.

Supported in part by NIAAA (RO1AA07386 and R21AA07539) and the Medical Research Service of the Department of Veteran Affairs.

References:

Finney J.W. and Moos R.H: The long-term course of treated alcoholism: II. predictors and correlates of 10-year functioning and mortality. Journal of Studies on Alcohol, 53, 142–153, 1992.

Lewis C.E., Smith E., Kercher C., and Spitznagel: Predictors of mortality in alcoholic men: a 20-year followup study. Alcoholism: Clinical and Experimental Research, 19, 984–991, 1995.

NR97 Monday, June 1, 1:00 p.m.-2:30 p.m.

A Multivariate Genetic Analysis of the Use of Tobacco, Alcohol and Caffeine in a Population-Based Sample of Male and Female Twins

John M. Hettema, M.D., Department of Psychiatry, Medical College of Virginia, PO Box 980710, Richmond VA 23298; Linda A. Corey, Ph.D., Kenneth S. Kendler, M.D.

Summary:

Numerous epidemiologic studies in the past few decades have consistently demonstrated associations between the use of various psychoactive substances, both licit and illicit. Models developed to account for this finding include genetic and environmental factors. One important question to address is whether these risk factors are substance specific or whether there is some global set or risk for substance use. This study uses multivariate structural equation modeling to determine the sources of covariation between the use of tobacco, alcohol, and caffeine, the three most commonly consumed psychoactive substances. The sample, consisting of population based data collected from members of the Virginia Twin Registry, consists of 774 monozygotic and 809 dizygotic male and female twin pairs. Our results predict that genetic and individual specific environmental factors that are shared between these three substances account for a modest proportion of the total variance. Common familial environment appears to play little or no role. This would suggest underlying genetic and individual environmental risk factors producing some liability (poly)substance use in general, with the rest determined by substance specific factors. In addition, bigender analyses for the three substances individually suggest a female specific genetic source of liability to smoking.

Funding: NIH-R01 Grants NS31564 and HD26746.

References:

Istvan J, and Matarazzo JD: Tobacco, alcohol, and caffeine use: a review of their interrelationships. Psychological Bulletin 95: 301–326, 1984.

Kendler KS, Heath AC, Neale MC, Kessler RC, and Eaves LJ: Alcoholism and major depression in women: a twin study of causes of comorbidity. Archives of General Psychiatry 50: 690–698, 1993.

NR98 Monday, June 1, 1:00 p.m.-2:30 p.m.

Sex Differences in Social Adjustment in a Sample of Patients with Major Depression

Maureen Attiullah, M.D., Department of Psychiatry, Brown University, 345 Black Stone Blvd, Providence RI 02906; Caron Zlotnick, Ph.D.

Summary:

Objective: Sex-specific models have suggested that relational demands in social roles are greater for women than for men, and may explain sex differences in prevalence of certain mental illnesses, such as major depression. Given the purported relational stress placed on women, an aim of this study was to examine whether depressed women would experience more social impairment as compared with depressed men. The study also explored differences in various areas of social functioning between depressed women with children and those without. We hypothesized that due to greater family obligations, women with children would experience more social maladjustment than those without children in a sample of women with major depression.

Method: Using data from the NIMH Treatment of Depression Collaborative Research Program, 246 outpatients (72 men and 174 women), who met criteria for major depression were administered the Social Adjustment Scale to provide a measure of the

degree of functioning in various social roles, namely marital, parental, relationships with extended family, and work roles.

Results: A series of multiple regressions found no sex differences in the degree of social impairment in many of the various social roles, controlling for the severity of depression, as measured by the BDI. Further, multiple regressions found no differences in degree of social impairment in the various social roles in women with children (N = 106) and those without (N = 68), controlling for the severity of depression and age.

Conclusion: This study is one of the first to examine sex differences in social functioning in men and women with major depression. Our findings did not support a sex difference in any area of social functioning in men and women with major depression, a finding that is consistent with other studies on sex differences in symptom patterns of major depression. Our study also found that depressed women with and without children reported similar degrees of social impairment.

References:

Kornstein, SG: Gender differences in presentation of chronic major depression. Psychopharmacology Bulletin 31(4):711–718, 1995.

Gore, S. Social roles, sex roles and psychological distress: additive and interactive models of sex differences. Journal of Health and Social Behaviour 24:300–312, 1983.

NR99 Monday, June 1, 1:00 p.m.-2:30 p.m.

Mood Changes During Corticosteroid Therapy: Preliminary Data

E. Sherwood Brown, M.D., Department of Psychiatry, UT Southwestern, 5323 Harry Hines Blvd/Box 9070, Dallas TX 75235; Trisha Suppes, M.D., David A. Khan, M.D., Thomas J. Carmody, Ph.D.

Summary:

Corticosteroids are frequently prescribed medications given for a variety of common illnesses. Mania, depression, mood lability, and psychosis have been reported as side effects of corticosteroid therapy. To date these symptoms have often been poorly characterized, and risk factors have not been identified. Preliminary data (n = 23) are reported from an ongoing investigation (target n = 60) characterizing mood symptoms in outpatients with asthma receiving prednisone therapy (generally 40 mg daily for 1 to 2 weeks). Psychiatric symptoms are characterized using a structured clinical interview, Hamilton depression (HAMD), Young Mania (YMS), Brief Psychiatric Rating, and Internal State (ISS) scales. These data show significant increases in the YMS ($p = 0.003$) after four to seven days of corticosteroid therapy. Persons with a history of major depressive disorder show significantly increased scores on the Well Being subscale of the ISS ($p = 0.04$) and a trend toward decreased HAMD scores ($p = 0.08$) compared with persons without a history of depression. Anecdotally, persons with post-traumatic stress disorder (n = 5) sometimes report a worsening in reexperiencing symptoms and depression during prednisone therapy, though these data do not reach statistical significance. Thus, these preliminary data suggest symptoms of hypomania are common with corticosteroids and that psychiatric history may help predict response.

Supported, in part, by NARSAD, and NIMH Fellowship, F32 MH11580.

References:

Brown ES, Suppes T: Mood changes during corticosteroid therapy: a review. Harvard Review of Psychiatry (in press).

The Boston Collaborative Drug Surveillance Program: Acute adverse reactions to prednisone in relation to dose. Clin Pharmacol Therapy 13, 694–8, 1992.

NR100 Monday, June 1, 1:00 p.m.-2:30 p.m.

Neuroendocrinology of Depression During Pregnancy

Donald J. Newport, M.D., Department of Psychiatry, Emory University, 1639 Pierce Drive NE Ste 4003, Atlanta GA 30322; Zachary N. Stowe, M.D., James R. Strader, Jr., B.S., James C. Ritchie, Ph.D., Alexis M. Llewellyn, B.A., Charles B. Nemeroff, M.D.

Educational Objectives:

Demonstrate the alterations of the hypothalamic-pituitary-adrenal (HPA), hypothalamic-pituitary thyroid (HPT), and hypothalamic-pituitary-gonadal axes in women suffering from major depressive disorder (MDD) during pregnancy.

Summary:

The rate of major depressive disorder (MDD) in pregnancy parallels that of non-gravid women at a rate of approximately 10%. The neuroendocrine alterations, which have been shown in non-gravid MDD, have had limited investigation during pregnancy. The purpose of the current study is to evaluate the function of the HPA (cortisol, cortisol binding globulin), HPT (TSH, thyroxine, triiodothyronine, antithyroglobulin antibodies, antithyroperoxidase antibodies), and HPG (FSH, LH, estradiol, progesterone, prolactin, sex hormone binding globulin) in pregnant women presenting with MDD. These values are compared with two groups: nondepressed pregnant women with no prior history of depression and nondepressed pregnant women with positive history for depression. All subjects were evaluated monthly throughout pregnancy to control for the physiological alterations of pregnancy. To date, eight control subjects with no prior history of MDD (BDI scores 5.8 + 2.3), six subjects with a positive history of depression who did not relapse during pregnancy (BDI scores 6.9 + 4.3), and seven women who presented with depressive symptoms during pregnancy (BDI scores 27.5 + 6.2) presented in pregnancy and were followed prospectively up to 12 months postpartum. The study is currently in the follow-up, postpartum period. Significant differences were found in the HPG axis hormones, including prolactin. The groups showed similar patterns of HPG, HPA, and HPT alterations with pregnancy. In contrast, total cortisol values of depressed subjects were higher than both control groups during the second trimester; however, there was considerable overlap in the mean values among the three groups. Measurement of cortisol binding globulin concentrations and subsequent calculation of free serum cortisol are presently being measured, as are HPT axis variables. It is noteworthy that four of the seven women who were depressed during pregnancy delivered infants with low birth weight for gestational age (N = 1), low Apgar scores (N = 1), hepatomegaly (N = 1), and subsequent failure to thrive (N = 2). There were no adverse effects reported for the 14 women who did not become depressed. The potential impact of maternal depression during pregnancy and of fetal exposure to the neuroendocrine alterations of MDD will be discussed.

References:

Gotlib IH, Wiffen VE, Mount JH, et al: Prevalence rates and demographic characteristics associated with depression in pregnancy and the postpartum. J Consult Clin Psychol 57:269–274, 1989.

Orr ST, Miller CA. Maternal depressive symptoms and the risk of poor pregnancy outcome. Epidemiologic Rev 17:165–171. 1995.

NR101 Monday, June 1, 1:00 p.m.-2:30 p.m.

Outcome After Two Years of Lithium Treatment: Continuation Versus Discontinuation

Julie E. Peters, B.A., Department of Psychiatry, New York University Med School, 490 2nd Ave #15 D, New York NY

10016; Eric D. Peselow, M.D., Ronald R. Fieve, M.D., Michael Sobel, M.D.

Educational Objectives:

To evaluate the relapse rate in patients who were stable on lithium therapy for two years comparing patients who were discontinued from lithium vs. patients continuing on lithium and also to evaluate whether there was a differential relapse following first episode mania vs. multiple manic episodes.

Summary:

The utility of lithium in the prophylaxis of bipolar illness has been well established. However, it is not clear how long a patient should remain on lithium before discontinuation is attempted. The purpose of this study is to evaluate the long-term outcome of patients who either continued or discontinued lithium treatment after two years of mood stability, comparing the outcome between patients who began prophylaxis during the first manic episode and those who began after multiple manic episodes. We have followed 180 patients with bipolar I disorder who had been stable on lithium alone for two years. In the context of clinical care, 41 patients were discontinued from lithium (19 single episode; 22 multiple) and 139 were continued (37 single episode; 102 multiple). Over a four-year period, 28 of 41 patients (68%) discontinued from lithium had a recurrence of an affective episode compared with 53 of 139 patients (38%) continued on lithium. The probability of remaining free of an affective episode after discontinuation compared with the probability with continuation was as follows: 53% vs. 84% at one year, 35% vs. 75% at two years, and 32% vs. 72% at three years. First-episode bipolar patients who were discontinued did only slightly better than multiple-episode patients who were discontinued, and did statistically worse than first-episode patients who were continued. Overall, despite two years of stability on lithium, medication discontinuation was associated with a significantly higher recurrence rate than continuation, although continuation did not ensure mood stability.

References:

Abou-Saleh, MT: Who responds to prophylactic lithium therapy? British Journal of Psychiatry, 163 (suppl 21) 20–26:1993.

Maj M, Pirozzi R, Magliano L, et al: Long-term outcome of lithium prophylaxis in bipolar disorder: a 5 year prospective study of 402 patients at a lithium clinic. American Journal of Psychiatry, 155:30–35, 1998.

NR102 Monday, June 1, 1:00 p.m.-2:30 p.m.

Relative Risk of Death After Antidepressant Medication Overdose

Donna T. Chen, M.D., Department of Psychiatry, Columbia University, 722 West 168 Street Unit 92, New York NY 10032; Mark Olfson, M.D., J. John Mann, M.D.

Summary:

Objective: Antidepressants are the class of medications most commonly used in suicidal overdose in the U.S. Little is known about the extent to which individual antidepressants vary in their relative risk of death after overdose.

Methods: Data on overdoses and deaths were obtained from the Toxic Exposure Surveillance System (TESS) maintained by the American Association of Poison Control Centers (AAPCC). The risk of death from overdose was calculated from cases where the poison control center determined that the overdose "probably" or "undoubtedly" resulted in death. Data from years 1989–1996 are used in our analyses. The relative risks are compared with those for new-generation antidepressants.

Results: Tricyclics have seven times the risk of death of new-generation antidepressants. The relative risk of death after overdose of desipramine is highest among all antidepressants (15 times higher). Other relative risks are reported for antidepressants by type and individually. These results are consistent with fatal toxicity index rankings reported from other countries as well as reports of LD50 rankings in animals.

Conclusions: The increased risk of successful suicide associated with desipramine and other tricyclics has implications for antidepressant choice in patients at risk for suicide.

Funded by a grant from the APA/van Ameringen Health Services Research Scholars Program.

References:

Henry JA: Epidemiology and relative toxicity of antidepressant drugs in overdose. Drug Safety 16:374–390, 1997.

Kapur S, Mieczkowski T, Mann JJ: Antidepressant medications and the relative risk of suicide attempt and suicide. JAMA 268:3441–3445, 1992.

NR103 Monday, June 1 1:00 p.m.-2:30 p.m.

Prescribing Patterns by Psychiatrists, Scott and White, for Patients with OCD from 1993 to 1997

Jim B. Airhart, M.D., Department of Psychiatry, Scott and White, 2401 South 31st Street, Temple TX 76508; Greg D. Blaisdell, M.D.

Summary:

Objective: To better define the prescribing patterns by Scott and White psychiatrists for patients with obsessive-compulsive disorder (OCD) seen in the mental health clinic from 1993 to 1997.

Methods: We identified patients with OCD during the above time period using both billing records and information from the electronic medical record (EMR). A manual chart review was performed for these identified patients with OCD. We documented each patient's antiobsessional medication regimen for each year during the five-year period specified above.

Results: For the period 1993 to 1997, we identified a total of 41 patients with OCD undergoing treatment with antiobsessional medication(s). We noted a 33% increase in use of the selective serotonin reuptake inhibitors (SSRI's) and a corresponding 33% decrease in the utilization of clomipramine or other agents over this five-year period.

Conclusions: These results illustrate an increasing preference for the use of SSRI's over clomipramine or other medications in outpatients suffering from OCD. This likely reflects both an increase in clinician education in the use of SSRI's for this disorder, and greater patient tolerability for the SSRI's compared with previously available drug therapies.

References:

Jenike MA, Baer L, Minichiello WE: Obsessive-Compulsive Disorders: Theory and Management. Chicago, IL, Year Book Medical Publishers, Inc., 1990.

Hollander E, Wong C: Developments in the Treatment of Obsessive-Compulsive Disorder. Primary Psychiatry 1995; 2:28–33.

NR104 Monday, June 1, 1:00 p.m.-2:30 p.m.

Religiosity, Ethnicity and Psychological Distress

G. Eric Jarvis, M.D., Department of Psychiatry, McGill University, 6100 Wilderton Ave #7, Montreal PQ H3S 2L1, Canada; Laurence J. Kirmayer, M.D.

Educational Objectives:

At the conclusion of this presentation, the participant should be able to recognize that religious measures are important to include

in psychosocial research, and that religiosity interacts with ethnicity to affect levels of psychological distress.

Summary:

Objectives: (1) To replicate previous findings that psychological distress is inversely correlated with religiosity; (2) to examine how ethnicity affects this relationship.

Methods: Data were drawn from a larger study of health care utilization in Montreal. A random community sample of 2,246 yielded four groups: a Canadian-born group, and immigrant groups from the Caribbean, Vietnam, and the Philippines. Religious groups included Protestant (n = 233), Catholic (947), Jewish (353), and Buddhist (182). Psychological distress was assessed with the 12-item version of the General Health Questionnaire (GHQ). Religiosity was measured with a three-item index: (1) declared religion, (2) frequency of attendance at religious meetings, (3) frequency of religious rituals performed at home; Cronbach's alpha = 0.58. Multiple regression models examined the relationship of religiosity to distress controlling for sociodemographic variables including ethnicity.

Results: Overall, religiosity was negatively associated with the GHQ score. Attendance at religious services was inversely correlated with psychological distress for Protestants and Catholics but not Buddhists or Jews. Identification as Buddhist rather than Catholic was associated with lower levels of distress among Vietnamese. Religious practice at home was not associated with level of distress for any group.

Conclusion: Results confirm the association between religiosity and lower level of distress but reveal ethnic-specific effects indicating the need to understand religiosity in social and cultural context.

Funding source for the original survey: the Fonds de la Recherche en Santé du Québec (FRSQ).

References:

Larson DB, Sherril KS, Lyons JS, Craigie FC Jr, Thielman SB, Greenwold MA, Larson SS: Associations between dimensions of religious commitment and mental health reported in the American Journal of Psychiatry and Archives of General Psychiatry: 1978–1989. Am J Psychiatry 149:557–559, 1992.

Ventis WL: The relationship between religion and mental health. Journal of Social Issues 1995; 51 (2):33–48.

NR105 Monday, June 1, 1:00 p.m.-2:30 p.m.

Quality of Care for Depressed Older Adults in a Large HMO

Jurgen Unutzer, M.D., Psychiatry, Univ of Washington, Box 356560, Seattle WA 98195; Wayne J. Katon, M.D., Joan Russo, Ph.D.

Summary:

Background: We examined the care of 502 adults treated for depression in a large HMO.

Methods: We administered structured diagnostic interviews to 502 adult HMO members who had received depression diagnoses and antidepressant prescriptions in a large primary care clinic. We used automated data and telephone surveys to assess adequate dose and duration of antidepressants, primary care, and specialty mental health visits.

Results: A total of 22% (n = 110) of the sample were age 60 or older. Older adults were less likely to meet diagnostic criteria for major depression (32.7% versus 52.8% in the younger group). A total of 52.8% and 41.1% of younger patients received "adequate" doses of antidepressants for 30 and 90 days, respectively, compared with 37.3% and 26.4% of older adults. Both groups had few primary care visits in the first three months after an antidepressant prescription (mean = 1.6). Younger patients were more likely to receive specialty mental health care than older patients, although this difference did not remain significant after adjusting for the differences in the rates of major depression.

Discussion: There are significant gaps between the patterns of care observed in this primary care setting and treatment guidelines for depression in primary care. These gaps are even wider for older adults.

References:

Katon WJ, VonKorff M, Lin E, Unutzer J, Simon G, Walker E, Ludman E, Bush T: Population-based care of depression: effective disease management strategies to decrease prevalence. Gen Hosp Psychiatry 1997;19:169–178.

Callahan CM, Hendrie HC, Dittus RS, Brater DC, Hui SL, Tierney WM: Improving treatment of late life depression in primary care: a randomized clinical trial. J Am Geriatr Society 1994;42:839–846.

NR106 Monday, June 1, 1:00 p.m.-2:30 p.m.

Prevalence of Depression in Asian and Pacific Islanders with HIV

Gene A. Nakajima, M.D., General Int Medicine, West Los Angeles VAMC, 11301 Wilshire Blvd W111G, Los Angeles CA 90025; David T. Takeuchi, M.D., Barbara Leake, Ph.D., Kenneth B. Wells, M.D.

Educational Objectives:

To understand the risk factors for depression in Asian and Pacific Islanders with HIV/AIDS.

To understand what risk factors determine unmet utilization of depression treatment in this population.

Summary:

Objective/Hypothesis: Little is known about use of mental health services among Asian and Pacific Islanders (A&PIs) with HIV/AIDS. Due to high stigma of HIV and mental health problems in this group, there may be a high unmet need for such care. To address this issue, we studied risk for depressive disorder and use of depression treatment for A&PI's with HIV/AIDS.

Method/Proposed Methods: We used location and snowball sampling to systematically identify A&PIs with HIV/AIDS over 18 months. A total of 209 A&PIs with HIV/AIDS in New York City, San Francisco/Bay Area, and Southern California were interviewed.

Outcome measures included the WHO Composite International Diagnostic Interview (CIDI)-Short Form Screeners for major depression and dysthymia, use of antidepressants, and visits to health professionals for emotional or personal problems.

Discussion/Significance: A total of 93 (44.5%) screened positive for major depression/dysthymia in the past year. Controlling for other factors, lower social support (OR: 0.50, 95%CI: 0.41, 0.62) and recent substance use (OR: 2.2, 95%CI: 1.8, 2.8) were independently associated with higher probability of depression. Of 81 (38.8%) subjects with probable depressive disorder in the past six months, 29 (36%) received antidepressants and 44 (54%) had four or more visits to a health professional for emotional and personal problems. Depressed subjects with some college education (OR: 2.7, 95%CI: 1.9, 3.9) were more likely to receive care for depression.

Almost half of A&PI's with HIV/AIDS had probable current depressive disorder, regardless of HIV symptomatic status. Low social support and recent substance abuse should raise the index of suspicion for clinical depression in this population. Level of unmet need (about 40%) was not as high as many had feared, yet appropriateness of care for depression can be improved, especially for those without a college education.

Funds provided by UCLA AIDS Institute and Robert Wood Johnson Foundation.

References:

Nakajima GA, Rubin HC: "The epidemiology of HIV/AIDS in Asian and Pacific Islander Communities in New York City" (abstract). VIII International Conference on AIDS, Amsterdam, Netherlands, 1992.

Nakajima GA, Kono R, Katz M, Liu J, O'Malley P: "Mental Health Care Utilization of Asian and Pacific Islander Men with HIV in San Francisco" (abstract). X International Conference on AIDS, Yokohama, Japan, August 1994.

NR107 Monday, June 1, 3:00 p.m.-5:00 p.m.

Practice Patterns of International and United States Graduate Psychiatrists

Carlos Blanco-Jerez, M.D., Department of Psychiatry, Columbia University, 722 West 168th Street, Box 81, New York NY 10032; Cletus S. Carvalho, M.D., Mark Olfson, M.D.

Summary:

Objective: To compare the practice patterns of international medical graduate (IMG) and United States medical graduate psychiatrists (USMG).

Method: Using data from the 1996 National Survey of Psychiatric Practice, the authors compared both groups on demographic characteristics, practice settings, clinical characteristics of their patients, and sources of reimbursement.

Results: IMG's tend to be older than USMG's, have a higher proportion of females, and are more racially heterogeneous. They work longer hours, work more frequently in the public sector, and treat a higher proportion of patients with psychotic disorders. IMG's also receive a higher percentage of their income than USMG's from Medicaid and Medicare, while the reverse is true of self-payment. Most of these differences remain significant after controlling for age, gender, race, and board certification of the psychiatrist.

Conclusion: IMG psychiatrists have different practice patterns than USMG's. Policies that significantly decrease the number of IMG psychiatrists may adversely influence the availability of care for minorities and other underserved populations.

NR108 Monday, June 1, 3:00 p.m.-5:00 p.m.

Medical, Psychiatric and Sociodemographic Correlates of Hypochondriacal Worry

Karl J. Looper, M.D., Department of Psychiatry, Jewish General, 4333 Cote Ste Catherine, Montreal QC H3T 1E4, Canada; Laurence J. Kirmayer, M.D.

Summary:

Objective: To identify sociodemographic and psychopathological correlates of hypochondriacal worry (HW) in an ethnically diverse community sample.

Method: A total of 500 subjects, 100 from each of five ethnocultural groups: Anglophone and Francophone Canadian-born, Caribbean, Filipino, and Vietnamese, were drawn from a larger randomly selected urban community sample. Modules of the Composite, International Diagnostic Interview (CIDI) for hypochondriasis, anxiety, and depression, and a sociodemographic questionnaire were administered. Multiple logistic regression analysis was conducted using relevant variables.

Results: Thirty-three subjects had HW. Four variables were significantly correlated ($p < 0.05$) with HW: chronic illness (Odds Ratio = 3.5), medically unexplained symptom (OR = 3.9), number of somatic symptoms (OR = 1.3), and Caribbean ethnicity (OR = 7.3). Depression, panic, and generalized anxiety were not.

Conclusion: HW is associated with medically unexplained and multiple somatic symptoms, but not with depression and anxiety. These results argue for the independence of hypochondriacal worry from mood and anxiety disorders and its closer association with other somatoform disorders. Models will be presented to explain the correlation with the significant medical, psychiatric, and ethnocultural variables.

Funding: Fonds de la recherche en sante du Quebec.

NR109 Monday, June 1, 3:00 p.m.-5:00 p.m.

Bupropion Sustained Release in Atypical Depression

Luis Lopez, M.D., Department of Psychiatry, University of Miami, 1400 NW 10th Avenue Ste 304A, Miami FL 33136; Paul J. Goodnick, M.D., Robert N. Golden, M.D., C. Lindsay DeVane, Ph.D., Charles L. Bowden, M.D.

Summary:

Bupropion SR is a unique aminoketone antidepressant that appears to produce effect solely via catecholamine pathways. Although not established, it appears to have particular effectiveness in atypical and bipolar depression (Sachs et al 1994; Goodnick & Extein 1989). Its effect has also been related to both biochemistry (Golden et al 1988) and blood levels (Preskorn 1983, Golden 1988, Goodnick 1992). There is a paucity of similar information on the more recent SR version (Goodnick et al, in press). This protocol focuses on the SR version in atypical depression while monitoring both plasma levels of bupropion SR and its metabolites and plasma levels of MHPG. These are preliminary clinical results from a clinical collaboration. In the protocol, patients meeting DSM-IV criteria for major depression with atypical features are administered bupropion SR at a dose of 150 mg for three days, followed by 300 mg per day for the remainder of eight weeks. Patients are seen after one, two, four, six, and eight weeks, at which time they are evaluated on the HDRS, BDI, CGI, and assessed for atypical depression features. In five (3M, 2F) patients to date (mean age = 36.8 $\pm$ 5.1 yrs), significant improvement has been found both in HDRS (21.0 $\pm$ 6.7 to 4.4 $\pm$ 3.8, $p = .01$) and in BDI (26.8 $\pm$ 5.6 to 8.4 $\pm$ 7.2, $p < .01$). Data on 10 completers will be shown at the meeting, along with biochemical relationships. At this time, clearly more controlled clinical trials for bupropion SR in atypical depression are indicated.

NR110 Monday, June 1, 3:00 p.m.-5:00 p.m.

Psychiatric Admissions Due to Antidepressant-Induced Psychosis

Rebecca W. MacLean, M.D., Department of Psychiatry, Yale University, 20 York St 10-5 E Pavilion, New Haven CT 06504; Erica Weiss, M.D., Malcolm B. Bowers, Jr., M.D., Carolyn M. Mazure, Ph.D.

Summary:

Objective: Today's increasing use of antidepressants is likely to raise the rate of significant adverse events due to these agents. The current work seeks to determine the prevalence of antidepressant-induced psychosis leading to hospitalizations as a marker for significant antidepressant behavioral toxicity.

Method: A total of 207 consecutive inpatient psychiatric admissions over a six-month period were reviewed.

Results: Psychosis precipitated by antidepressants accounted for 11% of admissions (18 women, 5 men, ages 21–55 years). All patients had previously been diagnosed with a DSM-IV psychotic disorder. Sixty-five percent of patients had recently been prescribed antidepressants, and 35% had a recent reduction in neuroleptic dose in combination with continuing antidepressant treatment. All had an initiation or increase in psychotic symptoms as the primary reason for hospital admission. Rapid improvement was associated with discontinuation of antidepressants and the subsequent initiation or increase of an antipsychotic agent.

Conclusion: Eleven percent of psychiatric admissions to a general hospital were found to be due to antidepressant-induced psychosis, thus raising the concern that as the rate of antidepressant prescriptions has doubled in the past five years so have significant adverse events. These findings suggest the need for increased vigilance in prescribing practices for this commonly used pharmacotherapy.

NR111 Monday, June 1, 3:00 p.m.-5:00 p.m.

Mania in HIV Illness

Linda Mah, M.D., Department of Psychiatry, McGill University, 4810 Park Avenue, Montreal QC H2V 4E6, Canada; Pascale DesRosiers

Summary:

Objective: Several cases of mania associated with HIV disease have been reported in the literature, but few systematic studies exist. The authors conducted a retrospective chart review to determine the frequency of HIV mania and its possible risk factors.

Method: All charts of patients with HIV seropositivity referred for psychiatric consultation at a large urban teaching hospital between 1990 and 1996 were reviewed to identify cases of mania and associated clinical variables. Patients with a previous diagnosis of bipolar affective disorder prior to onset of HIV or mania due to another medical etiology were excluded.

Results: Of 251 HIV seropositive patients, eight presented with mania or psychosis with manic symptomatology, comprising 3.2% over a seven-year period. None had a positive personal or family history of mood disorder. All had AIDS at the time of presentation, with an average CD4+ count of 47.7/mm (range = 10–155). In all but one patient, a clinical diagnosis of definite or probable AIDS dementia was made, with cerebral atrophy visualized on neuroimaging studies. Average survival time following onset of mania was 11.3 months (range = 3–29 months).

Conclusions: HIV mania is relatively infrequent and appears to be associated with end-stage disease and cognitive impairment.

NR112 Monday, June 1, 3:00 p.m.-5:00 p.m.

Does a Day Hospital Lower Rehospitalization Rates?

Milica A. Markovic, M.D., Clasp, BMHI, PO Box 926, Bangor ME 04401; Jeffrey W. Aston, Ph.D., Beverly Catt, B.S.N., Charles D. Hanson, M.D., Jan Hruby, M.D., Bill Fenn

Summary:

Background: Public psychiatric institutions face a challenge in maintaining care and access with a shrinking number of hospital beds. For patients being discharged from chronic hospitalization into various forms of community living, the Bangor Mental Health Institute has developed a day treatment or partial hospitalization program (CLASP), including group and individual psychotherapy, psychoeducation related to pharmacotherapy, family and community counseling, and supervised activities.

Objectives: To determine whether patients treated in a day treatment program such as CLASP might have a lower rate of readmission for psychiatric hospitalization and/or a lesser number of subsequent inpatient days than patients treated by standard post-hospitalization care.

Method: A total of 45 patients admitted to CLASP day treatment in 1993 and 1994 were matched retrospectively for age, diagnosis, and gender with a control group of 45 patients selected as a stratified random sample. The control patients were discharged from inpatient hospitalization during the same interval but received standard referral to appointments at outpatient mental health clinics. For the two groups, the rates of rehospitalization and number of days of subsequent hospitalization from 1995 through 1997 were compared using a T-test. For each group post-treatment data were also compared with pretreatment data.

Results: The group admitted to the day treatment showed statistically significant differences including both lower rate of rehospitalization and a lesser number of subsequent hospital days as compared with the control group as well as greater reduction in these parameters for post-treatment as compared with pretreatment intervals.

Conclusions: Although results from a retrospective method may require further confirmation, they do suggest that patients being discharged from chronic hospitalization for a variety of major mental illnesses show beneficial effects from a day program such as CLASP.

NR113 Monday, June 1, 3:00 p.m.-5:00 p.m.

Neurotrophins in Amniotic Fluid

Christine E. Marx, M.D., Department of Psychiatry, University of North Carolina, CB 7160, Chapel Hill NC 27599; Brandon J. Vance, B.A., L. Fredrik Jarskog, M.D., Nancy C. Chescheir, M.D., John H. Gilmore, M.D.

Summary:

Objective: A growing body of literature implicates neurotrophins in psychiatric illnesses. Since some psychiatric disorders are neurodevelopmental in origin, the measurement of neurotrophin levels in amniotic fluid merits investigation.

Methods: Amniotic fluid specimens from 128 women were assayed for brain-derived growth factor (BDNF), neurotrophin-3 (NT-3), and nerve growth factor (NGF) by ELISA.

Results: BDNF, NT-3, and NGF were detectable in all amniotic fluid samples. A significant negative correlation exists between BDNF and NT-3 and gestational age ($p = 0.0012$ and $p = 0.0004$, respectively). A significant positive correlation exists between BDNF and NT-3 levels ($p = 0.0008$).

Conclusions: BDNF and NT-3 levels in amniotic fluid are inversely related to gestational age. BDNF and NT-3 levels are directly correlated. The elucidation of these neurotrophin characteristics may have important clinical applications for psychiatry. Currently, associations of neurotrophin levels in amniotic fluid with obstetric complications and disorders of brain development are being explored.

NR114 Monday, June 1, 3:00 p.m.-5:00 p.m.

Children's Responses and Recovery Following Parental Military Deployment

Lisa J. McCurry, M.D., Department of Psychiatry, Cambridge Hospital, 1493 Cambridge Street, Cambridge MA 02139; Peter S. Jensen, M.D., Henry K. Watanabe, M.D.

Summary:

Objective: A total of 32,000 children had one or both parents deploy to the Persian Gulf during Operation Desert Storm (ODS). Previous research has demonstrated an increase in self-reported depressive symptoms in these children during deployment. Few studies have been done on children after parental deployment. The authors sought to determine how these children fared after their parents returned from ODS.

Method: The cohort included families on a military base after ODS, regardless of previous deployment status. Several of these families were surveyed prior to and during ODS, as part of a longitudinal study. A total of 182 families (response rate 77%) completed questionnaires including the Child Behavior Checklist (CBCL) and Children's Depression Inventory (CDI).

Results: There was a significant decrease in CDI scores in children whose parents had deployed. CBCL's filled out by the caretaking parent suggested normalization of behavior. Stabiliza-

tion was greatest among families where a service member deployed.

Conclusions: In contrast with common assumptions, children experienced few difficulties following parental return. Most children showed fewer symptoms than at baseline. The improvement in symptomatology after return from deployment suggests that preventive interventions should be targeted to children and families before and during active deployment.

NR115 Monday, June 1, 3:00 p.m.-5:00 p.m.

Defining Subgroups by Service Use in Programs for Assertive Community Treatment

Scot W. McNary, M.A., Center for MH Services Res, University of Maryland, 685 Baltimore Avenue, MSTF 300, Baltimore MD 21201; Lisa B. Dixon, M.D., Anthony F. Lehman, M.D.

Summary:

Objectives: Programs for Assertive Community Treatment (PACT's) reduce symptoms and extend community tenure for persons with serious mental illness. However, outcome studies may ignore heterogeneity among client service use in order to: (1) gain power for outcome evaluations and (2) focus on direct outcome measures. This report attempted to find subgroups of PACT clients defined by service use patterns. Identifying subgroups may help refine programs to suit heterogeneous needs among clients.

Methods: Twelve months of service use were aggregated for 67 homeless clients with serious mental illness attending a PACT in Baltimore, MD. Cluster analysis was performed on the four most frequently used case manager contacts: (1) direct service in the office, (2) resource linkage in the office, (3) resource linkage in the community, or (4) resource linkage over the telephone.

Results: Five clusters were suggested by cluster analyses. These clusters differed in age and education, but not on baseline level of functioning or other demographics. The clusters also differed in use of other types of services.

Conclusions: Subgroups may exist among PACT clients, although criteria by which they are distinguished may be based on other non-measured variables, perhaps related to preference for type of contact.

NR116 Monday, June 1, 3:00 p.m.-5:00 p.m.

Sertraline in Diabetic Neuropathy

Liana Mendoza, M.D., Department of Psychiatry, University of Miami, 1400 NW 10th Ave Ste 304A, D79, Miami FL 33136; Paul J. Goodnick, M.D., Adarsh Kumar, Ph.D.,

Summary:

Previous work has indicated the usefulness of TCA's and SSRI's in treatment of diabetic neuropathy (Sindrup, 1994). In previous work, sertraline was found to be helpful in patients with combined AODM and depression in both reducing HDRS scores and at the same time improving dietary compliance and glycosylated hemoglobin A values (Goodnick et al, 1997a). A first study applying the principle of serotonergic benefits in pain therapy showed that sertraline at doses up to 150 mg was successful in diabetic neuropathy based on VAS ratings (Goodnick et al, 1997b). At this time, the trial is being replicated with a view toward using lower sertraline doses of 50 mg, rather than 150 mg/day. Patients are seen after one, two, four, and eight weeks; diabetic neuropathy symptoms are assessed by VAS and by observer. Although depression is an exclusion, patients are still rated each visit on HDRS and BDI. The first seven patients (3M, 4F) with a mean age of 55.7 years have shown improvements in VAS pain (81.4 to 16.4, $p < .001$), paresthesia (74.2 to 24.3, $p < .01$), and numbness (75.7 to 26.4, $p < .001$), as well as in observer pain (1.6 to 0.7, $p < .04$), paresthesia (1.6 to 0.8, $p = .05$), and numbness (1.7 to 0.8, $p < .02$) [VAS:0–100; Observer 0–2]. Platelet 5HT content drawn before and following trial have results pending. Results on 10 to 15 patients will be presented at the meeting. It would appear that minimal doses of sertraline can be effective in treatment of diabetic neuropathy; double-blind trials are indicated.

NR117 Monday, June 1, 3:00 p.m.-5:00 p.m.

Psychotic Depression in a Hispanic Population: Diagnostic Dilemmas and Implications for Treatment

David Mischoulon, M.D., Department of Psychiatry, Massachusetts General Hospital, 15 Parkman Street/WACC 815, Boston MA 02114; Isabel T. Lagomasino, M.D., Chris Harmon, M.D.,

Summary:

Objective: To review atypical psychotic symptomatology and treatment in Hispanic patients who present with psychotic depression.

Methods: We reviewed the charts of 44 Hispanic patients (9 men and 35 women, ranging in age from 20 to 62) being treated for psychotic depression and other mood and anxiety disorders at two community clinics. Specific psychotic symptoms were described, and treatment and outcomes were assessed.

Results: Thirty-seven patients met criteria for psychotic depression. Virtually all patients described at least some atypical psychotic symptoms, including doorbells ringing, telephones ringing, voices of one's children calling, and visual hallucinations of animals or relatives. Treatment of these patients varied, ranging from antidepressants alone, to combinations of antidepressants, neuroleptics, mood stabilizers, and anxiolytics. No clearly superior treatment regimen emerged.

Conclusions: Psychotic symptoms described by Hispanic patients may differ from typical psychotic symptoms described in other populations. This may make it difficult for the treating psychiatrist to formulate a firm diagnosis and treatment plan. Further investigation is recommended in order to assist the practitioner in deciding how to diagnose and treat such patients.

NR118 Monday, June 1, 3:00 p.m.-5:00 p.m.

Transfer of Psychopharmacology Patient Syndrome: A Resident Survey

David Michoulon, M.D., Department of Psychiatry, Mass General Hospital, 15 Parkman Street, WAC-812, Boston MA 02114; Edward Messner, M.D., Jerrold F. Rosenbaum, M.D.

Summary:

Objective: To determine how graduating psychiatry residents manage the transfer of care of psychopharmacology outpatients, and what negative effects these transfers may have.

Method: We surveyed 38 psychiatry residents at the Massachusetts General Hospital Adult Psychiatry Residency Program. Sixteen residents who transferred 185 psychopharmacology patients at the end of the 1996–97 academic year received a questionnaire inquiring about their transfer procedures and the pre-transfer clinical course of these patients. Twenty-two residents who assumed care of these patients were questioned about their patients' post-transfer course.

Results: Residents reported that 19% of patients worsened after being notified of the upcoming transfer, 32% required medication changes, and up to 8% became noncompliant or dropped out of treatment. Approximately four months after the transfer of care occurred, residents reported that 10% of patients had worsened, 7% required medication changes, and up to 12% became noncompliant or dropped out of treatment. Residents reported that

approximately 29% of all patients considered the change of treaters a major disruption in treatment.

Conclusions: The frequent changing of treaters in the academic setting may have a deleterious effect on up to one-third of all psychopharmacology patients. We propose a protocol for improving outcome in transfer of psychopharmacology patients.

NR119 Monday, June 1, 3:00 p.m.-5:00 p.m.

Separation Anxiety and Eating Attitudes in a Cross-Cultural Perspective

Cameron S. Morhaliek, M.D., Dept. of Child Psych., University of Hawaii, 1319 Punahou Street 6th Fl, Honolulu HI 96826; Alayne Yates, M.D., Deborah Goebert, M.S.

Summary:

Objective: A common theme among many studies of eating disordered individuals is the concept of ambivalent separation from parents and how this relates to symptomatology. No studies compare these issues on a cross-cultural basis. This study assesses the relation of perceived separation anxiety in childhood with eating attitudes across several cultures living in Hawaii. Do those individuals with high levels of perceived separation anxiety have high levels of pathological eating attitudes? Could different culturally determined parental bonding models account for differences in separation anxiety and eating attitudes? What is the change in self-perceived separation anxiety levels across cultures and generations?

Method: A cross-sectional survey using three self-rated questionnaires—Eating Attitudes Test (EAT-26), Separation Anxiety Assessment Index (SASI), and Ethnic Identity—was administered to 149 young adult college students living in Hawaii.

Results: A total of 4% of the sample scored in the pathological range (>20) on EAT-26. Of these pathologicals, 50%, 33%, 17%, and 0% identified themselves as Japanese, Chinese, Filipino, and Caucasian, respectively. There was a significant relationship between perceived separation anxiety in childhood and abnormal adult eating attitudes ($r = 0.24$, $p = 0.003$). There were nonsignificant differences in EAT-26 scores and ethnic self-identification ($F = 1.44$, $p = 0.24$). Mean EAT-26 scores were 9.82, 7.24, 6.67, and 4.65 for Chinese, Filipino, Japanese, and Caucasian ethnic identity, respectively. There was no significant difference in SASI scores by ethnic self-identification ($F = 0.94$, $p = 0.43$). However, SASI scores were highest for second-generation individuals, regardless of culture ($F = 3.15$, $p = 0.05$). All other relationships were insignificant.

Conclusions: These findings suggest that individuals who are second-generation immigrants with high levels of perceived separation anxiety in childhood are at increased risk for eating disorders. These findings are reviewed and discussed in relation to previous scientific literature.

NR120 Monday, June 1, 3:00 p.m.-5:00 p.m.

The Mechanism of Venlafaxine Action: Noradrenergic and Serotonergic Activity

Meera Narasimhan, Department of Psychiatry, Yale University, 129 York Street Apt 6F, New Haven CT 06511; Robert M. Berman, M.D., Amit Anand, M.D., Angela C. Cappiello, M.D., Dan A. Oren, M.D., Dennis S. Charney, M.D.

Summary:

Objective: Venlafaxine has been demonstrated to inhibit noradrenergic and serotonergic reuptake in preclinical studies. The purpose of this study is to assess dose-dependent effects of venlafaxine on functional measures of noradrenergic (plasma 3-hydroxy-4-hydroxyphenylethyleneglycol [MHPG]), and serotonergic (platelet serotonin [5-HT] content) activity.

Methods: Subjects meeting criteria for major depression underwent a 12-week progressive dose escalation of venlafaxine (i.e., starting at 18.75 mg thrice daily, increasing every two weeks to a final dose of 112 mg thrice daily). Morning plasma samples were prepared biweekly for determination of platelet 5-HT and MHPG levels, collected approximately 10 hours after the last dose.

Results: Nine of 12 enrolled subjects completed the protocol. Platelet 5-HT levels are currently available on seven subjects who completed at least four weeks of the protocol. Four subjects showed marked reduction in platelet 5-HT content (i.e., ≥25% baseline levels) after the first two weeks (i.e., total daily dose of 56.25 mg) and three subjects showed similar changes the second two weeks (i.e., total daily dose of 112.5 mg).

Conclusions: Preliminary results suggest that venlafaxine inhibits peripheral measures of 5-HT uptake at low doses. Data on MHPG levels will be available for comparison with extended data on platelet 5-HT content.

NR121 Monday, June 1, 3:00 p.m.-5:00 p.m.

Hippocampal Volume in MDD

Meena Narayan, M.D., Department of Psychiatry, Yale University, PO Box 208038 Yale Station, New Haven CT 06520; Eric Anderson, Helen L. Miller, M.D., Lawrence H. Staib, Ph.D., Dennis S. Charney, M.D., J. Douglas Bremner, M.D.

Summary:

Objective: High levels of cortisol have been associated with atrophy of the hippocampus, a brain region involved in learning and memory. Plasma cortisol is also elevated in subgroups of patients with major depressive disorder. One study evaluating hippocampal volume in major depression demonstrated atrophy while two other studies did not confirm this finding. The purpose of this study was to measure hippocampal volume in patients with major depressive disorder.

Methods: Magnetic resonance imaging was used to measure volume of the hippocampus in patients with remitted, unipolar major depression, and age- and sex-matched healthy subjects using methods previously described.

Results: The mean hippocampal volume was 13% smaller in patients with major depressive disorder ($n = 16$) compared with healthy subjects ($n = 14$). This difference was statistically significant after controlling for differences in whole brain volume with ANCOVA ($F = 10.57$, $P = 0.0004$). There was a pattern of greater reduction in the left hippocampus (17%) compared with the right (8%). There were no significant differences in comparison brain regions between depressed patients and healthy controls.

Conclusions: These preliminary findings are consistent with hippocampal atrophy in major depressive disorder, with a pattern of greater reduction in the left hippocampus than the right.

NR122 Monday, June 1, 3:00 p.m.-5:00 p.m.

Services to Families in a Community Program

Patricia Nnadi, M.D., Department of Psychiatry, University of Maryland, 3707 Edgewood Drive, Baltimore MD 21215; Lisa B. Dixon, M.D., Letecia Postrando, Ph.D., Bette Stewart, Eileen Hastings, R.N.

Summary:

Objective: Psychoeducational interventions delivered to families of persons with severe mental illness (SMI) have established effectiveness. Yet little is known about the extent to which such families even have contact with service providers. We aimed to determine the extent to which providers report family contact in a cohort of 1,400 adult patients at an urban community mental health center.

Methods: All case managers received a form asking if their patients had family contact and, if so, whether the case manager had family contact within the last year. We assessed whether diagnosis, demographic factors, and type of treatment team influenced likelihood of clinician/family contact.

Results: The overall rate of *patient/family* contact was 94%. Patients of the team serving the homeless had a significantly *lower* rate (74% ($p < .01$)). Men ($p < .01$) and persons with schizophrenia ($p < .01$) were less likely to have family contact. Among patients with family contact, the overall rate of *clinician/family* contact was 49% with significantly *higher* rates among patients who have schizophrenia ($p < .01$), men ($p < .01$), and those served by community outreach teams ($p < .001$).

Conclusion: This study confirms that adults with SMI remain highly connected to families. Only about half of these families were reported to have had contact with the treatment team. The appropriateness and quality of the family/clinician contact or lack thereof requires further study.

NR123 Monday, June 1, 3:00 p.m.-5:00 p.m.

Cholesterol and Aggression in Personality Disorders

Sherie Novotny, M.D., Mt Sinai Medical School, 1 Gustave Levy Place Box 1230, New York NY 10029; Antonia S. New, M.D., Elizabeth Sevin, B.S., Ann M. Callahan, M.D., Larry J. Siever, M.D.

Summary:

Background: Decreased serum cholesterol has been associated with impulsive and aggressive behaviors. Abnormal central serotonergic activity, as reflected by decreased prolactin responses to fenfluramine, has been correlated to impulsivity and aggression in personality disordered patients. This study was designed to explore the relationship between serum cholesterol levels, serotonergic indices, and measures of impulsivity and aggression in personality disordered patients.

Method: Forty-two personality disordered patients (DSM-III-R 20 females and 22 males, age 37.1 + 8.5), including 14 patients with BPD (age: 34.2 ± 6.6; 10 female, 4 male), and 28 patients with other personality disorders (age: 38.5 ± 9.1; 10 female, 18 male) were examined for evidence of irritability and aggression by self-report as measured by the Buss-Durkee Hostility Inventory (BDHI), and for evidence of impulsivity by self-report as measured by the Barratt Impulsivity Scale (BIS). Central serotonergic activity was measured by the prolactin response to fenfluramine challenge. Fasting serum cholesterol was measured by standard enzymatic assay as part of the initial medical screening. All patients' thyroid and liver function tests were also measured during initial medical screening, and were determined to be within normal limits.

Results: An ANOVA was performed with factors of gender and diagnosis, looking at two-way interactions between the factors and serum cholesterol. A significant relationship was found between borderline diagnosis and reduced serum cholesterol, (BPD chol = 166.8 ± 32.2, non-BPD = 192.6 ± 33.6, $F = 1.09$, $p < .05$). A significant interaction effect was also seen between gender and diagnosis, with the male patients having lower cholesterol levels (male BPD = 154.7 ± 38.1, non-BPD = 203.6 ± 34.3, $F = 4.33$, $p < .05$). There were no significant relationships between serum cholesterol and scores on the BIS or the BDHI. There was a trend of inverse correlation between serum cholesterol and prolactin response to fenfluramine ($n = 18$, $r = -.41$, $p < 0.1$).

Conclusions: This study suggests there may be a relationship between cholesterol and reduced serotonergic activity.

NR124 Monday, June 1, 3:00 p.m.-5:00 p.m.

Gender and Cognitive Deficits in Schizophrenia Patients

Demetra Pappas, B.S., Department of Psychiatry, Harvard Medical School, Taunton State Hosp PO Box 4007, Taunton MA 02780; Christina Wu, B.A., Rogelio D. Bayog, M.D., David N. Osser, M.D., Ileana Berman, M.D.

Summary:

Objectives: There has been an increased interest in understanding the role played by gender in the expression of schizophrenic illness. There is evidence suggesting that women with schizophrenia tend to have a later illness onset and that they do better than men with fewer and shorter hospitalizations and a better response to treatment. As part of an outcome study in a long-term state psychiatric hospital we assessed a group of hospitalized men and women with schizophrenic illness.

Method: The assessments included psychiatric scales such as the Positive and Negative Syndrome Scale for Schizophrenia (PANSS) and a battery of cognitive tests that included measures of attention, executive function, auditory and visual memory, verbal fluency, and trail making tests. To compare the two groups we used a t-test analysis. We collected the data from 60 patients (31 men and 29 women) who met criteria for schizophrenic spectrum illness (i.e., schizophrenia or schizoaffective disorder). The group was representative of a rather severely ill population (with an average total PANSS score of 88 and MiniMental Status Examination of 26).

Results: There were no statistically significant group differences in any of the measures: patients scored similarly on the positive and negative subscales of the PANSS and had similar cognitive scores on tests of attention, visual and auditory memory, executive function, verbal fluency, and trail making tests.

Conclusions: These findings do not replicate the previous data that male and female patients with schizophrenia have different illness manifestations. However, we have to keep in mind that our data do not capture a representative group of patients and are limited to only a severely ill cohort.

NR125 Monday, June 1, 3:00 p.m.-5:00 p.m.

Assessment of Evidence-Based Practice Guidelines in Psychiatry

Jagoda Pasic, M.D., Department of Psychiatry, University of Washington, Box 356560 School of Medicine, Seattle WA 98195; Efthimis Efthimiadis, Ph.D.

Summary:

Objective: Clinical practice guidelines have been developed to improve the process and outcomes of health care. Most guidelines utilize clinical experience, expert opinions, and research evidence. The strength of treatment recommendations is ideally assessed by the quality of the research evidence. Hence, the key component of guidelines is how accurately they reflect the inference conferred by the underlying research evidence.

This study assesses the quality of evidence used in the practice guidelines for psychiatric disorders.

Methods: The quality of evidence was assessed by identifying the references in seven guidelines with evidence originating from (a) randomized, controlled studies, (b) clinical trials, (c) longitudinal studies, (d–g) retrospective/secondary data.

Results: The total number of references used in the guidelines was 2,129. The distribution of the evidence was: (a) 14%–26%, (b) 2%–19%, (c) 3%–17%, (d–g) 50%–69%. These results show that the practice guidelines in psychiatry are based on 26% high quality evidence at best and the larger proportion of references originates from lower quality evidence.

Conclusions: This study outlines the current status of evidence the guidelines are based on. It also indicates that practice guidelines in psychiatry may need improvement with higher quality evidence. APA's Practice Research Network for enriching practice-based research in psychiatry may contribute toward this goal.

NR126 Monday, June 1, 3:00 p.m.-5:00 p.m.

Abrupt Versus Gradual Lithium Discontinuation: Relationship to Outcome

Julie E. Peters, B.A., Department of Psychiatry, New York University Med School, 490 2nd Ave #15 D, New York NY 10016; Eric D. Peselow, M.D., Ronald R. Fieve, M.D., Michael Sobel, M.D.

Summary:

Discontinuation of prophylactic lithium carbonate treatment in patients with bipolar disorder is associated with a high risk of recurrence of illness. The purpose of this study is to assess the effect of rate of lithium discontinuation on clinical outcome and to evaluate factors that might be predictors of remaining free of affective episodes after lithium discontinuation. We discontinued lithium in 98 patients with a history of bipolar disorder who were stable for six months to 10 years on lithium prophylaxis. A total of 37 individuals were withdrawn abruptly (over <10 days) in the context of a double-blind, placebo-controlled trial. A total of 61 individuals were withdrawn gradually (over two-five months) in the context of clinical care. At all time points ranging from three months to four years after lithium discontinuation, significantly more patients remained well among those discontinued gradually compared with those withdrawn abruptly. Over a four-year period, 34 of 37 patients (92%) abruptly withdrawn from lithium had a recurrence compared with 43 of 61 (71%) gradually withdrawn. In addition to gradual discontinuation, other factors predicting longer stability off medication were a lower average serum lithium concentration during prophylaxis and a lower frequency of interepisode manic and depressive symptoms. Factors not related to clinical outcome were length of time stable on lithium prophylaxis, severity of manic and depressive symptoms during the episode preceding the prophylactic period, sex, age, age at onset of illness, and number of years ill. Implications of these findings in the context of treatment for bipolar disorder will be discussed.

There was no funding for this study.

NR127 Monday, June 1, 3:00 p.m.-5:00 p.m.

Occupational Stress and Psychiatric Illness in the Military

Steven E. Pflanz, M.D., Department of Psychiatry, Wilford Hall MC, 4114 Medical Dr Apt 18302, San Antonio TX 78229-5655; Brian P. Skop, M.D.

Summary:

Objective: This is a pilot study aimed at gathering preliminary data on the relationship between occupational stress and mental illness among military personnel. The primary goal of this study is to determine to what extent military mental health patients report suffering from significant occupational stress.

Methods: The study employed a 65-item survey developed by the investigator that incorporates the 43-item Schedule of Recent Experiences (SRE). By adding the weighted values assigned to the 43 items, each respondent was given an SRE score, which is a measure of overall stress and has been shown to be predictive of future illnesses. A total of 38 military patients at the Wilford Hall USAF Outpatient Mental Health Clinic participated in the study on a voluntary basis from October to December 1997.

Results: A total of 71% reported suffering from significant work stress, 61% reported that work stress was causing them significant emotional distress, and 55% reported that work stress was a significant contributor to the onset of their mental illness. The average SRE score of all respondents was 304.

Conclusions: The results suggest that a majority of military mental health patients perceive themselves to be suffering from significant occupational stress. Furthermore, a majority also believe that their work stress was a causal factor in their mental illness. The average SRE scores reported by this sample, whether or not they report work stress, indicate that these patients are experiencing levels of stress that place them at significant risk for future illnesses.

NR128 Monday, June 1, 3:00 p.m.-5:00 p.m.

Characterization of a Novel Forebrain-Specific Neurodevelopmental Gene

Tony A. Pham, M.D., Department of Psychiatry, University of California, 498 Carl St Apt 4, San Francisco CA 94117-3607; Kyuson Yun, Ph.D., John L.R. Rubenstein, M.D., Michael P. Stryker, Ph.D.

Summary:

Behavior and cognition arise from precise interconnections of nerve cells as well as their underlying molecular constituents. In the developing brain, experiential and intrinsic factors interact to shape the formation of synaptic connections in the neocortex. To understand further at a molecular level how this process occurs, we have sought to identify genes whose pattern of expression may indicate an important involvement in synaptic development and/or plasticity in the neocortex. We present here the identification of a novel murine gene whose expression is developmentally regulated and restricted to the telencephalon. By performing in-situ hybridization on mouse brain, we show that this gene is expressed as early as embryonic day 14.5 within the cortical plate and cortical ventricular and subventricular zones. In the postnatal animal, the gene is expressed most abundantly in the neocortex and the hippocampus. Significantly, there is an absence of expression within the cerebellum, brain stem, and colliculus and only trace amounts of expression within the thalamus. Postnatally, the cortical expression of the gene rises from birth, peaks at around the second to third week of life, and declines as the animal matures further. Thus, the pattern of expression of this gene is consistent with an important role in the development and maturation of cerebral cortex. We are in the process of obtaining a full-length clone of this gene and completing the sequence and functional analyses. Supported by the NIH and the APA-PMRTP program (fellowship to T.A.P.).

NR129 Monday, June 1, 3:00 p.m.-5:00 p.m.

Dopamine D2 Receptor Density and Personal Detachment

Lisa J. Picken, B.A., Department of ETB, NIMH, Bldg 10 Room 4N212, Bethesda MD 20892; Alan F. Breier, M.D., Caleb M. Adler, M.D., Igor Elman, M.D., Neil Wiesenfeld, B.S.E., Anil K. Malhotra, M.D., David Pickar, M.D.

Summary:

Objective: The purpose of this study was to examine the relationship between the personality trait involving personal detachment and dopamine D-2 receptor-specific binding in healthy subjects.

Methods: Eighteen adult subjects (14 male, 4 female) completed the Karolinska Scales of Personality (KSP), the Tridimensional Personality Questionnaire (TPQ), and participated in an 11-C-raclopride positron emission tomography (PET) study to quantify striatal D-2 receptor binding.

Results: A significant relationship was found between the D-2 receptor-specific binding and KSP detachment scores (r = –0.50,

df = 16, p = 0.033) but not between the TPQ attachment factor (r = 0.23, df = 16, p = 0.34). In an exploratory analysis, we found a significant relationship between binding and the TPQ sentimentality factor (r = -0.71, df = 16, p = 0.001) but no other TPQ or KSP personality factors.

Conclusions: These data replicate a recent report that KSP personal detachment is related to dopamine D-2 receptor density and extends this finding by suggesting the relationship is relatively specific to the trait defined by the KSP and does not generalize to other forms of detachment.

NR130 Monday, June 1, 3:00 p.m.-5:00 p.m.

Frontal Activation on fMRI in Schizophrenia Patients

Srinivasan S. Pillay, M.D., McLean Hospital, 115 Mill Street, Belmont MA 02178; Abigail A. Baird, Stacey A. Gruber, Deborah A. Yurgelun-Todd, Ph.D.

Summary:

Cognitive deficits in schizophrenia may be partially localized to the dorsolateral prefrontal cortex (DLPFC) and anterior cingulate gyrus (AC). DLPFC hypoactivity has been associated with poor performance on the Wisconsin Card Sort, and normal performance on tasks of verbal fluency in schizophrenic patients. In schizophrenic patients, task performance on a degraded stimulus continuous performance test was negatively correlated with AC activity in a positron emission tomographic study. We hypothesized that decreases in DLPFC activation in schizophrenic patients on tasks of verbal fluency, on functional magnetic resonance imaging (fMRI), would be accompanied by increases in AC activation. Eight schizophrenic patients and nine nonpsychiatric controls were scanned on a GE 1.5 Tesla scanner retrofitted with a whole body echo planar coil. Using a quadrature head coil, echo planar images and high resolution MR images were acquired. The challenge paradigm included word fluency and finger tapping. A repeated analysis of variance model indicated a significant region by diagnosis effect (F = 10.2, p = .004). DLPFC activation was significantly reduced, whereas AC activation was significantly increased during the verbal fluency task for schizophrenic patients. These findings suggest a differential pattern of regional frontal activation in schizophrenic patients relative to nonpsychiatric controls.

NR131 Monday, June 1, 3:00 p.m.-5:00 p.m.

Olfactory Stimulation Acutely Elevates Mood in Depressed Patients with SAD

Teodor T. Postolache, M.D., CPB Branch NIMH, National Institute Health, 10 Center Drive MSC 1390, Bethesda MD 20892; Erick H. Turner, M.D., Jeffery R. Matthews, M.D., Ling Han, M.D., Lulu A. Jimma, M.D., Mulon Luo, Norman E. Rosenthal, M.D.

Summary:

Introduction: Although light treatment during winter is an effective antidepressant for patients with seasonal affective disorder (SAD), patients' improvement on light is not as marked as that which occurs spontaneously during summertime. This raises the possibility that other environmental factors associated with summer, such as olfactory stimuli, might influence mood in SAD patients. Pleasant odors improve mood in humans (Schiffman et al, 1995). Given that in rats lemon odor reduces immobility time after a forced swimming test, a reliable mean for screening antidepressant effects (Komori et al, 1995), we hypothesized that a lemon fragrance would elevate mood more effectively than a control fragrance.

Methods: We studied 22 depressed patients with SAD who signed informed consent. The olfactory stimuli consisted of 15 natural odors (Dragoco, Totowa, NJ), presented successively for one minute with two minute intervals between each stimulus, in a random order. Mood was tested using 100mm visual analogue scales (VAS) for happiness, relaxation, and level of energy before and after exposure to each odor. Depression was rated at the beginning and the end of each testing session using the depression subscale of a 65-item Profile of Mood Scale (POMS). We analyzed the data using paired t-tests. First, we compared mood before and after the entire session of olfactory stimulation. Then we compared the difference between mood before and after lemon odor with the difference in mood before and after a control odor (fir).

Results: POMS depression score decreased with 5.1 ± 7.2; p = 0.003. Mean differences between lemon and fir were of eight units of VAS happiness (p = 0.012), of four VAS units of "relaxation" (p = 0.023), and of seven VAS units of "energetic" (p = 0.045).

Conclusions: Sniffing lemon fragrance for one minute induced a rapid and transient elevation of mood compared with a control odor. We have also observed a small but significant elevation in mood after vs before global olfactory stimulation, but we are unable to rule out order or placebo effects. Further studies are warranted to assess if more sustained effects would result from more sessions and longer administration of olfactory stimulation and to evaluate its antidepressant potential.

NR132 Monday, June 1, 3:00 p.m.-5:00 p.m.

Medical Comorbidity, Mental Health and Insurance Status

Leticia T. Postrado, Ph.D., Department of Psychiatry, University of Maryland, 985 W Baltimore MSTF Bldg #300, Baltimore MD 21201; Lisa B. Dixon, M.D., Janine C. Delahanty, M.A.

Summary:

Objective: This study assesses the association between mental health status and medical comorbidity and insurance status among persons with schizophrenia.

Methods: The Schizophrenia PORT Project surveyed a stratified, random sample of 719 persons with schizophrenia in two states. The survey assessed medical comorbid conditions and their associations with mental health and insurance status.

Results: A total of 719 participated in the survey; 63% were male and 54% were white. Poorer mental health ratings were associated with increased number of lifetime medical illnesses (p < .01) and increased number of current illnesses (p < .01). Higher scores on SCL-90 depression scale were associated with increased number of both lifetime (p < .001) and current (p < .01) medical illnesses. Similar findings were obtained for SCL-90 psychotism scores. Insurance coverage differed by gender: men were likely to have private insurance (48%), women were more likely to have Medicaid only (34%). Type of insurance differed by race (p < .001), and by age (p < .001). Insurance status differed by one type of medical comorbidity: patients with high blood pressure were likely to have private (42%) and Medicaid only (25%). Other co-existing illnesses were not related to insurance type.

Conclusion: Persons with schizophrenia with poorer mental health status had more medical comorbid problems. Medical comorbidity bore little relationship to insurance status.

NR133 Monday, June 1, 3:00 p.m.-5:00 p.m.

Cholesterol and Suicidality: A Retrospective Study

Prasad Potaraju, M.D., Department of Psychiatry, Maimonides, 4802 Tenth Avenue, Brooklyn NY 11219; Gabriel Ghitan, M.D.

Summary:

Objective: Correlation between low cholesterol levels and increased risk for suicide was studied in the past with inconclusive

results. This study was intended to evaluate if such correlation exists in acutely suicidal psychiatric subjects and to provide additional information on whether such a correlation could be used as a biological marker. This was a preliminary investigation on the degree to which cholesterol levels correlate with suicidal thoughts and behavior.

Method: A retrospective chart review of consecutive admissions into an acute care psychiatric unit was done. Information about suicidality and cholesterol levels was collected from admission records. Data were collected only from available charts that had the required information at the time of admission. Comparisons between suicidal and non-suicidal groups were done using Point Biserial Correlation Coefficient Analysis.

Results: For the entire group there was a statistically significant positive correlation ($p = 0.013$). The group with only male patients had an almost significant positive correlation ($p = 0.057$). The group with only female patients had no significant correlation ($p = 0.22$).

Conclusion: The authors discussed the statistically significant results obtained and their divergence with the results of other studies. The importance of significant correlation was stressed even though it should not be used as a reliable marker in assessing suicidal risk; only a full psychiatric evaluation is reliable in understanding the complexities of the human mind.

NR134 Monday, June 1, 3:00 p.m.-5:00 p.m.

Efficacy of Brain SPECT in Assessment of Dementia

Emily M. Pressley, D.O., Department of Psychiatry, Penn State Geisinger, PO Box 850, Hershey PA 17033; Paul A. Kettl, M.D.

Summary:

Method: A retrospective study of all patients who received brain SPECT as a part of their dementia diagnostic work-up over a two-year period in a university geriatric inpatient setting was done. The study involved 48 (11%) of a total of 424 patients admitted with a diagnosis of dementia over that time period. Brain SPECT was done because of atypical presentation of dementia, i.e., history not compatible with gradual cognitive and memory loss as in Alzheimer's or with stepwise decline as in vascular dementia.

Results: It was found that in 34 of the 48 cases (71%) brain SPECT was helpful in establishing a definitive diagnosis. SPECT results showed that 16 patients had findings consistent with dementia of the Alzheimer's type, 10 had vascular dementia, three had both dementia of the Alzheimer's type and vascular dementia, two had Pick's disease, two had alcohol induced dementia, and one had a normal SPECT, which assisted in the diagnosis of dementia secondary to supranuclear palsy. Fourteen patients (29%) had nonspecific findings on SPECT such as atrophy or hypoperfusion. In these cases brain SPECT was not helpful in establishing a definitive diagnosis. Ten of these patients received a diagnosis of dementia NOS, two were diagnosed with delirium, and two with affective disorders.

Conclusion: Brain SPECT was found to be helpful in establishing a definitive diagnosis in 71% of patients who received the study as part of a diagnostic workup for atypical dementia. Brain SPECT should be considered as a useful adjunct study in the clinical assessment of patients with unclear etiology of dementia.

NR135 Monday, June 1, 3:00 p.m.-5:00 p.m.

Measuring the Rate of Cognitive Decline in Patients with Alzheimer's Disease With Mini-Mental State Exam: A Meta-Analysis

Ling Han, M.D., Department of Psychiatry, St Mary's Hospital, 3830 Lacomebe Avenue, Montreal PQ H3T 1J1, Canada; Francois J. Primeau, M.D., Martin G. Cole, M.D., Jane McCusker, M.D., Francois Bellavance, Ph.D.

Summary:

Objectives: To estimate typical rate of cognitive decline in Alzheimer's disease (AD) on Mini Mental State Examination (MMSE).

Methods: MEDLINE database of 1981 to November 1997 was searched using keywords of "AD," "Longitudinal study and/or prognosis," and "AD and cognitive decline." Inclusion criteria and standard forms were used to screen for relevant papers, to evaluate quality of study, or to abstract data for review. Bibliography of review articles and included papers were manually searched for additional papers. Random effect models was employed to estimate average population annual change scores (ARC) and its effect size (ES).

Results: Of the 439 studies screened, 29 meeting our inclusion criteria and with usable longitudinal MMSE data in 40 subgroups of AD patients, were reviewed for this report. An average ARC of MMSE is 3.48 ± 1.33 (range: 0.9–8.7). A crude population ES (cES) of ARC is 1.08 (95% confident interval (CL): 0.864–1.289). A weighted ES (wES) is estimated to be 1.426 (95% CI: 1.429–1.422). Stratified estimates of ES increase in the studies with less variation of follow-up length (ES $\pm$ se: 1.59 ± 0.67), and in the studies of AD patients with initial MMSE score of 15 or above (ES $\pm$ se: 1.53 ± 0.59).

Conclusions: The rate of cognitive decline in AD patients can be reliably measured with MMSE in mild or moderate demented patients, especially with appropriate control for initial severity of dementia and/or by standardizing follow-up length. More studies are needed to establish clinical validity of ARC measure.

NR136 Monday, June 1, 3:00 p.m.-5:00 p.m.

Treatment Response Predictors for Unipolar and Bipolar Depression

Jeffrey M. Pyne, M.D., Department of Psychiatry, VAMC-San Diego, 3350 La Jolla Village Drive, San Diego CA 92161; Dale P. Bullock, B.S., Shahrokh K. Golshan, Ph.D., Robert M. Kaplan, M.D.

Summary:

Objective: Predictors of medication treatment response have been studied more extensively in unipolar depressed populations than in bipolar depressed populations. The following report is a preliminary study of nonbiologic predictors of acute medication response in unipolar and bipolar depression.

Background: The nonbiologic predictors of treatment response were selected based on literature review (most studies used unipolar subjects). Treatment response predictors included age at first depression, baseline severity of depression, duration of current episode, Axis I and Axis II comorbidity, education, SES, and employment status. We also included a measure of health-related quality of life (HRQL), the Quality of Well-Being (QWB) scale. The QWB is a composite symptom/function measure composed of four subscales: symptom/problem complex (CPX), mobility (MOB), physical activity (PAC), and social activity (SAC).

Methods: This was a naturalistic study extending over four weeks of inpatient medication treatment. The subjects were recruited from the inpatient Mental Health Clinical Research Center at the San Diego Veterans Affairs Medical Center. Each patient was diagnosed by consensus using Structured Clinical Interview for DSM-IV. Weekly Hamilton Depression Rating Scale (HDRS), Beck Depression Inventory (BDI), and QWB ratings were collected. Baseline scores were defined as the mean value for weeks 1 and 2. Responders were defined as subjects who achieved a 50% reduction in HDRS-17 (compared with baseline) within four weeks of medication treatment. The analyses included t-test, chi-square, correlation, and logistic regression.

Results: Fifty-six subjects (42 unipolar and 14 bipolar) were included in the data analyses. At baseline, the only significant difference between unipolar and bipolar subjects was age at first

depressive episode. Predictors that correlated with unipolar response included age at first depressive episode, baseline BDI, baseline QWB, baseline CPX, and baseline SAC. Predictors that correlated with bipolar depression response included baseline BDI only. Using these variables in a series of logistic regression equations, we accurately categorized unipolar treatment response for 71% of subjects using age at first depressive episode, baseline BDI, and baseline SAC. Based on previous analyses, we then added baseline PAC, which resulted in 76% correct categorization. We used the same sets of variables in the bipolar sample (understanding that this is a small data set) and accurately categorized 85% and 100% of subjects, respectively.

Conclusions: These results indicate that there may be useful nonbiological models that include measures of HRQL, for predicting medication treatment response in unipolar and bipolar depressed subjects. Future studies with larger samples of bipolar subjects are needed to further study these models.

NR137 Monday, June 1, 3:00 p.m.-5:00 p.m.

Obsessive-Compulsive Symptoms in Patients with Parkinson's Disease

Alex S. Maia, Department of Psychiatry, Fac Medicina USP, R Dr Ovidio Pires Campos, Sao Paulo SP 05403, Brazil; Adriana S. Pinto, M.D., Egberto R. Barbosa, Ph.D., Paulo R. Menezes, Ph.D., Helema S. Prado, Euripedes C. Miguel, M.D.

Summary:

Background: Obsessive-compulsive disorder (OCD) has been reported in association with some neurological disorders that affect the basal ganglia. In addition, several studies such as neuroimaging suggest a role of the basal ganglia in the pathophysiology of OCD. However, there are few studies investigating OCD in Parkinson's disease patients. Therefore, the aim of this study was to verify the prevalence of obsessive-compulsive symptoms (OCS) in patients with Parkinson's disease.

Methods: We evaluated 53 patients with idiopathic Parkinson's disease using a semi-structured interview (for DSM-IV). The Yale-Brown Obsessive Compulsive Scale was administered to all patients. The 53 subjects (37 males and 16 females) had a mean (±SD) age of 61.3 (±10.65). All patients were examined by a neurologist who was blind to the patient's OCS scores.

Results: The obsessive-compulsive symptoms were present in 13 (24.5%) subjects and one of them was diagnosed with OCD. The mean (±SD) score of Y-Bocs was 14.38 (±6.3).

Conclusions: These data are important to alert the neurologist to the importance of looking for OCS in patients with Parkinson's disease. Moreover, these results add to the notion that the basal ganglia have an important role in the pathophysiology of OCD.

NR138 Monday, June 1, 3:00 p.m.-5:00 p.m.

Schizophrenia Patients With and Without OCD

Shakir R. Meghani, M.D., Department of Psychiatry, Kansas University Medical Ctr, 3901 Rainbow Boulevard, Kansas City KS 66160; Elizabeth C. Penick, Ph.D., Elizabeth J. Nickel, M.A., Ekkehard Othmer, M.D., William F. Gabrielli, Jr., M.D., Barbara J. Powell, Ph.D., Marsha R. Read, Ph.D.

Summary:

Objective: To systematically compare the family and clinical histories of a large group of outpatient schizophrenics who did or did not satisfy criteria for obsessive-compulsive disorder (OCD).

Method: Over a five-year period, all new admissions to the outpatient psychiatry service of a large midwestern teaching hospital were examined with a structured diagnostic interview and other self-report measures before seeing the clinic physician. Of the 1,458 patients who participated, 192 or 13.2% met Feighner criteria for schizophrenia. Of these, 61 of the 192 (31.7%) also met criteria for OCD. These two groups were compared for sociodemographic characteristics and a family history of mental disorder as well as the onset and course of the psychosis, the level of social impairment, utilization of treatments, and psychiatric comorbidity.

Results: Schizophrenics with OCD were younger and more likely to be married; no race, gender, religion, or educational differences were found. Psychosis and mood disorder did not distinguish the family histories of the two groups; alcoholism was slightly more prevalent in the OCD subgroup. Onset of psychosis began earlier in the schizophrenic patients with OCD. Schizophrenics with OCD also acknowledged significantly more obsessive-compulsive symptoms as expected; in addition, they reported more psychotic symptoms generally and more symptoms associated with anxiety and depression. Psychiatric comorbidity was greater in the OCD schizophrenic subgroup; this difference was not due to an increased prevalence of substance abuse. OCD schizophrenics reported more problems in childhood, poorer health currently, less efficient psychosocial functioning, and lower self-satisfaction. Despite the results that suggest greater severity, diversity of symptoms, and suffering among the schizophrenics with OCD, no treatment differences were noted, including the number of psychiatric hospitalizations or the kinds of medications prescribed to the two groups. Nevertheless, the schizophrenic OCD patients were more likely to report that the medications given to them "made no difference". Few patients in either group were referred specifically for psychotherapy or behavioral therapy.

Conclusions: A recent study indicated poorer clinical outcomes for schizophrenics with OCD symptoms compared with schizophrenics without such symptoms. Our findings suggest that schizophrenics with OCD comprise a recognizable subtype with specific treatment needs that must be addressed in order to maximize the therapeutic intervention.

NR139 Monday, June 1, 3:00 p.m.-5:00 p.m.

Tropical Rainfall and Increase in Schizophrenia Births

Erick Messias, M.D., Department of Psychiatry, University of Maryland, 200 Towsontown Court 105, Towson MD 21204; Nidia Cordeiro, M.S., Brian Kirkpatrick, M.D., Jose J. Sampaio, M.D.

Summary:

Introduction: The finding of excess in births among patients with schizophrenia has been extensively replicated. We examined season of birth in a region of northeast Brazil where there is minimal seasonal variance in temperature; however, there are distinctive dry and wet seasons.

Methods: A retrospective chart analysis was performed, in the archives of Sao Camilo de Lelis Hospital, the only psychiatric facility in the area. All patients with a diagnosis of schizophrenia (N = 2562) were included. Dates of birth for these patients and the general population were separated by month to assess seasonal variation, and relationship to average monthly temperature and rail fall.

Results: Schizophrenia birth peaks in May and June; there was no relationship to average daily temperature. However, there was a significant correlation between rainfall during a month and the number of schizophrenia births three months later. In contrast, in the general population, there was a significant relationship between rainfall during a month, but no significant correlation between rainfall and general population three months later.

Discussion: In this region, influenza has its highest incidence during the rainy season. These findings are consistent with the hypothesis that exposure to influenza during second and early third trimester increases risk of schizophrenia, although some other factor with a seasonal variation may be involved.

NR140 Monday, June 1, 3:00 p.m.-5:00 p.m.

Temperament Differences in Bipolar Disorder Patients

Mirene C. Winsberg, M.D., Department of Psychiatry, Stanford University, 401 Quarry Road, Stanford CA 94305-5543; Debbie L. Tate, Connie Strong, M.S., Terence A. Ketter, M.D.

Summary:

Objective: Increased harm avoidance (HA) and reward dependence (RD), and decreased persistence have been observed in bipolar disorder patients. We studied temperament in bipolar disorder outpatients with both Cloninger's Temperament and Character Inventory (TCI) and Akiskal's Affective Temperament Scale (ATS).

Method: Twenty patients (14F/6M, mean age 35.6 years, 3 BPI, 17 BPII) and 19 healthy controls (mean age 30.6) were administered the TCI and the ATS.

Results: On the TCI, bipolar patients compared with healthy volunteers had increased HA (21.9 versus 8.2, $p < 0.0001$), decreased self-directedness (SD) (24.7 versus 39.5, $p < 0.0001$), decreased cooperativity (30.1 versus 37.4, $p < 0.0006$), and unchanged RD, novelty seeking, persistence, and self-transcendence. HA, SD, and cooperativity as a triad all had significant mutual correlations. On the ATS, bipolar disorder patients had increased dysthymia (4.6 versus 0.4, $p < 0.0001$), cyclothymia (8.6 versus 0.9, $p < 0.0001$), irritability (5.6 versus 1.1, $p < 0.0003$), and anxiety (2.3 versus 0.6, $p < 0.0001$), but decreased hyperthymia (6.3 versus 10.3, $p < 0.02$). Dysthymia, cyclothymia, irritability, and anxiety as a tetrad had significant mutual correlations. Also, the measures in the TCI triad correlated significantly with those in the ATS tetrad.

Conclusion: These findings confirm prior data suggesting increased HA in bipolar disorder patients, and indicate that both Cloninger's and Akiskal's models of temperament are sensitive to differences between bipolar disorder patients and healthy controls.

NR141 Monday, June 1, 3:00 p.m.-5:00 p.m.

Tracking Quality and Availability of Heroin in Boston

Anthony J. Ramirez, M.D., Department of Psychiatry VA Outpatient Clinic, 251 Causeway Street, Boston MA 02114; John A. Renner, Jr., M.D.

Summary:

In an effort to track changing patterns in the local heroin market, data were collected on the price, quality, and availability of heroin used by patients seeking treatment at the Boston Medical Center Emergency Department and at the Boston VAMC Substance Abuse Treatment Program. Casual heroin users and addicts were questioned on the average amount purchased, the price per bag, and estimates of quality (rated on a scale of 1[worse ever] to 10[best ever]). This information was compared with data provided by the Boston office of the DEA and by the Narcotics Control Unit of the Boston Police Department. Data were collected over an eight-month period. Comparisons were made between the first four months and the second four months of the survey period to determine patterns of change.

During this period, patients reported an average price of $8.70 per bag, and an average subjective estimate of quality of 7 on a scale of 1 to 10. The range of use reported was from eight bags snorted per week to 30 bags used IV daily. Data provided by patients, when compared with law enforcement data, indicate that this is an accurate and useful method for tracking the heroin epidemic in Boston.

NR142 Monday, June 1, 3:00 p.m.-5:00 p.m.

Gender and Depression in Santiago, Chile: Preliminary Results

Graciela Rojas, Department of Psychiatry, University of Chile, Auda La Paz 1003, Santiago, Chile; Ricardo Araya, M.D., Rosemarie Fritsch, Julia Acuna

Summary:

Objective: To measure prevalence rates of depressive episodes and associations with gender and other sociodemographic variables in Santiago.

Method: A cross-sectional household survey of a representative sample from Santiago aged 16 to 64 was carried out. These preliminary results comprise a probabilistic multistage sample of 1,886 adults interviewed during 1997. Depressive episodes were measured with the Clinical Interview Schedule-Revised with ICD-10 diagnoses.

Results: The prevalence of mild depressive episodes was 11%, moderate 9.3%, and severe 1.3%. Women had rates twice higher than men (27% vs 12.4%). Depressive episodes are higher for women: aged 55 to 59 (32, 9%) and 25 to 29 (31, 8%), separated (42, 7%) and widowed (38, 3%), with no formal education (57, 1%), unemployed due to health problems (46, 2%), and housekeepers (30, 1%). Among men, depressive episodes are highest for: age 60 to 64 (20, 5%) and 25 to 29 (15, 8%), cohabiting (27, 8%), and separated (27, 0%), with no formal education (50%), retired (26, 7%) and unemployed due to health problems (25, 5%).

Conclusions: The prevalence of depressive episodes among Santiaguinos is higher than in most cities in the world. Young women from low socioeconomic background seem to be at a higher risk. More research is needed to understand the high levels of depressive episodes found in studies from Santiago.

NR143 Monday, June 1, 3:00 p.m.-5:00 p.m.

Meteorologic Predictors of Symptoms in Bipolar Disorder

Dena G. Rosenberg, M.S., Department of Psychology, University of Miami, PO Box 249229, Coral Gables FL 33124; Sheri L. Johnson, Ph.D., Ivan W. Miller, Ph.D., Gabor I. Keitner, M.D., Christine E. Ryan, Ph.D., David A. Solomon, M.D.

Summary:

Objective: The DSM-IV (1994) provides criteria for a seasonal specifier for bipolar disorder. However, recent research suggests seasonality is distributed along a continuum (Kasper, Wehr, Bartko, Gaist, and Rosenthal, 1989), rather than as a dichotomous variable, with most individuals exhibiting low to moderate levels of seasonality, and few individuals exhibiting high levels of seasonality. The goal of the current study was to examine seasonality as a continuous variable using prospective, standardized symptom interviews.

Method: The sample consisted of 80 bipolar I individuals recruited in Providence, Rhode Island. Participants were interviewed monthly using the Modified Hamilton Rating Scale for Depression and the Bech-Rafaelsen Mania Scale.

Results: We employed time-series analyses to calculate the cross correlations between bipolar symptomatology and meteorologic variables across time for each individual. As predicted seasonality scores (correlation coefficients converted to z-scores) for each individual were approximately normally distributed.

Conclusions: Seasonality is appropriately treated as a continuous, rather than dichotomous variable. The majority of individuals may experience a mild seasonal sensitivity. This suggests that for many individuals who do not meet specifier criteria, seasonality may be a powerful predictor of episode onset and course. Under-

standing the extent to which individuals experience seasonality also has implications for treatment.

NR144 Monday, June 1, 3:00 p.m.-5:00 p.m.

OCD in Patients with Huntington's Disease

Ignacio Ruiz, M.D., Inst National Neurology, Insurgentes Sur 3877, Mexico City 14269, Mexico; Elisa Alonso, M.D., Rosario Macias, C.P.B., Petra Yescas, C.P.B., Roberto Suastegui, M.D., Adriana Ochoa, S.W.

Summary:

Background: Some few cases of obsessive-compulsive disorder (OCD) have been reported in Huntington's disease (HD). Currently it is known that HD, as other neurological diseases that affect the caudate nucleus, can produce OCD.

Methods: We recruited 41 HD patients (clinical and biomolecular diagnosis) and 41 control subjects. We applied a structural interview and the Yale Brown scale. All patients were accompanied by their caretakers during the interview.

Results: We found that 17% of HD did not present signs or symptoms of OCD. The other 83% presented OCD (24% mild, 29% moderate, 20% severe, and 10% extreme). The obsessions that prevailed were pollution, sexual, religious, or aggressive in content. The compulsions were monitoring, washing, touching objects or people, and counting. A total of 93% of the control group did not present OCD ($P < 0.0001$).

Conclusions: The OCD in HD is observed with much greater frequency that it has been reported in the literature and probably it is one of the neuropsychiatric diseases that more often presents this symtomatology.

NR145 Monday, June 1, 3:00 p.m.-5:00 p.m.

Comorbidity of Panic Disorder and Schizophrenia

Paul C. Young, M.D., Department of Psychiatry, VA Medical Center, 109 Bee Street, Charleston SC 29401; Larry A. Labatte, M.D., George W. Arana, M.D.

Summary:

Objective: To determine the frequency of panic attacks and panic disorder in chronic schizophrenia or schizoaffective disorder.

Method: Fifty-four consecutive VA outpatients meeting DSM-IV criteria for chronic schizophrenia or schizoaffective disorder were administered the panic disorder and substance abuse modules from the Structured Clinical Interview for DSM-IV. Panic attacks were considered present only if the patient clearly described four symptom panic attacks. Patients were asked about recent and lifetime panic attacks. If patients reported panic attacks, they were asked if they were ever treated and if they occurred before or after the start of psychotic symptoms.

Results: Fifty patients (49 men, mean age 47 $\pm$ 8 yrs) were sufficiently organized to participate in the evaluation. Twenty-two (44%) experienced panic attacks and 16 (32%) had current or past panic disorder. Eight (50%) of the 16 with panic disorder had been treated for panic. For the 22 patients with panic, the temporal association of panic compared with psychosis was as follows: before ($n = 3$), same time ($n = 4$), after ($n = 6$), unsure ($n = 9$). Twenty-three (46%) had lifetime alcohol or drug dependence, though substance dependence was not associated with having panic attacks ($X^2 = .05$, $p = NS$) or current or past panic disorder ($X^2 = 1.6$, $p = NS$). Patients with the paranoid subtype of schizophrenia ($n = 30$) were more likely than patients with schizoaffective ($n = 11$) or undifferentiated schizophrenia ($n = 9$) to have experienced panic attacks (58% vs 21%, $X^2 = 6.4$ $p < .02$) or panic disorder (45% vs 11%, $X^2 = 6.5$, $p < 0.02$).

Conclusion: Panic attacks and panic disorder rates appear common in patients with chronic schizophrenia or schizoaffective disorder. Panic disorder may be an overlooked comorbid diagnosis in patients with schizophrenia. The association of panic disorder with paranoid schizophrenia may have implications for treatment as well as neurochemical or cognitive models of these illnesses.

NR146 Monday, June 1, 3:00 p.m.-5:00 p.m.

Association of Gz-alpha Gene Polymorphism in Bipolar Disorder

Takuya Saito, M.D., Department of Psychiatry, Bronx PO-Aecom, 1500 Waters Place Ward 19, Bronx NY 10461; Demitri F. Papolos, M.D., John R. Kelsoe, Jr., M.D., Herbert M. Lachman, M.D.

Summary:

Objective: Previously we reported linkage of a bipolar disorder (BPD) susceptibility gene on chromosome 22q11. One potential candidate gene that maps to this region is Gz-alpha, a G-protein alpha subunit that inhibits adenylate cyclase. Accumulating evidence indicates that G-proteins may be involved in the pathophysiology of bipolar disorder. Among G-protein subunits, Gz-alpha is unique in that: 1) it is expressed primarily in the brain, 2) it has a slow rate of GTP hydrolysis and a more prolonged action on effector proteins, and 3) it is coupled to receptor systems that have been implicated in mood disorders. We therefore hypothesized that Gz-alpha could be a candidate gene for BPD.

Method: The Gz-alpha gene was screened for mutations using single strand conformation polymorphism analysis. A preliminary scan revealed a polymorphism ($C \rightarrow T$) at position 309. We analyzed this polymorphism as a marker in an association study involving 88 patients with BPD and 74 controls.

Result: The frequency of the 309T polymorphism in patients with bipolar disorder was significantly higher than in normal control ($p = 0.037$, $c2 = 3.20$, one-tailed).

Conclusion: The result supports the hypothesis that Gz-alpha, or a gene with linkage disequilibrium with the 309T polymorphism, is involved in the development of BPD.

NR147 Monday, June 1, 3:00 p.m.-5:00 p.m.

Cultural Differences in Perceived Caregiver Burden

Rachel H. Salguero, B.A., School of Medicine, Tufts University, 391 Broadway Apt. 202, Somerville MA 02145; Robert Kohn, M.D., Luis F. Salguero, M.D., Charles Anthony Marotta, M.D.

Summary:

Objective: The intent of this exploratory study is to illustrate cultural differences in the amount of perceived burden for primary caregivers of persons with Alzheimer's disease.

Methods: Thirteen matched caregivers in Guatemala and Rhode Island were given a questionnaire exploring caregiver well-being, available supports, traditional ideology, and perceived burden. Nonparametric statistics were employed.

Results: The data indicate that Guatemalans have fewer institutional supports and more informal supports available compared with caregivers in the U.S.; for example, they had contact with friends more often than did U.S. caregivers. Guatemalan caregivers brought patients to a doctor sooner after the appearance of their first symptoms (0.9 $\pm$ 1.0 years vs. 1.6 $\pm$ 1.8 years for the North Americans) and had a poorer level of perceived health than U.S. subjects, suggesting a higher level of caregiver burden. They also appeared to place a greater emphasis on duty, responsibility, and family values, which in some cases may add additional strain to the caregiving role.

Conclusions: Perceived burden in Alzheimer's disease varies across cultures and should be considered in treatment strategies.

NR148 Monday, June 1, 3:00 p.m.-5:00 p.m.

The Spanish Translation and Cultural Adaptation of the Overt Aggression Scale for Adult Psychiatric Inpatients in Puerto Rico

Antonio Sanchez, M.D., Department of Psychiatry, University of PR, PO Box 1405, Aguas Buenas PR 00703-1405; Dhilma L. Alicea, M.D.

Summary:

This research used The Overt Aggression Scale (OAS) as a tool to assess aggressive behavior for adult psychiatric inpatients in Puerto Rico. This was done through its translation into Spanish and its cultural adaptation. The Spanish OAS version was designed to identify similar phenomena to those identified by the original English version in a dissimilar context. In order to get cross-cultural equivalency, four dimensions were addressed: semantic, technical, content, and conceptual. To complete this process various steps were taken: participation of a bilingual committee, back-translation, and reliability testing. We used the intensive care unit of the psychiatry hospital First Hospital Panamericano for a field study using our version of the OAS. We tested the scale in 10 patients identified by a ward psychiatrist as having an aggressive episode and also used nine control patients (identified as not aggressive), and two different raters filled the scale. We found an inter-rater reliability of 0.84. Therefore, our OAS version maintained the aggressive behavior terms of the original English version, was consistent for the construct of aggressive behavior, and was easy to understand and administer.

NR149 Monday, June 1, 3:00 p.m.-5:00 p.m.

Genetic Linkage Study of Male Homosexuality

Alan R. Sanders, M.D., Clinical Neurogenetics, NIH/NIMH/Bldg 10, Rm 3N218, 9000 Rockville Pike, Bethesda MD 20892-1274; Juliet J. Guroff, M.S.W., Elliott S. Gershon, M.D., Pablo V. Gejman, M.D.

Summary:

In 1993 and 1996 Hamer et al. published studies reporting linkage between markers on the long arm of the X chromosome (Xq28) and homosexual orientation in males. This was achieved via affected sibling pair (ASP) analysis, using 40 male homosexual sibling pairs in the first study and 33 in the second, in both cases with the families selected for apparent lack of paternal transmission. Sexual orientation is an important component of behavior. In order to strengthen this Xq28 finding, there is need for replication by an independent research group. Therefore, we have undertaken our own linkage study of male homosexual orientation. To date, we have recruited 54 male homosexual sibling pairs. We have examined 25 genetic markers on the whole X chromosome, including the Xq28 region, for evidence of increased sharing of alleles via ASP analysis, in an attempt to replicate the finding of Hamer's group and because of epidemiological evidence of sex-linked transmission. Our findings and their implications will be discussed during the poster session.

NR150 Monday, June 1, 3:00 p.m.-5:00 p.m.

Sensation Seeking and Evoked Auditory Potentials

Christine Sarramon, M.D., Dept of Psychiatry Adulte, CHS Purpan, Place Du Docteur Baylac, Toulouse 31059, France; Bernard Doyon, M.D., Helene Verdoux, M.D., Henri Sztulman, Ph.D., Laurent Scmitt, Ph.D.

Summary:

Objective: This pilot study seeks to determine evoked auditory potentials characteristics of sensation seeking. Since sensation seeking is implicated in high-risk and potentially maladaptive behaviors, the study was performed on heroin addicts versus control subjects.

Methods: Sensation seeking was evaluated in 32 subjects (20 heroine addicts and 12 control subjects) using the Sensation Seeking Scale, (Zuckerman 1994). Evoked auditory potentials were measured through a habituation-recovery protocol: variation of N100 wave during series of identical auditory stimuli, (Woods 1986).

Results: A relationship ($p < 0.01$), was found between habituation parameters and sensation seeking. Contrary to expected results, high sensation seekers habituate less to repeated presentation of an identical stimulus than low sensation seekers. Also heroin addicts showed higher scores on the Disinhibition factor of the Sensation Seeking Scale ($p < 0.0001$).

Conclusion: There is an association between evoked auditory potentials measures and sensation seeking. Since sensation seeking appears to be involved in drug addiction, it seems promising to investigate the relationship between such personality traits and electrophysiological parameters in other high-risk behavior populations. More investigations could have therapeutic implications.

NR151 Monday, June 1, 3:00 p.m.-5:00 p.m.

The Effect of Pain on End-of-Life Decision Making, Life Satisfaction and Depression

David A. Sayles, M.D., Department of Psychiatry, Maryland VA, 10 North Green Street, Baltimore MD 21201; Allen Raskin, Ph.D., Paul E. Ruskin, M.D., Kumar Menon, M.D.

Summary:

In an era of health care cost containment and growing managed care influence, patients are increasingly being asked to make decisions about end-of-life interventions. Reflected in this trend is the progressive number of states with legislation advocating patient autonomy and involvement in medical decision making. Our study population was 168 male, medical inpatients from the Baltimore and Perry Point Veterans Administration Medical Centers, all over the age of 60. Each patient underwent a one-time interview that included questions about six distinct medical scenarios designed to evaluate their preferences regarding end-of-life decision making (EOLDM). Other assessment instruments included the Geriatric Depression Scale and the Life Satisfaction Index. Pain within the last week was not associated with either an increased or decreased desire for end-of-life interventions. Four independent factors emerged from a factor analysis of the end of life scenarios. The factor labeled "Pain/Immobility" correlated with the patient having had experienced pain within the previous week ($p < .05$; 1-tailed). Experiencing pain within the previous week was also significantly associated with low scores on the Life Satisfaction Index ($p < .01$; 1-tailed). There was no significant correlation between pain and the Geriatric Depression Scale score.

NR152 Monday, June 1, 3:00 p.m.-5:00 p.m.

Schizotypal Personality Disorder: The Search for Subtypes

Elizabeth H. Schaefer, Ed.M., Depart of Psychosocial, McLean Hospital, 115 Mill Street, Belmont MA 02178; John G. Gunderson, M.D., Melissa Culhane, B.A., Ana Ruiz-Sancho, M.D., Thomas H. McGlashan, M.D.

Summary:

This is a descriptive account of the first clinical sample of patients with reliably diagnosed schizotypal personality disorder (STPD). The sample is derived from an NIMH-funded study: The

Collaborative Longitudinal Study of Personality. Sixty STPD subjects collected from multiple sites are examined with respect to internal consistency of the criteria set, demographics, social functioning, and subtypes. There are no gender differences, the mean age is 33.3, less than half attended college, and 50% are employed in unskilled labor positions. The minority of subjects are married. The fact that 26% of our sample is African American raises the question of whether ethnicity/race may influence the prevalence.

To examine the effects that major comorbid disorders have on STPD phenomenology, we will compare those with and without OCD, social phobia, and borderline personality disorder. To look at possible phenotypic variants we will compare subjects who have schizophrenic relatives with those who do not. Implications for the construct of the disorder will be drawn.

NR153 Monday, June 1, 3:00 p.m.-5:00 p.m.

Divalproex Sodium Versus Valproic Acid: Is There a Difference?

Thomas L. Schwartz, M.D., Department of Psychiatry, SUNY HSC Syracuse, 750 E Adams Street, Syracuse NY 13210; Jose L. Massa, M.D., Prakash S. Masand, M.D.

Summary:

Background: Approximately 50% of pharmacy prescriptions in the United States are filled with generic brands of medications. In difficult medical-economic times, two questions are frequently asked: (1) Are these generic medications as good as the brand name medications? and (2) Is the cost of a brand name medication worth the price? This study evaluates these questions for the brand name mood stabilizer, Depakote (divalproex sodium) and its generic counterpart, valproic acid.

Method: A retrospective chart review of 22 patients, switched among the above two preparations therapeutically by their treating psychiatrist within the previous year at a state hospital, was performed. Data were collected on duration, side effects, and efficacy of both treatments.

Results: T-tests for independent samples revealed no difference in efficacy or side effects between treatment with Depakote or valproic acid.

Conclusion: Use of generic medications continues to increase across the United States. There has been much written about improved quality of these generic products, but almost nothing about Depakote and its generic counterpart. As a result of this initial study, it is possible that valproic acid may be satisfactorily substituted for Depakote in terms of side effects and efficacy where mood stabilization is concerned.

NR154 Monday, June 1, 3:00 p.m.-5:00 p.m.

Patient Violence Against Residents: A Survey

Thomas L. Schwartz, M.D., Department of Psychiatry, SUNY HSC Syracuse, 750 E Adams Street, Syracuse NY 13210; Tricia L. Park, M.S.

Summary:

Background: There has been no definitive study to date regarding the nationwide rate of patient assaults against psychiatric residents. This report assesses the current risk of assault to psychiatric residents, demographics of those attacked, and addresses subsequent training issues.

Methods: Twenty percent of all current U.S. psychiatric residents responded to a written survey about patient violence and training in managing violent patients. All accredited residencies were surveyed across the U.S.

Results: It was found that 31% had been assaulted and 73% threatened. Age and previous threat were clear predictors with previously threatened younger residents having higher assault rates. Approximately 60% of residents reported no training or inadequate training in this area.

Discussion: This survey addressed the entire nation of psychiatric residents and is the most widespread and definitive to date in terms of patient assaults. Assault is likely during training years. Increased education, training, and guidelines are needed to reduce this problem.

NR155 Monday, June 1, 3:00 p.m.-5:00 p.m.

Description of an Inpatient Multiprofessional Treatment Program for the Treatment of Morbid Obese Patients with Mild to Severe Psychiatric Comorbidity

Adriano Segal, M.D., Department of Psychiatry, Hospital Clinicas, R. Caiubi 962 Perdizes, Sao Paulo SP 05010-000, Brazil; Taki A. Cordas, Ph.D.

Summary:

Objectives: To treat patients with morbid obesity (BMI > 39 kg/m^2) who presents a psychiatric condition that impedes them from submitting to appropriate surgical procedures.

Patients and Methods: Patients of both sexes, with age ranging from 17 to 60 years, with at least eight years of formal education, without diagnosis of lowering of the intellectual level, without current psychotic state, but with a significant psychiatric disorder are enrolled in a program that includes very low calorie diet (VLCD), nutritional orientation, supervised physical activity, clinical and psychiatric consultations, and participation in individual psychodynamic and behavioral-cognitive psychotherapies. The description of the program that started in September, 1997 and its first results are shown in this poster.

Results and Conclusions: The weight loss obtained in the first two months of treatment is of 10.3 kg $\pm$ 3.2 a month. In the two subsequent months, this rate decreases in a statistically nonsignificant way. Due to the reduced size of the studied population the data are still not sufficient for an appropriate generalization.

NR156 Monday, June 1, 3:00 p.m.-5:00 p.m.

Quality of Life and Side Effects of Neuroleptics

Serge M. Sevy, M.D., Psychiatry, Mt Sinai Medical Center, 1 Gustave Levy Place Box 1230, New York NY 10029; Carolyn E. Forman, M.P.A., George Fulop, M.D.

Summary:

Objectives: To measure change in quality of life (QOL) and nonmonetary costs associated with side effects of neuroleptics.

Methods, Subjects: 96 schizophrenic inpatients. *Change in QOL*: measured with utilities that are defined as numbers between 0 (the worst possible health state) and 1 (perfect health state). The utility for each side effect was assessed using a scaling method described by Finn et al (1990). Total utility score (U) for each patient equals the sum of the products of each utility by its probability of occurrence. *Nonmonetary costs*: estimated with the Willingness to Pay (WTP) method. WTP answers were adjusted for level of income and were transformed to a logarithm scale to normalize the data.

Results: U: mean: 0.83; standard deviation: 0.11; range 0.5–1. *WTP*: Mean: 3.51% of income. standard deviation: 3.23; range: 0–36% of income. *Pearson product moment correlation coefficient between U and log(WTP)*: −0.43; $P < 0.001$.

Conclusions: Side effects are associated with a decrease in QOL as determined by lower utility scores and higher nonmonetary costs. The significant correlation between U and WTP suggests a relationship between cost-utility and cost-benefit analyses.

Funding: NARSAD Young Investigator Award.

NR157 Monday, June 1, 3:00 p.m.-5:00 p.m.

Psychiatric Evaluation of Individuals with Problematic Use of the Internet

Nathan A. Shapira, M.D., Department of Psychiatry, University of Cincinnati, 231 Bethesda Avenue, Cincinnati OH 45267; Toby D. Goldsmith, M.D., Paul E. Keck, Jr., M.D., Uday M. Khosla, Susan L. McElroy, M.D.

Summary:

Objective: The problematic use of the Internet has been described in the lay press. In the psychology literature it is referred to as "Internet addiction" and formulated based on criteria for substance dependence. Despite public interest, there are no studies in the psychiatric literature involving standardized structured interviews to identify behavioral characteristics, psychiatric comorbidity, or family history of psychiatric illness.

Methods: Problematic Internet use was defined as (1) uncontrollable; (2) markedly distressing, time-consuming, or resulting in social, occupational, or financial difficulties; and (3) not solely present during hypomanic or manic symptoms. Evaluations involve a semistructured interview on Internet use, Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders-IV, family psychiatric history, and the Yale-Brown Obsessive Compulsive Scale modified for Internet usage for 20 outpatients with problematic usage.

Results: Research is in progress and of 10 patients evaluated, 100% had at least one lifetime Axis I diagnosis (average of 3.8 diagnoses), 80% had a lifetime diagnosis of bipolar disorder, 60% had a lifetime diagnosis of an impulse control disorder (ICD), and 100% fit criteria for ICD, not otherwise specified.

Conclusions: This systematic characterization of problematic Internet use should help further our characterization and treatment of these patients.

NR158 Monday, June 1, 3:00 p.m.-5:00 p.m.

The Effects of Risperidone on Verbal Fluency and Executive Function in Schizophrenia

Tonmoy Sharma, M.D., Psych/Medical, Inst of Psychiatry, De Crespigny Park Denmark Hill, London SE5, United Kingdom; Robin Morris, Ph.D., Shaun O'Neill, B.sc., Darren Mockler, Ph.D., Susan Gill, B.sc., William Soni, M.D.

Summary:

We studied the effects of risperidone on verbal fluency and executive function in 13 schizophrenic patients before and after treatment with risperidone using the Controlled Oral Word Association Test, computerised versions of the Tower London (ToL) Wisconsin Card Sorting Test (WCST), and Executive Golf. The Wechsler Adult Reading Test at baseline provided an estimate of current and premorbid intellectual ability. The tests were administered at baseline (pretreatment) and after six weeks of treatment with risperidone.

The results showed significant difference in verbal fluency but no significant difference between nonperseverative and perseverative responses on WCST between patients and healthy controls (N = 10) at baseline. There was evidence of a statistically significant improvement in psychomotor speed on the ToL test and of a significant improvement in the number of categories achieved on the WCST after six weeks of treatment with risperidone. There was improvement in verbal fluency in schizophrenic subjects (although not statistically significant) after six weeks of treatment. There was evidence to suggest some improvement in strategies used by schizophrenic patients for Executive Golf. The findings indicate that risperidone improves some aspects of executive function as early as after six weeks of treatment.

NR159 Monday, June 1, 3:00 p.m.-5:00 p.m.

Dissecting the Components of Linguistic Processing in Schizophrenia Using Functional MRI

Tonmoy Sharma, M.D., Psych/Medical, Inst of Psychiatry, De Crespigny Park Denmark Hill, London SE5, United Kingdom; Edward T. Bullmore, M.D., Garry Honey, M.Phil., William Soni, M.D., Chris Andrew, B.sc., Robin Morris, Ph.D.

Summary:

This study aimed to dissect the components of linguistic processing abnormalalities in schizophrenia using functional MRI. In experiment 1, nine right-handed schizophrenic patients and six male volunteers were scanned using functional MRI at 1.5 Tesla; images were acquired during a five-minute period using a task in which subjects were required to perform a semantic categorization of visually presented nouns representing "living" or "nonliving" entities, and to subvocalize their decision. In experiment 2 subjects were instead required to press a button with their right hand to indicate categorization of a stimulus as a "living" entity. In experiment 1, bilateral activation of the extrastriate cortex was found to be attenuated in the schizophrenic group (p 0.01). Activation of bilateral inferior frontal gyrus, dorsolateral prefrontal cortex, superior temporal gyrus, left middle temporal gyrus, and supplementary motor area, which was evident in the control group, was absent in the schizophrenics (p 0.01). In experiment 2, the fronto-tempral activation evidence in the control group in experiment 1 was absent in both groups, though the patient group did show activation of the left inferior frontal gyrus. The abnormalities shown by the schizophrenic patients are due to differences in activation in the heteromodal association cortex.

NR160 Monday, June 1, 3:00 p.m.-5:00 p.m.

Evidence of Abnormal Lateralization of Motor Systems in Schizophrenia Using Functional MRI

Tonmoy Sharma, M.D., Psych/Medical, Inst of Psychiatry, De Crespigny Park Denmark Hill, London SE5, United Kingdom; Steven Williams, Ph.D., Garry Honey, M.Phil., William Soni, M.D., Edward T. Bullmore, M.D., Chris Andrew, B.sc.

Summary:

This study used functional neuroimaging to investigate cerebral asymmetry of motor systems in schizophrenia. We used functional MRI to study six male right-handed schizophrenic patients and eight right-handed male volunteers matched for age and premorbid IQ. All subjects received offline training on the experimental task immediately prior to scanning. Images were acquired over a five-minute period at 1.5 Tesla. The task procedure, comprised of a 30-second resting condition, alternated with a pace visual presentation of a cue to move a joystick using the right hand. Subjects were instructed to perform the movements in a random order; there were no difference between groups in randomness of responses. Between-group differences in the mean power of experimental attenuation of the response were indentified on a voxelwise basis by an analysis of variance. The patient group showed significant attenuation of the response in the ipsilateral cerebellum, supplementary motor area (SMA), bilateral primary and premotor cortices, and occipito-parietal cortices compared with controls (p 0.05). However, increased activation was observed in the schizophrenic group in the contralateral cerebellum, left sensorimotor cortex and left occipital-parietal cortex (p 0.05). Schizophrenic patients demonstrate an abnormally lateralized response in motor regions including the cerebellum, SMA, and sensorimotor cortex during a right-handed random motor task. This report compliments our previous structural imaging study showing abnormal cerebral asymmetry in schizophrenia.

NR161 Monday, June 1, 3:00 p.m.-5:00 p.m.

Mania and Hypomania Following Antidepressant Discontinuation

Amy E. Shriver, B.S., Department of Psychiatry, Massachusetts General Hospital, 812 WACC 15 Parkman Street, Boston MA 02114; Gary S. Sachs, M.D., Claudia F. Baldassano, M.D.

Summary:

Objective: Chronic exposure to antidepressant medications puts bipolar patients at risk for iatrogenic increase in cycle frequency. Affective switch, however, has also been reported during discontinuation of antidepressant medication. This report presents naturalistic data from a bipolar specialty clinic examining the frequency of affective switch after discontinuation of antidepressant medications.

Methods: Chart review was conducted to determine the clinical outcome of antidepressant discontinuation using standardized prospective clinical rating procedures. Affective switch associated with discontinuation was defined operationally as the occurrence of mania or hypomania within 14 days of tapering antidepressant medications. Rates of affective switch for patients taking SSRIs (n = 36), MAOIs (n = 6), tricyclics (n = 25), or atypical agents (n = 23) were compared using Chi Square analysis.

Results: This review identified 90 episodes in which antidepressant medication was discontinued following acute treatment in 39 bipolar patients. Significantly higher rates of hypomania/mania were observed following discontinuation of SSRI (11%) and MAOI (33%) antidepressants than observed after discontinuation of tricyclics (4%) or atypicals (0%).

Conclusions: Within the limitations of naturalistic data, these findings suggest the risk of affective switch is significantly greater following discontinuation of SSRI and MAOI antidepressants than following discontinuation of tricyclics or atypicals.

NR162 Monday, June 1, 3:00 p.m.-5:00 p.m.

Operationalizing DSM-IV Criteria for Premenstrual Dysphoric Disorder

Mark J. Smith, M.D., 1414 17th Street, NW #809, Washington DC 20036-6415; Peter J. Schmidt, M.D., David R. Rubinow, M.D.

Summary:

While diagnostic criteria for premenstrual syndromes (PMS) exist, there are currently no criteria for identifying individual cycles as symptomatic or asymptomatic, a critical process for biological studies. The goal of this study was to operationalize the DSM-IV criteria for PMDD in order to select individual cycles for inclusion into research. Two symptomatic cycles were selected in 25 women with PMS and two asymptomatic cycles in 25 controls on the basis of the effect size method. DSM-IV criteria were then operationalized with Daily Rating Form scores as follows: 1) mean premenstrual week symptom increase of a least 30% above postmenstrual scores; 2) mean postmenstrual week scores of less than 1.67 (30% of scale); 3) mean premenstrual week "interference" symptom scores of at least 1.67 or greater. These criteria failed to confirm as symptomatic 20% of cycles identified by the effect size method. Further, requiring the absence of these criteria eliminated 60% of control cycles as insufficiently asymptomatic. Almost 40% of control cycles were eliminated by employing any of the three exclusion criteria. These data emphasize the importance of defining and applying criteria for cycle inclusion and further suggest the ubiquity of postmenstrual symptoms and premenstrual "interference" even in "controls."

NR163 Monday, June 1, 3:00 p.m.-5:00 p.m.

Olanzapine in the Treatment of Adolescent Acute Mania: Preliminary Report of Seven Cases

Cesar A. Soutullo, M.D., Psychiatry, University of Cincinnati, 231 Bethesda Ave PO Box 670559, Cincinnati OH 45267–0559; Michael T. Sorter, M.D., Keith D. Foster, M.D., Susan L. McElroy, M.D., Paul E. Keck, Jr., M.D.

Summary:

Background: Clozapine has been reported to be effective in some patients with treatment-resistant bipolar disorder, including adolescents. Olanzapine may have mood-stabilizing properties in adults with schizoaffective and treatment-resistant bipolar disorders.

Methods: Seven consecutive adolescents with DSM-IV bipolar disorder, hospitalized (N = 6), or as outpatients (N = 1), with manic episode, treated with open-label olanzapine were evaluated. Response to olanzapine was rated as marked, moderate, minimal, none, or worse.

Results: The adolescent's mean age ± SD was 15 ± 1 (range 12–17) years. All patients (three males and four females) met DSM-IV criteria for manic episode; two met criteria for rapid cycling and four also displayed psychotic features. Olanzapine was used as add-on treatment in six patients. Five (71%) adolescents showed marked or moderate responses. The mean ± SD olanzapine dose was 0.136 ± 0.081 mg/kg/day (10 ± 5 mg/day). All six hospitalized adolescents were discharged on olanzapine; the one outpatient maintained a marked response at eight weeks follow-up. The most common side effect was sedation, which occurred in five (71%) patients.

Conclusion: Although data were obtained nonblindly and without a randomized control group, these findings suggest that olanzapine, like clozapine, may have antimanic properties in some adolescents with bipolar disorder.

NR164 Monday, June 1, 3:00 p.m.-5:00 p.m.

Fluoxetine Action on T-Lymphocyte Proliferation

Leonor J. Sterin-Borda, Ph.D., CEFYBO, Conicet, Serrano 669, Buenos Aires 1414, Argentina; Valeria Ayelli Edgar, M.D., Ana Maria Genaro, Ph.D., Graciela A. Cremaschi, Ph.D.

Summary:

Previously, we demonstrated that fluoxetine (Flu) exerts an immunomodulatory effect upon T lymphocyte proliferation, potentiating the proliferative effect of submitogenic doses of concanavalin A (Con A) (1μg/ml) and inhibiting the proliferation induced by mitogenic concentrations of Con A (2μg/ml). Here, we studied the early signals involved in cellular proliferation, i.e., phosphoinositide turnover and protein quinase C (PKC) activity. We found that Flu 10^{-7} M increases the proliferation produced by 1μg/ml of Con A, increasing PKC translocation as well (pmol/min/10^7 cel: citosol/membrane values: 5.04 ± 0.5/0.56 ± 0.05; Con A 1μg/ml: 2.96 ± 0.3/2 ± 0.2; Con A 1μg/ml + Flu 10^{-7} M: 4 ± 0.4/1.92 ± 0.2, n = 5). Besides, Flu decreases the proliferation induced by 2 μg/ml of Con A by augmenting the proteolytic degradation of PKC, as shown by protein quinase M (PKM) values (pmol/min/10^7 cel: PKM/PKC: basal: 0.01 ± 0.1/0.56 ± 0.5; Con A 2μg/ml: 0.1 ± 0.5/1.76 ± 0.1; Con A 2 μg/ml + Flu 10^{-5} M: 0.8 ± 0.1/0.16 ± 0.01, n = 5). The calcium ionophore, A23187, mimics the effect of Flu. We conclude that Flu seems to modulate calcium influx, which in turn would modulate PKC translocation, thereby regulating cellular activity.

NR165 Monday, June 1, 3:00 p.m.-5:00 p.m.

Antidepressant Efficacy and Tolerability Comparison of Sertraline and Imipramine in Brazilian Elderly Outpatients

Alberto Stoppe, M.D., Department of Psychiatry, HC FMUSP, Caiubi 962, Sao Paulo SP 05010-000, Brazil; Orestes V. Forlenza, M.D., Edson Hirata, M.D., Rita Cecilia Ferreira, M.D., Osvaldo P. Almeida, Ph.D.

Summary:

Objective: To compare the antidepressant efficacy and tolerability of sertraline and imipramine in a double-blind study of elderly depressed outpatients.

Patients and Methods: 55 patients (17 male, 38 female) with major depressive episode (DSM-IV), aged 60 years or more were randomly assigned to treatment with sertraline 50 mg/day or imipramine 150mg/day, for a 10-week trial. Exclusion criteria were significant concurrent organic and cerebral diseases, alcohol or drug-related problems, treatment for depression in previous two months, and cognitive-impairment (MMSE < 24, or < 17 for illiterates). Symptoms' severity was evaluated with the CGI and MADRS. Side effects were assessed weekly.

Results: Initial MADRS scores were: imipramine 28.2 (SD = ±5.0) and sertraline 29.8 (±5.0) ($t = -1.24$; $p = 0.22$). Both groups had a significant decrease in MADRS scores after four, six, and 10 weeks, without significant difference between groups. The same occurred on CGI scores. There were no significant differences in dropout rates, 53.3% imipramine and 36.7% sertraline, or in drug-related side effects, 75% imipramine and 55.5% sertraline.

Conclusions: Both drugs exhibited good efficacy, without significant differences in the response rate. Although the sertraline group had fewer side effects and dropouts due to drug treatment, there was no significant difference between groups.

Partially supported by Pfizer Inc.

NR166 Monday, June 1, 3:00 p.m.-5:00 p.m.

Relationship Between Childhood Disturbances and Severity of Symptoms in Adult Patients with Anxiety Disorder

Boglarka Szabo, B.A., Department of Psychiatry, Penn State University, PO Box 850, Hershey PA 17033; Rudolf Hoehn-Saric, M.D.

Summary:

Introduction: High comorbidity between attention deficit disorder and anxiety disorder in children is well documented. Less known is about if and how symptoms associated with attention deficit disorder in childhood affect anxiety disorders in adults. In this study, we examined the relationship between retrospective ratings of antisocial behavior, attention deficit, and impulsivity during childhood and present ratings of anxiety, depression, and hostility in adult patients with anxiety disorders.

Method: The research material consisted of ratings obtained from 60 patients with panic disorder or generalized anxiety disorder. Correlations were calculated between subscales of the Childhood History Scale, a scale rating retrospectively symptoms common in attention deficit, and present state ratings of anxiety, depression, and hostility, derived from subscales of the Hopkins Symptoms Checklist (HSCL-90) and the Derogates Strews Profile (DSP). A correlation coefficient of $r = .4$, $p < .001$ or higher was considered to be clinically significant.

Results: The Childhood History subscale, Antisocial Behavior, correlated significantly with anxiety ratings on HSCL and DSP. The Attention Deficit subscale correlated significantly with anxiety ratings on the HSCL and the Impulsive Behavior subscale with anxiety ratings on the DSP. None of the correlations between Childhood History subscales and ratings of depression or hostility reached the study criteria.

Conclusion: The results of the study suggest that antisocial behavior, and to lesser degree attention deficit and impulsivity during childhood, are related to the severity of anxiety symptoms but not depression or hostility in adults suffering from anxiety disorders. The findings are limited to adults with anxiety disorder. Moreover, ratings of childhood disturbances are retrospective and not confirmed by independent informants. Thus, ratings on the Childhood History Scale may represent symptoms of childhood anxiety as well as attention deficit. Prospective studies and studies of anxiety disorder patients who have undergone appropriate evaluations during childhood are necessary to clarify the relationship between childhood disturbances and subsequent psychopathology.

NR167 Monday, June 1, 3:00 p.m.-5:00 p.m.

Prevalence of Depression in Menopause

Leslie W. Tam, M.D., Department of Psychiatry, UC San Diego, 9500 Gilman Drive MC 0804, La Jolla CA 92093; Barbara L. Parry, M.D.

Summary:

Introduction: Mood disorders in menopause and the effects of hormone replacement therapies on mood have not been thoroughly studied. The literature on whether there is an association between menopause and depression is controversial. We hypothesized that women in peri-menopause will be more likely to have a major mood disorder than those in pre- or post-menopause.

Methods: We studied 100 women between the ages of 45 and 65. Using menstrual and laboratory criteria, each subject was determined to be pre-, peri-, or post-menopausal. We collected a Beck Depression Inventory (BDI) as well as psychiatric and medical history from each patient.

Results: Of the 100 subjects studied, the mean BDI scores were as follows: pre-menopausal: 4.65, peri-menopausal: 11.92, post-menopausal: 6.86. For the contrast pre- vs. peri- $p \leq .0001$. For peri- vs. post- $p \geq .001$.

Discussion: Despite controversies in the literature, we have shown in this sample that there is a statistically significant increase in the BDI during the peri-menopause as compared with the pre- or post-menopause. These data document that there is an association between menopause and depression and suggest that it is a precipitant for a recurrence of pre-existing depressive illness. These findings underscore the importance of screening for and treating major depressive illness.

Grant support: NIMH grant MH 30914 and NIH grant M01-RR00827

NR168 Monday, June 1, 3:00 p.m.-5:00 p.m.

Religiosity, Religious Obsessions in OCD

Cenk Tek, M.D., Department of Psychiatry, University of Maryland AB, 701 W Pratt Street, Baltimore MD 21201; Berna Ulug, M.D., Ahsen Orhon, M.D.

Summary:

Objective: Religion has often been thought to play a part in the genesis of some cases of obsessive compulsive disorder (OCD). We previously demonstrated high prevalence of religious obsessions in a Turkish sample. In this study, we aim to explore the relationship between religiosity, religious obsessions, and other clinical characteristics of OCD.

Method: 45 patients (35 female, 10 male) with OCD (DSM-IV criteria), out of 50 invited, accepted to participate in this study. All were outpatients at Hacettepe University Hospital Psychiatry Clinic, Ankara, Turkey, in 1995. All patients were Muslim. A four

point Religious Practices Index (RPI), with excellent interrater reliability, was developed as a measure of religiosity for this study. Beside this, patients were evaluated with Yale-Brown Obsessive Compulsive Scale (Y-BOCS) and checklist (Y-BOCC).

Results: 19 of the patients (42.2%) had religious obsessions (RO). There was no significant difference of overall disease severity (Y-BOCS score) or independent Y-BOCS subscores for obsessions and compulsions, between patients with and without RO (Student's T). Patients with RO were significantly younger (Student's T, $p < 0.01$). There was no significant difference between groups in variables of sex or family history of OCD (Chi-square). RPI scores were not significantly different between groups (Student's T). We failed to find a relationship between RPI scores and any particular type of obsession or compulsion in Y-BOCC (Kruskall-Wallis). A stratified analysis between RO and other types of obsessions or compulsions in Y-BOCC failed to show a relationship (serial Chi-square). A logistic regression analysis, RO on one hand and age, RPI score, Y-BOCS score, number of types of obsessions and compulsions separately, as rated in Y-BOCC, revealed higher number of types of obsessions as the sole predictor of presence of RO ($p = 0.019$).

Conclusions: We failed to find a conclusive relationship between religiosity and any other clinical feature of OCD including the presence of religious obsessions. Our findings support the results of a previous study by Lewis who could not find a relationship between religiosity and obsessional symptoms in a Catholic sample. Though our hypotesis that extent of religious practices is a measure of religiosity has face validity, religiosity is an extremely difficult concept to measure. On the other hand, we showed that patients who tend to have more variable obsessions are more likely to have religious obsessions. As a conclusion, religion appears to be one more setting in which OCD expresses itself, rather than being a determinant of the disorder.

NR169 Monday, June 1, 3:00 p.m.-5:00 p.m.

Phenomenology of OCD in a Turkish Sample

Cenk Tek, M.D., Department of Psychiatry, University of Maryland AB, 701 W Pratt Street, Baltimore MD 21201; Berna Ulug, M.D., Aylin Ulusahin, M.D., Ahsen Orhon, M.D.

Summary:

Objective: Phenomenology of obsessive compulsive disorder (OCD) is significantly influenced by the prevailing culture. In contrast to the low frequency reported from Western and Indian cultures, religious obsessions seem to be dominating the clinical picture in reports from Jewish and Islamic cultures in the Middle East. This study attempts to investigate the nature and severity of OCD in a sample from Turkey, a predominantly Islamic country with a liberal society and secular government system, to determine the impact of this culture on OCD symptomatology in comparison with other studies.

Method: Sample consists of all the outpatients with OCD (DSM-IV criteria) seen at Hacettepe University Hospital Psychiatry Clinic in Ankara, Turkey, between November 1994 and October 1995. For diagnosis DSM-IV checklists by two independent psychiatrists, and for data collection a psychiatric history form, Yale-Brown OCD scale and checklist, and Hamilton Depression Scale, were used.

Results: 37 female and 13 male patients presented with a mean Y-BOCS score of 25.2. Contamination obsessions (86%) and cleaning-washing compulsions (82%) were most frequent symptoms. Religious obsessions, though very frequent (48%), were fourth in frequency. However, when patients were asked to note a maximum of three target obsessions, religious obsessions moved up to second place (42%), following contamination obsessions (68%). No statistical relationship could be found between disease severity (Y-BOCS total) and other sociodemographic and disease variables.

Conclusion: Though similar to patients reported from other parts of the world in many disease variables, this sample presented with OCD symptoms resembling the Western and Indian samples in the order of symptom frequencies. On the other hand, magnitude of frequencies was similar to series reported from other Islamic countries. The phenomenology of OCD in this sample closely resembles the Turkish society, Muslim and westernized. Although Islam is an extremely ritualistic religion with strong emphasis on contamination themes, cleaning rituals, and numbers/counting, deep-seated cultural factors rather than one religion may be more influential on OCD phenomenology.

NR170 Monday, June 1, 3:00 p.m.-5:00 p.m.

Trend in Teens Using Physicians for Drug Abuse Help

Kamara Thompson, B.A., Department of Psychiatry, Penn State-Hershey, Med Student Box 564, Hershey PA 17033; Paul A. Kettl, M.D.

Summary:

Objective: In 1989, 1991, 1993, and 1995, the Pennsylvania Governor's Drug Policy Council and the Pennsylvania Department of Education conducted surveys of students' attitudes towards alcohol, tobacco, and other drugs. The surveyed students were in grades six, seven, nine, and 12. From this information, we sought to detect trends between student use of illicit substances and willingness to utilize physicians and other resources for help.

Method: In 1989, 1991, 1993, and 1995, approximately 60,000 students in four regions throughout Pennsylvania were surveyed using the Primary Prevention Awareness, Attitude and Usage Scale. The results were compiled by Diagnostics Plus, Inc. of State College, Pennsylvania. Pearson two-tailed correlation coefficients were then used to examine the relationships between alcohol and drug use, grade level, students' feelings about using physicians as resources for help, and willingness to use other resources.

Results: From 1989 until 1995, as use of alcohol and most other drugs increased, students in grades six, seven, nine, and 12 were increasingly less willing to use physicians as intervention resources. Similarly, the students were also less willing to turn to parents, teachers, principals, school counselors, school nurses, church members, police, and community drug counselors as substance use increased. However, willingness to turn to friends as intervention resources increased with substance use.

Conclusions: As an increasing number of students experiment with and alcohol and other drugs, there has been a simultaneous decrease in the willingness of adolescents and preadolescents to seek the help of physicians and other community and school-based resources. In order to combat these trends, physicians need to secure knowledge of significant risk factors for adolescent substance use; establish availability, trust, and confidentiality; and be able to provide helpful feedback or other resources for the adolescent.

NR171 Monday, June 1, 3:00 p.m.-5:00 p.m.

Personality Disorders and Self-Rated Global Assessment of Functioning Score

Gudlaug Thorsteinsdottir, M.D., Department of Psychiatry, University Hospital, Eiriksgata, Reykjavik 101, Iceland; Kristinn Tomasson, M.D.

Summary:

Objective: The purpose of the study was to assess the prevalence of various Axis II disorders among consecutively admitted psychiatric inpatients and its relation to their highest level of functioning in the past year

Methods: One hundred consecutively admitted psychiatric inpatients, excluding those with organic brain damage and long-standing psychotic illness, were asked to fill in the DIP-Q (DSM-IV and ICD-10 personality questionnaire) and a self-rating global assessment of functioning (GAF) scale.

Results: A total of 35 men and 65 women were enrolled, with a mean age of 40.0 (15.6) years. According to the DIP-Q, 71% of men and women had a DSM-IV personality disorder diagnosis. Only five had one diagnosis, 13 had two diagnoses, while 53 patients had three or more personality disorder diagnoses. The most prevalent disorders were borderline, (55%), avoidant (48%), and obsessive compulsive personality disorder (50%), with no gender difference. The mean GAF score was 66 with schizoid personality disorder patients having the lowest GAF score of 51 (sd 16.1), while those with narcissistic personality disorder had the highest GAF score (72 sd 17.6).

Conclusions: Personality disorders are prevalent among psychiatric inpatients and affect the highest level of functioning in differential ways.

NR172 Monday, June 1, 3:00 p.m.-5:00 p.m.

Suicidal Behavior in Buenos Aires City

Guillermo Tortora, M.D., Forensic Psychiatric, Hospital Borda, Ituzaingo 1250, 3A, Lanus Este-BS AS 1824, Argentina; Alicia Sotelo Lago, M.D., Liliana Ines Florio, Ph.D., Claudia Rodriguez, Ph.D., Eduardo Rodriguez Garin, M.D., Benigno Gutierrez, M.D., Graciela Nazar, M.D.

Summary:

Objective: The purpose of this research is to analyze epidemiological data concerning the suicidal behavior obtained during 1994-1996 through our work in the mental health area and the work as forensic physicians at the National Judicial Power of Buenos Aires, Argentina. We also propose a guide for the evaluation of the suicide attempt.

Method: We analyzed the most prominent characteristics of the epidemiological profile of suicide completion and compared them with the profile of the suicide attempts. The material has been gathered through the data obtained from 1302 suicides carried out during 1994-1996 (autopsies: 8.856), from a sample of psychiatric experts' opinions obtained during the same years as required by the law governing psychiatric hospitalizations (n: 897). For the evaluation we have used what we called a guide for psychiatric forensic evaluation of suicide attempts.

Results: From the data obtained, our findings tend to confirm the statistic that the epidemiological profile of suicide completion differs from the profile of attempted suicide mainly in age, sex methods, marital status, etc

Conclusion: Men commit suicide more than two times as often as do women, a rate that is stable over all ages. Women, however, are three times as likely to attempt suicide as are men. Suicide rates increase with age. The significance of the midlife crisis is underscored by suicide rates. Among men, suicides peak after age 40, among women, the greatest number of completed suicides occurs after age 59. The higher a person's social status is, the greater is the suicide risk, but a fall in social status also increases the risk. The selection method for men is the firearm where as women prefer jumping. The 54.5% of the total attempted suicides are in the range of 13-34 years old. The most widely used method is overdose on substances. We also believe that the use of the proposed guide will contribute to a better preventive evaluation of the risk of suicide.

NR173 Monday, June 1, 3:00 p.m.-5:00 p.m.

Good Clinical Practice in Psychopharmacology

Guillermo Tortora, M.D., Forensic Psychiatric, Hospital Borda, Ituzaingo 1250, 3A, Lanus Este-BS AS 1824, Argentina; Pablo A. Liuboschitz, Ph.D., Roxana Alvarez, Ph.D., Liliana Ines Florio, Ph.D., Dario Bonetti, M.D., Pablo Mateos, Ph.D., Juan Carlos Groppa, M.D.

Summary:

Objective: The development of new molecules in psychopharmacology is very favorable, but it is necessary that this development should be done under strict control so as to assure on one hand the quality of the investigation and on the other hand the benefit for the patient. All phases of clinical research should now be undertaken in accordance with the guidelines on Good Clinical Practice for Trials on Medicinal Products. Sponsors of studies, monitors, investigators, and sanitary authority alike share the responsibility for ensuring that the stringent guidelines are followed. In Argentina the ANMAT provides the legal basis for Guidelines for GCP. The objective of the present study is a description of the most frequent difficulties observed in the investigators.

Method: We monitored 189 investigators who took part in two multicenter clinical studies developed in our country. One of them concerning the evaluation about the efficacy and tolerability of paroxetine on 950 patients during six months and the other, the efficacy and tolerability of zoplicone in 641 outpatients during 56 days.

Results: From a total of 189 investigators screened, 41 (21.6%) were excluded for different causes. The difficulties observed among the investigators were obtaining informed consent, collecting and recording data, reporting adverse events, patient recruitment, ethics committee approval, etc.

Conclusions: Our experience allow us to infer that despite the fact that all of them were really good professionals, an important percentage did not know or did not use the "Good Clinical Practice" rules required to assure the scientific purity and ethics in the clinical investigation. All this leads us to the creation in Argentina of GCP-RA, which gathers professionals of renowned background, national and international, monitors, clinical investigators and opinion makers, identified with the GCP rules.

NR174 Monday, June 1, 3:00 p.m.-5:00 p.m.

Patients' and Therapists' Perceptions of a Representative Payee Program

Joseph Turner, M.A., Department of Psychiatry, University of Maryland, 685 W Baltimore St MStF Rm 300, Baltimore MD 21201; Lisa B. Dixon, M.D., Nancy Krauss, M.S.W., Jack Scott, Sc.D., Scot W. McNary, M.A.

Summary:

Objectives: There is modest evidence suggesting that representative payees (RP) for Social Security benefits improve outcomes. We compare therapists' and patients' satisfaction and perceptions of RP services within a PACT model.

Methods: Staff uninvolved in direct treatment interviewed 49/51 (96%) patients who had received RP services for three months to two years (mean age = 41.6 (10.4): 63% were black, 63% schizophrenic, 63% substance use disorder (SUD)). The responses to a parallel set of questions asked of 39 therapists/patient pairs were compared.

Results: 39% of patients vs. 79% of therapists reported that the patients requested that ACT be payee ($p < .05$). In contrast, 72% of patients reported being satisfied with the RP arrangement currently. Yet only 39% of therapists believed that patients were so satisfied ($p < .05$). Therapists and patients agreed that the RP program improved housing, reduced substance abuse, and improved money management. While therapists and patients agreed that money should not become the central focus of treatment, 44% of therapists experienced verbal abuse around money issues.

Conclusions: This study suggests that while patients and staff generally agree that the RP program is helpful, there are marked

discrepancies in perceptions of acceptability of RP arrangements over time. Further study is necessary to understand the impact of RP on violence, clinical outcomes, and therapeutic alliance.

NR175 Monday, June 1, 3:00 p.m.-5:00 p.m.

Comorbid Conditions Fail to Predict Patterns of Response to Fluoxetine

Miguel Uribe, M.D., Department of Psychiatry, Mass General Hospital, WACC 812 15 Parkman Street, Boston MA 02114; Bronwyn R. Keefe, B.A., Nelson A. Vega, B.A., Andrew A. Nierenberg, M.D., David Mischoulon, M.D., Joyce R. Tedlow, M.D., Maurizio Fava, M.D.

Summary:

Patients with major depressive disorder (MDD) respond to antidepressants with either a true drug (TDR) or placebo-like (PLR) pattern of response. Because patients with PLR tend to lose their long-term response, even with continuation treatment, it would be important to predict which patients are most likely to have PLR.

Methods: We treated 375 outpatients (mean age 39.9 ± s.d. 10.6; 54.7% women; mean baseline CGI-Severity 4.0 ± .7) with DSM-III-R MDD. Fifty-four percent (203) responded to eight weeks of treatment with fixed-dose fluoxetine 20 mg daily. Response was defined as CGI much or very much improved. Axis I comorbid conditions in responders with TDR were compared with those with PLR.

Results: Of the 203 treatment responders, 130 (64.0%) had TDR and 73 (36.0%) PLR patterns of response. TDR and PLR groups had similar rates of comorbid anxiety disorders (panic, social phobia, obsessive compulsive, generalized anxiety, and simple phobia disorders), eating disorders, substance/alcohol abuse, or body dysmorphic disorders.

Conclusion: Comorbid conditions failed to predict patterns of response to a fixed dose of fluoxetine. Patterns of response need to be determined prospectively.

NR176 Monday, June 1, 3:00 p.m.-5:00 p.m.

Efficacy and Safety of Combining Risperidone and Clozapine in Patients with Treatment-Refractory Psychoses

Prathap R. Vaadyala, M.D., Creedmoor Psych Center SRU, 80-45 Winchester Blvd Bldg 40, Queens Village NY 11427; Santhi S. Ratakonda, M.D., Christine Miller, B.A., Zafar A. Sharif, M.D.

Summary:

This study examined the efficacy and safety of augmenting clozapine with risperidone in patients with psychoses refractory to standard neuroleptics as well as clozapine. Refractoriness to clozapine was prospectively established by the patients' failure to show at least 25% improvement in total PANSS score after > 12 weeks of clozapine treatment, with serum clozapine levels > 350ng/ml for a minimum of six weeks. Patients found to be refractory were given 2–6 mg/day of additional risperidone for eight weeks. Weekly ratings were done using PANSS, ESRS, and an adverse-event checklist. So far five patients have completed the study. Their mean age was 35 years, mean illness duration 16.8 years, and mean duration of current hospitalization of 34.6 months. Their mean baseline PANSS score was 93.25; mean clozapine dose 560 mg; mean clozapine blood level 556.52ng/ml; and mean maximum risperidone dose attained 4 mg/day. During the study, total PANSS score improved 13%, positive symptom score 15%, and negative symptom score 14%. Only one patient showed a ≥25% improvement in total PANSS score. Two of five patients developed significant side effects. These data, while limited by the small sample size, indicate that addition of risperidone has limited efficacy in treating patients refractory to clozapine.

NR177 Monday, June 1, 3:00 p.m.-5:00 p.m.

Comparison of Two Lithium Group Education Programs

Dr. Eduard M. van Gent, Slingeland Hospital Paaz, Ksruisbergseweg 25 PO Box 169, Doetinchem 7000 AD, The Netherlands; Dr. Linda M. Vogtlander, Jose L. Vredendaal, R.P.C.

Summary:

The goal was to improve the knowledge of the illness and medication, decrease of psychosocial problems and, thereafter, improve compliance and decrease rehospitalizations.

Methods: One group program for 12 patients was conducted by professionals (EMvG, LMV) and consisted of seven group sessions (every week), each 1 1/2 hour and were informative, sharing experience and done of home work. The other group program for 18 patients was conducted by experienced patients (JLM e.a.) of the self-help organization the NSMD (Netherlands Stichting of Manic Depressive Patients). These seven sessions (once in the two months) were more informal and lasted three to four hours. Assessments were done before and after a year by self-report questionnaires.

Results: The manic mood decreased in both groups ($p = 0.016$). The knowledge was high before and stays the same. The psychosocial problems were not changed. The hospitalization/ratio was already low (0.11) in the first group and decreased to 0.09; in the second group the decrease was from 0.36 to 0.11.

NR178 Monday, June 1, 3:00 p.m.-5:00 p.m.

Risperdone in Child Psychiatry

Dominique A. Van Gool, Ph.D., Neuropathology, Catholic University, Herestraat 49, Leuven B3000, Belgium; Paul M. Igodt, M.D.

Summary:

The novel antipsychotic risperdone was used in 17 children suffering from psychotic (n = 3), hyperkinetic (n = 3), or behavioral disorder (n = 11). Two patients dropped out because of side effects (one galactorrhea; one EPS). The remaining patients, aged 8.5 ± 2.9 year (n = 15) were all male, except one. Sleep disturbances, hyperactive movements, negative behavior, and anger attacks were evaluated. In psychotic patients, the severity of psychosis was evaluated. The disturbances were scored before treatment and after four weeks on a scale from 0 to 4 (0: severe disturbances; 4: disturbance not present). The dose was titrated until clinical effect occured. The mean dose was 1.7 ± 1.44 mg (n = 15). Children with psychotic and hyperkinetic disorder required the highest dosages (3.2 ± 1.7 mg; n = 5). All children showed a marked improvement. The score at baseline for sleep disturbances was 1.5 ± 1.3 and after four weeks 3.7 ± 0.6. The score for hyperactive movements went from 0.7 ± 0.9 to 3.3 ± 0.7, for negative behavior from 1.3 ± 1.2 tot 3.4 ± 0.7, and for anger attacks from 1.1 ± 1.2 to 3.5 ± 0.6. In the two psychotic patients, psychosis disappeared. Sedation and weight gain were seen in most patients.

Conclusion: Controlled studies with risperdone for the treatment of psychotic, hyperkinetic, and behavioral disorder in children seem of interest.

NR179 Monday, June 1, 3:00 p.m.-5:00 p.m.

Diagnosis of Dementia by Family Physicians and Memory Clinic: A Comparison

Hein P. Van Hout, Ms.C., Geriatric Medical, University of KUN, PO Box 9101, Nijmegen 6524HB, The Netherlands; Myrra J.

Vernooy-Dassen, Ph.D., Prof. Richard M. Grol, Prof. Willibrord H. Hoefnagels

Summary:

Aim: To see whether family physicians are able to diagnose dementia properly compared with the diagnoses done in a memory clinic.

Method: An observational comparative method was used. A group of family physicians diagnosed the patients they suspected of suffering from dementia and referred them to a memory clinic. The assessment of the memory was based on the CAMDEX (Cambridge Examination of Mental Disorders of the Elderly).

Results: 90 patients were registered and referred by 60 family physicians. In 98% of the cases the family physicians came to a diagnostic conclusion; in 76% of the cases this was dementia. In 72% of the cases the family physicians' diagnoses were confirmed by the memory clinic. The family physicians reached a sensitivity of 93% and specificity of 50%. When the cause for dementria was specified as Alzheimers' disease, vascular, mixed, or other dementias, only 48% of the GPs' diagnoses were confirmed.

Conclusion: Although family physicians were able to diagnose dementia, they had difficulties specifying the cause of the dementia. Specifying the cause for dementia will have significant consequences when medication becomes available for Alzheimer's disease.

NR180 Monday, June 1, 3:00 p.m.-5:00 p.m.

Suicidality and Homelessness

Honaid H. Vasi, M.D., Department of Psychiatry, University of Maryland, 701 Pratt Street, Baltimore MD 21201; Lisa B. Dixon, M.D., Mark Ehrenraich, M.D.

Summary:

Purpose: Previous research has suggested a link between homelessness and mental illness. However, little is known about the relationship between homelessness and suicidality. This study compared domiciled and homeless persons who attempted suicide on clinical and demographic factors as well as lethality and impulsivity.

Method: Data were collected on 61 adult patients referred to the psychiatric consultation/liaison service and 48 patients presenting to the emergency room or psychiatric urgent care after a suicidal attempt. Of the 109 patients, 13 were homeless or living in shelters. Data forms, lethality, and impulsivity scales were completed by psychiatric evaluators following interviews or review of consult forms.

Result: The homeless are more likely to be African American ($p < .001$), but they did not differ from the domiciled in other demographic measures. The homeless are more likely to have current suicidal ideations ($p < .05$), hallucinations ($p < .05$), and the use of substances prior to the suicidal attempt ($p < .05$); and to have had a history of psychiatric hospitalization ($p < .05$), and a current diagnosis of substance-induced mood disorder ($p < .02$). The homeless had significantly lower lethality of the suicidal attempt and a risk-rescue ratio ($p < .001$).

NR181 Monday, June 1, 3:00 p.m.-5:00 p.m.

Nonadherence in Heart Transplant Patients

Adriana R. Vasquez, M.D., Department of Psychiatry, Mayo Clinic, Rochester MN 55905; Sheila G. Jowsey, M.D., Christopher McGregor, M.D., William N. Friedrich, Ph.D., Kathy Schwab, R.N., Tammy Adams, R.N.

Summary:

Objective: To determine the degree of nonadherence in heart transplant patients.

Method: We will report on our data (preliminary data reported previously) on heart transplant patients transplanted between 1988 and 1996 at the Mayo Clinic. We retrospectively reviewed patients who could participate in a multidisciplinary pretransplant evaluation, survived at least six months posttransplant, and were over the age of 18. These patients were evaluated pretransplant by the transplant coordinator most familiar with the patients, who rated the patients on degree of knowledge about their illness, motivation for transplantation, family support, financial and insurance concerns, concerns about medication side effects, history of noncompliance, problematic relationships with authority figures, and optimism about transplant outcome. Posttransplant, the patients were rated with respect to compliance with medication, exercise, and diet, nicotine use, and attendance at outpatient appointments

Results: Ninety patients were studied—16 females and 74 males. Forty-six (51%) were nonadherent; of those, the majority displayed a low degree of nonadherence with exercise and diet. Of the nonadherent, 10 were females and 36 were males.

Conclusions: More than half of our patients were nonadherent. We will discuss variables associated with nonadherence and make recommendations for future research.

NR182 Monday, June 1, 3:00 p.m.-5:00 p.m.

Benzodiazepine Receptor SPECT in Schizophrenia

Nicolaas P. Verhoeff, M.D., Department of Psychiatry, VA Medical Center 116A2, 950 Campbell Avenue, West Haven CT 06516; Jair C Soares, M.D., Cyril D. D'Souza, M.D., Roberto B. Gil, M.D., Kathleen Degen, M.D., Anissa Abi-Dargham, M.D., Robert B. Innis, M.D.

Summary:

Objective: To assess whether regional cerebral central GABA-A/benzodiazepine receptor distribution volume (BZR-Vd) is changed in schizophrenia.

Method: In 10 male patients with schizophrenia (age 41 $\pm$ 14 y; four on atypical antipsychotics, three on typical antipsychotics, and three not on antipsychotics) versus 10 healthy male controls matched for race and age (41 $\pm$ 14 y) [^{123}I]iomazenil Single Photon Emission Computed Tomography (SPECT) was acquired for 36 min. on the Prism 3000 camera using the constant infusion/sustained equilibrium method (total activity 6 mCi, bolus/infusion ratio 3.8h) starting 6h after bolus injection. After nonuniform attenuation correction the SPECT was coregistered with a T1-weighted MRI.

Results: Using Statistical Parametric Mapping with a two studies, one scan per subject ANCOVA global normalization paradigm, six regions had a significantly decreased activity in the patients versus the controls: (1) pons, (2) right transverse temporal gyrus (Broca Area = BA 41), (3) left paracentral lobule (BA 5), (4) left superior frontal gyrus (BA 6), (5) and (6) right and left precentral gyrus (BA 4). No increases were observed.

Conclusions: The BZR-Vd in schizophrenia is relatively decreased in the frontal and temporal cortex and in the pons. Further studies will attempt to relate these data to severity in psychomotor poverty, reality distortion, and cognitive disorganization.

NR183 Monday, June 1, 3:00 p.m.-5:00 p.m.

Sex Differences in Discontinuation of Risperidone Over One Year of Treatment

Sarah J. Warden, Ms.c., Department of Psychiatry, University of Calgary, RM1966 3500-26 Ave NE, Calgary AB T1Y 6J4, Canada; Ruth A. Dickson, M.D.

Summary:

Objectives: To determine sex differences in 1) one-year discontinuation rates of a clinical sample of patients prescribed risperi-

done, 2) rates of sexual side effects, and 3) concomitant medications prescribed.

Method: Clinic charts from three outpatient treatment sites yielded 81 females and 149 males diagnosed with schizophrenia spectrum disorders who were prescribed risperidone during the first two years following drug release. Retrospective information on each patient was collected for one year following risperidone initiation.

Results: Females discontinued risperidone at significantly higher rates (69%) than did males (46%) at two of the three sites at one year (logrank = 9.90, p = 0.0016, logrank = 6.13, p = 0.0133). The third site showed no sex differences in discontinuation rates. Females were 3.45 times more likely to develop sexual side effects during treatment with risperidone than males. More males (30%) who continued risperidone for one full year vs. males who discontinued the drug (9%) were prescribed antidepressants. In contrast, more female continuers (47%) vs. discontinuers (22%) were prescribed anxiolytics.

Conclusions: Female patients discontinue risperidone at a higher rate and experience more sexual side effects on risperidone than males. Choice of concomitant medications may impact discontinuation rates of risperidone.

NR184 Monday, June 1, 3:00 p.m.-5:00 p.m.

The Effect of Race on the Prevalence of Dementia Upon Admission to Nursing Homes

Daniel Weintraub, M.D., Department of Psychiatry, University of Maryland, 701 West Pratt Street, Baltimore MD 21201; Paul E. Ruskin, M.D., Bruce A. Kaup, M.D., Allen Raskin, Ph.D., Jay Magaziner, Ph.D.

Summary:

The role of race in the prevalence of dementia in the community and in nursing homes is unclear. It is also uncertain what the risk factors are for developing dementia and how these factors are influenced by race. Finally, controversy exists about possible bias in the use of standardized rating scales in different ethnic groups.

We present findings from an epidemiological study that determined the prevalence of dementia for 1846 new admissions to 59 randomly selected Maryland nursing homes over a several-year period. We determined that blacks (76.5%) were significantly more likely to be diagnosed as demented than whites (56.8%). Increasing age and a history of cerebrovascular accident were associated with dementia in both whites and blacks; in addition, lower educational level and male gender were associated with dementia in whites only. There was no interaction between race and dementia for any of these factors. Controlling for education, blacks still had lower MMSE scores and a higher prevalence of dementia than whites.

Increased social support may allow blacks to remain in the community with more severe physical and cognitive impairment than whites. Our finding that blacks were more likely to have lived with someone prior to admission supports this theory.

NR185 Monday, June 1, 3:00 p.m.-5:00 p.m.

Differences in Admission Diagnosis by Race

Theodora G. Balis, M.D., Department of Psychiatry, Univ. of Md. Med. Sch., 701 West Pratt Street, Baltimore MD 21201; Lisa B. Dixon, M.D.

Summary:

Objectives: We aimed to compare the rates of affective and psychotic diagnoses at admission in African American vs. Caucasian patients in an inner city psychiatric hospital. We hypothesized that African Americans would be more likely to have a psychotic disorder diagnosis.

Methods: We reviewed the inpatient admitting log containing all consecutive admissions including diagnosis and demographic characteristics from 4/97 to 11/97. Bivariate and multivariate logistic regression analyses were conducted to determine the association of race with type of diagnosis.

Results: Subjects were 70% African American and 30% Caucasian. A total of 37% of patients had a psychotic (non-affective) disorder; 63% had an affective disorder. For men, African Americans were more likely to be diagnosed with a psychotic disorder, regardless of whether a narrow or broad definition of diagnoses were used ($p < 01$). There were no racial differences in diagnosis for women. Logistic regression controlling for age and sex still found an increased odds of psychotic diagnosis for African Americans ($p < .05$).

Conclusions: Although we cannot determine the appropriateness of diagnosis with this study design, this study supports previously reported findings that African American men tend to be diagnosed more than Caucasians with a psychotic disorder. The source of this possible bias needs to be explored further.

NR186 Monday, June 1, 3:00 p.m.-5:00 p.m.

Concurrent Cardiovascular Illness and Depression

Terrence A.R. Whiteman, Department of Psychiatry, Michigan State University, P.O. Box 70033, Lansing MI 48907; Dale A. D'Mello, M.D., Rafael Villicana

Summary:

Epidemiological studies observe that depressed patients have a higher death rate from cardiovascular diseases. Despite this, the influence of concurrent cardiovascular disease upon the outcome of depressive illness has received limited attention.

Objective: The present study sought to examine whether the presence of cardiac disease affects the outcome of treatment for depression.

Method: The authors examined the hospital records of patients with major depression who were consecutively admitted to a mid-Michigan hospital, during a 24-month period. They examined the prevalence of cardiovascular disorders in a cohort of drug responders and in a parallel age- and gender-matched cohort of nonresponders. The nonresponders were a group of patients who ultimately received electroconvulsive therapy (ECT).

Results: The 68 patients who were identified ranged in age from 25 to 55 years. Fifteen (22%) of these were nonresponders. Cardiovascular diseases were identified in eight (53%) of the nonresponders, and five (9%) of the responders ($z = 3.38$, $p < 0.005$).

Conclusion: The presence of comorbid cardiovascular illness in hospitalized depressed patients was associated with an 11-fold increased risk of nonresponse to conventional pharmacotherapy.

NR187 Monday, June 1, 3:00 p.m.-5:00 p.m.

Cognitive Dysfunction in Positive and Negative Type Schizophrenia Patients With or Without Tardive Dyskinesia

Jong-Min Woo, M.D., Department of Psychiatry, Samsung Medical Center, 50 Ilwon-Dong Kangnam-Ku, Seoul 137-710, Korea (ROK); Bum-Hee Yu, M.D., Ji-Hae Kim, Ph.D., Joo-Mi Bae, M.A., Kang-Uk Lee, M.D., S. Peter Kim, M.D.

Summary:

Objective: The purpose of this study was to identify the cognitive dysfunction in positive- and negative-type schizophrenic patients with or without tardive dyskinesia (TD).

Method: We selected 18 positive-type schizophrenic patients who were composed of nine patients with TD and nine patients without TD, and 25 negative-type schizophrenic patients who were composed of 13 patients with TD and 12 patients without TD from

Inkok Charity Hospital in Korea. They completed neuropsychological tests, such as the Korean Wechsler Intelligence Scale (KWIS) test, Grooved Pegboard test, Trail-making test A and B, Wisconsin Card Sorting test, and Wechsler Memory Scale (WMS) test.

Results: We found that positive-type schizophrenic patients showed better performance on comprehension of KWIS ($F(1,40) = 9.89$, $p < .05$) and Trail-making test A ($F(1,40) = 4.99$, $p < .05$) than negative-type patients. Additionally, total sum of negative symptom scores of Positive and Negative Syndrome Scale (PANSS) showed negative correlations with logical memory ($r = -.317$, $p < .01$) and information ($r = -.441$, $p < .001$) of WMS test, and comprehension ($r = -.523$, $p < .001$) and block design ($r = -.392$, $p < .01$) of KWIS test. Patients without TD showed better performance only on picture completion of KWIS test than those with TD ($F(1.40) = 5.90$, $p < .05$).

Conclusion: This suggests that TD alone may not contribute to the cognitive dysfunction in schizophrenic patients, and negative-type schizophrenic patients have frontal lobe dysfunction and memory impairment more severe than positive-type patients.

NR188 Monday, June 1, 3:00 p.m.-5:00 p.m.

Negative Symptoms and Executive Function in Patients with Schizophrenia

Amanda Ernst Woods, Ph.D., MHS (116), VA Puget Sound, American Lake Division, Tacoma WA 98493; Lori Secrest, O.T., Andre Tapp, M.D.

Summary:

Objective: This study examines the relationship between executive functioning and negative symptoms in schizophrenia from a multidisciplinary approach utilizing assessment tools from different disciplines including neuropsychology and occupational therapy.

Method: An assessment battery was given to 14 outpatients with a diagnosis of schizophrenia or schizoaffective disorder. Tests of executive functioning/problem solving included the Wisconsin Card Sort Test (WCST), the Allen Cognitive Level test (ACL), and the Behavioral Dyscontrol Scale (BDS). Each assessment tool used a different modality to assess functioning level.

Results: Using separate regression analyses and controlling for age, negative symptoms were found to be a significant predictor of test performance on the number of perseverative errors on the WCST ($p > .01$), the ACL ($p = .05$), and the BDS ($p = .05$). The WCST was significantly correlated with the three components of negative symptoms: alogia ($r = .57$, $p = .05$), avolition ($r = .69$, $p > .01$), and attention ($r = .69$, $p > .01$). The BDS was significantly correlated with two components of negative symptomology: affect ($r = -.84$, $p > .01$) and alogia ($r = -.70$, $p > .01$).

Conclusions: Results support the conclusion that negative symptoms and executive function are significantly related. Implications of the result that different modalities for measuring executive functioning are related to different components of negative symptoms are discussed.

NR189 Monday, June 1, 3:00 p.m.-5:00 p.m.

Geropsychiatry Versus General Psychiatry Inpatient Treatment of Elderly

Izzet C. Yazgan, M.D., Department of Psychiatry, Hillside Hospital, 75-59 263 S Lowenstein Res Bld, Glen Oaks NY 11004; Blaine S. Greenwald, M.D., Neil J. Kremen, M.D., Joan Strach, R.N., Elisse Kramer-Ginsberg, Ph.D.

Summary:

Despite the growth of geropsychiatry as a discrete clinical service, surprisingly limited data exist directly comparing psychiatric eldercare in general psychiatry and specialized geriatric psychiatry treatment environments.

Methods: Systematic medical record review compared clinical treatment variables between randomly selected elderly inpatients from general (n = 50; mean age = 76.0 +/- 6.3 years) and geriatric psychiatry units (n = 50; mean age = 76.0 +/- 5.8 years) who were matched for age, sex (29 women/21 men), and diagnosis.

Results: Cognitive status was quantified in 70% of geropsychiatry unit patients but only 10% of general unit patients ($p < .0001$). Psychotropic side effect monitoring was uniformly more vigilant on the geropsychiatry unit. For example, in all patients on neuroleptics, documentation of extrapyramidal side effects and orthostatic blood pressure monitoring occurred in 79% and 93% of geropsychiatry patients, respectively, but only 19% and 46% of general psychiatry patients ($p \leq .0005$). Similar patterns of better side effect monitoring in the geropsychiatry setting also existed for other psychotropic agents. Number of ECT treatments were unusually low on the general psychiatry unit (4.6 treatments/episode) and more conventional in the geropsychiatry setting (7.3 treatments/episode). Of patients discharged for psychiatric aftercare, 68% of geropsychiatry unit referrals were to geriatric specialty services compared with 36% of the general unit referrals ($p < .002$). Data support that the subspecialty geropsychiatric treatment setting appears to provide more careful and comprehensive treatment than that received by age-matched elderly patients on general psychiatry units in the same hospital. Findings also offer direction for continuing education of general psychiatrists treating older inpatients.

NR190 Monday, June 1, 3:00 p.m.-5:00 p.m.

Factors Used in Tarasoff Decisions: A Survey of Forensic and General Psychiatrists

Donald D. Saint-Just, M.D., Department of Psychiatry, University of Hawaii, 3906 Koko Dr, Honolulu HI 96816-4307; R. Andrew Schultz-Ross, M.D., Jon M. Streltzer, M.D., Deborah Goebert, M.S.

Summary:

A national survey of 500 psychiatrists was undertaken to discover factors used by psychiatrists in evaluating duties imposed by the court in *Tarasoff v. Regents of University of California.* The hypothesis was that psychiatrists utilize a variety of different variables when coming to a decision as to whether to take action pursuant to *Tarasoff.* Surveys were sent to 200 board-certified forensic psychiatrists and 300 general psychiatrists from more than 40 states. There was an overall response rate of 57.7%. Factor analysis was employed to find factors psychiatrists used in evaluating *Tarasoff* issues. Important factors for both groups were: violence potential, recent losses, perceived compliance, identified victim, problems with alliance, and diagnosis. The two groups differed in that forensic psychiatrists were more likely to take action if the victims were aware of the threat and were less likely to take action if they doubted the threat. General psychiatrists placed more emphasis on the diagnosis. Of those surveyed, 82% had faced a *Tarasoff* issue at least once.

Conclusion: This study identified factors psychiatrists use to determine whether to take action pursuant to *Tarasoff.* Knowledge of such factors may assist clinicians assessing *Tarasoff* issues in the future.

NR191 Monday, June 1, 3:00 p.m.-5:00 p.m.

Drug Use in a Spanish Methadone Multidimensional Treatment Program: A Four-Year Follow-Up

Juan J. Fernandez-Miranda, M.D., Department of Psychiatry, University of Oviedo, Julian Claveria, Oviedo 33006, Spain; Maria P. Gonzalez, Ph.D., Pilar A. Saiz, M.D., Eduardo Gutierrez, M.D., Manuel Bousono-Garcia, M.D., Julio Bobes, M.D.

Summary:

Objective: To describe the drug-consumption profile of heroin addicts remaining after four years in a MMT program.

Patients and Methods: Out of a total of 132 patients who initiated treatment, 50 remained after four years (retention rate 67.3%). Assessment was by the European Addiction Severity Index (EuropASI) and Goldberg Anxiety and Depression Scales. Serological HIV status plus heroin and cocaine consumption were monitored (blood and urine analysis).

Results: Patients' profiles at entry were: cocaine abusers (32.1%), benzodiazepine abusers (54.3%). Profile at 42 months was: heroin (37.8%), cocaine (20%). In addition, 22.4% employed the intravenous route and 2% shared needles. Profile at 47 months was: cannabis (30.6%), amphetamines (8.2%), and benzodiazepines (43.3%); 18.4% consumed more than 60 gr/d of alcohol. Heroin use was related with being HIV+ ($p < .01$), having psychiatric comorbidity ($p < .05$), and using cocaine ($p < .05$) and benzodiazepines ($p < .005$).

Conclusions: Even though patients achieve considerable abstinence from opioids and other drugs (cocaine and benzodiazepines), we wish to emphasize the need for treating the comorbid psychiatric disorders (in most cases related to being HIV infected) in order to achieve a higher degree of abstinence.

NR192 Monday, June 1, 3:00 p.m.-5:00 p.m.

Addiction Severity in a Spanish Methadone Multidimensional Treatment Program: A Four-Year Follow-Up

Juan J. Fernandez-Miranda, M.D., Department of Psychiatry, University of Oviedo, Julian Claveria, Oviedo 33006, Spain; Eduardo Gutierrez, M.D., Pilar A. Saiz, M.D., Maria P. Gonzalez, Ph.D., Manuel Bousono-Garcia, M.D., Julio Bobes, M.D.

Summary:

Objective: To describe the severity profile of heroin addicts retained in a MMT.

Patients and Methods: Out of a total of 132 patients who initiated treatment 50 remained after four years (retention rate 67.3%). Assessment was by the European Addiction Severity Index (EuropASI) and Goldberg Anxiety and Depression Scales. Serological HIV status plus heroin and cocaine consumption were monitored (blood and urine analysis).

Results: EuropASI scores showed low severity in all areas. Higher severity areas were: drugs (4.1, SD 1.8), psychological (3.2, SD 2.2), and medical (3.2, SD 2.4). Greater severity was related to being HIV positive, having symptoms of anxiety and/or depression, heroin consumption, and heavy alcohol use. Seroconversion rate was 0.9% patient/yr. Symptoms of anxiety and depression were 24.5% and 34.7%, respectively. Heroin consumption ($p < .05$) and heavy alcohol use ($p < .05$) were associated with anxiety, being HIV positive ($p < .01$), and heavy alcohol use ($p < .05$) with depression.

Conclusions: Severity of addiction in those remaining in this MMT is relatively low, but psychopathological problems exist in a sizable group of patients. Improvement of long-term effectiveness can be achieved by greater attention to psychiatric and organic (HIV) comorbidity.

NR193 Monday, June 1, 3:00 p.m.-5:00 p.m.

Parasuicidal Patients: A Three-Year Follow-Up

Pilar A. Saiz, M.D., Department of Psychiatry, University of Oviedo, Julian Claveria No 6-30, Oviedo 33006, Spain; Maria P. Gonzalez, Ph.D., Isabel Cocana, Manuel Bousono-Garcia, M.D., Julio Bobes, M.D.

Summary:

Objectives: To determine the evolution of a sample of suicidal attempters.

Patients and Method: A three-year follow-up of 123 patients was conducted. Patients were evaluated using the Psychological General Well-Being Index (PGWB Index), the Hamilton Depression Rating Scale (HDRS), the Hamilton Anxiety Scale (HAS), and the Hopelessness Scale (HS).

Results: Patient profile is shown:

Age [Mean (SD)]	34.54 (13.56)
Sex	18% – ♂ 82% ♀
Civil Status (% single)	60%
Repeated attempts (% patients)	4%
HS [Mean (SD)]	6.82 (6.32)

	Paired differences 1993–94 vs 1996–97	p*
HAS	−8.56 (95% CI: −11.5; −5.6)	.000
HDRS	−6.5 (95% CI: −8.9; −4.1)	.000
PGWB Index	−11.4 (95% CI: −17.4; −5.5)	.000

T-tests for paired samples were performed. Moderate/severe levels of hopelessness are significantly associated with scores > 5 on the HAS ($p = .00000$), >7 on the HDRS ($p = .00001$), and > 60 on the PGWB Index ($p = .00000$).

Conclusions: Patients demonstrated low levels of anxiety and depression, a lack of psychological distress, and a slight degree of hopelessness. In order to prevent parasuicidal behavior it is necessary to bear in mind the level of hopelessness, which is related to the levels of anxiety, depression, and psychological distress.

NR194 Monday, June 1, 3:00 p.m.-5:00 p.m.

Dual Pathology in Personality Disorders in Heroin Abusers Undergoing Two Different Maintenance Programs of Naltrexone and Methadone

Eduardo Gutierrez, M.D., Department of Psychiatry, University of Oviedo, Julian Claveria No 6-30, Ovideo 33006, Spain; Pilar A. Saiz, M.D., Maria P. Gonzalez, Ph.D., Juan J. Fernandez, M.D., Manuel Bousono-Garcia, M.D., Julio Bobes, M.D.

Summary:

Objectives: To discover the prevalence of personality disorders (PD) and severity of addiction in a group of heroin abusers undergoing methadone (MMP) and naltrexone (NMP) maintenance programs.

Subjects and Method: 88 patients meeting DSM-IV criteria for heroin dependence were included (34.1% in MMP and 65.9% in NMP). IPDE (Loranger et al, 1994) and EuropASI (Kokkevi et al, 1994) were employed.

Results: Mean age was 30.9 (5.6) in MMP and 25.6 (4.4) years in NMP ($p = .001$). Both groups had a similar proportion of males (86.7% in MMP and 82.8% in NMP). The prevalence of different PD was 62.5% (55 patients); 38.2% presented one PD and the rest more than one. The most frequent was the antisocial type (24.5%), followed by borderline (19.6%) and avoidance type (17.6%). This prevalence and distribution of PD was similar in both programs. The severity of addiction was worse in MMP, especially in the medical ($p = .001$) and drug ($p = .049$) areas.

Conclusions: Heroin addicts demonstrated a high prevalence of PD, particularly antisocial and borderline types. The severity of addiction was always greater in MMP patients whether they presented comorbidity or not.

NR195 Monday, June 1, 3:00 p.m.-5:00 p.m.

Panic Disorder and Season of Birth

Fulvio Pieraccini, M.D., Department of Psychiatry, University, Piazza Duomo 2, Siena 53100, Italy; Claudia Pacchierotti, M.D., Sonia Iapiehino, M.D., Paolo Castrogiovanni, M.D.

Summary:

Several studies of the seasonal distribution (by month) of the birth dates of patients suffering from schizophrenia have demonstrated a winter-spring birth-rate excess. The few studies conducted on other mental disorders focused on affective, neurotic, and personality disorders; the results, however, are much less consistent than for schizophrenia. The purpose of this study was to verify if there is a specific distribution (by month) of birth dates in subjects with panic disorder. The birth dates of outpatients with a diagnosis of panic disorder (DSM-IV), with and without intraepisodic comorbidity, were compared with those of subjects with other mental diseases without intraepisodic comorbidy PD. The birth dates of patients with panic disorder without comorbidity were compared with those of the Italian population. The monthly distribution of birth in patients with PD (with and without comorbidity) clearly peaked in September to December, while no relevant deviation in birth rate was observed in the control group (other mental diseases). Our results suggest a pathogenic role of birth seasonality in the development of panic disorder.

NR196 Monday, June 1, 3:00 p.m.-5:00 p.m.

Season of Birth and Course of Panic Disorder

Sonia Iapiehino, M.D., Department of Psychiatry, University, Piazza Duomo 2, Siena 53100, Italy; Fulvio Pieraccini, M.D., Claudia Pacchierotti, M.D., Paolo Castrogiovanni, M.D.

Summary:

Seasonal influences in psychiatric disorders have been widely examined. Rhythmic variations in the severity of symptoms were identified initially in affective disorders and recently in anxiety disorders. Moreover, several studies have suggested that season of birth plays a pathogenetic role in the development of mental illness. In our previous study, we found a significant increase of births of panic disorder subjects in the autumn and early winter months. The season of birth could influence brain development and in turn increase the risk of illness. The purpose of this study was to confirm the presence of a seasonality of onset of panic attacks and to verify if there is a specific correlation between season of birth and season of onset of this disorder. The month of birth and the season of the onset of panic disorder (DSM-IV) for 646 patients were obtained from hospital charts; these data were initially gathered through interviews with patients. This study confirms a predominance of the onset of panic disorder in the summer; summer onsets were significantly more frequent in subjects born from August to January. These findings suggest a correlation, seasonally regulated, between birth date and onset of panic disorder.

NR197 Monday, June 1, 3:00 p.m.-5:00 p.m.

Aggressive Behavior in OCD

Angela DiMuro, M.D., Department of Psychiatry, University, Piazza Duomo 2, Siena 53100, Italy; Livia Luccarelli, M.D., Paolo Castrogiovanni, M.D.

Summary:

Even if among psychopathological features of OCD patients, aggressive behaviors or impulse control features are not described, clinical experience suggests the presence of such behaviors in a large portion of cases. This could happen especially to OCD patients when they are exasperated by their repetitive behaviors (or thoughts) or when they are interrupted or obstructed by the resistance they have to oppose them. The study of aggressive behaviors in OCD seems to be important not only to examine closely this disorder, but also for finding important clinical, prognostic, and therapeutical implications. For this reason we administered to 49 OCD patients (mean age = 35.8), 61 depressed patients (mean age = 45), to 60 panic patients (mean age = 31.5), and to 61 control subjects (mean age = 45) the Italian version of Buss and Durkee's Inventory for Assessing Different Kind of Hostility.

OCD patients show a global profile almost equal to that of control subjects; even compared with depressed patients or panic patients there are no substantial differences. These findings suggest that OCD is not characterized by peculiar aggressive behaviors. Being that the global profile of OCD patients is similar to that of other disorders, it can be hypothesized that aggressive behaviors make a single cluster, influenced, not specifically, by different psychiatric disorders. All patient groups show higher scores on those factors linked to inhibited aggression (guilt, resentment, and suspiciousness). This could be explained in OCD by the extreme control and severity of the patients, so that aggressive behaviors could be seen to be similar to comorbid conditions. Depressed patients could be inhibited by their underevaluation feelings, and panic patients by their dependence on others; in both cases guilt is the common factor, similar to the one present in OCD.

NR198 Monday, June 1, 3:00 p.m.-5:00 p.m.

Shyness and Social Phobia in Students

Angela DiMuro, M.D., Department of Psychiatry, University, Piazza Duomo 2, Siena 53100, Italy; Claudia Pacchierotti, M.D., Paolo Castrogiovanni, M.D.

Summary:

There are few studies that compare shyness with social phobia. Different authors underlined the necessity of a distinction from social phobia and shyness, even if there are some difficulties because of the heterogeneity of the shy population.

We have conducted our study on 770 students of high school age who completed the Survey of Shyness, the Liebowitz Social Phobia Scale (LSPS), and the Sheehan Disabilities Scale. We compared the 328 students who defined themselves shy with the social-phobic (61 students with global score of LSPS >60). The common features are: average age of 16 years, prevalence of females, fear of older or authoritative subjects, higher interference on the scholastic and social life. On the contrary, the social-phobics have a more frequent presence of a "shy" familiar, a higher fear of friends, parents, relatives, and same-sex people, a higher score of all the factors of the LSPS and of the Sheehan, a higher difference between the anxiety factor and the avoidant factor.

The common features suggest an etiopathological bond, perhaps part of a syndromic continuum, but the different severity and familial aggregation in the social-phobic subjects suggest a different biological substrate.

NR199 Monday, June 1, 3:00 p.m.-5:00 p.m.

Outcome After ECT for Depressed Dementia Patients

Vani A. Rao, M.D. Psychiatry, Johns Hopkins, Osler 320 Johns Hopital Hospit, Baltimore MD 21209-1259; Constantine G. Lyketsos, M.D., Jeannie Sheppard, B.A.

Summary:

Background: Depression afflicts 25%–50% of patients with dementia. Of these, a substantial number are refractory to antidepressant treatment. The latter may be suitable candidates for electroconvulsive therapy (ECT). However, the use of ECT in

dementia patients is of concern due to possible adverse effects on memory and cognition. Data on the outcome of ECT in demented patients with depression are very limited.

Objective: To determine the effectiveness and complications of ECT treatment for depression in dementia.

Method: A chart review was conducted involving all 99 patients admitted to the Johns Hopkins Hospital over a five-year period with an ICD-9 discharge diagnosis of "dementia with depression." Admission and discharge ratings on the Mini-Mental State Exam (MMSE) and Montgomery Asberg Depression Rating Scale (MADRS) had been made on all these patients as part of routine clinical care.

Results: Thirty-one patients had received ECT: their mean age was 75.6 (range 55–97); 81% were females and 81% whites; 55% had received a diagnosis of vascular dementia, 13% of Alzheimer's disease, and 32% of dementia of uncertain etiology. Admission MMSE mean score was 18.8 (SD 5.5) and MADRS mean was 27.5 (SD 8.1). These patients received between one and 23 ECT treatments (mean 9, SD 5.7). Nine patients received bilateral treatments, with the remainder receiving unilateral treatments. At discharge, there was a statistically significant mean decline on the MADRS of 12.28 points (paired differences t-test (df, 30) = 4.98, $p < 0.01$); 40% had scores <10 (normal range) on the MADRS. Even though 52% of patients developed delirium, by the time of discharge there was also a significant mean increase (improvement) in MMSE of 1.62 points (paired differences t-test (df, 30) = 2.50, $p < 0.02$); 19% of patients had other minor complications. There were no major complications.

Conclusion: ECT is an effective treatment for depression in dementia leading to improvements in *both* mood and cognition, despite high rates of delirium. ECT was beneficial in seven patients who were very old (> = 85) and in three who were very demented (MMSE < 10). Multiple ECT treatments may be necessary before a significant improvement in mood is achieved.

NR200 Monday, June 1, 3:00 p.m.-5:00 p.m.

Event-Related Potentials and Attention in Autism

Christine M. Oliver, M.D., 100 High Street Floor D6, Buffalo NY 14203; Jennifer K. Williams, M.S., David W. Shucard, Ph.D.

Summary:

Objective: Examination of a specific component of the event-related potential (ERP) associated with aspects of sustained attention in autism during a continuous performance task (CPT).

Method: Participants, aged 13–22 years, were recruited through area schools. Four out of six autistic males and 12 of 13 controls completed the paradigm to date. Autistic subjects were matched with controls for age, sex, IQ, and handedness. The P300 component of the ERP was measured during separate auditory and visual CPTs. Subjects were presented with a series of letters, one at a time, and had to respond to a target letter "X" only if it was preceded by the letter "A." They had to inhibit their response when the "A" was followed by a letter other than "X." The P300 was recorded across 12 scalp sites.

Results: Response accuracy was equivalent between both groups. Midline anterior-posterior topography of P300 was similar between the two groups for both target and inhibit conditions. The autistic group showed a higher amplitude P300 response and shorter latency, across both modalities, for the inhibition condition.

Conclusion: Results suggest a greater allocation of attentional resources occurs among autistic subjects, compared with controls, in order to inhibit their response to a stimulus.

This work was funded, in part, by the Ralph Hochstetter Medical Research Fund in honor of Dr. Henry C. & Bertha H. Buswell and, in part, by the Departments of Psychiatry and Neurology, State University of New York, Buffalo.

NR201 Monday, June 1, 3:00 p.m.-5:00 p.m.

Antipsychotic Use in Patients with Schizophrenia

Philip Wang, M.D., Program for Analysis and Clinical Strategies, 221 Longwood Avenue, Room 309, Boston, MA 02115; Deborah A. Zarin, M.D., Harold Alan Pincus, M.D.

Summary:

Background: Little is known about recent patterns of use of antipsychotic medications (APMs) among patients with schizophrenia or the reasons for use of particular APM regimens.

Methods: Information on 150 patients with schizophrenia was collected from 1997 Practice Research Network (PRN) Patient-Level Core data. The frequency of use of particular APMs was identified. Characteristics of patients, prescribers, treatment settings, and health care systems that predicted the use of particular APM regimens were identified.

Results: Ninety-five percent of the patients with schizophrenia were on at least one APM at the time of the survey, 15% were on two, and 2%, were on three or more. Seven percent of patients were on clozapine, 24% were on risperidone, and 23% were on olanzapine, reflecting an extremely rapid rise in the use of these newer agents. In addition, almost half of patients had ever been on risperidone and nearly all had ever been on a conventional APM. The independent effects of several patient, psychiatrist, treatment setting, and health system factors on the probability of using newer APM agents were identified in multivariable models.

Conclusions: Data from APA's PRN provide a powerful tool for both characterizing significant changes in the pharmacological treatment of schizophrenia that have occurred recently and identifying important patient, prescriber, and health care system factors related to the use of particular regimens.

NR202 Tuesday, June 2, 9:00 a.m.-10:30 a.m.

Topiramate in Severe Treatment-Refractory Mania

Joseph R. Calabrese, M.D., Department of Psychiatry, Case Western Reserve Univ., 11400 Euclid Avenue, Ste 200, Cleveland OH 44106-3986; M.D. Shelton III, M.D., Paul E. Keck, Jr., M.D., Susan L. McElroy, M.D., Janet E. Werkner, Ph.D.

Educational Objectives:

To review the pharmacology of a new anticonvulsant and present preliminary data regarding the compound's efficacy in treatment-refractory hospitalized mania.

Summary:

Topiramate is a recently marketed, structurally novel compound with documented anticonvulsant efficacy and a good safety profile. It is a sulfamate-substituted derivative of the naturally occurring monosaccharide D-fructose with multiple mechanisms of action. The objective for this study was to evaluate the antimanic efficacy of topiramate in the acute management of treatment-refractory, hospitalized mania over a 28-day study period in patients with bipolar I disorder. After a washout period of approximately three days, 11 patients (mean age 42.4, 7 female/4 male) hospitalized for severe mania were given open-label topiramate in initial doses of 50 mg/day and titrated upward by 50–150 mg increments to a mean (range) last dose of 614 mg/day (50–1300 mg/d). Outcome measures included the Young Mania Rating Scale (YMRS), the 17-item Hamilton Depression Rating Scale (HAM-D), and the Brief Psychiatric Rating Scale (BPRS). The mean (range) baseline YMRS was 32 (26–40) and decreased to 23 (2–40). The baseline HAM-D was 27 (20–36) and increased to 28 (17–37). The baseline BPRS was 47 (29–68) and decreased to 39 (18–63). Three patients exhibited a ≥ 50% improvement in the YMRS and two exhibited 25% to 49% improvement. Side effects with incidence rates > 10% included paresthesia, anorexia/weight loss, constipation, and

nausea. These preliminary data suggest topiramate may have efficacy in mania.

References:

1. Shank RP, Gardocki JF, Vaught JL, et al: Topiramate: preclinical evaluation of a structurally novel anticonvulsant. Epilepsia 1994;29:450–60.
2. Faught E, Wilder BJ, Ramsay RE, et al: Topiramate placebo-controlled dose-ranging trial in refractory partial epilepsy using 200-, 400-, and 600 mg daily dosages. Neurology 1996;46:1684–90.

NR203 Tuesday, June 2, 9:00 a.m.-10:30 a.m.

A Trial of the Protein Kinase C Inhibitor Tamoxifen in the Treatment of Acute Mania

Joseph M. Bebchuk, M.D., Psychiatry, Wayne State University, 4201 St Antoine DRH 5V, Detroit MI 48201; Cynthia L. Arfken, Ph.D., Suzanne Dolan-Manji, R.N., Joanne M. Murphy, R.N., Husseini K. Manji, M.D.

Educational Objectives:

At the conclusion of this presentation the participant should be able to describe how further study of selective PKC inhibitors under double-blind, placebo-controlled conditions in acute mania is warranted.

Summary:

Bipolar affective disorder (BP) is a severe, chronic, and life-threatening disease, which often leads to significant functional impairment. Lithium's efficacy is well documented; however, its mechanisms of actions have not been fully elucidated. In recent years, however, there has been considerable progress in the identification of signal transduction pathways as targets for lithium's action. It is particularly noteworthy that three distinct antimanic agents, lithium, valproate, and verapamil, when administered in a clinically relevant time frame, all reduce the levels and/or activity of PKC isozymes in rodents and humans. Unfortunately, these medications have multiple biochemical effects, making it difficult to attribute any therapeutic relevance to PKC inhibition.

We are reporting on a case series using the PKC inhibitor tamoxifen in the treatment of acute mania. The medication was administered in blinded form and raters were blind to the treatment regimen. To date, a total of seven patients have been enrolled in the protocol. Manic symptomatology has varied in intensity from mild to severe. Tamoxifen resulted in a significant decrease ($p = 0.025$) in manic symptomatology rated by the Young Mania Rating Scale. No significant changes in the HDRS scores occurred during the course of the trial. These preliminary results suggest that further study of selective PKC inhibitors under double-blind, placebo-controlled conditions in acute mania is warranted in order to more definitively explore the efficacy of these agents in the treatment of BP.

Supported by The Theodore and Vada Stanley Foundation

References:

1. Manji HK, Potter WZ, Lenox RH: Signal transduction pathways: molecular targets for lithium actions. Arch Gen Psychiatry 1995;531–543
2. Horgan K, Cooke E, Hallet MB, Mansel RE: Inhibition of protein kinase C mediated signal transduction by tamoxifen: importance for antitumor activity. Biochem Pharmacol 1986;35:4463–4465

NR204 Tuesday, June 2, 9:00 a.m.-10:30 a.m.

Thyroid and Serotonin Abnormalities in Depression

Fabrice Duval, M.D., Department of Psychiatry, Centre Hospitalier, 27 rue du 4eme RSM, 68250 Rouffach 00110, France; M-Claude Mokrani, Ph.D., Marc-Antoine Crocq, M.D., Paul Bailey, M.D., Than Son Diep, M.D., Humberto Correa, M.D., Jean-Paul Macher, M.D.

Educational Objectives:

At the conclusion of this presentation the participant should be able to describe pathophysiological mechanisms other than serotonergic dysregulation may be involved in TSH blunting in major depressed patients; and serotonergic function is reduced in some depressed patients, especially those with TRH-THS test abnormality.

Summary:

Objective: This study was carried out to investigate whether the hypothalamic-pituitary-thyroid (HPT) axis alterations found in major depression may be related to serotonergic dysfunction.

Methods: We examined the relationship between these two systems by studying thyrotropin (TSH) response to 8 AM and 11 PM TRH challenges (200 μg IV) and adrenocorticotropic hormone (ACTH), cortisol (COR), and prolactin (PRL) responses to dextrofenfluramine (D-FEN; 45 mg orally, a specific serotonergic releasing agent) in 60 drug-free, DSM-IV major depressed inpatients and 20 hospitalized controls.

Results: Compared with controls, patients showed lower 11 PM TSH secretion (basal: $p < 0.03$; after TRH stimulation (ΔTSH): $p < 0.0005$) and $\Delta\Delta$TSH (i.e., difference between 11 PM-ΔTSH and 8 AM- ΔTSH) ($p < 0.00001$), and a trend toward lower PRL response to D-FEN (ΔPRL; $p < 0.08$). ΔACTH was correlated positively with ΔCOR ($r < 0.57$, $p < 0.00001$) and ΔPRL ($r < 0.39$, $p < 0.0007$). ΔACTH was correlated negatively with 11 PM-ΔTSH ($r < -0.35$, $p < 0.002$) and $\Delta\Delta$TSH ($r < -0.32$, $p < 0.005$). When patients were classified on the basis of their TRH-TSH test responses, patients with no abnormality of TRH-TSH tests ($n = 10$) showed lower ΔACTH ($p < 0.006$) and ΔPRL ($p < 0.01$) than controls. Patients with abnormal TRH-TSH tests (i.e., blunted 8 AM-ΔTSH and/or 11 PM-ΔTSH and/or $\Delta\Delta$TSH) had hormonal D-FEN responses comparable with those of controls.

Conclusions: These results suggest that (1) pathophysiological mechanisms other than serotonergic dysregulation may be involved in TSH blunting in major depressed patients, and (2) serotonergic function is reduced in some depressed patients, especially those without TRH-TSH test abnormality. These findings could be relevant for the selection of antidepressant treatment strategies.

References:

1. Duval F, Mokrani MC, Crocq MA, Jautz M, Bailey P, Diep TS, Macher JP: Effect of antidepressant medication on morning and evening thyroid function tests during a major depressive episode. Arch Gen Psychiatry 1996;53:833–840
2. O'Keane V, Dinan TG: Prolactin and cortisol responses to d-fenfluramine in major depression: evidence for diminished responsivity of central serotonergic function. Am J Psychiatry 1991;148:1009–1015

NR205 Tuesday, June 2, 9:00 a.m.-10:30 a.m.

Randomized Trial of a Depression Management Program in High Utilizers of Medical Care

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Educational Objectives:

1. Recognize that one in five high utilizers of medical services has untreated major depression.

2. Understand that a structured depression management program based in primary care can significantly enhance clinical outcomes vs. usual care in HMOs.

Summary:

The CARE study is a 12-month randomized evaluation of the Depression Management Program (DMP) compared with Usual Care (UC). We identified patients with depression by administering the SCID, via telephone interview, to high utilizers of ambulatory services in three large HMOs. Patients screening positive for major depression or depression in partial remission received a HAMD assessment two weeks later. Patients meeting study eligibility criteria, including a HAMD score of 15 or higher, were asked to complete four follow-up telephone interviews over the next year. We randomized 407 consenting patients, 218 to the DMP and 189 to UC. DMP patients initiated treatment with their primary care physicians and nonresponders received increasing levels of psychiatric care. DMP patients received the Rhythms patient education program at the first visit. DMP follow-up visits and prescription refills were also tracked to improve compliance. UC patients received the care available without the DMP. The data are from unblinding the first six months of clinical data and are based upon intent to treat. Baseline HAMDs were 19.1 for DMP and 19.2 for UC. Improvements in HAMD scores were significantly greater in the DMP group at six weeks and all later assessments ($p < 0.05$) by ANOVA. Six-month HAMD scores were 11.8 for DMP vs. 15.2 for usual care. At six months DMP patients reported better physical functioning and mental health and general health perceptions than UC on the SF-20 ($p < 0.05$). At least three antidepressant prescriptions were filled in the first six months by 68.4% of DMP patients vs. 18.5% in UC ($p < 0.05$). There were three or more specialty mental health visits in the first six months by 13.3% of DMP patients vs. 9.5% in UC ($p < 0.05$). Data on indirect costs and 12-month data will soon be available and presented.

Sponsor: Pfizer Pharmaceuticals

References:

1. Katzelnick, DJ, Kobak, KA, Greist, JH, Jefferson, JW, Henk, HJ: Effect of primary care treatment of depression on service use by patients with high medical expenditures. Psychiatric Services 1997;48:59–64.

2. Henk, HJ, Katzelnick, DJ, Kobak, KA, Greist, JH, Jefferson, JW: Medical costs attributed to depression among patients with history of high medical expenses in a health maintenance organization. Arch Gen Psychiatry 1996;53:899–904.

NR206 Tuesday, June 2, 9:00 a.m.-10:30 a.m.

Paroxetine and Imipramine in the Treatment of Adolescent Depression

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Educational Objectives:

This presentation will provide information on the efficacy of paroxetine and imipramine in the treatment of major depression in adolescent outpatients.

Summary:

The efficacy of paroxetine and imipramine in adolescents meeting DSM-IV criteria for major depression was assessed in a double-blind, placebo-controlled trial in 275 outpatients between the ages of 12 and 19. Patients were treated for eight weeks with doses of 20 mg of paroxetine and 200 mg of imipramine. Titration to 40 mg of paroxetine and 300 mg of imipramine was permitted for patients judged to be nonresponders. Patients were seen weekly and assessments included the 17-item Hamilton Depression Scale (HAM-D), the 7-point Clinical Global Impression of Improvement (CGI), and the 9-item depression section of the Kiddie SADS (K-SADS). Remission was defined as a score of 8 or less on the HAM-D. Among the imipramine patients, 32% withdrew for an adverse event. This compares with 10% and 7% for the paroxetine and placebo patients, respectively.

Patients treated with paroxetine demonstrated significant improvement over placebo on measures of affect, global improvement, and remission of depressive symptoms. In contrast, there was no separation from placebo on any clinical measures in patients treated with imipramine. These results support that paroxetine is an effective treatment for major depression in an adolescent outpatient population.

References:

1. Strober M: Pharmacotherapy of depressive illness in adolescents: III diagnostic and conceptual issues in studies of tricyclic antidepressants. J Child & Adol Psychopharmacology 1292;2(1):23–29.

2. Jensen PS, Ryan ND, Prien R: Psychopharmacology of child and adolescent major depression: present status and future directions. J Child & Adol Psychopharmacology 1992;2(1):31–45.

NR207 Tuesday, June 2, 9:00 a.m.-10:30 a.m.

Depressive Symptoms: A Risk for Mortality in Elderly

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Educational Objectives:

At the conclusion of this presentation the participant should be able to describe how the presence of depressive symptomatology is a significant predictor of mortality in elderly men; and describe how appropriate treatment of depression may result in decreased mortality and improved quality of life.

Summary:

Objective: To evaluate the predictive value of depressive symptomatology as a risk factor for mortality in elderly men.

Methods: At the fourth examination (1991–1993) of the Honolulu Heart Program longitudinal cohort, the presence of depressive symptoms was assessed using an 11-question version of the CES-D (Center for Epidemiology Surveys-Depression) Scale, hereafter called CESD-11. A total of 3741 men aged 71 to 93 were examined and followed prospectively for an average of five years for all-cause mortality. Presence of depressive symptomatology was defined as a score of ≥ 9 points on the CESD-11.

Results: A total of 3263 subjects completed the CESD-11 and 321 (10%) had depressive symptomatology. Of those without depressive symptoms, 20% (584/2942) died during the five year follow-up period compared with 25% (81/321) of those with these symptoms. Five-year, age-adjusted mortality rates in those with and without depressive symptoms were 56.4 and 43.6 per 1000 person-years, respectively. Using Cox proportional hazards models, after adjusting for age, the relative risk for mortality with depressive symptoms was 1.30 ($p = 0.026$).

Conclusions: These data suggest that the presence of depressive symptomatology is a significant predictor of mortality in elderly men. Appropriate treatment of depression may result in decreased mortality and improved quality of life.

References:

1. Gurland BJ: The range of quality of life: relevance to the treatment of depression in elderly patients, in Diagnosis and Treatment of Depression in Late Life: Results of the NIH Consensus Development Conference. Edited by Schneider LS, Reynolds CF, Lebowitz BD, Friedhoff AJ. Washington DC, American Psychiatric Press, 1994
2. Zubenko GS, Mulsant BH, Sweet RA, Pasternak RE, Tu XM: Mortality of elderly patients with psychiatric disorders. Am J Psychiatry 1997:154:1360–1368

NR208 Tuesday, June 2, 9:00 a.m.-10:30 a.m.

Utilization of Valproate

Leslie L. Citrome, M.D., Clinical Research, Nathan Kline Institute, 140 Old Orangeburg Road, Orangeburg NY 10962; Jerome Levine, M.D., Baerbel Allingham, M.S.

Educational Objectives:

1. Recognize the extent of the prescription of valproate.
2. Recognize the potential wealth of information that can be extracted from clinical databases.

Summary:

Objective: To describe the extent and type of use of valproate among hospitalized patients.

Method: A database containing patient information and drug prescription information for every inpatient within the adult civil facilities of the New York State Office of Mental Health was queried.

Results: In 1994, 2,888 out of 18,668 inpatients received valproate (15.5%). In 1996, 4,247 out of 12,444 inpatients received valproate (34.1%). In 1996, approximately 50% of all patients diagnosed as bipolar or schizoaffective, and 28% of all patients diagnosed as schizophrenia, received valproate. No difference was found in the 14-day discontinuation rates for valproic acid or divalproex sodium. Patients received valproate for approximately two-thirds of their hospital stay, at a mean dose of 1400 mg/day; 95% also received an antipsychotic, and 20% received concomitant lithium. Use of lithium or carbamazepine was less in 1996 than in 1994, but the magnitude of this change was much less than the increase in utilization of valproate.

Conclusions: From 1994 to 1996 valproate use has more than doubled, and it is being used widely in patients with schizophrenia, an off-label indication for which there is only anecdotal support in the literature. Given the lack of difference in early discontinuation rates, there are probably no dramatic differences in side effects for the two preparations of valproate.

References:

1. Citrome L: The use of lithium, carbamazepine, and valproic acid in a state operated psychiatric hospital. *Journal of Pharmacy Technology* 1995;11(2):55–59.
2. Citrome L, Levine J, Allingham B: Utilization of depot neuroleptic medication in psychiatric inpatients. *Psychopharm Bulletin* 1996;32(3):321–326.

NR209 Tuesday, June 2, 9:00 a.m.-10:30 a.m.

Intermittent Neuroleptic Treatment Is a Risk Factor for Tardive Dyskinesia

Peter N. van Harten, M.D., Department of Psychiatry, PC Welterhof, JF Kennedylaan 301, Heerlen XZ 6419, The Netherlands; Hans W. Hoek, M.D., Glenn E. Matroos, M.D., Maarten Koeter, Ph.D., Rene S. Kahn, M.D.

Educational Objectives:

At the conclusion of this presentation the participant should be able to describe how in the schizophrenia protocol the recommendation for long-term neuroleptic treatment rather than interruptions.

Summary:

Objective: We examined the association between three lifetime medication variables (cumulative amount of neuroleptics, number of interruptions in treatment with neuroleptics, cumulative amount of anticholinergics) and the occurrence and/or severity of tardive dyskinesia (TD).

Method: The study (N = 133, mean age 51.5 years) was conducted in the only psychiatric hospital of a well-defined catchment area (the Netherlands Antilles). The presence and the severity of TD were measured using the Abnormal Involuntary Movement Scale.

Results: Of the three lifetime medication variables, only the number of neuroleptic interruptions was significantly related to TD (adjusted OR 1.3, 95% CI 1.07-1.62). If the number of neuroleptic interruptions is dichotomized into less than or equal to two and more than two the resulting adjusted OR is 3.3 (95% CI 1.27-8.49).

Conclusions: Our finding supports the schizophrenia protocol that recommends long-term neuroleptic treatment rather than targeted or intermittent neuroleptic treatment. More than two interruptions increase the risk of TD more than threefold.

The research was supported by a grant from the NASKHO (National Antilles Foundation for Clinical Higher Education).

References:

1. Harten PN van, Hoek HW, Matroos GE, Koeter M, Kahn RS: Intermittent neuroleptic treatment is a risk factor for tardive dyskinesia. Am J Psychiatry 1998 (in press).

NR210 Tuesday, June 2, 9:00 a.m.-10:30 a.m.

D-Cycloserine Added to Neuroleptics in Schizophrenia

Donald C. Goff, M.D., Psychiatry, Harvard Medical School, 25 Stanford Street, Boston MA 02114; Guochuan Tsai, M.D., James J. Levitt, M.D., Edward Amico, M.Ed., David Schoenfeld, Ph.D., Robert W. McCarley, M.D., Joseph T. Coyle, Jr., M.D.

Educational Objectives:

1. Understand the rationale for the use of glycine agonists in schizophrenia.
2. Be familiar with clinical effects of D-cycloserine in this trial.

Summary:

Background: In a dose-finding study, the glycine partial-agonist, D-cycloserine, improved negative symptoms and cognitive function when added to conventional neuroleptics at a dose of 50 mg/d. In this study we assessed the efficacy of D-cycloserine 50 mg/d in a placebo-controlled, parallel-group design.

Method: Forty-seven patients with schizophrenia meeting criteria for deficit syndrome were randomized to D-cycloserine 50 mg/d (n = 23) or placebo (n = 24) added to their conventional neuroleptic for eight weeks. Serum concentrations of D-cycloserine, amino acids, and HVA were assayed at baseline and weeks 4 and 8. A neuropsychological battery was performed at baseline and week 8.

Results: Thirty-nine patients completed the eight-week trial. The slope representing improvement in SANS total scores was significantly greater in the D-cycloserine group compared with placebo ($p = 0.01$). Sixty-one percent of patients in the D-cycloserine group responded compared with 26% in the placebo group ($p = 0.05$). No differences were found in performance on any cognitive test between groups. Amino acid concentrations in serum did not differ

between groups and response did not significantly correlate with baseline amino acid concentrations or serum concentrations of D-cycloserine at weeks 4 or 8.

Conclusion: Because patients met criteria for the deficit syndrome and improvement in SANS scores was independent of effects on psychosis, parkinsonism, or depression, these results support the hypothesis that agents acting at the glycine modulatory site of the NMDA receptor improve primary negative symptoms.
Supported by NIMH grant ROI-MH54245 and the Brockton VA Schizophrenia Biological Research Center

References:

1. Goff DC, Tsai D, Manoach DS, Coyle JT: Dose-finding trial of D-cycloserine added to neuroleptics for negative symptoms in schizophrenia. Am J Psychiatry 1995;152:1213–1215
2. Goff DC, Wine L: Glutamate in schizophrenia: clinical and research implications. Schizophrenia Research 1997;27:157–168

NR211 Tuesday, June 2, 9:00 a.m.-10:30 a.m.

Fluoxetine Versus Sertraline and Paroxetine in Major Depression: Tolerability and Efficacy in Patients with High- and Low-Baseline Insomnia

Sharon L. Hoog, M.D., Neuroscience, Eli Lilly and Company, Lilly Corporate Center, Indianapolis IN 46285; Maurizio Fava, M.D., Jerrold F. Rosenbaum, M.D. Rosalinda Tepner, RPh, Joan Kopp, M.S., Mary Sayler, M.S., and the Fluoxetine Collaborative Study Group

Educational Objectives:

At the conclusion of this presentation the participant should be able to describe how these data show no significant differences in efficacy and tolerability of fluoxetine, sertraline, and paroxetine in patients with low or high baseline insomnia during acute treatment of major depression.

Summary:

Objective: Assess whether fluoxetine, sertraline, and paroxetine differ in efficacy and tolerability in depressed patients with low or high baseline insomnia.

Methods: Patients (N = 284) with DSM-IV depression were randomized to fluoxetine, paroxetine, or sertraline treatment in double-blind fashion. Using HAMD-Sleep Disturbance Factor score, patients were categorized as having low insomnia (<4) or high insomnia (≥4) at baseline. Changes in overall depression and insomnia were assessed.

Results: Within both low/high insomnia subgroups, patients demonstrated similar HAMD-17 improvement (low insomnia: fluoxetine, −10.4, ±7.1; sertraline, −12.2, ±7.7; and paroxctine, −11.9, ±6.6; p = 0.392 and high insomnia: fluoxetine, −13.2, ±8.2; sertraline, −14.7, ±7.5; and paroxetine; −12.9, ±8.5; p = 0.545) and HAMD Sleep Disturbance Factor improvement (low insomnia subgroup: fluoxetine, −0.6, ±1.5; sertraline, −0.7, ±1.6; and paroxetine; −0.7, ±1.8; p = 0.996 and high insomnia: fluoxetine, −3.1, ±2.0; sertraline, −3.3, ±1.8; and paroxetine; −2.9, ±2.4; p = 0.705). There were no significant differences between treatments in percentages of patients with substantial worsening, any worsening, worsening at endpoint, or improvement in the HAMD-Sleep Disturbance Factor score, in either subgroup. Treatments were well tolerated in both subgroups.

Conclusion: These data show no significant differences in efficacy and tolerability of fluoxetine, sertraline, and paroxetine in patients with low or high baseline insomnia during acute treatment of major depression.
Research funded by Eli Lilly and Company.

References:

1. Cleary M, Guy W. Factor analysis of the Hamilton depression scale. Drugs Exp Clin Res 1975;1:115–120
2. Satterlee WG, Faries D. The effects of fluoxetine on symptoms of insomnia in depressed patients. Psychopharmacol Bull 1995;31:227–237

NR212 Tuesday, June 2, 9:00 am-10:30 a.m.

Incidence of Tardive Dyskinesia with Risperidone Versus Haloperidol

Dilip V. Jeste, M.D., Department of Psychiatry, Veterans Affairs Medical Ctr., 3350 La Jolla Village Drive, San Diego CA 92161; Jonathan P. Lacro, Pharm.D., Hoang A. Nguyen, M.D., Mihaela E. Petersen, M.D., Enid Rockwell, M.D., Daniel D. Sewell, M.D., Michael P. Caligiuri, Ph.D.

Summary:

Educational Objectives: At the end of the presentation, the participants should be able to use specific criteria for diagnosing tardive dyskinesia (TD). They will also learn about the incidence of TD with risperidone and haloperidol in older patients, and about the ways to reduce the risk of TD among patients requiring antipsychotics.

Background: To our knowledge, there has not been a published longitudinal prospective study comparing the incidence of tardive dyskinesia (TD) with typical versus atypical antipsychotics in older patients who are particularly susceptible to TD.

Methods: We studied nine-month cumulative incidence of TD using Schooler-Kane criteria among middle-aged and elderly outpatients. A total of 64 patients were treated with risperidone. From among the patients treated with haloperidol, we selected 64 patients comparable with the risperidone group on age (mean 67 years), gender (72% male), primary psychiatric diagnosis (41% schizophrenia, 19% dementia), scores on the Brief Psychiatric Rating Scale, Hamilton Depression Rating Scale, and Mini-Mental State Examination, as well as duration of prior exposure to typical neuroleptics (median 40 days). The median daily doses of risperidone and haloperidol prescribed at initial visit were 0.8 mg and 1 mg, respectively. The subjects were assessed at one- to three-month intervals with the Abnormal Involuntary Movement Scale.

Results: The nine-month mean cumulative incidence of TD with haloperidol was 3.4 times greater than that with risperidone (p = .0253, matched-pair Peto-Prentice test) (See the Figure). Interestingly, among the risperidone-treated patients, TD usually manifested itself in the first three months, raising a possibility of dyskinesia secondary to withdrawal from typical neuroleptics. With age, diagnosis ("organic" versus other), baseline duration of prior neuroleptic exposure, and neuroleptic type (risperidone vs haloperidol) as covariates in Cox regression, the only significant predictor of TD-risk was neuroleptic-type (p = .0182).

Conclusion: The atypical antipsychotics such as risperidone may have a significant advantage over the conventional ones in terms of the risk of TD, at least in older patients. *(This work was supported, in part, by National Institute of Mental Health, San Diego VA Medical Center, and Janssen Pharmaceutica and Research Foundation.)*

References:

1. Jeste DV, Caligiuri MP, Paulsen JS, Heaton RK, Lacro JP, Harris MJ, Bailey A, Fell RI, McAdams LA: Risk of tardive dyskinesia in older patients: a prospective longitudinal study of 266 outpatients. Arch Gen Psychiatry 1995;52:756–765.
2. Kane JM, Woerner MG, Pollack S, Safferman AZ and Lieberman JA: Does clozapine cause tardive dyskinesia? J Clin Psychiatry 1993;54:327–330.

NR213 Tuesday, June 2, 9:00 a.m.-10:30 a.m.

Reboxetine: The First Selective Noradrenaline Reuptake Inhibitor

David T. Healy, M.D., Psychiatry, University of Wales, Hergest Unit, Bangor, United Kingdom

Summary:

Educational Objectives:

At the conclusion of this presentation, the participant should to able to recognise that social functioning is an important aspect of depression that is improved to a greater degree with reboxetine than fluoxetine.

Summary:

Objectives: To assess changes in social functioning in patients treated with reboxetine, fluoxetine, or placebo, using the Social Adaptation Self-Evaluation Scale (SASS).

Method: A total of 381 patients with major depressive disorder were randomized to reboxetine (8 mg/day), fluoxetine (20 mg/day), or placebo in a double-blind, multi-center study, lasting eight weeks. After four weeks the dose could be increased to 10 mg/day reboxetine or 40 mg/day fluoxetine.

Results: Reboxetine was as effective as fluoxetine in relieving symptoms of depression, assessed by reduction in mean HAM-D total score. In the 302 patients who provided SASS scores, reboxetine (n = 103) was more effective than fluoxetine (n = 100) or placebo (n = 99) in improving social functioning; mean SASS total score at last assessment was greater with reboxetine (35.2) than with fluoxetine (32.3) or placebo (27.7) ($p < 0.0001$). In remitted patients (HAM-D total score ≤ 10), reboxetine treatment led to significantly higher mean SASS total scores from days 28 and 35 compared with placebo or fluoxetine ($p < 0.05$), particularly for motivation, interest in activities, and self-perception.

Conclusions: Reboxetine improves social functioning independently of depressed mood, and improves the quality of remission compared with fluoxetine. Reboxetine may be particularly useful in treating depressed patients with loss of energy, interest and motivation.

References:

1. Weissmann MM, Bothwell S: Assessment of social adjustment by patient self report. Arch Gen Psychiatry 1976;33: 1111–1115.
2. Dubini A, Bosc M, Polin V: Do noradrenaline and serotonin differentially affect social motivation and behaviour? Eur Neuropsychopharm 1997;7(Suppl. 1):S49–S55.

NR214 Tuesday, June 2, 12 noon-2:00 p.m.

Fluvoxamine and Pindolol: A New and Faster Strategy in the Treatment of Delusional Depression

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Summary:

Objective: The 5-HT1A/β-adrenoreceptor antagonist pindolol has been shown to reduce the latency and potentiate the response to certain SSRIs in major depression. We have undertaken this study to assess whether the addition of pindolol could improve the therapeutic response to fluvoxamine in delusional depression.

Method: Seventy-two inpatients (56 women, 16 men; mean age ± SD: 47.4 ± 10.1) who met the DSM-III-R criteria for major depressive episode with psychotic features, were randomly assigned to receive fluvoxamine 300 mg/day in combination with placebo or pindolol 7.5 mg/day.

Results: At study completion, 57 of 71 patients were categorized as responders (HRSD score ≤ 8 and DDERS = 0) without significant difference between the two therapy groups. In the third and fourth week of treatment, the response rates were significantly superior in the fluvoxamine plus pindolol group ($p = 0.0001$; $p = 0.023$, respectively). No significant differences were found comparing pulse rate, blood pressure, and fluvoxamine weekly plasma levels between groups. No medically significant adverse events occurred; both treatments were well tolerated.

Conclusions: The combination of fluvoxamine with pindolol may be a faster and safe strategy in the treatment of delusional depression.

NR215 Tuesday, June 2, 12 noon-2:00 p.m.

Randomized, Double-Blind, Placebo-Controlled 52-Week Trial of Venlafaxine for the Prevention of Recurrent Depression

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Summary:

Objective: This 52-week, double-blind, randomized, placebo-controlled, multicenter study evaluated the prophylactic efficacy of venlafaxine in outpatients with major depression.

Methods: Outpatients age ≥ 18 years with a history of recurrent depression and satisfying DSM-III-R criteria for major depression were eligible if they had a minimum score of 19 on the 21-item HAM-D. Following six months of open-label treatment with venlafaxine, patients considered responders entered a 52-week, randomized, double-blind comparison of venlafaxine 100 to 200 mg/day and placebo. The primary efficacy variable was the number of patients with a recurrence (CGI severity score ≥ 4) during double-blind treatment. Time to recurrence was determined by survival analysis.

Results: Of 483 patients enrolled in the open-label phase, 286 completed six months and 237 began double-blind treatment; 107 on placebo and 106 on venlafaxine were analyzed for efficacy. Recurrence of depression was observed in 51% of placebo-treated and 20% of venlafaxine-treated patients ($p = 0.0001$, log-rank test). Significantly ($p = 0.023$) more patients in the placebo group (11%) than the venlafaxine group (4%) experienced recurrence within the first two months. HAM-D, MADRS, and CGI scores were significantly lower with venlafaxine than placebo from week 3 to the end of the study. No unexpected adverse events occurred with venlafaxine. Few serious adverse events were reported.

Conclusion: Venlafaxine was effective for preventing recurrence of major depression during 12 months of treatment and exhibited a tolerability profile that was similar to that of placebo. *This study was funded by Wyeth-Ayerst Research, Philadelphia, Pa.*

NR216 Tuesday, June 2, 12 noon-2:00 p.m.

Double-Blind, Placebo-Controlled Study of Once-Daily Venlafaxine Extended Release and Fluoxetine in Depressed Outpatients

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Summary:

Objective: This eight-week, double-blind, placebo-controlled trial compared the safety and antidepressant efficacy of once-daily venlafaxine XR (V-XR) and fluoxetine (Flu).

Method: Patients (n = 301) who met the DSM-IV criteria for major depressive disorder were randomly assigned to treatment

with placebo (Pbo), V-XR (75 mg/day), or Flu (20 mg/day). Doses of V-XR could be increased at two weeks to 150 mg/day and at four weeks to 225 mg/day. Doses of Flu could be increased at two weeks to 40 mg/day and at four weeks to 60 mg/day. Improvement in depression was evaluated by using the HAM-D total, the HAM-D depressed mood item, the MADRS total, and the CGI scale, by using analysis of covariance.

Results: Six percent (6%) of the V-XR-treated patients and 9% of the Flu-treated patients discontinued for adverse events. At week 8, the changes (significant differences from placebo indicated by *) from baseline were observed for the intent-to treat population (with the last observation carried forward for patients discontinuing prematurely) on the HAM-D total score (V-XR-12.7*, Flu-11.3, Pbo-10.4) and the MADRS (V-XR-15.0*, Flu-13.1, Pbo-11.3). Responses to treatment, based on an end-point CGI global improvement rating of 1 or 2 (very much or much improved) occurred for 71% (V-XR*), 62% (Flu), and 52% (Pbo) of the patients. Full remission (HAM-D total ≤ 7) occurred in 37% (V-XR*), 22% (Flu), and 18% (Pbo) of patients.

Conclusions: In this study both V-XR and Flu were well-tolerated when administered in their usual dose ranges. V-XR produced statistically significantly more improvement in depression ratings than did Pbo and a statistically significantly higher rate of full remission than did Flu. For Flu, there was a trend for superiority over Pbo that did not attain statistical significance.

NR217 Tuesday, June 2, 12 noon-2:00 p.m.

New Findings from the Collaborative Depression Study: Recurrence After Five Years of Recovery from the Index Episode of MDD

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Summary:

Introduction: Recovery from major depressive disorder is common. Unfortunately, recurrence is also common. Does a long period of recovery assure a low risk of recurrence? There is little empirical literature to answer this question.

Methods: In the Collaborative Depression Study 431 subjects with MDD only were followed for up to 15 years. A total of 105 of these subjects recovered from their index episode of MDD, remained well for five years, and were followed subsequently. Levels of psychopathology and clinical and demographic variables were monitored. Time to recurrence was analyzed using life-table methods, and cox regression analyses examined variables as predictors of time to recurrence.

*Results:*A total of 58% (Kaplan-Meier estimate) experienced a subsequent recurrence. The median time to recurrence after five years of recovery was 134 weeks. None of the examined variables predicted who would and would not experience a recurrence although several came close: GAS prior to seeking treatment ($p = .109$) and GAS at five years of follow-up ($p = .073$).

Conclusion: Even after lengthy periods of recovery from MDD, most subjects continue to experience recurrence. No clinical or demographic variables collected in this study predicted recurrence. Clinicians and patients need to remain vigilant for recurrence of MDD. Researchers must continue their search for the characteristics that can guide the development and application of strategies that maintain the well state.

NR218 Tuesday, June 2, 12 noon-2:00 p.m.

Sustained Lithium Response in Bipolar Illness

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Summary:

Given the less than 50% response rate to lithium in many studies, we sought to elucidate characteristics of patients who are highly responsive to lithium through a naturalistic questionnaire study. A total of 229 patients completed the questionnaire and 128 endorsed a good sustained response to lithium (a self-rating of vast or decided improvement). An additional 33 patients were similarly recruited for being poor lithium responders (slight/no improvement, or worse).

The 128 prophylactic lithium responders differed in many respects from the non-response group (all $p; < .01$). Responders had a much lower incidence of ultra-ultra rapid (ultradian) cycling (13% vs. 53%); a significantly lower incidence of childhood and adolescent verbal/emotional abuse, physical abuse, and sexual abuse; and a lower history of substance abuse (20% vs. 42%). The lithium responders had a substantial history of comorbid anxiety and panic disorder (38%), but much lower than the non-responders (76%). A total of 18% of the responders reported marked limitations in their occupational functioning compared with 59.4% in the non-responders ($p < .001$). The groups did not differ in family history of psychiatric illness, social support, very high self-reported compliance (87%) ("never/rarely missed"), retrospective illness demographics, and mean duration of illness (29 and 27 years).

These preliminary data suggest that, compared with lithium non-responders, those with a sustained response to lithium have a lesser history of verbal, physical, and sexual abuse in childhood and adolescence, less comorbid substance abuse, less anxiety and panic disorder, and less ultra-ultra-rapid cycling. Whether these same variables are also correlates of poor response to other treatment approaches in bipolar illness remains to be further delineated.

NR219 Tuesday, June 2, 12 noon-2:00 p.m.

Treatment of Bipolar Depression

L. Trevor Young, M.D., Department of Psychiatry, McMaster University, P.O. Box 2000, Hamilton ON L8N 3Z5, Canada; Janine Robb, B.ScN., Cathy MacDonald, R.N., Glenda M. MacQueen, M.D., Russell T. Joffe, M.D.

Summary:

The treatment of bipolar depression is a vastly under-studied area. Current clinical practice for a patient on mood stabilizer monotherapy who relapses into depression is to add either a second mood stabilizer or an antidepressant. Empirical evidence with which to make this decision is lacking. We carried out a double-blind comparison of lithium plus divalproex sodium vs lithium or divalproex plus paroxetine in the acute treatment of bipolar depression. Eighteen patients have thus far completed the six-week trial, with a mean age of 38.4 ± 2.1 (14 women/4 men). The mean initial Hamilton Depression score was 19.9 ± 0.8. Both treatments were well tolerated. The mean Hamilton Depression score at six weeks was significantly lower compared with baseline in the patients who received either an antidepressant (8.5 ± 1.7), or a second mood stabilizer (8.4 ± 1.3) in addition to the first mood stabilizer. There was no evidence of induction of manic symptoms in either group. These preliminary data suggest that both strategies are effective in the acute treatment of bipolar depression.

NR220 Tuesday, June 2, 12 noon-2:00 p.m.

Gabapentin in Bipolar Disorder

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Glenda M. MacQueen, M.D., Janine Robb, B.ScN., Cathy MacDonald, R.N., Irene Patelis-Siotis, M.D., Russell T. Joffe, M.D.

Summary:

Objective: To extend our earlier observations of gabapentin efficacy in the depressed and manic phases of bipolar disorder and to determine whether there are differences in the therapeutic efficacy between rapid and nonrapid cyclers.

Method: Thirty (8M/22F, mean age 42.3 years) patients with bipolar type I or II with or without a rapid cycling course were treated in an open fashion with gabapentin over 12 weeks. All subjects had been previously treated with at least two mood stabilizers. Mood symptoms were rated weekly using the HAM-D and YMS. Mean daily dose of gabapentin was 920 mg (range 200-2800 mg).

Results: Eighty-two percent of patients enrolled during a manic phase experienced marked improvement. Fifty-five percent of patients enrolled during a depressed phase experienced moderate or marked improvement. The overall response rate was comparable in rapid versus nonrapid cyclers, but nonrapid cyclers tended to have a more robust and sustained response. Side effects did not account for any dropouts during the three months of treatment.

Conclusions: These results support the efficacy of gabapentin in both phases of bipolar disorder, particularly considering the treatment-refractory nature of the cohort and the inclusion of rapid cycling patients.

NR221 Tuesday, June 2, 12 noon-2:00 p.m.

Which Relapse Factors Does Maintenance Treatment Modify?

Rosa Catalan, M.D., Department of Psychiatry, Hospital Clinic, Rosellon No 140, Barcelona 08036, Spain; Julio Vallejo, M.D., Guillen Masana, Aurora Otero, M.D., Cristobal Gasto, M.D.

Summary:

Objective: Prospective research, in two years, of a sample of 84 melancholy patients. Experimental design with different timing of exposition to imipramine (26 or 104 weeks).

Patients: A total of 84 ambulatory patients whose average age was 53 (ds 12.45), who matched the DSM-III criteria for melancholy and score >=6 for the Newcastle scale.

Methods: As the patients entered the survey, they were randomly assigned to the imipramine exposition treatment for either 26 weeks (group 1) or 104 weeks (group 2). We collected data corresponding to sociodemographic, clinical, and psychosocial variables. A relapse was considered to have taken place when the patient attained a scoring of >=16 on the Hamilton Depression Rating Scale (HDRS) after a clinical recovery (HDRS<=6) of eight weeks. The relapse index has been estimated through survival tables. Logistic regression models were used to estimate relapse factors in group 1 and group 2.

Results: Relapse predictors in group 1: (a) Index episode duration ($B = 3.86$, $p < 0.05$); (b) Number of previous episodes ($B = 5.73$, $p < 0.02$) (c) Absence of high social support ($B = -1.58$, $p < 0.05$); (d) High initial emotional instability (16PF factor C<5) ($B = 3.95$, $p < 0.04$). Relapse predictors in group 2: (a) Index episode duration ($B = 3.56$, $p < 0.01$) (b) Presence of agitation in the index episode ($B = 3.85$, $p < 0.01$) (c) Presence in two or more instances of non-suppression in the serial DST, previously to relapse ($B = 2.30$, $p < 0.002$).

Conclusions: (1) Long-term treatment considerably reduces the risk produced by the number of previous episodes. (2) Melancholy patients with higher duration of index episode, presence of agitation in the initial assessment, and/or repeated instability in the HPA axis, could benefit from combined pharmacological strategies, or from electroconvulsive therapy.

NR222 Tuesday, June 2, 12 noon-2:00 p.m.

Bupropion SR 150 mg Once and Twice Daily Versus Placebo for the Treatment of Depressed Outpatients

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Summary:

Objective: This study evaluated the efficacy and safety of bupropion SR 150 mg once daily and twice daily versus placebo in depressed outpatients.

Methods: Data were combined from two multicenter, parallel, randomized, double-blind, eight-week trials evaluating the effects of bupropion SR (Wellbutrin SR) 150 mg once daily (BUP-SR150), bupropion SR 150 mg twice daily (BUP-SR300), and placebo (PBO) for the treatment of depression. Efficacy was assessed by using the HAMD, CGI-S, and CGI-I scales. Safety was evaluated by adverse experience assessments.

Results: The changes from baseline to the last observation in HAMD scores ($n = 788$) for BUP-SR150 and BUP-SR300 were similar, and were statistically different ($p = 0.0015$ and 0.0205, respectively) from PBO. Likewise, for the CGI-I, and CGI-S analyses, both BUP-SR150 and BUP-SR300 were statistically superior to placebo ($p < 0.05$). The most commonly reported adverse events (>10% in any treatment group) were headache, dry mouth, and nausea. In general, the incidence of adverse events was lower in the BUP-SR150 group than in the BUP-SR300 group.

Conclusion: Bupropion SR 150 mg administered once daily had efficacy comparable with bupropion SR 150 mg administered twice daily, and both dosages were superior to placebo. The incidence of adverse events was generally lower in the BUP-SR150 group than in the BUP-SR300 group.

This study was funded by Glaxo Wellcome Inc.

NR223 Tuesday, June 2, 12 noon-2:00 p.m.

Digoxin-Like Factor in Bipolar Illness

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Summary:

A decrease in sodium pump activity in erythrocytes has been associated with manic episodes of bipolar illness relative to euthymic moods. Since red blood cells are long-lived and lack a nucleus, it is likely that a plams factor is responsible for the observed decrease in sodium pump activity. Utilizing a radioimmunoassay, we examined the serum concentrations of the digoxin-like immunoreactive factor (DLIF) in ill and well bipolar patients and compared the values with those of normal controls. DLIF was significantly decreased in manic individuals as compared with normal controls (143.6 ± SEM 20.94 vs. 296.6 ± 12.76 pg digoxin equivalents/ml, respectively, $F = 4.77$, $p < 0.05$) but not compared with euthymic bipolar subjects (213.8 ± 86.92, $F = 0.77$). There were no significant differences in DLIF concentrations between manic and euthymic bipolar individuals ($F = 0.8$). Since relapse in bipolar patients appears to display a seasonal pattern, we also measured the plasma concentration of this factor over a 12-month period. Normal controls exhibited a seasonal pattern of change in serum DLIF concentrations with a nadir in the winter months. Plasma concentrations of DLIF in bipolar patients did not show a seasonal pattern and maintained low levels throughout the year.

(Supported by an Alliant Community Trust Grant to RSE and an NIH HL36172 grant to RV)

NR224 Tuesday, June 2, 12 noon-2:00 p.m.

Lost Human Capital from Early-Onset Chronic Depression

Ernst R. Berndt, Ph.D., Sloan School, Mass Institution of Tech, 50 Memorial Drive, Cambridge MA 02142; Lorrin M. Koran, M.D., Stan L. Finkelstein, M.D., Alan J. Gelenberg, M.D., Ivan W. Miller, Ph.D., George Trapp, M.D., Martin B. Keller, M.D.

Summary:

The initial onset of chronic depression occurs at an early age for many individuals. Early onset depression could affect subsequent human capital accumulation—educational attainment, occupational choice, and work history—as well as health, relationship, and social behavior patterns, e.g., substance abuse (Kocsis et al, 1988). Is human capital accumulation affected by early onset depression? Are earlier vs. later onset depressives equally treatment responsive? Is sustained response different? Are there differential impacts on workplace performance after treatment?

We employ data from a three-phase, multicenter, double-blind, randomized trial comparing sertraline with imipramine for 635 patients meeting inclusion criteria for chronic depression (Thase et al., 1996). For subjects over age 30, those with early onset (before age 21, 43%) were more likely to have begun but not completed college, remained single, and have developed alcohol and/or substance abuse. There was no significant difference in treatment responsiveness between the two groups at acute phase week 12, at continuation phase week 28, and at maintenance phase week 76. Following treatment, the proportion working for pay, and the hours worked by those employed, increased substantially and equally for both groups.

Early onset chronic depression causes substantial human capital loss, which can be mitigated by treatment.

NR225 Tuesday, June 2, 12 noon-2:00 p.m.

Donepezil Reverses Antidepressant-Induced Side Effects in Nongeriatric Depressives, But May Trigger Mania

Frederick M. Jacobsen, M.D., 1301 20th St NW Suite 711, Washington DC 20036-6023

Summary:

Objectives: (1) Determine whether the acetylcholinesterase inhibitor donepezil can reduce side effects such as memory loss, dry mouth, and constipation in non-geriatric antidepressant responders; (2) Explore the utility and tolerability of donepezil in non-demented, non-geriatric patients.

Methods: Non-demented, antidepressant-remitted outpatients complaining of memory loss, dry mouth, or constipation took donepezil 5 mg/day for 3+ weeks, and then 10 mg/day as desired. Five-point self-rating scales were completed before and three to four weeks after starting each dose condition.

Results: A total of 13 patients (6 women, 7 men; mean age= 44.8 ± 9.7 years) took donepezil for at least three weeks. Twelve patients complaining of memory loss rated dramatic improvement with donepezil 5 mg ($p < 0.001$), and subsequently six rated further improvement with 10 mg ($p = 0.057$). Donepezil 5 mg significantly reduced complaints of constipation ($N = 9$; $p < 0.05$) and dry mouth ($N = 10$; $p < 0.001$).

Side effects of donepezil included insomnia, nausea, vomiting, and diarrhea. Surprisingly, two bipolars became manic within 12 hours of starting donepezil.

Conclusions: (1) Donepezil can reduce antidepressant-induced side effects; (2) The clinical effects and potential utility of donepezil in non-geriatric psychopharmacology merit further investigation.

NR226 Tuesday, June 2, 12 noon-2:00 p.m.

Relationship of Prior Course of Illness and Neuroanatomical Structures by MRI in Bipolar Disorder

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Summary:

Objective: Previous studies suggest that chronicity of affective illness may correlate with specific areas of brain atrophy. This preliminary study investigated the relationship of severity of prior course of bipolar illness to neuroanatomical structures by magnetic resonance imaging (MRI).

Method: Using the NIMH Life Chart Method™, 49 patients who met DSM-III-R criteria for bipolar disorder had a detailed retrospective life chart (LCM-r) completed. Patients also received an MRI scan with 5 mm coronal slices, from which volumes of the frontal lobes, temporal lobes, hippocampus, lateral ventricles, and the third ventricle were calculated. Multiple regression analyses were performed to compare LCM-r variables (i.e., duration of illness, number of weeks ill, number of hospitalizations, number of episodes) with neuroanatomical volumes.

Results: Larger third ventricular volume was associated ($p < 0.05$) with a greater number of episodes, a greater number of weeks ill, and a greater number of weeks hospitalized. Larger (and not smaller) left temporal lobe volume was associated with a longer duration of illness, and larger right temporal lobe volume was associated with both a greater number of weeks ill and a greater number of depressive episodes.

Conclusion: Results suggest that several indices of a more severe prior course of illness in bipolar disorder is associated with increased third ventricular volume, and contrary to expectations, increased temporal lobe volume.

NR227 Tuesday, June 2, 12 noon-2:00 p.m.

In Severe Depression, Reboxetine Is As Effective As Imipramine and More Effective than Fluoxetine

Juan Massana, M.D., Psychiatric, Hospital Clinic, Balmes 313, 08006 Barcelona, Spain

Summary:

Objectives: Severely depressed patients often respond poorly to treatment. TCAs are the mainstay of therapy and SSRIs (or at least fluoxetine) are considered less effective. This analysis assesses the comparative efficacy and tolerability of reboxetine, imipramine, and fluoxetine, in severely depressed patients.

Method: Among 1144 patients with major depression recruited to four randomized, double-blind, outpatient studies (two placebo-controlled), 633 patients with severe depression received reboxetine 8-10 mg/day, fluoxetine 20-40 mg/day, imipramine 150-200 mg/day, or placebo for six to eight weeks. Efficacy (change in HAM-D score) and tolerability results were pooled for analysis.

Results: Reboxetine was as effective as comparator agents and more effective than placebo in the overall population. In severely depressed patients, the between-treatment difference in HAM-D total score showed reboxetine to be as effective as imipramine (1.1 points; 95% CI-1.1 to 3.3), and more effective than fluoxetine (2.6 points; 95% CI 0.5 to 4.6) and placebo (4.7 points; 95% CI 2.5 to 6.8). Reboxetine tolerability was superior to that of imipramine and comparable to fluoxetine.

Conclusions: In severely depressed patients, reboxetine is as effective as a TCA and better tolerated. Furthermore, reboxetine is more effective than the SSRI fluoxetine in this population.

Funded by Pharmacia and Upjohn.

NR228 Tuesday, June 2, 12 noon-2:00 p.m.

Risk Factors for Postpartum Depression and Infant Outcome at Twelve Months

Beverley D. Cassidy, M.D., CM Hinks Institute, 114 Maitland Street, Toronto ON M4Y 1E1, Canada; Susan Goldberg, Ph.D., Kirsten Blokland, M.A., Diane Benoit, M.D.

Summary:

Objective: This prospective study explored links between postpartum depression (PPD) and prenatal maternal mental health, attachment status, response to infant affect, marital satisfaction, and socioeconomic status. Infant attachment status at 12 months was compared in depressed and nondepressed groups.

Method: A community sample of 136 women was interviewed prenatally using the Adult Attachment Interview and the Toronto Infant Emotion Stimuli (TIES). They also were screened for depression, substance use and antisocial history, marital satisfaction, and sociodemographic status. At four weeks and four months postpartum, the mothers were screened using the Edinburgh Postnatal Depression Scale. Infants were assessed at 12 months for attachment security using the Strange Situation.

Results: A total of 28 (20%) of the 136 women were depressed at either four weeks or four months postpartum. The depressed group did not differ on any prenatal risk dimensions except that they showed less accurate identification of infant affect using the TIES ($p < .05$). At 12 months, infants of depressed mothers showed decreased secure attachments compared with the sample as a whole (33% vs 60%).

Conclusion: These results suggest a strong biological basis for PPD in a low risk cohort. Also, decreased accuracy in affect perception prenatally may be both a marker and a mechanism for postnatal depression and its effects on infants.

Funding provided by The Ontario Mental Health Foundation and The C.M. Hincks Treatment Centre

NR229 Tuesday, June 2, 12 noon-2:00 p.m.

Comparison of Research and Clinical Antidepressant Data

Edward E. Schweizer, M.D., Mood Disorder, University of PA, 1601 Concord Pike, #86-88, Wilmington DE 19803; Philip Perera, M.D.

Summary:

Although the use of rating scales such as the Hamilton Depression Rating Scale (HAM-D) and CGI are standard in research studies of antidepressants, these scales are usually not used in clinical practice settings.

Objective: The purpose of this study was to compare results of assessments derived from clinical trials conducted in academic and research centers with the same assessments obtained in psychiatric clinical practices.

Method: HAM-D and CGI ratings for 1400 sertraline treated subjects with DSM-III-R defined major depression who participated in an eight-week, open, non-comparative, multicenter study of sertraline in outpatient psychiatric clinical practice settings were compared with HAM-D and CGI ratings on 535 sertraline treated subjects with DSM-III-R defined major depression from three eight-week, double-blind, placebo-controlled, multicenter, sertraline studies conducted in clinical research centers in the U.S.. The psychiatrists participating in the large open trial received training in the use of both the HAM-D and CGI scales.

Results: Data from clinical research centers showed significantly greater baseline to endpoint improvement for sertraline treated patients compared with placebo for the HAM-D, CGI, and HAM-D factors (depressed mood, anxiety, cognitive symptoms, and insomnia). Clinical practice patients treated with sertraline showed similar improvements in baseline to endpoint measures of the HAM-D, CGI, and HAM-D factors. Both groups were also compared for demographic characteristics, psychiatric disorder comorbidity, history of prior treatment, treatment-related adverse events, study discontinuation, and rates of response and remission. These data will also be presented.

Conclusion: Analysis of these data showed similarity in patient characteristics and rates of response, regardless of the study setting, suggesting that results of research trials are reasonably generalizable to patients seen in clinical practice.

NR230 Tuesday, June 2, 12 noon-2:00 p.m.

An Open Trial of Mirtazapine in the Treatment of Depressed Outpatients Refractory to or Intolerant of Treatment with SSRIs

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Summary:

Objective: We wanted to assess in an open trial the efficacy of mirtazapine, an antidepressant with a unique pharmacological profile, in the treatment of patients who are refractory to and/or intolerant of treatment with selective serotonin reuptake inhibitors (SSRIs).

Method: We have recruited 21 outpatients (as part of an ongoing treatment trial) with DSM-IV major depressive disorder who had failed to respond to > 4 weeks and < 6 months of treatment with adequate doses of the SSRIs fluoxetine, sertraline, or paroxetine, or who had not been able to tolerate the first four weeks of treatment with one of these SSRIs. Patients were switched from their SSRI (after they were tapered to the minimum therapeutic dose of their SSRI) to mirtazapine 15 mg qhs with or without a four-day wash-out and were then treated openly with mirtazapine up to 45 mg qhs for eight weeks. The 17-item Hamilton Rating Scale for Depression (HAM-D-17) and the Clinical Global Impression-Severity (CGI-S) scale were used to assess efficacy.

Results: Of those enrolled thus far, 14 patients have completed the study, and seven (33%) have dropped out because of adverse events (n = 5) or other reasons (n = 2). Intent-to-treat analyses showed significant ($p < 0.001$) reductions on both HAM-D-17 and CGI-S at endpoint among patients treated with mirtazapine (n = 21). The two most frequently reported adverse events were increased appetite/weight gain and sedation.

Conclusions: Mirtazapine appears to be a safe and effective treatment for patients refractory to or intolerant of treatment with SSRIs. An immediate switch from an SSRI to mirtazapine is well tolerated. Further, double-blind, placebo-controlled trials are needed to support our preliminary findings.

NR231 Tuesday, June 2, 12 noon-2:00 p.m.

Comparison of the Efficacy and Safety, Including Sexual Functioning, of Bupropion Sustained Release in Depressed Outpatients

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Summary:

Objective: This study was conducted to compare the efficacy and safety, including sexual functioning, of bupropion SR and sertraline in depressed outpatients.

Methods: Outpatients with moderate to severe major depression who were in a stable relationship and had normal sexual function-

ing were randomized to receive bupropion SR (100-300 mg/day) or sertraline (50-200 mg/day) for 16 weeks. Efficacy was assessed by using the HAMD, HAMA, CGI-S, and CGI-I scales. Safety was assessed by monitoring vital signs, weight, and adverse experiences. Sexual functioning was assessed by investigators using structured interviews.

Results: One hundred and twenty-two patients were randomized to bupropion SR; 126 to sertraline. Efficacy measures were comparable between the two treatment groups. A statistically significantly greater percentage of sertraline-treated patients experienced sexual dysfunction, including orgasm dysfunction, which began as early as Day 7 at a dose of 50 mg/day and persisted throughout the study. The adverse events nausea, diarrhea, somnolence, and sweating were experienced more frequently by sertraline-treated patients. Vitals signs and weight assessments were comparable between the two groups.

Conclusion: Bupropion SR and sertraline are similarly effective for the treatment of depression. Although both compounds were relatively well tolerated, sexual dysfunction and several side effects were observed more commonly in sertraline-treated patients.

This study was funded by Glaxo Wellcome Inc.

NR232 Tuesday, June 2, 12 noon-2:00 p.m.

Comparative Efficacy of Psychotherapy, Pharmacotherapy and Combined Treatments for MDD: A Meta-Analysis

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Summary:

Treatment studies of major depressive disorders were identified with computerized searches of Medline and Psychinfo databases from 1987 to 1997. This was supplemented by references cited in pertinent review articles. Studies were included if published in English, focused on adult subjects, used valid diagnostic criteria, and reported data allowing the calculation of within-condition effect sizes or remission rates. Studies of patients with organicity, substance abuse, psychosis, or treatment-resistant depression were excluded. Within-condition and between-condition effect sizes, response rates, and remission rates were calculated at the end of active treatment and at followup separately for self-report and observer-rated outcome measures. These were used to compare the efficacy of psychotherapy, pharmacotherapy, and combined treatment groups overall, and of specific treatments within each group. Finally, we examined the effect of study design, diagnostic method, type and severity of depression, comorbidity, duration and dose of treatment, and use of manuals on outcome. As a group, medication studies have shorter followup periods, higher dropout rates, and a more restricted focus on symptom change as a measure of outcome when compared with psychotherapy studies. This radically affects our interpretation of the usual finding of no difference between the two treatments.

NR233 Tuesday, June 2, 12 noon-2:00 p.m.

Fluvoxamine is As Effective As Clomipramine in Severe Depression

John Van Den Berg, M.D., Solvay, CJ Van Houtenlaan, Weesp 138ODA, The Netherlands; Chantal Vekens, Ph.D.

Summary:

Although SSRIs, such as fluvoxamine, are better tolerated than tricyclic antidepressants, some concerns exist that they may be less effective in severe depression. A double-blind, multicenter study was therefore conducted in severely depressed inpatients (≥25 on the 17-item HAMD total score) to compare the efficacy and safety of fluvoxamine and clomipramine. Following placebo run-in, 86 patients were randomized to flexible oral doses of fluvoxamine (100-250 mg/day) or clomipramine (100-250 mg/day) for eight weeks; 42 patients in each group were evaluable for efficacy. More patients in the clomipramine than in the fluvoxamine group withdrew prematurely (13 vs 8). Fluvoxamine and clomipramine both resulted in marked improvements; there were no statistically significant differences between them on the HAMD total score, CGI severity of illness or global improvement items, or MADRS, at any visit. At the end of the study, 71% in the fluvoxamine group and 69% in the clomipramine group were responders (≥50% decrease in HAMD total score). Fluvoxamine was better tolerated than clomipramine; clomipramine was associated with a higher incidence of overall and treatment-related adverse events and adverse events resulting in premature withdrawal. In conclusion, fluvoxamine and clomipramine are equally effective in severe depression, but fluvoxamine has a better safety profile.

Investigation sponsored by Solvay Pharmaceuticals.

NR234 Tuesday, June 2, 12 noon-2:00 p.m.

Fluvoxamine Versus Fluoxetine: A Double-Blind, Randomized Comparison in Major Depressive Episode

John Van Den Berg, M.D., Solvay, CJ Van Houtenlaan, Weesp 138ODA, The Netherlands; Adrian Honig, M.D.

Summary:

A double-blind, multinational study compared the efficacy and safety of fluvoxamine and fluoxetine in outpatients with DSM-III-R major depressive episode. A total of 184 patients received fluvoxamine (100 mg/day) or fluoxetine (20 mg/day) for six weeks; 177 patients were included in the efficacy analysis. Fluvoxamine and fluoxetine were both effective and there were no significant differences between them on the primary efficacy parameter—area under the curve of change from baseline in HAMD total score. However, fluvoxamine showed significant ($p < 0.05$) superiority over fluoxetine in other variables; percentage of HAMD responders, CGI severity of illness score and Irritability, Depression, and Anxiety Scale total score and depression subscale all showed significant advantages for fluvoxamine during the first four weeks. During the last two weeks, fluvoxamine was significantly more effective in improving the HAMD sleep disturbance scale. Fluvoxamine and fluoxetine were well tolerated and there were no marked differences in their side-effect profiles. In conclusion, fluvoxamine and fluoxetine are both effective and safe in the treatment of major depressive episode, but there are indications that fluvoxamine may have a faster onset of action with respect to resolution of depressive symptoms and result in a better improvement in sleep quality.

Investigation sponsored by Solvay Pharmaceuticals.

NR235 Tuesday, June 2, 12 noon-2:00 p.m.

Cytokine Production in Dysthymia

Arun V. Ravindran, M.D., Department of Research, Royal Ottawa Hospital, 1145 Carling Avenue, Ottawa ON K1Z 7K4, Canada; Jenna Griffiths, M.Sc., Zul Merali, Ph.D., Hymie Anisman, Ph.D.

Summary:

Depressive illness has been associated with variations of immune functioning, including reduced mitogen-induced cell proliferation and diminished natural killer (NK) cell activity. It was suggested that these immune disturbances may actually be secondary to activation of some aspects of the immune system. Indeed, there have been reports that major depressive illness was associated with increases of acute phase proteins, as well as

interleukin-1B (IL-1), sIL-1 receptors (sIL-1R), IL-6 and sIL-6R. These effects were pronounced in severely depressed (melancholic) patients, but were modest or absent in less severe major depression. Experiments conducted in our laboratory have likewise revealed that the production of IL-1 in mitogen-stimulated lymphocytes was elevated, but that of IL-2 was reduced among dysthymic subjects. This was the case irrespective of whether these patients exhibited typical or atypical characteristics. In the present investigation we report that the elevated IL-1 production was directly proportional to the duration of illness, and inversely related to age of onset. Moreover, following 12 weeks of treatment with an SSRI (sertraline), which reduced depressive symptoms, the elevated IL-1 production seen among dysthymic patients was diminished. In contrast, the reduced IL-2 production was not altered following successful pharmacotherapy. Thus, while IL-1 production appears to be a state characteristic of dysthymia, IL-2 may be a trait marker. Moreover, although both IL-1 and IL-2 are potent stimulators of the hypothalamic-pituitary-adrenal axis, neither IL-1 nor IL-2 production was related to cortisol levels. As well, while stressors are associated with altered cytokine production, neither cytokine was associated with the reported day-to-day stresses encountered or the coping styles employed.

Supported by the Medical Research Council of Canada and by Pfizer Canada Inc.

NR236 Tuesday, June 2, 12 noon-2:00 p.m.

Negative Life Events Initiate First But Not Recurrent Depressive Episodes

Andrew A. Nierenberg, M.D., Department of Psychiatry, Massachusetts General Hospital, 15 Parkman Street, WAC 812, Boston MA 02114-3117; Mark G. Pingol, B.A., Heather J. Baer, B.A., Jonathan E. Alpert, M.D., Joel Pava, Ph.D., Joyce R. Tedlow, M.D., Maurizio Fava, M.D.

Summary:

Stressful life events may initiate the first depressive episode and then become less of a factor in subsequent episodes (Post, 1992). We assessed the relationship between stressful life events and the number of depressive episodes.

Methods: We studied 176 drug-free outpatients (mean age 22.8 ± s.d. 12.2 years; females 56.3%) who met criteria for DSM-III-R major depression (mean HAM-D 19.4 ± 3.3). Patients self-administered the Life Events Scale (LES), Perceived Stress Scale (PSS), and the Cognitions Questionnaire (CQ). We compared those with their first non-chronic (<1 year) episode with those with ≥ 3 lifetime depressive episodes.

Results: Patients with their first depressive episode had more negative life events compared with those who were recurrent (mean LES −18.8 ± 12.8; −13.3 ± 13.9 respectively; $p = 0.037$). First-episode depressives had higher PSS scores (mean PSS 38.8 ± 6.4; 36.4 ± 6.7, respectively; $p = 0.058$). Patients with recurrent depression had significantly higher CQ scores (mean CQ 27.4 ± 9.7 vs. 23.0 ± 8.1).

Conclusion: First-episode depressives had more stressful negative life events compared with recurrent depressives, consistent with Post's hypothesis. Recurrent depressives had less stress and negative life events even though they had more negative cognitions. To the best of our knowledge, these data are the first to support the role of stress in first-episode depression.

NR237 Tuesday, June 2, 12 noon-2:00 p.m.

Increased Perception of Stress in Atypical Depression: A Confirmation of Mood Reactivity

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Summary:

Objective: Mood reactivity is an essential component for the diagnosis of atypical depression, but this symptom has never been assessed with data other than self-report. To assess mood reactivity, we examined the relationship between the atypical subtype, life events, and stress.

Methods: We studied 176 drug-free outpatients (mean age 22.8 ± s.d. 12.2 years; females 56.3%; mean 17-item Hamilton Depression Rating Scale 19.4 ± s.d. 3.3) with DSM-III-R major depression. Atypical subtype was determined with the Atypical Depression Diagnostic Scale. Patients were evaluated with the Life Events Scale (LES), Perceived Stress Scale (PSS), and the Cognitions Questionnaire (CQ).

Results: Patients with definite atypical depression reported similar negative life events compared with non-atypical depressives (mean LES −15.7 ± 16.1; −13.2 ± 12.4, respectively; $p = 0.3$) but more stress (mean PSS scores 38.3 ± 6.9 vs. 35.6 ± 6.4; $p = 0.01$) and had more negative cognitions (mean CQ 29.1 ± 10.9 vs. 24.9 ± 8.4; $p = 0.01$).

Conclusion: In the absence of any difference in life events, atypical depressives perceived themselves as having more stress than non-atypicals, and atypicals had more negative cognitions. To the best of our knowledge, these data are the first to confirm increased mood reactivity in atypical depressives.

NR238 Tuesday, June 2, 12 noon-2:00 p.m.

Delinquent Behavior Among Children of Parents with Depressive Subtypes

Jonathan E. Alpert, M.D., Department of Psychiatry, Massachusetts General Hospital, WAC-815, 15 Parkman Street, Boston MA 02114; Heather J. Baer, B.A., Bronwyn R. Keefe, B.A., Andrew A. Nierenberg, M.D., Jerrold F. Rosenbaum, M.D., Joseph Biederman, M.D., Maurizio Fava, M.D.

Summary:

Objective: Parenteral depression is a risk factor for the emergence of depression among offspring. Less is known about offspring risks for other behavioral problems and how they may be influenced by characteristics of a parent's depression. The aim of this study was to assess the relationship between depressive subtypes among parents and disordered behavior among school-age offspring.

Methods: Twenty-five parents with major depression completed the Achenbach Child Behavior Checklist for each child ages 6 to 18 ($n = 34$). Parental depression was subtyped according to: (1) early (age ≤ 18) vs. adult onset of first depressive episode; (2) presence vs. absence of anger attacks; (3) atypical vs. non-atypical depression; and (4) presence vs. absence of a comorbid DSM-III-R anxiety disorder.

Results: Delinquency was reported more frequently for children of parents with anger vs. no anger attacks ($p < 0.02$). Delinquency problems were also more prevalent among the offspring of parents with early onset depression compared with late onset depression ($p < 0.04$). There was a trend toward lower competency in activities (e.g. sports, hobbies) among the offspring of parents with anxious vs. non-anxious depression ($p < 0.06$).

Conclusions: Our results suggest that there may be an important link between particular parenteral depressive subtypes and behavioral disturbances among offspring, including delinquency.

NR239 Tuesday, June 2, 12 noon-2:00 p.m.

Comparison of the Safety and Efficacy of Bupropion Sustained Release and Paroxetine in Elderly Depressed Outpatients

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Summary:

Objective: This study compared the safety and efficacy of bupropion SR (BUP SR) and paroxetine (PAR) in elderly depressed outpatients.

Method: Elderly (≥ 60 years) outpatients experiencing a recurrent major depressive episode with a HAMD of at least 18 at baseline were randomized into this parallel, double-blind study to receive either BUP SR (50-300 mg/day) or PAR (10–40 mg/day) for six weeks. Efficacy was assessed at weekly clinic visits by using the HAMD, HAMA, CGI-S, and CGI-I scales. Safety was assessed by monitoring vital signs, weight, and adverse experiences.

Results: Forty-eight patients were randomized to BUP SR; 52 to PAR. Average age for BUP SR patients was 69 years (range: 60–85) and 71 (range: 60–88) for PAR patients. Efficacy measures were comparable between the two treatment groups. Eight patients in each group discontinued prematurely; four on BUP SR and three on PAR discontinued due to adverse events. Common adverse events (incidence >10%) included headache, nausea, dry mouth, dizziness, and agitation for both groups, and diarrhea, insomnia, constipation, and sedation for PAR. Vitals signs and weight assessments were comparable between the two groups.

Conclusions: Both bupropion SR and paroxetine are efficacious and safe in the treatment of elderly depressed outpatients.

This study was funded by Glaxo Wellcome Inc.

NR240 Tuesday, June 2, 12 noon-2:00 p.m.

Relationship of Neuropsychological Performance and Neuroanatomical Structures by MRI in Bipolar Disorder

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Summary:

Objective: This preliminary study investigated the relationship between neuropsychological performance and neuroanatomical structures by magnetic resonance imaging (MRI) in patients with bipolar disorder.

Method: Forty-nine outpatients who met DSM-III-R criteria for bipolar disorder were administered a battery of neuropsychological tests, which assessed a variety of functions including memory, abstracting ability, visuo-motor performance, attention, concentration, and intelligence. Patients also received a MRI scan with 5 mm coronal slices, from which volumes of the frontal lobes, temporal lobes, hippocampus, lateral ventricles, and third ventricle were calculated. Using multiple regression analysis, neuroanatomical volumes were correlated with neuropsychological test variables.

Results: Larger third ventricular volume was associated ($p < 0.05$) with poorer performance on the Selective Reminding Test (SRT), Wisconsin Card Sorting Test (WCST), and the Trail Making Test (TMT). Larger right temporal lobe volume was associated with poorer performance on the California Verbal Learning Test, Wechsler Adult Intelligence Scale-Revised (WAIS-R), and the WCST. Larger left temporal lobe volume was associated with poorer performance on the TMT, Cancellation Task, and the WAIS-R. Larger right hippocampal volume was associated with poorer performance on the Controlled Oral Word Association Test, Continuous Performance Test, SRT, and the WAIS-R.

Conclusion: Results from this study suggest that a larger third ventricular volume is associated with poorer neuropsychological functioning in patients with bipolar disorder. However, contrary to expectations, *larger* temporal lobe and hippocampal volumes were also associated with poorer neuropsychological performance. Further studies are needed to assess the relationship and mechanisms of neuroanatomical alterations and neuropsychological functioning in patients with bipolar disorder.

NR241 Tuesday, June 2, 12 noon-2:00 p.m.

Number of Episodes and Outcome in Bipolar Disorder

Glenda M. MacQueen, M.D., Department of Psychiatry, McMaster University, 3G Clinic McMaster University, Hamilton ON L8N 3Z5, Canada; Janine Robb, B.ScN., Michael Marriott, M.Sc., Robert G. Cooke, Russell T. Joffe, M.D., L. Trevor Young, M.D.

Summary:

Objective: To evaluate the proposed relationship between number of episodes of illness and level of function in bipolar patients.

Methods: Fifty-nine bipolar type I patients (34F/25M, mean age 35.9) completed the Medical Outcomes Questionnaire-Short Form (MOS) and the SCID-IV during a period of euthymia.

Results: Patients with fewer depressions (≤ 2) had higher levels of functioning both subjectively, as measured by the mental health subsection of the MOS ($F = 4.6$, $p < 0.02$) and objectively, as rated on the Global Assessment of Functioning Scale (GAF; $F = 6.1$, $p < 0.01$). Patients with fewer previous manic episodes (≤ 2) had higher scores on the mental health section of the MOS ($F = 3.3$, $p = 0.04$) and a trend toward higher scores on the GAF ($F = 2.2$, $p = 0.07$). A 2 × 2 ANOVA did not reveal a significant interaction between number of depressions and manias for either measure (GAF $F = 0.3$, MOS $F = 0.4$). Age at onset of first depression, onset of first mania, or at time of rating was not associated with level of functioning.

Conclusions: Patients with high numbers of either depressions or manias over the course of bipolar illness have lower perceived and objectively rated levels of function even when euthymic.

NR242 Tuesday, June 2, 12 noon-2:00 p.m.

Mathematics Deficits in Bipolar Youth

Diane C. Bird, B.Sc., Department of Psychiatry, Dalhousie University, 5909 Jubilee Rd Lane Bldg, Rm 4083, Halifax NS B3H 2E2, Canada; Stanley P. Kutcher, M.D., Heather A. Robertson, M.A.

Summary:

Objective: Based on a subset of data from a cross-sectional follow-up study of adolescent onset bipolar disorder, mathematical reasoning was compared in bipolar I probands (B), unipolar probands (U), and controls (C).

Method: Sample was comprised of 119 youth (44 B, 30 U, 45 C), 14 to 26 years. Subjects completed standardized tests of mathematical ability: Wide Range Achievement Test (WRAT-R) and the Peabody Individual Achievement Test (PIAT).

Results: Significant differences were found on the WRAT-R2 ($p = .009$), with bipolar youth functioning at a lower level than unipolars, and both patient groups exhibiting greater difficulties than controls (B < U < C). Peabody findings revealed a similar although nonsignificant trend. A comparison of expected ability level (given CA) and actual grade equivalents (WRAT) revealed a 1.5 to two year academic lag for bipolars. As expected, sex

differences were observed (M > F) on both the WRAT (p = .004) and the Peabody (p = .04).

Conclusion: Findings suggest that bipolar youth have serious difficulties in mathematical reasoning, particularly in time-limited test situations with little or no verbal supports. Future work is required to examine possible reasons for this deficit. Implications for preventive or remedial strategies will be addressed.

NR243 Tuesday, June 2, 12 noon-2:00 p.m.

Use and Misuse: Antidepressants in General Practice

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Summary:

In Primary Care antidepressants are often used haphazardly, at inadequate dosages, and variable information is given to patients about side effects, their duration, and management. This has important implications for compliance and outcome of antidepressant treatment.

Objective: The Dorset Antidepressant Side-effects Initiative was used to survey antidepressant prescribing preferences, dosing, and knowledge and management of side-effects by GPs in West Dorset.

Methods: A questionnaire developed by the authors was distributed to ten GPs for evaluation and modified as necessary. The revised questionnaire was sent to all 132 GPs in West Dorset.

Results: Responses were received from 100 (76%) GPs. Among respondents, 57% named TCAs as their first choice treatment, 41% SSRIs, and 2% non-antidepressants. An analysis of dosing patterns showed that TCAs were much more likely to be prescribed at sub-therapeutic doses than SSRIs ($p << 0.0001$).

Half the SSRI prescribers told patients side effects would improve with time compared with 29% of TCA users. Similar percentages of GPs changed dosing regimens to manage side effects (26% TCA, 22% SSRI). Upon discontinuation of therapy, GPs tapered TCAs more gradually than SSRIs (54% vs 34% greater than one week; $p < 0.001$).

Conclusions: Inadequate dosing and side effects are persistent problems with TCAs in primary care.

NR244 Tuesday, June 2, 12 noon-2:00 p.m.

A French Study of Comorbidity Social Phobia in Depression

Roland H. Dardennes, M.D., 1001 Rue De La Sante, Paris 75014, France; Elema Bonett-Perrin, M.D., Serge Barry, M.D., Samuel Mercier, STAT.

Summary:

Objectives: This epidemiologic study evaluated the rate of comorbidity between social phobia and depression on a national French population of depressed outpatients.

Method: A national sample of 1500 private practice psychiatrists was randomly selected. Each psychiatrist had to investigate the first two patients presenting with a recent depressive episode (first episode or recurrent depressive disorder, according to ICD-10 and DSM-IV criteria) and to assess the presence of diagnostic criteria for social phobia (according to both diagnostic systems). Patients had to report severity of symptomatology with Beck Depressive Inventory and Rathus' social assertiveness scale; criteria for social phobia were also directly drawn from the patient through a self-report based on the CIDI section for social phobia.

Results: A total of 1184 patients were included; 381 patients (32%) were free from social phobia. The majority of patients had both lifetime and concomitant comorbidity (n – 512, 43%); 193 patients (16%) had only concomitant social anxiety disorder (disorder began during the previous 12 months); few patients had a lifetime diagnosis of social anxiety but no concomitant comorbidity (n = 43, 4%).

Conclusion: Social phobia in currently depressed patients is very frequent and should be systematically assessed.

NR245 Tuesday, June 2, 12 noon-2:00 p.m.

Attentional Deficit and Antidepressant Response in Depression

Paul Jacques, M.D., Department of Psychiatry, Hosp. Enfant-Jesus, 1401 18e Rue Rue, Quebec PQ G1J 1Z4, Canada; Sophie Lemelin, Ph.D., Pierre Vincent, M.D., Marie-Josee Filteau, M.D., Philippe Baruch, M.D.

Summary:

Attentional performance of depressed patients has been the focus of several studies. However, some authors have underlined that these attentional deficits are quite variable within the depressed group. To our knowledge, there are no studies assessing the significance of attentional deficit as a predictor of improvement of treated depressed patients.

Method: A total of 34 unmedicated major depressives (11 males, 23 females; 19 to 62 years old, mean 39.4 ± 9) were assessed using the HDRS-21 and an attentional battery in order to evaluate selective and divided attention. These patients were treated by various antidepressants and were followed up for eight weeks. The response criterion was: 8-week HAMD score <12 and 50% improvement from initial score. A selective or divided attention deficit was considered present if the patient's score was above the mean plus 2 SD of a control group (n = 30, age- and sex-matched normal subjects).

Results: No relationship was found between initial score on HAMD-21 and the presence of deficits on selective and/or divided attention tasks. After eight weeks of treatment, we observed a significant link between clinical response and initial cognitive deficits ($\chi 2$ test, $p < 0.02$). Rate of recovery was 80% for depressives without attentional deficit, 40% for patients with one deficit in divided or selective attention, and 22% for depressives with both deficits.

Conclusion: These results suggest that attentional deficits could be a predictor of antidepressant response in depression.

NR246 Tuesday, June 2, 12 noon-2:00 p.m.

Thyroid Axis and Treatment Response in Depression

Bettina Knight, B.S.N., Department of Psychiatry, Emory University, 1701 Uppergate Drive Room 126, Atlanta GA 30322; Philip T. Ninan, M.D., Charles B. Nemeroff, M.D., Dominique L. Musselman, M.D., Jeffrey E. Kelsey, M.D.

Summary:

Objective: We examined the relationship of HPT abnormalities and response to newer antidepressants in MD.

Method: Sixty-two patients (36 female) with MD diagnosed using the SCID had their symptomatology assessed using the HAM-D and CGI. HPT function was assessed with TSH, total and free T3 and T4, and thyroid autoantibodies. Antidepressant treatment response and HPT function was examined in 36 (19 female) patients. Antidepressant treatments included SSRIs, clomipramine, venlafaxine, nefazodone, amesergide, and buproprion.

Results: Forty-five patients (73%) were abnormal on at least one of the HPT assessments. Fourteen patients (23%) had a single abnormality, while 31 (50%) had two or more abnormalities. Only total T3 appeared to be related to treatment outcome. Of the 36 patients, 10 had levels of low total T3. There were no significant differences among baseline HAM-D mean scores due to low T3. Post treatment HAM-D scores were significantly lower

than pre-treatment scores (p = 0.0001). Analysis of categorical response to treatment using the CGI with a cutoff of 2 for response indicated a lower proportion of females with low total T3 responded to antidepressant treatment (p = .047).

Conclusions: Women with MD and low total T3 show less response to antidepressant treatment.

NR247 Tuesday, June 2, 12 noon-2:00 p.m.

Quality of Life in Depressed Spanish Patients After Six-Months of Treatment with Venlafaxine

Julio Bobes, M.D., Department of Psychiatry, University Oviedo, Julian Claveria 6, Oviedo 33006, Spain; Enrique Baca-Garcia, M.D., Leonardo Casais, M.D., Miguel Roca, M.D., Maria P. Gonzalez, Ph.D.

Summary:

Aim: To determine the evolution of QoL in depressed patients after six months with venlafaxine.

Patients and Methods: A total of 692 of 1159 depressed patients (ICD-10 criteria) completed a Spanish multicenter six-month follow-up. Assessment: Hamilton Depression Scale (HDRS) and SF-36. Statistical analysis: Wilcoxon and Kruskall-Wallis tests.

Results: Mean age was 47.3 (SD 13.4), 71.7% were female, 42.7% had depressive episode, 37.6% recurrent depressive disorder, and 19.7% dysthymia. Global clinical impression: 11.1% extremely severe, 33.7% severe, 49.8% moderate, and 5.4% mild. HDRS mean score 23.5 (SD 6.1), mean doses of venlafaxine 91.8 mg/d (SD 46.95). Highly significant improvements were observed in all eight SF-36 scales after six months, the greatest being role emotional (69.25 points). At baseline, the greater the severity the lower the QoL, except in bodily pain. After six months significantly greater improvement in QoL was seen in the more severe patients.

Conclusions: Considerable improvement was seen in QoL after six months of treatment with venlafaxine. An inverse relationship exists between the severity of the depression at baseline and the degree of QoL improvement after six months of treatment.

NR248 Tuesday, June 2, 12 noon-2:00 p.m.

Depression in Clinical and Analogue Samples

Brian J. Cox, Ph.D., Psychiatry, University of Manitoba, PS 430 771 Bannatyne Ave, Winnipeg MB R3E 3N4, Canada; Murray W. Enns, M.D., Sharon C. Borger, B.A., James D.A. Parker, Ph.D.

Summary:

Objective: University students with self-reported depressed mood are often used as analogue subjects in depression research. This practice is controversial because it is based on an assumption that clinically depressed and analogue samples have a qualitatively similar depressive experience, differing only in severity or quantitatively (continuity view). The validity of the continuity view was tested by directly comparing the nature of the depressive experience in clinical and analogue samples.

Method: A total of 101 adult outpatients with a primary diagnosis of major depressive disorder were compared with 175 analogue depressed university students on self-report severity ratings of all of the DSM-IV symptoms of major depressive episode. The equality of the covariance matrices for the two samples was assessed using Statistica 5.1.

Results: Several goodness-of-fit indices revealed that the covariance matrices of the depression symptoms were virtually identical in the two samples.

Conclusions: These and other results from the study support a continuity view of the depressive experience in analogue and clinical samples. Results also indicated that although the two samples differed in severity or quantitatively, the nature of the depressive experience did not appear to be one of transient and mild distress for many individuals in the analogue sample.

NR249 Tuesday, June 2, 12 noon-2:00 p.m.

Antipsychotic Agents in Bipolar Disorder

Jose de Leon, M.D., UK/MHRC, Eastern State Hospital, 627 West Fourth Street, Lexington KY 40508; Ana Gonzalez-Pinto, M.D., Miguel Gutierrez, M.D., Jose L. Perez Deheredia, M.D., Fernando Mosquera, M.D., Juan L. Figuerido-Poulain, M.D., Edorta Elizagarate, M.D.

Summary:

Background: The ideal treatment for bipolar disorder is monotherapy with a mood stabilizer (APA, 1994). In clinical practice, bipolar patients are frequently treated with several medications including antipsychotics.

Method: All 169 patients with bipolar I disorder who attended any of the state of Alava's (Spain) Mental Health Centers from 1994 to 1996 were included. They were studied using the SCID-P interview and DSM III-R criteria and RDC-FH (family history). Clinical records, which are easily available in Alava, were reviewed thoroughly to follow up pharmacological treatment. The presence of antipsychotic treatment was defined as taking any of these agents for at least one month, even in low doses.

Results: A total of 76% of patients have received antipsychotics for one month in the last two years. Antipsychotic treatment was associated with a history of psychotic symptoms ($p < 0.01$) and early age of onset ($p < 0.01$).

Conclusions: Our results were similar to those of Verdoux et al. (1996), but we did not find an association of antipsychotic treatment with low socioeconomic status. Although more studies are needed to determine efficacy, clinicians frequently use low doses of antipsychotics as adjunctive treatment in bipolar disorder.

This study was funded by the Spanish Government (FIS 97/0851) and the Basque Government.

NR250 Tuesday, June 2, 12 noon-2:00 p.m.

Observational Study of the Response and Tolerance to Venlafaxine in Patients with Depression

Jeronimo Saiz-Ruiz, M.D., Department of Psychiatry, Hosp Ramon Cajal, Ctra. Colmenar Viejo KM9100, Madrid 28034, Spain; Dr. Angela Ibanez, Dr. Laura Ferrando, Dr. Francisco Arias, Dr. Jesus Padin, Dr. Manuel Martin, Prof. Jose Luis Carrasco, M.D.

Summary:

The response and tolerance to venlafaxine treatment was evaluated in a pharmacovigilance study performed in a large sample of Spanish patients arranged in two groups: patients who previously had showed inefficacy (INE-Group) or intolerance (INTO-Group) in the treatment of depression with selective serotonin reuptake inhibitors (SSRIs). Patients of both sexes, at least 18 years of age and who met DSM-IV criteria for major depression (single, recurrent, or bipolar) were included in the study. Efficacy was evaluated by the Montgomery and Asberg Depression Rating Scale (MADRS), 17-item Hamilton Rating Scale for Depression (HAM-D), Hamilton Rating Scale for Anxiety (HAM-A), and patient/physician global clinical impression (GCI). Tolerance to the treatment with venlafaxine was evaluated by the UKU scale of adverse events as well as by the patient/physician global clinical impression (GCI). MADRS, HAM-D, and HAM-A scores decreased significantly, thus showing a meaningful efficacy of the treatment. Based on both CGI obtained, 53 (physician's CGI) and 52 (patient's CGI) of 80 patients were *much* or very much *improved* relative to baseline. Furthermore, 59 (physician's CGI) and 61 (patient's CGI) of 94 patients had a *good* or an *excellent* tolerance to the venlafax-

ine treatment. While 54.3% of patients reported adverse effects in previous SSRI treatments, only 26.6% of patients reported adverse effects at the end of the venlafaxine treatment. No significant differences were found between INE-Group and INTO-Group with respect to the changes found for efficacy or tolerance indexes studied. In conclusion, venlafaxine provided significant relief of depressive symptoms and was generally well tolerated in those patients who had discontinued other SSRIs because of inefficacy or side effects.

NR251 Tuesday, June 2, 12 noon-2:00 p.m.

Atypical Depression in Private Practice Outpatients

Franco Benazzi, M.D., Psychiatry, Via Pozzeto 17, Castiglione Di Cervia RA, Cervia RA 48010, Italy

Summary:

Objective: To study the prevalence of DSM-IV atypical depression and to compare atypical vs nonatypical depression in private practice.

Methods: A total of 203 consecutive unipolar/bipolar depressed outpatients presenting for treatment were interviewed with the Comprehensive Assessment of Symptoms and History, MADRS, and GAF scales.

Results: Prevalence was 31%. Of the variables investigated (unipolar/bipolar diagnosis, age, gender, psychosis, comorbidity, chronicity, duration of illness, recurrences, severity), bipolar II diagnosis was significantly more common (60% vs 37%), age at baseline was significantly lower (40 vs 46 y), duration of illness was significantly lower (11 vs 15 y), proportion of females was significantly higher (80% vs 62%), and psychiatric comorbidity was significantly higher (68% vs 53%) in atypical (n = 63) vs nonatypical (n = 140) depression. Bipolar II atypical depression (n = 38) had significantly earlier age at baseline (38 vs 46 y), earlier age at onset (26 vs 31 y), and more females (81% vs 62%) than nonatypical depression.

Conclusions: There are important clinical differences between atypical and nonatypical depression. A bipolar II form might be separated from the broad category of atypical depression.

NR252 Tuesday, June 2, 12 noon-2:00 p.m.

Bipolar Versus Unipolar Psychotic Outpatient Depression

Franco Benazzi, M.D., Psychiatry, Via Pozzeto 17, Castiglione Di Cervia RA, Cervia RA 48010, Italy

Summary:

Objective: To compare bipolar with unipolar psychotic depression in private practice outpatients.

Method: Forty-eight consecutive psychotic depressed outpatients were interviewed by a senior psychiatrist in his own private practice with the Comprehensive Assessment of Symptoms and History, the Montgomery Asberg Depression Rating Scale (MADRS), the Global Assessment of Functioning Scale, and the Brief Psychiatric Rating Scale (BPRS).

Results: A total of 43.7% had bipolar (I+II) disorder, 56.2% had major depressive disorder. Of the variables investigated (age, duration of illness, severity, recurrences, atypical features, chronicity, gender, comorbidity, hallucinations, delusions), only depression severity, measured by MADRS and BPRS, was significantly (p 0.0087; p 0.0475) greater in bipolar than in unipolar psychotic depression.

Conclusions: Bipolar psychotic depression was similar to unipolar psychotic depression on variables reported to distinguish bipolar from major depressive disorder (age, gender, recurrences, atypical features, comorbidity).

NR253 Tuesday, June 2, 12 noon-2:00 p.m.

Screening for Bipolar Disorder in Substance Users

Kevin L. Sloan, M.D., 4731 84th Ave SE, Mercer Island WA 98040-4322; Dan R. Kivlahan, Ph.D., Andrew John Saxon, M.D.

Summary:

Objective: Bipolar disorder is increasingly recognized to have frequent comorbidity with substance use disorders but to be commonly undetected. Unfortunately, there are no current standardized screening procedures.

Methods: We constructed a 19-item, one-page, self-report form to screen for bipolar disorder and piloted the instrument in 262 consecutive applicants for substance use treatment.

Results: These pilot data show reasonable internal consistency (α = .850) and high rates of manic symptomatology (36%), previous bipolar diagnosis (29.7%, 51% of whom have been psychiatrically hospitalized), and exposure to mood stabilizers (19.6%, 65% of whom reported therapeutic benefit). Comparison of different scoring algorithms with clinical criterion diagnoses found that self-report of bipolar diagnosis was optimally sensitive (sensitivity 80.0%, specificity 75.5%, positive predictive value (PPV) 43.5%, negative predictive value (NPV) 94.1%). Either self-report of bipolar diagnosis with hospitalization (sensitivity 62.0%, specificity 90.6%, PPV 60.8%, NPV 91.0%) or self-report of exposure to mood stabilizers with therapeutic response (sensitivity 52.0%, specificity 92.0%, PPV 60.5%, NPV 89.0%) was optimally specific. Symptom self-report items had significantly poorer sensitivity and specificity ($F = 7.60$, $p < .01$).

Conclusions: Self-report screening for bipolar disorder in a substance use disorders population is reliable and practical. Further work using structured diagnostic interview as the criterion diagnosis is underway to validate this instrument.

NR254 Tuesday, June 2, 12 noon-2:00 p.m.

Bipolar Disorder and Antidepressants

S. Nassir Ghaemi, M.D., Psychiatry, George Washington University, 2150 Penn Ave, NW, 8th Floor, Washington DC 20037; Erica E. Boiman, B.A., Frederick K. Goodwin, M.D.

Summary:

Objective: How accurately is bipolar disorder (BP) diagnosed? What are the effects of antidepressants on BP's course?

Methods: Diagnostic and treatment history was assessed in 29 outpatients with SCID-based DSM-IV BP (12 type I, 6 type II, 11 NOS).

Results: Major depression occurred earlier than mania or hypomania (age of onset 18.3 years vs. 25.8 years and 23.8 years, respectively), lasted longer (ill 47% of lifetime for depression vs. 10% for mania/hypomania), and was more frequent (5.8 lifetime depressive vs. 2.2 manic episodes). Bipolar diagnosis occurred 9.6 years after first seeking professional help. Antidepressant preceded mood stabilizer use by 4.1 years, and 70% never received mood stabilizer monotherapy. The most common previous diagnosis was unipolar major depressive disorder (67%). A total of 41% of patients developed mania or hypomania due to antidepressant use, and 35% developed rapid-cycling (mood episodes/year rose from 2.9 to 9.1 but amount of time ill fell from 52% to 39%.

Conclusion: BP is underdiagnosed, perhaps due to the earlier onset and greater duration of depressive symptoms. Antidepressants are used earlier than mood stabilizers and mood stabilizer monotherapy is uncommon. Antidepressant-induced rapid-cycling produces more mood episodes but perhaps a mild decline in amount of time ill. Further data will also be presented.

NR255 Tuesday, June 2, 12 noon-2:00 p.m.

Nefazodone in the Treatment of Elderly Patients with Depression

Charles S. Wilcox, Ph.D., Research Institute, Pharmacology, 10691 Los Alamitos Blvd #101, Los Alamitos CA 90720; Robert David Linden, M.D., M. Frances D'Amico, M.S., Robert McQuade, Ph.D., Alan L. Schneider, M.D., Judy L. Morrissey, M.S.N., Jon F. Heiser, M.D.

Summary:

Nefazodone is a phenylpiperazine derivative that is distinctly different from tricyclic antidepressants, monoamine oxidase inhibitors, and the selective serotonin reuptake inhibitors. It is important for clinicians to know the relative advantages (and disadvantages) of antidepressants in order to maximize their therapeutic potential.

We are reporting on the results of an open-label, two-phased, 52-week trial involving 90 depressed patients: 50 patients < 65 years and 40 patients ≥ 65 years. The acute phase completion rates were essentially identical, as were the response rates, when measured by the CGI: Global Improvement rating of much or very much improved. Because elderly patients are generally more susceptible to the potential adverse effects (AEs) of antidepressants, the incidence of AEs and comparative changes in electrocardiograms were of particular interest, as well as antidepressant efficacy. There were no statistically significant differences in the incidence or severity of adverse effects in the adult vs. elderly patients. There were no clinically significant EKG changes in either age group. Similarly, the dosage range was 100-600mg/day, with mean daily dosages being comparable (<65 yrs = 366 mg/day; ≥ 65 yrs = 336 mg/day).

The overall results indicated that nefazodone is equally well tolerated and efficacious in both adult and elderly depressed patients.

NR256 Tuesday, June 2, 12 noon-2:00 p.m.

Influence of ECT in the rCBF Studied by HMPAO-SPECT

Edorta Elizagarate, M.D., Department of Psychiatry, Hospital Santiago, Olaguibel 29, Vitoria-Alava 01004, Spain; Ana Gonzalez-Pinto, M.D., Miguel Gutierrez, M.D., Jose L. Perez Deheredia, M.D., Julia Cortes, M.D., Ignacio Alonso, M.D., Pilar Alcorta, M.D.

Summary:

Objective: This research studies the regional cerebral blood flow (rCBF) response to electroconvulsive therapy (ECT).

Method: This is a longitudinal prospective study of a cohort of 17 patients with major depression (CID 10, IC) resistant to pharmacological treatment or with melancolic depression. Patients were given bilateral brief pulse ECT three times a week, during six to 12 sessions according to the standards of the Psychiatric Department of the Santiago Apostol Hospital of Vitoria. Patients were all assesed with the Hamilton Depression Scale (17 items), Montgomery and Asberg Scale, Newcastle Scale, with the Mini Mental Scale, and rCBF measured by HMPAO-SPECT

Results: The pattern of distribution of the regional cerebral flow during the ECT shows changes from the basal pattern in all patients: (1) 100% of the patients had a relative increased perfusion of the temporal lobes (15 bilateral, 2 unilateral) and of the basal ganglia (13 bilateral, 4 unilateral). (2) Other changes from the basal study were: areas of decreased perfusion of the occipital lobe (11 patients) and of the parietal lobe (7 patients).

Conclusion: The brain perfusion SPECT study of these patients with major depression shows changes during ECT.

NR257 Tuesday, June 2, 12 noon-2:00 p.m.

Antenatal Depression and Early Development Milestones of the Offspring

Matti Joukamaa, Ph.D., Psychiatry, Peltolantie 5, Oulu 90220, Finland; Pirjo Maki, M.D., Matti K. Isohanni, M.D., Juha Veijola, Ph.D., Marjor-Riitta Jarvelin, Ph.D.

Summary:

Objective: The aim of the present study was to determine the connection between matemal antenatal depression and the developmental milestones of the offspring.

Method: During pregnancy mothers of 12,058 babies in the Northern Finland 1966 birth cohort were asked by a nurse at the antenatal clinic if they felt themselves depressed. The offspring's development (the age of learning to stand, walk and talk, as well as timing of potty training and being dry during the day) was available based on a routine, one-year examination in child welfare clinics.

Results: The proportion of infants (boys and girls together) with delayed development was higher in the group of offspring of depressed mothers than among the offspring of non-depressed mothers in terms of each of the above mentioned developmental milestones. When adjusted for mothers' social class, marital status, and desirability of the pregnancy, the difference remained in the boys' group concerning the timing of potty training (OR 1.4; 95%CL 1.2-1.7) and in girls' group for potty training (OR 1.2; 95%CL 1.004-1.5), wetting at day time (OR 1.3; 95%CL 1.02-1.6) and at night time (OR 1.2; 95% CL 1.04-1.5).

Conclusions: The maternal antenatal depressed mood was associated with delayed developmental milestones. It is important to assess depression during pregnancy, which is easy to do as a part of the antenatal clinic health examination.

NR258 Tuesday, June 2, 12 noon-2:00 p.m.

OCD with Comorbid Depression: A Comparison of Sertraline and Desipramine Treatment

Philip T. Ninan, M.D., Department of Psychiatry, Emory University, 1701 Uppergate Drive, Room 126, Atlanta GA 30322; Rudolf Hoehn-Saric, M.D., Stephen M. Stahl, M.D., Cathryn M. Clary, M.D., Wilma Marcia Harrison, M.D.

Summary:

Objective: Drugs such as selective serotonin reuptake inhibitors (SSRIs) that increase serotonergic transmission are the most effective against obsessive-compulsive disorder (OCD), although unpublished evidence suggests that at high doses, noradrenergic drugs may also affect serotonergic transmission. Sertraline is a potent, highly selective SSRI that has been shown to be effective in the treatment of both depression and obsessive-compulsive disorder—this study compared sertraline with the predominantly noradrenergic agent, desipramine, in patients with concurrent OCD and MDD.

Methods: Multicenter, double-blind, parallel-group, 12-week comparator study of sertraline (50-200 mg.) vs. desipramine (50-300mg.) in 159 outpatients ≥ 18 years w/SCID-diagnosed OCD (Y-BOCS ≥ 20) for ≥ 2 years and comorbid major depression (24-item Ham-D score ≥ 18). One week, single-blind placebo lead-in; two-week taper period at the end of the 12 weeks.

Results: A total of 54% of sertraline patients vs 38% of desipramine-treated patients were Y-BOCs responders (≥ 35% reduction in score), a difference that was significant ($p \leq 0.05$). A total of 40% vs. 24% of sertraline and desipramine patients, respectively, were in remission from depression (Ham-D total score ≤ 7), a significant difference ($p < .05$), and sertraline was significantly more effective in reducing the Ham-D total score than desipramine ($p \leq 0.05$). Sertraline was better tolerated than desipramine, with

fewer adverse events and less discontinuations for adverse events (2.6% for sertraline vs. 21% for desipramine).

Conclusions: The results of this study confirm that sertraline is an effective agent for obsessive-compulsive disorder, even in the presence of major depression, and that sertraline treatment produced a more vigorous antidepressant response than did desipramine in this population.

This research was supported by Pfizer, Inc.

NR259 Tuesday, June 2, 12 noon-2:00 p.m.

Citalopram for Premenstrual Dysphoria: Intermittent Versus Continuous Administration

Elias Eriksson, Ph.D., Pharmacology, Goteborg University, PO Box 431, Goteborg S-40530, Sweden; Ida Wikander, M.D., Bjorn Andersch, M.D., Inger Dagnell, M.D., Dimitri Zylberstein, M.D., Finn Bengtsson, M.D., Charlotta Sundblad, Ph.D.

Summary:

Objective: To explore the efficacy of the serotonin reuptake inhibitor (SRI) citalopram for the treatment of premenstrual dysphoria (PMD).

Method: Citalopram was administered for three cycles to women suffering from severe PMD. One group (n = 17 completers) was administered citalopram continuously at a constant dose (20 ± 10 mg/day) throughout the cycle. A second group (n = 17) also received citalopram, but at a lower dose in the follicular phases (5 mg/day) than in the luteal phases (20 ± 10 mg/day) (=semi-intermittent treatment). A third group (n = 18) received citalopram (20 ± 10 mg/day) in the luteal phase only (and placebo during the follicular phase) (=intermittent treatment). A fourth group (n = 17) received placebo throughout the cycles. Drop-outs: 1-3/group.

Results: Intermittent administration of citalopram was more effective than placebo both with respect to reduction in self-rated irritability (=main outcome measure) and with respect to self-rated global improvement; interestingly, intermittent treatment with citalopram appeared more effective also than continuous or semi-intermittent administration of the drug.

Conclusion: The results support our previous observation that SRIs reduce premenstrual complaints with a short onset of action. Also, they indicate that SRIs, when used for PMD, may be associated with a slight development of tolerance that can be avoided by intermittent drug administration.

Sponsors: Swedish MRC and Lundbeck AB.

NR260 Tuesday, June 2, 12 noon-2:00 p.m.

Gender Differences in CSF Thyrotrophin Releasing Hormone

Mark A. Frye, M.D., NIMH, National Institute of Mtl Hlth, Building 10 Room 3N212, Bethesda MD 20892; Keith A. Gary, Ph.D., Teresa Huggins, Ph.D., John T. Little, M.D., Robert T. Dunn, M.D., Timothy A. Kimbrell, M.D., Robert M. Post, M.D.

Summary:

In light of TRH's postulated role as an endogenous antidepressant, this investigation was conducted to assess the cerebrospinal fluid (CSF) levels of TRH based on gender and diagnosis.

A total of 56 mood disordered patients (21 m, 35 f, 28 BPI, 28 UP) and 34 controls (CON) studied in the Biological Psychiatry Branch, NIMH, underwent a double-blind or medication free, lumbar puncture. CSF TRH radioimmunoassay was completed blind to mood state and diagnosis.

There was no difference between mean CSF TRH in patients (or by diagnostic subtype) compared with controls (BP = 3.7 pg/ml, UP = 2.99 pg/ml, CON = 3.61 pg/ml, n = 90, F = 0.91, p = 0.41). TRH was, however, lower in females (2.95 pg/ml) than males (3.98 pg/ml, n = 90, t = 2.02, p < 0.05, ANOVA BP vs. UP vs. CON p < 0.05). A post-hoc t-test revealed the greatest gender difference in the bipolar group (t = 2.52, p < 0.024) in comparison with the unipolar (t = 0.74, p < 0.47), and control groups (t = 0.024, p < 0.98). There was no correlation between CSF-TRH and mood (n = 47, r = 0.16, p = 0.91).

These data, although not consistent with previous reports of elevated CSF-TRH in depression, do suggest important gender differences (i.e., lower values in women) that may have important implications for further study and clinical treatment.

NR261 Tuesday, June 2, 12 noon-2:00 p.m.

Tryptophan Depletion in Premenstrual Dysphoric Disorder

A. Chris Heath, M.D., Psychiatry, Southwestem University, 5323 Harry Hines Blvd., Dallas TX 75235; Kimberly A. Yonkers, M.D., Paul Orsulak, Ph.D., Michael J. Bennett, Ph.D., Robert Koonce, M.S., A. John Rush, M.D.

Summary:

Dysregulation of serotonergic neurotransmission has been linked to premenstrual dysphoric mood disorder (PMDD). This study examined the mood effects of depleting the precursor to serotonin, tryptophan (Trp). PMDD women were administered a diet and drink containing all neutral amino acids minus Trp, during the follicular (asymptomatic) phase of their menstrual cycle. Mood was measured using the Inventory of Depressive Symptomatology-Clinician Rated Version (IDS-C) at baseline and after 24 hours, and the Profile of Mood States (POMS) at baseline and six hours. Levels of Trp were obtained by HPLC analysis of serum. Patients (n = 14) given a low Trp diet for 24 hours were administered an amino acid cocktail containing 19, 50, 75, or 100 grams of a balanced amino acid mixture without Trp or a control diet and cocktail (Vivonex®). Subjects were tested twice under double-blind conditions. Worsened mood and decreased Trp levels corresponded with increasing amounts of amino acids without Trp. After six hours, Trp concentrations changed as follows: Vivonex®: 5.6uM (SD+/– 1.6); 19 grams amino acid in solution: 16.5uM (+/–1.2); 50 grams amino acid: 22.5uM (+/– 1.5); 75 grams amino acids: 34.5uM (+/– 1.5). This pilot study expands previous work by suggesting that tryptophan can be depleted in a dose-dependent fashion.

NR262 Tuesday, June 2, 12 noon-2:00 p.m.

Effect of Gonadal Steroids on HPA Axis Function

Catherine A. Roca, M.D., BPB/SBE, NIMH, 10 Center Drive MSC 1276, Bethesda MD 20892; Margaret Altemus, M.D., Peter J. Schmidt, M.D., Patricia Deuster, Ph.D., Philip W. Gold, M.D., Dennis L. Murphy, M.D., David R. Rubinow, M.D.

Summary:

This study investigates the individual effects of hypogonadism and gonadal steroid replacement on HPA axis function in female volunteers. Subjects (n = 8) participate in an exercise stress test under the following conditions: GnRH agonist (GnRH-A) induced hypogonadism, GnRH-A plus estradiol, and GnRH-A plus progesterone. The treadmill exercise stress provides a reproducible, quantifiable stressor. During the test, the intensity of the exercise is increased over 20 minutes until subjects reach 90% of their maximal exercise consumption (VO_2 max). Blood for hormone levels is drawn at 10-minute intervals. Results are analyzed by ANOVA-R and post-hoc Bonferroni tests. Preliminary results indicate a significant hormone condition x time effect (p < 0.05) for cortisol, which reflects a significant increase in cortisol secretion (i.e., area under the curve, p = 0.02) during progesterone replacement relative to the hypogonadal state. Similarly, the mean peak and area under the curve values for ACTH were increased during

both hormone replacement phases relative to the hypogonadal phase; however, these differences were not significant, possibly due to Type II error. These data are some of the first direct evidence for modulation of the HPA axis by gonadal steroids in humans.

NR263 Tuesday, June 2, 12 noon-2:00 p.m.

Serotonin Genetics in Personality Disorders

Antonia S. New, M.D., Department of Psychiatry, Mt. Sinai/ Bronx VAMC, Box 116A, 130 West Kingsbridge Road, Bronx NY 10468; Joel Gelernter, M.D., Vivian Mitropoulou, M.A., Larry J. Siever, M.D.

Summary:

The etiology of personality disorders is undoubtedly multidetermined. A range of biologic measures from CSF 5-HIAA to prolactin response to fenfluramine have been found, which suggest that abnormal serotonergic function may be associated with impulsive aggression in patients with personality disorders. Preliminary data suggest that specific candidate genes may be implicated in impulsive aggression and suicidality, including a polymorphism in the tryptophan hydroxylase gene. Additionally, the "s" allele of a polymorphism in the promotor region of the serotonin transporter (SLC6A4) has been associated with increased levels of harm avoidance as measured by the Tridimensional Personality Questionnaire (Lesch et al, 1996). Apart from genetic factors, environmental factors (i.e., childhood trauma) have been implicated in the etiology of personality disorders (especially borderline personality disorder). We have preliminary evidence that in patients evaluated for DSM-III-R personality disorders, the "s" allele of SLC6A4 is associated with lower self-reported measures of early trauma as assessed by the Childhood Trauma Questionnaire (n = 69). Specifically, there was a linear relationship between presence of the "s" allele and lower physical abuse scores (s/ss: 44.0 ± 12.2, n = 11; s/l 60.4 ± 19.3, n = 40; l/l 62.7 ± 19.7, n = 11; $F[1,2] = 5.2$, $p < .02$), physical neglect scores (s/s: 15.3 ± 3.4, n = 11; s/l: 17.0 ± 4.2, n = 40; l/l: 18.9 ± 5.5, n = 18; $F[1,2] = 4.5$, $p < .03$), as well as total score (s/s: 94.9 ± 18.2, n = 11; s/l: 118.6 ± 26.7, n = 40; l/l: 122.5 ± 30.5, n = 18; $F[1,2] = 6.05$, $p < .01$); while there was a trend relationship for sexual abuse (s/s: 6.6 ± .92, n = 11; s/l: 9.5 ± 5.9, n = 40; l/l: 10.3 ± 5.0, n = 18; $F[1,2] = 3.1$ $p < .08$). These data raise the possibility that trauma and genetics may have independent influence in the development of personality disorders.

NR264 Tuesday, June 2, 12 noon-2:00 p.m.

Differences Between Clinical and Research Practice in Diagnosing Personality Disorders

Mark Zimmerman, M.D., Department of Psychiatry, Rhode Island Hospital, 235 Plain Street Ste 501, Providence RI 02905; Jill I. Mattia, Ph.D., Sharon Younken, B.A., Melissa Torres, B.A.

Summary:

Objective: The development of measures to evaluate the DSM personality disorders (PDs) followed the same approach as assessment of axis I disorders—individuals are asked direct questions related to the criteria. Some researchers have suggested that the direct questioning approach may be appropriate for assessing axis I disorders, but is at variance with how clinicians evaluate personality in clinical practice. The goal of the present study was to compare the rates of PD diagnosis in patients who were diagnosed by unstructured clinical evaluations and semi-structured research interviews.

Method: Two samples were studied. The first was a consecutive series of 500 outpatients evaluated by a routine unstructured clinical interview in the private practice of the Rhode Island Hospital Department of Psychiatry. The second sample, collected subsequent to the first one, consisted of 409 patients who presented to the same practice and who were evaluated with semi-structured research diagnostic interviews. The diagnostic evaluation included the borderline and antisocial (PD) sections of the Structured Interview for DSM-IV Personality (SIDP).

Results: The demographic characteristics of the groups were comparable. There were no differences regarding age, gender, education, or race. The rate of PD diagnoses was significantly higher in the patients diagnosed with the SIDP than the patients diagnosed by unstructured clinical interview (borderline PD 14.4% vs. 0.4%; antisocial PD 2.9% vs. 0.4%).

Conclusions: These results suggest that during the initial diagnostic evaluation clinicians are reluctant to diagnose borderline and antisocial PD, and the prevalence of these diagnoses is much higher when research interviews are used.

NR265 Tuesday, June 2, 12 noon-2:00 p.m.

The Prevalence of the DSM-IV Impulse Control Disorders in Psychiatric Outpatients

Mark Zimmerman, M.D., Department of Psychiatry, Rhode Island Hospital, 235 Plain Street Ste 501, Providence RI 02905; Jill I. Mattia, Ph.D., Sharon Younken, B.A., Melissa Torres, B.A.

Summary:

Objective: DSM-IV identifies five specific impulse control disorders (intermittent explosive disorder, kleptomania, pyromania, pathological gambling, trichotillomania). Reports about these conditions are often based on samples ascertained by advertisements seeking to evaluate individuals with specific problems such as explosive temper or hair pulling. We are not aware of any studies of the prevalence of impulse control disorders in an outpatient psychiatry practice.

Method: A consecutive series of 411 psychiatric outpatients seen in the Rhode Island Hospital Department of Psychiatry private practice were evaluated with the Structured Clinical Interview for DSM-IV (SCID). Using the same format of the SCID, the authors wrote diagnostic modules for each of the five DSM-IV impulse control disorders. Criteria and diagnostic modules were also written for another three impulse control disorders that have recently been described in the literature: compulsive exercise, compulsive sexual behavior, and compulsive shopping. McElroy's criteria for compulsive shopping were used as the model for the compulsive exercise and sexual behavior definitions.

Results: Fifty-two (12.7%) patients had a current impulse control disorder and 84 (20.4%) had a lifetime history of an impulse control disorder. The most frequent current/lifetime specific diagnoses were compulsive shopping (5.6% / 9.0%) and intermittent explosive disorder (3.8% / 6.2%). For each of the other six disorders the current prevalence was less than 2%. Co-occurrence of impulse control disorders was low. Only four (7.7%) of the 52 patients with a current and nine (10.7%) of the 84 patients with a lifetime history of an impulse control disorder had more than one.

Conclusion: In summary, we found that as a group impulse control disorders were not rare, though the frequency of individual disorders was low. In contrast to anxiety, substance, and personality disorders, comorbidity amongst the impulse control disorders was low.

NR266 Tuesday, June 2, 12 noon-2:00 p.m.

Body Dysmorphic Disorder in Psychiatric Outpatients

Mark Zimmerman, M.D., Department of Psychiatry, Rhode Island Hospital, 235 Plain Street Ste 501, Providence RI 02905; Jill I. Mattia, Ph.D., Sharon Younken, B.A., Melissa Torres, B.A.

Summary:

Objective: To determine the prevalence and correlates of BDD in a heterogeneous outpatient sample.

Method: BDD diagnoses based on research and unstructured clinical interviews were compared in two groups of psychiatric outpatients drawn from the same practice setting. Five hundred patients were diagnosed according to a routine unstructured clinical interview. Subsequent to the completion of the first study, the method of conducting diagnostic evaluations was changed and 500 patients were evaluated with the Structured Clinical Interview for DSM-IV (SCID) as part of their intake evaluation. Psychosocial functioning and suicidality were evaluated with items from the Schedule for Affective Disorders and Schizophrenia (SADS).

Results: No patient was diagnosed with BDD in the clinical sample, whereas 16 (3.2%) patients were diagnosed with BDD in the SCID sample. Three (0.6%) patients received BDD as their principal diagnosis. The patients with BDD received significantly more current Axis I diagnoses, and were significantly more likely to have current OCD and social phobia. The most frequent diagnosis in BDD patients was major depression (68.8%); however, there was no difference in the rate of MDD in the patients with and without BDD. The BDD patients were rated lower on the GAF, they had poorer social relationships, and they were also more likely to have never married. There was no association between BDD status and lifetime history of suicidal behavior or psychiatric hospitalization.

Conclusions: BDD is a infrequent disorder in an outpatient setting that is very rarely recognized when clinicians conduct their routine diagnostic interview. Although it is usually not patients' principal reason for seeking treatment, the majority of patients with BDD want their treatment to address these symptoms. Patients with BDD tend to be sicker and more functionally impaired than patients without BDD.

NR267 Tuesday, June 2, 12 noon-2:00 p.m.

History of Childhood Abuse and Personality Traits in Non-Psychiatric Adult Population

Stanley W. Raczek, M.D., Dept of Psych, U.S. Naval Hospital PSC 827 Box 4837, FPO AE 09617 U.S.A., Lindsay D. Paden, M.D.

Summary:

Objectives: In several recent studies childhood abuse has been implicated as a significant etiologic factor in the development of personality disorders. However, a significant limitation of many of these studies is the fact that they focus mainly on the psychiatric patient population. In this study the association between childhood physical, sexual, and emotional abuse, and pathological traits in a normal adult population was evaluated.

Method: One hundred forty-nine nonpsychiatric adult subjects participated in the study. After informed consent was obtained, all subjects completed the Childhood Trauma Questionnaire (CTQ) and each subject was also administered Personality Inventory-OMNI developed by Loranger. The personality profile of subjects reporting a history of significant childhood trauma was compared with the personality profile of those without such history. Data were analyzed using multiple logistic regression test.

Results: The results strongly indicate a significant relationship between history of multiple childhood abuse (combined physical, sexual, and emotional abuse) and pathological personality traits, particularly traits from cluster B personality disorders in nonpsychiatric adults.

Conclusions: Findings indicate that childhood abuse may play a significant role in the development of character pathology in adulthood. Implication for the prevention of childhood abuse as well as development of Axis II psychopathology will be discussed.

NR268 Tuesday, June 2, 12 noon-2:00 p.m.

Neuropsychological Assessment in Schizotypal Personality Disorder

Antonis Kotsaftis, Ph.D., Manhattan Psychiatry Center, Dunlap 14A Wards Island Comple, New York NY 10035; Kay Kambfrakis, B.A., John Neale, Ph.D., Jean-Pierre Lindenmayer, M.D.

Summary:

Studies on assessment of cognitive functioning in schizotypal personality disorder (SPD) have been inconsistent. This could be related to small sample sizes, comorbidity between SPD and other axis I disorders, and the effects of psychotropic medication. Finding a specific and consistent pattern of cognitive deficit would help examine its possible genetic relationship with schizophrenia. The present study examined cognitive functioning in a group of well defined schizotypals using a structured diagnostic interview. Fifteen schizotypal and 17 nonpsychiatric controls were presented with a cognitive test battery that assessed language, memory, abstraction, concept formation, and cognitive flexibility. The participants were adults living in the community and all but two were not taking psychoactive medication at the time of testing. None of the subjects met criteria for axis I disorder. Schizotypals showed a statistically significant higher number of perseverations in the Wisconsin Card Sorting Test, attesting to their increased difficulty in shifting strategies and an overall diminished cognitive flexibility. The two groups did not differ on tests of memory and language. The results are consistent with those from other studies that assessed frontal lobe functioning in SPD. They also suggest similarities in deficits between SPD and schizophrenia.

NR269 Tuesday, June 2, 12 noon-2:00 p.m.

Personality Disorders in Penal Populations

Antonio Perez-Urdaniz, M.D., Psiquiatria, H Universitario, Paseo De San Vicente, 58, Salamanca 37007, Spain; Vicente Rubio-Larrosa, M.D., Yolanda Riesco Perez, M.D., Juan A. Izquierdo Torre, M.D., Santiago Sanchez Iglesias, M.D., Juan Santos, M.D.

Summary:

Objective: To establish the prevalence of personality disorders in penal population.

Method: A total of 56 male Spanish prisioners, mean age 22, were studied with the MMPI and Loranger's IPDE (International Personality Disorder Examination), DSM-III-R version. They were imprisoned for drug trafficking, assault, rape, and murder.

Results: A total of 91% of the group studied presented personality disorders, the most frequent being antisocial (79%), paranoid (52%), and borderline (45%), MMPI scales most frequently found psychopathic deviation (59%), paranoia (52%), and schizophrenia (41%). Other personality disorders were less frequent. A high correlation between the MMPI and the IPDE results was found.

Conclusion: Penal populations present a very high prevalence of personality disorders that should be considered in their rehabilitation.

NR270 Tuesday, June 2, 12 noon-12:00 p.m.

A Double-Blind Study of Risperidone for BPD

S. Charles Schulz, M.D., Department of Psychiatry, Case Western Reserve Univ., 11100 Euclid Avenue, Cleveland OH 44106; Kelly L. Camlin, L.S.W., Sally A. Berry, M.D., Lee Friedman, Ph.D.

Summary:

Introduction: Borderline personality disorder remains an enigma for both clinicians and researchers. Despite confusion over the etiology and treatment of this debilitating disorder, progress can be made by the use of pharmacotherapy intervention to reduce symptoms associated with the disorder. Over the last 20 years the low dose neuroleptic strategy has been employed to diminish symptoms of borderline/schizotypal disorder. Therefore, our group designed a double-blind, placebo-controlled study of low-dose risperidone for patients diagnosed with BPD. To our knowledge this is the first controlled study of the atypical antipsychotics for this disorder.

Method: Patients were assessed by SCID I & II. Only those patients with BPD and no history of schizophrenia or bipolar illness were included. Patients were blindly and randomly assigned to either placebo or risperidone beginning with one miligram each day and increasing, if necessary, to 4 milligrams by the end of four weeks. The dose at four weeks was held constant until the end of the study at eight weeks. Patients were rated with the HSCL 90, BPRS, as well as impulsivity and aggression rating scales.

Results: To date 22 patients have completed the study and the blind remains unbroken. A substantial number of patients have indicated a marked decrease in suspiciousness, impulsivity, and aggression. No patients have discontinued the trial because of presumed medication side effects.

Discussion: Numerous medications have been tried for BPD with some success; however, many of the medications have side effects, which diminish their acceptability. This controlled trial can be very useful for both clinicians and researchers in determining treatment for BPD and learning more about its etiology.

NR271 Tuesday, June 2, 12 noon-2:00 p.m.

Polypharmacy of BPD: Prescribing Patterns from a Naturalistic Setting

Karen J. Rosen, M.D., Psychiatry, Butler Hospital, 345 Blackstone Blvd., Providence RI 02906; Elizabeth B. Simpson, M.D., Teri B. Pearlstein, M.D., Jacqueline Pistorello, Ellen Costello, Ph.D., Ann Begin, Ph.D.

Summary:

Borderline personality disorder (BPD) affects approximately 11% of all psychiatric outpatients and 19% of all psychiatric inpatients. Despite its high prevalence and associated costs, there is a striking dearth of evidence for effective pharmacotherapy with this population. There are few double-blind, placebo-controlled studies, and no clear indications for how to manage this population pharmacologically, despite treatment with every class of psychotropic medication. In fact, very little is known about how individuals with strong borderline features are treated psychopharmacologically in natural settings.

This presentation has two purposes. First, it will present findings regarding psychotropic medications prescribed to women with strong BPD features. Second, it will compare these findings to those obtained from women with fewer BPD features. A total of 96 women consecutively admitted to a partial hospital program for women with borderline features agreed to complete a questionnaire regarding currently prescribed psychotropic medications and to participate in a structured interview for assessment of BPD (SCID-II). A total of 58 (60.4%) participants were diagnosed as having strong BPD features (met four or more BPD criteria), whereas the remaining 38 (39.6%) women were assessed as not having significant BPD features (met three or fewer BPD criteria).

Results indicated that women with strong BPD features were on multiple medications: 36 (62.1%) were on an SSRI, 23 (39.7%) were on a benzodiazepine, 7 (12.1%) were on a TCA, 25 (43.1%) were on trazodone for sleep problems, 6 (10.3%) were on venlafaxine, none were on a MAOI, 9 (15.5%) were on a neuroleptic, 11 (19.0%) were on an anticonvulsant, and only 2 (3.4%) and 3 (5.2%) were on lithium and disulfuram, respectively. There was a trend ($p < .09$) for women with strong BPD features to be prescribed a greater number of medications ($M = 2.55, SD = 1.3$) than those with fewer features ($M = 2.09, SD = 1.2$). Additionally, the more BPD criteria a patient met, the greater the number of medications she was on ($r = .21$, $p < .05$). Those with strong features were significantly more likely to be on SSRIs than those lower on BPD features ($p < .01$). Results will be discussed in terms of treatment implications.

NR272 Tuesday, June 2, 12 noon-2:00 p.m.

Pindolol Augmentation of Fluoxetine for Bulimia

Robert M. Berman, M.D., Department of Psychiatry, West Haven VAMC, 950 Campbell Avenue/116A, West Haven CT 06516; Carlos M. Grilo, Ph.D., Robin Masheb, Ph.D., Elayne Daniels, Ph.D., Diane Mickley, M.D., David Greenfield, M.D., Dennis S. Charney, M.D.

Summary:

Objective: To evaluate a pharmacologic augmentation strategy for treatment-refractory bulimia nervosa (BN). We evaluated the efficacy of administering a serotonin$_{1A}$ (5-HT$_{1A}$) receptor antagonist with a 5-HT reuptake inhibitor antidepressant in females who do not show improvement on the antidepressant alone. This augmentation strategy was chosen following its recent application in three double-blind, placebo-controlled trials for refractory depression.

Method: Subjects were adult females with DSM-IV-defined BN who have been nonresponsive to fluoxetine (a 5-HT reuptake inhibitor) administered for seven weeks at 60 mg/day. Subjects were randomized to receive for five weeks, in double-blind fashion, capsules containing either active pindolol (a 5-HT$_{1A}$ receptor antagonist) at 2.5 mg tid dosing or placebo (tid). Serial assessments with psychometrically well-established measures were administered weekly. In order to test for a possible dose-response relationship, subjects who showed insufficient clinical response to either placebo or pindolol were offered open-label (unblinded) augmentation for four weeks of pindolol 5 mg tid.

Results: This controlled trial and the open-label followup trial remain open and continue to enroll participants. At the time of abstract submission, 15 subjects completed the double-blind trial and nine completed the open-label trial. The regimen has been applied safely with a benign side-effect profile. Preliminary analyses revealed no significant differences between study groups.

Conclusions: Preliminary analyses (limited sample size of subjects enrolled to date) do not support the efficacy of pindolol as an augmentation strategy for fluoxetine-refractory BN patients.

NR273 Tuesday, June 2, 12 noon-2:00 p.m.

Controlled Clinical Trial for Binge Eating Disorder

Carlos M. Grilo, Ph.D., Department of Psychiatry, Yale Psychiatric Institute, PO Box 208038/184 Liberty St., New Haven CT 06520; Robert M. Berman, M.D., Elayne Daniels, Ph.D., Robin Masheb, Ph.D., Thomas H. McGlashan, M.D., Terence G. Wilson, Ph.D., George R. Heninger, M.D.

Summary:

Objective: To perform a controlled clinical trial for binge eating disorder (BED) to test the efficacy of cognitive-behavioral therapy (CBT) and of fluoxetine and to test the relative efficacy of these two treatments either alone or in combination.

Method: Patients with DSM-IV-defined BED were randomly assigned to one of four treatment conditions for 16 weeks of individual treatments: fluoxetine treatment (60 mg/day), pill placebo,

fluoxetine treatment (60 mg/day) combined with CBT, or pill placebo combined with CBT. The medications were administered in double-blind fashion. Serial assessments (multi-modal assessment battery) were administered at baseline, 4-, 8-, 12-, and 16-weeks.

Results: This controlled comparative trial remains open and continues to enroll participants. At the time of abstract submission, 34 BED patients (29 females, 5 males) were enrolled. Twenty-five BED subjects had completed treatments: 21 subjects completed 16 weeks and four subjects had dropped out. Overall, significant improvements in binge eating and associated psychopathology were observed during the 16-week treatments. Preliminary outcomes by treatment condition will be presented from this ongoing trial.

Conclusion: Preliminary results of this ongoing trial suggest that fluoxetine and CBT treatments for BED can be performed safely, have few problems, and produce substantial reductions in binge eating and associated psychopathology.

NR274 Tuesday, June 2, 12 noon-2:00 p.m.

Suicide Risk Predictors in Abused Adolescents

Carlos M. Grilo, Ph.D., Department of Psychiatry, Yale Psychiatric Institute, PO Box 208038/184 Liberty St., New Haven CT 06520; Dwain C. Fehon, Ph.D., Charles A. Sanislow, Ph.D., Deborah Lipschitz, M.D., Steve Martino, Ph.D., Thomas H. McGlashan, M.D.

Summary:

Objective: To examine correlates of suicide risk in psychiatrically hospitalized adolescents with reported histories of childhood abuse.

Method: A battery of psychometrically well-established psychological self-report measures was administered to a series of adolescent inpatient admissions. Subjects were 74 (22 males and 52 females) adolescents (M = 16.0 years) who scored above clinical cutoff on the Childhood Abuse Scale of the Millon Adolescent Clinical Inventory (MACI; Millon, et al., 1993).

Results: Correlational analyses revealed that the following were significantly associated with Suicide Risk Scale scores (SRS; Plutchik, et al 1989): depression (Beck Depression Inventory), self-criticism (Blatt Depressive Experiences Questionnaire for Adolescents), hopelessness (Kazdin Hopelessness Scale for Children), and violence (Plutchik Past Feelings and Acts of Violence Scale). There were no observed gender differences in suicide risk or its predictors. A multiple regression model using forced simultaneous entry was employed to test the joint and independent contributions of seven predictors of suicide risk. This model accounted for 54% of the variance in Suicide Risk Scale scores ($F(7,66) = 11.16$, $p < .0000$). Depression ($p < .000$) and alcohol problems ($p < .04$) emerged as significant independent contributions of suicide risk; violence and self-criticism were independent predictors at the trend level.

Conclusions: Our findings suggest that higher levels of depression and alcohol abuse (and perhaps violence and self-criticism) represent important predictors of suicide risk in adolescent psychiatric inpatients who report histories of childhood abuse.

NR275 Tuesday, June 2, 12 noon-2:00 p.m.

Childhood Anorexia Nervosa and the Possibility of Antibiotic Treatment

Mae S. Sokol, M.D., Menninger, Eating Disorder, PO Box 829, Topeka KS 66601-0829

Summary:

Objective: Some cases of anorexia nervosa (AN) in youngsters may be triggered by infection. This presentation describes this possible subtype of AN and its treatment.

Method: Four youngsters with AN, who had the infection-triggered subtype characteristics, were treated with an open antibiotic trial. Clinical information, weight, throat cultures, streptococcal serological tests (anti-DNase B and ASO titers), D8/17, and scores on the Children's Yale-Brown Obsessive Compulsive Scale (CY-BOCS), National Institute of Mental Health OCD scale (NIMH OCD scale), and the Yale-Brown-Cornell Eating Disorder Scale (YBC-EDS), are presented for each patient.

Results: Each patient responded with decrease in AN symptoms, weight increase, and decrease in CY-BOCS, NIMH OCD scale, and YBC-EDS scores. As the patients improved clinically, their anti-DNase B and ASO titers decreased. The patients' non-T lymphocytes with the D8/17 marker ranged from 28% to 38%. D8/17 is a B cell alloantigen associated, in several publications, with susceptibility to rheumatic fever, obsessive-compulsive disorder, and tics. Individuals are considered positive for the D8/17 marker when 12% or more of their non-T lymphocytes have the D8/17 marker.

Conclusions: Antibiotic treatment may be effective for an infection-triggered subtype of AN. Future research is necessary before this treatment becomes part of clinical practice.

NR276 Tuesday, June 2, 12 noon-2:00 p.m.

Serotonin-1A Receptor Sensitivity in Bulimia

Barbara E. Wolfe, Ph.D., Department of Psychiatry, Beth Israel Hospital, 330 Brookline Avenue, Boston MA 02215; Eran D. Metzger, M.D., David C. Jimerson, M.D.

Summary:

Objective: Decreased CNS serotonergic responsiveness may play a role in binge eating in bulimia nervosa. By measuring hypothermic responses following administration of ipsapirone, this study tested the hypothesis that increased sensitivity of pre-synaptic inhibitory serotonin-1A receptors may play a role in diminished serotonin release in bulimia nervosa.

Method: Women with bulimia nervosa ($n = 8$, age 26 ± 6 yrs, BMI 23.1 ± 1.9 kg/m^2) and healthy female controls ($n = 8$, age 23 ± 3, BMI 22.0 ± 2.1) were studied following overnight fast and bedrest. In a double-blind, placebo-controlled, randomized design, body temperature was measured using a calibrated electronic oral probe at baseline and at 15 min intervals for three hours following administration of ipsapirone (20 mg p.o.) or placebo. Placebo-adjusted temperature decreases (mean of 75, 90, and 105 min.) for study groups were compared by t-test.

Results: Baseline body temperature was not significantly different for patients ($36.41 \pm .24$°C) and controls ($36.24 \pm .20$°C). Maximum decrease in temperature occurred at approximately 90 min. following ipsapirone, consistent with previous reports. The placebo-adjusted, mean decrement in temperature for patients was 80% greater than for controls ($p < 0.1$).

Conclusions: These preliminary results show a trend consistent with the hypothesis that patients with bulimia nervosa have abnormally increased responsiveness of inhibitory pre-synaptic serotonin-1A receptors, an alteration that could contribute to diminished satiety, and possibly binge eating.

Supported by USPHS grants K07 MH00965 (BEW), R01 MH45466 (DCJ), RR 01032 (BIDMC).

NR277 **Tuesday, June 2, 12 noon-2:00 p.m.**

Eating Disorders in a National Sample of Hospitalized Female and Male Veterans: Prevalence and Psychiatric Comorbidity

Ruth H. Striegel-Moore, Ph.D., Psychology, Wesleyan University, 207 High Street, Middletown CT 06459; Vicki Garvin, Ph.D., Faith-Anne Doam, Ph.D., Robert A. Rosenheck, M.D.

Summary:

This study examined the point prevalence of eating disorders and their psychiatric comorbidity in a national sample of hospitalized female and male veterans. Prevalence rates were determined by reviewing the discharge diagnoses of 24,041 women and 466,590 men hospitalized in Veteran Affairs medical centers during fiscal year 1996. Comorbidity was examined by individually matching eating disorder cases (N = 161) with patients without an eating disorder, using sex, race, and age as matching variables. On the basis of routine clinical diagnosis, 0.30% of the female veterans and 0.02% of the male veterans were diagnosed with a current ICD-9-CM eating disorder. Women with eating disorders had significantly elevated rates of comorbid substance, mood, anxiety (particularly PTSD), adjustment, and personality (particularly BPD) disorders. Men with eating disorders were found to have high rates of comorbid organic mental, schizophrenic/psychotic, substance, and mood disorder. Our study illustrates the value of administrative data sets for the investigation of uncommon diseases.

NR278 **Tuesday, June 2, 12 noon-2:00 p.m.**

Body Image Satisfaction in the United States Versus India School Kids

Arnold E. Andersen, M.D., Department of Psychiatry, University of Iowa, 2887 JPP 200 Hawkins Drive, Iowa City IA 52242; Sanjay Gupta, M.D., Jeffrey Van Engelenhoven, B.S. Rohit Jaiman, M.B.

Summary:

Hypothesis: School children in non-Western cultures will be less dissatisfied with current body size and shape than U.S. school children, but will still demonstrate between-gender differences in body image and dieting behavior.

Methods: A total of 198 (154M, 44F) students attending an Indian (English speaking) preparatory school filled out an anonymous voluntary demographic questionnaire, plus circle-a-person body image test and an eating attitudes test. Results were compared with 222 elementary and 452 high school students in the U.S.

Results: Indian students were primarily from higher socio-economic classes. They were objectively thinner than U.S. students with the majority <18 in BMI. The large majority of Indian students considered themselves to be "just right" in weight (82%M, 89%F), in contrast to only 71% male and 49% female U.S. students. Cross-cultural similarities included: school boys wished to be heavier now ($p < .000$) while girls did not; girls wished to be thinner now and in the future ($p < .000$).

Conclusions: Despite business class social states, Indian school children are less dissatisfied with body weight than U.S. children. They do follow the stereotypical gender divergent pattern of boys wanting to bulk up and girls to become thinner. Results need to be compared with Indian village children.

NR279 **Tuesday, June 2, 12 noon-2:00 p.m.**

Psychiatric Disorders in Patients with Rheumatic Fever

Marcos T. Mercadante, M.D., Department of Psychiatry, University of Sao Paulo, Rua Ovidio Pires de Campos S/N, Sao Paulo 05403-010, Brazil; Lisa P.G. Prado, Paul J. Lombroso, M.D., M. Conceicao do Rosar Campos, M.D., James F. Leckman, M.D., Maria J. Marques-Dias, M.D., Euripedes C. Miguel, M.D.

Summary:

Background: Rheumatic fever (RF) is an autoimmune disease triggered by the group A β-hemolytic streptococci, characterized by systemic manifestations (carditis, arthritis) and central nervous system manifestations (Sydenham's chorea - SC). Recently, obsessive-compulsive disorder (OCD) and obsessive-compulsive symptoms (OCS) have been described as more frequent in Sydenham's chorea patients (SC) than rheumatic fever without SC (RF) patients. The aim of this study was to investigate the frequency of other psychiatric conditions described more frequently in OCD patients such as Tourette syndrome and attention deficit hyperactivity disorder (ADHD) in patients with RF.

Method: Sixty-two children, 22 with SC, 20 with RF, and 20 without any autoimmune disease (control group) were evaluated. The RF patients were diagnosed according to Jones criteria. Psychiatric and neurological evaluations were performed in all patients. The Schedule for Affective Disorders and Schizophrenia for School-Age Children-Epidemiological version, the Yale-Brown Obsessive Compulsive Scale, and the Yale Global Ties Severity Scale were administered to all patients.

Results: The two groups with RF presented OCD and OCS more frequently than the control group. There was no difference between them. The SC sample showed higher frequency of vocal tics ($\chi^2 = 14.347$, df = 2, $p = 0.001$) and ADHD ($\chi^2 = 21.678$, df = 2, $p = 0.0002$) than the two other groups.

Conclusions: RF seems to be a neuropsychiatric disorder. Among its psychiatric manifestations OCD may be present even in patients without SC. Tics and ADHD may represent part of the spectrum of disorders that are more frequent in SC.

NR280 **Tuesday, June 2, 12 noon-2:00 p.m.**

Panic Disorder and the Immune System

Steven J. Schleifer, M.D., Department of Psychiatry, New Jersey Medical School, 185 South Orange Avenue, Newark NJ 07103; Steven E. Keller, Ph.D., Jacqueline A. Bartlett, M.D.

Summary:

Objective: Altered immune measures are commonly reported in major depression (MD), and comorbid anxiety disorder appears to modulate immune changes in MD. Less is known about the immune system in isolated panic disorder. We report an extensive immune assessment of PD patients.

Method: Fourteen medically well, medication-free adults (age 23-49; 11 female) meeting SCID-UP DSM-III-R criteria for panic disorder (PD) with agoraphobia and free of lifetime MD were compared with 14 medically well subjects without depression or anxiety disorders matched by gender, age, and racial background.

Results: PD was associated with decreased B cells ($p < 0.025$), but no differences on other enumerative lymphocyte measures. Mitogen responses (ConA, PHA, PWM) did not differ except for a possible dose-related PWM effect ($p < 0.09$). This was not associated statistically with the changes in B cells, but related to Hamilton Depression Scale scores. PD patients, overall, did not differ in natural killer cell activity (NKCA); however, a gender by PD interaction ($p < 0.05$) revealed decreased NKCA in females with PD.

Conclusions: The limited immune changes in PD are comparable, in part, to immunologic findings in depression, and may be understood in the context of reported immune interactions of anxiety and depression in comorbid states.

Supported in part by grants from the Upjohn Company and the Chernow Foundation

NR281 Tuesday, June 2, 12 noon-2:00 p.m.

Donepezil Produces Both Clinical Global and Cognitive Test Improvement in Patients with Alzheimer's Disease

Serge Gauthier, M.D., McGill Centre for Studies, Douglas Hospital, 6825 Boul Lasalle Verdun, Quebec H4H 1R3, Canada; Martin Rosser, M.D., Jane Hecker, M.B., H. Petite, M.D., Sharon Rogers, M.D., Erich Mohr, Ph.D., Alistair Burns, M.D., Lawrence T. Friedhoff, M.D., Sharon Rogers, M.D.

Summary:

Objectives: To evaluate the effects of donepezil in a multinational (82 sites in 9 countries) cohort of AD patients.

Methods: A 24-week, randomized, double-blind, parallel-group study of donepezil 5 mg/day (n = 271), 10 mg/day (n = 273), or placebo (n = 274), followed by a six-week, single-blind, placebo washout period. Efficacy was measured by ADAS-cog and CIBIC plus. Safety was evaluated by physical and laboratory examinations, and treatment-emergent signs and symptoms (TESS) recorded.

Results: Both 5 and 10 mg/day donepezil showed statistically significant improvements in ADAS-cog and CIBIC plus at all visits (weeks 6, 12, 18, 24, and endpoint) compared with placebo. The improvement in ADAS-cog represents a 41% and 81% reduction in the annualized rate of deterioration when compared with the placebo cohort, respectively. Donepezil 5 mg/day and 10 mg/day, as compared with placebo, increased the proportion of patients judged to be improved on the CIBIC-plus by 50% and 71%, respectively. Furthermore, both doses of donepezil decreased the proportion of patients judged to be moderately to very much worse by 50%. Donepezil was well tolerated over the course of the study, with 77% of patients completing the trial. TESS were of low frequency, generally mild, and transient.

Conclusions: In this multinational AD population, donepezil significantly improved cognition and global function. Benefits were obtained in the absence of clinically significant adverse events or laboratory values. This outcome confirms the results obtained in U.S. clinical trials.

Supported by Eisai Inc, Teaneck, NJ, USA

NR282 Tuesday, June 2, 12 noon-2:00 p.m.

Can Cognitive-Behavior Therapy Substitute Medication for Controlling Panic Attacks and Anxiety Symptoms?

Young Hee Choi, M.D., Psychiatry, INJE University, 85 JUR 2 Dong Chung Ku, Seoul 100-032, Korea; Jung Heum Lee

Summary:

Purpose: The primary aim of our study was to test the hypothesis that panic disorder (PD) patients who had completed cognitive behavior therapies (CBT) could stop taking medication.

Method and Population: A total of 37 patients who met DSM-IV criteria for PD with or without agoraphobia had completed 11 weekly sessions of Panic Control Therapy (PCT; Barlow et al.) and the treatment effect was measured with several scales as the pre- and post-treatment assessment and weekly assignments.

Results: At the termination of PCT, all patients (100%) were panic free and 27 patients (73.0%) reached a status of "high end-state functioning (HES)". A total of 26 patients (70.3%) stopped medication and six patients (16.2%) reduced their medication to less than 50% of their initial dosage. Five patients (13.5%) could not reduce medication. At the three-month follow-up, three of 26 patients in the abstinent group took medication again, 23 of 37 patients (62.1%) remained medication free, and 27 of 37 patients (73.0%) still remained at HES.

Conclusions: Eleven weekly sessions of PCT provided PD patients with powerful coping strategies that could be substituted for medication for controlling panic attacks and anxiety symptoms.

NR283 Tuesday, June 2, 12 noon-2:00 p.m.

Sequencing Medication and Cognitive Behavioral Therapies for OCD

Laurence B. Guttmacher, M.D., Dept of Psychiatry, Univ of Rochester Med Ctr, 300 Crittenden Blvd, Rochester NY 14642; Jeffrey C. Levenkron, Ph.D., Katharyne M. Sullivan, M.D.

Summary:

Objective: Experts agree that optimal treatment for OCD combines medication (MED) and cognitive-behavioral therapy (CBT). We conducted a clinical trial to determine if outcome is dependent upon the sequence in which these two treatments are administered.

Method: MED consisted of 20 weeks of fluvoxamine at a target dose of 250 mg; and CBT included 10 weekly group sessions with five concurrent biweekly individual sessions. Patients were randomized to one of three conditions: (1) MED-then-CBT (n = 9), received fluvoxamine for 10 weeks, then CBT was initiated while medication was maintained; (2) CBT-then-MED (n = 12), received 10 weeks of CBT, then 20 weeks of fluvoxamine; or (3) MED-&-CBT (n = 11), simultaneously initiated fluvoxamine and CBT, and maintained fluvoxamine for 20 weeks.

Results: Y-BOCS and HAM-D ratings at baseline, 10, and 20 weeks were analyzed by a two-way ANOVA, yielding significant *M* decreases over time from 27.5 to 17.5, and 10.7 to 5.0, for each scale, respectively ($p < .01$).

Conclusions: Although Group X Time interactions were not significant, only MED-&-CBT continued to show improvement at follow-up, suggesting the benefit of concurrent rather than sequential therapies.

NR284 Tuesday, June 2, 12 noon-2:00 p.m.

Psychosocial Treatment in Late-Life Anxiety

Laszlo A. Papp, M.D., Department of Psychiatry, Columbia University, 722 West 168th Street, Unit 24, New York NY 10032; Ethan Gorenstein, Ph.D., Marc Kleber, Ph.D., Marybeth de Jesus, B.A.

Summary:

Introduction: Epidemiological surveys suggest that up to 30% of the elderly suffer from anxiety disorders, most commonly from generalized anxiety disorder (GAD). Most of these patients are treated with benzodiazepines (BZD). While they offer a number of advantages over other pharmacotherapies, BZD's may impair cognitive functioning and cause significant daytime sedation.

Methods: A cognitive-behavioral treatment (CBT) manual that has been found effective in the general population was modified to address specific problems in the elderly and the difficulties associated with BZD taper. Patients with late-life GAD treated unsuccessfully with BZD's were randomized to receive CBT in combination with medical management (MM) or MM alone for 13 weeks.

Results: Of the 17 patients randomized during the first year of the study, 12 completed the acute phase. BZD use dropped by 80% in the combination group with no deterioration in anxiety or

functioning, while the MM group remained essentially unchanged as assessed by an independent clinician.

Conclusion: CBT may offer significant benefits in elderly GAD patients as an alternative to BZD's.

NR285 Tuesday, June 2, 12 noon-2:00 p.m.

Cognitive-Behavior Therapy and Medication in the Treatment of OCD: A Pilot Study

Christo G. Todorov, M.D., Hospital Louis-H Lafontaine, 7401 Hochelaga, Montreal PQ H1N 3M5, Canada; Kieron O'Connor, Ph.D., Sophie Robillard, M.S.C., Francois Borgeat, M.D., Mathilde Brault, M.S.C.

Summary:

The aim of the study was to evaluate the effect of combining cognitive-behavior therapy (CBT) and antiobsessional medication (MED) in the treatment of obsessive-compulsive disorder (OCD). Twenty-nine OCD patients (DSM-III-R criteria) were recruited. They were evaluated at baseline and after treatment on the Yale-Brown Obsessive Compulsive Scale (Y-BOCS) by a psychiatrist who was blind to treatment modality. Patients also completed an efficacy questionnaire measuring the degree they felt able to resist their rituals. Subject's strength of belief in their obsessions was also rated. Subsequently, patients were allocated to one of the following groups: MED + CBT simultaneously (n = 9), CBT only (n = 6), MED only while waiting for CBT (n = 6), or neither MED nor CBT while waiting for CBT (n = 5). Multivariate repeated measures MANOVA revealed that Y-BOCS total score and ratings of self-efficacy to resist rituals improved significantly post-treatment in all active treatment groups. Patients who received CBT also showed a reduction in the strength of their obsessional beliefs. In conclusion, our results suggest that CBT or medication alone are equally effective. The combination of CBT and medication seems to potentiate treatment efficacy, and we found it more clinically beneficial to introduce CBT after a period of medication, rather than to start both therapies simultaneously.

NR286 Tuesday, June 2, 12 noon-2:00 p.m.

Strong Association Between Suicidal Ideation and Ratings of Limbic System Irritability in Children with a History of Early Abuse

Martin H. Teicher, M.D., Department of Psychiatry, Harvard & McLean, 115 Mill Street, Belmont MA 02154; Yutaka Ito, M.D., Carol A. Glod, Ph.D., Erika Ackerman, B.S.

Summary:

Suicide is one of the major causes of death in adolescents. It is typically linked to depression and panic-anxiety; however associations have also been made between suicide, epilepsy, and EEG abnormalities. Previous work has shown that subjects abused in childhood had elevated LSCL-33 rating scores suggestive of "limbic irritability," an increased prevalence of EEG abnormalities and epilepsy, abnormal left hemisphere EEG coherence, and diminished hippocampal volume. The aim of this study was to ascertain the degree of association between suicidal ideation, "limbic irritability," depression, and anxiety in children or adolescents with documented childhood abuse.

Twelve psychiatric inpatients (6M/6F, 11.3 years, range 8-14) completed the Reynold's Suicidal Ideation Questionnaire, the Child Depression Inventory, Child Manifest Anxiety Scale, Limbic System Checklist (LSCL-33), and underwent quantitative EEG evaluation.

As expected, there were moderate and significant correlations between suicidal ideation and depression ($r = 0.65$, $p < 0.05$), and between suicidal ideation and anxiety ($r = 0.57$, $p < 0.05$). There was an extremely high correlation between suicidal ideation and LSCL-33 score ($r = 0.97$, $p < 0.00001$). This was remarkable as the LSCL-33 asks nothing about suicidality, mood, hopelessness, or future plans. It only probes for symptoms associated with ictal features of temporal lobe epilepsy (TLE).

These findings are consonant with observation of strong association between paroxysmal EEG abnormalities and suicide, and markedly elevated risk for suicide in patients with TLE. Theoretically, this finding supports the notion that "limbic irritability" may be another risk factor in suicide, at least in the subset of patients exposed to early trauma.

Supported by NIMH Grant RO1-53636-02 to MHT.

NR287 Tuesday, June 2, 12 noon-2:00 p.m.

Neurophysins and Temperature Responses to Flesinoxan, Serotonin Agonist, in Major Depression: Relationship with Suicidal Behavior

William Pitchot, Ph.D., Psychiatry, University of Liege, Chu Du Sart Tilman, Liege B 4000, Belgium; Michel Hansenne, B.Sc., Marc M. Ansseau, Ph.D., Jean-Jacques Legros, Ph.D.

Summary:

Neurophysins (vasopressin and oxytocin) are implicated in the biology of depression. However, no data are available about the possible relationship with suicidal behavior. In the present study, we assessed neurophysins and temperature responses to flesinoxan in 24 major depressed inpatients according to DSM-IV criteria (20 M, 4 F) subgrouped into suicide attempters (n = 13) and nonattempters (n = 11). The patients were assessed after a drug-free period of at least three weeks and compared with a sample of normal controls (n = 14, 10 M and 4 F). Mean delta oxytocin- and delta vasopressin-neurophysins responses to flesinoxan were significantly lower in depressed patients compared with controls: for the area under the curve (AUC) (relative values), oxytocin-neurophysins, 88 $\pm$ 127 ng min/ml in controls and 2.5 $\pm$ 56 ng min/ml in depressed patients ($z = -2.36$, $p = 0.009$); vasopressin-neurophysins, 27.8 $\pm$ 37.8 ng min/ml in controls and -1 ± 11 ng min/ml in depressed patients ($z = -3.56$, $p = 0.0002$). There was also a significant difference between controls and depressed subjects for the temperature (delta AUC) responses to flesinoxan ($z = -1.8$, $p = 0.03$). Moreover, suicide attempters differed from nonattempters in temperature ($z = -2.6$, $p = 0.004$) but not in neurophysins' responses to flesinoxan. In conclusion, our results confirm the implication of a hyposensitivity of 5-HT1A receptors in depression.

NR288 Tuesday, June 2, 12 noon-2:00 p.m.

Eating Attitudes in Rural Zulu Adolescents in South Africa

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Summary:

Objective: The study was part of an investigation into the emerging phenomenon of eating related psychopathology in black, female adolescents in South Africa. Rural adolescents were hypothesized to be a low-risk group for the development of eating disorders relative to their urban counterparts.

Methods: The Eating Attitudes Test (EAT-26) and the Body Figure Preference Test (BFPT) were utilized. The EAT-26 was translated into Zulu for this section of the study. Questionnaire completion was supervised by the researcher together with staff from the two participating schools. The schools were located in KwaZulu-Natal. All respondents were Zulu.

Results: There were 361 participants. The mean age was 17.87 (SD = 2.77); the mean body mass index (BMI) was 23.8 (SD =

3.95). A total of 56.46% (166/294) of the sample were in social class V. The mean EAT-26 score for the sample (n = 361) was 7.47 (SD = 5.5), with 3% (n = 11) scoring 20 or above. Cronbach's coefficient Alpha was 0.61. Regarding the BFPT, 40% (n = 144) wanted to be smaller and 29% (n = 104) larger. There were significant differences on all of these parameters compared with an urban sample of black adolescents.

Conclusion: The results demonstrate that while the possibility of eating related psychopathology emerging in rural black (Zulu) adolescents exists, this is at present unlikely to be to the same extent as within the urban setting.

NR289 Tuesday, June 2, 12 noon-2:00 p.m.

Suicidal Ideation During Pregnancy

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Summary:

The prevalence rates for a major depressive episode in pregnancy parallel those of non-gravid women at a rate of about 10%. Altshuler (1994) concluded that pregnancy is not the mythically described time of "well-being" as once thought. The depressive symptomatology during pregnancy can be quite severe, but the issue of medications in pregnancy and the discomfort in pharmacologically treating these women prevents many of them from being adequately treated for major depressive episodes in pregnancy. We know that depression during pregnancy can cause low birth weights and prematurity, the number one cause of infant mortality. In conducting this study, we show the severity of depression in pregnancy in hopes of greater screening for suicidality and less hesitation in treating this group of women. Our hypothesis is that although pregnancy confers some protection against actual suicide attempts, that suicidal ideation among pregnant women with depressive symptomatology is quite high. Our preliminary data (N = 21) confirmed these findings. No actual suicide attempts were made in the group studied; however, 35% identified suicidality on the Beck Depression Inventory (BDI), 37% on the Edinburgh Postnatal Depression Scale (EPDS), and 33% were identified by the single treating physician on the Hamilton 21-Item Depression Scale (Ham-D 21) as having suicidal thoughts. These rates are consistent with those found in the general population of major depression, having 1/3 of this group reporting suicidal ideation. The strongest predictors for the presence of suicidal ideation in pregnant women included: personal psychiatric history, history of suicidal ideation, family history of suicidal ideation, and psychosocial correlates such as poor dyadic relationship. These results confirm the need for comprehensive assessment and aggressive treatment in pregnant women exhibiting depressive symptomatology. This study will include 75 women by April 1998.

This research was sponsored by the American Suicide Foundation

NR290 Tuesday, June 2, 12 noon-2:00 p.m.

Repetition of Para-Suicide in Young French People

Francoise Chastang, M.D., Centre Psych Esquirol, C.H.R.U. Cote de Nacre, 14033 Caen, France; Isabelle Dupont, M.D., Patrice Rioux, M.D., Vivianne Kovess, M.D., Edouard Zarifian, M.D.

Summary:

The rate of suicide risk among adolescents and young adults has risen significantly over the two past decades in many European countries and other industrialized countries. In France, about 40,000 suicidal adolescents are brought into hospital each year; 37% in the 15-24 age group and 47% among the 24-34 age group are repeaters. Demographic data, personal and familial characteristics, as well as DSM-III-R-based psychiatric diagnoses were collected in 369 adolescents and young adults aged 15 to 29, referred to an emergency department for psychological problems. Sixty percent of them were suicide attempters. Separations before the age of 12 and depression in the family emerged as the main features distinguishing the suicidal group from the psychiatric control group. Fifty percent of the suicide attempters were repeaters. Fostering during childhood, parasuicide, and depression in the family were found to be risk factors for repeated suicide attempts.

These results support the view that significant levels of dysfunction, together with increased psychiatric morbidity, especially suicidal behavior, characterize the families of young suicide-attempters.

NR291 Tuesday, June 2, 12 noon-2:00 p.m.

Repeated Suicide Attempters in French People Over Age 30

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Summary:

Demographic data, personal and familial characteristics, as well as DSM-III-R-based psychiatric diagnoses were collected in 685 adults over age 30 referred to an emergency department for psychological problems.

Forty-six percent of them were suicide attempters. Depression and suicide attempts in the family emerged as the main features distinguishing the suicidal group from the psychiatric control group. Forty percent of suicide attempters were repeaters.

Depression and alcohol/drug abuse were more frequent in the families of repeaters than those of first attempters. However, early separations before age 12, which have been shown to correlate with parasuicide in adolescents, were not associated with self-attempts in adults over age 30.

These findings support the view that severe family dysfunction in childhood distinguishes young self-attempters from older suicide attempters.

NR292 Tuesday, June 2, 12 noon-2:00 p.m.

Association Between the Tryptophan Hydroxylase Gene and Suicidal Behavior

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Summary:

Background: Serotonin-system-related genes are major candidates in association studies with suicidal behavior. This association study explores whether tryptophan hydroxylase (TPH) gene, which codes for the rate-limiting enzyme in the metabolic pathway of serotonin, may be a susceptibility factor for suicidal behavior.

Methods: The TPH intron 7 A218C biallelic polymorphism was determined using a polymerase-chain-reaction-based method in DNA samples followed by a RFLP analysis in 233 suicide attempters and 161 controls. All the subjects were Caucasians.

Results: There was a significant association between TPH genotypes and suicidal behavior ($p < 0.01$). The rarer A allele occurred with greater frequency in suicide attempters (0.46) than in controls (0.36). We observed a significant dose effect with higher AA genotypic frequency in violent attempters. The increasing fre-

quency of A allele in subgroups of patients with a history of depression and/or with a history of violent suicide attempt, was significant using the Armitage linearity test ($p < 0.01$).

Conclusion: A genetic variant of the TPH gene may influence serotonergic turnover and predisposition to suicidal behavior. Previous studies reported association between this gene and suicidal behavior in violent offenders and bipolar manic-depressive illness. This TPH variant might thus be associated with a common trait underlying both manic-depressive disorder, violent suicide attempts, and violent behaviors.

NR293 Tuesday, June 2, 12 noon-2:00 p.m.

Age and Suicidal Ideation in Older Inpatients

Paul R. Duberstein, Ph.D., Department of Psychiatry, University of Rochester, 300 Crittenden Boulevard, Rochester NY 14642; Yeates Conwell, M.D., Christopher Cox, Ph.D.

Summary:

Background: The likelihood of reporting depressed mood apparently decreases with older age. Community studies suggest that suicidal ideation (SI) decreases with age, but this has not been studied in psychiatric inpatients.

Method: Data were obtained from a case-control study of attempted suicide in inpatients 50 years of age and older with major depression. Analyses were restricted to patients who did attempt suicide prior to hospitalization (N = 95). Outcome variables were: suicide items on the Hamilton Depression Rating Scale and Structured Clinical Interview for DSM-III-R, Scale for Suicidal Ideation total score and death ideation items, and the Spectrum of Suicidal Behavior. Two logistic regressions were conducted for each outcome, first with age and gender as predictors, then with age, gender, marital status, living situation, and employment status entered simultaneously.

Results: For all outcome variables except the SCID item, younger age was a significant predictor of suicidal ideation, for all outcomes except the HDRS, this relationship was maintained after controlling for other demographic influences.

Conclusion: Even in this age-restricted sample, there is a negative relationship between age and SI. Clinicians who work with older patients should supplement self-report with ancillary sources of information.

Funding Source NIMH grants #K07 MH001135 and # MH54682

NR294 Tuesday, June 2, 12 noon-2:00 p.m.

Child Sexual Abuse and Suicide Attempts in Elders

Nancy L. Talbot, Ph.D., Department of Psychiatry, University of Rochester, 300 Crittenden Blvd, Rochester NY 14642; Paul R. Duberstein, Ph.D., Yeates Conwell, M.D., Diane Gill, M.Ed.

Summary:

Objective: Childhood sexual abuse (CSA) is associated with suicidal behavior in community and patient samples of adolescents and young adults. However, CSA in older psychiatric samples has not been investigated.

Method: As part of a study of suicidal behavior among psychiatric inpatients age > 50 years, data were collected concerning subjects' histories of sexual abuse prior to age 18. Analyses presented here focus exclusively on women in the sample.

Results: Of 121 women in the sample, 23 (19%) reported a CSA history. Women with CSA histories were significantly more likely than those who denied CSA to have made one or more suicide attempts during their lifetime (87% vs. 55%, χ^2 (1) = 7.96, p = .005). Of subjects admitted following a suicide attempt (n = 59), women with CSA had acted with greater intent to die and employed more potentially lethal means than those without CSA.

Conclusions: A substantial number of older female psychiatric inpatients did report CSA histories that were associated with lifetime history of suicide attempts and suicidal behavior. These findings suggest that CSA histories among older adults may be a risk factor for suicidal behavior that merits further empirical and clinical attention.

NR295 Tuesday, June 2, 12 noon-2:00 p.m.

Suicide Risk in Adolescents with Substance Use Disorders

Keith Cheng, M.D., Adolescent Psychiatry, Emanuel Hospital, 3001 North Gantenbein Avenue, Portland OR 97227; Kathleen M. Myers, M.D., Laura A. Proud, B.A., Louis Homer, Ph.D., Randy Riedel, B.S.

Summary:

Objective: This study examines the relationship between chemical dependency as measured by the Substance Abuse Subtle Screening Inventory (SASSI) and modified Michigan Alcohol Screening Test (MAST) and suicide risk measured using the Suicide Probability Scale (SPS) in an adolescent hospital sample.

Methods: This study assesses 40 consecutively admitted psychiatric patients (ages 12–17 years) for chemical dependency using the SASSI and MAST and suicide probability with the SPS.

Results: A regression of the MAST on the SPS shows a marginal link between chemical dependency and suicide risk ($p < .052$). A regression of the SASSI on the SPS shows no correlation using the face value scores (direct questions about drug use history). However, a regression of the non-face value scales (questions about attitudes toward life situation) of the SASSI on the SPS show a highly significant correlation ($p < .000001$).

Conclusions: Based on the use of the MAST, SASSI, and SPS, in contrast to conventional thinking, chemical dependency or substance abuse may not be linked with increased suicide risk in psychiatrically hospitalized youth. Possible reasons for this findings are discussed.

NR296 Tuesday, June 2, 12 noon-2:00 p.m.

Assessment of Psychoactive Substance Use Disorders

Keith Cheng, M.D., Adolescent Psychiatry, Emanuel Hospital, 3001 North Gantenbein Avenue, Portland OR 97227; Kathleen M. Myers, M.D., Laura A. Proud, B.A., Louis Homer, Ph.D., Randy Riedel, B.S.

Summary:

Objective: This study evaluated the validity of the Substance Abuse Subtle Screening Inventory (SASSI) compared with two other self-report substance abuse measures, the CAGE and modified Michigan Alcohol Screening Test (MAST), in an adolescent psychiatric hospital setting.

Method: This study assesses 72 consecutively admitted psychiatric patients, ages 12 to 17 years, for psychoactive substance use disorders using the SASSI, CAGE, and MAST. To test for temporal differences in questionnaire responses, 31 subjects complete the MAST twice during their hospitalization.

Results: MAST and CAGE scores were positively correlated, with slopes dependent on age and SASSI classification, but independent of sex. The MAST and SASSI were highly correlated using a simple regression analysis ($p < .01$). This strong correlation depends on the face value scores of the SASSI, which rely on the overt reporting of drug use. There is no difference in retest data.

Conclusions: The use of the SASSI to evaluate the presence of a psychoactive substance use disorder in hospitalized adolescents appears to show the same level of validity as the CAGE and MAST.

NR297 Tuesday, June 2, 12 noon-2:00 p.m.

Child Psychiatric Disorders in United Arab Emirates

Valsamma Eapen, Ph.D., Department of Psychiatry, UAE University, PO Box 17666, Al Ain, U.Arab Emirates; L.S. Al-Ghazali, S. Bin Othman, M.T. Abou-Saleh, M.D.

Summary:

Objective: The prevalence and psychosocial risk factors were examined in 3278 children aged 6 to 15 years in Al Ain, United Arab Emirates.

Method: A two-stage study design was used; children were screened using standardized questionnaires in the first stage, and a stratified random sample of children were interviewed in the second stage.

Results: A total of 23.9% of children were reported to have mental health problems by the parent or the school health physician. Using the Rutter A2 Scale for parents, 16.5% were identified as having behavioral disorders: emotional in 5.2%, conduct in 7.6%, and mixed disorders in 3.7%. A stratified random sample was directly interviewed using the Schedule for Affective Disorders and Schizophrenia and the prevalence for any DSM-IV disorder was estimated to be 10.4%. Number of children in the household, polygamy, loss of parent early in life, and low socio-economic status were noted to be associated with psychiatric disorders, while a positive family history, and consanguinity were the most significant factors associated with learning disorders.

Conclusion: The prevalence rates of psychiatric disorders observed in this study are similar to that reported in Western studies. The identification of certain culture-specific risk factors need further exploration.

NR298 Tuesday, June 2, 12 noon-2:00 p.m.

Flumazenil Challenge Test in Social Phobia

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Summary:

In a previous study flumazenil 2mg iv infused over 60 seconds provoked panic in panic disorder. We tested this response for specificity in 14 patients with social phobia and pairwise age/sex-matched controls, in a double-blind, placebo-controlled, crossover design. Panic attacks were defined by a 26-item symptom scale (item scores: 0 = absent to 4 = very severe), requiring increases of at least 2 in anxiety and 4/13 DSM-III-R panic items, plus severe or very severe peak anxiety. Panic rates and summed change (peak minus baseline) scores were also compared retrospectively with panic disorder.

	Panic attacks [%]		Summed scale change scores [median (75th centile)]	
	Flumazenil	Placebo	Flumazenil	Placebo
Social phobia	14.3	0	11 (13)	−1 (2)
Healthy controls	0	0	1 (2)	0 (0)
Panic disorder	80	10	30 (36)	2 (8)

Panic attacks after flumazenil in social phobia were not significantly more frequent than in controls (Fisher's exact test: $p = 0.24$), but were significantly fewer than in panic disorder ($p = 0.002$). Five social phobics reported at least some anxiety after flumazenil, and of these three also did so after placebo, suggesting an effect of the experimental situation. These results suggest that flumazenil is not generally panicogenic in social phobia.

NR299 Tuesday, June 2, 12 noon-2:00 p.m.

Mirtazapine in Patients with Irritable Bowel Syndrome

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Summary:

Mirtazapine is a recently released antidepressant medication. Mirtazapine's pharmacologic actions include blockade of the serotonin (5-HT)-2 and 5-HT-3 receptor; these effects have been linked to its anxiolytic, sleep-enhancing, and anti-emetic effects. Irritable bowel syndrome (IBS) is a functional disorder of the lower gastrointestinal tract that presents with a variety of complaints including abdominal bloating, gas, nausea, diarrhea, constipation, and/or pain. It occurs more often in women than in men (2:1) and onset is usually in early adult life. Although not life-threatening, IBS is often associated with considerable disability and functional impairment, and 70% to 90% of patients with IBS that seek medical attention have comorbid psychiatric disorders, most commonly depression and anxiety disorders. Since serotonin dysregulation has been implicated in the pathophysiology of IBS, antidepressants are often prescribed. However, side effects associated with antidepressants, especially serotonin reuptake inhibitors (SSRI), often overlap with the cardinal manifestations of IBS and may result in medication discontinuation. However, mirtazapine's unique effects on 5-HT suggest that it may represent a particularly promising medication for the treatment of IBS. With this in mind, 20 consenting patients with IBS received six weeks of open-label treatment with mirtazapine (flexible-dose regimen of 15-45 mg/day). Serial assessments of IBS via a daily checklist of IBS symptoms as well as standardized ratings of anxiety and depressive symptoms were completed during a two-week screening period and throughout the study. Complete results including a subanalysis of the impact of mood and anxiety symptoms on response to mirtazapine in the IBS patients is pending, but a repeated measures ANOVA completed on the first group of completers revealed a significant improvement in IBS symptoms with mirtazapine [$F(2,14) = 22$, $p < 0.05$].

NR300 Tuesday, June 2, 12 noon-2:00 p.m.

Variability of ECT Peak and Baseline Heart Rates

Conrad M. Swartz, M.D., Department of Psychiatry, E Tenn State University, PO Box 5621, Johnson City TN 37603

Summary:

Objective: The heart rate rises rapidly with ECT seizure onset and falls with seizure termination, apparently from medullary neurogenic control. The peak heart rate potentially reflects seizure quality, of particular interest because the traditional seizure measure, duration, does not. This study aims to determine if the baseline heart rate should be subtracted from the peak when comparing heart rates. If the baseline embodies larger random variations than the peak, such subtraction will increase random variations and obscure meaning.

Method: Baseline and peak heart rates were measured on all treatments for 24 consecutive consenting, medication-free patients receiving asymmetric bilateral ECT. Only good quality treatments were included, taken as motor seizure duration over 18 sec in the cuffed foot and definite EEG postictal suppression.

Results: The mean baseline variation over the course within subjects was 7.7 bpm (8.1% of baseline, SD 4.6 bpm), substan-

tially larger (p = 0.004 2-tail, p = 3.2) than the mean peak variation of 4.6 bpm (3.0% of peak, SD 2.4 bpm).

Conclusions: Heart rate comparisons should be relative to the peak rather than the baseline, e.g., the difference between the peak heart rate of the seizure and the peak in an ECT thought most vigorous, such as the first of the course. This validates a prior study.

NR301 Tuesday, June 2, 12 noon-2:00 p.m.

Repetitive Transcranial Magnetic Stimulation of the Left Dorsolateral Prefrontal Cortex in Depressed Patients

Richard A. Greer, M.D., Department of Psychiatry, University of Florida, 1535 SW Archer Suite B9, Gainesville FL 32608; William J. Triggs, M.D.

Summary:

This research explores the use of rapid-rate transcranial stimulation (rTMS) producing an antidepressant effect through regional brain activation. A coil of wire is placed on the scalp surface and, by briefly passing a current through it, creates a magnetic field. This field depolarizes neurons of the underlying cortex. Historically, repeated stimulation over brain regions produces temporary functional lesions, which may be verified by conventional brain mapping techniques such as Single Photon Emission Computed Tomography (SPECT). Neuroimaging studies suggest left prefrontal dysfunction as pathophysiologically linked to depression.

Left dorsolateral prefrontal cortex stimulation resulted in significant decreases in scores on the HAM-D. Five patients included thus far had a history of recurrent depression/medication resistance. Transcranial stimulation was accomplished with a high speed stimulator equipped with a focal figure-8 shaped coil allowing continuous water cooling. Each course consisted of 10 sessions over two weeks. Sessions consisted of 20 trains of 10s duration separated by one minute pauses. Stimulation was applied at 20 HZ with intensity 80% of the patient's motor threshold intensity. Changes from the relevant baseline HAM-D were measured (decreased by more than 5 points), demonstrating improved mood during the active treatment phase. Concomitant neuropsychological test results indicate improved cognition. SPECT imaging revealed left dorsolateral prefrontal cortex plays a causal role in antidepressant treatment.

NR302 Tuesday, June 2, 12 noon-2:00 p.m.

Herb Use in Subjects Assessed for Clinical Trials

Naresh P. Emmanuel, M.D., Dept of Psych, MUSC, 171 Ashley Avenue, Charleston SC 29425-0002; Carolyn Cosby, R.N., Marsha Crawford, R.N., Olga Brawman-Mintzer, M.D., Sarah W. Book, M.D., Rebecca Kapp, R.N., Alex Morton, Pharm.D., Michael R. Johnson, M.D., Jeffrey P. Lorberbaum, M.D., R. Bruce Lydiard, M.D., Cathie Jones, B.A.

Summary:

The prevalence of herbal use in the United States is unknown. In a recent study, approximately 22% of a sample of 623 subjects reported using herbal products within the previous month.

Ignoring patient's use of herbal products can complicate a clinical trial. Herbs are pharmacologically active compounds and it may not be appropriate to combine herbal remedies with certain pharmaceutical compounds. We wish to determine the extent of the use of herbal remedies in subjects evaluated specifically for clinical trials.

Methods: Specific information about the patient's use of and response to herbs was collected during the initial evaluation.

Results: To date, 150 subjects have been evaluated for concomitant herbal use. From this sample 59% (N = 88) reported using herbs during their lifetime. Of this sample 56% (N = 49) reported using herbs within the past month. Forty-eight subjects have used herbs to treat psychiatric symptoms and 50 subjects to treat non-psychiatric symptoms with a 56% and 52%, respectively, reporting a positive response.

Conclusion: Because many herbs possess psychoactive properties, subjects should be carefully screened for the use of herbal products before being allowed into clinical trials so as not to introduce bias to the data collected.

NR303 Tuesday, June 2, 12 noon-2:00 p.m.

Quality of Life Difference: Sertraline and Placebo Panic Responders

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Summary:

High placebo responses, which may mask true drug effect, are common in psychopharmacology treatment trials in panic disorder, yet attempts to characterize placebo response have yielded mixed results. An analysis of two identical multicenter, 10-week panic disorder treatment studies was performed examining functional improvement as measured by the change from baseline to endpoint in quality of life assessed by the Quality of Life Enjoyment and Satisfaction Questionnaire (Q-LES-Q). Quality of life assessments significantly enhanced the separation between sertraline and placebo effects in panic disorder treatment responders. The cohort consisted of 167 sertraline-treated patients flexibly dosed in the range of 50-200 mg/day and 175 placebo-treated patients. Patients were first categorized as panic disorder responders based upon seven different criteria at endpoint. Sertraline- and placebo-treated responders were then compared by the mean change from baseline in Q-LES-Q total score at endpoint. It was notable that for all seven responder criteria sertraline-treated responders demonstrated a significantly greater improvement in quality of life compared to placebo responders ($p \leq 0.01$). This result suggests that placebo response as ordinarily defined by the change in number of panic attacks and/or clinical global impression does not necessarily reflect functional improvement and that differentiation between pharmacological and placebo treatment may require consideration of quality of life measures.

This research was supported by Pfizer, Inc.

NR304 Tuesday, June 2, 12 noon-2:00 p.m.

Effect of Oral Sildenafil on Intercourse Success in Patients with Erectile Dysfunction of Broad-Spectrum Etiology

Pierre Wicker, M.D., Research, Pfizer Inc, Eastern Point Road, Groton CT 06340; Michael W. Sweeney, M.D.

Summary:

Objective: The efficacy of oral sildenafil, taken as required not more than once daily, was evaluated in a placebo-controlled, flexible dose-escalation study of men with erectile dysfunction (ED).

Method: In a 12-week, flexible dose-escalation study, 329 men with ED of broad-spectrum etiology (59% organic, 15% psychogenic, 26% mixed) were randomized to receive 50 mg of sildenafil (N = 163) or placebo (N = 166). The dose could be titrated to 100 mg or 25 mg based on efficacy and toleration. Efficacy assessments at week 12 included an event log, in which patients recorded the date and dose taken, presence of sexual stimulation, and whether sexual intercourse was successful. A chi-square test was used to determine the association between the treatment groups.

Results:
Successful Sexual Intercourse

	PLACEBO (N = 166)	SILDENAFIL (N = 163)	P VALUE
% of all attempts that were successful	22%	69%	<0.001
Mean number of successful attempts per month	1.5	5.9	<0.0001

* During final four weeks of treatment

Conclusion: Treatment with oral sildenafil significantly improves the rate of successful sexual intercourse and the mean number of successful attempts each month in patients with ED of broad-spectrum etiology.

[This study was funded by Pfizer Inc]

NR305 Tuesday, June 2, 12 noon-2:00 p.m.

The Temperament and Character Inventory in a French Community Sample

Antoine Pelissolo, M.D., Department of Psychiatry, Hospital F. Widal, 200 Rue Du Faubourg St Denis, Paris 75010, France; Eric Guillem, M.D., Dr. Stephany Orain, Jean-Pierre Lepine, M.D.

Summary:

Objective: To explore the structure of the TCI in a French community sample, and to compare the mean scores to those obtained by Cloninger and Svrakic in an American sample.

Methods: A total of 602 subjects selected by a Gallup institute as representative of the French general population in terms of sex, age, and other sociodemographic characteristics, completed the TCI.

Results: When principal component analyses were conducted on the sub-scores of temperament and character dimensions separately, three temperament factors and three character factors appeared, with a good agreement with TCI dimensions except for persistence. The mean scores (and standard deviations) of the seven dimensions were: 16.4 (5.6) for novelty seeking (NS), 16.1 (7.2) for harm avoidance (HA), 14.2 for reward dependence (RD), 4.6 for persistence (P), 31.9 (6.3) for self-directedness (SD), 31.7 (5.6) for cooperativeness (C), and 13.7 (6.1) for self-transcendence (ST). All differences between these values and the American normative data were significant ($p < 0.01$), with lower scores obtained in our sample except for HA and SD.

Discussion: The structure of the TCI appeared to be satisfactory in this sample, but the mean scores were notably different from those obtained with the original version in an American sample, underlying the necessity to conduct validation community studies with each version of the questionnaire, in order to generate specific normative data; these figures also suggest cross-cultural differences in temperament and character assessment.

NR306 Tuesday, June 2, 12 noon-2:00 p.m.

The Psychophysiologic Response in Korean Patients with Conversion Disorder

Sang Keun Chung, M.D., Dept of Psych Chonbuk, National Univ Med School, 634-18 Keuman-Dong Dokijun-Ku, Chonju 561-712, Korea; Ik-Keun Hwang, M.D.

Summary:

Objective: We examined the psychophysiologic response pattern in Korean female patients with conversion disorder (CD).

Methods: A total of 15 female patients with conversion disorder and 20 healthy female subjects were evaluated by Spielberger's State-Trait Anxiety Inventory, four psychophysiologic measures, i.e., skin temperature (ST), electromyographic activity (EMG), heart rate (HR), and electrodermal response (EDR) during rest, and two psychologically stressful tasks (mental arithmetic, TM; talk about a stressful event, TT).

Results: CD group showed: (1) significantly higher EMG, HR level during baseline, (2) significantly lower change in the startle response of all psychophysiologic measure during TM, (3) significantly lower change in the recovery response (RR) of EMG, HR, and EDR during stressful tasks than control group (by t-test). We found that there were significantly positive correlations between RR during TM and state ($r = .551$, $p < .05$) and trait ($r = .549$, $p < .05$) anxiety in CD group.

Conclusion: Above results suggest that patients with conversion disorder show higher autonomic arousal than normal control group and decreased physiologic flexibility or reduced autonomic flexibility.

NR307 Tuesday, June 2, 12 noon-2:00 p.m.

Validation of a Computer Version of the Hamilton Anxiety Scale Administered Over the Telephone via Interactive Voice Response

Kenneth A. Kobak, Ph.D., Dean Foundation, 2711 Allen Blvd, Middleton WI 53562; John H. Greist, M.D., James W. Jefferson, M.D., David J. Katzelnick, M.D., Revere Greist, B.A.

Summary:

Objective: To examine the psychometric properties of a telephone-administered version of the Hamilton Anxiety Scale (HAMA) using Interactive Voice Response technology (IVR). In addition to the traditional benefits of computer administration, such as (1) increased reliability, (2) reduced data entry errors, (3) increased patient disclosure of sensitive information, and (4) time and cost savings, IVR enables remote evaluation of treatment response 24 hours a day. Such accessibility allows a more precise monitoring of the speed of onset of medications in clinical trials, as well as a mechanism for clinicians to monitor treatment response between office visits.

Method: Seventy-two subjects with a SCID-IV diagnosed anxiety disorder ($n = 22$), affective disorder ($n = 27$), other psychiatric disorder ($n = 2$), and community controls with no diagnosed disorder ($n = 21$) were given the clinician and IVR HAMA in a counterbalanced order. Subjects were retested 24 hours later with both versions.

Results: Reliability: Internal consistency reliability was $r = .93$ and the mean item-to-total scale correlation was .67, indicating a high level of internal consistency reliability. The standard error of measurement was 2.14, indicating a low level of random error. Test-retest reliability was $r = .97$, with mean score differences between test and retest nonsignificant (.23 of a point), $t(68) = .59$, $p = .55$. Validity: Correlation with the clinician HAMA was $r = .65$, $p < .001$. The IVR HAMA also correlated highly with the Beck Anxiety Inventory ($r = .52$). The mean score difference between the IVR and clinician HAMA was nonsignificant (15.53 vs 16.13, respectively, 0.60 of a point), $t(71) = .54$, $p = .594$.

Conclusion: The IVR HAMA possesses good psychometric properties and has substantial advantages for clinical trial research and clinical practice.

NR308 Tuesday, June 2, 12 noon-2:00 p.m.

Depression in Cancer Patients Treated with Bone Marrow Transplantation: A One-Year, Longitudinal Study

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Jordi Blanch, M.D., Esteve Cirera, Enric Carreras, M.D., Cristobal Gasto, M.D.

Summary:

Objective: This study determines the prevalence, clinical characteristics, and course of major (MDE) and minor depressive episode (mde).

Method: A consecutive series of 164 cancer patients were evaluated in the hospital prior to the transplantation and weekly until discharge with two more follow-ups six and 12 months later. We used structured clinical interviews and DSM-IV criteria for diagnosis.

Results: From the cancer diagnosis until the last follow-up we found that 45 patients (30%) met criteria for a mde, with one-third of these cases intensifying into a MDE; 36 patients (23%) met criteria for a MDE. Twelve percent of patients developed various depressive episodes. Percentage of diagnoses that remitted before the last assessment was 80% for a mde and 54% for a MDE. Mean episode length were for a remitted mde 3.15 months (range :0,5-12) and for a MDE 5,26 months (range :1-13). Antidepressant medication was prescribed in 19% of patients. Most of the patients had a MDE of mild or moderate intensity, with one patient committing suicide.

Conclusion: A high rate of depressive episodes are observed in our population. One-third of cases of mde progressed to a MDE. A more benign prognosis is associated with a mde.

NR309 Tuesday, June 2, 12 noon-2:00 p.m.

Depression, Coping, Social Support and Electrogastrography of Functional Dyspepsia

Sang-Yeol Lee, M.D., Department of Psychiatry, Wonkwand Univ Psych Hosp, 144-23 Dongsan-Dong, Iksan CH, Korea; Min-Cheol Oark, M.D., Suk-Chei Choi, M.D., Yong-Ho Nah, M.D.

Summary:

Background: It is well known that stress, anxiety, and depression are related to functional dyspepsia, but there are little data about various factors including coping style and social support that can be influenced by functional dyspepsia.

Aims: This study investigated depression, coping, social support, and changes of electrogastrography (EGG) in patients with functional dyspepsia.

Methods: 24 patients (21F, 3M) with negative findings in radiological, endoscopic, and laboratory examinations were tested with the Symptom Checklist 90-Revision(SCR-90-R), Beck Depression Inventory (BDI), Spielberger State-Trait Anxiety Inventory (STAI), the Ways of Coping Checklist, and Interpersonal Support Evaluation List. The patient group was compared with 30 persons (15F, 15M) who visited our hepatobiliary clinic without functional dyspepsia. The two groups were also assessed on the quantity of perceived stress during the last year; this was measured by self-report. The gastric electrical activities of 24 patients who had functional dyspepsia were recorded by using EGG (Microdigitrapper, Synetics Medical) with Ag-AgCl cutaneous electrode.

Results: The patient group was predominantly female ($p < .01$). Compared with the control group, the patient group had significantly higher mean scores on three subscales: somatization ($p < .05$), depression ($p < .01$), and positive symptom distress index ($p < .05$), and significantly lower mean scores on two subscales: interpersonal sensitivity ($p < .05$) and paranoia ($p < .05$), of the SCL-90-R. The patient group had significantly higher levels of depression ($p < .001$) than the control group in the BDI, but there were not any significant differences in the STAI and quantity of perceived stress between the groups. The patient group had lower scores than the control group in problem focused coping ($p < .001$), wishful thinking ($p < .05$), and seeking social support ($p < .05$). But there was not any significant difference in emotion focused coping and social support between the groups. There was a significant positive correlation between BDI score and somatization ($r = .53$, $p < .01$), BDI score and positive symptom distress index ($r = .39$, $p < .05$), and there was a significant negative correlation between BDI score and social support ($r = .49$, $p < .05$). The percentage of EGG was that bradygastria 19.3 ± 18.8, 3 cpm 53.2 ± 19.0, tachygastria 18.7 ± 14.3 at preprandial period, bradygastria 23.5 ± 29.2, 3 cpm 40.0 ± 22.4, tachygastria 32.8 ± 24.0 at postprandial period, bradygastria 21.4 ± 19.5, 3 cpm 49.0 ± 16.5, tachygastria 27.7 ± 17.6 at total. There were significant negative correlations between somatization and 3 cpm preprandially ($r = -.37$, $p < .01$), postprandially ($r = -.32$, $p < .01$), and totally ($r = -.36$, $p < .01$).

Conclusions: The patients with functional dyspepsia show higher depression and lower social support. They also show lower problem focused coping and seek less social support in their coping styles. This shows that these patients tend to utilize less active coping skills than the control group. There is a good correlation between somatization and gastric dysrhythmia. These findings suggest that persons with functional dyspepsia need to have a psychiatric evaluation and treatment, and the possibility that these symptoms may be a psychosomatic disorder.

NR310 Tuesday, June 2, 12 noon-2:00 p.m.

Mental Disorders in Bone Marrow Transplantation Patients During the Germ-Free Isolation Period

Rie Akaho, M.D., Psychiatry, Komagome Hospital, 3 18 22 Honkomagome Bunkyo, Tokyo, Japan; Tsukasa Sasaki, M.D., Miyo Yoshino, Ph.D., Katsuko Hagiya, Ph.D., Yutaka Shinohara, M.D., Hideki Akiyama, M.D., Hisashi Sakamaki, M.D.

Summary:

Objective: Psychiatry liaison is frequently required in patients receiving bone marrow transplantation (BMT) during hospitalization, especially during the germ-free isolation period, although longitudinal studies reported low prevalence of psychiatric illnesses in these patients. We investigated mental disorders and related factors in BMT patients during the isolation period.

Method: The subjects were 30 Japanese patients, consecutively receiving allogenic BMT in the Komagome General Hospital from 1996 to 1997. The patients were interviewed every week by two of the authors during the isolation period (40 days on average).

Results: A total of 15 patients were diagnosed as having an Axis I DSM-IV disorder; 11 with acute stress disorder, two with mood disorder, and two with delirium. In seven patients the disorders were developed before the BMT; a personality test in advance showed neurotic trends in these patients. The Profile of Mood States (POMS) scores did not change after the BMT. The disorders were more frequent in the patients donated from a nonrelative donor than those donated from their relatives ($p < 0.05$).

Conclusions: The results suggest high frequency of mental disorders during the hospitalization for BMT treatment, although the disturbances may not be very persistent.

NR311 Tuesday, June 2, 12 noon-2:00 p.m.

Use of Carbohydrate Deficient Transferrin in Liver Transplantation

Mario Finkelstein, M.D., Psychiatry, NJ Medical School, 135 Newcomb Rd, Tenafly NJ 07670-1515; James M. Hill, Ph.D., Saila B. Donepudi, M.D., Baburao Koneru, M.D., Adrian Fischer, M.D., Dorothy Nolan, R.N., Barbara Smith, R.N., Jacqueline A. Bartlett, M.D.

Summary:

Introduction: Resumption of heavy alcohol intake in patients who are waiting for or following liver transplantation can result in refusal of candidacy for surgery and medical complications of the new liver. These patients must be monitored prior to and following transplantation and appropriate interventions must be applied if relapse of alcohol use occurs. In an attempt to increase the likelihood of early detection of relapse in pre- and post-transplanted patients, the current study examined the utility of measuring carbohydrate deficient transferrin (CDT) in blood as an indicator of recent moderate to heavy alcohol abuse.

Method: Fourteen patients with alcohol-related liver disease had blood CDT levels tested serially. Six of them were post-transplant and eight were pre-transplant. Each patient was asked about any recent consumption.

Results: One of the six post-transplant and four of the eight pre-transplant patients had significant CDT levels. Only one of these five patients admitted alcohol intake.

Conclusions: These results suggest that the use of CDT in pre- and post-transplant patients could be a useful marker for relapse. Appropriate uses of CDT by transplant psychiatrists working with this population will be discussed. Comparisons of CDT to more traditional markers (e.g. GGT) will also be discussed.

NR312 Tuesday, June 2, 12 noon-2:00 p.m.

Trait Impulsivity As a Predictor of HIV Risk and Criminality Among Substance Abusers

Lon R. Hays, M.D., Dept of Psych, Univ of KY Med Ctr, 820 South Limestone, Lexington KY 40536-0001; David Farabee, Ph.D., T.K. Logan, Ph.D.

Summary:

The associations between impulsivity, HIV risk, and criminal activity were examined among a sample of inpatients in an addictive disease unit (N = 127). Patients were administered a questionnaire including measures of certain HIV risk behaviors within the past year (e.g., number of sex partners, frequency of condom use) and past three months (how often they had used drugs and/or alcohol prior to having sex), past-year criminal involvement and arrests, and a brief measure of trait impulsivity (Eyesenck & Eyesenck, 1978). Subjects reporting multiple sex partners in the past year were more likely to score above the median on impulsivity than those reporting having only one partner. However, among those with multiple sex partners, impulsivity was not associated with frequency of condom use. For male subjects, impulsivity was inversely related to the perceived ability of jail or prison to deter crime and was positively correlated with number of self-reported crime days (r = .42) and arrests (r = .20) during the past year. Support is provided for assessing and targeting impulsivity among drug treatment clients to reduce the frequency of these peripheral behaviors often associated with substance abuse.

NR313 Tuesday, June 2, 12 noon-2:00 p.m.

Effect of Alcohol on Testicular Histology

Jin-Sook Cheon, M.D., Neuropsychiatry, Kosin University, 34 Am Nam Dong SEO Gi, Pusan 602 702, South Korea; Byoung-Hoon Oh, M.D.

Summary:

Objectives: The aims of this study were to evaluate the effect of alcohol on testicular histology, to find drugs to influence changes, and to discuss association with the aging process, understanding a mechanism of alcohol-induced sexual dysfunction.

Methods: 14% ethanol was administered to five rats for four weeks, comparing testicular histology with those in five normal adult controls and those in five normal aged rats. Thirty ethanol-administered rats were treated with nimodipine, clonidine, bethacholine, bromocriptine, fluoxetine, and ketamine (5 rats respectively) for 4 weeks. Testicular histology in the above drug-treated rats were compared by the same procedure.

Results: (1) Mean Leydig cell numbers more significantly reduced in ethanol-administered rats than those in normal adult controls ($P < 0.0001$). (2) Reduced Leydig cell numbers in the ethanol-administered rats became significantly raised by treatment with nimodipine ($P < 0.05$) or clonidine ($P < 0.01$). (3) There was no significant association between alcohol-induced testicular atrophy with an aging process.

Conclusions: A hormonal factor and a pathophysiological process related to calcium or norepinephrine can be involved in a mechanism of alcohol-induced sexual dysfunction.

NR314 Tuesday, June 2, 12 noon-2:00 p.m.

Seroprevalence of Hepatitis-C in Substance Abusers

Henry D. Abraham, M.D., ADTS, Butler Hospital, 345 Blackstone Blvd., Providence, RI 02806; Silvia Degli-Esposti, M.D., Louis J. Marino, Jr., M.D.

Summary:

Hepatitis C (HCV) is an indolent, progressive, and often fatal disease currently affecting four million Americans, and the cause of one-third of all liver transplants in the United States. We assessed the seroprevalence of HCV in a consecutive sample of 334 substance abusers admitted to a private urban hospital, and ascertained risk factors for its transmission. The point prevalence rate for HCV was 27.7% among all substance abusers, and 76.7% among any with a past use of intravenous drugs. Multiple viral types were identified, suggesting diverse sources of transmission in the sample. Risk factors associated with HCV infection in order of decreasing odds ratios were intravenous drug use, needle sharing, prior liver disease, opiate dependence, seropositivity for HIV infection, and benzodiazepine dependence. Contrary to prior reports, low socioeconomic class and male homosexuality were not risk factors in this population. These data suggest that HCV may be infecting increasing numbers of individuals from the middle class, and that early reports of lower social class as a risk factor for HCV may in part represent downward economic drift as a consequence of parenteral drug use.

NR315 Tuesday, June 2, 12 noon-2:00 p.m.

Pregnancy and Buprenorphine Maintenance

Gabriel Fischer, M.D., Department of Psychiatry, University of Psychiatry, Waehringer Guertel 18-20, Vienna 1090, Austria; Dr. Reinhold Jagsch, M.A.G., Christine Nagy, M.D., Claudia Lennkh, M.D., Harald Eder, Wolfgang Gombas, M.D., Martin Langer, P.O.Z.

Summary:

It is well known fact that maternal opiate use during pregnancy is associated with a long list of problems in the pregnant woman as well as in the fetus, neonate, and young infant. Relevant pharmacological treatment for the latter individuals has not yet been established. Methadone maintenance therapy improves the situation for mother and child but cannot prevent the neonatal abstinence syndrome (NAS). Ten opiate-dependent pregnant addicts (mean age 24 years), with a mean duration of opioid dependence of 54.6 months, were enrolled in an open standardized treatment study with maintenance therapy of sublingual buprenorphine. Induction period to a daily dose of 8 mg sublingual buprenorphine (SD ± 2,8; range 4-10) was performed on an inpatient basis during the mean duration of pregnancy of 27 weeks (SD ± 5,8; range 17-36). Prior to buprenorphine all subjects were stabilized on

methadone (n = 7; mean daily dosage of 400 mg). Buprenorphine was well tolerated during pregnancy. Ten healthy neonates were born during the 39.5th week of pregnancy (SD ± 1,8; range 36-42), the mean birth weight being 3001 grams (SD ± 397,8; range 2290-3700) and without occurrence of the NAS. We propose that the partial agonistic properties of methadone, morphine, and heroin account for the absence of NAS following buprenorphine therapy.

NR316 Tuesday, June 2, 12 noon-2:00 p.m.

Chronic Cocaine Reverses Prepulse Inhibition Disruption in Rats

Ronald P. Hammer, Ph.D., Department of Psychiatry, Tufts-NEMC, 750 Washington St. Box 1007, Boston MA 02111; John J. Byrnes, Ph.D.

Summary:

Schizophrenic patients exhibit a deficit of sensorimotor gating revealed by a reduced inhibition of their responses to startle stimuli caused by a lower intensity pre-stimulus, termed prepulse inhibition (PPI). Acute administration of dopamine agonists or glutamate antagonists produce identical results in rodents, particularly when directed at the nucleus accumbens (NAc). Acute cocaine increases extracellular NAc dopamine and disrupts PPI, and chronic cocaine produces behavioral sensitization, which serves as an animal model of psychosis. We examined the effect of chronic cocaine (30 mg/kg, i.p. daily for seven days) or vehicle treatment on PPI following cocaine (30 mg/kg) challenge seven days later. Acute cocaine challenge significantly reduced PPI, while cocaine challenge following chronic treatment failed to disrupt PPI compared with vehicle-treated rats. Animals in all treatment groups exhibited the same baseline PPI response. We have shown previously that this chronic treatment paradigm produces locomotor sensitization compared with acute treatment. Thus, chronic cocaine reverses PPI disruption produced by acute cocaine, which could underlie the increased incidence of cocaine abuse and improvement of some symptoms following cocaine infusion in schizophrenic patients. The cellular and molecular mechanisms underlying this effect of chronic cocaine treatment are currently under investigation.

Supported by USPHS Award DA09822.

NR317 Tuesday, June 2, 12 noon-2:00 p.m.

Access to Follow-Up Care by Dual Diagnosis Patients

Lawrence Appleby, Ph.D., J.D., Psychiatry, University of Illinois, 1601 W Taylor, Chicago IL 60612; Vida Dyson, Ph.D., Daniel J. Luchins, M.D.

Summary:

Objective: The major purpose of this study was to examine the relationship between substance use treatment and aftercare contact among public psychiatric patients.

Method: Two groups, consisting of 93 participants and 99 nonparticipants in substance use treatment, were selected from 273 dual diagnosis patients admitted to a state facility in a six-month period. Selected outcomes included referral rates, aftercare contact, and recidivism. Data were collected from hospital and statewide computer files, central patient files, and aftercare clinics.

Results: Enrollment in a substance use treatment program was not related to any outcome measure. Regression analyses revealed that patients with psychotic diagnoses were more likely to be referred and keep clinic appointments. Personal linkage to the clinic also was significantly related to aftercare engagement. Nonpsychotic, male, and younger patients readmit earlier and more frequently. Individuals who make two or more clinic visits stay in the community longer.

Conclusions: Psychiatric bias needs to be addressed in order to facilitate greater access to services for mentally ill with co-occurring substance use disorders. Costly inpatient substance abuse treatment is inefficient; focus should be on integrated models dominated by outpatient care. Less severely ill dually diagnosed patients may have to be addressed with nonmental health models to facilitate engagement in treatment.

NR318 Tuesday, June 2, 12 noon-2:00 p.m.

Contingency Treatment of Cocaine Use in Heroin Addicts Receiving Methadone

Chandresh Shah, M.D., Dept of Psych SVC (116), VA Outpatient Clinic, 351 East Temple Street, Los Angeles CA 90012; Marites Del Rosario, M.D., Lena Simitian, Pharm.D.,

Summary:

Cocaine use by heroin addicts is a growing problem. Treatment with methadone reduces heroin use but not necessarily cocaine use. Thus, continued cocaine use by methadone-receiving heroin addicts undermines the efficacy of methadone treatment. Therefore, we studied the role of contingency treatment (CT) in such a population. There were 69 patients admitted to methadone treatment, of them 21 were also using cocaine. Of these, 16 patients aged 51.13 ± 9.84 years were placed on CT. Their requests to adjust their daily methadone dose up to 80mg were accepted. Their performance was studied at a monthly interval (T1, T2, T3, T4) for four months by monitoring their urine toxicology results. The frequency of cocaine use at T1 was 37.79 ± 32.73% by 13 patients; at T2, 33.57 ± 33.04% by 11 patients; at T3, 20.24 ± 25.74% by 11 patients; and at T4, 17.18 ± 26.12% by eight patients. The statistical analysis was done using ANOVA. The reduction in cocaine use was highly correlated to time on CT ($r = -.945$). The frequency of cocaine use at T4 was significantly ($p = <.005$) lower than that at T1 on CT.

These data show that CT has significant role in treatment of cocaine use among methadone-receiving heroin addicts. Long-term studies are required to ensure that these benefits are maintained over time.

NR319 Tuesday, June 2, 12 noon-2:00 p.m.

Dual Diagnosis in the Paris Area

Francois Petitjean, M.D., 1 Rue Cabanis, Paris, France; Corinne Launay, M.D., Delphine Antoine, M.D., Fabienne Perdereau, M.D.,

Summary:

Comorbidity between substance abuse (concerning alcohol or other drugs) and mental illness, also called "dual diagnosis," has been a major subject of research during the last decade, both in Europe and in the U.S. Figures reported for substance abuse prevalence among patients treated for mental illness have been estimated between 20% and 65%. Addiction is a source of treatment resistance in patients with schizophrenia and increases the use of health care resources.

This study is an extension of the survey on drug addiction, performed by way of questionnaire under the auspices of the SESI (Statistical and Epidemiological Department of the French Ministry of Health) in November 1996.

A total of 428 dual-diagnosis patients, reported by 25 community mental health teams (sectors) from the Ile de France region, were studied in terms of ICD-10 diagnosis and treatment. Schizophrenia appears as the most frequent diagnosis (44% of cases), followed by personality disorder (34%) and affective disorders (22%). Among patients with schizophrenia alcohol appears as the most

frequent substance abuse (50% of cases) with cannabis coming second (22%). Mean length of stay in hospital for those treated as inpatients was twice its mean value for psychiatric patients in the same region. The proportion of chronic crisis patients (hospitalized four times or more within one year) was 8.7%. This survey confirms the importance of substance abuse as a source of treatment resistance for schizophrenic patients.

NR320 Tuesday, June 2, 12 noon-2:00 p.m.

Fluoxetine in Severe Alcohol Dependence

David Huertas, M.D., Psychiatry, Hosp Guadalajara, Donantes De Sangre, Guadalajara, Spain; Santiago Bautista, M.D., Juan Molina, M.D., Lorenzo Chamorro, M.D., Inmaculada Gilaberte, M.D.,

Summary:

Goal: To determine the effectiveness of fluoxetine in facilitating long-term alcohol abstinence.

Background: McBride et al. communicated that administration of serotonin agonists decreased self-administration of ethanol in rats. Cornelius et al. reported that fluoxetine was effective in reducing depressive symptoms and alcohol consumption in patients with comorbid major depression and alcohol dependence.

Method: Twenty-one patients diagnosed with severe alcohol dependence according to DSM-IV criteria were included in a seven month protocol for alcohol withdrawal. On day 15, after two weeks of alcohol detoxification all subjects were started on 20 mg/d of fluoxetine. Depressive features were measured on day 15, 75, and 210 with the Beck Depression Inventory (BDI). ALT, AST, GGT, and amylase were controlled during the study.

Results: 67% of the sample showed a positive BDI (> 9) after alcohol detoxification. It means a high incidence of comorbid masked depression. 57% of patients remained abstinents from ethanol six months or more. All patients who maintained adherence to treatment with fluoxetine 20 mg/d finished the study abstinent. No patients showed altered values of ALT, AST, GGT, or amylase after 195 days with fluoxetine.

Conclusions: Fluoxetine showed efficacy in the treatment of alcohol dependence during a six-month period. Double-blind studies could confirm this.

NR321 Tuesday, June 2, 12 noon-2:00 p.m.

A Six-Month Prospective Study of the Treatment of Sedative-Hypnotic Dependence

Dara A. Charney, M.D., Department of Psychiatry, Montreal General Hospital, 1650 Cedar Avenue, Montreal, PQ H3G 1B4, Canada; Antonios M. Paraherakis, M.Sc., Kathryn J. Gill, Ph.D.,

Summary:

The objectives of this six-month prospective study were to evaluate the efficacy of addiction treatment for sedative-hypnotic dependence, to examine the demographic and clinical predictors of outcome, and to determine whether anxiety or other psychiatric comorbidity impedes the successful treatment of sedative-hypnotic dependence. Eighty-two patients with sedative-hypnotic dependence were assessed upon entering addiction treatment by clinical and semistructured interviews, GAS, HamD, BDI, and SCL90. Both alcohol- and benzodiazepine-dependent patients succeeded in reducing their use of sedative-hypnotic substances during the course of treatment. However, at three months, benzodiazepine-dependent patients fared less well than alcohol-dependent patients in terms of several outcome measures; they reported a lower rate of abstinence, shorter periods of continuous abstinence, and more frequent use. At six months, the differences in outcome between the drug groups were not maintained. Benzodiazepine-dependent patients may have had a worse outcome at three months due to a protracted detoxification regimen rather than to a failure to comply with treatment recommendations. In terms of predictors of outcome, variables such as gender, drug group, and indicators of psychiatric status had little impact on outcome measures. Benzodiazepine-dependent patients experienced no change in their level of anxiety during treatment, despite substantial reductions in benzodiazepine use.

NR322 Tuesday, June 2, 12 noon-2:00 p.m.

Suicide Notes: A Content Analysis Between Younger and Older Victims

Daniel Castellanos, M.D., Depart of Psychiatry, University of Miami, 1150 NW 14th St Ste 501 (M861), Miami FL 33136; Noel A. Cabrera, M.D., Jon A. Shaw, M.D.,

Summary:

Objective: This study systematically examines the differences between suicide notes of older and younger victims.

Method: Suicide notes were obtained from the Dade County, Florida Medical Examiner's Office and grouped according to the victim's age: 24 years and younger (n = 28) and 60 years and over (n = 26). Raters (interrater reliability = 0.91) blindly analyzed the notes for differences in linguistics, stressors, affect, and attribution/motivation.

Results: Compared with those of the older group, the notes of the younger group were found to be longer ($t = 2.07$, $df = 52$, $p = 0.04$), more frequently contained multiple notes, contained more ambivalent constructions ($t = 2.07$, $df = 52$, $p = 0.04$), identified loss of a love object as a stressor ($x^2 = 6.27$, $p = 0.01$), expressed more rage/anger ($x^2 = 13.82$, $p = 0.003$) and guilt ($x^2 = 8.99$, $p = 0.03$), and more frequently attributed the suicide as an act of reunion ($x^2 = 4.78$, $p = 0.03$).

Conclusions: Significant differences in the suicide notes of younger and older victims supports a developmentally specific conceptualization of the phenomenon of suicide.

Funded by a grant from the Roddy Brickell Youth Suicide Education & Prevention Center

NR323 Tuesday, June 2, 12 noon-2:00 p.m.

Clinical and Psychological Characteristics of Familial Alcoholism Reevaluated

Frederic Limosin, M.D., Assistance Publique, Hospital Louis Mourier, Columbes 92700, France; Philip A. Gorwood, M.D., Jean Ades, M.D.,

Summary:

Presence of familial history of alcoholism may predict clinical characteristics in affected relatives, such as an earlier age at onset, more frequent and severe social maladjustment, and somatic complications. We analyzed the clinical and psychological specificities of a sample of 51 French alcohol-dependent patients, according to absence versus presence of familial history of alcoholism. Patients were evaluated for lifetime psychiatric morbidity with the Diagnostic Interview for Genetic Studies: for sensation-seeking, with the Zuckerman sensation-seeking scale: for somatic complications with a systematic screening list. First-degree relatives (N = 264) were assessed with the Family Inventory Schedule and Criteria.

Twenty-seven patients (53%) had at least one alcoholic relative. Age at onset significantly predicted familial versus sporadic alcoholism on average five years earlier in familial alcoholism, even when considering censored data and/or interaction between variables ($p = 0.02$). Social and somatic complications were not significantly different between sporadic and familial alcoholism.

If age at onset appears informative for familial versus sporadic alcoholism, number and severity of somatic and social complica-

tions do not seem to be factors to distinguish familial from sporadic alcoholism.

NR324 Tuesday, June 2, 12 noon-2:00 p.m.

Childhood Trauma and Depression in Alcoholics

Alec Roy, M.D., Department of Psychiatry, VANJ Health Care System, 385 Tremont Avenue, East Orange NJ 07019; Alec Roy, M.D.

Summary:

Objective: To examine for a relationship between childhood trauma and depression in alcoholics.

Methods: Euthymic depressed alcoholics (N = 23) were compared with never depressed alcoholic controls (N = 20) for their scores on the Childhood Trauma Questionnaire (CTQ). Subjects also completed the Hostility and Direction of Hostility Questionnaire (HDHQ).

Results: Euthymic depressed alcoholics had significantly higher scores on the CTQ for childhood emotional abuse, physical abuse, sexual abuse, and emotional neglect. They also had significantly higher hostility scores on the HDHQ. There were significant correlations between HDHQ hostility scores and childhood emotional neglect and total childhood trauma scores on the CTQ.

Conclusion: Childhood trauma is a risk factor for depression in alcoholics. It may exert its effect partly through an influence on the personality dimension of hostility.

NR325 Tuesday, June 2, 12:00 p.m.-2:00 p.m.

Alcohol Problems and Age of Onset

Bankole Johnson, M.D., Department of Psychiatry, Hlth Science Ctr @ Houston, 1300 Moursund Street, Houston TX 77030; Patrick Bordnick, Ph.D., Michelle Shenberger, M.Ed., Lynn Ratkos, R.N., Leanne Vogelson, B.S., Angela Kimble, B.S.,

Summary:

Age of onset of problem drinking has emerged as an important discriminator between alcoholic subtypes. Severity of alcohol-related problems appears negatively correlated with age of onset. However, qualitative differences in the type of problems experienced by alcoholics may also vary across age of onset groups. We, therefore, examined for qualitative differences in problems associated with the development of alcoholism in 253 dependent males and females across three age of onset categories: <20 years, 20–25 years, and >25 years. Compared with the >25 years onset group, those in the <20 years onset group were more likely to start drinking because of developmental problems such as peer pressure (18.2% vs. 33.3%)* and problems with parents (0.9% vs. 21.1%)*. In contrast, those in the >25 years group tend to commence drinking due to problems of adulthood such as separation/divorce (14.5% vs. 6.7%)* and stresses at work (22.7% vs. 3.3%)*. These results suggest that the developmental factors are associated with an early onset of disease presentation and may explain the reported high prevalence of antisocial traits in these individuals. (*p < 0.05)

NR326 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

MRI Signal Hyperintensities in Hypertensive Elderly Patients With and Without Depression

Blaine S. Greenwald, M.D., Department of Psychiatry, Hillside Hospital, 75-59 263rd St/Lowenstein Bldg, Glen Oaks NY 11004; Elisse Kramer-Ginsberg, Ph.D., K. Ranga Rama Krishnan, M.D., Manzar Ashtari, Ph.D., J. Hu, M.D., Mahendra C. Patel, M.D., Neil J. Kremen, M.D., Simcha Pollack, Ph.D.,

Summary:

Increasing age and hypertension are risk factors for MR scan signal hyperintensities, which—when larger and occurring in deep white and subcortical gray matter—probably reflect ischemic cerebrovascular disease. Several reports have additionally found that greater severity/frequency of hyperintensities are associated with geriatric depression. Taken together, these data generate the hypothesis that elderly hypertensives are at particular risk for depression mediated or partially mediated by cerebrovascular disease that is earmarked by hyperintensities.

Methods: Elderly depressed (n = 81) and normal comparison (n = 70) subjects underwent T-2 weighted MR scans (1.0T) in the axial plane. Signal hyperintensities were rated blind to patient diagnoses employing two standard hyperintensity rating systems (Fazekas, Boyko). Subjects were divided into four groups (hypertensive depressed [n = 40], hypertensive control [n = 21], normotensive depressed [n = 41], normotensive control [n = 49] and compared on hyperintensity ratings employing analyses of covariance controlling for the effects of age, gender, and height.

Results: Hypertensive depressives had significantly more severe hyperintensity ratings in subcortical gray matter ($p = < .05$) than hypertensive controls, and significantly more severe ratings in both subcortical gray and deep white matter than normotensive depressives and controls ($p < .05$). Hypertensive controls had significantly more severe ratings in deep white matter than either normotensive group ($p < .05$).

Discussion: Findings suggest a relationship between deep white matter hyperintensities and hypertension (regardless of depressive state), and a particular role of subcortical gray matter hyperintensities (possibly interacting with deep white matter lesions) in elderly depressed hypertensives, but not elderly depressed normotensives. These data support heterogeneous pathophysiologies in late-life depression, one of which appears to be cerebrovascular-disease mediated.

NR327 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Recurrence Following Discontinuation of Maintenance Antidepressant Medication for First-Episode Geriatric Depression

Alastair J. Flint, M.B., Psychiatry, Toronto Hospital, 200 Elizabeth St, 8 Eaton N., Toronto, ONT M5G 2C4, Canada; Sandra L. Rifat, Ph.D.,

Summary:

Objective: Late age of onset of depression has been identified as a risk factor for recurrence. We examined the two-year outcome of elderly patients with first-episode major depression following the discontinuation of maintenance antidepressant medication.

Method: Twenty-one patients, aged 60 and older, who had recovered from a first lifetime episode of DSM-III-R unipolar major depression, participated in the study. These patients had been maintained on full-dose nortriptyline (n = 19) or phenelzine (n = 2) for two years and had been in remission during that time. At the end of the two-year maintenance phase, the antidepressant medication was withdrawn over two months. From the start of discontinuation, patients were followed for two years or until recurrence, whichever occurred first. Recurrence was diagnosed if a patient met symptomatic criteria for DSM-III-R major depression for at least one week and had a HAM-D score of ≥16.

Results: The cumulative probability of having a recurrence was 61%. Fifty-eight percent of new episodes occurred within six months and 92% within one year from the start of discontinuation. Eleven of the 12 patients who suffered a recurrence agreed to restart the antidepressant and 10/11 (90.9%) responded (HAM-D ≤ 10).

Conclusions: Elderly patients with first-episode major depression are at high risk of recurrence following discontinuation of

maintenance antidepressant medication. However, the vast majority of patients who experience a recurrence respond to prompt reintroduction of the antidepressant.

NR328 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Venlafaxine and Blood Pressure: A Meta-Analysis of Original Data in Depression

Michael E. Thase, M.D., Department of Psychiatry, University of Pittsburgh, 3811 O'Hara Street, Pittsburgh PA 15213;

Summary:

Objective: To evaluate the effect of venlafaxine hydrochloride on supine diastolic blood pressure (SDBP).

Method: This meta-analysis of original data from 3744 patients with major depression used a random effects model and a multivariate survival analysis method. Patients received six weeks of acute phase therapy in phase II and III controlled clinical trials comparing venlafaxine, imipramine, or placebo.

Results: Venlafaxine and imipramine were associated with small but statistically significant elevations in SDBP (eg, 1 mm Hg). In the venlafaxine group, the incidence of sustained elevations was statistically significant only at dosages >300 mg/day; at lower dosages, the risk of elevated SDBP was comparable to that of placebo and somewhat lower than that observed during imipramine therapy. Venlafaxine did not significantly increase blood pressure in patients with treated hypertension. SDBP actually decreased slightly among patients with elevated baseline pressures treated with venlafaxine. SDBP elevations remitted spontaneously during continued venlafaxine therapy in about one half of patients.

Conclusions: Venlafaxine is a safe, effective antidepressant that at highest dosages is associated with sustained elevations in SDBP in about 10% of patients. These data demonstrate that vigilant blood pressure monitoring is probably not necessary in patients taking low and intermediate dosages. For patients requiring >300 mg/day of venlafaxine, the risk of elevated SDBP warrants regular blood pressure monitoring during acute phase therapy.

This research was supported by a grant from Wyeth-Ayerst Pharmaceuticals.

NR329 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Negative Symptoms and Their Relationship with Other Neuropsychiatric Symptoms in Patients with Alzheimer's Disease

Arnaldo E. Negron, M.D., Department of Psychiatry, UMDNJ, 667 Hoes Lane, Piscataway NJ 08855;

Summary:

Introduction: Negative symptoms such as apathy, affective blunting, and emotional withdrawal are prevalent in patients with Alzheimer's disease (AD).

Objective: To evaluate whether the presence of negative symptoms is related to the presence of other neuropsychiatric symptoms in AD.

Method: One hundred and ten patients diagnosed with probable AD were evaluated in a university-based dementia management clinic over an 18-month period. The patients received a comprehensive battery of tests that included the Positive and Negative Syndrome Scale (PANSS), Scale for the Assessment of Negative Symptoms for AD (SANS-AD), Neuropsychiatry Inventory (NPI), and the BEHAVE-AD.

Results: The cohort age was 77.5 ± 8.3 years, level of education was 11.6 ± 4.5 years, 65% were female, 73% Caucasian, 37% had documented heart conditions, and the MMSE score was 14.0 ± 6.6. Fifty-seven percent of the patients (n = 63) scored ≥15 in the PANSS-Negative Subscale (PANSS-N) and were considered to have predominance of negative symptoms (PNS). Patients with PNS scored significantly worse on the NPI (43.3 ± 17.1 Vs 34.7 ± 19.7, $p = 0.01$) and the BEHAVE-AD (10.8 ± 4.8 Vs 7.4 ± 4.8, $p = 0.0004$). There was a high correlation between the PANSS-N and the SANS-AD ($r = 0.85$, $p < 0.0001$).

Conclusions: AD patients with predominance of negative symptoms manifested more severe neuropsychiatric symptoms as defined by the above scales.

NR330 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Risperidone in the Treatment of Psychosis and Aggressive Behavior in Patients with Dementia

Ira R. Katz, M.D., Department of Psychiatry, University of Pennsylvania, 3600 Market Street, Room 759, Philadelphia PA 19104; Dilip V. Jeste, M.D., Jacobo E. Mintzer, M.D., Christopher Clyde, M.S., Judy Napolitano, R.N., Martin B. Brecher, M.D., Risperidone Study Group,

Summary:

A multicenter, double-blind study was conducted on institutionalized patients with dementia to evaluate the efficacy and determine the optimal dose of risperidone in the treatment of behavioral disturbances. The subjects were 625 patients (424 women, 201 men) with diagnoses of dementia of the Alzheimer's type (73%), vascular dementia (15%), or mixed dementia (12%) who were randomly assigned to receive placebo or 0.5 mg/day, 1 mg/day or 2 mg/day of risperidone for 12 weeks. Baseline Functional Assessment Staging scores were 6 or 7 in more than 90% of the patients, indicating severe dementia.

Significantly greater reductions were seen at endpoint in BEHAVE-AD total scores ($p < 0.01$), BEHAVE-AD psychosis subscale scores ($p \leq 0.01$), BEHAVE-AD aggressiveness scores ($p < 0.01$), and Cohen-Mansfield Agitation Inventory verbal and physical aggression scores ($p < 0.01$) in patients receiving 1 and 2 mg/day of risperidone than in placebo patients. More adverse events were reported by patients receiving 2 mg/day of risperidone than 1 mg/day; the frequency of adverse events (including extrapyramidal symptoms) was similar in patients receiving 1 mg/day of risperidone or placebo.

It is concluded that risperidone significantly improved symptoms of psychosis and aggressive behavior in severely ill patients with dementia. In most patients with dementia, a risperidone dose of 1 mg/day appears to be optimal.

NR331 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Olanzapine Therapy in Elderly Patients with Schizophrenia

Martha Sajatovic, M.D., Psychiatry Service 116A, VA Medical Center, 10000 Brecksville Road, Brecksville OH 44141; Dalia Perez, M.D., Debra W. Brescan, M.D., Lucita Ching Pimentel, M.D., Luis F. Ramirez, M.D.,

Summary:

Objective: Compared to young adults, elderly individuals with schizophrenia may have a six-fold increase in the prevalence of tardive dyskinesia. The atypical antipsychotic olanzapine may offer particular benefit for this population. This is a prospective, open-label trial of olanzapine therapy in elderly schizophrenic patients.

Methods: Individuals at least 65 years old with DSM-IV schizophrenia and history of neuroleptic responsiveness were given olanzapine as add-on therapy to existing medication regimen. Other antipsychotic medication was gradually discontinued. Psychopathology was assessed using the Brief Psychiatric Rating Scale (BPRS). Abnormal movements were assessed with the

Simpson-Angus Neurological Rating Scale (SA), and cognitive status was assessed with the Mini-Mental State Evaluation (MMSE).

Results: 21 individuals received olanzapine therapy for a mean of 6.2 weeks at a mean dosage of 10 ± 3.9 mg day. Mean age of the group was 70.4 ± 4.2, range 65–80 years. Patients had a mean of 1.6 ± 1.4 significant comorbid medical illnesses. Changes in BPRS scores were not significant for the group as a whole, while SA score change was substantial, with pretreatment mean of 13.2 ± 9.4 compared with olanzapine treated mean of 5.5 ± 4.0 ($p < .001$). MMSE score change was not statistically significant. Comorbid medical illnesses were not adversely affected.

Conclusion: Olanzapine is an effective antipsychotic medication in psychotic older adults and is associated with significant improvement in extrapyramidal side effects. Implications for effect on cognitive status should be explored in larger, long-term trials.

This study was supported by a grant from Eli Lilly Company.

NR332 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Anxiety in Older Primary Care Patients

Ajaya K. Upadhyaya, M.D., Psychiatry, University of Rochester, 300 Crittendon Blvd., Rochester NY 14642; Jeffrey M. Lyness, M.D., Christopher Cox, Ph.D., Larry Seidlitz, Ph.D., Eric D. Caine, M.D.

Summary:

While anxiety disorders and symptoms are common in younger persons, their clinical significance in older adults is less clear. We studied 305 subjects 60 or older, recruited from primary care settings, to determine the prevalence and comorbidity of anxiety disorders and symptoms and their associated functional impairment. Psychopathology was assessed by the Structured Clinical Interview for DSM-III-R (SCID), which provided Axis I psychiatric diagnosis and lifetime history of threshold SCID anxiety symptoms. Current anxiety was measured by self-report instruments, (e.g., the relevant items from the Medical Outcomes Survey short form [SF-36]), and by observer ratings of anxiety items on the Hamilton Depression Rating Scale. Medical morbidity was assessed by presence/absence of several specific medical conditions. Functional status was measured by the Global Assessment of Function (GAF), the Instrumental Activities of Daily Living and Physical Self Maintenance Scales, and the social function score on the SF-36. Analyses used comparative statistics and multiple regression techniques to determine independent associations.

Anxiety disorders were relatively uncommon (point prevalence: 1.0%), but history of SCID anxiety symptoms was more prevalent (14.9%). Hypothyroidism was the only medical condition associated with a history of anxiety symptoms. There was substantial overlap of anxiety symptoms with depressive disorders. Forty-seven percent of patients with a history of anxiety symptoms had major depression (active or in full remission) compared with 21% of those without such a history. Conversely, 74% of patients with a diagnosis of depression had a history of anxiety symptoms compared with 11% of those without such a diagnosis. Anxiety symptoms were significantly associated with poorer function on the GAF and the SF-36. However, anxiety was not independently associated with poorer function after controlling for age, gender, education, and depressive symptoms. Further studies, including longitudinal outcome and using more rigorous measures of anxiety, are warranted to better elucidate the significance of anxiety in older adults.

Supported by NIMH grant # MH 01113 (J.M.L.) and NRSA fellowship # MH 18911 (A.K.U.)

NR333 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Visual Hallucinations in Charles Bonnet Syndrome

Janis G. Chester, M.D., Jefferson Univ Hosp, 1651 Thompson Bldg, 1020 Sansom Street, Philadelphia PA 19107-5004; Daniel A. Monti, M.D.

Summary:

Objective: Patients with Charles Bonnet syndrome (CBS) were evaluated using single-photon-emission computed tomography (SPECT). Findings were reviewed using the recently proposed synaptic elimination model for hallucinations.

Method: Three elderly patients who presented with the classic visual hallucinations of CBS received comprehensive psychiatric, ophthalmologic, and neurologic examinations, including magnetic resonance imaging (MRI) and SPECT imaging of the brain. All patients were given a trial of low dose antipsychotic medication.

Results: Ophthalmologic examination revealed that all three patients had myopia and/or presbyopia, and two of the patients had some degree of cataract disease. Neurological examination and MRI revealed no focal lesions. SPECT revealed hypoperfusion of the occipital cortices for all patients. Neuroleptics did not significantly affect the hallucinations.

Conclusions: As might be expected, there was some degree of ophthalmologic pathology in all patients, as well as decreased perfusion in the occipital cortex. However, this does not fully explain the production of visual hallucinations. The new synaptic elimination or "pruning" model alleges that a significant decrease in synaptic connections produces the auditory hallucinations in schizophrenia. Given that CBS characteristically presents in old age, a neurodegenerative process might be a factor for the development of hallucinations in this disorder as well.

NR334 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Sertraline Versus Nortriptyline in the Depressed Elderly

Arnold J. Friendhoff, M.D., Department of Psychiatry, NYU Medical School, 550 First Avenue, New York NY 10016; Murray Alpert, Ph.D., Cathryn M. Clary, M.D., Ellen Richter, Ph.D.

Summary:

Objective: To compare the efficacy of sertraline vs. nortriptyline in improving anxiety, sleep, and energy in elderly patients with major depression, with and without melancholia/high baseline severity.

Methods: 210 nondemented, depressed elderly outpatients (HAM-D-24 ≥ 18) were randomized, double-blind, to 12 weeks of treatment with flexibly dosed sertraline (50-150 mg) or nortriptyline (25-100 mg).

Results: Mean ± SD age 67.9 ± 6.3 years; 59% female; mean ± SD baseline HAM-D score 25 ± 5; 19% of patients were melancholic. The HAM-D response rate at endpoint for melancholic patients was 59% for both SERT and NTP; for the high depression severity group it was 53% for SERT and 39% for NTP (n.s.). Improvement on the HAM-D sleep factor was similar for SERT and NTP, as was PRN use of hypnotics and improvement in anxiety on the HAM-A. Improvements in energy level as assessed by the HAM-D energy/motivation factor, as well as by two patient-rated factors, the POMS-vigor and POMS-fatigue, showed no significant difference between drugs on the HAM-D factor, but SERT treatment showed a significant improvement compared with NTP on both POMS factors ($p \leq 0.03$ for POMS-vigor; $p < 0.01$ for POMS-fatigue).

Conclusions: 1) SERT has comparable efficacy to NTP in elderly depressives with melancholia/high baseline severity; 2) SERT treatment yielded improvement in insomnia comparable to NTP even in the first two weeks of study treatment; 3) SERT and NTP

treatment yielded comparable improvement in anxiety; and 4) SERT was associated with significantly greater subjective improvement in energy level than NTP.

This research was supported by Pfizer, Inc.

NR335 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Safety and Efficacy of Long-Term ECT in the Very Old

Mustafa M. Husain, M.D., Univ TX Southwestern Med, 5323 Harry Hines Boulevard, Dallas TX 75235; Tommie Tipton, R.N., Aaron Van Wright, M.D., Aneela Ahmed, M.D., A. John Rush, M.D.

Summary:

Objective: Electroconvulsive therapy (ECT) is a beneficial and often life-saving alternative treatment for affective disorders in the elderly. Previous studies have shown ECT-induced cognitive deficits to be transient after an acute course of ECT. The purpose of this study was to review the safety and efficacy of long-term, i.e. continuous, ECT treatment for more than a year in the very old patient (over 75 years of age).

Methods: Twenty-one patients (15 female, six male) average age 79 years with affective disorders (17 major depressive disorder, two bipolar disorder, one major depressive disorder with Parkinson's disease, and one major depressive disorder with dementia) were followed. All patients received at least five or more acute phase ECT treatments followed by maintenance ECT treatments over a year. The psychometric rating scales (21-item Ham-D and Folstein MMSE) were used prior to and during the course of ECT treatments to compare the efficacy of the treatments vs. the risk of cognitive deficit.

Results:

	Average	*Range*
Age in years	79.8	75–89
#of A-ECT treatments	7.6	3–15
pre A-ECT HAM-D scores	23	9–41
post A-ECT HAM-D scores	7.7	0–13
pre A-ECT MMSE scores	24.5	15–30
post A-ECT MMSE scores	22.3	11–30
# of M-ECT treatments	16	12–24
pre M-ECT HAM-D scores	8.6	0–27
post M-ECT HAM-D scores	5.9	0–27
pre M-ECT MMSE scores	22.4	9–30
post M-ECT MMSE scores	27.9	22-30

Conclusion: ECT-induced cognitive deficits were not found to be a significant problem in the overall course of ECT (acute and maintenance). Both postacute and postmaintenance ECT psychometric tests show significant improvement in affective symptoms as well as demonstrating no significant change or decline in cognitive functioning. This study further points towards the safety and efficacy of long-term ECT for very old patients.

NR336 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Pharmacokinetics of Reboxetine in Elderly Volunteers and Depressed Patients

Erik H.F. Wong, Ph.D., CNS Research, Pharmacia Upjohn, 301 Henrieta Street, Kalamazoo MI 49001

Summary:

Objectives: Depression in the elderly is generally not well treated. Poor tolerability, possibly resulting from age-related changes in antidepressant pharmacokinetics, may lead to noncompliance. Here the pooled results of several pharmacokinetic studies of reboxetine are reported.

Method: Single doses of reboxetine (4mg) were given to cohorts of nine to 12 healthy volunteers aged 50–63 (middle-aged); 68-77 (elderly); and 66–98 (very elderly). Twelve depressed patients aged 75–87 also received reboxetine up to a maximum of 8 mg/day over four weeks. Reboxetine plasma pharmacokinetics were determined from periodic blood samples and compared with previously determined pharmacokinetics in the general population.

Results: In the middle-aged and elderly, the pharmacokinetics of reboxetine do not differ from those of the general population. However, in very elderly volunteers, plasma AUC is increased (from 2974 ng.h/ml in the middle-aged to 8345 ng.h/ml) and renal clearance decreased (1.6 vs. 0.5 ml/min). In elderly patients, systemic exposure after reboxetine 8 mg/day (steady-state), although not directly comparable with that following single-dose administration, was relatively higher (AUC 6841 ng.h/ml). However, reboxetine 4 mg/day was well tolerated, with no increase in the frequency or severity of adverse events.

Conclusion: Reboxetine 4 mg/day is a suitable starting dose for patients aged 65 and older with depression.

Funded by Pharmacia and Upjohn

NR337 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Reboxetine Is As Effective and Better Tolerated than Imipramine in Elderly Patients with Depression

Cornelius L. Katona, M.D., Department of Psychiatry, University College, Ridinghouse Street, London E97AL, England

Summary:

Objectives: Antidepressant therapy is often not well tolerated and may be contraindicated in the elderly. This affects choice of therapy, compliance, and outcome. This study compared the efficacy and tolerability of reboxetine, the first selective noradrenaline reuptake inhibitor (NARI), with imipramine in an elderly depressed population.

Method: 347 elderly patients (>65 years) with a diagnosis of major depression or dysthymia were randomized to receive reboxetine (4–6 mg/day) or imipramine (75–100 mg/day in divided doses), for eight weeks. Efficacy was principally assessed using the HAM-D rating scale.

Results: Reductions in the mean total HAM-D score in both groups were comparable as was the cumulative risk of developing an adverse event, although hypotension and related symptoms were more frequent with imipramine (16%) than reboxetine (7%); odds ratio 0.43 (95% CI 0.21–0.85). Similarly, the frequencies of cardiovascular events (21 vs. 13%), moderate to severe (73 vs. 65%), serious (14 vs. two events) and drug-related (9.2 vs. 3.3%) adverse events and discontinuation of treatment (16 vs. 11%) caused by adverse events were nonsignificantly greater in the imipramine group than the reboxetine group.

Conclusions: Reboxetine is as effective and better tolerated than imipramine in the elderly. Discontinuations and cardiovascular events are less frequent, and adverse events were less serious in patients treated with reboxetine.

Funded by Pharmacia & Upjohn.

NR338 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

The Impact of Social Support on End-of-Life Treatment Preferences

Sid M. Hosseini, D.O., Dept of Psychiatry, UMMS, 645 W Redwood Street, Baltimore MD 21201-1542; Paul E. Ruskin, M.D., Kumar Menon, M.D., Allen Raskin, Ph.D.

Summary:

Objective: We examined the relationship between social support and end-of-life treatment preferences among geriatric patients.

Method: As part of a larger study, 112 medically ill patients admitted to a VA hospital were assessed and DSM-III-R diagnoses were made. Thirty-nine of the 112 subjects were assigned a depression diagnosis. Choices for end-of-life treatment preferences were: CPR, mechanical ventilation, tube feeding, and IV fluid. Subjects were administered a 12-item social support scale. The scale was factor analyzed and three factors emerged: Family, Friend, and Special Person Support.

Results: Depressed patients with more social support were significantly more likely to prefer CPR (r = 0.35), mechanical ventilation (r = 0.43), tube feeding (r = 0.43), and IV fluid (r = 0.45). Furthermore, the Special Person factor and to a lesser extent the Friend factor significantly correlated with the above treatment preferences, but the Family factor did not. For the nondepressed group, none of the Social Support factors significantly correlated with any of the treatment preferences.

Conclusions: When patients choose end-of-life treatment preferences, they should be screened for depression and their social support assessed.

NR339 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Relationship of Alcohol Use and APOE Genotype to Age of Onset in Alzheimer's Disease

Krishnaswamy Gajaraj, M.D., Psychiatry, Mt Sinai Medical Center, 8039 SW 190th St, Miami FL 33157-7441; Raymond L. Ownby, M.D., Dylan Harwood, M.A., Warren W. Barker, M.S., Ranjan Duara, M.D., Peter St George-Hyslop, M.D.

Summary:

Objective: Determine the effects of alcohol consumption and the apolipoprotein E epsilon 4 allele (ϵ4) on age of onset among men and women with Alzheimer's disease (AD).

Method: This study included 547 AD patients (males, N = 199; females, N = 348). Age of onset of memory/cognitive symptoms was assessed with a structured interview with the primary caregiver. History of alcohol consumption was assessed via the primary caregiver as: (1) never consumed; (2) <1 drink per month; (3) <1 drink per week; (4) <1 drink per day; (5) 1-2 drinks per day; and (6) >2 drinks per day or heavy drinker. >2 drinks per day was classified as history of heavy alcohol use (HAU+). ANOVAs were utilized to determine the relationship between APOE genotype and HAU.

Results: Men reported a greater frequency of HAU than women (11% vs 6%; p = .03). In women, age of onset was related to APOE genotype (ϵ4+ = 72.9 $\pm$ 7.5 vs. ϵ4– = 76.9 $\pm$ 8.0) (p = .0001) and HAU (HAU + = 70.7$\pm$4.4 vs. HAU– = 75.0 $\pm$ 8.1) (p = .03). Among men, age of onset was not related to HAU (HAU+ = 74.6 $\pm$ 7.0 vs. HAU– = 75.5 $\pm$ 8.3, p = .93) but approached significance for APOE genotype (ϵ4+ = 74.1 $\pm$ 7.1 vs. ϵ4– = 76.5 $\pm$ 8.9, p = .08). For both genders there was no interaction between APOE genotype and HAU on age of onset. Post hoc analysis in women revealed that the women who drank 1-2 drinks per day did not have an earlier age of onset than those who drank less. The ϵ4 allele frequency was 42% in HAU+ and 26% in HAU– (ns).

Conclusions: In women with AD, HAU reduced age of onset by 4.3 years, which was comparable with the reduction in age of onset observed for subjects who were ϵ4+. However, this association was not observed among male AD patients.

NR340 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Profile of Discrete Emotions in Major and Minor Depression in Older Primary Care Patients

Larry Seidlitz, Ph.D., Department of Psychiatry, University of Rochester, 300 Crittenden Blvd, Rochester NY 14642; Jeffrey M. Lyness, M.D., Yeates Conwell, M.D., Paul R. Duberstein, Ph.D., Christopher Cox, Ph.D.

Summary:

Objective: The extent to which various discrete emotions are associated with depressive disorders in later life remains unclear. We tested the associations of the self-reported frequencies of 12 discrete emotions with diagnoses of major and minor depression in an older primary care sample, and whether particular emotions were more strongly associated with these disorders than comparison sets of other emotions.

Method: Patients aged 60 or older were recruited from the private practices of general internists and a family clinic. Stratified sampling with the CES-D was used to oversample persons having depressive syndromes. Based on a diagnostic interview, subjects were classified as (a) current major depressive disorder (MDD n = 13); (b) current minor depressive or dysthymic disorder (MIN n = 12); or (c) all others, excluding those with a current or previous major mood disorder (NONDEP n = 121). The frequencies of 12 emotions were measured with Izard's (1993) Differential Emotions Scale-IV.

Results: In analyses of covariance controlling for age and gender, MDDs differed from NONDEPS in all emotions except surprise, and differed from the MINs in sadness, fear, anger, contempt, and surprise. The MINs differed from the NONDEPs in sadness, guilt, shame, inner-directed hostility, joy, and interest. In a repeated-measures analyses of covariance, sadness and inner-directed hostility, but not guilt, were associated with MDD and MIN more strongly than was the set of other negative emotions. Fear and anger were related more strongly with MDD, but not with MIN, than was a comparison set of negative emotions. Lower joy and interest were associated more strongly with MDD and MIN than was surprise (*ps* < .05).

Conclusions: Late-life depressive disorders are characterized by particular patterns of discrete emotions. Future research should address the extent to which specific emotions predict other correlates and outcomes of depression.

Acknowledgements: This work was supported in part by NIMH grants K07 MH01113 (Dr. Jeffrey M. Lyness) and T32 MH18911 (Dr. Eric D. Caine)

NR341 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Delusional Parasitosis in Young and Elderly Patients

Michael Musalek, M.D., Psychiatry, University of Vienna, Wahringeraurtel 18-20, Vienna A1090, Austria; Elizabeth Denk, M.D., Ali Zoghlami, M.D., Ullrike Moosbacher, M.D.

Summary:

The wide variety of opinions concerning symptomatology, pathogenesis, and nosological position of delusional parasitosis (DP) in young and elderly patients was the starting point for an age-comparative study on the pathogenesis and nosological position of DP carried out on 85 consecutively selected patients (40 patients with an age under 60, 45 patients with an age of 60 or more). All of the physical, psychic, and social factors that might be of pathogenetic value as shown in previous psychopathological studies on DP were recorded. No significant differences between the two groups could be evaluated with respect to delusion's content, structure, constituting elements (e.g., quality and localization of tactile phenomena), and social isolation. Significant differences were found concerning general background symptomatology and nosological position of delusional parasitosis. The majority of patients with an age under 60 presented typical signs of major depression, whereas most of the cases older than 60 had to be attributed to the group of dementias. The impact of the study's results on treatment and prognosis will be discussed in detail.

NR342 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Follow-up Study of Risperidone in the Treatment of Patients with Dementia: Interim Results on Tardive Dyskinesia and Dyskinesia Severity

Martin B. Brecher, M.D., Janssen Research Foundation, 1125 Trenton-Harbouton Road, Titusville NJ 08560;

Summary:

A multicenter, double-blind study was conducted in 625 institutionalized patients with dementia (73% Alzheimer's, 15% vascular, 12% mixed) to evaluate the efficacy and safety of risperidone. Patients were randomly assigned to receive placebo or 0.5 mg/day, 1 mg/day, or 2 mg/day of risperidone for 12 weeks. According to their scores on the Behavior Pathology in Alzheimer's Disease Rating Scale (BEHAVE-AD) and the Cohen-Mansfield Agitation Inventory, significantly greater improvements were seen in psychosis and in the severity and frequency of aggressive behaviors in patients receiving 1 or 2 mg/day of risperidone than those receiving placebo. The frequency of adverse events (including extrapyramidal symptoms) was similar in patients receiving 1 mg/day of risperidone and placebo. Two hundred sixteen of the patients are participating in a one-year open-label follow-up study. To date, the 216 patients have been exposed to risperidone for a mean (±SD) of 184 ± 128 days (69% have been exposed > 90 days). No cases of tardive dyskinesia have been reported, and the patients show improvements on five measures of dyskinesia: dyskinetic movements, hyperkinesia, buccolinguomasticatory factor, choreoathetoid movements, and clinical global impression of dyskinesia.

NR343 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Risperidone in the Treatment of Behavioral Disturbances in Dementia

Philippe Lemmens, Ph.D., CNS, Janssen Res FDN, Turnhoutseweg 30, Beerse B-2340, Belgium; Peter DeDyne, M.D., Goedele DeSmedt, M.D.

Summary:

An international, double-blind, randomized trial was conducted to evaluate risperidone treatment in elderly patients with dementia. Patients received placebo (n = 114) or flexible doses (0.5 to 4 mg/day) of risperidone (n = 115) or haloperidol (n = 115). Diagnoses included dementia of the Alzheimer type, vascular dementia, and mixed dementia (DSM-IV).

The mean BEHAVE-AD total score at baseline was ~16.5; aggressiveness was the dominant symptom. Reductions in BEHAVE-AD total scores were greater with risperidone (mean dose 1.1 mg/day) than placebo; at week 12 the difference was significant ($p < 0.05$). At endpoint, reductions in BEHAVE-AD aggressiveness scores and Cohen-Mansfield Agitation Inventory total aggressive cluster scores were significantly greater ($p < 0.01$) in patients receiving risperidone than placebo. Treatment response (≥30% reduction in BEHAVE-AD total score) was reported in 72% of patients receiving risperidone, 69% receiving haloperidol, and 61% receiving placebo at week 12; and 54%, 63%, and 47%, respectively, at endpoint. Severity of extrapyramidal symptoms with risperidone did not differ significantly from that of placebo and was superior to that of haloperidol (mean dose 1.2 mg/day). No clinically relevant abnormalities were observed in laboratory results, vital signs, or ECG.

These results show that low-dose risperidone is well tolerated and reduces behavioral disturbances, particularly aggressive symptoms, in patients with dementia.

NR344 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Past Utilization of Geriatric Psychiatry Outpatient Services by a Cohort of Major Depressives

Peter M. Aupperle, M.D., Department of Psychiatry, RWJ Medical School, 667 Hoes Lane, Piscataway NJ 08855; Andrew C. Coyne, Ph.D., Rebecca Lifchus, B.A.

Summary:

Objective: To examine the utilization of outpatient psychiatric services by elderly depressives.

Method: A chart review identified 49 patients who had ceased active treatment, of whom 57.1% were successfully contacted by telephone to determine their history of utilization of services. The Beck Depression Inventory (BDI) was also administered. The cohort unable to be contacted did not differ statistically from the group contacted with respect to age, sex, marital status, living arrangement, and years of education. The mean age was 69.4 years.

Results: Statistically significant findings included: 1) a higher number of visits by patients referred initially from a non-health-care source ($x = 14.6$) than via a health care source ($x = 5.2$) (Wilcoxon $S = 189$, $p < 0.05$); 2) a higher number of visits by married patients ($x = 26.3$), than nonmarried individuals ($x = 8.3$) (Wilcoxon $S = 251$, $p < 0.05$); 3) higher BDI scores ($x = 21.1$) in those who complained of barriers to utilizing services, versus scores ($x = 7.5$) among those who stated that they did not need care for depression (Wilcoxon $S = 227.5$, $p < 0.05$); 4) a greater willingness to re-engage in treatment by those patients with a higher number of visits during their past treatment ($x = 19.0$) than those patients who were unwilling to seek future psychiatric care ($x = 4.8$) (Wilcoxon $S = 45$, $p < 0.05$). Reasons for discontinuation were: 1) patient perception that care was no longer needed (51.5%); 2) the existence of barriers to care (33.3%); and 3) the perception of lack of treatment efficacy (15.2%).

Conclusions: Patient characteristics and their source of referral were associated both with past service utilization and likelihood of future usage; however, many individuals do not access treatment due to both practical and attitudinal barriers to care.

NR345 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Functional Brain Activity in Alzheimer's Disease

Larry E. Tune, M.D., Department of Psychiatry, Emory University, 1829 Clifton Road, Atlanta GA 30329; Paul J. Tiseo, Ph.D., John M. Hoffman, M.D., Carlos A. Perdomo, M.S., John R. Votow, Ph.D., Sharon L. Rogers, Ph.D., Lawrence T. Friedhoff, M.D.

Summary:

Objective: To evaluate the effects of donepezil vs. placebo on cerebral glucose metabolism (CMR-glu) in patients with mild to moderate Alzheimer's disease (AD).

Methods: Twenty-eight patients with mild to moderate probable AD (mean MMSE score: 21 ± 3.9) were randomized in this double-blind, parallel-group, 24-week study comparing donepezil (10 mg/day) with placebo. Quantitative PET studies with [^{18}F]-flourodeoxyglucose were performed at baseline, week 12, and week 24, and whole-brain imaging with absolute metabolic determination was performed. Percent changes in global glucose metabolism compared to baseline were calculated for each patient.

Results: A continuous decline in functional brain activity was observed in the placebo-treated patients with a mean (±SE) decrease from baseline in CMR-glu of –7.0% (± 6.6) at week 12 and –23% (± 7.3) at week 24. The decline at week 24 was statistically significant ($p = 0.004$). In contrast, the donepezil-treated patients were not statistically different from baseline at week 12 or week 24 with mean changes in CMR-glu of +7.1% (± 6.8) and –5.4% (± 7.0), respectively.

Conclusions: These results suggest that AD is associated with a significant decline in functional brain activity over time as shown by a decreasing CMR-glu in placebo-treated patients (–23%). Treatment with donepezil (10 mg/day) appears to preserve functional brain activity as demonstrated by a lack of significant change in CMR-glu over the 24 weeks of treatment.

NR346 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Donepezil Improves Cognitive and Clinical Global Function in Patients with Alzheimer's Disease

Lawrence T. Friedhoff, M.D., ELSAL Inc, 500 Frank W. Burr Blvd, Teaneck NJ 07666; Sharon L. Rogers, Ph.D., John R. Ieni, Ph.D., Raymond D. Pratt, M.D.

Summary:

Objective: To compare the efficacy and safety of donepezil HCl, an acetylcholinesterase inhibitor, from two large studies in patients with Alzheimer's disease (AD). One study (–302) was conducted in the US, while the multinational study (–304) was conducted in nine countries across four continents.

Methods: Both studies were 30-week, randomized, multicenter, placebo-controlled studies of donepezil (5 and 10 mg) once daily. AD patients (MMSE: 10–26) received 24 weeks of double-blind treatment followed by a six-week placebo washout. Primary efficacy measures were the ADAS-cog and the CIBIC-plus, which incorporated caregiver input, an index of global function. A total of 473 patients were enrolled at 34 US sites. In the multinational study, 818 patients were enrolled at 82 sites throughout Australia, Belgium, Germany, France, Ireland, South Africa, and the UK.

Results: In both studies, donepezil-treated patients (5 and 10 mg) showed similar improvements on ADAS-cog compared with placebo-treated patients. While the donepezil groups showed significant improvement compared with placebo at week 24 and at endpoint, a greater improvement in ADAS-cog scores was consistently observed in patients receiving 10 mg/day compared with 5 mg/day. Similar effects were observed on the CIBIC-plus scores with all active dose groups showing similar significant improvements in numbers of patients judged clinically unchanged or improved compared with placebo. After the six-week placebo washout, ADAS-cog and CIBIC scores of patients previously treated with donepezil returned to levels similar to patients who received placebo for 30 weeks. Donepezil was well tolerated in both studies, with 10 mg/day patients having a slightly higher incidence of nausea, diarrhea, and vomiting compared with placebo- and 5 mg/day donepezil-treated patients. Adverse events were generally of mild severity and of brief duration. Both doses of donepezil improved cognitive and global function in both studies in the absence of significant adverse effects.

Conclusions: These results demonstrate that donepezil's positive effects on cognitive and global function were the same in US and multinational cohorts of patients with mild to moderately severe AD.

Supported by Eisai Inc., Teaneck, NJ.

NR347 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

AD7C-NTP Is Specifically Elevated in Alzheimer's Disease

Hossein A. Ghanbari, Ph.D., Nymox Corporation, 5516 Nicholson Lane, Rockville MD 20895; Michael Munzar, M.D., Kasra Ghanbari, Paul Averback, M.D.

Summary:

This study was carried out to confirm the specificity of AD7C-NTP as a biochemical marker for Alzheimer's disease (AD). AD7C-NTP is a 41 kD protein present in neurons that is selectively upregulated in AD brain and is associated with the pathology of the disease. *In situ* hybridization and immunostaining studies have localized AD7C-NTP gene expression in early-stage degenerating neurons. Over-expression of AD7C-NTP in transfected neuronal cells promotes neuritic sprouting and cell death. Using an enzyme-linked sandwich immunoassay (ELSIA), AD7C-NTP levels have been measured in cerebrospinal fluid (CSF) samples from cases of AD as well as age-matched controls and a variety of neurological disease controls, including cases of stroke, Pick's disease, amyotrophic lateral sclerosis, diffuse Lewy body disease, and certain psychiatric disorders of the elderly. The mean AD7C-NTP level in the possible/probable AD group (4.3 $\pm$ 3.2 ng/ml) was significantly higher ($P < 0.0001$) than the age-matched non-AD demented control group (1.1 $\pm$ 0.9 ng/ml). However, there was no significant difference between AD7C-NTP levels in the non-AD dementia control group and age-matched normal controls (1.1 $\pm$ 0.9 vs 1.2 $\pm$ 0.9). Levels of AD7C-NTP greater than 2.0 ng/ml were found in 83% of possible/probable AD, 89% of early AD, and in only 6% of the non-AD-demented control group. The data clearly confirm specificity of AD7C-NTP as a biochemical marker for Alzheimer's disease.

NR348 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Olanzapine in the Treatment of Delirium

Prakash S. Masand, M.D., Department of Psychiatry, SUNY Health Sciences Center, 750 East Adams Street, Syracuse NY 13210; Anil Sipahimalani, M.D.

Summary:

Delirium, an organic psychiatric syndrome occurring in 10% of hospitalized medical and surgical patients (Lipowski, 1987), is characterized by fluctuating levels of consciousness and global impairment of cognitive functioning. It can be caused by a variety of factors and usually has a sudden onset and fluctuating course. The Delirium Rating Scale (DRS) is a 10-item, clinician-rated, symptom scale that is more sensitive than tests of cognitive function for delirium (Trzepacz et al., 1988). Eleven delirious patients were treated with olanzapine (8.2 +/– 3.4 mg qhs), and 11 delirious control patients were treated with haloperidol (5.1 +/– 3.5 mg qhs). Peak response time was similar in both groups. Five of the 11 olanzapine patients showed significant improvement (>50% reduction) on the DRS and no patients had side effects, while six of the 11 control subjects showed no improvement on the DRS and five had EPS or excessive sedation. Olanzapine may be a useful alternative to haloperidol in the treatment of delirium in hospitalized patients.

NR349 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Schizophrenia and Irritable Bowel Syndrome: A Cross-Cultural Study

Prakash S. Masand, M.D., Department of Psychiatry, SUNY Health Sciences Center, 750 East Adams Street, Syracuse NY 13210; Charles Pinto, M.D., Sanjay Gupta, M.D., David E. Kaplan, M.D.

Summary:

Irritable bowel syndrome (IBS) affects 10%-22% of adults (Lynn and Friedman, 1993). Among patients seeking medical attention for IBS, 70%-90% may have psychiatric comorbidity. In previous research, we found that 19% (N = 47) of patients with schizophrenia in the U.S. met criteria for IBS compared with 2.5% (N = 40) of the control group (Gupta et al., 1997). Using a semistructured interview to study the prevalence of IBS among schizophrenia patients in Mumbai, India, we compared 37 patients (study group) with 47 patients in the U.S. (comparison group 1) and 40 control patients (comparison group 2). Thirty-two percent (N = 12) of the study group met criteria for IBS (Drossman et al., 1990) compared

with 17% (N = 8) of patients in group 1 and 2.5% (N = 1) of group 2. Indian patients were less likely to be employed, to have completed high school, and to have had a psychiatric history. This is the first cross-sectional study comparing the prevalence of IBS in patients with schizophrenia in two different cultures. It appears that IBS is common in patients with schizophrenia across cultures. Patients with schizophrenia seldom complain about gastrointestinal symptoms. Therefore, it may be important to inquire about symptoms before initiating pharmacotherapy in order to differentiate side effects from an existing condition.

NR350 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Memory and Aging in Adults with Down's Syndrome

Karen L. Brugge, M.D., Psychiatry, Ohio State University, 1670 Upham Drive Ste. 130, Columbus OH 43210

Summary:

Almost all 40-year-old and older adults with Down syndrome (DS) have the neuropathology of Alzheimer's disease (AD), yet only about 30% of adults over 50 years old have dementia. The present study, which addressed methodological concerns, revealed greater memory deficits in adults with DS than non-DS IQ-matched controls on measures employed in AD patients. These deficits appeared among strikingly young adults with DS and correlated with age among DS but not controls. Unlike reported prevalence rates of dementia, the percentage of DS identified as "memory impaired" (60% among 30–39 year olds and 100% among 40–51 year olds) corresponded to the known age-distribution and prevalence rates of AD neuropathology in DS (about 70% and 100%, respectively). The controls showed a positive relationship of cognitive function with age, suggesting the presence of neuronal plasticity. However, a cohort effect cannot be excluded in that better cognitive function in older adults may be associated with greater longevity. These results confirm those of our earlier San Diego study and emphasize the need to further elucidate the clinical manifestations of neurodevelopmental, neurodegenerative, and aging processes in this unique population.

Supported by NIA: 1R29AG12552 and the National Alliance for Research on Schizophrenia and Depression.

NR351 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

A Bridging Study of Metrifonate in Patients with Probable Alzheimer's Disease

Jerome F. Costa, M.D., California Clinical Trials, 8500 Wilshire Blvd 7th Floor, Beverly Hills CA 90211; Pamela Ann Cyrus, M.D., John J. Sramek, Pharm.D., Florian Bieber, M.D., Paul Tanpiengco, M.S., Barbara Gulanski, M.D., Neal R. Cutler, M.D.

Summary:

Objective: Metrifonate is the pro-drug of DDVP (2,2-dichlorovinyl dimethyl phosphate) a potent and long-acting acetylcholinesterase (AChE) inhibitor. This safety/tolerability study was designed to determine the maximum tolerated dose (MTD) of metrifonate in patients with AD.

Methods: In this open-label inpatient/outpatient bridging study, two sequential cohorts of eight AD patients each received metrifonate once daily. The first cohort received loading doses by weight of 125–225 mg (2.5 mg/kg) for 14 days, followed by 200–360 mg (4.0 mg/kg) for three days, and, finally, a maintenance dose of 100-180 mg (2.0 mg/kg) for 14 days. The second cohort of patients received a loading dose by weight of 125-225 mg (2.5 mg/kg) for 14 days followed by a maintenance dose of 75-135 mg (1.5 mg/kg) for 35 days.

Results: Six patients in the first cohort were discontinued during the maintenance phase on days 25–27 due to moderate to severe asthenia, cramps, incoordination, abdominal pain, and/or decreased appetite, and the panel was discontinued. All adverse events resolved after discontinuation, most within two to five days. Adverse events in the second cohort were primarily mild and transient; only one patient was discontinued.

Conclusions: The MTD of metrifonate was a maintenance dose of 75–135 mg (1.5 mg/kg). Neither plasma metrifonate nor DDVP concentrations nor erythrocyte AChE inhibition levels were predictive of tolerability.

This study was sponsored by Bayer Corporation.

NR352 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Delirium in Terminal Cancer: A Prospective Study on Incidence and Prevalence

Pierre R. Gagnon, M.D., Clinique Externe de Psych, Hotel Dieu De Quebec, 11 Cote Du Palais, Quebec PQ G1R 2J6, Canada; Pierre Allard, M.D., Benoit Masse, Ph.D.

Summary:

Background: Delirium frequency in terminal cancer remains unknown. Continuous screening and symptom monitoring is essential to evaluate delirium frequency accurately. Studies using such a methodology are lacking.

Purpose: To measure delirium incidence and prevalence in terminal cancer.

Methods: 89 consecutive cancer patients admitted to a palliative care center were under continuous delirium screening by bedside nurses, using the Confusion Rating Scale (CRS), during a four-month period, until each one died (median stay: 12 days). Patients positive on delirium screening were interviewed by a research nurse for delirium diagnosis, using the Confusion Assessment Method (CAM). Data on patients, disease, and medication were recorded.

Results: At admission, prevalence of positive delirium screening (CRS+) was 13% (12/89). Incidence of patients who became CRS+ during stay was 56% (43/89-12). Among these 43 patients, delirium was confirmed in 25 (58%), eliminated in 10 (23%), and undetermined in eight (19%). Thus, the best estimate of delirium incidence was between 32% (25/89-12) and 43% (25 + 8/89-12). The only factor associated with a higher frequency of delirium symptoms was higher opioid dosage ($p = 0.08$).

Conclusion: At least one-third of cancer patients admitted for terminal care may develop delirium before death. Higher opioid dosage was associated with delirium symptoms.

(Funded by the National Cancer Institute of Canada)

NR353 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Relationship of Negative Symptoms to Functional Status in Alzheimer's Disease

William E. Reichman, M.D., Department of Psychiatry, Univ of Med and Dent of NJ, 667 Hoes Lane, Piscataway NJ 08856; Andrew C. Coyne, Ph.D., Sudarshan Bagchi, M.D., Sandra Egan, R.N.C.

Summary:

Prior work has demonstrated that disturbances of initiative, motivation, and emotional reactivity frequently complicate the course of Alzheimer's disease (AD). These features of AD can be operationalized and measured as negative symptoms. Such symptoms are distinguishable from depression and are not necessarily accounted for by the comorbid occurrence of systemic medical illness, positive symptoms, or medication use. As a behavioral feature of AD, negative symptoms have the potential to impair function and heighten caregiver burden.

Purpose: This study was designed to show that in AD, negative symptoms are associated with functional status and that this relationship is independent of level of cognitive impairment.

Method: A total of 15 patients with clinically diagnosed AD who were enrolled in a clinical trial of a cognition-enhancing agent had baseline evaluations of cognitive impairment (MMSE), negative symptoms (SANS-AD), depression (Cornell Depression Scale), and functional status (Blessed Dementia Scale). No subjects had exposure to neuroleptic or other medication that could contribute to negative symptoms.

Findings: Mean age of subjects was 70.9 years; 73.3% were females; mean MMSE was 17.1 (SD 5.8). MMSE scores correlated inversely with Blessed scores ($r = -0.84$, $p < 0.001$). MMSE scores did not correlate with SANS-AD scores ($r = 0.40$, $p > 0.05$). However, SANS-AD scores were positively correlated with Blessed scores ($r = 0.55$, $p < 0.05$).

Conclusions: The present findings suggest that negative symptoms are associated with functional status independent of cognitive ability or depression. These results imply that future treatments that are successful in improving negative symptoms in AD may also have a beneficial impact on functional status independent of any effects on cognition or mood.

NR354 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Donepezil Safety in a Large-Scale, Open-Label Alzheimer's Disease Trial Compares to That in Pivotal Trials

William E. Reichman, M.D., Department of Psychiatry, Univ of Med and Dent of NJ, 667 Hoes Lane, Piscataway NJ 08856; Thomas D. McRae, M.D., Donepezil 313 Study Group

Summary:

Objective: To evaluate the safety of donepezil use in Alzheimer's disease (AD) in an open-label trial with a broader sample of patients than those in the pivotal trials.

Methods: 256 sites enrolled patients; most clinicians were community-based physicians. Patients met standard criteria for mild to moderate probable or possible AD and were excluded for comorbid conditions judged both clinically significant *and* unstable or for concomitant use of tacrine or any investigational drug. Patients were treated for 12 weeks with 5 mg/day of donepezil for the first four weeks; then, 10 mg/day was encouraged but not required.

Results: 1,035 patients enrolled. 83.7% completed 12 weeks; 6.5% discontinued due to adverse events (AE's). Of the first 353 completers, 92% were taking 10 mg/day at week 12. Seventy seven percent reported AE's (vs. 74% for donepezil and 72% for placebo in the pivotal trials). Shaded data below show the most common AE's for this group compared with data from previous trials; data for all 1,035 will be presented at the meeting.

Adverse Event	Placebo	5 mg/day	10 mg/day after 1 wk	10 mg/day after 4 wks	10 mg/day after 6 wks
Nausea	6%	5%	19%	10%	6%
Diarrhea	5%	8%	15%	12%	9%
Insomnia	6%	6%	14%	7%	6%
Fatigue	3%	4%	8%	5%	3%
Vomiting	3%	3%	8%	3%	5%
Muscle Cramps	2%	6%	8%	2%	3%

Conclusions: Similar safety profiles were obtained in these more typical community residing AD patients when compared with pivotal study patients. Comparing across studies, the incidence of cholinergic side effects appears directly related to the time to dose increase from 5 to 10 mg per day.

This study was funded by Eisai Inc. and Pfizer Inc.

NR355 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

The Effects of Atypical Antipsychotic Drugs on Cognitive Function in Schizophrenia

Susan R. McGurk, Ph.D., Department of Psychiatry, Vanderbilt University, 1601 23rd Avenue South, #306, Nashville TN 37212; Herbert Y. Metzler, M.D.

Summary:

Cognitive dysfunction is a core deficit in schizophrenia that is resistant to typical antipsychotic medications. We studied the effects of treatment with risperidone and olanzapine on cognition. Schizophrenia patients (22 males, seven females) were evaluated at baseline (on typical agents) and again after treatment with risperidone (mean dose = 5.7 mg). Risperidone significantly improved performance on the Auditory Consonant Trigrams ($p < 0.05$), a measure of verbal working memory, with a trend for improvement on the Wisconsin Card Sort Categories (number of categories attained increased from 3 to 3.74; $p < 0.09$). These findings are consistent with other reports (Green et al., 1997). In a study of 16 patients (12 males, four females) assessed at baseline (while on typical agents) and again after six weeks of treatment with olanzapine (mean dose = 12 mg), olanzapine significantly improved performance on measures of verbal fluency ($p < 0.01$), executive functioning (Stroop Test) ($p < 0.01$), reaction time ($p < 0.05$), and verbal memory ($p < 0.01$). However, unlike risperidone, performance on measures of spatial and verbal working memory was unresponsive to olanzapine. Performance on cognitive tests was unrelated to effects of these drugs on BPRS-rated psychopathology. A double-blind comparison of the effects of risperidone and olanzapine is ongoing in our clinic.

NR356 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

The Effects of Nicotine in Parkinson's Disease

Paul A. Newhouse, M.D., Dept of Psych, Univ of VT College of Med, 1 South Prospect Street, Burlington VT 05401; Jaskaran Singh, M.D., Christina Conrath, M.S., Megan Kelton, B.S.

Summary:

Objective: Postmortem studies have demonstrated a substantial loss of nicotinic receptors in Parkinson's disease (PD), which may be at least partially responsible for some of the cognitive, motoric, and behavioral deficits seen in this disorder. Epidemiologic studies have suggested that cigarette smoking is a strong negative risk factor for the development of PD. We have previously shown that blockade of central nicotinic receptors produces cognitive impairment in areas of new learning, short-term memory, and psychomotor slowing with increasing dose sensitivity with age and disease. Studies of acute stimulation of nicotinic receptors in Alzheimer's disease with nicotine and the novel agonist ABT-418 in our laboratory and others have show improvements in several measures of cognitive function. Prior studies of the effects of nicotine in PD have suggested some improvements in clinical symptomatology. We have begun quantitative studies of both acute and chronic nicotine in PD to assess both cognitive and motor effects.

Methods: Nine nondemented subjects (age 67 ± 5.3; M/F = 7/2) with early to moderate PD (mean Hoehn-Yahr stage = 1.75; MMSE = 28.6) received a dose-ranging study of intravenous nicotine up to 1.25 μg/kg/min, followed by chronic administration of nicotine by transdermal patch with doses ranging up to 14 mg per day for two weeks. Testing occurred both during drug administration and up to two months after drug cessation to look for prolonged effects.

Results: Preliminary analysis shows improvements after acute nicotine in several areas of cognitive performance, particularly measures such as reaction time, central processing speed, and decreased tracking error. Improvements in attention and semantic

retrieval were not seen. After chronic nicotine, improvements were seen in several motor measures, suggesting improved extrapyramidal functioning. This appeared to be sustained for up to one month after drug. The treatment was well tolerated.

Conclusion: Nicotinic stimulation may have promise for improving both cognitive and motor aspects of Parkinson's disease.

Supported by GCRC M01-00109 and Japan Tobacco

NR357 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Enhanced Cortisol Response to Ipsapirone in Mania

Lakshmi N. Yatham, Department of Psychiatry, University of British Columbia, 2255 Wesbrook Mall, Vancouver BC V6T 2A1, Canada; I.S. Shiah, M.D., Raymond W. Lam, M.D., Edwin M. Tam, M.D., A.P. Zis, M.D.

Summary:

Objectives: To explore the role of 5-HT1A receptor function in the pathophysiology of bipolar mania, we measured plasma cortisol response to a challenge with the selective 5-HT1A receptor agonist ipsapirone in bipolar manic patients.

Methods: We recruited six bipolar manic patients and 26 healthy subjects for the study. After obtaining a blood sample for baseline cortisol levels, a single dose of 0.3 mg/kg of ipsapirone was given orally to all the subjects and further bloods were obtained every 30 minutes for three hours.

Results: The administration of ipsapirone led to a significant increase in cortisol levels both in manic patients and healthy controls. There was no significant difference in baseline cortisol levels between the two groups, but the cortisol responses to ipsapirone were significantly enhanced in manic patients compared with healthy controls.

Conclusions: Our findings suggest an increased postsynaptic 5-HT1A receptor sensitivity in mania, which may result from low serotonin availability in this condition.

NR358 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Comparison of Prolactin Levels in Postmenopausal Women Treated with Risperidone or Conventional Neuroleptics

Giovanni Caracci, M.D., Department of Psychiatry, Cabrini Medical Center, 227 East 19th Street, New York NY 10003; Renuka Ananthamoorthy, M.D.

Summary:

We have previously reported that the atypical antipsychotic risperidone increases prolactin levels in premenopausal women up to three times higher than the typical neuroleptics. In this patient population, such increases are often responsible for hypogonadism, amenorrhea, and galactorrhea. To date, no such study has been performed in postmenopausal women. The relevance of such study lies in the potential for loss of bone density associated with chronically high prolactin, a reason for concern in a population greatly affected by osteoporosis.

We compared prolactin levels in 15 postmenopausal women treated with risperidone with levels from a sample of 15 postmenopausal women treated with typical neuroleptics. The two groups did not significantly differ for age (mean 71.4 vs. 71.6, SD 2.5 vs. 12.3) and dose in cpz equivalents (mean 1.5 vs. 1.2, SD .8 vs .9), but significantly differed in the number of days of treatment (mean 170 vs. 17, SD 242 vs. 22) ($F = 5.9$ $p = .021$). Prolactin levels were significantly higher in the risperidone-treated group than in the group treated with conventional neuroleptics (mean 72 vs. 21, SD 39 vs. 10) ($F = 24$, $p = .0001$). The etiological and clinical relevance of our findings in the geriatric patient population will be discussed.

NR359 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Tryptophan Depletion Challenge in Depressed Outpatients: Relationship to Response Pattern

Maya K. Spillmann, M.D., Department of Psychiatry, Massachusetts General Hospital, 15 Parkman Street, ACC 815, Boston MA 02114; Meridith Rankin, B.A., Rachel D. McColl, B.A., Jonathan E. Alpert, M.D., Andrew A. Nierenberg, M.D., Jerrold F. Rosenbaum, M.D., Maurizio Fava, M.D.

Summary:

Objective: Our study examined the effects of acute nutritional tryptophan depletion on remitted depressed patients currently treated with selective serotonin reuptake inhibitors (SSRIs).

Method: We recruited 17 outpatients on SSRIs whose major depressive disorder (MDD) was in remission and who scored ≤ 7 on the modified 25-item Hamilton Depression Rating Scale (HAM-D) at screen. Tryptophan depletion was obtained administering a tryptophan-free amino acid drink with 25 amino acid capsules and was conducted in a double-blind, placebo-controlled, balanced crossover fashion. Psychological measurements were administered before and after each test, and the crossover phase was completed during the second week of the study. Repeated measure analysis of covariance, using treatment group, period, and baseline effect as covariates, was used to determine the effect of tryptophan depletion on the various psychological measures.

Results: Tryptophan depletion was significantly related to increased scores on the six-item HAM-D scale ($p = .004$), the 14-item HAM-Anxiety scale ($p = 0.15$), the Beck Depression Inventory ($p = .013$), and the Symptom Questionnaire Anger, Anxiety, and Somatic Symptom Scales ($p = 0.23$, .032, and .007, respectively). Patients with a history of true drug response pattern to the SSRIs were more likely than patients with a history of placebo response pattern to experience a worsening of mood during depletion ($p = .01$).

Conclusion: Our results suggest that SSRI-treated patients undergoing tryptophan depletion are likely to experience short-term worsening of mood and significant somatic symptoms. Given the small sample size of our study, further investigations are needed to confirm our finding of a relationship between a history of true-drug response and severity of worsening of depression during tryptophan depletion.

NR360 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Serotonin Receptors of Type 2C in Human Brain

Donatella Marazziti, M.D., Department of Psychiatry, University of Pisa, Via Roma 67, Pisa 56100, Italy; Alessandra Rossi, Ph.D., Gino Giannaccini, Ph.D., Antonio Lucacchini, Ph.D., Giovanni B. Cassano, M.D.

Serotonin (5-HT) receptors of type 2 are distinguished in 2a and 2c; recently, mutant mice lacking functional 5-HT2c receptors were shown to be overweight and more prone to death from seizures, suggesting that the receptors may be important in the serotonergic control of food intake and in tonic inhibition of neuronal excitability (Tecott et al., 1995). Our study aimed to contribute to the understanding of 5-HT2c receptor functions through its mapping in human brain by means of the specific binding of tritiated mesulergine (^{3}H-MES).

Human brains were collected at autopsy from five men and five women. The postmortem delay ranged between 12 and 23 hours. Brain areas were identified by anatomists, cut into blocks and put in liquid nitrogen. The binding of ^{3}H-MES was carried out according to the method of Pazos et al. (1985) modified. The results showed that the highest concentration of ^{3}H-MES binding sites was present in choroid plexus, followed by hypothalamus and, in a significant lower amount, by basal ganglia and limbic structures, such as cingulate cortex and olfactory nucleus.

These findings represent a report on the presence of ^{3}H-MES binding sites in several regions of human brain and suggest a possible role of 5-HT2c receptors in the composition and formation of cerebrospinal fluid.

NR361 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

ECT-Induced Amnesia and Cholinergic Mechanisms

Gary M. Hasey, M.D., Department of Psychiatry, McMaster University, 100 West Fifth Street, Hamilton ON L8N 3K7, Canada; Robert G. Cooke, Jerry J. Warsh, M.D., Isaac Smith, M.Sc., Barry Martin, M.D.

Summary:

The etiology of ECT-induced memory impairment is unknown; however, animal studies suggest that muscarinic cholinergic mechanisms may be involved. Patients with major depression received right unilateral ECT 90 seconds after randomized, double-blind pretreatment with intravenous atropine (AT) or saline (SAL). Immediate, 10 minute, and 24 hour retention of paired words, faces, short story, geometric design, and nonsense words was measured before the first ECT, four hours after the fourth and the last ECT, then one week and one month later. Five different but equivalent versions of the memory battery were used. Psychotropic drugs were limited to benzodiazepines for at least seven days prior to and during the course of ECT. Age, sex, benzodiazepine use and number of ECT's were the same in AT (N = 10) and SAL (N = 13) groups. ANOVA with repeated measures for the five test sessions revealed greater recall impairment in AT compared with SAL subjects (paired words, 10 minute: group, p = .044; time, NS; group by time, NS; paired words, 24 hour: group, p = .001; time, p = .0001; group by time, NS; geometric design, 24 hour: group, p = .39; time, p = .002; group by time, NS). Preplanned t-tests showed that 24-hour paired words recall remained more impaired in AT compared with SAL subjects at one week (t = 3.56, df = 16, p = .003) and one month (t = 2.7, df = .016) after the end of ECT. These data suggest that muscarinic perturbation with atropine prior to ECT may have long-lasting negative impact upon ECT-induced amnesia.

NR362 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Clinical Features of Psychosis in Deaf Adults

Barbara G. Haskins, M.D., University of Virginia, Western State Hospital, P.O. Box 2500, Stauton, VA 24402

Summary:

Objective: To describe clinical features of psychotic illness in deaf adult inpatients.

Methods: Using DSM-IV criteria, a psychiatrist skilled in American sign language and care of deaf people reviewed records of the Mental Health Center for the Deaf.

Results: In 54 inpatients with psychosis (nine females and 45 males) diagnoses were: schizophrenia (15), schizoaffective (7), psychosis NOS (6), bipolar (5), MDE (5), and other (16). Fourty-three patients (80%) showed disordered thought content, and 27 (50%) showed disordered thought form. Hallucinations were: auditory n = 15 (28%), visual n = 19 (29%), and tactile n = 4 (7%). Regarding the association between etiology of deafness and clinical illness, all patients with Wardenburg syndrome, Usher's syndrome, and hydrocephalus suffered from mood disorders. Of the four known rubella cases, two had schizophrenia and two had mood disorders. Fourteen patients had relatives with psychiatric illness. Twelve patients had a familial (vs. acquired) cause of deafness.

Conclusion: In this sample, schizophrenic and schizoaffective disorder are over-represented among the psychotic illnesses. As 78% of the patients had an acquired form of deafness, these traumatic etiologies may also have contributed to the development of schizophrenia. Prelingually deaf schizophrenics can experience auditory hallucinations. More psychotic patients demonstrated delusions than formal thought disorder, reflecting the large number of paranoid schizophrenic subjects. Unipolar and bipolar subjects with psychosis were equally represented.

NR363 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Mirtazapine's Effect on Plasma Prolactin Levels

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Summary:

Objectives: While it is clearly established that 5-HT plays a role in stimulating prolactin release by the anterior pituitary gland, it remains unclear which specific 5-HT receptor subtype(s) mediate this response. The novel antidepressant mirtazapine stimulates 5-HT release via blockade of α_2 heteroreceptors. Since mirtazapine also blocks 5-HT_2 and 5-HT_3 receptors, its net effect is to enhance 5-HT_1 neurotransmission. To examine the role that 5-HT_1 receptors might play in 5-HT-stimulated prolactin release, we examined the effects of mirtazapine on plasma prolactin concentrations in healthy volunteers.

Methods: Under double-blind, randomized conditions, 33 healthy volunteers received either mirtazapine or placebo for a four-week period. Plasma concentrations of prolactin were measured by radioimmunoassay at baseline and at the end of each week. The maximum change from baseline in plasma hormone concentrations was calculated for each subject, and group differences were analyzed using t-test for independent samples.

Results: There were no group differences in prolactin levels at baseline (p = 0.7). Mirtazapine exposure was not associated with an increase in plasma prolactin concentrations at any time points. In fact, there was a trend toward a decrease in plasma prolactin concentrations in the mirtazapine group following four weeks of exposure (p = .19).

Conclusions: These results suggest that 5-HT_1 receptors do not mediate the prolactin response to serotonin stimulation.

This work was supported in part by Organon, Inc., and by PHS grants MH-42145, MH-33127, MH-19111, and RR-00046

NR364 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Delayed Phase Synchronization of EEG Response to 40 Hz Auditory Stimulation in Schizophrenia

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Summary:

Gamma frequency band neural activity has been hypothesized to reflect the synchronization of neural assemblies involved in "binding" of various features of an object both within a single modality and across modalities. From the cellular models of schizophrenic pathology, there are several lines of evidence implicating disturbances of inhibitory circuits, including GABAergic neurons that could affect gamma synchronization in schizophrenia. Thus, we examined the phase synchronization (phi, relative timing) of the EEG response to gamma frequency auditory stimulation in medicated patients with chronic schizophrenia (N = 15) and control subjects (N = 15). Trains of clicks (475 ms duration) were delivered at a stimulus rate of 40 Hz; 150 click trains were delivered, with a 725 ms inter-train interval. After artifact rejection

procedures, sweeps were averaged at Fz and filtered 35 - 45 Hz. Phase was defined as, $phi = (t_r - t_i) / (t_{i+1} - t_i)$ where t_r is the time corresponding to the positive response peak in the EEG, and t_i corresponds to the time of the ith stimulus presentation. Phase was measured for the 20 cycles during the stimulus train and for 16 cycles after stimulus offset. A repeated measures ANOVA showed an effect of cycle ($p < .001$) and a diagnosis X cycle interaction ($p < .001$). The schizophrenic patients were significantly slower to entrain 40 Hz stimulation than were control subjects. In addition, the schizophrenics showed slower desynchronization after stimulus offset. This finding may point to a failure of recurrent inhibitory circuits essential for accurate timing of neuronal responses in schizophrenia.

NR365 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

CSF Monoamines During Tryptophan Depletion in Depression: Implications for Pathophysiology and Antidepressant Pharmacodynamics

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Summary:

Objective: To assess pharmacodynamic changes in CSF monoamines during sertraline treatment for depression. Simultaneous measurements in plasma and CSF measured dynamic relationships between catecholamines and indoleamines during acute tryptophan depletion (ATD) before and during treatment.

Method: CSF catheters collected CSF (at 0.1 ml/minute, 1 ml samples) for 49 hours. Five weeks of sertraline treatment preceded a second catheterization. A tryptophan-free amino acid mixture was administered halfway through each CSF collection. Balanced diets resumed eight hours later.

Results: Chronic sertraline treatment significantly decreased CSF 5HIAA, but not HVA or CSF tryptophan levels. ATD decreased total plasma tryptophan, free plasma tryptophan, and CSF tryptophan to 12.13% (significant), 19.95%, and 7.45% (significant) of baseline, respectively. The slope of CSF tryptophan restoration after depletion remained essentially constant for each patient, unaffected by sertraline treatment. CSF 5HIAA levels, but not HVA, declined significantly during ATD in pre-sertraline studies (average 42.3%) but less during sertraline treatment (30.1%). Mood was unchanged during the pre-sertraline ATD study; but relapsed (on HDRS ratings) during ATD after treatment.

Conclusion: Sertraline decreases CSF levels of 5HIAA in depressed patients. After ATD, tryptophan replacement slopes remained constant. This suggests that tryptophan passage at the blood-brain barrier is not affected by sertraline treatment.

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Sertraline Versus Paroxetine in Major Depression: A Multicenter Double-Blind, 24-Week Comparison

Hans Agren, Ph.D., Sahlgrenska University, Institute of Clin Neuro Scienc, Molndal SE-43180, Sweden; Anna Aberg-Wistedt, M.D., Ann-Charlotte Akerblad, M.Sc.

Summary:

Objective: The clinical effect, safety, pharmacokinetics, effect on quality of life, and personality profiles of sertraline and paroxetine were compared in a multicenter, double-blind, 24-week trial involving 176 vs. 177 patients with DSM-III-R unipolar major depression.

Methods: Patients were randomized to sertraline (50-150 mg daily) or paroxetine (20-40 mg) and assessed on the Montgomery-Asberg rating scale (MADRS), Clinical Global Impression (CGI) scale, CGI-change scale, Global Improvement scale, and Battelle Quality of Life questionnaire. Spontaneously reported adverse events were recorded and the UKU side-effect scale was used. Personality assessments were performed using the Karolinska Scales of Personality (KSP) and the SCID II screen questionnaires.

Results: At baseline there were no differences seen concerning age, sex, age of onset, number of previous episodes, duration of present episode, MADRS score (30), life events during the past six months, or family history between the two treatment groups. Responders were defined as having at least 50% reduction of the total MADRS score, CGI-scale scores 1 to 3, and a CGI-change reduction to 1 or 2. At week 24 the response rates in the ITT population were 89.4% vs. 89.0%, and in the ITT-LOCF they were 71.6% vs. 69.5% for sertraline vs. paroxetine, respectively. No differences in treatment responses were found as for gender, age, and whether patients were in their first or subsequent episode of depression. The mean daily dosage for sertraline was 80.4 mg and for paroxetine 26.3 mg. The proportion of completers was 63.6% vs. 65.5%. Of all discontinuations, those due to adverse events deemed related to study drug were 14.8% vs. 18.6%. There were some statistically significant differences in the side-effect profile between the drugs. For example decreased libido in females, constipation, and fatigue were more frequently reported in the paroxetine-treated patients, while diarrhea was more frequent in the sertraline group. A tendency for an anticholinergic side-effect profile was seen in the paroxetine group.

Conclusion: This 24-week study demonstrates comparable antidepressant effects of sertraline and paroxetine in a well-defined patient population, some differences in the side-effect profiles, and the nonimportance of sex, age, and multiplicity of depressive episodes. These results emphasize the amenability of effective treatment using these SSRI drugs.

NR367 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Neurochemical Effects of Amphetamine in Chronic Schizophrenia Patients

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Summary:

Objective: By using PET technique, we have demonstrated direct evidence for greater amphetamine-induced synaptic dopamine release in schizophrenics than in healthy volunteers. We also investigated the neurochemical effects of dextroamphetamine (D-amp) and attempted to compare the differences between these two groups.

Method: Twenty drug-free chronic schizophrenic patients (M:F = 16:4, age 32.8 ± 9.4 years) and 12 healthy subjects (M:F = 10:2, age 30.3 ± 9.6 years) received D-amp (0.2 mg/kg) intravenous administration 50 minutes after the start of PET procedure. Blood samples for amphetamine, norepinephrine (NE), serotonin metabolite (5-HIAA), dopamine metabolite (HVA), and prolactin were collected at baseline, 75, 90, and 120 minutes.

Results: ANOVA-R identified a uniform increase in D-amp level following administration in both patients and controls with no differences between the groups (significant time effect: $p < 0.001$). Similar findings were observed for NE and prolactin (time effect: $p < 0.05$ and $p < 0.001$, respectively). In contrast, D-amp induced significant decrease of HVA concentration over time (time effect: $p < 0.03$) with a maximum decrement of 12% compared with baseline. No time or group effect of D-amp on 5-HIAA levels was demonstrated. A positive correlation between maximum changes of NE and prolactin ($r = 0.47$, $p < 0.01$) reflects elevation of prolactin that may be driven by NE during amphetamine infusion.

Conclusions: D-amp induced no peripheral neurochemical differences between schizophrenics and healthy subjects. D-amp increased the levels of both NE and prolaction and decreased that of HVA. The discrepancy between changes of peripheral HVA and central synaptic dopamine levels suggests D-amp may exert different mechanisms peripherally and centrally. The close relation between prolactin and NE during D-amp challenge indicates that the mechanism for alteration of prolactin is not limited to the major determinants serotonin and dopamine.

NR368 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

QEEG in Dissociative Disorders

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Summary:

Objectives: To quantify differences in QEEG topographic maps between patients with dissociative disorders and healthy controls.

Method: Subjects: 18 patients with dissociative disorders (M/F: 1/17; age: 18–51 years); 477 healthy controls (M/F: 273/204; age: 14–79 years). Data collection: There were 20 channels in the 10/20 configuration referenced to linked ears. Data expressed as log power were collected in the frequency range 0.4–23.8 Hz in the eyes closed alert condition. Data analysis: Each channel was assigned Cartesian coordinates (x, y) so that the response surface could be expressed as a polynomial with 20 parameters. Patient maps were compared with the database with covariate control of age, sex, and site of ascertainment, using a nonparametric resampling statistical model.

Results: The patients' topographic maps showed bilateral symmetric abnormalities of the frontal coronal section with increased power in F1, F2, F3, and F4. This effect was confined to the beta bands. Analysis of individual records showed 12 to be entirely normal and six highly abnormal. Drug regimen did not account for the abnormalities.

Conclusions: This was a somewhat unexpected finding. Eye movement artifact is ruled out because the delta and theta bands were normal. More extensive prospective studies with more detailed clinical evaluations are planned.

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Neuroanatomical Correlates of Anticipatory Anxiety: A PET Study of CCK-4-Induced Anxiety

Mahan Javanmard, B.S.C., Psychiatry, Clarke Institute, 250 College St, Toronto ON M5T1R8, Canada; Jakov Shlik, M.D., Sidney H. Kennedy, M.D., Jacques Bradwejn, M.D.

Summary:

Objective: Anticipation of reoccurrence of a panic attack is one of the hallmarks of panic disorder that may be involved in precipitation of agoraphobia, and therefore, it is important to investigate functional neuroanatomical basis of anticipatory anxiety (AA).

Method: We used a single cholecystokinin-4 (CCK-4) challenge for anxiety induction in a paradigm utilizing ^{15}O-water ($[^{15}O]H_2O$) positron emission tomography (PET) scans with 20 male and female healthy volunteers. The subjects were blinded to the nature of the injections for the CCK-4 and the control scans (receiving placebo; control scan corresponded to anticipation of uncertain aversive event or AUAE). The AA scan consisted of priming the subjects with receiving another bolus challenge of CCK-4 but in reality administering only placebo injection (this scan was anticipation of certain aversive event or ACAE). The results were analyzed using SPM 95 software.

Results: We found considerable increases of the cerebral blood flow (CBF) in the anterior cingulate (AC) region, specific to the ACAE and to a lesser intensity in AUAE scans; the AC activity was not seen in the CCK-4 scan.

Conclusion: Both the ACAE and AUAE show increases in AC activity, but difference in the activation intensity between these two scans suggests different subtypes of anxiety involved in ACAE and AUAE.

This project was supported by a joint MRC grant (SK and JB).

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A Time Course Study of CCK-4-Induced Panic Attacks in Healthy Volunteers: A PET Study

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Summary:

Objective: Panic attacks are the cornerstone of panic disorder and it is crucial to study them with the help of provocation agents such as cholecystokinin-4 (CCK-4). Past challenge studies using functional imaging have investigated panic attacks at a single point in time, but no study has evaluated changes in cerebral blood flow (CBF) as a function of time during an induced panic attack. We hypothesized that different patterns of CBF change would occur as a function of time after a CCK-4-induced panic.

Method: This is a study using PET with MRI coregistration and analyzed with SPM and region of interest. To determine, the differences in the anatomical activity as a function of time, we performed scans at either T_1, scanning the first 60 sec after the CCK-4 injection, or T_2, scanning during the subsequent 60 sec. The study included 20 right-handed healthy volunteers (males and females with mean age of 30).

Results: The results revealed significant CBF differences between T_1 and T_2 intervals, with T_1 showing activation in the hypothalamic region and T_2 showing activation of the claustrum-insular region.

Conclusion: These results support the hypothesis that changes in CBF as a function of time might underline the expression of symptoms in panic attacks.

This project was supported by a joint MRC grant (SK and JB).

NR371 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Activation Paradigm in fMRI with Depression: A Study with Passive Viewing of Emotionally-Laden Films

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Summary:

To evaluate the brain regions and systems associated with specific symptoms of the major depressive syndrome, we carried out a fMRI study of the neural basis of passive viewing of emotionally-laden films. Ten patients suffering from major depressive disorder according DSM-IV criteria were matched with a control group in terms of age and gender. Subjects were scanned while presented with validated films intended to transiently induce sadness. These were compared with neutral films. It has been performed using a 1.5 Tesla Magnetom Vision scanner from siemens. Results indicated that passive viewing of film clips intended to transiently induce sadness produces a significant activation of the right orbitofrontal and right medial prefrontal cortices in depressed patients and of the left orbitofrontal and left medial prefrontal cortices in normal control subjects.

This activation, however, was nearly two fold in depressed patients compared with normal control subjects. Thus, depressed patients differed in degree of activation and localization of activation induced by the "affective" material. This finding provides striking confirmation of a previous PET study (Beauregard et al, 1997) showing that these two cortical regions are involved in the processing of emotionally-laden information.

The activation paradigm allows us to study emotional processing specifically; results are going to be vastly more informative than resting studies.

NR372 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Clinical Response to Antidepressants Is Associated with Reduced Frontal CBF in Late-Life Depression

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Summary:

Objective: There is consistent evidence for abnormalities in global and regional cerebral blood flow (rCBF) among patients in episodes of major depression. This study addressed the effects of treatment with antidepressant medications on rCBF in elderly outpatients.

Methods: Twenty outpatients (mean age 67.8 ± 5.9 years) with major depression were treated with either nortriptyline (n = 15) or sertraline (n = 5). Patients were medication free for at least two weeks prior to baseline measurement of rCBF with the Xe 133 inhalation technique (eyes closed, resting condition). rCBF determinations were repeated following four to six weeks on antidepressant.

Results: Responders (n = 9) and nonresponders (n = 11) did not differ in baseline global or regional CBF values. Responders and nonresponders differed significantly in the change in a ratio of CBF in anterior and posterior brain regions. Responders manifested reduced perfusion in frontal regions following treatment. A greater percentage improvement in HRSD score was significantly and positively correlated with reductions in this anterior-posterior CBF ratio.

Conclusions: Remission in depression was associated with reduced frontal CBF. These findings are consistent with our previous report of reduced CBF following ECT response, and suggest a common mechanism of action at the level of cerebrovascular physiology.

Funded by NIMH Grant K08MH01244 and a NARSAD Young Investigator Award

NR373 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Functional Imaging: A Necessary Prerequisite to Neuropsychological Assessment

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Summary:

Despite the increasing sophistication of neuropsychological testing for measuring the behavioral sequelae of brain injury, there is often a discrepancy between the results of such an evaluation and the degree of real disability; mild impairment on objective testing is frequently associated with devastating inability to function in everyday life. We hypothesize that in such cases tests inappropriate to the particular pathology were administered because the evaluation was structured in the absence of information concerning the locus of brain abnormality.

Objective: Evaluation of positron emission tomography (PET) as a method to obtain information to guide subsequent neuropsychological testing toward processes most likely to have been affected by brain injury.

Methods: Five patients with brain injury were evaluated with a traditional neuropsychological test battery (Halstead-Reitan), submitted to PET, and then re-evaluated with tests that target functions mediated by brain systems identified as abnormal on the scans.

Results: In each case, the subsequent neuropsychological assessment that was guided by functional imaging detected impairments that were either underestimated or entirely missed in the initial unguided testing.

Conclusions: The present results strongly suggest the use of functional imaging as a necessary prerequisite to neuropsychological testing.

NR374 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Pharmacokinetic and Pharmacodynamic Study of Multiple Doses of Fluoxetine and Zolpidem When Coadministered to Healthy Women

Stephane Allard, M.D., ICALS, Lorex Pharmaceutic, 5202 Old Orchard Road, Skokie IL 60077; Steve Sainati, M.D.

Summary:

Objective: To determine the potential pharmacokinetic (pK) and pharmacodynamic (pD) interactions of multiple-day, single doses (five consecutive nights) of zolpidem 10 mg with steady-state plasma concentrations of fluoxetine 20 mg in healthy women aged 20–45.

Method: Twenty-four healthy female subjects completed the study and received zolpidem 10 mg po at hs on day 1 followed by one-day washout. Fluoxetine 20 mg po qam was administered on days 3–27. Fluoxetine 20 mg po qam and zolpidem 10 mg po qhs were administered on days 28–32. Subjects completed a three-minute Digit Symbol Substitution Test (DSST) and CBDI Trail-Making Tests in the morning of days 1, 2, 28, 29, and 33. Zolpidem, fluoxetine, and norfluoxetine plasma concentrations were used in calculating the primary pK parameters: zolpidem AUC (0–24), C_{max}, T_{max}, $T_{1/2}$; fluoxetine and norfluoxetine AUC (0–24), C_{min}, C_{max}, T_{max}. Mean ratios of concentration measures (AUC and C_{max}) for zolpidem given alone or with fluoxetine were used to evaluate bioequivalence for zolpidem with and without concomitant multiple fluoxetine dosing.

Results: No subjects experienced a serious drug-related adverse event. Both drugs were well tolerated alone and during coadministration. Fluoxetine and norfluoxetine were in steady state by day 27. When zolpidem was coadministered, there were no significant differences in any of the pK parameters of fluoxetine and norfluoxetine. There were no significant differences in the AUC (0–24), C_{max}, and T_{max} of zolpidem plasma concentrations between nights 1, 28, and 32. Bioequivalence of zolpidem when taken alone or in combination with fluoxetine was established. The $T_{1/2}$ of zolpidem did not significantly differ between night 1 and night 28. There was a statistically significant increase ($P < 0.05$) in the $T_{1/2}$ between night 28 and night 32 (3.29 hrs vs 3.64 hrs). No significant impairment in the next-morning DSST and CBDI Trail-Making Tests was observed.

Conclusion: This study demonstrates an absence of clinically significant pK and pD interactions during short-term concomitant therapy with fluoxetine 20 mg and zolpidem 10 mg, supporting the safety of such coadministration.

This study was supported by Lorex Pharmaceuticals, Clinical Research, Skokie, Illinois.

NR375 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Behavioral Disorders and rCBF in Alzheimer's Disease

Philippe H. Robert, M.D., Dept of Psychiatry J, Hospital Pasteur, 30 Av De La Voie Romaine BP69, Nice Cedex 06002, France; Ina Dygai, M.D., Octave Migneco, M.D., Jacques Darcourt, M.D., Sophie Vincent, M.D., Dominique Pringuey, M.D.

Summary:

In the past, behavioral disturbances received less attention than cognitive symptoms in studies of dementia. However, in Alzheimer's disease (AD), they are frequent and important. Brain imaging provides an excellent opportunity to study the relationships between these behavioral symptoms and regional brain function.

In the present study, cognitive and behavioral symptoms were systematically evaluated in 20 AD patients (mean age = 77.4, SD = 5.3) using the Mini Mental State Examination (MMSE mean score = 20.6; SD = 3.9) and the Neuropsychiatric Inventory (NPI; Cummings, 1994). Regional cerebral blood flow (rCBF) was measured in each patient by SPECT using ECD as perfusion tracer and a triple head camera. Five regions of interest (ROIs) were analyzed on each hemisphere (frontal dorsolateral medial and lateral, orbitofrontal, anterior cingulum, temporal). Temporal rCBF correlated significantly with the MMSE (r = 0.49 for left) and the NPI total score (r = 0.55 for right and r = −0.49 for left). Looking at the anterior areas theoretically involved in behavioral disturbances pathophysiology, significant correlations were found between the anterior cingulate ROIs and the NPI apathy score (r = 0.53 for right and r = 0.48 for left); the frontal dorsolateral ROIs and the NPI total score (r = 0.50 for left), the NPI depression/apathy score (r = 0.45 for right). These results suggest that the behavioral disturbances of AD are associated with specific brain region dysfunction and are not merely a consequence of diffuse brain impairment.

NR376 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

MRI in Pervasive Development Disorder During Adulthood

Francois P. Monnet, M.D., ATED, Hospital Charcot, 30 Rue Marc Laurent, Plaisir 78373, France; Liliana Feldman, M.D., Dung Chu-Ba, M.D., Mary S. E. Mahe, S.N., Catherine Milcent, M.D.

Summary:

Objective: Magnetic resonance imaging (MRI) studies have suggested that individuals suffering from autism present cerebellar and cerebrum abnormalities during childhood and adolescence. Since none has addressed whether these structural abnormalities lasted in adulthood, we undertook the present study.

Method: Brain T1 and T2 weighted images in the three planes, performed on a Magneton Expert 1T., were obtained from 32 consecutive autistic adults (19 men, 13 women), both mentally retarded and nonretarded.

Results: These evaluations disclosed 14 arachnoid cysts/enlarged cisterna magna; seven cerebellar atrophia, four fourth ventricule hyperplasia, and eight third/lateral ventricule hyperplasia. No limbic abnormality was found. The total brain volumes did not differ significantly between sexes and cognitive status. There was, however, a significant sex-by-diagnostic interaction for arachnoid cysts (sex ration M/F: 11/3), cerebellar hypoplasia (sex ratio M/F: 6/1) and third/lateral ventricule volume (sex ratio M/F: 3/5).

Conclusions: These findings suggest the high prevalence of arachnoid cysts/enlarged cisterna magna in autistic adults, which differs from that of young subjects. They further support the notion that posterior fossa involvement may be a consistent feature in these disorders and provide additional data that autism is likely due to an early brain insult rather than to a progressive degenerative disorder.

NR377 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Brain Imaging and Neurometabolite Levels in Chronic Fatigue Syndrome

Subhendra N. Sarkar, Ph.D., Department of Radiology, Tri City Hospital, 7525 Scyene Road, Dallas TX 75227

Summary:

Chronic fatigue affects approximately 5% of developed country population at some point of the patient's life span. There is a significant lack of understanding from the point of view of radiologic imaging for this syndrome. Nuclear perfusion brain SPECT has demonstrated brain injury for such patients. Magnetic resonance imaging does not have the sensitivity to assess CFS injuries or pathologies. MRS (magnetic resonance spectroscopy) on the other hand has demonstrated some fairly novel findings in several cerebral locations for patients clinically diagnosed for CFS. This work is focused along these two radiologic techniques with correlation and attempt to establish "radiologic markers" for chronic fatigue.

Utilizing General Electric high-field clinical magnetic resonance scanners we have studied 150 patients with CFS and assessed their metabolite levels from four cerebral locations. Creatine/phosphocreatine metabolites were found to be mild to moderately abnormal in a small fraction of CFS patients. Most common injury seems to be in the left hemisphere, with global cellular membrane damage and immobility of glutamatergic neurons. There is a clear spread of global hypoxia in the brain of such patients. Clinical and nuclear SPECT correlation will be presented.

NR378 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Mild Brain Trauma in Psychiatry and Radiology

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Summary:

Brain trauma has been traditionally assessed by CT, MRI, EEG, and by the psychiatric battery of tests when indicated. However, mild to moderate brain trauma often leaves no anatomical brain injury but produces late effects that are primarily neuropsychiatric in nature. There is a distinct need to understand the pathways for injury progress after minor head trauma. We have pursued magnetic resonance metabolite spectroscopy on 75 patients in GE 1.5T MRI scanner after routine MRI of brain. MRI brain shows shear injury on a small fraction of patients in the gray/white junction or in temporal lobe white matter. However, EEG shows moderate slowing of waves on the majority of patients and establishes seizure activity region on a small fraction of patients. MR spectroscopy results are the following: there seems to be at least two regions (primarily one frontal and one temporal lobe) that show mild amounts of ischemia and related metabolite deficits on 70/75 patients; in addition, there is mild to moderate inhibition of brain detoxification resulting in build up of neurotoxins secondary to trauma. This seems to be a very important finding for mild trauma cases and needs to be studied by multicenter trials if possible. Psychiatric deficits of these patients are early memory loss, pseudo-dementia, mild loss of motor control, depression, and fatigue.

NR379 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

HLA-DR1 and Schizophrenia in the Japanese Population

Tsukasa Sasaki, M.D., Psychiatry, Teikyo University, 74 Mizonokuchi Takatsu, Kawasaki, Japan; Rie Akaho, M.D., Masaki Matsushita, B.Sc., Shinichiro Nanko, M.D., Katsushi Tokunaga, Ph.D.

Summary:

Objective: Several lines of evidence indicate genes encoding HLA complex as genetic predisposition to schizophrenia. In Japanese patients, a tendency for increased frequency of HLA-DR1 (22%-23%) has been reported, compared with healthy controls (10%). Recently, in Caucasian patients, significant decrease of DR4 was observed. In the present study, we further investigated the frequencies of HLA-DR1 and DR4 in schizophrenia in the Japanese population.

Method: HLA-DRB1 gene was studied in 121 unrelated Japanese patients with schizophrenia (DSM-IV). The control group consisted of 493 healthy Japanese volunteers.

Results: No statistically significant difference was observed in the frequencies of any HLA-DR group or DRB1 ^{4}allele between the patients and controls. However, the same trend of increase in the frequency of DR1 (DRB1^{4}0101) was observed in the schizophrenia patients (17% in the patients vs. 11% in the controls), as in the previous studies.

Conclusions: Evidence for the decrease of DR4 was not found in the Japanese schizophrenia patients. However, the consistency of the results in the present and previous studies suggests that the frequency of HLA-DR1 (DRB1^{4}0101) may be increased in schizophrenia patients in the Japanese population.

NR380 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Association Between Sex and Serotonin Transporter Gene in OCD

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Summary:

Objective: The etiology of obsessive-compulsive disorder (OCD) has a probable genetic component, suggested by familial and twin studies; however, its role remains still unclear. Following evidence from pharmacological treatments, genes linked to serotonergic system may play a role in OCD etiology. Recently it has been hypothesized that a deletion of 44bp in the promoter region of the serotonin transporter gene (5HTT) might influence response to selective serotonin reuptake inhibitors (SSRI)(Billet, 1997).

Method: We tested this hypothesis in 157 Italian OCD patients, diagnosed according to DSM-IV criteria, treated with standardized SSRI treatments.

Results: Comparing patients with healthy controls, no differences were found in allele and genotype distribution of the promoter deletion of 5HTT gene. However, we found a significant excess of deletion homozygotes in male OCD patients (χ2=6.273, df=2, p=0.043), while there is a trend toward an excess of the deleted allele in male patients (χ2=3.788, d.f.=1, p=0.052). This result is independent from response to SSRI and other clinical variables. In a previous study male sex was associated with positive response to acute intravenous clomipramine challenge (Mundo, in press).

Conclusions: The excess of male OCD responders to clomipramine challenge could therefore be explained by a different 5HTT profile between males and females.

Research granted by Telethon (project E 529)

NR381 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Mouse Candidate Loci for Panic Disorder

Jordan W. Smoller, M.D., Department of Psychiatry, Mass General Hospital, 15 Parkman Street, WACC 815, Boston MA 02114; Jerrold F. Rosenbaum, M.D., Mark H. Pollack, M.D., Joseph Biederman, M.D., Maria Bulzachelli, B.A., Derek Moody, B.S., Lisa Helbling, B.S.

Summary:

Linkage studies of candidate genes can be an efficient method for mapping genes related to complex disorders, but they depend on the availability of suitable candidates. Uncertainty about the pathogenesis of panic disorder has made it difficult to identify compelling candidate genes from biological studies of panic disorder. The use of animal models can vastly simplify gene-mapping efforts. The extensive homology between human and mouse genomes can be used to localize regions of the human genome that may contain genes influencing behavior.

To exploit this strategy, we examined loci identified from QTL mapping of anxiety phenotypes in mice as candidates in a linkage analysis of a large ethnically homogeneous pedigree (N >80) segregating early-onset panic and phobic anxiety. We also tested a gene implicated in a mouse knockout model of CO_2 sensitivity, a neurobiologic system that may influence the pathogenesis of panic disorder. Two definitions of affected status were used, but no lod scores > 1.0 were detected. Linkage to human 1q, 8, and 14 was excluded under a fully penetrant dominant model. The results of other candidate gene analyses currently underway will also be reported. This study illustrates a strategy that may facilitate gene-mapping studies of anxiety disorders.

NR382 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

OCD with Tics: Analysis of Dopamine System Genes

Margaret A. Richter, M.D., Anxiety Clinic, Clarke Institute, 250 College Street R-31, Toronto ON M5T 1R8, Canada; Fariba Sam, B.Sc., Laura J. Summerfeldt, M.A., Richard P. Swinson, M.D., Wendy J. Hiscox, R.N., James L. Kennedy, M.D.

Summary:

Objectives: Obsessive-compulsive disorder (OCD) is a common and severe psychiatric illness, with considerable evidence supporting a genetic component in the etiology. OCD and Tourette's syndrome (TS) are likely genetically related, and both may be mediated by genetic factors in the dopamine system.

Method: We investigated polymorphisms in the dopamine D2 (Taq I-A) and D4 receptor genes, as these genes have been implicated in OCD in published reports. Genes were tested against presence versus absence of tics in a sample of OCD probands (n = 118), and transmission analyzed in a carefully characterized sample of 32 probands with parental controls (HRR statistic).

Results: No difference was seen between the tic and tic-free groups for the D4 receptor gene (χ^2 = 1.428, p = 0.490, df = 1) or the D2 Taq I-A polymorphisms (χ^2 = 0.045, p = 0.832, df = 1). In the HRR sample, alleles of the D2 Taq I-A polymorphism were transmitted in a random fashion to OCD probands (χ^2 = 0.051, p = 0.821, df = 1). Allele transmission rates were nonsignificant for the D4 receptor gene (χ^2 = 8.649, p = 0.194, df = 6).

Conclusions: Further investigation of the role of dopamine system genes in OCD is warranted.

This work was funded by the Ontario Mental Health Foundation and the Medical Research Council of Canada.

NR383 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Molecular Genetics Studies of Panic Disorder

Nicole A. King, Dept of Neurogenetics, University of Toronto, Clarke Inst of Psychiatry, Toronto ON M5T 1R8, Canada;

Diana Koszycki, Ph.D., Jacques Bradwejn, M.D., James L. Kennedy, M.D.

Summary:

Objective: Our effort to elucidate genetic factors underlying panic disorder (PD) has focused on the cholecystokinin (CCK) system, since intravenously injected CCK induces panic attacks in about 95% of panic patients.

Method: In a sample of DSM-IV PD patients (N = 99) and controls matched for gender and ethnicity, we studied polymorphisms in genes of the CCK-A and CCK-B receptor and the promoter region of the CCK peptide.

Results: We obtained nonsignificant results for the CCK-AR ($\chi^2 = 0.31$, $p = 0.58$) and CCK gene ($\chi^2 = 0.04$, $p = 1.00$) polymorphisms. CCK-BR showed an association with PD. We used an a prior design grouping alleles into four size categories, $\chi^2 = 13.8$, $p = 0.004$, and for an all-allele analysis, $\chi^2 = 26.02$, $p = 0.038$. The panic patients showed an excess of alleles 6 and 7, with odds ratios of 2.3 and 1.7, respectively. Furthermore, we analyzed major clinical variables in relation to presence or absence of a putative risk allele with the following results (reported here as presence of allele 6 or 7 vs. absence): age at onset 24.8 vs. 26.2 years, $p = 0.60$; history of agoraphobia (80% vs. 83%, $p = 0.75$); gender (45F:25M vs. 18F:11M, $p = 0.83$); comorbid affective disorder (27% vs. 14%, $p = 0.15$); comorbid substance abuse (7% vs. 3%, $p = 0.48$).

Conclusion: We conclude that the 6 and 7 alleles of CCK-BR increase risk for panic disorder, but as yet do not predict age of onset or comorbid conditions.

NR384 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Genetics of Tardive Dyskinesia: Role of Dopamine D3 Receptor and Serotonin

Fabio MacCiardi, M.D., Neuropsy Department, University of Milan, IRCCS Hospital San Raffaele, Milan, Italy; Roberto Cavallaro, M.D., James L. Kennedy, M.D., Enrico Smeraldi, M.D.

Summary:

Objectives: Tardive dyskinesia (TD), characterized by involuntary choreoathetotic movements, is the most serious adverse effect of exposure to neuroleptic medications. TD can affect the orofacial region, trunk, and/or limbs. Studies in animal models, and the fact that known environmental risk factors predict only a minor part of the variance in the incidence of TD, suggested to us that a genetic component is plausible.

Methods: We analyzed 91 patients in a long-stay state hospital and diagnosed as schizophrenic (DSM-III-R), many presenting with TD, all scored with the Simpson and Gardos scale. Relationship between presence or absence of TD and the dopamine D3 receptor (DRD3) and serotonin 2A (5HT2A) receptor genes was evaluated with a case-control design, and quantitative measures of TD were tested with ANOVA.

Results: We found a positive association for orofacial movements and the DRD3 gene ($p = 0.004$), and for abnormal movements in the extremities and the 5HT2A gene ($p = 0.002$). Interaction between the two polymorphisms seems to be of paramount importance on abnormal movements of both areas.

Conclusions: Our data suggest that occurrence of TD is probably highly related to a genetic predisposition whose effects become phenotypically evident with the significant contribution of other variables, especially neuroleptic treatment and aging.

NR385 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Bulimia and SAD: Serotonin Gene Analysis

Mario Masellis, M.Sc., Neurogenetics Department, University of Toronto, Clarke Inst 250 College Street, Toronto ON M5T 1R8, Canada; Robert D, Levitan, M.D., Emily Strong, Sidney H. Kennedy, M.D., Allan S. Kaplan, M.D., Fariba Sam, B.Sc., James L. Kennedy, M.D.

Summary:

Objectives: Serotonin has been suggested to play a role in feeding regulation, and evidence points to serotonergic dysfunction in seasonal affective disorder (SAD) and bulimia nervosa (BN). Therefore, we investigated the role of three serotonin genes: tryptophan hydroxylase (TPH), the serotonin 2C receptor (HTR2C), and the serotonin transporter (5-HTT), in SAD and BN.

Methods: Parental control SAD triads, and SAD cases with matched controls were collected and genotyped for the TPH, the cys23ser HTR2C, and the insertion/deletion 5-HTT polymorphisms; chi-square analysis was employed. BN triads are in the process of being collected.

Results: For both the parental control sample and an extension including matched cases and controls, no associations were observed for both the HTR2C polymorphism (parental control: $p = 1.00$, $n = 44$; extended sample: $p = 0.87$, $n = 144$) and the 5-HTT polymorphism (parental control: $p = 0.58$, $n = 52$; extended sample: $p = 0.25$, $n = 148$). However, associations were observed for the TPH polymorphism in both the parental control sample and the extended sample (parental control: $p = 0.09$, $n = 36$; extended sample: $p = 0.0004$, $n = 92$).

Conclusions: Although replication in larger samples is required, our results indicate that the TPH polymorphism may play a role in susceptibility to SAD.

Supported by the Ontario Mental Health Foundation

NR386 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Dopamine Receptors Gene: Association with Tardive Dyskinesia

Vincenzo Basile, BSC, Neurogenetics Department, University of Toronto, Clarke Inst. 250 College St, Toronto ON M5T 1R8, Canada; Mario Masellis, M.Sc., Andrew D. Paterson, M.B., Herbert Y. Meltzer, M.D., Jeffrey A. Lieberman, M.D., Steven G. Potkin, M.D., James L. Kennedy, M.D.

Summary:

Objectives: Given that dopamine D3 receptors mediate an inhibitory effect on locomotor activity and the recent localization of D3 mRNA in the ventral striatum, we investigate the role of a dopamine D3 receptor gene (DRD3) polymorphism in neuroleptic-induced tardive dyskinesia (TD).

Methods: 112 schizophrenic patients previously treated with typical neuroleptics were assessed for TD severity using the AIMS. The MscI polymorphism of DRD3 was genotyped in these patients. A modified ANCOVA model, which incorporated several clinical risk factors for TD, was used to detect differences in TD severity between genotypic groups.

Results: It was found that this polymorphism was associated with typical neuroleptic-induced TD ($F[2,95] = 8.25$, $p < 0.0005$). Higher mean AIMS scores were found in patients homozygous for the glycine variant of the DRD3 gene (AIMS = 14.20 ± 12.49) as compared with heterozygous patients (AIMS = 3.92 ± 5.33) and patients homozygous for the serine allele (AIMS = 3.47 ± 4.34).

Conclusions: This study supports a role for the dopamine D3 receptor in the pathogenesis of TD and is the first to consider other clinical risk factors in the analysis. Although replication is necessary, this finding may redirect neurobiological research to focus on the D3 receptor as a new route to understanding the pathophysiology of TD.

Supported by the Medical Research Council of Canada.

NR387 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Genetic Association of Serotonin System Genes with Bipolar Disorder

Wendy J. Hiscox, R.N., University of Toronto, Clarke Inst. 250 College St, Toronto ON M5T 1R8, Canada; John B. Vincent, Ph.D., Mario Masellis, M.Sc., Sagar V. Parikh, M.D., J. Lawrence, H.M.D. Gurling, James L. Kennedy, M.D.

Summary:

Objectives: The serotonin system is considered to be important in mood disorders in light of the mechanism of SSRI antidepressants. We are using genetic association studies to test for evidence of involvement of serotonin system genes in the disease etiology.

Methods: We examined 102 DSM-IV (SCID interview) bipolar affective disorder individuals and paired controls closely matched for age, gender, and ethnic background. The frequencies of DNA polymorphisms at the genes for the 5HT1A, 5HT1D-alpha, 5HT1D-beta, 5HT2A, 5HT2C, 5HT6, and 5HT7 receptors and for the serotonin transporter (5HTT) were analyzed and compared in our patient vs. control populations.

Results: Positive associations were found for the 5HT2A receptor T102C polymorphism with an increase of the 2-2 genotype in affected individuals (chi sq = 4.374, p = 0.016, n = 102 pairs) and for an insertion/deletion polymorphism within the promoter region of the 5HTT gene (chi sq = 6.080, p = 0.048, n = 99). Another polymorphism in the 5HTT gene, an intronic VNTR, was also analyzed and found to have a trend toward higher frequency of the 12-copy homozygotes among affected individuals (chi sq = 8.419, p = 0.077, n = 98).

Conclusions: These molecular genetic analyses provide support for the involvement of 5HT2A and 5HTT genes in bipolar disorder. The necessary replication studies are underway using parental controls.

NR388 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Is Unstable DNA Involved in the Etiology of Bipolar Disorder?

John B. Vincent, Ph.D., Neurogenetics Department, University of Toronto, Clarke Inst. 250 College St, Toronto ON M5T 1R8, Canada; Sagar V. Parikh, M.D., Art Petronis, Ph.D., Wendy J. Hiscox, R.N., Hesther M. Tims, R.N., Catherine Moravac, B.Sc., James L. Kennedy, M.D.

Summary:

Objectives: We are focused on testing the possible involvement of unstable DNA in the etiology of psychosis, following observations of earlier age of onset in successive generations of a family (genetic anticipation) and several reports of increased frequency of large CAG/CTG repeats in affected individuals.

Methods: Using the Repeat Expansion Detection (RED) technique, we have analyzed DNA samples from DSM-IV (SCID interview) bipolar disorder patients and controls matched for age, sex, and ethnicity. Also, we examined the unstable CAG/CTG repeat in a transcription factor gene (SEF1) located at chromosome 18q21.

Results: When 91 bipolar individuals were paired with controls we did not find a higher frequency of RED expansions or SEF1 expansions. No differences in clinical features (age of onset, severity, or rapid cycling) were observed among the affected individuals with large CAG/CTG repeats (> = 270bp) versus those with small repeats (< = 150bp) as measured by the RED method. Over 50% of affected individuals and controls with large repeats had expanded CAG/CTG alleles at the SEF1 gene.

Conclusions: The RED method did not reveal significant differences in CAG/CTG repeats between bipolar cases and controls. Furthermore, large unstable CAG/CTG repeats at the SEF1 locus do not appear to be involved in the etiology of bipolar disorder.

NR389 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Is Serotonin Transporter Gene Associated with Pathological Gambling?

Dr. Angela Ibanez, Department of Psychiatry, Ramon Y Cajal H, Crta Colmenar Km 9,1, Madrid 28034, Spain; Jeronimo Saiz-Ruiz, M.D., Ignacio Perez de Castro, Jose Fernandez-Piqueras

Summary:

Objective: A serotonergic deficit has been postulated in the pathogenesis of pathological gambling. This study was performed to determine if there was an association between a functional polymorphism in the serotonin transporter gene (5-HTTLPR), with the short variant leading to low functional activity, and pathological gambling.

Method: 68 DSM-IV pathological gamblers (46 males and 22 females) and 68 healthy controls matched by age and sex, all of them Caucasians and unrelated, were genotyped for 5-HTTLPR polymorphism. A psychiatrist was used for interviews to exclude controls with personal or family psychiatric background. Number of DSM-IV criteria fulfilled and score on South Oaks Pathological Gambling Screen were used to assess severity of gambling.

Results: The short variant of the 5-HTTLPR was present significantly more frequently in genotypes of pathological gamblers than in controls (p = 0.008) when considering only males, particularly in more severe cases (p = 0,001). Taking both sexes together the short variant was more represented in more severe cases (36 of 68) than in controls (p = 0.036).

Conclusion: The decreased serotonergic activity reported in pathological gambling could be associated in some cases with a less-functional variant of the 5HTT gene at least in the more severe patients, and mainly in males.

NR390 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Dopamine Receptor Genes and Pathological Gambling

Jeronimo Saiz-Ruiz, M.D., Department of Psychiatry, Hosp Ramon Cajal, Ctra. Colmenar Viejo KM9100, Madrid 28034, Spain; Dr. Angela Ibanez, Ignacio Perez de Castro, Jose Fernandez-Piqueras

Summary:

Objective: Pathological gambling is an impulse control disorder and a model of addiction without substance. Polymorphisms in D2 (DRD2) and D4 (DRD4) dopamine receptors genes have been associated with impulsive and addictive behaviors. We attempted to determine if there was an association between DRD2 and/or DRD4 genes and pathological gambling.

Method: 68 Caucasian patients with DSM-IV pathological gambling disorder (46 males and 22 females) and 68 healthy Caucasian controls matched for age and sex were genotyped for DRD2 and DRD4 polymorphisms. Controls were selected by personal interview with a psychiatrist to exclude subjects with personal or familial psychiatric background.

Results: DRD2-C4 alleles were significantly more frequent in gamblers with psychiatric family history than in gamblers without it (p = 0,005). In women, the 7-repeat allele of the DRD4 polymorphism was present in 47.6% of gamblers vs. 15.3% of controls (p = 0,025), and it was more frequent in more severe cases (p = 0,022).

Conclusion: These findings support the role of DRD2 as a liability factor for psychiatric disorders. On the other hand, a genetic variant with poorer functioning of DRD4 could be implicated in the pathogenesis of pathological gambling at least in women.

NR391 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Genetic Analysis of Serotonin System Genes in OCD

Fariba Sam, B. Sc., Depart of Neurogenetics, University of Toronto, Clarke Inst 250 College St, Toronto ON M5T 1R8, Canada; Margaret A. Richter, M.D., Richard P. Swinson, M.D., Xiao-Yan Dai, M.D., Laura J. Summerfeldt, M.A., James L. Kennedy, M.D.

Summary:

Objectives: There is considerable evidence for involvement of genetic factors in the etiology of obsessive-compulsive disorder (OCD). It is widely accepted that the serotonergic system plays a strong role in the pathogenesis of this disorder, as evidenced by the efficacy of the serotonin reuptake inhibitors (SRI's) in treatment.

Methods: We studied the serotonin transporter gene (5-HTT) in an initial sample of 118 cases and 118 controls matched for age, sex, and ethnicity. A second sample of 32 OCD probands and their parental controls was analyzed for 5HTT, 5-HT1Dβ, and 5-HT2C using the HRR test statistic.

Results: In cases vs. controls, for 5-HTT, $\chi^2 = 0.000$, p = 1.00, df = 1. In the parental control sample, for 5-HTT, $\chi^2 = 0.288$, p = 0.591, df = 1; for 5-HT1Dβ, $\chi^2 = 0.065$, p = 0.798, df = 1; and for 5-HT2C, $\chi^2 = 0.600$, p = 0.438, df = 1.

Conclusions: Overall we find no evidence as yet that serotonin system genes play a significant role in the etiology of OCD. However, larger sample sizes are required to provide more definitive answers.

This work was funded by the Ontario Mental Health Foundation.

NR392 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Once-Daily Venlafaxine XR Versus Fluoxetine in Outpatients with Depression and Concomitant Anxiety

Peter H. Silverstone, M.D., Psychiatry, University of Alberta, 1E713 MacKenzie Centre, Edmonton Alberta T6G2B7, Canada; Arun V. Ravindran, M.D., Rene Hamel

Summary:

Objective: This 12-week, prospective, multicenter, double-blind, randomized, placebo-controlled study compared the efficacy and tolerability of once-daily venlafaxine XR and fluoxetine with placebo in outpatients with depression and concomitant anxiety.

Methods: Outpatients aged 18 years or older satisfying DSM-IV criteria for major depression were eligible if they had a minimum score of 20 on the first 17 items of the 21-item HAM-D and a Covi of 8. Treatment was started with venlafaxine XR 75 mg daily, fluoxetine 20 mg daily, or placebo. The doses of venlafaxine XR and fluoxetine could be increased to 150 mg and 225 mg daily or 40 mg and 60 mg daily, respectively, on study days 14 and 28 if clinically indicated to improve response. The primary efficacy variables were the final on-therapy scores for the HAM-D and HAM-A scales.

Results: A total of 359 patients were evaluable, 118 on placebo, 122 on venlafaxine XR, and 119 on fluoxetine. At the final evaluation, the HAM-D response rate was 42% on placebo, 66% on venlafaxine XR, and 64% on fluoxetine ($p < 0.001$). The HAM-D remission rate was significantly higher ($p < 0.05$) with venlafaxine XR than placebo at weeks 3, 4, 6, 8, 12, and with fluoxetine at weeks 8 and 12. The HAM-A response rate was significantly higher ($p < 0.05$) with venlafaxine XR than with fluoxetine at week 12.

Conclusion: Once-daily venlafaxine XR is effective and well tolerated for the treatment of major depression and concomitant anxiety and may provide superiority over fluoxetine.

This study was funded by Wyeth-Ayerst Research, Philadelphia, Pa.

NR393 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

CSF Monoamine Metabolites in Tryptophan Depletion

Francisco A. Moreno, M.D., Department of Psychiatry, University of Arizona, 1501 N Campbell Avenue, Tucson AZ 85724; Cameron McGavin, Philip Malan, M.D., Alan J. Gelenberg, M.D., George R. Heninger, M.D., Aleksander A. Mathe, M.D., Pedro L. Delgado, M.D.

Summary:

Plasma tryptophan (TRP) depletion is increasingly being used in psychiatric research. This study determines the cerebrospinal fluid (CSF) monoamine metabolite response to TRP depletion in five healthy males.

Method: Five subjects without personal or family history of mental disorders were tested. Testing included two one-day tests. On one test the subjects received 103 gm, TRP-free, 15-amino acid drink (TRP depletion) and on the other test a 105 gm, TRP-supplemented 16-amino acid drink (control). Testing was administered in a placebo-controlled, double-blind, randomized, crossover design. Plasma TRP levels, and behavioral ratings were obtained prior to and five hours after ingestion of each amino acid drink. CSF was obtained performing a standard lumbar puncture seven hours after ingestion of the drink.

Results: TRP depletion caused a decrease of CSF 5-HIAA but not of HVA. MHPG results are still pending. CSF 5-HIAA during TRP depletion was 24% lower than the value measured during control testing (52.92 ± 7.26 nM during control testing versus 40.44 ± 10.55 nM during depletion testing, p = 0.03) Behavioral rating scales scores were unchanged in all subjects.

Implications: A single lumbar puncture may be sufficient to demonstrate the extent of CSF 5-HIAA changes in TRP depletion studies.

NR394 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Impact of Neonatal Stress on Neuronal Activity

Zachary N. Stowe, M.D., Department of Psychiatry, Emory University, 1639 Pierce Drive, Ste 4003, Atlanta GA 30322; Zhongliang Tang, Ph.D., Paul M. Plotsky, Ph.D.

Summary:

The impact of early adverse life events on animal development and behavior has received considerable attention. The impact of such events on the basic electrophysiological activity of brain nuclei has received limited attention. We sought to determine the baseline neuronal firing rate, the response to directly applied neurotransmitters, and response to peripheral stimuli in adult animals that had undergone a neonatal stress paradigm (HMS 180) and in co-reared controls (HMS 15). The locus coeruleus (LC) is responsible for the majority of noradrenergic projections to the forebrain and is activated by noxious stimuli (paw pinch). We obtained extracellular recordings from spontaneously active, histologically confirmed LC neurons (n = 15). The were no significant differences in either baseline firing rate or the action potential morphology. In contrast, activation by contralateral paw pinch produced a pronounced excitation in HMS 180 rats (238.1 ± 198.2%) compared with HMS 15 rats (57.8 ± 13.8%), and the time to recovery was extended in HMS 180 rats. Spontaneously active, type II neurons (n = 25) in the nucleus accumbens (NAC) demonstrated both increased baseline activity and decreased response to neurotransmitters, such as DA and GABA in HMS 180 rats. These data suggest that adult animals that have been subjected to neonatal separation paradigm (Plotsky et al.) demonstrate significant alterations in neuronal responsivity in brain nuclei that modulate stress responses. These animals demonstrate significant alterations in baseline neuronal activity in brain areas purportedly related to reward mechanisms. The potential rele-

vance of these findings to adult psychopathology following early adverse life events will be discussed.

NR395 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

The Overt Agitation Severity Scale for the Objective Rating of Agitation

Stuart C. Yudofsky, M.D., Dept of Psych & Behav Sci, Baylor College of Medicine, One Baylor Plaza, Houston TX 77030; Heather J. Kopecky, Ph.D., Jean Endicott, Ph.D., Mark E. Kunik, M.D., John M. Silver, M.D.

Summary:

Agitation, as conventionally conceptualized and utilized by health professionals, is a commonly occurring, highly disabling set of emotions and behaviors. The immediacy, unpredictability, and intermittence of symptoms present safety and manageability issues for families and caregivers. A broad range of incidences may be accounted for by inconsistencies in the nosology, measurement, and biopsychosocial conceptualizations of agitation leading to the misinterpretation of data, and consequently, ineffective and variable treatment practices. Varying rating scales that purport to measure agitation blur its boundaries with psychiatric diagnoses such as anxiety, mood, and other disorders that may or may not be secondary to general medical conditions. The study proposed that agitation be conceptualized nondiagnostically by utilizing the observable behaviors outlined in the Overt Agitation Severity Scale (OASS), which, if present, would alert clinicians to search for the specific underlying disorder(s) that elicit the agitation. The OASS was developed to define and objectively rate the severity of agitated behavior.

Results established the reliability and validity of the OASS in measuring agitation severity based on objectifiable vocalizations and motoric upper and lower body behaviors. The OASS demonstrated sensitivity to rate agitation severity during agitated and nonagitated periods. The OASS differs from other agitation scales in that it confines its rating exclusively to observable behavioral manifestations of agitation, as opposed to subjective inferences and a diffuse range of symptoms and problem behaviors.

NR396 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Effects of the Acetylcholinesterase Inhibitor Rivastigmine on PET Scan in Alzheimer's Disease

Mahmoud A. Parsa, M.D., Psychiatry, University Hospital, 11100 Euclid Avenue, Cleveland OH 44120-7908; Bijan Bastani, M.D., Nora K. McNamara, M.D., Gregory P. Leisure, Flora D. Miraldi, M.D.

Summary:

Introduction: Alzheimer's disease (AD) produces deficiencies in several central neurotransmitters, especially acetylcholine. Functional brain imaging techniques, such as positron emission tomography (PET), typically show decreases of activity/perfusion in the parietal and temporal regions of the brain in AD patients. Centrally acting cholinergic enhancers have been reported to have memory and cognitive efficacy in AD. Exelon is an acetylcholinesterase inhibitor of the carbamate type, which is currently under study as a treatment for AD.

Objective: We studied the effects of rivastigmine in AD patients, as measured by PET imaging of brain perfusion using O-15 water.

Method: Four patients with probable AD were PET scanned with 0-15 water perfusion at baseline and following 26 weeks of treatment with open-label rivastigmine 3-12 mg/day. Baseline PET imaging revealed biparietal and bitemporal perfusion deficits in three of the patients and disclosed bifrontal hypoperfusion in the fourth patient.

Results: All three patients with biparietal and bitemporal abnormalities showed improvement in the perfusion of parietal and temporal regions as measured by mean change from baseline to endpoint on PET perfusion imaging of the brain (qualitative measurement), whereas the patient with hypofrontality on PET imaging did not show any improvement.

Conclusion: Our data suggest that treatment with rivastigmine can reverse the baseline perfusion deficits in the brain of AD patients, particularly in those with biparietal and bitemporal abnormalities on PET imaging of the brain.

NR397 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Asperger's Disorder: Neuropsychological Profile, Developmental Trends and Comorbidity

Gahan J. Pandina, M.A., Psychiatry, UMD of New Jersey, 675 Hoes Lane, Piscataway NJ 08854; Robert L. Hendren, D.O., Janean Dilworth, Alyson Aviv, Ph.D., Katy Butler, Ph.D.

Summary:

Fourteen subjects with Asperger's disorder aged 6 to 14 (two girls; 12 boys) were administered a battery of neuropsychological tests. Twelve children and one parent of each also completed the K-SADS. Data for six subjects completing the K-SADS have been analyzed. These six subjects manifested symptoms of other psychiatric disorders, with three receiving diagnoses in addition to Asperger's. Preliminary neuropsychological results revealed: (1) impaired nonverbal abilities in the context of good rote verbal abilities; (2) a high positive correlation between age and PIQ; and (3) greater neuropsychological impairment in comorbid cases, independent of IQ. The results are discussed in the context of delineating the heterogeneity and natural history of Asperger's disorder, although a stable substrate closely resembling the NLD syndrome presides.

NR398 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Deconstructing Speech Fluency in Alogia

Antonis Kotsaftis, Ph.D., Manhattan Psychiatric Center, Dunlap 14A Wards Island Complex, New York NY 10035; Murray Alpert, Ph.D., Enrigue Pouget, B.A., Fotini-Sonia Aperghi, M.A., Jean-Pierre Lindenmayer, M.D.

Summary:

The speech of patients with schizophrenia is often characterized by decreased productivity, increased latency to respond, and blocking. These aberrations in speech fluency are captured under the construct of alogia. Dysfluency in schizophrenic speech is often assessed as a cognitive deficit reflected in poor performance on neuropsychological tests of speech fluency. Moreover, the halting schizophrenic free speech is assessed in the laboratory electronically by measuring aspects such as duration of actual talk time and duration of pauses. Both assessment approaches yield measures that correlate significantly with increased clinical ratings of alogia. This study explored how performance on speech fluency tests relates to electronically assessed free speech fluency, and how the two variables relate to clinical ratings of alogia. Thirty-two inpatients who met the criteria for DSM-IV schizophrenia were audiotaped while participating in an interview about happy and sad memories and a neuropsychological evaluation of speech fluency. Free speech dysfluency was moderately correlated to neuropsychologically assessed fluency. A multiple regression analysis showed that both measures contributed uniquely to clinical ratings of alogia, thus indicating that productivity assessed with cognitive tests is not simply redundant with free speech productivity. The presentation will focus on identifying the neuropsychological bases for these separate cognitive mechanisms contributing to language production.

NR399 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Emotion Mediated Startle Response in Schizophrenia

Antonis Kotsaftis, Ph.D., Manhattan Psychiatric Center, Dunlap 14A Wards Island Complex, New York NY 10035; John Neale, Ph.D., Themistoklis Theofilaktidis, B.A., Jean-Pierre Lindenmayer, M.D.,

Summary:

Schizophrenia includes, among other symptoms, deficits in the perception and expression of emotion. While there is an objective reduction in the expression of emotion, it is not clear whether this also applies to the subjective experience of emotion. The relationship between overt emotional expression and subjective experience has not been fully elucidated yet. This study compared the objective and subjective emotional response of a group of schizophrenics with that of normal controls in response to pleasant, unpleasant, and neutral slides.

Method: Twenty-eight male DSM-IV chronic schizophrenics on stable antipsychotic medications and 28 male normals matched for education viewed a total of 54 slides. While viewing the slides, participants were startled with a 50ms 95db auditory probe. Their startle-elicited blink magnitude of the obicularis oculi was assessed. In addition, the subjects were asked to rate the slides on two dimensions: valence and arousal.

Results: Preliminary analysis showed that the magnitude of the blink response was significantly smaller in schizophrenics than controls in all three conditions. Moreover, the magnitude of the response to unpleasant slides was greater than that of the pleasant slides for both groups. The control group gave greater ratings to the slides in both valence and arousal compared with patients. These data indicate that, as a group, schizophrenics show similar, albeit diminished, patterns of emotional response to those of normals.

NR400 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Baseline Asymmetry in Right Temporal Lobe

Fredric Schiffer, M.D., Department of Psychiatry, McLean Hospital, 115 Mill Street, Belmont MA 02178; Carl Anderson, Ph.D., Perry F. Renshaw, M.D., Louis Maas, Martin H. Teicher, M.D.

Summary:

Objective: We previously found that lateral visual field stimulation, by preferentially directing visual information to one hemisphere, altered the affect and theta EEG laterality of college students. As part of an ongoing study of early abuse on brain development, we were able to test the hypothesis that left vs. right visual field stimulation would exert greater effects in subjects with more strongly lateralized differences in resting temporal lobe perfusion.

Method: EEG and anxiety level (abreviated POMS scale) were assessed following random presentation of two pairs of experimental goggles, and two pairs of comparison goggles. The experimental goggles restricted vision to the left visual field (LVF) or RVF; the comparison goggles, to the L or R eye. Twelve right handed subjects (3M/9F; 18–22 yr) participated, including five (1M/4F) with a history of childhood trauma but without current PTSD. 24 channel QEEG was obtained using an e-Net cap in standard 10/20 placement, via NeuroData (Pasadena CA). A theta EEG laterality index was assessed for mean of frontal and temporal leads during presentation of each goggle. On a separate day each subject underwent an echo planner fMRI using a unique T2 stepping procedure to assess T2 relaxation time as an indirect noninvasive estimate of basal blood perfusion in each hemisphere and in anterior temporal lobe (ATL) (GE 1.5T Signa scanner with Advanced NMR systems whole body echo planner coil). All images were subjected to motion correction using the DART algorithm (Maas et al., 1997).

Results: We found that the LI for the ATL correlated significantly (r^2 = 0.61, F (3,8) = 6.74, p < 0.02) with a multiple regression consisting of theta EEG laterality and absolute anxiety (both in response to the experimental glasses) and sex. Higher relative right ATL blood flow by MRI was associated with higher EEG and affect responses to the experimental glasses. There were no significant correlations between the LI for the hemispheres and the data from the experimental glasses. There were no significant correlations between the responses to the monocular glasses and the fMRI data.

Conclusion: Thus, increased relative right-sided resting ATL blood flow determined by baseline fMRI appears to predict EEG and affect responses to glasses restricting vision to the lateral fields.

Supported by NIMH R01-53636-01A1 to MHT.

NR401 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

The Safety and Efficacy of Sertraline in the Treatment of Depression Concomitant with Parkinson's Disease

R. Jolyon Meara, M.D., Geriatric Medicine, University of Wales, Glan Clwyd Hospital, Rhyl LL18 5UJ, United Kingdom; Bimal K. Bhowmick, M.D., Peter Hobson, B.S.

Summary:

Objective: This is an open, uncontrolled study undertaken to provide further data on the efficacy and safety of sertraline in the treatment of depression in Parkinson's disease (PD).

Methods: Patients (n = 41; mean age 73 years) with PD attending a specialist movement disorder clinic and who were felt on clinical grounds to be depressed were treated with sertraline 50mg. Patients taking selegeline were excluded from the study. Response was assessed clinically and by reduction in the Geriatric Depression Scale-15 score. Motor function was assessed by a timed 10-meter walk and a measure of upper limb akinesia.

Results: There was no evidence of any significant deterioration of motor function. After three months' treatment, 61% (25/41) were classified as responders and 39% (16/41) showed a 50% or more reduction in GDS score. There were no significant differences between responders and nonresponders in terms of age, sex, or severity of PD, but nonresponders had a significantly longer duration of disease (Mann Whitney test P < 0.05). Sertraline was withdrawn in two patients due to side effects.

Conclusion: Sertraline is an effective and well-tolerated treatment for depression in PD and does not cause deterioration in motor function.

NR402 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

A Pilot Study to Evaluate the Efficacy of Sertraline in the Management of Emotional Lability Following Stroke

Alistair Burns, M.D., Department of Psychiatry, University of Manchester, Withington Hospital, West Didsbury M20 8LR, United Kingdom; Eve Russell, M.D., Hilary Stratton-Powell, R.M.N.

Summary:

Objective: This double-blind, placebo-controlled, randomized, parallel-group study assessed the efficacy of sertraline in the alleviation of post-stroke emotional lability.

Methods: Depressed and nondepressed patients with a history of post-stroke emotional lability were randomized to receive either sertraline (50mg once daily; n = 14) or placebo (n = 14) for eight weeks followed by a two-week placebo washout period. Assess-

ments were made at weeks 0, 4, 8, 10, and 36. The primary efficacy variables were: Clinical Global Impression of Change (CGI) and the Four-Point Lability Scale.

Results: Significantly more patients on sertraline had improved CGI scores at weeks 4 and 8 than those on placebo ($P = 0.041$). At week 8, 93% of patients on sertraline had improved compared with 64% on placebo, and the number of patients who improved continued to be greater in the sertraline group during follow-up. Patients on sertraline showed a significantly greater reduction in the number of episodes of tearfulness than those on placebo ($P = 0.041$) although Four-Point Lability Scale scores failed to show any difference between the two groups during treatment. Sertraline was well tolerated.

Conclusion: CGI scores were significantly better in patients on sertraline than in those on placebo, and significant improvements in emotional lability were also observed.

NR403 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Prevalence and Clinical Significance of OCD in Schizophrenia Patients

Stephanie Krueger, M.D., Department of Psychiatry, Westfael Zentrum, Alexandrinenstr 1, Bochum 44791, Germany; Peter Braeunig, M.D., Juergen Hoeffler, M.D., Ingrid Boemer, M.D.

Summary:

Objective: The current study systematically examines the prevalence of OCD in schizophrenia and assesses psychopathological and motor symptoms in this group of patients.

Methods: Seventy-six schizophrenic subjects were assessed for OCD with the Structured Clinical Interview for DSM-III-R and by the Yale-Brown Obsessive Compulsive-Scale. Subjects were divided into two groups based on the presence of OCD. The groups were administered the Brief Psychiatric Rating Scale, the Scales for the Assessment of Positive and Negative Symptoms, the Hillside Akathisia Rating Scale, the Simpson-Angus Rating Scale, the Abnormal Involuntary Movements Scale, and the Catatonia Rating Scale.

Results: Twelve schizophrenic subjects (15.8%) fulfilled diagnostic criteria for OCD. On the BPRS, schizophrenic subjects with OCD had more anxiety, guilt feelings, and mannerisms and less suspiciousness. They scored higher on the activation subscale and had a higher total score. On the SAPS, they scored lower on the delusions and hallucinations subscales and higher on the bizarre behavior subscale. They had more akathisia, more extrapyramidal symptoms, abnormal involuntary movements, and catatonic symptoms.

Conclusions: OCD is a relevant diagnosis in a subset of schizophrenic patients. This group of patients is clearly distinguishable from schizophrenic subjects without OCD on a number of clinical parameters. The diagnostic, pathophysiological (basal-ganglia and frontal lobe hypothesis), and therapeutic implications of our findings are discussed.

NR404 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

The General Health Questionnaire in Screening for Rape Victim PTSD

Jean-Michel Darves-Bornoz, M.D., Psychiatry, Hospital Universitaire, Clinique Psychiattrique Univ, Tours Cedex 37044, France; Jean-Pierre Lepine, M.D., Andree Degiovanni, Philippe Gaillarp

Summary:

Objective: This study aimed to determine whether the General Health Questionnaire, a simple psychological screening instrument, could be useful to nonspecialists in screening for psychologically traumatized rape victims.

Method: 285 rape victims (mean age 22.5, men 8%) attending consecutively a Consultation for Victims of Psychological Trauma at the University Hospital in Tours, France, were assessed through the Structured Interview for Post-Traumatic Stress Disorder (SI-PTSD), and the French 28-item version of the self-rated General Health Questionnaire (GHQ-28).

Results: 70% had post-traumatic stress disorder (PTSD) and 72% a GHQ-28 overthreshold score. A principal components analysis of the GHQ-28 ratings yielded a four factor solution: social dysfunction, feeling of foreshortened future type of depression, somatoform complaints, and hyperalertness anxiety. GHQ-28 reliability and validity in screening for PTSD were studied through computation of Cronbach's α coefficient (0.95), sensitivity (88%) and positive predictive value (86%).

Conclusion: Using the GHQ-28 is valid for screening rape victim PTSD and appropriate for practical use.

NR405 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Discontinuation of SSRIs in Traumatized Refugees

Stevan M. Weine, M.D., Department of Psychiatry, University of Illinois, 2216 Lincolnwood Drive, Evanton IL 60201; Amer Smajkic, M.D., Zvezdana Djune Bijedic, M.D., Nenad Brkic, M.D., Ivan Pavkovic, M.D.

Summary:

Objective: To conduct a preliminary study on the discontinuation of SSRIs in a population of traumatized refugees from Bosnia.

Subjects: Subjects were the 19 Bosnian refugees being treated in our clinical program who had discontinued SSRIs over a six-month period. All had been on SSRIs for over one year and had shown a therapeutic response. The discontinuations were either planned with their clinician (4) or self-initiated (15). Their age ranged between 36 and 64, with a mean of 56. Ten were men and nine were women. Standardized assessments were done approximately two months after discontinuation.

Results: Upon reassessment, 10 (53%) met symptom criteria for PTSD. The mean PTSD severity rating was 15 and the BDI score was 8.5. Three persons restarted SSRIs and 16 did not. Statistical analysis showed that the group that restarted differed from the others in terms of lower age, higher PTSD severity, higher BDI score, higher subjective reporting of worsening. Overall, subjective reporting of worsening was not found to correlate with either PTSD or BDI scores.

Conclusion: This preliminary study suggests that when traumatized refugees discontinue SSRIs, they continue to have significant PTSD and depressive symptoms, indicating chronicity. The choice to discontinue or restart SSRIs is not simply a matter of symptoms, but a complex process involving multiple psychosocial factors. Further research is needed.

NR406 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Correlates of Community Violence Exposure

Dwain C. Fehon, Ph.D., Psychiatry, Yale Psychiatric Inst., P.O. Box 208038, New Haven CT 06520; Carlos M. Grilo, Ph.D., Deborah Lipschitz, M.D., Robin Jilton, Ph.D., Steve Martino, Ph.D.

Summary:

Objective: To examine the psychological and symptom correlates of community violence exposure in psychiatrically hospitalized adolescents.

Method: A nearly consecutive series of 56 adolescent inpatients aged 12-18 (mean 15.5 years) was administered a battery of psychometrically well-established psychological self-report instruments. Exposure to community violence was assessed using the Children's Exposure to Violence Scale (CEVS; adapted from Rich-

ters & Martinez, 1990). Other measures included the Beck Depression Inventory (BDI), Hopelessness Scale for Children (HSC), Impulse Control Scale (ICS), Suicide Risk Scale (SRS), Fast Feelings and Acts of Violence Scale (PFAV), Dissociative Experience Scale (DES), Post-Traumatic Stress Disorder-Reaction Index (PTSD-RI), Adolescent Drug and Alcohol Screening Test (DASTA), Rosenberg Self-Esteem Scale (RSES), and Childhood Trauma Questionnaire (CTQ).

Results: Patients who reported high exposure to community violence also reported significantly higher ($p \leq .01$) levels of PTSD symptoms, violence potential, drug and alcohol use, and childhood physical abuse compared with patients with low violence exposure. Correlational analysis revealed that community violence exposure was significantly ($p \leq .01$) associated with depression, violence potential, drug and alcohol use, PTSD symptoms, and a history of other childhood trauma.

Conclusions: These findings underscore the serious emotional impact community violence has on adolescents who have required psychiatric hospitalization.

NR407 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Blunted Prolactin Response to Fenfluramine Challenge in Unipolar Major Depression with Anger Attacks

Maurizio Fava, M.D., Department of Psychiatry, Massachusetts General Hospital, 15 Parkman Street, WANG 812, Boston MA 02114; Rachel D. McColl, B.A., Emma C. Wright, B.S., Andrew A. Nierenberg, M.D., Jonathan E. Alpert, M.D., Jerrold F. Rosenbaum, M.D.

Summary:

We have previously hypothesized that patients with major depression and anger attacks may have a greater central serotonergic dysregulation than depressed patients without such attacks.

Objective: We wanted to compare the prolactin response to fenfluramine challenge, as an indirect measure of central serotonergic function, in depressed patients with and without anger attacks.

Methods: We recruited 36 drug-free outpatients with DSM-III-R major depressive disorder, diagnosed with the SCID-P. Their initial 17-item Hamilton Rating Scale for Depression score was ≥16. Patients were classified as either having or not having anger attacks with the Anger Attacks Questionnaire. All patients received a single-blind placebo challenge followed by a fenfluramine challenge (60 mg orally) the next day. Plasma prolactin measurements were obtained with radioimmunoassay before and after both placebo and fenfluramine challenges, and fenfluramine and norfenfluramine blood levels after each challenge were determined by gas liquid chromatography.

Results: Of the 36 study participants, 16 (44%) were classified as having anger attacks. There were no significant differences in age, gender, fenfluramine, or norfenfluramine blood levels between depressed patients with and without anger attacks. Depressed patients with anger attacks showed a significantly ($p = .03$) blunted prolactin response to fenfluramine challenge compared with patients without anger attacks.

Conclusions: As previous studies have shown blunted prolactin responses to fenfluramine in impulsive aggression among patients with personality disorders, our results suggest that depressed patients with anger attacks may have a relatively greater serotonergic dysregulation than depressed patients without these attacks.

NR408 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Correlates of Dissociative Symptoms in Adolescents

Deborah Lipschitz, M.D., Yale University, Psychiatry, 80 Hulls Hwy, Southport CT 06490-1134; Carlos M. Grilo, Ph.D., Robin Jilton, Ph.D.

Summary:

Objective: To examine the correlates of dissociative symptoms in an adolescent psychiatric inpatient sample.

Method: Subjects (N = 56, 27 male, 29 female, with a mean age of 14.7, SD = 1.8 years), who were consecutive admissions to an inpatient adolescent unit, completed self-report measures of dissociation (Adolescent Dissociative Experience Scale), depression (Beck Depression Inventory), suicidal ideation (Suicide Ideation Questionnaire), and post-traumatic stress (Posttraumatic Stress Disorder-Reaction Index). Histories of physical and sexual abuse and neglect were "best estimates" obtained via self-report (Traumatic Events Questionnaire-Adolescents, TEQ-A) and from clinicians and records.

Results: 73% (N = 36) of subjects had a history of abuse (23 subjects had combined sexual and physical abuse, 13 subjects reported physical abuse only). Youngsters with sexual abuse reported significantly higher dissociative symptoms than youngsters without sexual abuse ($t = 2.28$, $p = .03$). A-DES scores correlated significantly with depression ($r = .59$, $p < .001$), post-traumatic stress symptoms ($r = .64$, $p < .001$), and suicidal ideation ($r = .50$, $p < .001$). Subjects with histories of suicide attempts scored significantly higher on the A-DES than non-attempters ($t = 2.21$, $p = .03$).

Conclusion: In inpatient samples of adolescents, highly dissociated youngsters are more likely to have histories of abuse, particularly sexual abuse, and to display increased suicidality and depressive and post-traumatic symptoms. Implications for clinical treatment will be discussed.

NR409 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Correlates of Community Violence Exposure in Adolescents

Deborah Lipschitz, M.D., Yale University, Psychiatry, 80 Hulls Hwy, Southport CT 06490-1134; Carlos M. Grilo, Ph.D., Robin Jilton, Ph.D., Dwain C. Fehon, Ph.D., Thomas H. McGlashan, M.D.

Summary:

Objective: To examine the prevalence and correlates of exposure to community violence in psychiatrically hospitalized adolescents.

Method: 50 consecutively admitted adolescent inpatients (21 male, 20 female, mean age = 15.8 years) were administered a battery of psychometrically well-established psychological self-report measures including a measure of exposure to community violence (Children's Exposure to Community Violence, CECV) and general maltreatment (Childhood Trauma Questionnaire, CTQ).

Results: 50% (N = 25) children report witnessing multiple incidents of community violence such as shootings, stabbing, and/or robberies. There was no significant differences in age, gender, or ethnicity between subjects exposed to high levels of community violence and psychiatric controls. Subjects exposed to community violence were significantly more likely to report being both a direct victim ($X^2 = 12.5$, $p < .001$) and a perpetrator of violence toward others ($X^2 = 19.1$, $p < .001$). They also endorse higher levels of current violence (Plutchik Past Feelings and Acts of Violence), but not more depression (Beck Depression Inventory), dissociation (Adolescent Dissociative Experience Scale), use of alcohol (Adolescent Alcohol Involvement Scale), or suicidal behavior (Suicide Risk Scale) compared with psychiatric controls. On measures of childhood maltreatment they were significantly more likely to report childhood physical abuse and neglect, but not sexual abuse.

Conclusions: Our findings suggest that hospitalized youngsters who have witnessed high amounts of community violence are at high risk for the perpetuation of ongoing violence and aggressive behavior.

NR410 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Peritraumatic Dissociation in a Group of Plane Crash Survivors

Philippe J.R. Birmes, M.D., Department of Psychiatry, Chu Purpan, Place Du Docteur Baylac, Toulouse 31059, France; Alexandre Arrieu, M.D., A. Payen, M.D., Barbara A. Warner, M.D., P.A. Delpla, M.D., Laurent J. Schmitt, M.D.

Summary:

Objective: Correlation of a prospective assessment of peritraumatic symptoms of dissociation and acute stress with the development of post-traumatic stress disorder (PTSD) in plane crash survivors.

Methods: Immediately after psychological debriefing, 10 plane crash victims, hospitalized either on the surgical or burn unit of a university hospital, were assessed for symptoms of dissociation, acute stress, and post-traumatic stress according to DSM-IV criteria by a psychiatric consultation-liaison team twice weekly for the month immediately following the accident. The Impact of Event Scale (IES) was administered on days 15 and 30.

Results: Seven subjects had symptoms of peritraumatic dissociation, including a feeling of unreality, 57%; derealization/depersonalization, 57%; automatic movements, 43%. Although three subjects had PTSD at day 30 (mean IES scores, 51), only two of these had experienced peritraumatic dissociation. Two other subjects met criteria for major depressive disorder.

Conclusion: Levels of peritraumatic dissociation were elevated in this group but without significant correlation to the development of PTSD.

NR411 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Characteristics of Domestic Violence in a Mentally Ill Population

Janet E. Johnson, M.D., Dept of Psych, Tulane Univ Med Ctr, 1415 2nd Lane Ave, New Orleans LA 70112; Jessica L. McMahon, B.S., Phillip T. Griffin, Ph.D., Robert G. Ellis, M.D., J. Kevin Jackson, M.D., David Harry Mielke, M.D.

Summary:

Domestic violence is a significant public health problem for both women and men. Many studies have interviewed women in domestic violence shelters and then determined the prevalence of mental disorders, finding high rates of PTSD and depression. A recent study investigated the prevalence of domestic violence among women in a primary care clinic and found that 21.4% of respondents had experienced domestic violence sometime during their lives. However, few studies have looked at the prevalence and characteristics of domestic violence among a population of chronically mentally ill patients.

In this pilot study we administered a questionnaire to inpatients in an acute care urban public hospital. This survey was adapted from McCauley et al. and included demographic information, physical and psychiatric comorbidity, and questions concerning past and recent violence.

In our sample of 60 patients, 28 were male, 32 female, with a mean age of 37.6 years; 35% reported a history of physical abuse before the age of 18; 32% reported being sexually abused before age 18. Also, 47% reported being either physically or sexually abused as an adult; 68% of these occurred in the past year.

Correlates with demographic information, physical and psychiatric comorbidity, and psychiatric diagnosis are discussed, as are implications for evaluation and treatment.

NR412 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Patterns of Cocaine Utilization, Availability of Funds, and Acute Care

Ronald C. Rosenberg, M.D., Department of Psychiatry, Bellevue Hospital, 462 First Avenue, New York NY 10016; Melanie E. Schwarz, M.D., Michael H. Allen, M.D.

Summary:

While it is asserted that available government funds contribute to a "government sponsored revolving door," little has been written about the outcome of acute intervention. An examination of the results of urine toxicology results on 826 patients who were retained for acute treatment in a comprehensive psychiatric emergency program revealed no tendency for recidivism compared with other groups. Patients with urine toxicologies positive for cocaine were less likely to be admitted, but more likely to require an extended observation period. Patients with schizophrenia were less likely to have a positive urine toxicology. A relation between day of the month and positive urine toxicologies was found only in those who claimed to have insurance at the time of registration. However, a more significant relation was found for male patients and the day of the month, suggesting other factors are involved. The authors discuss the use of acute interventions that break the cycle of dependency.

NR413 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Survey of Hepatitis B and C in an Addiction Treatment Unit

Vasant P. Dhopesh, M.D., Department of Psychiatry, VA Medical Center/116A, University & Woodland Avenue, Philadelphia PA 19104; Keitha Taylor, R.N., Wayne Macfadden, M.D., Elmer Yu, M.D.

Summary:

Objective: High incidence of hepatitis B and C is reported in injection drug users (IDUs). Our objective was to determine the incidence of hepatitis B and C in our inpatient addiction unit. In addition we sought to determine if patients had the knowledge about the mode of transmission of hepatitis viruses.

Methods: Questionnaire survey was administered by one person to 150 inpatients. Results of the routine lab tests for antibodies to hepatitis B and C virus were recorded. X2 was applied for analysis.

Results: All 150 patients were males. Age ranged from 26 to 73, mean 44 ± 6.9 AF AM were 62%, Cau 35 and 3% others; 41% were unemployed and 29% were homeless; 51 or 34% shared needles. Of 75 IDUs 67 (89.3%) were hepatitis C virus antibody (HCVAB) positive. Of the 75 non-IDUs 18 (24%) were HCVAB positive $P < .01$. Of the 75 IDUs 61 (80.3%) were positive for hepatitis B core antibody (HBcAB), but of 75 non-IDUs 26 (34.7%) were positive for HBcAB $P < .01$. 80% to 90% in either group did not know they had hepatitis B or C. Forty-two percent of the IDUs did not know or were unsure of the mode of transmission of hepatitis B or C.

Conclusion: (1) Our survey confirms the high incidence of hepatitis B and C in IDUs (2) Very high percentage of these patients did not know they had the disease. (3) Significant number of IDUs did not know or were unsure of the mode of transmission of hepatitis B or C virus. (4) These findings emphasize the need to focus on education, especially about transmission of hepatitis B and C infections, in drug addicts, particularly in injection drug users.

NR414 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Depressive Symptoms in Dually Diagnosed Patients

Cynthia A. Pristach, M.D., Department of Psychiatry, Suny At Buffalo, 462 Grider St, Buffalo NY 14215–3021; Cedric M. Smith, M.D.

Summary:

A group of psychiatric inpatients (n = 18) with concurrent alcohol abuse or dependence were assessed using the Beck Depression Inventory (BDI) and the Addiction Severity Index (ASI) to determine the number and severity of depressive symptoms and their associations with the function scores on the seven life areas measured by the ASI. Variables that might influence reported sobriety and medication compliance following discharge were identified. The mean BDI score was 18.8 (range 0–54); 12 (66%) qualified as depressed. Subjects with more depressive symptomatology also reported more psychological and alcohol-related problems. BDI scores correlated significantly with higher problem severity on the psychiatric (r = 0.599, p = 0.01) and alcohol scales (r = 0.597, p = 0.01) of the ASI. The majority (10,55%) of subjects reported sobriety and were compliant with aftercare at one week; this group had statistically significantly higher BDI scores than noncompliant subjects (t-test, p = 0.005). However, at one month post-discharge, only six (33%) subjects were compliant with aftercare, and there was no significant difference in BDI scores between the compliant and noncompliant groups. Depressive symptoms appear to be common and severe in patients with alcohol use disorders plus a variety of comorbid psychiatric disorders, and their effects on compliance and sobriety deserve further attention.

NR415 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

The Ability of Pregnant Women to Complete a Detox Program

Wendy L. Weinstein, M.D., Department of Psychiatry, Erie County Medical, 462 Grider Street, Buffalo NY 14215; Michele T. Pato, M.D.

Summary:

Objective: Given the risk of prenatal drug exposure and the rising number of drug-exposed infants, this study was designed to assess if pregnant substance abusers were more or less likely to complete a detox program compared with their nonpregnant counterparts.

Methods: A retrospective analysis of all detox patients who left against medical advice (AMA) in a large county hospital was conducted from 1987–1997. Of all 19,145 patients admitted for detox, 5,911 (31%) were female. Of these women, 558 (9%) were pregnant. Patients analyzed either left AMA from the acute detox program and/or the inpatient rehab program. These data also include patients with subsequent admissions.

Results: There was no difference in the AMA rate of women who were pregnant compared with their nonpregnant counterparts. When these women were separated for primary drug of choice (alcohol, heroin, cocaine) there was also no difference in completion rate.

Conclusions: These findings imply that there is no increased retention in detox programs among pregnant women despite the fact that their drug abuse can have a profound effect on their unborn babies. Some have argued that the access to detox programs for this selective group of women is difficult. Therefore, it is unfortunate to find that those who manage to get admitted are no more likely to remain in treatment than their nonpregnant counterparts.

NR416 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Searching for Universals: Evidence for the Validity of Substance Abuse Subtypes in a Sample of Mexican-American Youths

Jose M. Pena, M.D., Dept of Psych & Neurology, Tulane Univ Med School, 1430 Tulane Ave Box SL23, New Orleans LA 70112-2699; Joan D. Koss-Chioino, Ph.D, Curt Bay, Ph.D.

Summary:

Objectives: Recent studies of substance abuse typologies indicate that multivariate models originally developed for identifying subtypes of alcoholics are valid among users of other substances. Little is known regarding the generalizability of these subtypes across culturally different subgroups. In this paper we examine the validity of the Type A-Type B distinction in a sample of Hispanic youths.

Methods: A k means algorithm was utilized to generate a two-cluster solution in a sample of 131 Mexican-American youths in treatment for substance-involved problems. The choice of variables for the cluster analysis followed the methods described by Babor et al. (1992) and included variables from three domains—premorbid risk; psychopathology, and severity of substance use. The external validity of the subtypes was tested utilizing separate measures of substance use and functioning in the areas of medical, employment, legal, family, and psychological status.

Results: Good discrimination between the clusters was achieved with the more severe cluster (Type B) exhibiting significantly greater problems on cluster variables measuring tobacco use (p = .001), polydrug use (p = .001), typical use of drugs (p = .001), impulse control (p = .02), psychiatric severity (p = .03), and conduct disorder (p = .05). In the test of external validity Type B individuals exhibited significantly more alcohol use (p = .01), other drug use (p = .001), current use of alcohol (p = .01), current use of other drugs (p = .01), more problems in school (p = .002), more legal problems (p = .001), and more high risk sexual behaviors (p = .001).

Conclusion: Our results support the validity of the Type A-Type B distinction in this sample of Mexican-American youths. Future studies should examine if these subtypes are generalizable to other Hispanic subgroups. If substance abuse typologies are universal, then controlling for type may be a useful strategy for researchers attempting to distinguish the separate contribution of cultural factors to risk.

NR417 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

The Influence of Social Networks on Sexual Risk Behavior

Cheryl Gore-Felton, Ph.D., Department of Psychiatry, Stanford University, 401 Quarry Road, Stanford CA 94305; Cheryl Koopman, Ph.D., David Spiegel, M.D.

Summary:

Objective: This study examined the relationship between social support and its role in sexual risk behavior.

Method: Participants in this baseline study were 73 adult patients who were recruited through health care providers and newspaper advertisement (66% male, 51% gay men, 58% Caucasian, 19% African-American, 8% Hispanic, 4% Asian-American, 4% Native-American, and 3% other). All participants completed self-report measures of social support and relationship status and completed interviewer-administrated measures on number of sexual partners, and sexual risk behavior.

Results: In stepwise linear regression analyses, social support from friends was positively associated with having more unprotected sexual encounters (R2 = .17, p < .01). Additionally, married men reported having a greater number of sexual partners (R2 = .12, p = .01).

Conclusions: Involving friends and partners of HIV+ men in intervention strategies aimed at increasing safer sex practices is likely to be a particularly effective strategy.

This research is funded by the National Institute of Mental Health, grant #MH54930.

NR418 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Changes in Ways of Coping Across the Phases of Brief Psychotherapy for Persons with HIV: Do the Poor Get Richer?

Ari E. Zaretsky, M.D., Department of Psychiatry, Mount Sinai Hospital, 600 University Avenue, #941A, Toronto ON M5G 1X5, Canada

Summary:

Background: Specific coping strategies utilized by HIV patients over the course of brief therapy were examined. For the present analysis, the data from the three different therapy modalities that were used (CBT, CCRT and psychoeduction) have been pooled.

Methods: At baseline, mid-therapy, and post-therapy, all patients completed the Ways of Coping Scale (WOC), a 66-item self-report questionnaire that examines eight types of coping strategies that are used in the context of a specific encounter. A composite index of good coping and bad coping was defined using the different subscales. The balance between good and bad coping was then examined over the course of therapy in both therapy responders and nonresponders.

Results: 22 subjects completed 16 sessions. There was an increase in the utilization of good coping strategies over the course of therapy in the entire sample. A more specific analysis revealed that therapy responders achieved substantially more good coping strategies by the end of therapy than therapy nonresponders.

Conclusions: These findings support the contention that effective psychotherapy results in a global improvement in coping strategies. A larger sample size will be needed to analyze whether there are differential effects on coping strategies from the different psychotherapy modalities.

NR419 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Sexually Transmitted Disease Risk Behaviors of Male Psychiatric Outpatients

John H. Coverdale, M.D., Dept of Psychiatry, Univ of Auckland Med School, Private Bag, Auckland 0024, New Zealand

Summary:

Objective: Because of the paucity of controlled studies, we aimed to determine the STD risk behaviors of male chronically ill psychiatric outpatients compared with controls.

Method: Ninety-two male outpatients with major psychiatric disorders, including schizophrenia, bipolar disorder, and mood disorders, were individually matched for age and ethnicity with 92 men who had never been treated for psychiatric illness. The patients completed a semistructured interview (response rate = 66%) on specific STD risk behaviors.

Results: Sexually active psychiatric patients were significantly more likely than controls to have known their sexual partner for less than one day and to report having been pressured into unwanted sexual intercourse over the preceding year ($\chi^2 = 2.09$, d.f. = 1, $p < 0.01$; Fisher's Exact Test two-tailed $p < 0.05$, respectively). There was also a strong but not significant trend for sexually active patients to have had sex with a male partner and sexual intercourse with a drug user over the preceding year.

Conclusion: These results underscore the priority for developing STD risk-prevention programs for male psychiatrically ill outpatients.

NR420 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Risperidone Versus Classical Neuroleptics: Preliminary Results of a Prospective Naturalistic One-Year Study

Roch H. Bouchard, M.D., Polyclinique, 65 Rue Sainte-Anne, PQ, G1R 3X5, Canada; Chantal Merette, Ph.D., Marie-France Demers, M.Sc., Marie-Helene Roy-Gagnon, M.Sc., Study Group Quebec

Summary:

Objective: To compare the long-term effectiveness of risperidone (R) and classical neuroleptics (NLP) in a chronic schizophrenic population.

Method: A randomized, open, parallel, multicentered study (no wash-out period in shifting to R). Evaluations included PANSS, CGI, ESRS, side effects, and medication at baseline, three, six, and 12 months. A total of 165 out of 184 patients selected completed the first-year follow-up. Average doses of R and NLP were 5.5mg and 1006mg (CPZ equivalent), respectively.

Results: There is a significantly superior effect of R on negative symptoms at three months ($p = 0.04$). The effect of R on positive symptoms becomes significant and superior at 12 months ($p = 0.014$). Overall, R group experienced greater mean change from baseline in total PANSS score ($p = 0.0063$) and on CGI score ($p = 0.0241$). At 12 months, twice as many (30%) R patients reached at least 20% reduction in PANSS score compared with the NLP group ($p = 0.027$). R patients had subjective and objective symptoms less parkinsonian ($p < 0.05$) versus NLP patients. Correlation analysis showed that a higher dose or the use of multiple neuroleptics is related to less improvement in both groups ($p < 0.05$).

Conclusion: Our analysis provides clinical evidence of superior long-term effectiveness of R and suggests possible new guidelines in medication use for the schizophrenic population.

This study was supported by Janssen-Ortho Inc.

NR421 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Cognitive Reserve Effects on HIV-1 Disease Progression: A Survival Analysis

Susan G. Silva, Ph.D., Psychiatry, University of North Carolina, Medical School Wing B, Chapel Hill NC 27599; Eric D. Jackson, B.S., Kristi Lanning, B.S., Jane Leserman, Ph.D., Robert N. Golden, M.D., Diana O. Perkins, M.D., Dwight L. Evans, M.D.

Summary:

Objective: The aim was to examine the influence of cognitive reserve (i.e., brain capacity) on disease progression in HIV-1 infection.

Method: Subjects were 75 HIV-seropositive gay men participating in a longitudinal study. Subjects were medically asymptomatic at baseline. Cognitive reserve (CR) scores were calculated by summing the ranks of three baseline measures: years of education, occupational attainment, and vocabulary score. Based on median-split, subjects were assigned to the high (HCR) or low (LCR) reserve group. Cognitive summary scores were derived from annual neuropsychological assessments. Disease progression was defined in four ways, as time to: (1) neurocognitive decline; (2) clinical symptom advancement; (3) CD4+ count below 200; and (4) HIV-related death.

Results: A survival analysis was conducted using a Cox Regression Model adjusting for baseline CD4+ count, race, age, antiretroviral use, and depressive symptoms. Lower CR was related to more rapid progression to psychomotor speed dysfunction ($P = .02$; hazard = .31), advanced clinical symptoms ($P = .06$; hazard = .52), and mortality ($P = .05$; hazard = .11). Compared with HCR subjects, the LCR group was three times more likely to develop

psychomotor deficits, two times more likely to become symptomatic, and nine times more likely to die from HIV.

Conclusions: These findings provide support for the role of cognitive reserve in protecting against or delaying the onset of HIV-related symptoms.

NR422 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Cognitive Impairment in HIV-1 Infected Patients: The Role of Education

Vittorio Volterra, M.D., Institute of Psychiatry, University of Bologna, Viale Carlo Pepolis 5, Bologna 40123, Italy; Diana De Ronchi, M.D., Laura Fratiglioni, Ph.D., Marco Degli Esposti, M.D.

Summary:

Objective: To explore the relation between education and HIV-1 cognitive impairment/dementia prevalence by computing the odds ratios for different educational levels after adjustment for CDC stage, age, gender, risk behavior, and antiretroviral therapy.

Methods: A study including 273 subjects (90 seronegative, 88 asymptomatic, and 95 symptomatic subjects) was carried out in Bologna, Italy. HIV-1 cognitive impairment and HIV-1 dementia were clinically diagnosed using DSM-III-R diagnostic criteria.

Results: Higher prevalence of HIV-1 cognitive impairment/dementia was observed among less-educated HIV-1 infected subjects. Comparing education up to five years to any education, the OR (adjusted for CDC stage, age, gender, risk behavior, and antiretroviral therapy) was 11.8 (95% C.I. 3.0–47.5).

Conclusions: Low education levels in HIV-1 infected patients are associated with cognitive impairment/dementia independent of CDC stage, age, gender, risk behavior, and antiretroviral therapy. These findings can be reviewed as supporting the cerebral reserve hypothesis. In this view, education delays the onset of dementia by providing extra brain reserve that allows an individual to cope longer before dementia is expressed clinically. However, the alternative hypothesis that the deleterious effects of low education may be due to other factors linked to low socioeconomic status is also likely.

NR423 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Depression and Social Support in Mexican-American Gay Men with AIDS

Cervando Martinez, Jr., M.D., Dept of Psych, UTHSCSA, 7703 Floyd Curl Dr, San Antonio TX 78284-6200; Ellen Slaten, Ph.D., Margaret Hoppe, Ph.D.

Summary:

Objective: The overall goal of this project is to gain a better understanding of the psychiatric and social aspects of AIDS in minority gay men and their support networks. Although minority groups (Hispanic and African American) are overrepresented among AIDS cases, little is known about the unique psychiatric and family issues in these groups. The study was designed to examine ethnic differences between Mexican Americans and non-Hispanic whites in psychiatric symptoms, social factors, and adaptation to disease by gay men and members of their families of choice and origin.

Method: The project to date has involved in-depth interviews with 153 Mexican-American and non-Hispanic white gay men with HIV/AIDS, a comparison group of 51 HIV- gay men, and 147 family members and/or caregivers of both groups in San Antonio, Texas. The interviews with gay men and their family members explore psychiatric symptoms, especially depression, anxiety, and suicidality, and cultural variables such as fatalism, familism, and homophobia.

Results: Preliminary analyses show high levels of depressive symptoms among gay men as well as predicted cultural differences in variables such as family support. The presentation will report more extensive analyses.

The study is funded by the National Institute of Mental Health (R01-MH51034).

NR424 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Psychiatric Features of 30 Sex Offenders

Susan L. McElroy, M.D., Department of Psychiatry, Univ of Cincinnati Col of Med, 231 Bethesda Avenue, ML 559, Cincinnati OH 45267-0559; Cesar A. Soutullo, M.D., Purcell Taylor, Jr., Ed.D., Erik B. Nelson, M.D., DeAnna A. Beckman, M.S.W., Paul E. Keck, Jr., M.D., Stephen M. Strakowski, M.D.

Summary:

Background: Sexual violence is an enormous public health problem. Studies suggest that many sex offenders may have a wide range of psychiatric disorders.

Method: Thirty consecutive male sex offenders admitted from prison, jail, or probation to a residential treatment facility received the Structured Clinical Interviews for DSM-IV Axis I and II disorders. Legal, abuse, and family psychiatric histories were also assessed.

Results: The subjects' mean age (±SD) was 33 ± 8 years. They had been convicted 1.9 ± 1.7 (range 1–9) times for sexual offenses and incarcerated 9 ± 6 (range 0–22) years. Subjects displayed the following high rates of lifetime Axis I disorders: 24 (80%) had a substance use disorder; 19 (63%) a paraphilia; 18 (60%) a mood disorder (40% bipolar disorder); 11 (37%) an impulse control disorder; 10 (33%) an anxiety disorder; and six (20%) an eating disorder. We also found high rates of Axis II disorders; 22 (73%) had antisocial personality disorder. First-degree relatives had high rates of substance use and mood disorders. Subjects with paraphilias displayed statistically significantly higher rates of mood, anxiety, eating, and clusters A and C personality disorders than those without paraphilias.

Conclusions: Sex offenders should be carefully evaluated for the presence of psychiatric disorders.

NR425 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

New Antipsychotic-Induced Sexual Dysfunction: Comparative Incidence with Risperidone and Olanzapine Using a Questionnaire

Angel L. Montejo, M.D., Psychiatry, Hospital Universitario, Paseo De San Vicente 58-182, Salamanca 37007, Spain; Gines Llorca, M.D., Juan A. Izquierdo, M.D., Jesus Ciudad, M.D., Santiago Sanchez Iglesias, M.D., Alfonso Ledesma-Jimeno, M.D., Enrique Daniel, M.D.

Summary:

The new generation of antipsychotic drugs (risperidone, olanzapine, etc.) increase serotonergic function that could produce some side effects different from classical neuroleptics. The real incidence of sexual dysfunction related to neuroleptics is still unknown. The authors analyze the incidence of sexual dysfunction (SD) with different antipsychotics (risperidone, olanzapine, clozapine, and haloperidol). The qualitative and quantitative changes in SD over time in 106 outpatients meeting DSM-IV criteria for schizophrenia (43 women, 63 men; mean ± SD age = 33.9 ± 9.3) under treatment with neuroleptics were reviewed with the SDQ (Sexual Dysfunction Questionnaire, Montejo et al, 1996) including questions about the following items: decreased libido, delayed orgasm or anorgasmia, delayed ejaculation, inability to ejaculate, impotence, and general sexual satisfaction. Patients with the following criteria were included: normal sexual function

before antipsychotic intake, exclusive treatment with neuroleptic or associated with benzodiazepines, previous heterosexual or self-erotic current sexual practices. We excluded patients with previous sexual dysfunction, association of neuroleptics with SSRIs, hormone intake, or significant medical illnesses.

Results: There is a significant increase in the incidence of SD by asking the patients direct questions, 80% versus spontaneous SD reported (15%). There are some significant differences among neuroleptics. Risperidone caused SD more frequently (45/66 –81.8%-, mean modal dose 5.53 mg/day) than olanzapine (1/18 –1.8%- mean dose 9.44 mg/day), haloperidol (1/4–25%- mean dose 5.8 mg/day), and clozapine (0/5–0%-, mean dose 115 mg/day). Sixty percent of the patients taking risperidone had a poor tolerance of their dysfunction and 25% of them wanted to drop the medication. SD has a positive correlation with the dose. The patients experienced substantial improvement in sexual function when the dose was diminished or the drug was withdrawn. Five of five patients taking risperidone experienced total improvement using a "drug holiday period" during 24 hours a week. Three of three patients improved when the treatment was changed to olanzapine (10 mg/day).

Conclusions: Sexual functioning seems to be a very important aspect affecting the compliance with treatment in schizophrenic patients. It may be necessary to ask patients directly about the presence of antipsychotic-related sexual dysfunction.

NR426 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Estrogen Replacement Therapy Status and Antidepressant to Sertraline

Lon S. Schneider, M.D., Department of Psychiatry, University of Southern CA, 1975 Zonal Avenue, KAM-400, Los Angeles CA 90033; Gary W. Small, M.D., Cathryn M. Clary, M.D.

Summary:

Objective: The estrogen deficiency of the postmenopausal state may be a factor in both the pathogenesis of late-life depression and in clinical response. A previous placebo-controlled study with fluoxetine suggested that there was a significant interaction between estrogen replacement therapy (ERT) use and treatment response in depressed, older women. We sought further evidence for this possible ERT effect by assessing response to another selective serotonin reuptake inhibitor (SSRI), sertraline, in women receiving ERT.

Methods: We compared the response in 34 sertraline-treated depressed (DSM-III-R) women outpatients, (HAM-D 24 scores ≥18, age ≥60 years) receiving ERT with 93 sertraline-treated women not receiving ERT who entered either of two 12-week, randomized, double-blind, multicenter trials comparing sertraline (50 to 150 mg/d) with either fluoxetine in one trial or nortriptyline in the other. (The nine patients receiving both ERT and medroxyprogesterone were excluded).

Results: Sertraline-treated women on ERT had substantially greater improvements than sertraline-treated women not taking ERT based on Clinical Global Impression (CGI) scores ("much improved" or "very much improved") of 79% vs. 58% ($p = 0.04$). There was a statistical trend for similar results on CGI mean change (1.9 vs. 2.4, where 2 is "much improved" and 3 is "minimally improved") and on proportion of women "remitting" (defined as HAM-D-17 scores ≤7) - 48% vs. 32%.

Conclusions: These observations provide further evidence that ERT use may augment clinical response to SSRI antidepressant treatment in older depressed women. ERT status of postmenopausal women should be considered during both treatment and the planning of clinical trials.

This research was supported by Pfizer, Inc.

NR427 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

The Diagnostic Interview Summary for Deaf Patients on Interactive Video: A Preliminary Investigation

Annie G. Steinberg, M.D., Department of Psychiatry, Univ. of Pennsylvania, 3405 Civic Center Blvd., Philadelphia PA 19104; Marjorie Goldstein, Ph.D., Elizabeth Eckhardt, C.S.W., Doug Lipton, Ph.D., Vicki J. Sullivan, R.D.T.

Summary:

Objective: The feasibility of a version of the Diagnostic Interview Schedule (DIS), suitable for deaf individuals, was investigated by incorporating the feedback of an expert panel and several focus groups of deaf adults.

Method: This study involved a preliminary stage during which Q-DIS-III-R scales were selected and the translation procedures were outlined, a translation stage during which selected Q-DIS-III-R items were translated into American Sign Language (ASL), Signed English (SE), and "mouthing" in speechreading (SR), cross-cultural issues were addressed, and reviewed by both an expert panel and back translator, and a focus group stage where 39 deaf volunteers reacted to the clarity, conceptual, cultural, and functional equivalence of the three translations.

Results: Overall, the expert panel and focus groups responded very favorably to all three translated versions. However, several translation problems were revealed and suggestions for addressing these problems are offered.

Conclusion: The translation of the Q-DIS-III-R into ASL, SE, and SR for use by deaf patients is feasible and holds great potential for both clinical and research setting.

This study was funded by a Phase I Small Business Innovation Research grant #1R43MH55943-01 from the National Institute of Mental Health.

NR428 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Low Incidence of Schizophrenia in Hmong Patients Compared with Other Southeast Asian Refugee Groups

Jerome L. Kroll, M.D., Department of Psychiatry, Univ Minnesota Hospitals, Box 393-Mayo Memorial Building, Minneapolis MN 55455; Moua Vang, B.A.

Summary:

There are 65,000 Southeast Asian refugees in Minnesota, of whom 50,000 are Hmong. We have assessed and treated more than 1500 Southeast Asian refugees, including over 1000 Hmong, primarily for a complex of emotional and psychiatric troubles well known in wartime refugee populations. The Hmong group came from the least technological culture and has shown the most difficulty in adjustment. This is reflected clinically with the majority of Hmong patients fitting into depressive and PTSD diagnostic categories.

However, we observed an almost complete absence of schizophrenia among Hmong patients and, if we see a true sample of the Hmong refugee group, among the Hmong population. At our clinic, 6.9% of Vietnamese, 4% of Lao, 1.3% of Cambodian, and 0.3% Hmong patients have schizophrenia. We have seen only three Hmong schizophrenic patients (two teenagers) in over 10 years. A check with other local facilities has uncovered three other possibly schizophrenic adults. There is no evidence that schizophrenics were selectively killed off or abandoned by Hmong refugees or that Hmong families keep their schizophrenics hidden while bringing in depressed and PTSD relatives. The apparently low incidence of schizophrenia among Hmong refugees is an observation that needs to be reevaluated in Minnesota and elsewhere. If valid, it raises interesting problems and possibilities for genetic and cultural theories of the transmission of schizophrenia, especially among third-world peoples.

NR429 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Ethnic Differences in Depression and Its Correlates

Sukanya Ray, Ph.D., Psychiatry, Mass General Hospital, 15 Parkman Street WAC 812, Boston MA 02124; Vinita Leslie, M.A., Karen Sullivan, B.A., Kalenga Munungo, B.A., Maurizio Fava, M.D.

Summary:

Research has indicated some variability in the depressive symptoms and cognitive and psychosocial functioning across different ethnic groups. It is still unclear whether the relationship between academic adaptation and depression is also culture-bound.

Objective: The study examined the relationship between depressive symptoms, psychosocial functioning, and college adaptation pattern among minority and nonminority students in Boston.

Method: 204 nonminority (Caucasians; mean age: 21.62) and 148 minority (32 African-American, 58 Asians, 33 Hispanics, 25 other; mean age: 21.47) students were randomly selected from various universities in the Boston area. The nonminority group comprised of 66.17% women and 33.82% men, while the minority group was comprised of 66.21% women and 33.78% men. All these participants were asked to complete the Beck Depression Inventory, the Symptom Questionnaire, the Health Survey (SF-36), and the College Adaptation Questionnaire.

Results: African-American students showed higher scores on anger (.005) and depression ($p < .02$) scales and lower scores on somatic ($p < .001$), friendliness ($p < .001$), contentment ($p < .003$), and relaxation ($p < .001$) subscales. Asian students reported more health problems ($p < .002$) and exhibited less satisfaction with the college experience ($p < 01$). African-American students indicated moderate level of satisfaction with their college experience.

Conclusion: Our results suggest that the severity of psychological symptoms varies across ethnic groups and is closely related to academic satisfaction of college students.

NR430 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

Extrapyramidal Side Effects and Antipsychotic Use in India

H.S. Dhavale, M.D., Department of Psychiatry, C/O MJDewan MD, 750 E Adams Street, Syracuse NY 13210; A. Rane, M.D., J. Apte, M.D., Charles Pinto, M.D., Mantosh J. Dewan, M.D.

Summary:

Objective: Textbooks suggest that antipsychotics agents should be used without routinely adding anticholinergic agents. However, these are routinely initiated together in India. We wanted to study whether Indians are more susceptible to EPS or if this practice is overly cautious and unnecessary.

Method: 68 consecutive patients (42 men, 26 women) who were started on antipsychotics were repeatedly evaluated using a standard scale for EPS.

Results: All patients suffered EPS; 61 (89.7%) suffered mild EPS and the rest (7 or 10.3%) moderate to severe EPS. There was no difference in severity of EPS based on sex, type of drug (haloperidol or trifluperazine), dose of drug, or history of treatment. All patients with moderate/severe EPS but only 18% with mild EPS reported these symptoms; 70% of EPS was present at day 5, 90% by day 10.

Conclusions: The population in India is highly susceptible to EPS, with 100% of patients suffering at least mild EPS on routine doses of antipsychotics. The prophylactic use of anticholinergics, therefore, seems warranted and in fact is used in everyday clinical practice. Perhaps in part due to this prophylaxis, compliance rates are relatively robust in India.

NR431 Tuesday, June 2, 3:00 p.m.-5:00 p.m.

BPD Exists in India

Charles Pinto, M.D., Topiwala Natl. Med. Coll., B.Y.L. Nair Charitable Hosp., Dr. A.L. Nair Road, Bombay 400 008, India; H.S. Dhavale, M.D., Shanta Nair, M.D., B. Patil, M.D., Mantosh J. Dewan, M.D.

Summary:

Objective: Borderline personality disorder (BPD) is infrequently reported in India and is a rarely used diagnosis. We attempted to resolve whether it does not exist or is diagnosed differently.

Method: 75 consecutive suicide attempters were evaluated by a semi-structured interview, SCID-II, Scale for Self-Injurious Behavior (SSIB), Scale for Child Abuse, Suicide Intent Questionnaire (SIQ), and the Predictive Model for Suicide.

Results: 13 (17.3%) of 75 of suicide attempters met DSM-IV criteria for BPD; 20% of the 45 men and 14.3% of the 35 women were BPD. BPD and non-BPD cohorts did not differ in age, sex, education, employment, or marital status; however, BPD patients had a significantly greater incidence of childhood sexual/physical abuse (61.5% v. 24.2%, $p = 0.05$), previous suicide attempts (76.9% v. 12.9%, $P < 0.001$), and substance abuse/dependence (38.5% v. 6.5%, $p = 0.01$).

Discussion: This first report on borderline PD in India suggests BPD may be underdiagnosed. Consistent with the U.S. literature, BPD patients had a high incidence of childhood sexual/physical abuse, comorbid depression and substance abuse, frequent and severe self-injurious behavior, and a high risk for suicide. Contrary to expectations, BPD was more frequent in males than females. Ongoing work will compare BPD in India and the US.

NR432 Wednesday, June 3, 9:00 a.m.-10:30 a.m.

Characterizing Psychiatric Patients and Treatments

Terri L. Tanielian, M.A., Office of Research, American Psychiatric Assoc., 1400 K Street, NW, Washington DC 20005; Harold Alan Pincus, M.D.,Deborah A. Zarin, M.D., Julie L. Johnson, M.A.

Educational Objectives:

To understand the characteristics of patients and treatments treated by psychiatrists in routine clinical settings.

Summary:

Background: Despite recent advances in the availability and refinements of treatments for psychiatric disorders, little is still known at a detailed clinical level about the routine care of psychiatric patients.

Methods: Utilizing the APA Practice Research Network, the *1997 Study of Psychiatric Patients and Treatments* collected demographic characteristics, diagnostic information, treatment setting, treatments provided, and information about other treatment providers/settings on a systematically sampled set of patients ($n = 1245$).

Results: Fifty-two percent of patients sampled were female. The mean age of patients treated was 41.8 years and the mean education level was 12.9 years. The most common diagnostic category was mood disorders (51.8% of patients), followed by schizophrenia and other psychotic disorders (14.1%), anxiety disorders (10.0%), and disorders of childhood (7.4%). Fifty-seven percent of patients had at least one comorbid Axis I condition. Seventy-seven percent of patients were seen in an outpatient setting and 18.4 in an inpatient setting. A total of 11.2% of patients received psychotherapy alone, 42.2% received medication alone, and 37.8% received a combination of psychotherapy and medication. The mean number of medications per patient was 1.8, with antidepressants being the most common medication class prescribed (64.2%).

Conclusion: The APA PRN complements traditional clinical research methods and provides a unique and much-needed source of information to inform day-to-day clinical decision-making.

Support for the PRN is provided by the MacArthur Foundation and the federal CMHS.

References:

1. Zarin DA, Pincus HA, West JC, McIntyre JS: Practice-based research in psychiatry. Am J Psychiatry 154:1199–1208, 1997

2. West JC, Zarin DA, Pincus HA, McIntyre JS: Characteristics of psychiatric patients. Psych Services 47:577, 1996.

NR433 Wednesday, June 3, 9:00 a.m.-10:30 a.m.

Managed Care and Psychiatric Treatment Patterns

Joyce C. West, M.P.P., American Psych. Assoc., 1400 K Street, N.W., Washington DC 20005; Deborah A. Zarin, M.D., Harold Alan Pincus, M.D.

Educational Objectives:

To understand and demonstrate the relationship between health plan and clinical treatment patterns in routine psychiatric practice.

Summary:

Objective: This study reports recent, nationally representative data on the nature and scope of psychiatric managed care arrangements; assesses variations in the treated patient case mix across different health plans and managed care organizations (MCOs); and describes variations in the type, intensity, and continuity of psychiatric treatments provided in different health plans and MCOs.

Methods: This observational study used data from the *1997 APA Practice Research Network (PRN) Study of Psychiatric Patients and Treatments,* which was conducted in spring 1997. A total of 78.5% of PRN members (417/531) participated yielding detailed diagnostic, clinical, and treatment information on 1,245 patients. Multivariate logistic and ordinary least squares multiple linear regression were used to generate risk-adjusted estimates of treatment pattern variations.

Results: Treated patients in managed health plans were generally more severe than those in nonmanaged plans. Statistically significant variations in treatment patterns (e.g., visit length, treatment type, intensity, and duration) were also observed after adjusting for patient sociodemographic and clinical factors. Managed care patients had the fewest number of visits in the past 30 days (2.0 visits), while patients in nonmanaged private plans had 3.3 visits. Patients in managed behavioral health care plans were also more likely to receive medications alone without psychotherapy (60.0%) than patients in private nonmanaged care plans (34.4%).

Conclusions: The significant variations in patterns of care observed may have important implications for the quality of care provided under different types of health plan and MCO arrangements. Rigorous risk-adjusted analyses are needed to control for patient clinical factors, that are also associated with treatment pattern variations.

The APA PRN is funded by the MacArthur Foundation and the federal CMHS.

References:

1. Zarin DA, Pincus HA, West JC, McIntyre JS: Practice-based research in psychiatry. Am J Psychiatry 154:1199–1208, 1997

2. Pincus HA, Zarin DA, West JC: Peering into the 'black box': measuring outcomes of managed care. Archives of General Psychiatry 53:870–877, 1996

NR434 Wednesday, June 3, 9:00 a.m.-10:30 a.m.

Mental Disorders and Access to Health Care in the United States

Benjamin G. Druss, M.D., Psychiatry, Yale University, 950 Campbell Avenue 116A, West Haven CT 06516-3861; Robert A. Rosenheck, M.D.

Educational Objectives:

To understand the barriers to receipt of health care in the US for people with mental disorders.

Summary:

Objectives: We examined the barriers to receipt of health services among people with mental disorders for a representative sample of U.S. adults (n = 77,183).

Methods: The sample was drawn from adults responding to the 1994 National Health Interview Survey. We studied the association between reporting a mental disorder (n = 7,409) and access to: (a) health insurance, (b) primary medical care, and (c) actual receipt of general health care, controlling for demographic, insurance, and health variables.

Results: People with mental disorders were about twice as likely to report having been denied insurance due to a preexisting condition (OR = 2.18, $p < 0.0001$) or to have stayed in their job for fear of losing their health benefits (OR = 1.90, $p < 0.0001$). Among respondents with insurance and a usual source of care, those reporting mental illness were more likely to have delayed seeking needed medical care because of cost (OR = 1.76, $p < 0.0001$), or to have been unable to obtain needed medical care (OR = 2.30, $p < 0.0001$).

Conclusions: People with mental disorders experienced significant barriers to receipt of health care. Efforts to measure and improve access to health care for this population may need to go beyond simply providing insurance benefits or access to general medical providers.

Supported in part by grants from the Donaghue Medical Foundation and NARSAD

References:

1. Berk ML, Schur CL, Cantor JC: Ability to obtain health care: recent estimates from the Robert Wood Johnson Foundation National Access to Care Survey. Health Affairs 14(3); 139–46, 1995.

2. Aday LA, Andersen RM: Equity of access to medical care: a conceptual and empirical overview. Medical Care 19 (12); 4–27, 1981.

NR435 Wednesday, June 3, 9:00 a.m.-10:30 a.m.

Psychiatric Factors and Homicide Recidivism in Finland

Markku E.J. Eronen, M.D., Forensic Psychiatry, University of Kuopio, Niuvanniemi Hospital, Kuopio 70240, Finland; Jari Tiihonen, Ph.D.

Educational Objectives:

To recognize the most important epidemiological psychiatric factors associated with homicidal recidivism.

Summary:

Objective: Data on persons known to have committed homicide during a 15-year period were studied to determine factors associated with increased risk of repeating homicide.

Method: Between 1981 and 1995 a total of 1,942 homicides were committed in Finland. In 1,256 cases (65%) the offenders received an exhaustive forensic psychiatric examination. Data from reports of these examinations were analyzed to determine

whether mental disorder and other psychiatric factors were associated with homicide recidivism.

Results: Forty-six homicide recidivists were identified. Thirty-two were alcoholics; 31 suffered from at least one personality disorder, in most cases combined with type two alcoholism; six had schizophrenia; and two had major depression. Homicidal behavior was about ten times more likely in men who had committed a previous homicide than in the general male population. In male homicide offenders alcoholism, personality disorders, and schizophrenia increased the odds ratio of an additional homicide over ten-fold when compared with the general male population. During the first year outside prison, male homicide offenders were at very high risk (odds ratio about 250) to commit a new homicide.

Conclusions: The risk of a repeated homicide appears to be very high during the first year after release from prison in Finland. In our study group of homicide recidivists, individuals with alcoholism, personality disorder, and schizophrenia were overrepresented.

References:

1. Eronen M, Hakola P, Tiihonen J: Mental disorders and homicidal behavior in Finland. Arch Gen Psychiatry 53:497–501, 1996.
2. Eronen M, Hakola P, Tiihonen J: Factors associated with homicide recidivism in a 13-year sample of homicide offenders in Finland. Psychiatric Services 47:403–406, 1996.

NR436 Wednesday, June 3, 9:00 a.m.-10:30 a.m.

Clinical Usefulness of the Canadian Edition of the Wisconsin Quality-of-Life Index in Individuals with Schizophrenia

Pablo Diaz, M.D., Department of Psychiatry, Dalhousie University, PO Box 1004, Dartmouth NS B2Y 3Z9, Canada; Celine Mercier, Ph.D., Sylvie Gibeau, John Leblanc, M.D., Raymonde Hachey, Ph.D., Marion Becker, Ph.D., Genevieve Boyer, M.S.

Educational Objectives:

To recognize the practical clinical use of the CaW-QLI and to acknowledge the strength and weaknesses of the CaW-QLI.

Summary:

Objectives: To assess the CaW-QLI's clinical usefulness by: (a) comparing agreement among seven QOL domains between caregivers (CGs) and patients (PTs), (b) describing a taxonomic classification of patient's goals, and (c) surveying CG's opinion on the use of CAW-QLI in clinical practice.

Method: A total of 212 individuals with schizophrenia were interviewed in Montreal and Halifax using the CaW-QLI, which includes open-ended questions on patients' main three goals. PTs provided names of CGs who were asked to answer the CaW-QLI (caregiver questionnaire) about PTs. Level of agreement was calculated (interclass correlation) in a sub-sample (Halifax) of 40 PTs and 40 CGs. CGs answered a questionnaire about clinical usefulness of the CaW-QLI.

Results: There was poor agreement between CGs and PTs in all domains ($r < 0.2$), except on activities of daily living (r 0.46). CGs and PTs agreed on two most frequent objectives: productive activity (44%) and general mental health (36%). Most nonmedical clinicians surveyed >80% would like to use the CaW-QLI in clinical practice.

Conclusions: The CaW-QLI is useful in clinical practice. It helps to uncover and to focus on clinically relevant disagreement between CGs and PTs. Taxonomic classification of PTs' goals included in the CaW-QLI is useful to identify collective needs, and for planning services. Clinical usefulness of the CaW-QLI is recognized by nonmedical clinicians.

This research was possible by a Grant from Hoechst-Marion Roussel, Janssen-Ortho Inc and Novartis Sandoz (Canada).

References:

1. Award AG: Quality of life rediscovered: implications for clinical outcome and health economics in schizophrenia. J Psychiatry Neuroscience 22(4):229–230, 1977
2. Atkinson MJ, Zibin S: Quality of Life Measurements Among Persons with Chronics Illness: A Critique of Measures and Methods. Health Canada Publications, 1996.

NR437 Wednesday, June 3, 9:00 a.m.-10:30 a.m.

Early Adverse Life Events of Single Mothers

Ellen L. Lipman, M.D., Research Bldg Chedoke, Patterson Bldg Chedoke Div, PO Box 2000, Hamilton ON L8N 3Z5, Canada; Harriet L. MacMillan, M.D., M. Wong, M.Sc.

Educational Objectives:

At the conclusion of this presentation, the participant should be aware that: (1) Ontario single mothers had significantly more adverse early life events and current problems with employment, income support, and psychiatric disorder vs. mothers from two-parent families; & (2) among all mothers, those with a childhood history of abuse had significantly higher rates of mental health problems compared with mothers without a history of abuse.

Summary:

Objective: To examine the prevalence of early adverse life events and their relationship to current problems experienced by single mothers compared with mothers from two-parent families.

Method: Cross-sectional general population survey of a random sample of 9,953 Ontario residents aged 15 years and older.

Results: Single mothers were significantly more likely than mothers from two-parent families to have experienced adverse early life events (such as early parental death or a mentally ill parent), and sexual abuse or severe sexual or physical abuse. Single mothers were also significantly more likely than mothers from two-parent families to be experiencing current problems in the areas of employment, financial support, and psychiatric disorder. Among single mothers and mothers from two-parent families, those with a childhood history of abuse had significantly higher rates of mental health problems in adulthood compared with mothers without a history of abuse. The size of effects was larger among single mothers.

Conclusion: Single mothers are more likely to have experienced adverse early life events including childhood abuse and to have current sociodemographic and mental health problems than mothers from two-parent families. Childhood abuse is associated with similar patterns of current difficulties among single mothers and mothers from two-parent families.

References:

1. MacMillan HL, Fleming JE, Trocme N, et al.: Prevalence of child physical and sexual abuse in the community. Results from the Ontario Health Supplement. JAMA 278:131–135, 1997.
2. Lipman EL, Offord DR, Boyle MH: Single mothers in Ontario: sociodemographic, physical and mental health characteristics. Can Med Assoc J, 156:639–645, 1997.

NR438 Wednesday, June 3, 9:00 a.m.-10:30 a.m.

Does Fluoxetine Augment the Inpatient Treatment of Anorexia Nervosa?

Evelyn Attia, M.D., Psychiatry, Columbia University, 722 West 168th Street, New York NY 10032-2603; Claire Haiman, B.A., B. Timothy Walsh, M.D., Suzanne R. Flater, R.N.C.

Educational Objectives:

At the conclusion of this presentation, the participant should be able to recognize that fluoxetine offers no additional benefit to inpatient treatment for patients with anorexia nervosa.

Summary:

Objective: While pharmacologic interventions are of established utility in bulimia nervosa, medications have no clear role in the treatment of anorexia nervosa. Because patients with anorexia nervosa frequently exhibit mood disturbances and symptoms of obsessive-compulsive disorder, the authors tested the utility of fluoxetine in the treatment of women participating in an inpatient program for anorexia nervosa.

Method: The authors conducted a randomized, placebo-controlled, double-blind, seven-week study of fluoxetine at a target daily dose of 60 mg in 31 women with anorexia nervosa receiving treatment for their eating disorder on a clinical research unit. Body weight and measures of eating behavior and psychological state were obtained at baseline and at termination.

Results: There were no significant differences in clinical outcome on any measure between patients receiving fluoxetine and patients receiving placebo.

Conclusions: Fluoxetine does not appear to add significant benefit to the inpatient treatment of anorexia nervosa.

Points for Discussion: This result is consistent with other controlled trials of pharmacologic treatment of anorexia nervosa. Given the high incidence of depression among patients with anorexia nervosa, as well as the high incidence of bulimic-like symptoms in these patients, the lack of benefit from antidepressant medications as well as from medications known to be helpful in the treatment of bulimia is puzzling. The authors consider methodologic issues, as well as the question of neurochemical disturbances in the setting of low weight, which may be relevant to their findings.

This study was supported in part by Eli Lilly & Company.

References:

1. Attia E, Haiman C, Walsh BT, Flater SR, Does fluoxetine augment the inpatient treatment of anorexia nervosa?" American Journal of Psychiatry, accepted for publication, October 29, 1997.
2. Jimerson DC, Wolfe BE, Brotman AW, Metzger ED, Medications in the treatment of eating disorders. Psychiatric Clinics of North America, December 1996, 739–754.

NR439 Wednesday, June 3, 9:00 a.m.-10:30 a.m.

Serotonergic Function and Aggression in Alzheimer's Disease

Nathan Herrmann, M.D., Department of Psychiatry, Sunnybrook Hlth Science Ctr, 2075 Bayview Avenue, North York ON M4N 3M5, Canada; Krista L. Lanctot, M.Sc., Goran M. Eryavec, M.D., Robert van Reekum, M.D., Claudio A. Naranjo, M.D.

Educational Objectives:

To recognize the potential contribution of neurotransmitter abnormalities to behavioral disturbances in Alzheimer's disease

Summary:

Objective: To investigate the relationship between central 5-HT activity and aggression in AD.

Methods: A total of 22 institutionalized non-depressed patients with severe AD (NINCDS-ADRDA criteria, MMSE = 4.0 ± 4.6) were studied. All subjects had significant behavioral disturbances (Behavioral Pathology in AD Rating Scale (B-AD) score ≥ 8), but 11 demonstrated aggressive behaviors (Neuropsychiatric Inventory agitation/aggression subscale [NPI agg] score ≥ 6, range 6–12) and 11 did not (NPI agg < 6, range 0–4). Central 5-HT activity was assessed with the prolactin (PRL) response to fenfluramine challenge. PRL levels were measured at baseline (–20 minutes and –5 minutes), and then three and four hours after administration of fenfluramine (60 mg p.o.).

Results: Scores on the aggression subscales of the NPI and B-AD were positively correlated to peak PRL concentration (% baseline) following fenfluramine challenge (Spearman r = .61, p < .003; r = .47, p < .028). Aggressive patients showed a greater increase in mean peak PRL concentration (% baseline, 216 ± 60) than nonaggressive subjects (123 ± 54) (p = .0009, 2-tailed Mann-Whitney U).

Conclusion: These results suggest a link between aggression in AD and central serotonergic hyper-responsivity.

References:

1. Herrmann N, Lanctôt KL: From transmitters to treatment: the pharmacotherapy of behavioral disturbances in dementia. Can J Psychiatry 1997; 42(suppl 1):51S–64S
2. McLoughlin DM, Lucey JV, Dinan TG: Central serotonergic hyper-responsivity in late-onset Alzheimer's disease. Am J Psychiatry 1994; 151:1701–3

NR440 Wednesday, June 3, 9:00 a.m.-10:30 a.m.

The Effect of Treatment on the Four-Year Outcome of Elderly Patients with Recurrent Major Depression

Alastair J. Flint, M.B., Psychiatry, Toronto Hospital, 200 Elizabeth St, 8 Eaton N., Toronto, ONT M5G 2C4, Canada; Sandra L. Rifat, Ph.D.

Educational Objectives:

At the conclusion of this presentation the participant will be able to describe how full-dose antidepressant medication and regular followup are associated with a favorable outcome in elderly patients with recurrent depression.

Summary:

Objective: The authors examined the effect of treatment on the four-year outcome of elderly patients with recurrent depression.

Method: The study group consisted of 38 patients, aged 60 years and older, who had a history of DSM-III-R recurrent unipolar major depression. All patients had recovered from the index episode of depression and were maintained on full-dose antidepressant medication (nortriptyline n = 29, phenelzine n = 8, fluoxetine n = 1). Patients were followed on a regular basis for four years or until recurrence, whichever occurred first. Recurrence was diagnosed if a patient met symptomatic criteria for DSM-III-R major depression for at least one week and had a HAM-D score of ≥ 16. Survival analyses were used to estimate the cumulative probability of remaining well without recurrence and to examine the effect of 11 demographic and clinical variables on time to recurrence.

Results: The cumulative probability of remaining well without recurrence over the four-year followup period was 70%. Forty percent of recurrences occurred within the first year and 80% within the first two years of followup. Higher anxiety scores on the Hospital Anxiety and Depression scale at remission were associated with shorter time to recurrence.

Conclusions: Full-dose antidepressant medication and regular followup were associated with a favorable four-year outcome in this group of elderly patients with recurrent depression. Most recurrences occurred during the first two years of treatment. Residual symptomatic anxiety predicted shorter time to recurrence.

References:

1. Reynolds CF, Frank E, Perel JM, Imber SD, Mazumdar S, Kupfer DJ: Maintenance therapies for late-life recurrent depres-

sion: research and review circa 1995. Int Psychogeriatr 7 (Suppl):27–40, 1995.

2. Flint AJ, Rifat SL: Two-year outcome of elderly patients with anxious depression. Psychiatr Res 66:23–31, 1997

NR441 Wednesday, June 3, 9:00 a.m.-10:30 a.m.

Estrogen Use Enhances Cognitive Performance in Non-Demented, Community-Dwelling Older Women

David C. Steffens, M.D., Department of Psychiatry, Duke University, Trent Drive-Duke South, Durham NC 27710; Maria C. Norton, JoAnn T. Tschanz, Ph.D., Bonita W. Wyse, Ph.D., Brenda Plassman, Ph.D., Kathleen A. Welsh-Bohmer, Ph.D., Ann M. Saunders, Ph.D.

Educational Objectives:

At the conclusion of this presentation, the participant should be able to determine the differential effects on cognition in post-menopausal women of estrogen use status, APOE genotype, age, and education.

Summary:

Objective: To examine history of postmenopausal estrogen use and cognitive performance in a large sample of non-demented, community-dwelling elderly women.

Method: As part of a large epidemiologic study of dementia, a multi-stage screening protocol identified 2,542 non-demented elderly women. These subjects were administered the Modified Mini-Mental State Examination (3MS) and were asked if they were currently using or have past use of estrogen post-menopause. Two buccal swabs were obtained for APOE genotyping. Estrogen use was trichotomized as: no use, past use, and current use. APOE genotype was dictotomized as E4 allele present vs absent. A series of hierarchical ANOVAs on a sensory-adjusted 3MS score was conducted, first with estrogen use alone, then adding sequentially, education, age, and genotype as covariates.

Results: Both groups of estrogen users had significantly higher 3MS scores than non-users ($p < 0.0005$), regardless of APOE genotype. Adjusted means (with s.d.) were 90.0 (7.0), 91.7 (6.0), and 93.2 (4.6) for never, past, and current use, respectively.

Conclusions: In this large community study, women who had ever used estrogen scored higher on the 3MS. This finding remained, even after controlling for the effects of age, education, and APOE genotype.

Supported by NIH grant AG 11380.

References:

1. Kawas C, Resmick S, Morrison A, Brookmeyer R, Corrada M, Zonderman A, Bacal C, Lingle DD, Metter E: A prospective study of estrogen replacement therapy and the risk of developing Alzheimer's disease: the Baltimore Longitudinal Study of Aging. Neurology 1997; 48, 1517–1521.

2. Sherwin BB: (1997). Estrogen effects on cognition in menopausal women. Neurology 1997; 48 (suppl 7), S21–S26.

NR442 Wednesday, June 3, 9:00 a.m.-10:30 a.m.

Comparison of Panic Symptoms in Women and Men

Vladah Starcevic, M.D., Institute of Mental Health, Palmoticeva 37, Belgrade 11000, Yugoslavia; Ana Djordjevic, Milan Latas, M.D., Goran Bogojevic, M.D.

Educational Objectives:

At the conclusion of this presentation the participant will be able to describe if the frequency and severity of symptoms of panic attacks are different in men and women.

Summary:

Objective: To compare frequency and intensity of symptoms of panic attacks (PA) in women and men with panic disorder with agoraphobia (PDA), in view of the gender-related differences in certain aspects of PDA.

Method: Ninety-seven consecutive outpatients (74 women and 23 men) with PDA, whose diagnosis was later confirmed by a structured diagnostic interview, were administered the National Institute of Mental Health Panic Questionnaire (NIMH PQ). The NIMH PQ is a self-report instrument, providing information on 44 symptoms experienced during PA. The frequency and severity of each symptom were rated on a four-point scale, from 0 to 3. The mean scores for each symptom in women and men were compared.

Results: Women experienced symptoms during PA more frequently and more intensely, but the differences were insignificant (1.22 vs. 1.13 for mean frequency and 0.87 vs. 0.81 for mean severity). Except for trembling/shaking, which women reported significantly ($p < 0.01$) more frequently (2.50 vs. 1.96) and with greater intensity (1.95 vs. 1.26), there were no significant differences between female and male PDA patients in terms of both frequency and severity of symptoms experienced during PA.

Conclusions: For the most part, PA are not experienced differently by women and men with PDA. A strikingly higher frequency and much greater severity of trembling/shaking in women may be an instrument-related artifact or an idiosyncratic finding, but it may also reflect women's culturally determined, lesser difficulty to admit that they have this visible and recognizable anxiety symptom during PA.

References:

1. Oei TPS, Wanstall K, Evans L: Sex differences in panic disorder and agoraphobia. *J Anxiety Disord* 1990;4:317–324

2. Cox BJ, Swinson RP, Endler NS, Norton GR: The symptom structure of panic attacks. *Compr Psychiatry* 1994;35:349–353

3. Shioiri T, Someya T, Murashita J, Takahashi S: The symptom structure of panic disorder: a trial using factor and cluster analysis. *Acta Psychiatr Scand 1996;93:80–86*

NR443 Wednesday, June 3, 9:00 a.m.-10:30 a.m.

Drug Reinstitution in OCD Patients

Luigi Ravizza, M.D., Neuroscience, Psychiatric Unit, Cherascoll, Turin 10126, Italy; Giulio Barzega, M.D., Silvio Bellino, M.D., Giuseppe Maina, M.D., Filippo Bogetto, M.D.

Educational Objectives:

How to treat properly ICS patients who relapsed after discontinuation

Summary:

Objective: to investigate in OCD patients whether clinical response to SUI reinstitution remains unchanged after drug discontinuation and symptom relapse.

Method: A 6-month, open-label reinstitution study was performed on a group of OCD patients. A total of 81 outpatients who were found responders (Y-BOCS score decrease ≥ 40%) to a preceding trial (6 months) with clomipramine (CMI, 150 mg/day), fluoxetine (FLU, 40 mg/day), fluvoxamine (FLV, 300 mg/day), or paroxetine (PAR, 40 mg/day) and who relapsed within 6 months of discontinuation had the same SUI treatment reinstituted (18 patients were retreated with CMI, 22 with FLU, 21 with FLV and 20 with PAR). The Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) was administered to each patient defore entering the study and then every 2 weeks until endpoint. Patients with at least 40% decrease of Y-BOCS score were rated as 'responders'.

Results: at endpoint, the responder rates after drug reinstitution were: 83.3% with CMI, 81.8% with FLU, 80.9 with FLV and 80.0 with PAR. These findings were significantly lower than the 100% rates of the first treatment. Besides, Y-BOCS scores for the four groups showed a slower decrease after drug reinstitution than in the first trial.

Conclusions: OCD patients who relapsed after drug discontinuation responded again when the same treatment was reinstituted, but responder rates were found lower and response onset was delayed.

References:

1. Pato MT, Zohar-Kadouch R, Zohar, J, Murphy DL: Return of symptoms after discontinuation of clomipramine in patients with obsessive-compulsive disorder. *Am J Psychiatry* 145:1521–1525, 1988.

2. Leonard HL, Swedo SE, Lenane MC, Rettew DC, Cheslow DL, Hamburger SD, Rapoport JL: A double-blind substitution during long-term clomipramine treatment in children and adolescents. *Arch Gen Psychiatry* 48:922–927, 1991.

NR444 Wednesday, June 3, 12 noon-2:00 p.m.

Quetiapine Fumarate Reduces Aggression and Hostility in Patients with Schizophrenia

Marc Cantillon, M.D., Medical Affairs, Zeneca Pharmaceuticals, 1800 Concord Pike, Wilmington DE 19850; Jeffrey M. Goldstein, Ph.D.

Summary:

Standard antipsychotics can reduce aggression and hostility in acutely psychotic patients by improving positive symptoms of psychosis, but can also produce side effects such as akathisia or other extrapyramidal symptoms (EPS), sedation, dysphoria, or cognitive dysfunction. Therapies that reduce aggression and hostility without worsening negative or cognitive symptoms or inducing EPS would represent an important advance. 'Seroquel' (quetiapine fumarate), a recently approved antipsychotic, is effective in treating the positive and negative symptoms of psychosis, is well tolerated, and does not produce treatment-emergent or dose-related EPS or elevations of plasma prolactin. We present results from a six-week, placebo-controlled, double-blind, randomized trial (n = 351) in hospitalized patients with acute exacerbation of schizophrenia that evaluated five fixed doses of quetiapine (75, 150, 300, 600, 750 mg/day) and a single haloperidol dose (12 mg/day). Aggression and hostility were assessed using the BPRS factor V score (mean of hostility, excitement, suspiciousness, uncooperativeness), the BPRS hostility item, and a BPRS hostility cluster score (mean of anxiety, tension, hostility, suspiciousness, uncooperativeness, excitement). Positive symptoms were assessed using the BPRS positive symptom cluster score (mean of conceptual disorganization, hallucinatory behavior, suspiciousness, unusual thought content). Quetiapine and haloperidol were both superior to placebo in reducing positive symptoms; however, only quetiapine was superior to placebo on all three measures of aggression and hostility (at a dose of 600 mg/day). This provides initial evidence that quetiapine is effective in the treatment of aggression and hostility in patients with acute exacerbation of schizophrenia. Quetiapine's favorable safety and tolerability profile across the dose range in addition to data supporting efficacy in the treatment of positive, negative, and affective symptoms of schizophrenia, suggest that quetiapine may represent a new first-line treatment for psychotic disorders, including schizophrenia. Seroquel is a trademark, the property of Zeneca Limited.

NR445 Wednesday, June 3, 12 noon-2:00 p.m.

Efficacy of Quetiapine Fumarate in Affective Symptoms of Schizophrenia

Marc Cantillon, M.D., Medical Affairs, Zeneca Pharmaceuticals, 1800 Concord Pike, Wilmington DE 19850; Jeffrey M. Goldstein, Ph.D.

Summary:

Affective symptoms are common in patients with schizophrenia and are associated with significant morbidity, mortality, and impaired functioning. Therapies effective in reducing affective symptoms without worsening negative or cognitive symptoms or inducing extrapyramidal symptoms (EPS) would represent an important advance. 'Seroquel' (quetiapine fumarate), a recently approved antipsychotic, is effective in treating positive and negative symptoms of psychotic disorders, including schizophrenia. Quetiapine is well tolerated and does not produce treatment-emergent or dose-related EPS and does not elevate plasma prolactin levels. We present results from two, six-week, placebo-controlled, double-blind, randomized, parallel-group, efficacy and safety trials in hospitalized patients with acute exacerbation of schizophrenia. Trial 1 (n = 351) evaluated five fixed doses of quetiapine (75, 150, 300, 600, 750 mg/day) and a single haloperidol dose (12 mg/day); Trial 2 (n = 296) was dose-titrated. Efficacy was assessed using the 18-item Brief Psychiatric Rating Scale (BPRS) and the Clinical Global Impression (CGI). Affective symptoms were assessed using the BPRS factor I score (mean of depressive mood, guilt feelings, somatic concern, anxiety) and a BPRS mood cluster score (mean of depressive mood, guilt feelings, anxiety, tension). In both trials, quetiapine was superior to placebo in improving affective symptoms, as assessed by the BPRS factor I and mood cluster scores, while haloperidol (Trial 1) was not ($p<0.05$). Affective symptoms were improved on both measures in a statistically significantly greater proportion of patients treated with quetiapine than with placebo (Trials 1 and 2) or haloperidol (Trial 1). These results provide evidence that quetiapine is effective in the treatment of affective symptoms associated with schizophrenia and may have a better therapeutic effect in this important area of psychopathology than standard agents. A favorable safety and tolerability profile across the dose range, combined with data supporting efficacy in the treatment of positive, negative, and affective symptoms of schizophrenia, suggest that quetiapine may represent an important advance in the treatment of psychotic disorders. Seroquel is a trademark, the property of Zeneca Limited.

NR446 Wednesday, June 3, 12 noon-2:00 p.m.

Antipsychotic Response to Clozapine in the Treatment of Patients with Refractory Schizophrenia

Vittorio Volterra, M.D., Institute of Psychiatry, University of Bologna, Viale Carlo Pepolis 5, Bologna 40123, Italy; Diana De Ronchi, M.D., Giovanni Viscanti, M.D., Maria Augusta Raggi, M.D., Rossella Michetti, M.D., Diana Gentile, M.D., Nicolo Baldini Rossi, M.D.

Summary:

Objective: To evaluate the safety and efficacy over a three-year period of clozapine (dose: 352.38 ± 114.54 mg/day) in 21 subjects (16 men/5 women) meeting the DSM-III R criteria for schizophrenia.

Methods: Behavioral changes in 17 subjects were measured at month 1, 3, 6, 12, 24, and 36 with (1) the Brief Psychiatric Rating Scale, (2) the Scales for the Assessment of Positive and Negative Symptoms, and (3) the Clinical Global Impression. Spontaneously reported adverse events (grouped in five categories) were collected.

Results: Significant results of clozapine treatment were related to (1) plasma clozapine concentrations (above 400 ng/mL all pa-

tients became responders); (2) the high positive response rate over a three-year period according to plasma clozapine concentrations (651.9 ± 348.3 ng/mL after one year, 436.2 ± 292.2 ng/mL after two years, and 394.4 ± 178.9 ng/mL after three years); (2) only 17.6% of patients with any treatment-emergent extrapyramidal event. No significant changes in SANS severity scores were observed.

Conclusions: Clozapine is effective in treatment-refractory schizophrenic patients over a three-year period. Moreover, plasma concentrations were helpful in predicting response even in long-term follow-up studies.

NR447 Wednesday, June 3, 12 noon-2:00 p.m.

Pharmacotherapy of Anxiety of Schizophrenia

Marko Munjiza, Ph.D., Institute for Mental Health, Palmoticeva 37, Belgrade YU 11000, Fr Yugoslavia; Snezana Kuzmanovic, M.D., Smildka Popovic-Deusic, Ph.D., Milorad Veliekovic, Ph.D., Natasa Ljubomirovic, M.D., Dejan Mandic, M.D., Marija Nikolic, M.D.

Summary:

Almost 75% of the population are more or less anxious, which indicates that anxiety is normal in human beings. At low grade it helps in quick reactions in "planning" of adaptive activities. But when anxiety lasts longer or appears more frequently with hard bearing intensity, we speak of pathological anxiety. In schizophrenia we are faced with syndromes of psychotic anxiety, which often "intertwine" with other psychopathological features of schizophrenia.

Objective: To test the efficacy of pharmacotherapy on psychotic anxiety.

Method: In this research 80 schizophrenics have been tested (57 males, 23 females) average age of 28 to 39 years, who were treated in the department for psychoses of day hospital during 1996. The group was divided into subgroups with 40 patients each, who were treated with different pharmacotherapy. First, the experimental group received a combination of antipsychotics and anxiolytics (benzodiazepine group). The control group was treated with classic antipsychotics only (fluphenazine, haloperidol). Psychotic symptoms were measured with Brief Psychiatric Rating Scale (BPRS) and anxiety was measured by Spielberger's State-Trait Anxiety Index (STAI). Data were presented numerically from 1.00 (without anxiety) to 3.00 (very high anxiety). Psychotic behavior was also presented numerically as psychotic index.

Results: In both groups anxiety was at level of 2.96 index points before treatment (very high anxiety). In the control group there was no significant improvement (2.38 at the end of examination), which indicates minimal improvement ($p = 0.10$). In the experimental group, which was treated with combine therapy (antipsychotics and benzodiazepines), there was significant improvement of anxiety, especially psychotic anxiety ($r = 0.059$). This fact indicates very low anxiolytic potential of phenothiazines. Reduction of psychotic features in the sense of partial remission of schizophrenic phenomenon is significant in both groups (from 178.4 to 46.3 index points, $p = 0.05$).

Conclusion: Significant improvement of anxiety was found in the group of schizophrenic patients treated with a combination of antipsychotics and anxiolytics.

NR448 Wednesday, June 3, 12 noon-2:00 p.m.

Comparisons of the Effects of the Newer Atypical Antipsychotics in the Treatment of Schizophrenia: A Meta-Analysis

John M. Davis, M.D., Department of Psychiatry, University of Illinois, 1601 West Taylor Street, Chicago IL 60612; Philip G. Janicak, M.D., Rajiv P. Sharma, M.D., Radmilla Manav, M.D.

Summary:

In a meta-analysis of the results of clinical trials, the efficacy and side effects of five newer atypical antipsychotics (risperidone, olanzapine, quetiapine, sertindole, and ziprasidone) were compared with placebo and conventional neuroleptics using the Mantel-Haenszel and Hedges-Olkin statistics. All five atypicals were massively superior to placebo ($p < 0.0001$). The effect sizes were: risperidone, 0.53; olanzapine, 0.52; quetiapine, 0.60; sertindole, 0.47; and ziprasidone, 0.51. Risperidone was significantly superior to conventional neuroleptics (effect size, 0.21, $p<0.00001$); 59% of patients with schizophrenia responded to risperidone versus 52% of patients treated with conventional neuroleptics (Mantel-Haenszel chi-square=10.9, $p=0.001$). Olanzapine was also superior to conventional neuroleptics (effect size, 0.19, $p<0.00001$), but superiority of the other three atypicals versus conventional neuroleptics was not demonstrated. Dose-response curves were also used to evaluate the quantitative occurrence of extrapyramidal symptoms and to construct a dose equivalency table for all antipsychotics.

NR449 Wednesday, June 3, 12 noon-2:00 p.m.

Gender-Specific Prolactin Response to Treatment with Olanzapine Versus Risperidone in Schizophrenia

Bruce Kinon, M.D., Eli Lilly and Company, Lilly Corporate Center, Indianapolis IN 46285; Bruce Basson, M.S., Gary D. Tollefson, M.D.

Summary:

Objective: The influence of gender upon prolactin (PRL) response to either olanzapine (OLZ) or risperidone (RIS) was investigated during a six-month clinical trial.

Method: Within a double-blind, controlled, comparative clinical trial of OLZ and RIS in predominantly schizophrenic patients, serum PRL was assessed at baseline (following drug washout), after completion of up to eight weeks acute treatment, and after up to 28 weeks extended treatment.

Results: After acute as well as extended treatment, mean PRL for RIS-treated males and females was significantly higher than that of corresponding OLZ-treated males and females. Mean PRL after acute or extended treatment for OLZ-treated patients did not differ significantly from baseline in either gender. RIS-treated females had a significantly greater increase in mean change from baseline PRL than RIS-treated males at both acute and 28 weeks treatment. Mean change from baseline did not differ significantly between OLZ-treated males and females.

Conclusions: Treatment with RIS is associated with a marked increase in PRL in both males and females (females > males). Both sexes demonstrate persistently elevated PRL during up to six months of treatment. OLZ is not associated with a significant increase in PRL in either males or females receiving extended treatment.

NR450 Wednesday, June 3, 12 noon-2:00 p.m.

Symptom Severity in Homeless Men and Women with Schizophrenia

Leonard White, Ph.D., Clinical Neuroscience Ctr, Pilgrim Psychiatric Center, Box A, Building 23-5, W. Brentwood NY 11717; Lewis A. Opler, M.D., Patrick E. Shrout, Ph.D., Carol L.M. Caton, Ph.D., PANSS Study Group

Summary:

Objective: This study sought to identify correlates of homelessness in schizophrenia and to test the discriminant validity of the pentagonal model of schizophrenic symptoms.

Method: Homeless and domiciled schizophrenic men and women (N=400) were compared in terms of clinical characteristics and PANSS rated symptoms. Factor coefficients were newly calculated for the pentagonal structural model of schizophrenic symptoms and used to score five subscales from the PANSS: positive, negative, activation, dysphoric mood, and autistic preoccupation. Statistical analysis proceeded using Gender (2) by Residence (2) MANOVA-MANCOVA.

Results: In the homeless, symptom severity was significantly higher for positive, activation, and autistic preoccupation subscales. However, when illicit drug use and neuroleptic noncompliance were held constant, these differences were no longer significant. Independent of residence, negative symptoms, activation, and autistic preoccupation were more severe in women and the differences were retained even when historical and risk characteristics were held constant. Neuroleptic noncompliance was most severe in homeless men but did not differ between homeless and domiciled women. Illicit drug use was most frequent in homeless men. We conclude that homelessness in schizophrenia is associated with severity of positive symptoms, activation, and autistic preoccupation. Neuroleptic noncompliance and illicit substance abuse are more significant correlates of homelessness in schizophrenic men than in women. Discriminant validity of the pentagonal structural model of schizophrenic symptoms was demonstrated.

NR451 Wednesday, June 3, 12 noon-2:00 p.m.

Effects of Acute Tryptophan Depletion on Clozapine-Responsive Schizophrenia Subjects

Tony P. George, M.D., Psychiatry, Yale University, RM 5-101 SAC CMHC 34 Park St., New Haven CT 06508; Marc N. Potenza, M.D., Kathleen Degen, M.D., Michael J. Sernyak, M.D., Christopher J. McDougle, M.D., Scott W. Woods, M.D.

Summary:

Objective: The effects of acute tryptophan depletion (ATD) were studied in clozapine-responsive chronic schizophrenic subjects.

Method: Five subjects completed sham and active depletions in a double-blind, crossover design one week apart. The PANSS, HAM-D, HAM-A, Y-BOCS, and CGI-S were administered before and after each depletion. Plasma was collected for total and free L-tryptophan (TRP) before and five hours after each challenge.

Results: Although ATD significantly (>80%) lowered plasma total and free TRP levels, there were no significant changes on the clinical rating scales measured.

Conclusions: These preliminary data suggest that dietary manipulation of pre-synaptic serotonergic function does not alter clinical parameters in clozapine-responsive schizophrenic subjects.

Supported in part by The Lucille P. Markey Foundation, NARSAD, The Stanley Foundation and USPHS

NR452 Wednesday, June 3, 12 noon-2:00 p.m.

Olanzapine Versus Fluphenazine in Schizophrenia

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Summary:

Unlike typical neuroleptics, olanzapine increases responding during the conflict component of a modified Geller Seiffer test suggesting anxiolytic activities. To test this hypothesis clinically, a study was conducted comparing efficacy, including anxiolytic activity, between olanzapine (Olz) and fluphenazine (Flu). Sixty schizophrenic patients were randomized to Olz (5–20 mg) or Flu (6–21 mg). The study lasted 22 weeks with an acute treatment period of six weeks. Six-week results are reported. After six weeks, the Olz group showed superior improvement in mean change in HAM-A total (Olz –9.8 vs. Flu –5.8; p = .048) and HAM-A somatic (Olz –3.6 vs. –1.6; p = .04). There was a difference in favor of Olz in mean change of CGI-S scores (Olz –1.9 vs. Flu –1.2; p = .039). The Olz group achieved a numerically superior decrease in mean BPRS total, PANSS total, PANSS positive, and PANSS negative. Assessment using the Simpson Angus Scale and the Hillside Akathisia Scale showed that the Olz group experienced significantly less EPS. Concomitant use of benzodiazepines and anticholinergics was also significantly lower in the olanzapine group. Olanzapine produced significantly superior global improvement in symptoms, including anxiety, compared with fluphenazine. The data extend preclinical observations of effectiveness of olanzapine in the conflict model of anxiety.

NR453 Wednesday, June 3, 12 noon-2:00 p.m.

Switching Psychotic Patients with Symptomatic Extrapyramidal Symptoms from Haloperidol to Olanzapine: Results of a Multi-Center, Collaborative Trial in Latin-America

Pierre V. Tran, M.D., MC 541, Eli Lilly Company, Lilly Corporate Center DC 0538, Indianapolis IN 46285; Mauricio Tohen, M.D., G. Mazzoti, Costa Silva, Jorge Ospina, M.D., W.F. Gattaz, V. Larach

Summary:

The objective of this open-label, multicenter study is to assess the effects of the novel antipsychotic olanzapine in a group of psychotic patients with symptomatic, haloperidol-induced extrapyramidal symptoms (EPS). We hypothesized that olanzapine would 1) improve the EPS and offer better tolerability over haloperidol, and 2) be effective in a direct switch scheme without a need for washout from previous neuroleptics. A total of 94 patients meeting ICD10 criteria for schizophrenia, schizophreniform and schizoaffective disorder with a minimum score > 3 on the Simpson Angus Scale (SAS) were enrolled in the study and received olanzapine (5–20 mg). All patients were treated with haloperidol for at least four weeks prior to study entry. Eighty eight (88.3%) percent of the patients completed the 6-week study. No patients dropped out from the study because of extrapyramidal symptoms. After six weeks of therapy, analysis of the mean change from baseline scores on the SAS (–9.60 ± 5.36), Barnes Akathisia Scale (–1.00 ± 1.19), and the Abnormal Involuntary Movement Scale (–1.52 ± 2.91) all showed statistically significant improvement ($p < .001$). After six weeks of therapy, there was a statistically significant improvement from baseline in mean scores on the PANSS total (–25.07 ± 18.53, $p < .001$), the BPRS total (item scored from 1–7) (–13.41 ± 10.14, $p < .001$), and the Quality of Life total (19.19 ± 31.47, $p < .001$). These results suggest that olanzapine could represent an appropriate alternative therapy to patients intolerant to haloperidol-induced EPS. Additionally, when substituting an alternative agent, a direct-switch from haloperidol to olanzapine without washout could be an option based on the results of this clinical trial.

NR454 Wednesday, June 3, 12 noon-2:00 p.m.

A Longitudinal Study of Schizophrenia's Factors

Joanne T. Marengo, Ph.D., Psychiatry, Northwestern University, Suite 1204 111 Wabash, Chicago IL 60602; Martin Harrow, Ph.D., James R. Sands, Ph.D.

Summary:

Objectives: This longitudinal study investigated theoretical formulations of schizophrenia's three major symptom dimensions and the independence and stability of its three syndrome factors:

reality distortion, disorganization, and negative symptoms. Depression also was examined longitudinally in relation to schizophrenia's major factors.

Method: A total of 173 acute, nonchronic patients (48 schizophrenia, 23 schizoaffective, 37 psychotic affective, 65 nonpsychotic affective) were assessed at hospitalization and followed up at two, 4.5, and 7.5 years post-hospitalization. At each follow-up, delusions, hallucinations, and depression were evaluated by the SADS. Disorganized speech was assessed using a reliable and standardized method (Marengo & Harrow, 1986). Negative symptoms and disorganized affect were evaluated using the Behavior Rating Schedule of the PAI (Strauss & Carpenter, 1974). Factor analyses were conducted.

Results: In schizophrenia, disorganization and reality distortion were stable and independent factors over time. The negative syndrome was independent although flat affect/withdrawal, motor slowness, and impoverishment emerged as discordant dimensions within this syndrome. Depression was stable and independent of schizophrenia's factors over time.

Conclusions: Our longitudinal data suggest that depression is an important independent factor of schizophrenia's course. Disorganization and reality distortion are stable and independent factors, but negative symptoms show discordant patterns of covariation. These longitudinal data challenge classical three-factor models of schizophrenia.

NR455 Wednesday, June 3, 12 noon-2:00 p.m.

Minor Dysmorphic Features in Schizophrenia and Velocardiofacial Syndrome

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Summary:

Velocardiofacial syndrome (VCFS) is a multisystem genetic disorder associated with a microdeletion on chromosome 22q11, minor congenital dysmorphic features (MDF), and psychosis in adulthood.

Objective: To identify subjects with schizophrenia (SZ) at high risk for VCFS based on their MDF.

Methods: Sample I (n = 13) VCFS-SZ subjects with a 22q11 deletion, and randomly ascertained Sample II (n = 123) SZ subjects with unknown deletion status, had a standardized physical examination for MDF. Total MDF (n = 82) were divided a priori into VCFS (n = 25) and non-specific (n = 57).

Results: Samples I and II did not differ on sex ($\chi^2 = 0.98$, p = 0.32) or age at onset (t = 0.73, p = 0.48). Sample I subjects had ≥7 VCFS MDF; nine Sample II subjects (7.3%) with ≥ 7 VCFS MDF were considered high risk (HR) for VCFS. HR-Sample II subjects had fewer VCFS MDF (t = 4.27, p = 0.0004) and more non-specific MDF (t = 3.05, p = 0.0064) than Sample I; the two groups did not differ on total MDF (t = 0.07, p = 0.94). Of 10 VCFS MDF occurring in the majority of Sample I subjects, five (flat cheeks, small eyes, large nose, small jaw, and prominent nasal bridge) were as frequent and five (nasal voice, high palate, small ears, small mouth, and abnormal palpebral fissures) less frequent in HR-Sample II subjects.

Conclusion: Patients with SZ and ≥7 VCFS MDF may be at high risk for VCFS or other genetic syndromes. *We acknowledge support from the Ontario Mental Health Foundation and NARSAD.*

NR456 Wednesday, June 3, 12 noon-2:00 p.m.

First-Rank Symptoms and Outcome in New-Onset Nonaffective Psychosis

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Summary:

Background: We studied the relationship between the presence of Schneiderian first-rank symptoms and syndromic recovery in patients with a first-episode nonaffective psychosis.

Methods: Twenty-six patients admitted for their first psychiatric hospitalization for treatment of nonaffective psychosis were recruited. Diagnostic and symptom assessments were made at index hospitalization and at two-, six-, and 12-months after discharge. All patients had at least one follow-up. Twenty-three (88%) completed the entire 12-month study. Multivariate analyses evaluated associations between first-rank symptoms and recovery. Survival curves compared recovery rates in subjects with first-rank scores ≥10 versus those with lower scores.

Results: Thirty-five percent of the patients achieved syndromic recovery during the 12-month follow-up interval. The lack of first-rank symptoms was associated with a shorter time to recovery (t = 2.3, df = 1, p = .03) after adjusting for sex, premorbid adjustment score (PAS), and drug abuse. None of the other variables studied demonstrated significant associations with syndromic recovery. No subject with first-rank symptom score ≥ 10 (N = 7) achieved syndromic recovery, compared with 47% (9 of 19) of the remaining subjects (Fisher exact test: p = .03).

Conclusions: This study suggests the presence of first-rank symptoms predicts a longer time to recovery in patients with a first-episode, nonaffective psychosis.

Supported in part by grants from the Ohio Department of Mental Health and NIMH (MH54317).

NR457 Wednesday, June 3, 12 noon-2:00 p.m.

Recognizing a Genetic Subtype of Schizophrenia

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Recent studies suggest that schizophrenia may be associated with genetic syndromes, including velocardiofacial syndrome (VCFS), which commonly show deletions at chromosome 22q11.

Objective: to better identify patients with schizophrenia who have 22q11 deletion syndrome (DS) we compared features of two groups of patients, with and without 22q11 deletions using standard FISH methods (probe N25, Oncor).

Methods: All subjects had DSM-IV schizophrenia or schizoaffective disorder and were referred with ≥ 2 of: learning disorder or mental retardation (MR), hypernasal speech or cleft palate (CP), congenital heart defect (CHD), suggestive facial appearance; each received a standardized physical examination for congenital dysmorphic features.

Results: Thirteen subjects (7 M, 6 F) had a deletion (46%) and 15 (8 M, 7 F) did not; age at onset was not significantly different between groups (p=.13). Mild and borderline MR were more common in the deleted group (n=12/13, p=.038), but mild MR alone was not. CHD (6/13, p=.029) and minor VCFS dysmorphic features (n=24, selected a priori) were more common in the deleted group ($\bar{x}$=11.3, SD 2.1 vs $\bar{x}$=8.9 SD 2.7, t=2.66, p=.01), but CP and 57 nonspecific dysmorphic features showed similar frequencies in both groups.

Conclusions: Patients with schizophrenia and the following features may be at highest risk for 22q11 DS: borderline MR, nasal

voice, small ears, small eyes, high palate, CHD, scoliosis. 22q11 DS may represent the first true genetic subtype of schizophrenia; identified patients require genetic counseling, education about the syndrome, and appropriate medical follow-up. We acknowledge support from *NARSAD, Scottish Rite Schizophrenia Research Program, and Ontario Mental Health Foundation.*

NR458 Wednesday, June 3, 12 noon-2:00 p.m.

Impact of Proband Sampling Strategies on the Relationship Between Age at Onset and Familial Occurrence of Schizophrenia

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Summary:

Past studies have suggested that very early-AAO (≤21 years) schizophrenia (SZ) may be associated with increased familial risk. A large, representative, archival sample of familial mental illness collected by L.S. Penrose provided an opportunity to examine this relationship. Penrose, however, did not ascertain index proband status.

Objective and Methods: To study the effect of different proband sampling strategies on co-sibs' risk for SZ, we investigated 593 unique sibling pairs in which one (N=364) or both (N=229) members had SZ.

Results: Selection of a proband in SZ-SZ pairs based on earlier AAO within the pair gave results showing a significantly greater proportion of co-sibs with SZ for very early-AAO probands (N=104) than later-AAO (> 21 years) probands (N=489) (54% versus 35%, respectively; X^2=12.3, df=1, p=0.001). Proband selection based on earlier year of onset within each SZ-SZ pair revealed similar results. When probands were selected based on earlier year of birth within each SZ-SZ pair, there was no significant difference in proportion of co-sibs with SZ between very early-AAO probands (N=81) and later-AAO probands (N=512) (41% and 38%, respectively). Results for randomly sampled probands resembled those for probands selected on earlier birth year.

Conclusion: These results suggest family studies should carefully consider proband sampling issues in design and analysis. We acknowledge support from *MRC Canada and the Canadian Psychiatric Research Foundation.*

NR459 Wednesday, June 3, 12 noon-2:00 p.m.

Gender Differences in Cognitive Function in Schizotypal Personality

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Summary:

Objective: Gender differences in cognitive dysfunction have been reported in schizophrenic (SZ) subjects, but have not been studied in schizotypal personality (SPD), a disorder thought to be biologically linked to SZ. The purpose of the current study was to examine the effect of gender on cognitive function in DSM-IV-defined SPD.

Method: We administered a battery of neuropsychological tests to 16 male and 12 matched female SPD subjects. We specifically compared two tests that were found to be deficient in male SPDs in our earlier study, the California Verbal Learning Test (CVLT) and the Wisconsin Card Sort Test (WCST) [Voglmaier et al, 1997].

Results: Male SPDs learned fewer words and used fewer semantic clusters on the CVLT than matched controls, and they formed fewer categories and made more perseverative responses on the WCST. In contrast, female SPDs showed a normal rate of learning on the CVLT, and normal use of semantic clusters to facilitate learning. On the WCST, performance of female SPDs was intermediate to that of male SPDs and controls.

Conclusions: SPD in females appears to be complicated by less severe cognitive deficits than in males, a profile difference that shares some similarities to gender effects found in SZ.

Research supported by NIMH 1-RO1-MH52807-01

NR460 Wednesday, June 3, 12 noon-2:00 p.m.

Stable P300 Asymmetry at Schizophrenia Onset

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Summary:

Objective: Previously, we have shown that schizophrenic patients (SZ) displayed an abnormal voltage topography of P300 at first hospitalization, with a left less than right temporal area asymmetry. In contrast, first-episode affective psychotics (AFF) displayed normal left greater than right P300 topography. Here we report the results of longitudinal retesting of these patients.

Method: P300 was recorded as subjects silently counted rarely presented target tones (15%, 1.5 kHz, 97 dB) among standard tones (1 kHz, 97 dB) against 70 dB noise. Thirty-one first psychotic episode patients returned for follow-up ERP testing, comprising 15 SZ and 16 AFF.

Results: Lateral temporal peak P300 analysis revealed a significant interaction between group and side of the head (p=.014), with no interaction of time. Peak midline P300 analysis revealed larger P300 at retest in both groups (p=.05). At initial measurement, groups did not differ in symptom severity (BPRS: SZ=35.9; AFF=35.1). Both groups were significantly less psychotic at retest (p < .001), but SZ were worse than AFF (SZ=30.2; AFF=23.9).

Conclusions: Asymmetry of P300 is present at the onset of schizophrenia and persists over longitudinal retesting despite some overall increase in P300 voltage (albeit not to normal ranges). This topographic abnormality is never present in the early stages of psychotic bipolar disorder. This finding indicates the specificity and importance of left temporal lobe dysfunction in the pathogenesis of schizophrenia.

NR461 Wednesday, June 3, 12 noon-2:00 p.m.

Gender Differences in Poor Outcome Schizophrenia

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Summary:

Gender effects are consistently found in schizophrenia, with female patients having a later age of onset, better premorbid functioning, reduced negative symptoms, less extensive cognitive impairment, and a better overall functional outcome. It is not clear to what extent these gender effects are found in samples with a uniformly poor functional outcome. Recent research has documented significant cognitive impairment in affective patients with poor functional outcome, suggesting that the relationship of cognitive impairment and outcome may hold up across psychiatric conditions. In this study, geriatric poor-outcome patients (mean age=74.6) were compared across gender on clinical symptoms and cognitive functions. Male patients (n=83) had less severe positive symptoms (p<.005) and more severe negative symptoms (p<.05) than female patients (n=91), with the differences in symptomatic

severity holding up across the majority of the specific positive and negative symptoms. Similar to general findings regarding gender differences in patients with schizophrenia, the female patients were three years older at the time of their first psychiatric admission ($p<.05$). In contrast, there were no statistically significant differences in scores on the Mini-Mental State examination ($p=.55$) or on any of the measures in a neuropsychological battery (all $p>.25$). These data suggest that gender differences in the areas of onset age and symptomatology are preserved in poor-outcome patients with schizophrenia. In contrast, cognitive impairment is not more severe in male patients with a poor outcome, suggesting that previous findings of reduced cognitive impairment in female patients with schizophrenia may be associated with their generally better functional outcome and that cognitive impairment is a more consistent correlate of poor functional outcome than negative symptoms.

Funded by the NIMH through a Clinical Research Center Grant.

NR462 Wednesday, June 3, 12 noon-2:00 p.m.

Psychometric Properties of the Canadian Edition of the Wisconsin Quality-of-Life Index in Individuals with Schizophrenia

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Summary:

Objectives: To evaluate the CAW-QLI (French and English): (1) test-test reliability and internal consistency, (2) construct, convergent, and discriminant validity.

Method: A total of 177 individuals with schizophrenia and schizoaffective disorder (DSM-IV criteria) living in the community in Montreal, Quebec, and Halifax, Nova Scotia were interviewed with the CaW-QLI, Spitzer QOL-index, and MOS-SF36. Random samples of 40 English and 36 French individuals were re-interviewed within a two-week period.

Results: The test-retest Spearman Correlation (SC) varied from 0.47 to 0.82 among the domains, and between 0.82 (French) to 0. (English) for the CaW-QLI global score. Chronbach's alpha ranged from 0.55 to 0.87 among the seven out of eight domains, and between 0.69 (French) and 0.78 (English) for the CaW-QLI global score. Regarding construct validity SC between domains and the global CaW-QLI scores ranged from 0.42 to 0.75 while the inter-domain correlations were lower, confirming the multi-dimension properties of the scale. SC between the Global CaW-QLI score and Spitzer QOL-Index was 0.63 (French) and 0.75 (English).

Conclusions: The client's CaW-QLI demonstrated to be a valid and reliable instrument. Showing an appropriate convergent and discriminant validity as assessed against the Spitzer QOL-Index and MOS-SF36, respectively.

This research was possible by a Grant from Hoechst-Marion Roussel, Janssen-Ortho Inc. and Novartis Sandoz (Canada).

NR463 Wednesday, June 3, 12 noon-2:00 p.m.

Premorbid Functioning, Duration of Untreated Psychosis and Outcome in Psychosis

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Summary:

Objective: This study examines one-year outcome in first-episode DSM-III-R nonaffective psychosis with emphasis on duration of untreated psychosis (DUP-defined time interval from the onset of psychosis to initiation of adequate treatment) and premorbid functioning (defined as the time from childhood to six months before the onset of psychosis, measured by the Premorbid Adjustment Scale) in order to determine how each relates to outcome and to clarify how these factors interact.

Method: Forty-three consecutively admitted patients to Rogaland Psychiatric Hospital, Norway, from Jan. 1, 1993, to Dec. 31, 1994, were rated on the Positive and Negative Syndrome Scale (PANSS) and the Global Assessment of Functioning Scale (GAF), both at hospitalization and at one-year follow-up. In addition, premorbid functioning, DUP, duration of hospitalization, global functioning, social functioning, etc., were rated.

Results: Fifty-six percent were in remission, defined as being nonpsychotic at follow-up and for a duration of at least two months. Eighteen percent suffered multiple relapses and 26% were continuously psychotic at one-year follow-up. Both poor premorbid functioning and DUP are significantly correlated with more negative symptoms and poorer global functioning at follow-up. DUP is also significantly correlated with more positive symptoms. Even when we control for other factors including premorbid functioning and gender, in a multiple regression model, DUP is a strong predictor of outcome.

Conclusions: These findings support the idea that longer time to treatment in first-onset psychosis is associated with a poorer long-term prognosis and that early intervention in psychosis will lead to a better natural history for the patients.

NR464 Wednesday, June 3, 12 noon-2:00 p.m.

Long-Term Ziprasidone in Schizophrenia

Mihaly Arato, M.D., Research, Pharma Projections, Kecskemet U11, Budapest H10 53, Hungary; Rory O'Connor, M.D., Jean E. Bradbury, Ph.D., Herbert Meltzer, M.D.

Summary:

Objective: To evaluate ziprasidone in the prevention of acute exacerbation and in the long-term treatment of negative symptoms of schizophrenia in chronically ill, stable patients who had been treated with neuroleptics.

Method: This prospective, randomized, double-blind study in patients living under medical supervision compared ziprasidone 40 mg/day ($n=76$), 80 mg/day ($n=72$) and 160 mg/day ($n=71$) with placebo ($n=75$) over one year.

Results: The probability of experiencing an acute exacerbation at one year was significantly lower in the ziprasidone 40, 80, and 160 mg/day groups compared with placebo ($P=0.003$, $P=0.001$, and $P=0.001$, respectively). Ziprasidone was associated with a clinically and statistically significant improvement in negative symptoms over the course of the study compared with placebo ($P<0.05$). There was a small, early improvement with placebo with no change occurring after six weeks. In patients treated with ziprasidone, negative symptoms improved throughout the study. There was also a significant improvement in positive symptoms, PANSS depression factor, and GAF with ziprasidone compared with placebo. The tolerability of ziprasidone was excellent. Mean changes in movement disorder assessment scale scores with ziprasidone were indistinguishable from placebo. Ziprasidone was not associated with weight gain.

Conclusion: This study demonstrated that ziprasidone provides long-term improvement in negative symptoms, is effective in preventing acute exacerbation of schizophrenia, is very well tolerated, and improves global functioning.

NR465 Wednesday, June 3, 12 noon-2:00 p.m.

A Comparison of Intramuscular Ziprasidone with Intramuscular Haloperidol

Rachel H. Swift, M.D., Cent Research, Pfizer Inc., Eastern Point Road, Groton CT 06340; Edmund P. Harrigan, M.D., Daniel P. van Kammen, M.D.

Summary:

Objective: To compare the tolerability of fixed-dose, IM ziprasidone with flexible-dose, IM haloperidol.

Method: In this randomized, open-label study, patients with psychotic disorder received either IM ziprasidone 20 mg/day (n=69), 40 mg/day (n=71), or 80 mg/day (n=66), given qid, or IM haloperidol 10–40 mg/day (n=100), given bid-qid (mostly bid), for three days. After IM treatment, patients received four days of oral treatment with randomized therapy (ziprasidone 40–200 mg/day, initial haloperidol dose = last IM dose).

Results: Notable was the lower incidence of EPS, dystonia, and akathisia associated with IM ziprasidone compared with IM haloperidol. Benztropine use was ≥2-fold greater with haloperidol than with any ziprasidone dose both during the IM period and at any time during the study. Tachycardia and postural hypotension were very infrequently associated with IM ziprasidone. In all three ziprasidone groups, the reduction in mean scores on the Behavioural Activity Rating Scale (BARS), a novel measure of agitated behavior, was more rapid than that observed with haloperidol. In all groups there was a moderate reduction in mean BPRS total score in the IM treatment period, which was maintained during the oral treatment period.

Conclusions: Based on these findings, ziprasidone shows promise as a novel IM treatment for acutely agitated patients and may have tolerability advantages over conventional rapid-acting IM antipsychotics.

NR466 Wednesday, June 3, 12 noon-2:00 p.m.

Behavioral Activity Rating Scale Validation

Rachel H. Swift, M.D., Cent Research, Pfizer Inc., Eastern Point Road, Groton CT 06340; Edmund P. Harrigan, M.D., Joseph Cappelleri, Ph.D., David Kramer, Ph.D., Linda P. Chandler, Ph.D

Summary:

Objective: To validate the seven-point Behavioural Activity Rating Scale (BARS) used in the evaluation of the rapid-acting, intramuscular (IM) formulation of the novel antipsychotic ziprasidone, which reduces the behavioral symptoms in patients with psychosis and acute agitation but is not profoundly sedating.

Methods: Data from a Phase III clinical trial were used.

Results: The correlation coefficients between the baseline BARS and the PANSS agitation grouping (hostility, excitement, anxiety, and tension) (0.33) and CGI-severity (CGI-S) scores (0.40) were statistically significant (convergent validity), whereas the coefficient between the BARS and PANSS negative subscale scores (0.16) was not (divergent validity). The effect size was larger for the BARS (0.83) than for the PANSS agitation grouping (0.52) and the CGI-S (0.60) (responsiveness to treatment differences). A significant difference in BARS scores at baseline was found between two distinct populations (P<0.05) (discriminant validity). Perfect inter-rater reliability and intra-rater reliability were achieved.

Conclusion: Evaluation of the BARS has shown it to be a psychometrically valid and reliable scale to objectively measure the level of activity in acutely agitated patients with psychotic disorders treated with rapid-acting IM ziprasidone.

NR467 Wednesday, June 3, 12 noon-2:00 p.m.

Prognosis of Brief Reactive Psychosis in Comparison with First-Episode Schizophrenia

Mark Weiser, M.D., Memory Clinic, Sheba Medical Center, Beitan 39A, Tel Hashomer 52621, Israel; Yehuda Baruch, M.D., Auraham Reichenberg, M.A., Yoau Grossman, D.D.M., Michael Davidson, M.D.

Summary:

Objective: To examine if brief (less than one month) duration of psychotic symptoms in the first psychotic break predicts fewer future hospitalizations than longer, more persistent psychosis.

Method: Forty-one adolescents, aged 18 to 21, who had suffered from their first psychotic break during their military service, and had been hospitalized and diagnosed as suffering from brief reactive psychosis (BRP) were identified from the archives of the Israeli Defense Force Mental Health Division. A comparative group of adolescents, who were diagnosed as suffering from first-episode schizophrenia, was identified from the same archives. Future admissions for both groups were determined from a National Psychiatric Hospitalization Registry, which records all psychiatric hospitalizations in the country.

Results: Over a mean seven-year follow-up period, 16/41 (39%) of the subjects were rehospitalized. The frequency of rehospitalization did not differ significantly between the BRP patients and the schizophrenia patients. Presence or absence of hallucinations, delusions, mood symptoms, or family history of psychiatric disorders did not predict future hospitalization.

Conclusions: These results indicate that the duration of psychotic symptoms during the first psychotic episode does not predict outcome.

NR468 Wednesday, June 3, 12 noon-2:00 p.m.

Response Bias and Positive Symptomatology in Schizophrenia

Gildas Brebion, Ph.D., Psychiatry, Columbia University, 722 W and 168th Street, Box 2, New York NY 10032; Mark J. Smith, M.D., Xavier F. Amador, Ph.D., Dolores Malaspina, M.D., Jack M. Gorman, M.D.

Summary:

The purpose of this study was to replicate and extend to a memory task Bentall and Slade's (1985) finding that hallucinations in schizophrenic patients were linked to a liberal decision bias. A word recognition task was administered to 40 schizophrenic patients and 40 normal controls that yielded two indices of performance, an index of discrimination accuracy (Pr), and one of decision bias (Br). Patients obtained a lower Pr than controls, whereas Br was similar in both groups. In patients, Br was selectively correlated with positive symptomatology: the more the positive symptoms, the more liberal the bias. In particular, there was a specific correlation with hallucinations. Pr was inversely correlated with severity of depression, but not with either positive or negative symptoms. Thus, positive symptomatology may be linked more to difficulties in distinguishing between representations of internal versus external events than to deficits in encoding external events.

NR469 Wednesday, June 3, 12 noon-2:00 p.m.

Memory and Schizophrenia: Links with Processing Speed and Selective Attention

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Summary:

The purpose of this study was to investigate how underlying cognitive deficits such as a defect in processing speed or in selective attention were related to the memory impairment observed in schizophrenia. Fifty schizophrenic patients and 40 normal controls were administered a memory task. Superficial encoding in memory was assessed by the ability to recall items in their serial order. Deep encoding was assessed by the ability to organize words into semantic categories. Two measures of processing speed (Digit Symbol Substitution Test and Stroop color time) and one measure of selective attention (Stroop interference) were used for correlational studies. Results showed that processing speed was correlated with both superficial and deep encoding and with a global verbal memory score in the patient group. Selective attention was only linked to superficial encoding. Thus, slowing of processing speed seems to affect memory in a pervasive way, whereas increased distractibility seems to affect only rehearsal of the information.

NR470 Wednesday, June 3, 12 noon-2:00 p.m.

Correlates of Crime in Schizophrenia

Zack Z. Cernovsky, Ph.D., Psychiatry, University Western Ontario, 2 Farnham Crescent, London N6K1K1, Canada; Johan Landmark, M.D., L. Kola Oyewumi, M.D., Larry Litman, Ph.D.

Summary:

Objective: We evaluated whether unlawful conduct in schizophrenic patients is associated with specific symptom patterns or with particular sociodemographic variables.

Method: We recorded the incidence of known unlawful conduct in 111 schizophrenics diagnosed in accordance with DSM-III and also rated these patients on Landmark's (1982) list of 86 symptoms relevant for diagnosing schizophrenia. We subsequently examined significant correlations (phi and point biserial coefficients, $p<.01$, 2-tailed) of the unlawful conduct to these symptoms and to sociodemographic variables.

Results: Only 33.3% had a known history of delinquent behavior and this mostly involved nonviolent crimes. Those with a history of crime also had a history of alcohol and drug abuse and were presently abusing alcohol. They more frequently changed their address, more often showed progressive deterioration and poor rapport, were less likely to give reliable information, and had a history of lower premorbid competence.

Conclusions: No significant relationships were found to key symptoms of schizophrenia. Unlawful conduct may be more frequent in patients indulging in substance abuse and may also be associated with poor and unreliable rapport, frequent changes of address, lower premorbid competence, and with progressive deterioration.

NR471 Wednesday, June 3, 12 noon-2:00 p.m.

DSM-III-R and ICD-10 Psychotic Disorders Criteria

Antonio Costilla, M.D., Psychiatry, University Hospital, APDO Postal 3 4101, Monterrey NL 64461, Mexico; Adelina Alcorta, M.D., Alfonso Ontiveros, M.D., Horacio Garcia, B.S., Rosario Alonso, M.D.

Summary:

Objective: To compare DSM-III-R and ICD-10 diagnostic criteria for psychotic disorders.

Method: Fifty-one Hispanic psychotic outpatients were rated twice with DSM-III-R and ICD-10 criteria (25 inter-rater and 26 test-retest).

Results: Patients' characteristics: (mean ± SD) 31 ± 12 years of age; 38 (75%) were men and 13 (25%) women; 41 (80.4%) single; 10 ± 4 years of schooling; 61% with no current occupation; symptom onset at 22 ± 6 years of age (YA); first psychiatric evaluation at 23 ± 6 YA; first psychiatric hospitalization at 23 ± 13 YA; number of psychiatric hospitalizations 1 ± 2 with a total duration of 16 ± 64 months. Ten (20%) were on their first episode. ICD-10 and DSM-III-R showed a concordance of 93% for schizophrenia (N=38); 100% for schizoaffective disorder (N=9); 100% for delusional disorder (N=1); DSM-III-R diagnosed one psychotic NOS and three schizophreniform disorder cases. Concordance values were acceptable (Kappa ± SD=.59 ± 0.05 to .69±0.05).

Conclusion: Both criteria sets were acceptably comparable in a Mexican population. Implications for the DSM-IV criteria will be discussed.

NR472 Wednesday, June 3, 12 noon-2:00 p.m.

Regional Asymmetry and the Subtyping of Schizophrenia

Thamilarasi R. Nair, M.D., Department of Psychiatry, Southwestern Medical Center, 4500 South Lancaster Road/ 116A, Dallas TX 75216; James D. Christensen, Steven J. Kingsbury, M.D., David L. Garver, M.D.

Summary:

Objective: To asses regional brain and ventricular symmetry in schizophrenics compared with normal controls.

Method: 3D-MR images were obtained from 33 patients and 23 controls. To determine left-right asymmetry, the segmented brain was divided into six regions, dividing at the midline and at the anterior (VCA) and posterior (VCP) commisural planes following alignment of the brain along the anterior-posterior commissure axis.

Results: As compared with controls, schizophrenics evidenced significant asymmetry of the brain regions posterior but not anterior to the VCA plane. Serial 3D-MRIs have shown that the rate of ventricular expansion in this cohort of patients can be divided into one cluster of patients (atrophic psychosis) with ventricles expanding at four times the rate of normal controls and the other cluster of patients with the rate of ventricular expansion similar to the controls (neurodevelopmental psychosis) (Nair et al, 1997). Significant asymmetry posterior to the VCA plane is limited to the cluster of schizophrenic patients with stable ventricles (presumably neurodevelopmental psychosis) ($p=0.009$).

Conclusion: Brain asymmetry posterior to the VCA plane is the likely consequence of neurodevelopmental, now static anomalies; symmetry was comparable in controls and in the cluster of ventricular expanders (presumably atrophic psychosis).

NR473 Wednesday, June 3, 12 noon-2:00 p.m.

Pain Insensitivity and Pressure Pain Thresholds in Patients with Schizophrenia

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Summary:

Objectives: Decreased pain sensitivity to inner and outer stimuli was measured through pressure pain thresholds in patients with schizophrenia. After the pain insensitivity (PI) was confirmed, the influence of psychiatric symptoms to the PI was evaluated.

Methods: Twenty-one schizophrenics and 23 healthy controls were enrolled. Repeated two times of pressure pain thresholds measured by pressure algometer on initial and recovered phase and concordant psychiatric symptoms by PANSS (Stanley et al, 1991) were obtained. The confounding factor induced by antipsychotics to the pressure pain thresholds was controlled for. Comparisons of pressure pain thresholds between the two groups,

and correlation of pressure pain thresholds and psychiatric symptoms in the patient group were tested.

Results: Schizophrenic patients with active psychiatric symptoms showed higher pressure pain thresholds compared with healthy controls. When psychiatric symptoms were improved, pressure pain thresholds were decreased to the level of healthy controls. Subscale of delusion in PANSS was closely correlated with pressure pain thresholds in patients with schizophrenia. The dose of antipsychotics was not influential to pressure pain thresholds.

Conclusions: Some schizophrenics had PI in active phase and this condition seemed to be transient rather than persistent. Change of pain sensitivity in schizophrenics were associated with reversible changes of brain function or severity of psychiatric symptoms. Decreased concentration due to delusion or lack of motivation were influential factors of PI. Clinicians should give attention to PI in schizophrenic patients and not overlook physical illness and serious injuries in them.

NR474 Wednesday, June 3, 12 noon-2:00 p.m.

The French Concept of Chronic Psychotic Hallucinations and Schizophrenia: Similarities and Differences

Caroline Dubertret, M.D., Hospital L Hourier, 178 Rue Des Renouilliers, Colhbes FR 92310, France; Philip A. Gorwood, M.D., Jean Ades, M.D.

Summary:

The French concept of "psychose hallucinatoire chronique" (PHC) (Ballet, 1911) is characterized by late-onset psychosis, predominantly in females, with rich and frequent hallucinations, but nearly no dissociative features. This diagnosis is classified in schizophrenic disorders (paranoid type) according to DSM-IV. We recruited and interviewed (DIGS) 30 females with PHC, and 30 schizophrenic female subjects, matched for age at interview. We also used the FH-RDC interview for relatives, and assessed the SANS and SAPS schedule.

The PHC group have significantly fewer total negative symptoms ($p < 0.0001$), more hallucinations ($p=0.03$), but fewer thought disorder ($p < 0.0001$) and bizarre behavior ($p=0.0005$) than schizophrenic patients. All patients with PHC had symptoms rated as predominantly positive, compared with 19.2% in the schizophrenic group. A total of 81.5% of PHC had episodic modifications or moderate deterioration, compared with 0% in the schizophrenic group. Furthermore, depression without psychotic feature was found more frequently in the PHC group than in the schizophrenic group ($p=0.04$). Finally, we found that schizophrenics had more schizophrenic relatives than PHC ($p=0.003$).

There is no definite argument that PHC and schizophrenia share common etiopathogeneic factors. This first controlled study thus put to the fore clinical, epidemiological, and probably etiopathogenic factors that distinguish these two concepts.

NR475 Wednesday, June 3, 12 noon-2:00 p.m.

Neurophysiologic Mechanisms of Attention Deficits in Schizophrenia

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Summary:

Objectives: Despite advances in the pharmacological treatment of schizophrenia, the neurophysiologic mechanism(s) of disordered attention in schizophrenia remain elusive. The goal of the present study was to assess specific components of attention using stimuli that differentially activate reflexive and volitional attention pathways.

Method: Thirteen chronic schizophrenics from the inpatient and outpatient units of the Veterans Administration medical center (New Orleans, La) and 13 normal controls were administered a saccadic eye movement task. Saccade latency was measured in the presence of contra-lateral distracter stimuli that preceded the target onset, followed the target onset, or in the absence of a distracter. Distracter stimuli that precede the target assess volitional mechanisms, whereas distracter stimuli that follow the target assess reflexive mechanisms.

Results: Repeated measures analysis of variance revealed that schizophrenics are impaired on both the volitional and reflexive mechanisms. These impairments are observed for schizophrenics when the distracter onset follows the target onset in the presence of the fixation.

Conclusion: The results suggest that schizophrenic attention abnormalities can, in part, be accounted for by a deficit in the inhibitory mechanisms that regulate the early allocation of attention.

NR476 Wednesday, June 3, 12 noon-2:00 p.m.

Ward Behavior Rating Scale for Negative Symptoms

Edward G. Altman, Psy.D., Department of Psychiatry, University of Illinois, 1601 West Taylor Street, 7-East, Chicago IL 60612; James L. Peterson, B.S., James Watson, Nancy Chen, B.S., John M. Davis, M.D.

Summary:

To date, there are at least nine rating scales to assess negative symptoms in schizophrenic patients. Five of these require brief patient interviews. Three are rated from nursing observations, but because they were not designed to measure negative symptoms, they are not comprehensive. The remaining scale is a self-rating version of an interview-based measure. For this reason, the Ward Behavior Rating Scale for Negative Symptoms, was developed to allow assessment of social behavior across different time periods and social contexts. The scale was administered to 63 adult psychiatric inpatients (schizoaffective = 14, major depression = 19, bipolar manic = 7, schizophrenia = 23) during baseline and following treatment. The PANSS was also administered to assess concurrent validity. Four nurses were trained to administer the scale until acceptable inter-rater reliability had been achieved for 10 patients ($r=0.95$). At baseline all three factors correlated significantly with the negative symptoms subscale of the PANSS (factor 1 $r=0.42$, $p<.001$; factor 2 $r=0.43$, $p<.0001$; factor 3 $r=0.30$, $p<.02$), but not with the positive symptom subscale. After treatment these correlations were even more robust for all three factors ($r=.67$, $p<.001$; $r=.72$, $p<.0001$; $r=.53$, $p<.0001$). The findings support our contention that negative symptoms essentially reflect social behavior, which is most appropriately evaluated over time.

NR477 Wednesday, June 3, 12 noon-2:00 p.m.

Changes in Health Status of Patients with Schizophrenia

Sandra L. Tunis, Ph.D., Health Services, Eli Lilly And Company, Lilly Corporation Center, Indianapolis IN 46285; Thomas W. Croghan, M.D., Douglas K. Heilman, M.S., Bryan M. Johnstone, Ph.D., Robert L. Obenchain, Ph.D.

Summary:

Objective: Schizophrenia patients experience serious impairments in mental, social, and physical functioning. New antipsychotic medications have demonstrated increased levels of effectiveness and tolerability compared with conventional medications. The purpose of this study was to examine perceived health and

outcome for 1,155 patients randomly assigned to treatment with olanzapine or haloperidol.

Method: Health was measured with the Medical Outcomes Study Short Form Health Survey (SF-36). Change from baseline was compared for the two groups at six weeks and 52 weeks.

Results: At six weeks, olanzapine patients improved in five of the 8 domains to a significantly greater extent than did haloperidol patients. Greatest differences were for mental health and "negative" symptomatology. At one year, olanzapine patients showed greater improvement in physical functioning. At six weeks, greater improvement in all domains was related to lower hospitalization costs, and improvement in six scales was related to higher outpatient costs. In the longer term, greater improvements in general health, vitality, and physical functioning were related to lower hospitalization costs.

Conclusions: "Subjective" perceptions of health were valuable indices of outcome and were related to actual service costs. Analyses of this nature can be useful for evaluations of pharmacotherapeutic and other interventions for severely mentally ill patients.

Funded by: Eli Lilly and Company

NR478 Wednesday, June 3, 12 noon-2:00 p.m.

Reward-Related Learning in Patients with Schizophrenia

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Summary:

Objective: Our study evaluates reward-related learning in control participants and participants with schizophrenia who are receiving antipsychotic medications, with the goal of eventually identifying the effects of these medications on this form of non-declarative learning and memory.

Method: In our initial study, schizophrenic participants receiving typical antipsychotic medications are recruited from the outpatients seen at Kingston Psychiatric Hospital, and controls matched for age, gender and education are recruited from hospital volunteers. Participants are tested in a probabilistic classification task using computer-generated stimuli. Percent correct in blocks of ten over 150 trials is computed and learning is indicated by significant improvement over blocks.

Results: Our task was validated with university students ($n = 21$) who showed a significant learning effect over the 15 blocks of ten trials each ($p < 0.005$), replicating previous findings of Knowlton, et al. (1994, 1996). To date, a similar learning curve is appearing in the control participants tested so far ($n = 3$); participants with schizophrenia ($n = 6$) appear to be showing no learning. Testing continues.

Conclusions: Results suggest that probabilistic classification learning, a form of non-declarative reward-related learning, is impaired in schizophrenic patients treated with typical antipsychotic medications.

NR479 Wednesday, June 3, 12 noon-2:00 p.m.

A Quantitative EEG Study of Patients with Schizophrenia and Bipolar Disorders Versus Normal Controls

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Summary:

The goal of this study was to examine the spectral properties of brain electrical activity in schizophrenia and bipolar disorder.

Method: Resting Q-EEGs of 25 schizophrenics, 16 bipolars, and 25 normal controls were obtained with eyes open and closed; absolute and relative power was analyzed.

Results: Bipolars had significantly higher total power than controls and schizophrenics in central and frontal areas, which was attributed to the higher absolute theta power. Analysis of relative power showed a shift toward slower frequencies in bipolars (less alpha 2 and more theta 2), and less alpha 2 in schizophrenics ($p = 0.003$). Normal increase in alpha rhythm with eyes closed was suppressed in bipolars and schizophrenics; bipolars had the smallest degree of alpha augmentation.

Schizophrenics had decreased left-sided theta 1 power in the frontal area ($p = 0.005$), which may reflect insufficient activity of the left frontal/prefrontal cortex.

No significant differences between the groups were found in delta and beta bands.

Failure of psychotic patients to generate alpha rhythm to the degree of controls may reflect a state of cortical hyperexcitability. The special role of theta rhythm is still unclear.

NR480 Wednesday, June 3, 12 noon-2:00 p.m.

Functional Decline in Poor Outcome Schizophrenia

Philip D. Harvey, Ph.D., Department of Psychiatry, Mt. Sinai Medical Center, One Gustave L. Levy Place, New York NY 10029; Ashley Bennett, M.A., Patrick J. Moriarty, M.A., Dana G. Lieber, M.A., Michael Parrella, Ph.D., Leonard White, Ph.D.

Summary:

Despite the fact that many chronic patients with a particularly poor outcome have evidence of grossly impaired adaptive and cognitive skills that implicate decline at some time period, little evidence has been collected to identify the timing of any decline. Since most studies evaluating the association between these domains have been cross-sectional, convergence of adaptive and cognitive decline has not been demonstrated. In this study, 59 geriatric patients with chronic schizophrenia were followed up an average of 2.5 years after their referral from chronic psychiatric care to a nursing home in the community. Positive and negative schizophrenic symptoms (measured with the PANSS), cognitive functioning (measured with the MMSE), and social-adaptive functioning (measured with the Social Adaptive Functioning Evaluation [SAFE] Scale) were assessed at these two time periods. Both MMSE scores and SAFE scale score showed evidence of statistically significant worsening (both $p < .01$), while there was no change in negative or positive symptoms. Baseline scores on all the measures were uncorrelated with deterioration in adaptive functioning (all $r < .20$, all $p > .05$), as was the duration of the followup interval ($r = -.02$). Changes in MMSE scores over the followup period were significantly correlated with changes in adaptive functions, $r = -.49$, $p < .001$. These data indicate that those patients who decline in adaptive functioning are also manifesting deterioration in cognitive status. The average level of change in MMSE scores, 2.0 points over an average followup period of 2.5 years, is inconsistent with the decline seen in degenerative conditions such as Alzheimer's disease.

Funded by the NIMH through a Clinical Research Center Grant.

NR481 Wednesday, June 3, 12 noon-2:00 p.m.

Does Adjunctive Nefazodone Turn a Conventional Neuroleptic into a Typical One?

Grigori Joffe, M.D., Psychiatry, University of Helsikni, Lapinlah Dentie 1, Hilsinki 00180, Finland; Bjorn Appelberg, M.D.

Summary:

Eight schizophrenic patients with predominantly negative and/or depressive symptoms entered an open, prospective, 26-week add-on nefazodone trial. Two patients have dropped out, three continue, and three have completed the study. Nefazodone (mean daily dose 537,5 mg at week 6 and 575 at the end point) caused no psychotic exacerbation or other serious adverse events. The Positive and Negative Syndrome Scale scores decreased by a mean of 29% (range 13% to 61%) at week 6 and 30% (11% to 62%) at the end point ($p = 0.012$ and 0.021). Also, the Montgomery-Asberg-Depression Rating Scale scores decreased by 64% (22% to 100%) and 65% (−44% to 100%) ($p = 0.012$ and 0.021). The residual positive symptoms seen in three patients rapidly and entirely disappeared, as well as panic attacks in two patients. The doses of concomitant neuroleptics, stable during the first six weeks of the trial, could thereafter be considerably decreased with subsequent improvement of extrapyramidal symptoms.

Augmentation of nefazodone, an antidepressant inhibiting 5HT2 receptors, to a "conventional neuroleptic" may lead to an "atypical neuroleptic"-like receptor blockade with an additional antidepressant effect, which may explain our favorable results. Nefazodone may become a useful adjunct in some schizophrenic patients.

NR482 Wednesday, June 3, 12 noon-2:00 p.m.

Cognitive Impairment and Genetic Risk in Schizophrenia

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Summary:

Objective: To investigate cognitive impairment in relation to genetic risk in familial schizophrenia (FS), and to examine effects of education level and functioning, using an easy to administer and reliable screening instrument.

Methods: The Mini-Mental State Examination (MMSE) was administered to 147 subjects in 10 multigenerational FS families. Subjects were assigned to genetic risk groups: high (HRG; schizophrenia/schizoaffective, n=30); intermediate (IRG; spectrum disorders and obligate carriers, n=28) and low (LRG; unaffected, n=89).

Results: The HRG (Mdn=25) and IRG (Mdn=27) had lower total scores than the LRG (Mdn=28) ($p=0.0001$; $p=0.07$, respectively). The IRG had lower total scores than the HRG ($p=0.05$). The HRG and IRG had lower attention subscores than the LRG ($p=0.0002$; $p=0.03$, respectively). Multiple regression analysis indicated that genetic risk (15%), Global Assessment of Functioning score (16%), and education (27%), were the largest predictors of total MMSE score. Genetic risk group accounted for 9% of the variance above education, and age for 5% above genetic risk. There was no significant effect of alcohol use, medication, or sex.

Conclusion: The results suggest that cognitive impairment, especially attention, may be related to genetic risk in familial schizophrenia. We acknowledge support from *MRC Canada, and the Schizophrenia Society of Ontario.*

NR483 Wednesday, June 3, 12 noon-2:00 p.m.

Treatment Effectiveness: A Comparison of Risperidone and Typical Antipsychotics

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Summary:

We report here results of a naturalistic study comparing long-term outcome in schizophrenia patients followed since the first onset of illness treated with risperidone with comparable patients treated with typical antipsychotics. Patients were reviewed and interviewed using the Interview for Retrospective Assessment of Schizophrenia (IRAOS; Häfner, 1994). Current symptoms were assessed using SAPS, SANS; extrapyramidal symptoms were assessed using the Extrapyramidal Symptom Rating Scale (ESRS), and quality of life was assessed using the Wisconsin Quality of Life questionnaire (client and caregiver versions). Forty patients were receiving treatment with risperidone and 52 with typical antipsychotics within the context of a community-oriented outpatient program operated in a teaching general hospital setting. The results showed that the two groups were comparable on age, gender, regular occupation (prior to onset of illness), education, and total length of treatment received. The risperidone group had a higher proportion of single patients and a higher mean length of untreated psychosis. Compared with the typical antipsychotic group, patients in the risperidone group showed a significantly lower number of admissions to hospital (2.5 vs 1.7), spent less days in hospital (62 vs 35), and had a lower total number of episodes of psychosis (1.5 vs 1.1). At the time of the outcome assessment the risperidone group showed lower levels of positive symptoms (global scores on SAPS 1.7 vs 3.3), lower level of disorganization symptoms (2.8 vs 5.2) and lower level of reality distortion (3.3 vs 5.5), and lower level of hypokinetic (1.5 vs 3.3) as well as hyperkinetic (.8 vs 1.7) extrapyramidal symptoms on the ESRS. Quality of life data are being analyzed and will also be reported.

NR484 Wednesday, June 3, 12 noon-2:00 p.m.

Rate of Onset and Duration of Untreated Psychosis

Lili C. Kopala, M.D., Department of Psychiatry, Dalhousie University, QE2 SU4031 Ln BU 1763 Robie St, Halifax, NS B3H 3G2, Canada; Lynne Peters, B.Sc., Bradley W. Frankland, M.Sc., Sheryl Clain, M.D., David Whitehorn, Ph.D., Kathy Black, M.D.

Summary:

A longer duration of untreated psychosis (DUP) has been associated with poorer outcomes. An insidious and less severe onset of illness has been postulated as contributing to a longer DUP.

Methods: This hypothesis was tested with 27 (21 male, 6 female) first-episode schizophrenia patients. The IRAOS interview was used to establish age of onset of positive symptoms (mean: 20.9 yrs, SD: 4.2) and DUP (mean: 70.8 wks, SD: 98.8). The Premorbid Adjustment Scale (PAS) provided a measure of functioning in four age periods (<12, 12–15, 16–18, >18 yrs). The Global Assessment of Function Scale (GAF) provided a measure of function in the year prior to diagnosis. The rate of illness onset was assessed by the change in PAS between age periods and by the change in GAF (GAFSC; highest GAF in prior year vs GAF at diagnosis).

Results: DUP was negatively correlated with the maximum change in PAS ($r=-.36$; $p<.05$) and with GAFCS ($r=-.42$; $p<.05$). For severity, DUP was negatively correlated ($r=-.53$; $p<.02$) with the highest GAF in the year prior to diagnosis. There were no significant correlations with absolute PAS scores.

Conclusion: These data support the hypothesis that an insidious and less severe onset of illness is associated with a longer DUP.

NR485 Wednesday, June 3, 12 noon-2:00 p.m.

Age of Onset and Motor Lateralization in Schizophrenia

Theo C. Manschreck, M.D., Brown Univ., CMH Center, 49 Hillside Street, Fall River MA 02720; Brendan A. Maher, Ph.D., Laura L. Winzig, B.A.

Summary:

It seems reasonable to suppose that in schizophrenia the occurrence of disturbances in lateralized functioning may be associated with altered maturation of normal hemispheric asymmetries. As these asymmetries are expected to be fully formed by the end of the second, decade of life, one plausible hypothesis is that earlier onset of schizophrenia would be related to limited formation of lateralization of particular functions.

Objective: We examined the relationship between age of onset and degree of motor lateralization. We hypothesized that poorer lateralization would be associated with an earlier age of onset.

Method: We assessed chronic schizophrenic patients with diagnostic, symptom, and demographic instruments. Age of onset was determined on the basis of record review. We measured motor lateralization with standard rating scales and a performance measure line drawing. Other cognitive measures were used to assess language, motor, memory, and related functions.

Results: Schizophrenic patients with early age of onset showed poorer motor lateralization than patients with later age of onset. The former group also had greater evidence of abnormal involuntary and voluntary movements, parkinsonian features, speech perseverations, and negative symptoms.

Conclusion: Early age of onset in schizophrenia is associated with a pattern of features that reflect linkages between brain development and symptoms. This pattern may also identify a subtype.

NR486 Wednesday, June 3, 12 noon-2:00 p.m.

Hemispheric Asymmetry of Frontal and Temporal Gray Matter, Age Onset and Hyperassociativity in Schizophrenia

Brendan A. Maher, Ph.D., Department of Psychology, Harvard University, 1120 William James Hall, Cambridge MA 02138; Theo C. Manschreck, M.D., Deborah A. Yurgelun-Todd, Ph.D., Ming T. Tsuang, M.D.

Summary:

Objective: To ascertain the relationship of hemispheric frontal and temporal volume asymmetry to onset and associative functioning in schizophrenic patients.

Method: Sixteen schizophrenic patients, selected from consecutive admissions, who had undergone magnetic resonance imaging (MRI) of brain volume were examined. A battery of clinical and laboratory measures was also applied, including semantic priming for associative facilitation. Selection required diagnostic consensus of three clinicians. Exclusion criteria were any history of long-term alcohol/drug abuse, head injury, neurological disorder, medical disorder affecting the brain, ECT. The main outcome measure was volumetric asymmetry, i.e., the difference in volume between hemispheric divisions of the region of interest as a percentage of the total volume of the region. Onset age was established from the chart history of the patient.

Results: Low frontal and temporal hemispheric asymmetry was strongly positively associated with the age of onset of schizophrenia (early onset = low asymmetry), and with associative hyperfacilitation. This was not found in other brain areas scanned. Chronological age and extreme scores were not a factor. These findings are consistent with the hypothesis that failure to develop asymmetry is a component of the pathology underlying some forms of schizophrenia, and implicates the functioning of associative processes.

NR487 Wednesday, June 3, 12 noon-2:00 p.m.

Diabetes in Schizophrenia

Lisa B. Dixon, M.D., Department of Psychiatry, University of Maryland, 685 W. Redwood St. MSTF/Rm 300, Baltimore MD 21201; Anthony F. Lehman, M.D., Leticia T. Postrado, Ph.D., Janine C. Delahanty, M.A.

Summary:

Objective: The impact of medical comorbidity in schizophrenia is underrecognized. This study assesses the prevalence and impact of diabetes in schizophrenia using administrative data (Medicare and Medicaid claims, 1991) and direct patient interviews as part of the schizophrenia Patient Outcomes Research Team (PORT).

Methods: We determined the proportion of persons with diagnoses of diabetes and schizophrenia on a paid claim in Medicare and Medicaid (single southern state, 1991). In multivariate analyses, we determined the association of a diabetes diagnosis with total payment. In the direct interview study, a total of 719 patients receiving treatment for schizophrenia in two states were interviewed. We assessed the relationship of a diabetes diagnosis to health outcomes and insurance status.

Results: In Medicaid, 673(11.1%) of patients had an inpatient or outpatient diabetes diagnosis. In Medicare (under age 65), 9.1% of patients had a diabetes diagnosis. In both samples, persons with diabetes were more likely to be women, ($p<.001$) and to be African American ($p<.01$). Diabetes was also associated with higher costs. On interview, 15% of patients reported having diabetes. Diabetes was associated with poorer physical health status ($p<.01$). Persons not receiving treatment for diabetes report the poorest overall life satisfaction ($p<.01$). Having Medicaid was associated with greater likelihood of receiving treatment for diabetes ($p<.01$).

Conclusion: Diabetes is an example of a medical comorbidity in schizophrenia that requires more attention.

NR488 Wednesday, June 3, 12 noon-2:00 p.m.

An MRI Study of Posterior Fossa Structures in Schizophrenia

James J. Levitt, M.D., Psychiatry, Brockton VAMC, Harvard Medical School, 940 Belmont Street/116A, Brockton MA 02401; Creola Petrescu, B.A., Martha E. Shenton, Ph.D., Paul G. Nestor, Ph.D., Ronald Kikinis, M.D., Ferenc A. Jolesz, M.D., Robert W. McCarley, M.D.

Summary:

Objective: The brainstem and cerebellum have been postulated to play an important role in schizophrenia (SZ) and other neuropsychiatric disorders such as autism. Recent evidence suggests the cerebellum may play a role in higher cognitive functions (Leiner et al., 1995). The brainstem has monoaminergic cell groups containing important neurotransmitters believed to play a role in SZ.

Method: We conducted an MR study of these structures using an automated segmentation algorithm (Wells et al., 1996) to obtain grey and white matter volumes of the cerebellum. MR scans were obtained on a 1.5 Tesla magnet. Double echo spin-echo 3 mm axial slices were obtained to establish total intracranial contents in order to compute relative volumes. For the measurement of specific regions of interest higher spatial resolution SPGR images ($1.5 \times .9375$ mm voxels) were used.

Results: In 15 SZ and 15 normal controls (matched on age and social class of origin, with all subjects right-handed males), we found total brainstem absolute volume, but not relative volume, was larger in SZs than in NCLs (29.9 ± 2.6 vs. 27.8 ± 3.0 ml, $p=.056$; $1.85 \pm .16$ vs. $1.78 \pm .15\%$, $p=.24$) and found no significant difference in total cerebellar absolute or relative volumes ($p=.32$, $p=.96$). When we segmented the cerebellum into gray matter (GM) and white matter (WM), we found no group difference for GM absolute volume, but there was a trend for SZ WM absolute volume to be larger than NCLs (33.1 ± 3.3 vs. 31.0 ± 3.7 ml, $p=.11$). The vermis was separated and parcellated into three GM regions and one WM region in all subjects. We found that SZs had a

larger total (GM plus WM) vermian absolute volume (9.4 ± .73 vs 8.6 ± .84 ml, p=.02) and a larger vermian WM absolute volume (1.0 ± .20 vs. 0.82 ± .13 ml, p=.002). The parcellated vermian lobules (I-V, VI-VII and VIII-X), against expectations, were not significantly different between groups (3.6 ± .49 vs. 3.3 ± .41 ml, p<.07; 2.3 ± .31 vs. 2.2 ± .29 ml, p=.43; 2.5 ± .21 vs. 2.4 ± .31 ml, p=.32). Only vermian WM volume remained significantly enlarged in SZ when relative volumes were compared (0.06 ± 0.01 vs. 0.05 ± 0.01%, p=.01). We found, in SZ, it correlated significantly with clinical measures of higher global SAPS scores and higher formal thought disorder subscale SAPS scores (r= 0.61, n=13, P=.026; r=0.55, n=15, P=.033), and with poorer performance on neuropsychological measures of immediate and delayed verbal memory (r=–0.58, n=15, p=.024; r=–0.45, n=15, p= .089). Inter-rater reliability for brainstem and cerebellar structures was high: intraclass correlations were r>.99.

Conclusions: These data suggest the importance of detailed parcellation of posterior fossa structures in SZ.

NR489 Wednesday, June 3, 12 noon-2:00 p.m.

Gender Differences in Onset of Schizophrenia

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Summary:

Objective: Several studies have shown an earlier onset of schizophrenia in males. We have observed a similar situation in Chile. The objective of this study was to analyze the existence of sexual dimorphism in the onset of schizophrenia in each subtype of this illness.

Material and Method: A sample of 369 schizophrenic patients was selected according to DSM-III-R criteria from the files of the University Psychiatric Clinic. In each case the age of onset, sex, and subtype of schizophrenia were obtained. The data were analyzed by means of t-test.

Results and Conclusions: The frequency distribution of each subtype was the following: paranoid 52.6%, undifferentiated 30.4%, disorganized 7.3%, catatonic 3.5%, and residual 6.2%. The mean age of onset of each subtype was 20.3, 19.1, 17.2, 19.2, and 18.2, respectively. Males showed a mean age of 18.8 and females 21.2 in the overall sample; this difference reached statistical significance. The analysis by subtype showed the same tendency, though significance was only observed in the paranoid group.

NR490 Wednesday, June 3, 12 noon-2:00 p.m.

Three Different Criteria Onset of Schizophrenia

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Summary:

Objective: Different criteria have been used to asses the onset of schizophrenia, such as the age at first psychiatric symptoms, the age at first treatment, and the age of first hospital admission. Because of methodological difficulties the first criterion has seldom been used. The objective of this study was to analyze the relationship between these criteria.

Material and Method: A sample of 369 schizophrenic patients was selected from the files of the University Psychiatric Clinic, according to DSM-III-R criteria and retrospectively studied. To define age of onset we used the three different criteria mentioned above. To measure the reliability of the medical records information a subsample of 44 patients was studied. Pearson's correlation was used to analyze the data.

Results and Conclusions: A significant and positive correlation was observed between the age at first psychiatric symptoms and the age at first treatment (r=0.8; p=0.0001), between the age at first psychiatric symptoms and at the first hospital admission (r= 0.75; p=0.0001), and between the age at first treatment and the age at first hospital admission (r=0.9; p=0.0001). The same correlation was observed in the analysis by sex. Results seem to show that the three criteria have approximately a similar value as a means to define age of onset of schizophrenia.

NR491 Wednesday, June 3, 12 noon-2:00 p.m.

Coping Responses and Neurocognitive Functioning in Schizophrenia

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Summary:

Research indicates that stressful life events can be "triggers" of symptom exacerbation or relapse in schizophrenia. However, clearly not all patients who experience stressors have a relapse. A recent study found that better neurocognitive performance was associated with the use of problem-focused coping strategies and the use of those strategies lessened the impact of stressful life events (Pallanti, Quercioli, & Pazzagli, 1997). Using the Coping Responses Inventory (Moos, 1986), we examined how 22 recent-onset schizophrenia outpatients and 16 demographically matched normal subjects responded to a negative interpersonal stressor. Cognitively oriented problem-focused approaches (e.g., making a plan of action and following it) were used significantly more often by normal controls (M = 2.17) than schizophrenia patients (M = 1.69; p<.001). However, patients and normal subjects did not differ in the use of avoidance-based coping. Schizophrenia patients with better performance on a measure of sustained attention and early perceptual processing used more problem-focused coping strategies, such as logical analysis (r = .57, p < .02) and positive reappraisal (r = .51, p < .04), and tended to cope less by acceptance and resignation (r = –.44, p < .08). Differences in the way schizophrenia patients and controls cope with stress might account for differences in sensitivity to stress and may be mediated by neurocognitive factors.

NR492 Wednesday, June 3, 12 noon-2:00 p.m.

Neurocognitive Functioning in Schizophrenia

Jean M. Addington, Ph.D., Department of Psychiatry, University of Calgary, 1403 29th Street, NW, Calgary AB T2N 2T9, Canada; Donald E. Addington, M.D.

Summary:

Objective: It has been suggested that individuals experiencing their first episode of schizophrenia are already exhibiting cognitive deficits. Although these patients may not evidence as severe impairment as those who have experienced multi-episodes of schizophrenia, they have more impairment relative to normal controls.

Method: This is the first part of a longitudinal study comparing the neurocognitive functioning of 53 individuals who had recently been diagnosed with schizophrenia or schizophreniform disorder (FE) with 76 individuals with a diagnosis of schizophrenia, who had been ill for many years (ME). Measures included the Positive and Negative Syndrome Scale, verbal memory, early information processing, sustained attention, and the Wisconsin Card-Sorting Test (WCST).

Results: The samples did not differ in level of education, age of onset, current GAF scores, positive symptoms, or sustained

attention. The ME group had more negative symptoms ($p<0.05$). The ME group performed more poorly on memory ($p<0.01$), the WCST ($p<0.001$), and early information processing ($p<0.05$). Neurocognitive functioning was associated with negative symptoms but not with positive symptoms in both groups.

Conclusions: These results suggest that FE subjects have early signs of neurocognitive impairment which, with the exception of negative symptoms, are unrelated to other features of the illness.

NR493 Wednesday, June 3, 12 noon-2:00 p.m.

Effects of Risperidone on Affective Symptoms in Patients with Schizophrenia

Philippe Lemmens, Ph.D., CNS, Janssen Res FDN, Turnhoutseweg 30, Beerse B-2340, Belgium; Joseph Peuskens, M.D., Bart Van Balen

Summary:

The effects of risperidone on affective symptoms were analyzed using combined data from six double-blind, comparative trials of risperidone and haloperidol (one placebo controlled) in patients with schizophrenia. Symptoms were assessed by mean shifts from baseline on the Positive and Negative Syndrome Scale (PANSS) excited factor score, grandiosity score, and anxiety/depressive cluster score.

Among all patients, the excited factor score decreased in both active treatment groups; the risperidone group showed a greater improvement than the placebo or haloperidol groups. In excited patients with grandiosity (≥4 excitement and ≥4 grandiosity baseline score) manic-like symptom scores (excitement + grandiosity; excited factor + grandiosity) improved significantly more with risperidone than haloperidol ($p\leq0.05$). Dropouts due to inefficacy among this excited group of patients were less frequent with risperidone (8.5%) than haloperidol (18.4%) or placebo (80%). For patients who dropped out because inefficacy, endpoint scores for all measures were not significantly different among the three groups.

Among all patients and those with anxious/depressive symptoms (baseline score ≥ median), the anxious/depressive cluster scores decreased in both active treatment. The risperidone group had a significantly ($p\leq0.01$) greater improvement in the anxious/depressive cluster score than patients receiving haloperidol or placebo. These results suggest that risperidone is more efficacious for affective symptoms than haloperidol in patients with schizophrenia.

NR494 Wednesday, June 3, 12 noon-2:00 p.m.

Ziprasidone Intramuscular 10 mg and 20 mg in Acute Agitation

Karen R. Reeves, M.D., Clinical Research, Pfizer Central, Eastern Point Road, Groton CT 06340; Rachel H. Swift, M.D., Edmund P. Harrigan, M.D.

Summary:

Objective: To evaluate the efficacy and tolerability of rapid-acting IM ziprasidone in the treatment of hospitalized patients with psychosis and acute agitation.

Methods: Two 24-h, randomized, double-blind, fixed-dose clinical trials of the rapid-acting IM formulation of the novel antipsychotic ziprasidone were conducted. Patients received an initial IM ziprasidone dose and, if needed, up to three subsequent doses of either 2 mg (n=54) or 10 mg (n=63) (up to q2h) in one study and 2 mg (n=38) or 20 mg (n=41) (q4h) in the other. Efficacy was assessed using the CGI, PANSS, and the Behavioural Activity Rating Scale (BARS), a novel measure of agitated behavior.

Results: Efficacy assessments demonstrated that both 10 mg and 20 mg were rapidly and significantly effective in reducing the symptoms of acute agitation compared with the 2 mg groups. A comparison of treatment effects confirmed a dose-response relationship for the 10 mg and 20 mg doses. All doses were very well tolerated. Assessments of movement disorders improved slightly between baseline and the last observation in all treatment groups. No acute dystonia was reported.

Conclusions: IM ziprasidone 10 mg and 20 mg are rapidly effective in ameliorating the symptoms of agitation associated with psychosis, without causing extreme sedation or movement disorders.

NR495 Wednesday, June 3, 12 noon-2:00 p.m.

Intramuscular Ziprasidone 20 mg in Acute Agitation

Karen R. Reeves, M.D., Clinical Research, Pfizer Central, Eastern Point Road, Groton CT 06340; Rachel H. Swift, M.D., Edmund P. Harrigan, M.D.

Summary:

Objective: To compare the efficacy and tolerability of fixed dose, IM ziprasidone 2 mg (n=38) and 20 mg (n=41) in hospitalized patients with psychosis and acute agitation over a 24-h period.

Method: In this randomized, double-blind study, after the initial IM dose, up to three subsequent doses could be administered a minimum of 4 h apart. Assessments included the seven-point Behavioural Activity Rating Scale (BARS), a novel measure of agitated behavior, the PANSS, and the CGI.

Results: The following were significantly different in favor of the 20 mg group compared with the 2 mg group: mean AUC for BARS at 2 h and at 4 h after the first injection; the improvement in CGI severity and PANSS agitation items at 4 h; the CGI improvement score at 4 h; and the percentage of patients classified as responders (≥2 point reduction in the BARS at 90 min). Mean Simpson-Angus, Barnes Akathisia, and AIMS scores improved slightly from baseline at the last observation in both groups. No dystonia was reported.

Conclusions: The results of this study indicate that patients with psychosis and acute agitation treated with IM ziprasidone 20 mg experienced a rapid and substantial reduction in agitation for at least 4 h after administration and that this dose was very well tolerated, particularly with regard to movement disorders.

NR496 Wednesday, June 3, 12 noon-2:00 p.m.

Ziprasidone: In Vivo Evidence of Central Serotonin Agonist Activity

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Summary:

Objective: Ziprasidone is a novel antipsychotic with high affinity for $5HT_{1A}$ receptors, an activity thought to contribute to reduced extrapyramidal side-effect liability and enhanced efficacy against negative and affective symptoms. The *in vivo* $5HT_{1A}$ agonist activity of ziprasidone was investigated in two studies.

Method: The studies compared the effects of ziprasidone, clozapine, and olanzapine on dorsal raphe cell firing and on dopamine release in prefrontal cortex (PFC) and striatum (STR) in rats.

Results: Ziprasidone and olanzapine inhibited dorsal raphe firing. The inhibition induced by ziprasidone was blocked by the $5HT_{1A}$ antagonist WAY-100,635, but not by the norepinephrine re-uptake inhibitor desipramine. Conversely, the inhibition induced by olanzapine was blocked by desipramine, but not by WAY-100635. Ziprasidone and clozapine, but not olanzapine, preferentially increased dopamine release in the PFC compared with the STR. Pretreatment with WAY-100,635 substantially inhibited PFC

dopamine release induced by both ziprasidone and clozapine but not by olanzapine.

Conclusion: Ziprasidone and clozapine, unlike olanzapine, are $5HT_{1A}$ agonists *in vivo*. This activity may contribute to the beneficial clinical effects seen in ziprasidone-treated patients and could offer advantages over agents for the treatment of schizophrenia that do not stimulate $5HT_{1A}$ receptors.

NR497 Wednesday, June 3, 12 noon-2:00 p.m.

Weight Gain Associated with Conventional and Newer Antipsychotics: A Meta-Analysis

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Summary:

Objective: To estimate and compare the effects of both conventional and newer antipsychotics on body weight.

Method: A comprehensive literature search identified 78 studies that included data on weight change in patients treated with a specific antipsychotic. For each agent a meta-analysis and random effects regression estimated the change in weight at 10 weeks of treatment.

Results: Except for molindone, antipsychotic treatment was associated with weight gain. Placebo was associated with a weight reduction (mean 1.68 kg). Among conventional agents, thioridazine was associated with the greatest weight increase (3.25 kg). Among newer antipsychotics, mean increases were as follows: clozapine 4.46 kg, olanzapine 4.15 kg, sertindole 2.92 kg, risperidone 2.10 kg, and ziprazidone 0.87 kg ($P < 0.05$ vs. each of the former). Insufficient data were available to evaluate quetiapine.

Conclusion: Both conventional and newer antipsychotics are associated with weight gain. Among newer agents, clozapine appears to have greatest potential to induce weight gain and ziprasidone has the least. These differences among newer agents may be relevant for health risks related to obesity and for drug selection.

NR498 Wednesday, June 3, 12 noon-2:00 p.m.

Prodromal Indicators of Schizophrenia

Julia A. Becker, M.D., Psychiatry, Hillside Hospital, 75-59 263rd Street, Glen Oaks NY 11004; Michael Obuchowski, Ph.D., Karen Baruch-Feldman, Ph.D., Tak Chun Chan, M.A., Barbara Cornblatt, Ph.D.

Summary:

Objective: This study is part of a clinical/research program focusing on adolescents and young adults at risk for schizophrenia (Cornblatt, et al., in press). A major goal of this program is to establish clinical predictors of schizophrenia during the nonpsychotic prodromal phase of the disorder in order to facilitate preventive intervention.

Method: Twenty-eight adolescents were evaluated during routine intake assessments using an instrument screening for Axis II personality disorders. Fifteen patients considered to be in the prodromal stages of schizophrenia (PRD) were compared with 13 adolescents with other major diagnoses (OMD: bipolar, conduct, and attention deficit hyperactivity disorders). All prodromal patients were part of the RAPP Clinic, a schizophrenia intervention program newly initiated at Hillside and Schneider Children's Hospitals in New York.

Results: Prodromal (PRD) patients displayed significantly more *total features* ($p < .03$) than the OMD subjects, with the PRD group showing more schizotypal, borderline, and avoidant PD features. In contrast, the OMD group displayed more histrionic and narcissistic features than did the prodromal subjects.

Conclusions: These preliminary findings are supportive of the notion that patients in the early stages of schizophrenia, prior to the onset of psychosis, can be identified and distinguished from adolescents with other serious psychiatric disorders.

NR499 Wednesday, June 3, 12 noon-2:00 p.m.

The Familial Morbidity on the Clinical Characteristics and Intelligence of Schizophrenia Patients

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Summary:

Objective: This study evaluated the hereditary effect on the clinical characteristics and intelligence of the schizophrenic patients.

Method: The authors surveyed two groups of schizophrenic patients: One group of 31 patients with psychotic family members (hereditary group), and a group of 31 patients without Psychotic family members (control group). We examined the groups in terms of some clinical characteristics and intelligence. The hereditary index was defined as the reciprocal of the probability of the same genetics between the patients and the psychotic family members in mitosis. T-test was performed on all the items between the two groups. In the hereditary group, correlations were calculated between the items and the hereditary index and then regression analysis was applied between the significant item and the hereditary index.

Results: (1) Both groups showed no differences on the evaluated clinical characteristics. (2) Both groups showed differences on the arithmetic, comprehension, and picture completion in the Korean-Wechsler Adult Intelligence Scale. (3) In the hereditary group, the hereditary index showed an inverse relationship to the number of hallucinations.

Conclusion: The schizophrenic patients with psychotic family members showed, in comparison with the control group, no differences in clinical characteristics such as age of onset, symptoms, duration of illness etc., but some weakness in intelligence. Results showed the more heredity, the more various hallucinations.

NR500 Wednesday, June 3, 12 noon-2:00 p.m.

CT Scan Study of Pineal Gland and Choroid Plexus Calcification in Schizophrenia

Professor Giuseppe Bersani, Lasapienza University, 3rd Psychiatric Clinic, Via Del Corallo N25, Rome 00186, Italy; Alessandra Garavini, Ines Taddei, Giulio Tanfani, Paolo Pancheri

Summary:

The association of pineal calcification with early onset of schizophrenia and the choroid plexus calcification with hallucinations have been previously reported. However, data about a relationship between calcification and pineal and choroid function is still quite unclear.

CT scans of 87 consecutively admitted, male schizophrenic inpatients (mean age = 29.71; SD = 7.45) were blindly examined by a desk magnifier to evaluate presence and size of pineal (PC) and choroid plexus calcification (CPC) and cortical and subcortical measures.

A significant correlation was found between right CPC size and SAPS hallucinations ($p = .004$), delusions ($p = .002$), and between left CPC and formal thought disorder ($p = .033$).

PC size was found to be in significantly negative correlation with SAPS hallucinations ($p = .002$), delusions ($p = .002$), bizarre behavior ($p = .012$), formal thought disorder ($p = .008$), and PANSS subscale score for positive symptoms ($p = .002$). A positive correla-

tion (p = .003) was found between PC size and SANS attentional impairment subscale score.

No correlation of PC and CPC was found with other brain measures, age of onset, and duration of illness. The results seem to indicate an association of CPC with positive symtoms of schizophrenia, while PC appears mostly associated with non-positive aspects of the illness.

A serotonin disfunction implication could be likely hypothized for both results.

NR501 Wednesday, June 3, 12 noon-2:00 p.m.

Clozapine Improves Insight and P300 in Schizophrenia Patients

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Summary:

Recent findings suggest that newer antipsychotics, like clozapine, are more likely to reduce cognitive dysfunctions in schizophrenia than conventional neuroleptics. There are no reports on the effects of clozapine on subjective awareness, which is considered to be more of a cognitive dysfunction rather than a mere symptom of schizophrenia.

Twenty-seven paranoid-type schizophrenic patients entered a six-months clozapine study following a clinical relapse. Clinical symptoms (SAPS, SANS), level of insight (SUMD scale), involuntary mouvement (AIMS scale), and acoustic-evoked P300 potential at recruitment (T1, clinical stabilization under conventional neuroleptics) were assessed and reevaluated after the six-months clozapine treatment (T2). Clozapine mean daily dose at T2 was 347.7 mg., SD: 71.51, range 250-450 mg.

Five patients discontinued the clozapine treatment due to its adverse effects. After the clozapine trial, patients showed significantly lower SANS (p < .01) and AIMS (p < .001) scores. Results on the SUMD did show a significant increase of awareness of mental disorder, medication effect, and social consequences at T2. In addition, patients showed an increased awareness and attribution of positive and negative symptoms with respect to T1. Only flat affect and asociality awareness did not show significant variations during typical neuroleptic or clozapine treatment. A higher amplitude (p < .01 on Cz) was found at T2 rather than at T1.

The results suggest efficacy of clozapine in improving insight in schizophrenic patients and encourage the concept of insight as a cognitive dimension of the illness.

NR502 Wednesday, June 3, 12 noon-2:00 p.m.

P300 Abnormalities and Basic Cognitive Disturbances in Young Schizophrenia Patients

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Summary:

The study of the subjective experience of cognitive difficulties in schizophrenia has long been neglected, but has triggered a great scientific interest in recent years. This approach entails difficulties regarding the available instruments and their content validity. This study investigates the relationship between subjective and objective deficits in schizophrenia, taking into account clinical symptoms, cognitive evoked potentials (P300 component, and subjective experiences of cognitive impairment. A group of 20 schizophrenic patients (mean age 26.9, SD: 6.73; 14 on neuroleptic treatment, 6 drug-naive) was considered, together with a comparison group of 20 healthy subjects matched in age and education. Auditory ERPs were obtained by means of a simple oddball paradigm. Clinical symptoms were rated with BPRS, SAPS, and SANS scales, while subjective disturbances were assessed by means of the FBF questionnaire. Fourteen schizophrenic patients (Subgroup 1) showed reduced P300 amplitude and increased latency (as compared with normal ranges), while six patients (Subgroup 2) had normal P300 parameters. Subgroup 1 showed a significantly higher level of basic cognitive symptoms (P < .005) and no significant differences in clinical level in comparison with Subgroup 2.

The results suggest that the use of questionnaires about subjective disturbances would be useful in studying the cognitive dysfunction of schizophrenic subjects.

NR503 Wednesday, June 3, 12 noon-2:00 p.m.

Neuropsychological Functioning in Patients with Velocardiofacial Syndrome and Schizophrenia

Eva W. Chow, M.D., Department of Psychiatry, University of Toronto, 250 College Street, Toronto ON M5T 1R8, Canada; Donald Young, Ph.D., Edward Janiszenski, B.A., Rosanna Weksberg, M.D., Anne S. Bassett, M.D.

Summary:

Background: Velocardiofacial syndrome (VCFS) is a genetic syndrome associated with Chromosome 22 microdeletions. Features in VCFS include defects involving the palate, heart, typical facies, and learning difficulties. Up to 30% of adults with VCFS have schizophrenia or other psychotic disorder. There are few studies of neuropsychological functioning, mainly in children.

Objective: To assess the neuropsychological profile in adult patients with VCFS and schizophrenia (SZ), and compare it with that in SZ patients without VCFS.

Method: Ten patients with VCFS-SZ and 10 patients with SZ without VCFS were administered a battery of neuropsychological tests to assess overall IQ, attention and concentration (Digit Span), verbal and nonverbal memory (Rey-Auditory-Verbal Learning Test, Wechsler Memory Scale-Revised), frontal lobe executive function (Wisconsin Card Sorting Test, Trail B), visual-spatial skills (Block Design, Clock Drawing), and academic achievement (Wide Range Achievement Test).

Results: The mean overall IQ of the first eight VCFS-schizophrenia subjects with completed testing was 70 (SD = 11.5). Impairments were mild in attention, nonverbal and verbal memory, and visual-spatial skills; and moderate in reading, spelling, arithmetic, and frontal lobe executive functioning. Compared with completed subjects without VCFS (n = 4), deficits in VCFS-SZ subjects were significantly worse in IQ (p = 0.03), attention (p = 0.02), reading (p = 0.03), and spelling (p = 0.001).

Conclusions: VCFS-SZ patients may have a neuropsychological profile unique to this subtype, different from that of other patients with schizophrenia.

NR504 Wednesday, June 3, 12 noon-2:00 p.m.

Use of Population Pharmacokinetic Modeling to Characterize the Intramuscular Pharmacokinetics of the Novel Antipsychotic Agent Ziprasidone in Schizophrenia Patients

Jeffrey Miceli, Ph.D., Cent Research, Phizer Inc., Eastern Point Road, Groton CT 06340; Carol Folger, M.S.N., Keith D. Wilner, Ph.D., Sheldon H. Preskorn, M.D.

Summary:

Objective: To characterize the pharmacokinetics of the rapid-acting intramuscular formulation of the novel antipsychotic ziprasidone in patients with schizophrenia.

Methods: Building upon a population pharmacokinetic model established from data-rich, single-dose studies performed in

healthy subjects, the multiple-dose disposition of ziprasidone was characterized in patients receiving ziprasidone intramuscular doses of 5 mg ($n = 6$), 10 mg($n = 6$), and 20 mg ($n = 6$) administered four times daily for three days. Pharmacokinetic sampling was limited to 12 samples on Day 1 and 14 on Day 3.

Results: The results were consistent with predictions from the single dose, showing attainment of peak exposure within approximately 30 minutes, dose-related increases in exposure, and little drug accumulation.

Conclusions: The approach used here demonstrated that population pharmacokinetic modeling is a useful tool in understanding drug disposition where pharmacokinetic sampling is limited. Ziprasidone IM has a predictable, linear pharmacokinetic profile. Therapeutic plasma concentrations are attained rapidly.

NR505 Wednesday, June 3, 12 noon-2:00 p.m.

Pharmacokinetics of Ziprasidone in Normal and Impaired Renal Function

Keith D. Wilner, Ph.D., Clinical Research, Pfizer Central Res, Eastern Point Road, Groton CT 06340; Jennifer Sherwood, M.S., Richard J. Anziano, M.S., Francesca T. Aweeka, Pharm.D.

Summary:

Objective: Ziprasidone is a novel antipsychotic that is effective in the treatment of positive, negative, and depressive symptoms of schizophrenia. This study compared the pharmacokinetics of ziprasidone in subjects with normal renal function with those in subjects with varying degrees of renal impairment.

Method: This open-label, multicenter, multiple-dose study evaluated nine subjects with normal renal function (Group 1), nine with mild renal impairment (Group 2), nine with moderate renal impairment (Group 3), and nine with severe renal impairment (Group 4). All subjects received ziprasidone 20 mg orally bid, with food, for seven days and a single 20 mg dose on the morning of Day 8.

Results: There were no statistically significant differences between the steady-state pharmacokinetics of ziprasidone (AUC_{0-12}, C_{max}, t_{max}, k_{el}, % protein binding) in Group 1 and those in Groups 2, 3, or 4, except the AUC_{0-12} in Group 2. Although the AUC_{0-12} in Group 2 was statistically significantly greater than those in the other three groups ($P = 0.0025–0.0221$), this was not considered clinically significant.

Conclusions: The findings of this study indicate that mild-to-severe renal impairment does not have a clinically significant effect on the pharmacokinetics of ziprasidone and does not necessitate dose adjustment.

NR506 Wednesday, June 3, 12 noon-2:00 p.m.

Intramuscular Ziprasidone Versus Intramuscular Haloperidol

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Summary:

Objective: To compare the efficacy and tolerability of the rapid-acting IM formulation of ziprasidone ($n = 90$) with IM haloperidol ($n = 42$) in the treatment of inpatients with acute, nonorganic psychosis.

Method: In this seven-day, randomized, open-label study, patients received up to three days of IM treatment followed by oral therapy until the end of the study. Doses were as follows: ziprasidone 10 mg IM, followed by 5–20 mg IM 4–6 hourly (max 80 mg/day), then by oral ziprasidone 80–200 mg/day; or haloperidol 2.5 mg IM, followed by 2.5–10 mg IM 4–6 hourly (max 40 mg/day), then by oral haloperidol 10–80 mg/day.

Results: Mean BPRS improved with IM ziprasidone (–6.2) and haloperidol (–3.2). The mean IM dose at the last injection was 11.7 mg for ziprasidone and 4.6 mg for haloperidol. The incidence of movement disorders and anticholinergic use was notably lower with IM ziprasidone compared with IM haloperidol. Simpson-Angus and Barnes Akathisia scores improved with IM ziprasidone but deteriorated with haloperidol.

Conclusions: These results indicate that rapid-acting, IM ziprasidone was effective in reducing the symptoms of acute, nonorganic psychosis. Moreover, ziprasidone was better tolerated than haloperidol, particularly in assessments of movement disorders.

NR507 Wednesday, June 3, 12 noon-2:00 p.m.

Serum Prolactin and Atypical Neuroleptics in Schizophrenia

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Summary:

Prolactin related side effects often determine compliance in schizophrenics. The present study was undertaken to find out patterns of rise in serum prolactin in response to two atypical antipsychotic drugs, clozapine and risperidone at a fixed duration of 60 days in schizophrenics switched over to atypical antipsychotics.

Method: Prolactin level was assesed in 120 patients: thirty patients each in four groups, male and female (premenopausal) treated with clozapine and risperidone. Serum prolactin was estimated at baseline after seven days washout in hospital and at the end of 60 days.

Results: The treatment groups were demographically comparable. Maximum rise of prolactin was observed in risperidone treated female group ($\bar{X}$ = 110micrograms/L). The two groups differed significantly on dosage (clozapine $\bar{X}$ = 224mg and risperidone 4.1mg P 0.001). There was significant rise of serum prolactin at 60 days compared with baseline in risperidone group ($\bar{X}$ = 76, $P < 0.001$) than clozapine group treated group. Fifteen percent of patients in clozapine treated female group were significantly symptomatic.

Conclusion: High increase in prolactin in risperidone group was observed. Findings and implications will be discussed.

NR508 Wednesday, June 3, 12 noon-2:00 p.m.

Factor-Analysis of Catatonic Schizophrenia

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Summary:

Objective: Catatonic schizophrenia commonly is characterized not only by one, but by several different symptoms. We studied whether there are more or less fixed clusters of symptoms by an investigation of 61 inpatients suffering from schizophrenia (16 female, 45 male; mean age (a) 34.8 ± 9.5; mean duration of illness (a) 13.1 ± 9.1; mean GAF-score 32.9 ± 13.2).

Method: Patients were examined for catatonic symptoms and movement disorders using a broad set of 44 items, which were found in descriptions of catatonia by traditional European psychiatric authors (Kahlbaum, Kraepelin, Bleuler, Kleist).

Results: By means of factor analysis catatonia does not appear as an homogeneous entity (variance explained only 12.9%). Even a three-factor model can only explain 32.9% of the variance. However, when using a seven-factor model, more than 54.8% of the

variance can be explained. Some of the factors resulting are similar to well described catatonic syndromes of the traditional psychiatric literature. Other factors reflect neurological disturbances or neuroleptic side effects (hypokinetic, hyperkinetic, or dyskinetic symptoms).

Conclusion: The findings demonstrate that catatonia does not seem to be a homogeneous syndrome and might better be understood as a spectrum.

NR509 Wednesday, June 3, 12 noon-2:00 p.m.

A Comparison of Hispanic and African-American Sexually Abused Children and Their Families

Jon A. Shaw, M.D., Psychiatry, University of Miami, P.O. Box 016960, Miami Beach FL 33101; John Lewis, Ph.D., Claudia Lang, Ph.D., Susan Tanner, Ph.D., Andrea Loeb, P.S.Y.

Summary:

Objective: To compare African-American (AA) and Hispanic (H) children and their families who have been the victims of sexual abuse.

Method: Sixty-nine AA children (4–16 years, $\bar{x}$ age 8.7 years) were compared with 51 H children (4–17 years, $\bar{x}$ age 9.1 years). Sexual abuse was verified by medical exam and state health investigation. The parent/caretaker completed a demographic form, the Child Behavior Checklist (CBCL), and the Family Assessment Measure (FAM-P). The child completed the FAM-C and the Trauma Symptom Checklist (TSC).

Results: No differences were found between the two groups for age, gender, SES, characteristics of the sexual abuse experience, history of emotional neglect and physical abuse, and parental support of disclosure. On the CBCL, the H children exhibited significantly more anxiety/depression, internalizing symptoms, somatic problems, a trend toward withdrawn behavior, and a greater number of total emotional and behavioral symptoms. H children reported more suicidal ideation on the TSC. H parents perceived their families as manifesting more dysfunctional parental roles and role integration, value confusion, and greater dissonance between family and cultural values.

Conclusion: H mothers perceived their children as having more emotional and behavioral problems and H children endorsed more suicidal ideation. H mothers perceived their families as more dysfunctional in parental roles and value conflicts. Treatment of sexually abused H children and their families requires sensitivity to the cultural and ethnic factors determining the psychological response to sexual abuse, particularly the importance of the value of female virginity in the Hispanic culture.

NR510 Wednesday, June 3, 12 noon-2:00 p.m.

An Open-Label Pharmacokinetic Trial of Nefazodone in Depressed Children and Adolescents

Robert L. Findling, M.D., Div. of Child Psychiatry, Case Western Reserve Univ., 11100 Euclid Avenue, Cleveland OH 44106; Ryan D. Magnus, M.D., Ronald N. Marcus, M.D., Sheldon H. Preskorn, M.D., Punit H. Marathe, Ph.D., Jeffrey L. Blumer, M.D., M. Frances D'Amico, M.S.

Summary:

Objective: The purpose of this study was to study the pharmacokinetics (pK) and safety of nefazodone (NFZ) in children and adolescents with depression.

Method: Thirteen children and 13 adolescents with depression were enrolled in this eight-week, open-labeled trial. Twelve hours of intensive sampling for pK analyses was performed after a single 50 mg dose, and after one week of each 100 mg/day and 200 mg/day of NFZ. Doses were then adjusted in order to maximize therapeutic response.

Results: Children had higher levels of NFZ and its three metabolites when compared with adolescents. The rank order of NFZ and its three metabolites were the same in children and adolescents. Children and adolescents had similar half-lives for NFZ and its three metabolites. The pK of NFZ and its hydroxy metabolite seemed to be non-linear. The pK of NFZ's other metabolites appeared to be linear. No serious side effects were noted with NFZ therapy. Reductions in depressive symptomatology and functional impairment were seen.

Conclusions: The biodisposition of NFZ appears to be similar in children, adolescents, and adults. In depressed youths, open-labeled treatment with NFZ was well-tolerated and associated with salutary effects. Controlled clinical trials are indicated.

This study was funded by Bristol-Myers Squibb.

NR511 Wednesday, June 3, 12 noon-2:00 p.m.

Adverse Childhood Events Among Men Involved in Teen Pregnancy

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Summary:

While a history of sexual abuse has been associated with pregnancy among teenage girls, few studies have examined risk factors in males that predict their impregnating teenage girls. To better address this issue, we analyzed data from 3,873 men (mean age = 58 years at time of survey) who received standardized medical evaluations at the Kaiser-Permanente Health Appraisal Clinic in San Diego. Participants provided their reproductive histories and information about childhood exposure to abuse and domestic violence as part of the Adverse Childhood Experiences Study. Nineteen percent of respondents reported impregnating a teenage girl. Forty-four percent had experienced at least one of three adverse childhood events: physical abuse (32%), sexual abuse (16%), and abuse of their mother by a husband or male partner (11%). A dose-response relationship emerged between the number of adverse childhood events reported and the likelihood of having impregnated a teenage girl ($p < .001$). Men who had experienced all three types of adverse childhood events were more than twice as likely to have impregnated a teenage girl than those who had experienced none (adjusted odds ratio = 2.2, 95% CI: 1.4–3.5). These data suggest that assessment of sexual and contraceptive practices of males reporting exposure to abuse or domestic violence during childhood may be an important component of teen pregnancy prevention.

NR512 Wednesday, June 3, 12 noon-2:00 p.m.

Open Trial of Fluoxetine in Youth with Dysthymic Disorder

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Summary:

Objective: Dysthymic disorder commonly presents in children and adolescents and is associated with an elevated risk of developing other mood disorders and significant morbidity. No treatment studies currently exist in this age group. We conducted an eight-week, open-label trial of fluoxetine for youth presenting with dysthymic disorder.

Method: Subjects recruited for this study were assessed diagnostically using standardized interviews and dimensionally for depressive symptoms and psychosocial impairment. After four

weeks of psychosocial treatment, subjects failing to show significant improvement in their disorder began open-label treatment with fluoxetine (20 mg.) for eight weeks. Subjects were then reassessed after eight weeks of medication treatment.

Results: Thirteen subjects entered the study. Three subjects improved clinically with psychosocial treatment precluding medication treatment. Ten subjects entered the medication phase, and nine completed. Seven subjects (70% of subjects entering medication treatment) no longer met criteria for dysthymic disorder after eight weeks of fluoxetine treatment. Global functioning measures and clinician- and self-rated depressive symptom measures were significantly improved at week eight. Minor side effects were noted in this trial.

Conclusions: Fluoxetine shows initial promise as a safe and effective treatment for youth with chronic depressions. Controlled trials are indicated and necessary.

NR513 Wednesday, June 3, 12 noon-2:00 p.m.

Use of Risperidone in Adolescents: A Retrospective Chart Review

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Summary:

This naturalistic study evaluated the use, safety, and efficacy of risperidone in hospitalized adolescents on an acute inpatient unit of a community teaching hospital. The charts of all 191 adolescent patients treated with risperidone during a 36-month period were reviewed. Specific target symptoms were identified for each patient and adverse drug reactions were recorded.

The mean age of the patients was 14.4 years. Risperidone was used to treat psychotic symptoms (hallucinations, paranoid thinking, delusions) in 122 patients (64%); aggressive, violent, and agitated behaviors in 55 (29%); and other psychiatric disorders in 14 (7%). The average effective dose of risperidone was 1.8 mg/day. Side effects were reported by 23% of the patients, including sedation by 15% and extrapyramidal symptoms by 4%. Of the 191 patients receiving risperidone, 86% were discharged from the hospital on maintenance doses of risperidone. The reasons for risperidone discontinuation included side effects in 4% and lack of efficacy in 3%.

Risperidone was an effective and well-tolerated antipsychotic agent for the treatment of psychotic symptoms and aggressive and violent behaviors in adolescent patients hospitalized on an acute inpatient unit.

NR514 Wednesday, June 3, 12 noon-2:00 p.m.

Sertraline in Adolescent Depression and Dysthymia: A Six-Month Open Trial

Jovan G. Simeon, M.D., Department of Psychiatry, Royal Ottawa Hospital, 1145 Carling Avenue, Ottawa ON K1Z 7K4, Canada; Mary K. Nixon, M.D., Robert P. Milin, M.D., Wendy Spenst, Debbie Smith

Summary:

The long-term efficacy of sertraline in adolescent depression and dysthymia was evaluated in 21 patients during a six-month, open clinical trial. Ten patients suffering from major depression (DSM-IV, ≥ 18 on the first 17 items of HAMD), eight from dysthymia (DSM-14, ≥ of 13 on the first 17 items of HAMD), and three from both disorders were included in analysis. Sertraline was started at the dose of 50 mg/day; upward titration was allowed in 50 mg increments at minimum two-week intervals to a maximum of 200 mg/day. Responders were defined as having ≥50% reduction from baseline of ≤ 10 on total HAMD-21 score. The responders' rates were as follows: 75% by week 6 (n = 15 out of 20), 87% by week 12 (n = 14 out of 16), and 89% by week 24 (n = 8 out of 9). Similar results were obtained with the proportion of patients improved much or very much on CGI-Improvement scale. Sertraline had a significant effect ($p < 0.001$, n = 21) on decreasing total HAMD-21 scores from baseline (22.0 +/– 4.5) to final evaluation (7.6 +/– 8.2). This was accompanied by a significant decrease from baseline (4.7 +/– 0.7) to endpoint (2.9 +/– 1.6) on CGI-Severity scale ($p < 0.001$, n = 21). Side effects were generally mild and transient, consisting of nausea, headaches, tiredness, and insomnia. Patient compliance was identified as major challenge for this population of adolescent depressed or dysthymic patients. The results on other measures (BPRS, HAM-A, Raskin Depression/Covi Anxiety Scale, CBCL, and CDI) as well as analyses of the depression and dysthymia subgroups will be presented. In conclusion, our study suggests that sertraline may be an effective antidepressant in adolescents with major depression or dysthymia; additional long-term controlled studies are nevertheless needed.

NR515 Wednesday, June 3, 12 noon-2:00 p.m.

A Comparison of Parental Support in Sexually Abused Children and Their Families

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Summary:

Objective: To compare psychosocial, family, and abuse-related variables between Perfectly Supportive Mothers (PSM), who affirm their child's sexual abuse, with Unsupportive Mothers (UM), who question the sexual abuse, among children who have been the victims of sexual abuse, verified by medical exam and state investigation.

Method: Sixty-five PSM mothers, as determined by the Parental Reaction to Disclosure Scale, were compared with 56 UM mothers statistically controlled for ethnicity/race, age, and socioeconomics status. Mothers were given a semistructured clinical interview, a demographic form, the Child Behavior Checklist (CBCL), and the Family Assessment Measure (FAM-P). The child completed the FAM-C and the Trauma Symptom Checklist (TSC).

Results: No differences were found between the groups for age, SES, characteristics of the sexual abuse, characteristics of the perpetrator, and history of emotional neglect or physical abuse. On the CBCL, the UM child exhibited significantly more thought problems and delinquent behavior. UM children reported more suicidal ideation on the TSC. No differences were elucidated on the FAM-P; however, on the FAM-C, UM children reported more family problems in accomplishing familial tasks, dysfunctional control among family members, and difficulty communicating.

Conclusion: UM mothers perceived their children as having more emotional and behavioral problems and UM children endorsed more suicidal ideation. UM children perceived their families as more dysfunctional in task accomplishment, communication, and control. Treatment of sexually abused children and their families requires awareness of the degree of parental support, which may affect the response to sexual abuse, subsequent treatment, and suggests the need for parental/family intervention with non-abusing parents.

NR516 Wednesday, June 3, 12 noon-2:00 p.m.

Diagnostic Comorbidity of BPD in Hospitalized Adolescents: Comparison with Hospitalized Adults

Daniel F. Becker, M.D., Menninger-SFBA, 1783 El Camino Real, Burlingame CA 94010; Carlos M. Grilo, Ph.D., William S. Edell, Ph.D., Thomas H. McGlashan, M.D.

Summary:

Objective: The authors examined axis I and axis II comorbidity with borderline personality disorder (BPD) in a sample of adolescents admitted consecutively to the Yale Psychiatric Institute. For comparison, BPD comorbidity was also examined in a sample of adults who were admitted consecutively to the same hospital, during the same period of time.

Method: One hundred thirty-eight adolescents and 118 adults were reliably assessed with semi-structured diagnostic interviews for DSM-III-R axis I disorders and axis II personality disorders. Sixty-eight adolescents and 50 adults met diagnostic criteria for BPD. Diagnostic co-occurrence in the group of subjects with BPD was statistically compared with that in the group without BPD, for adolescents and adults separately.

Results: For the adolescents, BPD showed significant comorbidity with substance use disorders, major depression, and dysthymic disorder, as well as with schizotypal, narcissistic, avoidant, and passive-aggressive personality disorders. For the adults, BPD was significantly comorbid with substance use disorders, eating disorders, all other cluster B personality disorders, and avoidant personality disorder.

Conclusions: BPD was significantly associated with substance use disorders in both age cohorts, and with eating disorders in adults. In addition to the significant comorbidity with depression, BPD showed a broader pattern of axis II comorbidity in adolescents than in adults. This latter finding supports the view that, in adolescents, personality disorders are somewhat less differentiated than they are in adults.

NR517 Wednesday, June 3, 12 noon-2:00 p.m.

Ziprasidone in Tourette's Syndrome

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Summary:

Method: This was a double-blind, placebo-controlled, multicenter study in patients aged 7–17 years, who received either placebo ($n = 12$, mean age = 12 years) or ziprasidone ($n = 16$, mean age = 12 years) for eight weeks. Ziprasidone was initiated at 5 mg/day and increased in increments of up to 5 mg bid every three to four days to a maximum dose of 40 mg/day.

Results: Ziprasidone was significantly more effective than placebo in reducing mean Yale Global Tic Severity Scale (YGTSS) global score ($P = 0.016$) and mean YGTSS total tic subscale score ($P = 0.008$). The total number of motor and phonic tics in five minutes decreased by 54% with ziprasidone ($n = 15$) vs 1% with placebo ($n = 11$, $P = 0.04$). In patients with a score of ≥2 (mild or worse) on item 17 (global severity) of the Child Yale-Brown Obsessive Compulsive Scale ($n = 5$ in each group), the mean obsessive-compulsive disorder score decreased by 26% in the ziprasidone group and increased by 5% in the placebo group. Ziprasidone was not associated with clinically significant effects on laboratory tests, vital signs, weight, or ECG. There were no clinically meaningful changes in mean Simpson-Angus, Barnes Akathisia, or AIMS scores or any evidence of acute dystonic effects.

Conclusions: These results indicate that ziprasidone 10–40 mg/day is effective and well tolerated in reducing the characteristic symptoms of TS in children and adolescents and may be associated with a low risk of EPS.

NR518 Wednesday, June 3, 12 noon-2:00 p.m.

Neurological Soft Signs in an Adolescent Population at Psychometric Risk for Schizophrenia Spectrum Disorders

Jordi E. Obiols, Dept de Psicologia de la, Professor of Psychopathology, Universtat Autonoma, Barcelona 08193, Spain

Summary:

Neurological soft signs (NSS) have been found in a great proportion of schizophrenic patients, both adult and child. Particularly relevant for this study is that NSS have appeared in several high-risk studies for schizophrenia as early precursors of the illness. This evidence, combined with a neurodevelopmental conception of schizophrenia, has given rise to the notion of NSS as possible neurointegrative markers of the schizophrenic spectrum conditions. In our study it has been used as a psychometric criterion to select the "at-risk" group, the sustained attentional deficit measured by means of the Continous Performance Test (CPT). This study was undertaken to test the heightened presence of NSS in psychometrically vulnerable subjects, as well as the relationship between this marker and others from different domains. We compared 140 normal adolescents with 162 "CPT-linked vulnerable" adolescents (index subjects) on a NSS (which included assessment of laterality), IQ, executive function, and a psychometric schizotypy battery. It was found that there is an association between NSS and attentional deficit. Furthermore, index subjects *with* NSS had lower IQ, poorer performance in frontal lobe tests, and more social problems and social withdrawal. There also was a trend for an association between male sex with left-handedness and NSS.

NR519 Wednesday, June 3, 12 noon-2:00 p.m.

Risperidone in the Treatment of Stuttering: A Double-Blind, Placebo-Controlled Study

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Summary:

In a double-blind, placebo-controlled study, 16 adults with developmental stuttering were randomly assigned to receive risperidone or placebo for six weeks. The subjects' ages ranged from 18 to 73 years and stuttering severity ranged from very mild to severe. Risperidone was started at 0.5 mg once daily at bedtime and increased up to 2.0 mg/day as tolerated. Frequency and duration of stuttering were assessed twice during a two- to four-week baseline period and every two weeks during the study period using standardized, controlled conversational samples. Frequency of stuttering (mean percentage of syllables stuttered) was reduced from 9.6% at baseline to 4.8% (a difference of 51%) in the risperidone group ($p < 0.01$ by ANOVA) and from 7.0% to 5.1% (27%) in the placebo group (NS). The difference between the risperidone and placebo groups was significant ($p = 0.025$). The duration of stuttering was reduced from 4.5 to 3.2 seconds (29%) in the risperidone group and from 3.3 to 2.8 seconds (15%) in the placebo group. Risperidone was well tolerated; all subjects completed the double-blind portion of the study and six of the eight elected to continue with open-label treatment. These preliminary results are encouraging given the wide variability of stuttering; further evaluation of the efficacy of risperidone in this disorder is warranted.

NR520 Wednesday, June 3, 12 noon-2:00 p.m.

Functional Imaging and Medication in Hair Pulling

Dan J. Stein, M.D., Department of Psychiatry, University of Stellenbosch, PO Box 19063, Tygerberg 7505, South Africa; Ben Van Heerden, M.D., Charmaine Wessels, B.A., Jeanine Van Kradenburg, B.A., Geoffrey Van Der Linden, M.D., Annamarie Schmidt, M.D., James Warwick, M.D.

Summary:

The neurobiology and pharmacotherapy of trichotillomania (TTM) has received increasing attention in recent years. Parallels have been drawn between findings in this disorder and those in obsessive-compulsive disorder (OCD). To date, however, there has been little work on the effect of pharmacotherapeutic intervention on functional brain imaging in TTM. Female patients (n = 10) who met diagnostic criteria for TTM were subjected to single photon emission computed tomography (SPECT) with Tc-99m HMPAO before and after a 12-week trial of pharmacotherapy with the selective serotonin reuptake inhibitor (SSRI) citalopram. Pharmacotherapy led to significantly reduced activity in inferior-posterior and other frontal areas. At baseline, non-responders (n = 7) had increased activity in superior-anterior frontal and other areas compared with responders (n = 3). Correlates of hair pulling symptoms during scanning with activity in brain regions differed before and after pharmacotherapy. These data are consistent with work suggesting that TTM, like OCD, is mediated by corticostriatal circuits.

Acknowledgments: This work is supported by the MRC (South Africa) Research Unit on Anxiety and Stress Disorders.

NR521 Wednesday, June 3, 12 noon-2:00 p.m.

Psychiatric Determination of Feigned Memory Deficit

Alexandru D. Costa, M.D., Psychiatry, Clark, 3650 Kaneff Crescent STE 3301, Mississaga ON L5A 4A1, Canada

Summary:

Objective: This is the first psychiatric study on the relationship of formally determined feigning of memory deficit to measures of mental status and DSM-IV diagnoses in evaluees with incentives.

Method: Personal injury claimants/litigants reporting memory deficit were seen in the author's autonomous practice (January 1996-October 1997). Measures administered included SCID-I from September 1996, Rey-15 test, four attention and memory tests, and a validity test to detect sham memory deficit. Head injury was diagnosed with standardized criteria.

Results: Eighty-eight evaluees were studied (53 with SCID-I). Head injury cases (N = 17) had a feigning rate of 47%. This rate was 31% in cases without head injury (N = 71) in whom failure on immediate verbal recall and/or Rey-15 screened feigning with a sensitivity and specificity of 91% and 63%, respectively. Digits forward produced similar results. The specificity to feigning of some clusters of mental status test results has been 96% or 98%. Feigning arose alone or with diverse DSM-IV diagnoses and impairment levels.

Conclusions: This study shows that mental status tests can help in the screening and diagnosis of sham cognitive deficit in evaluees without head injury. The diversity of diagnosis-feigning combinations should be taken into consideration in clinical practice.

NR522 Wednesday, June 3, 12 noon-2:00 p.m.

Low Dose of Alprazolam and Psychometric Performance

Michel S. Bourin, M.D., Psychopharmacology, FAC of Medicine, BP 53508 1 Rus Gaston Veil, Nantes 44035, France; Marie-Claude Colombel, B.Sc., Bernard Guitton, M.D.

Summary:

The effects of alprazolam (0.125 mg) twice a day on several cognitive and performance tasks: pictures test, Digit Symbol Substitution Test (DSST), Choice Reaction Time (CRT), and Critical Flicker Fusion (CFF), were investigated in healthy students. A double-blind, independent group design was used to compare placebo and alprazolam (32 volunteers in each group). After randomization, all subjects received placebo for three days (D), followed by 14 days of treatment with either alprazolam or placebo. Subjects completed a battery of tests at D_0, then at D_3, D_7, D_{10}, and D_{14}.

D_3 performance was poorer in the alprazolam group except for CFF (ascending values and total values); the only significant improvement was in Total Reaction Time on the CRT test. However, a significant improvement of performance (except in Recognition Reaction Time) was shown at D_7, D_{10}, and D_{14} in the alprazolam group compared with the control group. The current study shows that low repeated doses of alprazolam are able to produce small improvements in some aspects of psychomotor and cognitive functions. Different points are discussed to explain the performance improvement: training effect, tolerance effect, anxiolytic effect, or changes in receptor function and/or number.

NR523 Wednesday, June 3, 12 noon-2:00 p.m.

Polycystic Ovaries in Women with Epilepsy on Inducing and Non-Inducing Antiepileptic Drugs

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Summary:

Objective: Women with epilepsy (WWE) may be at risk for reproductive disorders, including polycystic ovaries (PCO), Herzog et al. (1984) found that 20% of women with temporal lobe epilepsy (TLE) were diagnosed with PCO compared with 3% to 7% in the general population, Isojarvi et al. (1993) described a 56% incidence of PCO in women with epilepsy on valproate (VPA) or VPA and carbamazepine (CBZ) in comparison with 18% in nonepileptic controls.

Methods: Ovarian morphology was assessed using transvaginal ovarian ultrasound in 30 WWE and 11 nonepileptic controls. Patients were classified by AED relative to the effect on the hepatic cyP450 enzyme system.

Results: Mean age was 30.3. PCO occurred in 1/21 control ovaries (5%) and 12/59 ovaries of WWE, including one woman not on an AED (21%) ($p < .05$). Women with TLE had PCO in 7/28 ovaries ($p < .03$) and women with PGE had PCO in 3/15 ovaries. PCO occurred in ovaries of patients with cyP450 induction (CBZ 5/22, Pb 1/4), inhibition (VPA 3/13), and no effect (GBP 2/6, LMT 1/8).

Conclusion: These preliminary data suggest that WWE are at higher risk for PCO and women with TLE appear to be at highest risk compared with nonepileptic controls. The relative contribution of individual AEDs to PCO is being evaluated.

Funded by an unrestricted grant from Glaxo Wellcome

NR524 Wednesday, June 3, 12 noon-2:00 p.m.

Associated Symptoms in Adults with ADHD

Atilla Turgay, M.D., 251 Queens Quay West #701, Toronto ON M5J 2N6, Canada; Keith Cameron, M.B.A., Hashem Khoshroshahi, M.D.

Summary:

This prospective study took place in a university hospital ADHD clinic and involved 103 consecutive patients between ages 20

and 68 who received the DSM-IV ADHD diagnosis. After the diagnosis of ADHD was established with the use of DSM-IV-based structured clinical interviews, independently completed by a psychiatrist and a clinical psychologist, the patients responded to a 30-item questionnaire reviewing the frequency of the associated symptoms, including drug and alcohol use, sense of underachievement, verbal and physical aggression, difficulty with the law, self-destructive behavior, anxiety, frequent job changes, and others. The most common associated symptom for both genders was the sense of underachievement (F:92.6%; M:92.1%). The second most common problem was the inability of the patients to complete the projects started (F:88.9; M:85.5). Self-destructive behavior was also very common (F:34.2%; M:33.3%). More than half of the patients suffered from frequent job changes (F:55.6%; M:44.7%). Alcohol abuse (F:11.1%; M:19.7) and drug abuse (F:3.7%; M:19.7%) were not very common in this population. With the multiplicity of the associated problems, the adult patients with ADHD need interventions at many personal and interpersonal levels. Medication alone may not be a sufficient intervention.

NR525 Wednesday, June 3, 12 noon-2:00 p.m.

Gender Differences in Children with ADHD

Atilla Turgay, M.D., 251 Queens Quay West #701, Toronto ON M5J 2N6, Canada; Stacey Bloom, M.A., Levent Tonga, M.D., Michael Schwartz, Ph.D., Steven Singerman, M.S.W., Rubaba Ansari, M.A., David Ng, M.D.

Summary:

In a university hospital ADHD clinic, 699 males and 181 females between the ages of 7 and 18 with the DSM-IV diagnosis of ADHD were studied to differentiate the gender differences in comorbidity and subtypes of ADHD. Structured clinical interviews, teacher and parent versions of Offord and Boyle general psychopathology screening and rating scales, and the DuPaul ADHD rating scale and a DSM-IV-based symptom checklist were also completed for each patient.

The distributions of the ADHD subtypes and of comorbidity did not differ significantly among the male and female children (age 7–12); however, the distributions did differ significantly among the male and female adolescent groups (age 13–18). There were no significant differences in the ADHD subtypes among male and female children ($p > .05$), but there was a great degree of difference between the distributions of the ADHD subtypes among male and female adolescents ($p < .05$). A greater percentage of girls displayed the predominantly inattentive subtype, while a greater percentage of boys displayed the predominantly hyperactive-impulsive subtype.

A greater percentage of the males displayed disruptive externalizing behavior (oppositional defiant disorder and conduct disorder) and a greater percentage of females met the criteria for anxiety and major depression ($p < 05$).

NR526 Wednesday, June 3, 12 noon-2:00 p.m.

Heart Treatment: Meaning and Desired Donor Traits

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Summary:

Heart transplantation is assumed to be a traumatic event. This study explores heart transplant candidates' attitudes to the pending loss of their hearts, and inquires about desired traits in their potential heart donors. Twenty patients, 13 (65%) males and seven (35%) females, mean age 52.2 years, accepted by the institution's cardiac transplant committee were given a semi-structured interview. When given two chances to describe the meaning of the heart, the two most common responses were: seat of emotions (18), and physical life-sustainer (15). The significance of the loss of the heart was (one response allowed): second chance (8), fearful experience (4), disappointment in their heart (3), and grief (2). Important donor traits (two responses allowed) were: morality/goodness (11), health (5), belief in God (3), and intelligence (3). Literature review shows minimal research in this area. This project, therefore, can help health professionals understand that the heart is more than a mechanical pump; it carries strong emotional meaning. This research has psychological and ethical implications with regard to emotional aspects of heart transplantation—including desired donor traits and questions about revealing donor characteristics that do not match subjects' ideals.

NR527 Wednesday, June 3, 12 noon-2:00 p.m.

How Attorneys Pick Psychiatric Experts: A Survey

Douglas Mossman, M.D., Department of Psychiatry, Wright State University, PO Box 927, Dayton OH 45401; Marshall B. Kapp, J.D.

Summary:

Background: Although mental health professionals are testifying with increasing frequency as expert witnesses, scholars have published little systematically gathered data about which attorneys seek mental health opinions, how often they do so, and their criteria for selecting experts.

Method: To explore these issues, we conducted a mailed survey of Dayton-area attorneys and judges.

Results: A total of 267 attorneys and 41 judges responded (response rates = 20% and 38%, respectively); though low, these rates compare favorably to other published survey results involving legal professionals. Attorneys and judges said that one-seventh of their cases raised issues related to mental health or mental disability, and 55% of the attorneys had sought the opinion of a mental health professional in the last year. Attorneys rated knowledge in the specific area at issue and ability to communicate effectively and persuasively as their two most important criteria for selecting an expert. The expert's scholarly writings and national reputation were rated least important. Forty-nine percent of attorneys said that the likelihood of receiving a favorable opinion was a "very important" or "essential" consideration in selecting an expert, although this did not necessarily imply that they wanted a dishonest opinion.

Conclusions: Nationally publicized "battles of the experts" shape public perceptions of forensic psychiatric practice. However, forensic work is typically performed by mental health professionals who are chosen because of their knowledge, communication skills, and local reputations.

NR528 Wednesday, June 3, 12 noon-2:00 p.m.

Psychiatric Residents' Views on Their Training and Experience Regarding Issues Related to Child Abuse

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Summary:

Purpose: The purpose of this study was to explore the views of psychiatric residents regarding the prevalence and impact of child physical (PA), sexual (SA), and emotional (EA) abuse; to gather residents' opinions regarding adequacy of training; and to acquire views on the sufficiency of treatment resources for the abused and their abusers.

Method: A 97-item survey questionnaire was distributed to 189 psychiatric residents as a section of the 1997 COPE examination.

Results: All 189 participants in the COPE examination participated in the survey on child abuse. Responses regarding prevalence of child sexual, physical, and emotional abuses among men, women, and psychiatric patients were generally accurate according to the literature. The tendency was for respondents to indicate a higher prevalence of child sexual abuse among females. Forty-five percent of respondents indicated that EA is increasing, while 29% indicated that SA is increasing; 28% indicated that PA is increasing.

Residents appear to be aware of the multi-factorial nature of childhood abuse and identified the particular importance of social/environmental factors such as parental drug abuse and violent social environment. Residents also recognized the significant association of post-traumatic stress disorder, borderline personality disorder, and dissociative disorders with childhood sexual abuse.

Of the 171 responses, 76.6% indicated that the amount of instruction on issues of childhood abuses was insufficient in *undergraduate* medical school. Similarly, 74.9% of respondents (n = 171) felt that instruction during their psychiatric residency has been insufficient despite the fact that the majority (76.7%) of psychiatric residents had seen 20 or more patients who were suffering the long-term effects of sexual abuse. The two major treatment methods identified for managing patients with effects of child abuse were individual psychotherapy and pharmacotherapy, although respondents also recognized the importance of referral to specialized centers (e.g., sexual assault center) and special group therapy for survivors.

Sixty-four percent of respondents (n = 170) felt that resources for the treatment of effects of child abuse are insufficient. Eighty-three percent of respondents (n = 148) felt that treatment resources for child *abusers* are insufficient.

Conclusion: Given the severe impact abuse can have on the mental health of the abused, it is disconcerting that the great majority of psychiatric residents surveyed feel that training at both the undergraduate and residency levels is insufficient in this area. For this reason further evaluation of medical school curricula and training experiences may be required. Increasing the profile of the issue of child abuse and the mental health impacts of abuse might also result in an enhancement of the treatment resources available to the abused and their abusers.

NR529 Wednesday, June 3, 12 noon-2:00 p.m.

The Effect of a Psychiatry and Family Medicine Educational Intervention on the Empathy Level of Medical Students

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Summary:

Empathy is important to teach to medical students. Psychiatry and family medicine faculty added Balint groups and other teaching related to empathy to a third-year family medicine clerkship. Balint groups consist of a leader and physicians who discuss ongoing doctor-patient relationship situations. Students' empathy was assessed pre and post clerkship. The Interpersonal Reactivity Index was self-administered. The empathic understanding subscale of the Barrett-Lennard Relationship Inventory was scored by a simulated patient during an encounter with the student. The empathy variables of the History-taking Rating Scale and the empathy subscale of the Countertransference Factors Inventory Revised were scored by a faculty observer. Cronbach's alpha for all scales was 0.78 or better. Scores of simulated patients and faculty were highly correlated ($p < 0.01$). Pre and post scores on the student's self-assessments did not change significantly. Post scores by the simulated patients and faculty were significantly higher than pre scores ($p <$ or $= 0.05$). Student's self-perception of empathy may not reflect empathy projected to patients and observers. The empathy of third-year medical students was increased after this clerkship, which included Balint groups and other interventions delivered by psychiatry and family medicine faculty.

NR530 Wednesday, June 3, 12 noon-2:00 p.m.

Serotonin and Antidepressant Treatment Outcome

Fabrice Duval, M.D., Department of Psychiatry, Centre Hospitalier, 27 rue du 4eme RSM, 68250 Rouffach 00110, France; M-Claude Mokrani, Ph.D., M-Antoine Crocq, M.D., Paul Bailey, M.D., Than Son Diep, M.D., Humberto Correa, M.D., Jean-Paul Macher, M.D.

Summary:

Objective: This study was carried out to investigate possible differences in outcome following treatment with different classes of antidepressants in depressed patients according to their pretreatment hormonal response to dextro-fenfluramine (D-FEN, a serotonergic (5-HT) releaser).

Methods: We examined adrenocorticotropic hormone (ACTH), cortisol (COR), and prolactin (PRL) responses to D-FEN (45 mg orally) in 33 drug-free DSM-IV major depressed inpatients and 17 healthy hospitalized controls. In order to increase the power of the D-FEN test, changes in ACTH, COR, and PRL after D-FEN were expressed as the maximum increment above the level at 60 minutes post-administration (Δ_{60}). Patients were subsequently treated for one month with three different types of antidepressants: fluoxetine (FLUOX (n = 11), a 5-HT reuptake inhibitor); maprotiline (MAP (n = 8), a norepinephrine (NA) reuptake inhibitor); and amitriptyline (AMI (n = 13), a 5-HT and NA reuptake inhibitor), and were then classified as responders or non-responders.

Results: Compared with controls, depressed patients showed lower Δ_{60}COR ($p < 0.008$) and Δ_{60}PRL values ($p < 0.08$). Responders to FLUOX showed lower Δ_{60}COR ($p < 0.002$) and Δ_{60}PRL ($p < 0.07$) than controls, and lower responses to D-FEN than responders to MAP (Δ_{60}ACTH: $p < 0.02$; Δ_{60}COR: $p < 0.05$; Δ_{60}PRL; $p < 0.04$) and than responders to AMI (Δ_{60}ACTH: $p < 0.03$; Δ_{60}COR; $p < 0.02$). On the other hand, responders to AMI showed a trend toward lower Δ_{60}PRL ($p < 0.07$) than controls.

Conclusions: These results suggest that pretreatment hormonal responses to D-FEN challenge might be helpful in predicting treatment outcome following selective antidepressants: a blunted response to D-FEN could orientate the clinician toward antidepressants that increase serotonergic transmission.

NR531 Wednesday, June 3, 12 noon-2:00 p.m.

Evaluation of Olanzapine Therapy in Schizophrenic and Schizoaffective Patients Resistant to Risperidone

Shyam D. Karki, Ph.D., Pharmacy, Monroe Community Hospital, 435 E Henrietta Road, Rochester NY 14620; Terrance J. Bellnier, M.P.A., Herman Burliss, M.D.

Summary:

Olanzapine, a recently approved drug, is reported to be effective in treating both positive and negative symptoms of schizophrenia. Recent reports indicate it to be more efficacious than risperidone in treating negative symptoms and to have fewer extrapyramidal side effects. Here we report our experience with olanzapine in schizophrenic and schizo-affective patients resistant to risperidone.

Forty-two patients were started on olanzapine. Four were discharged and 5 were discontinued before six months of treatment. Psychiatrists treated patients according to their practice patterns

and conducted all ratings; BPRS, AIMS, Simpson-Angus, and Barnes Akathisia at baseline, six weeks, and six months.

Patients had a mean ± (SD) age of 48 ± 14 years, length of stay of 11 ± 13 years, and were 73% men. Mean daily dose was 17 ± 4 mg. There was a change in BPRS from 54 ± 14 at baseline to 51 ± 15 at six weeks and 41 ± 13 at six months. There was a decrease of >20% in BPRS ratings in 21% of patients at six weeks and 31% of patients at six months. There was no significant change in other scales and side effect check.

In our study, 17 (40%) of 42 risperidone-resistant patients had a positive response.

NR532 Wednesday, June 3, 12 noon-2:00 p.m.

Cognitive Effect of Olanzapine

Ileana Berman, M.D., Department of Psychiatry, Taunton State Hosp/Harvard Med, Taunton State Hosp PO Box 4007, Taunton MA 02780; Rogelio D. Bayog, M.D., Christina Wu, B.A., David N. Osser, M.D., Alan R. Kershaw, R.P.H., Demetra Pappas, B.S.

Summary:

Objectives: There is evidence suggesting that, compared with typical antipsychotics, the atypical neuroleptics such as clozapine and risperidone have a superior beneficial effect. As part of an outcome study at a long-term state psychiatric hospital, we collected data about the effect of olanzapine (OLZ) on cognitive function in a group of patients with schizophrenic illness.

Method: We assessed a group of patients before and approximately six weeks after the initiation of OLZ, using the Positive and Negative Syndrome Scale for Schizophrenia (PANSS) and a cognitive battery that included tests of attention, visual and auditory memory, and executive function. Patients improved significantly on the positive symptom subscale of the PANSS ($p = 0.02$, $n = 20$) and scored better on the global cognitive measure as indicated by the Mini-Mental Status Examination ($p = 0.052$, $n = 20$). Our results are similar to the earlier findings we obtained in a similar group of patients treated with risperidone. When we compared the data obtained from the risperidone trial with those from the olanzapine trial we did not find statistically significant group differences in any of the cognitive measures we assessed.

Conclusions: These preliminary data suggest that, despite the strong anticholinergic properties, olanzapine had cognitive effect that resembled in many ways that of risperidone. However, to understand the cognitive effect of these agents we need larger and controlled studies.

NR533 Wednesday, June 3, 12 noon-2:00 p.m.

Outcome and Six-Month Follow-Up of Ultra-Rapid Opiate Detoxification

Bennett L. Oppenheim, Ph.D., City New York LLC, 1580 Lemoine Avenue Suite 8, Fort Lee NJ 07024; Anthony Albanese, M.D., Jean Field, Ph.D., John Eurtace, M.D., Phyllis Harrison-Ross, M.D., Clifford Gevirtz, M.D., John Ables, M.D.

Summary:

Objectives: (1) To evaluate the safety and efficacy of Ultra Rapid Opiate Detoxification ($UROD_{(SM)}$); and (2) to evaluate six-month outcome data of patients choosing this method.

Design: Two-center, parallel-group clinical trial.

Setting: Two academic medical centers.

Participants: Ninety-three men and 27 women, aged 18 to 55 years, with opiate dependency self-selected to undergo detoxification.

Interventions: $UROD_{(SM)}$ with naltrexone maintenance and an aftercare program. $UROD_{(SM)}$ and aftercare costs were the responsibility of the patients and/or their significant others.

Main Outcomes Measure: (1) Completion of $UROD_{(SM)}$ as determined by a nonreactive response to a naloxone challenge test under anesthesia and nonreactive response to naltrexone administration before discharge. (2) Patient outcome as determined at six-month follow-up of $UROD_{(SM)}$ patients' relapse-free status as documented by drug urinalysis, self-report, significant other reports, and/or therapist reports.

Results: 100% successful detoxification with $UROD_{(SM)}$ with low morbidity and no mortality. Relapse data were available for 111/123 procedures performed (90%), with 61/111 patients (55%) with reported relapse-free status at the six-month follow up interval.

Conclusions: For individuals who are addicted to opiates, the Ultra Rapid Opiate Detoxification method appears to be a viable treatment option.

NR534 Wednesday, June 3, 12 noon-2:00 p.m.

SSRIs in Pregnancy: Dose Management

Amy Hostetter, B.A., Department of Psychiatry, Emory University, 1639 Pierce Drive, Suite 4003, Atlanta GA 30322; Zachary N. Stowe, M.D., Alexis M. Llewellyn, B.A.

Summary:

The use of antidepressant medications during pregnancy has been reviewed by numerous groups; however, treatment strategies are lacking. One group reports on the impact of pregnancy on daily tricyclic dose requirements ($n = 8$) (Wisner et al., 1993). However, the effects of pregnancy on daily SSRI dose requirements have not been investigated. We prospectively followed 18 women who were treated with SSRIs during pregnancy: fluoxetine ($n = 8$), paroxetine ($n = 5$), sertraline ($n = 5$). Several women conceived on medications ($n = 4$), while the remaining women tapered off medications at knowledge of conception and relapsed or started medications for symptoms that presented during pregnancy ($n = 14$). The women on medication during the entire pregnancy (conception to delivery) had initial Beck Depression Inventory Scores of (BDI) scores of 11 ± 5.3 and 50% of these women had medication dose increased over the course of pregnancy. In contrast, for women who tapered off medication and relapsed or started medication during pregnancy, the initial BDI scores were 23 ± 7.8 and 85% of these women had medication increased during the course of pregnancy. The BDI scores at points of medication increase were 20.2 ± 9.9, and the average number of dose increases for this group was 2.3. Typically, the first dose increase occurred at 24 ± 5.1 weeks gestation and a second increase at 31 ± 5.9 weeks gestation. It appears that for women conceiving on medication, tapering and discontinuation may result in increased fetal exposure to maternal depression and increased medication. The proportion of women requiring increased medication, and a BDI score representing 87% of baseline measures at dosage increases suggest that routine dose adjustment at specific gestational periods may minimize fetal exposure to maternal stress. The potentially enhanced risk of both medication and illness exposure is unknown.

NR535 Wednesday, June 3, 12 noon-2:00 p.m.

Effective Treatment Schedule for the Continuation of ECT

Mustafa M. Husain, M.D., Univ TX Southwestern Med, 5323 Harry Hines Boulevard, Dallas TX 75235; Nicholas V. Camperlengo, M.D., Thomas J. Carmody, Ph.D., A. John Rush, M.D.

Summary:

Introduction: Electroconvulsive therapy (ECT) has been observed to be one of the most effective treatments for major depressive disorder. ECT is divided into three stages: (1) *Acute*

treatment, the goal of which is recovery from the current episode of illness. (2) *Continuation* treatment (usually the first six months post acute treatment), the objective of which is prevention of relapse into the same illness episode. (3) *Maintenance* treatment, employed to decrease the chance of recurrence of another episode.

It has been noted that a high percentage (70–90%) of patients treated with acute phase ECT relapse, most within the first two to three months, if not treated with continuation ECT or antidepressants. The goal of this study was to quantify the safest and most effective continuation ECT treatment schedule.

Methods: The effects of different continuation ECT schedules of 18 patients diagnosed with major depressive disorder were observed (seven male and 11 female).

The patients in this study were selected from a larger cohort of patients initially referred to our psychiatric center for A-ECT. After acute phase treatment was complete the patients were randomly assigned to one of two groups. The first group was a rapid taper (i.e., once a week, then once in two weeks, then once a month) and the second group received a more gradual taper (i.e. one a week X4, once every two weeks X4, and then once a month). Patients were evaluated with the 21-item Hamilton Rating Scale for Depression (Ham D) and the Folstein Mini-Mental Status Exam (30 item) prior to each treatment.

RESULTS:	Rapid Taper Group	Gradual Taper Group
Age: Mean years	69.75	65.8
Sex: Male/Female	3/5	4/6
# of patients	8	10
# relapsed during Course of ECT (%)	3 (40%)	(10%)
# of M-ECT Mean (Range)	6.1 (2–10)	9.7 (4–17)
Pre A-ECT Ham-D Mean (Range)	27.2 (21–33)	25.8 (17–33)
Post A-ECT Ham-D Mean (Range)	4.0 (0–14)	5.0 (0–15)
Post M-ECT Ham-D Mean (Range)	7.2 (0–22)	5.3 (1–17)

Conclusion: The results of this preliminary investigation supported our hypothesis that a more gradual taper course of continuation ECT provides a greater resistance to relapse than a more rapid taper. However, more studies of continuation ECT are needed, with larger numbers of patients in each group. In this way a time to relapse in different ECT schedules for continuation ECT may be elicited.

NR536 Wednesday, June 3, 12 noon-2:00 p.m.

Clinical and Quality of Life Superiority of Risperidone

Charles H. Merideth, M.D., Affiliated Research Inst, 8880 Rio San Diego Dr Ste 1090, San Diego CA 92108; Ramy A. Mahmoud, M.D., Luis F. Ramirez, M.D., Luella M. Engelhart, M.S.

Summary:

Real-world decision-makers need to understand the outcomes patients may expect under "naturalistic" conditions of usual care. These may not be accurately predicted by results obtained in the contrived setting of ordinary clinical trials of drug efficacy. The usual care setting can maximally challenge a new drug by introducing a broad array of patients, providers, and treatment practices as well as effects of insurance and cost. No atypical antipsychotic has demonstrated clinical benefit over conventional agents in a large trial of this type.

We report long-term clinical and quality of life outcomes from a 684-patient, multicenter, prospective, randomized effectiveness trial of the decision to treat with risperidone (RIS) vs. conventional (CON) antipsychotics after relapse. Patients were followed for one year with minimal protocol-induced interference in psychiatric care to best approximate the "natural" conditions faced by decision-makers.

Despite a surprising magnitude of no-drug intervals and homogenization of drug therapy, both of which would be expected to minimize differences between treatment arms, patients randomized to RIS had statistically superior PANSS (total, general psychopathology, positive, and negative symptoms), Barnes Akathisia, Simpson-Angus EPS, and mental quality of life scores (SF-36 MCS) when compared with CON patients over one year. The QOLI (Lehman) and SF-36 physical scale showed no difference.

NR537 Wednesday, June 3, 12 noon-2:00 p.m.

Double-Blind Study Comparing Tianeptine and Fluoxetine in Patients With ICD-10 Criteria for Depressive Disorders With or Without Somatic Syndrome

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Summary:

Objective: A multinational, multicentre study was performed in order to compare the efficacy and safety of tianeptine with those of fluoxetine in depressed patients fulfilling ICD-10 criteria for depressive episode, recurrent depressive disorder, or bipolar affective disorder (depressed), with or without somatic syndrome.

Method: This double-blind study used a parallel group design; after a one week run-in placebo-period, patients were allocated either to tianeptine (37.5 mg/d) or to fluoxetine (20 mg/d) for six weeks. Efficacy criteria were MADRS and CGI scale.

The somatic complaints of the patients were recorded using the AMDP5 scale.

Results: A total of 387 patients were included in this trial (191 in the tianeptine group and 196 in the fluoxetine group). At inclusion no significant difference was shown between both groups in respect to the main population criteria. Forty-six percent of the patients had a somatic syndrome. Initial MADRS scores were 32.1 and 31.9 in tianeptine and fluoxetine groups, respectively. Final MADRS scores were 15.7 and 15.8 in tianeptine and fluoxetine groups, respectively (ITT population) ($p = 0.944$). No statistical difference was found for all CGI items. MADRS responders were 58% of the patients treated with tianeptine and 56% of those treated with fluoxetine ($p = 0.678$). The survival curves analysis of responders again showed no difference between the two treatment groups.

Discontinuations of treatment occurred in 72 patients (36 in each group). The main reasons were adverse events (15 and 16 patients in tianeptine and fluoxetine groups, respectively) and inefficacy (12 patients with tianeptine and 8 patients with fluoxetine). There was no major difference between groups with respect of the safety parameters.

Conclusion: Both tianeptine and fluoxetine were shown to be effective and safe in the treatment of these depressed patients.

NR538 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Comparison of Day Treatment and Inpatient Treatment for Substance Abuse

Kristinn Tomasson, M.D., Department of Psychiatry, University Hospital, Eiriksgotu, Reykjavik 101, Iceland

Summary:

Objective: The purpose of the study was to compare the treatment results for substance abuse disorders one year after treatment between an inpatient ward and a day treatment facility.

Methods: In 1992 patients admitted for a four-week inpatient substance abuse program run by a psychiatrist, nurses, and alcohol counselors were evaluated with Diagnostic Interview Schedule and an alcohol history instrument (N = 123). One year later they were asked to fill in a questionnaire on outcome. In 1995 the inpatient ward was changed to a day-treatment facility, and subsequently, 142 patients were evaluated using Composite International Diagnostic Interview and the alcohol history instrument. One year later these patients were asked to fill in the questionnaire on outcome.

Results: The patients in day treatment were on average seven years younger (34 vs 41 years) and had fewer prior admissions (2.4 vs 4.1). At least 22% of them maintained sobriety while 17% of the inpatients did so. Although patients with polysubstance abuse, affective disorder, and panic/agoraphobia appeared to do better in day treatment, this difference disappeared after taking number of prior admission, age, and gender into account.

Conclusion: Day treatment for substance abuse gives at least the same results as inpatient treatment.

NR539 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Season and Admissions for Manic Depressive Illness

Diane K. Whitney, M.D., Spec Psychiatry, Homewood Health Center, 150 Delhi St., Guelph, ONT N1E 6K9, Canada; Verinder Sharma, M.D., Karen Kuneneman, B.A.

Summary:

Objective: The purpose of the study was to determine if a seasonal pattern existed for hospital admissions of manic depressive illness.

Method: Admission records at London Psychiatric Hospital, an Ontario provincial psychiatric hospital, were reviewed from 1920 to 1995. Mood state on admission, gender, and the influence of psychotropic medication were considered in the analysis.

Results: There was a preponderance of admissions in the summer for mania and a preponderance of admissions in spring and summer for depression, but neither reached statistical significance. With mixed state, the frequency of admissions peaked in the summer months (X^2 = 16.09,p < .01). When the data were examined by gender, a unique finding for women was the statistically significant peak of admissions for mixed state in the summer months. There was no significant difference between the seasonal pattern comparing the pre and post medication eras for each mood state.

Conclusions: The results of this study contradict the seasonal pattern traditionally reported in the literature. The authors believe that the seasonal peak of admissions for mixed state in the summer is a unique finding.

Financial support provided by the Department of Psychiatry, University of Western Ontario, London, Ontario, Canada.

NR540 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

The Community Re-Entry Program for Schizophrenia Patients

Donna A. Wirshing, M.D., Department of Psychiatry, West LAVA Medical Center, 11301 Wilshire Blvd. (B151-H), Los Angeles CA 90073; Elizabeth H. Rossotto, Ph.D., Jennifer B. Watson, M.S., Robert E. Benveniste, B.S., Stephen R. Marder, M.D., Robert P. Liberman, M.D., William C. Wirshing, M.D., Jim Mintz, Ph.D.

Summary:

Objective: A series of psychoeducational training classes have been designed to teach individuals with schizophrenia to recognize the signs and symptoms of their illness, the importance of medication treatment and side effects, to make and keep appointments, and elaborate viable emergency plans. These classes are implemented during brief hospitalizations (e.g., 8-15 days) for exacerbations of chronic schizophrenia. It is anticipated that the skills subjects obtain in these classes will decrease rehospitalization rates, bed-days, and increase compliance with medication and outpatient appointments.

Method: 24 inpatients with DSM-IV-diagnosed schizophrenia were randomly assigned to either the experimental psychosocial treatment group [the Community Re-Entry Program (CREP); N = 14] or to a standard series of illness education classes (N = 10). All subjects were given both a pre-test and a post-test of their knowledge of illness-pertinent issues within the CREP training module.

Results: The largest differences between groups were on individual test items that concerned making and keeping appointments (t = 2.4, df = 21, p = 0.03). Questions that focused on knowledge of illness and symptoms did not differ between groups (t = −0.21, p = 0.8, df = 21).

Conclusions: Our preliminary data demonstrate that both groups learned about their illness, but only the patients in the CREP group learned the importance of and the skills needed to make appointments. Whether or not these patients actually do follow up with appointments will be a crucial outcome measure in our long-term study.

NR541 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

To Evaluate the Cost-Effectiveness of Olanzolpine Compared to Haloperidol for Schizophrenia

Bryan M. Johnstone, Ph.D., Health Services, Eli Lilly and Company, Lilly Corporate Center, Indianapolis IN 46285; Robert L. Obenchain, Ph.D., Thomas W. Croghan, M.D., Sandra L. Tunis, Ph.D., Thomas J. Kniesner, Ph.D.

Summary:

Objective: To evaluate the cost-effectiveness of olanzapine (OLZ) in comparison with haloperidol (HAL) from an intent-to-treat perspective in a randomized, double-blind trial of 814 schizophrenic patients from the United States.

Method: One-year outcomes were compared using survival analysis. We used mixed effects linear models to impute missing values and two-sample bootstrap analysis to estimate a confidence interval for the incremental cost-effectiveness ratio.

Results: OLZ was significantly more effective than HAL, measured as number of BPRS-based symptom-free days experienced by patients (Wilcoxon χ^2 = 3.8, *df* = 1, *p* = .05). OLZ therapy was significantly less costly than HAL therapy, measured as total medical expenditures incurred by patients (Wilcoxon χ^2 = 17.6 *df* = 1, *p* = .0001). The difference in average annual costs per patient (OLZ - HAL) was −$US10,179. The difference in average number of symptom-free days (OLZ - HAL) was 17.72. The incremental cost-effectiveness ratio was −$US575 per symptom-free day. Resampling this result 5,000 times, the observed percentage of negative bootstrap estimates (indicating that OLZ therapy was more effective at lesser cost) was 96.5%.

Conclusions: OLZ displayed significant cost and effectiveness advantages for treatment of schizophrenia in comparison with HAL over one year from an intent-to-treat perspective.

Funding: Eli Lilly and Company

NR542 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Validity of SF36 for Severely Mentally Ill Patients

Sandra L. Tunis, Ph.D., Health Services, Eli Lilly And Company, Lilly Corporation Center, Indianapolis IN 46285; Thomas W. Croghan, M.D., Douglas K. Heilman, M.S.

Summary:

Objective: To adequately evaluate treatment strategies for schizophrenia, clinicians understand the degree to which their patient population is burdened by the disease. An instrument used to assess this burden must be psychometrically sound and appropriate for schizophrenia patients. This study was designed to determine the validity and reliability of a widely used measure of health status (the Medical Outcomes Study Short Form Health Survey [SF-36]) in a large sample of patients with schizophrenia, and to characterize the perceived level of physical and mental health functioning.

Method: Baseline SF-36 data from a subset of patients (n = 1155) in a clinical trial to compare olanzapine and haloperidol were used in several psychometric analyses.

Results: Strong evidence was obtained for the validity and reliability of the SF-36 for these severely mentally ill patients. Also, standardized scores showed marked deficits in physical role functioning, general health, vitality, emotional role functioning, mental health, and social functioning.

Conclusions: These results support the emerging picture that severe mental illness is associated with substantial decreases in physical functioning. Results also point to the importance of focusing interventions on the "negative" symptoms of schizophrenia including emotional and social deficits.

Funded by: Eli Lilly and Company

NR543 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Access to Psychiatric Care in Early Psychosis: Impact of an Early Psychosis Program in the Province of Nova Scotia

David Whitehorn, Ph.D., Psychiatry, Nova Scotia Hospital, P.O. Box 1004, Dartmouth, Canada B2Y 379; Qing Rui, M.D., Sheryl Clain, M.D., Lili C. Kopala, M.D.

Summary:

Introduction: As evidence mounts that early effective intervention in psychotic disorders may lead to improved long-term outcomes, there is a need to organize clinical services so as to maximize access to expert psychiatric care for persons with a first-episode psychosis (FEP). In October 1995 an early psychosis program (EPP) was established in the province of Nova Scotia, Canada, offering clinical service and province-wide professional education. Epidemiological data suggest that each year there will be between 83 and 139 FEP cases in Nova Scotia (assuming 15-25 cases/year/100,000 at risk). The objective of the program is for every FEP case in the province to have access to expert psychiatric care.

Methods: To evaluate the extent to which this objective was met, surveys were sent in June 1997 to all psychiatrists in Nova Scotia (n = 122) requesting information on FEP cases they had treated during the preceding year.

Results: Survey response rate was 41%. Thirty-nine FEP cases were reported in the surveys. During the same time period the EPP processed 57 referrals, 17 of which were also identified in the surveys. The total number of FEP cases that reached psychiatric care was estimated as (39 + ((57 – 17)) = 79.

Discussion: Of the 83 to 139 predicted new FEP cases, 79 were identified as receiving psychiatric care. 70% of the identified cases received specialized care from the EPP. The success of the EPP to date is aided by the universal access to health care in Canada. Nonetheless, a considerable number of new FEP cases are not receiving psychiatric care.

NR544 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Drug Utilization Patterns and Outcomes Associated with In-Hospital Treatment with Risperidone and Olanzapine

Ric M. Procyshyn, Ph.D., Division Medical, Riverview Hospital, 500 Lougheed Highway, Port Coquitlam BC V3C 4J2, Canada; Sylvia Zerjav, Pharm. D.

Summary:

Objective: To compare the drug usage patterns and outcomes associated with treatment with either risperidone or olanzapine within a hospital setting

Methods: This was a retrospective chart review of patients identified within inpatient wards at Riverview Hospital in British Columbia. Patients received either risperidone or olanzapine as their first new drug after reassessment (N = 30 per treatment group). Data were collected to a maximum of 120 days.

Results: Responders were defined as those patients with a clinically significant reduction in symptoms related to their primary diagnosis and who continued to take the drug. A significantly greater number of risperidone-treated patients responded to therapy (60%) compared to olanzapine-treated patients (27%) ($P < 0.01$). Forty percent of risperidone-treated patients were discharged on risperidone compared to 13% of olanzapine-treated patients discharged on olanzapine ($P < 0.05$). The mean dose of risperidone for responders was 4.12 ± 2.08 mg/day (CAD $3.96/day), while the mean dose of olanzapine was 17.19 ± 3.88 mg/day (CAD $11.52/day). Overall, there were no significant differences in side effects between the two groups. No significant differences were observed between groups for sex, age, duration of illness, or diagnosis.

Conclusions: Within this cohort of patients, treatment with olanzapine was associated with higher cost and less effectiveness than risperidone.

NR545 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Costs of Novel Antipsychotics in Clinical Practice

Donald E. Addington, M.D., Department of Psychiatry, University of Calgary, 1403 29th Street, NW, Calgary AB T2N 2T9, Canada; Jean M. Addington, Ph.D.

Summary:

Introduction: We report results on costs and outcome in clinical practice, which can complement data from clinical trials.

Methods: A cohort of 35 patients with a first-episode psychosis were treated in a nonrandomized open manner with either risperidone or olanzapine. Both medication and dose were individualized to minimize side effects and optimize benefits. Diagnoses ranged from brief psychotic disorder to schizophrenia (75%). Three months after program entry patients were assessed with the Positive and Negative Syndrome Scale, the Calgary Depression Scale for Schizophrenia, the Extrapyramidal Symptom Rating Scale, and the Barnes Akathisia Scale.

Results: Diagnoses were similar for both groups. At three months, nine patients were taking risperidone mean dose 2.3 mg, and 26 patients were taking olanzapine mean dose 9.9 mg. Patients showed no significant difference in positive, negative, depressive, or extrapyramidal symptoms. Medication costs in Canadian dollars did differ significantly. Costs of risperidone were $2.20 per day, costs of olanzapine were $6.60 dollars per day.

Conclusions: In clinical practice with this cohort of patients the daily costs of risperidone were significantly lower than for olanzapine.

NR546 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

The Impact of Risperidone on Seclusion and Restraints at a State Psychiatric Hospital

Kadiamada N. Chengappa, M.D., WPIC, 3811 O'Hara St., Pittsburgh, PA 15213; Jaspreet S. Brar, M.D., Haranath Parepally, M.D., Rick Brienzo, M.S., Rebecca Zoretich, M.Ed., Anthony Palmer, Ph.D., Aziz Gopalani, M.D., James Baird, Ph.D., Nina R. Schooler, Ph.D.

Summary:

The impact of risperidone on seclusion and restraints was studied at a state hospital among patients who received risperidone for at least one month and who had experienced either of these interventions one or more times during the year before risperidone was initiated. Forty-six patients (23 men and 23 women, 31 Caucasian, 15 African-American; schizophrenia or schizoaffective mainly, few bipolar) were included; 28 patients experienced seclusion only, 11 restraints only, and seven both. The mean dose of risperidone was 5.8 mg/day. During the year after risperidone was initiated, the average number of seclusion incidents decreased by more than 50% (from 4.0 to 1.8, $p < 0.02$), as did the number of hours spent in seclusion (11.6 to 5.6, $p < 0.001$), and the number of restraint incidents decreased more than three-fold (from seven to two, $p < 0.01$). The numbers of hours spent in restraint also decreased, but the difference was not statistically significant. Hospital privileges doubled after risperidone was started ($p < 0.01$). There were no statistically significant changes in the use of p.r.n. medications after risperidone treatment. The results indicate that risperidone may prove particularly useful for difficult-to-treat patients, and significantly improve their morale and quality of life.

NR547 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

How Clinicians Respond to Missed Appointments

Jordan W. Smoller, M.D., Department of Psychiatry, Mass General Hospital, 15 Parkman Street, WACC 815, Boston MA 02114; Renee McLean, B.A., Michael W. Otto, Ph.D., Mark H. Pollack, M.D.

Summary:

Missed patient appointments are a common occurrence but have received little attention in the psychiatric literature. Clinicians' responses to "no-shows" appear to vary widely, and no accepted standard of care exists. To ascertain predictors of clinician responses to missed appointments, an anonymous survey was mailed to clinicians at two teaching hospitals: a general medical hospital and a private psychiatric hospital. The sample included 250 psychiatrists, 203 non-MD therapists (psychologists and social workers), and 431 internists. Clinicians were asked about the sequence of steps they would take in response to a hypothetical "high-risk" and "low-risk" patient who failed to keep an appointment and had not cancelled in advance. Approximately 40% of the clinicians responded (N = 339) and response rates did not differ by site or profession. Psychiatrists were initially two to six times less likely to take steps to contact a patient after a missed appointment compared with nonphysician therapists and internists. A number of clinical variables were associated with clinicians' responses including medicolegal concerns, hospital site, support staff availability, and billing practices. The results suggest that clinicians' responses to missed appointments are determined by a complex mixture of influences rather than adherence to a readily definable "standard of care."

NR548 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Compliance with SSRI Treatment in Adolescents

David L. Pogge, Ph.D., Department of Psychology, Four Winds Hospital, 800 Cross River Road, Katonah NY 11704; Julie Kraus, B.A., Susan R. Borgaro, M.A., Anne Lloyd, M.A., John Stokes, Ph.D., Melissa Singer, B.A., Philip D. Harvey, Ph.D.

Summary:

Little research has been performed on the prediction of medication compliance in adolescent psychiatric patients. With FDA approval of SSRI use in adolescent and child patients, such information may be critical for the development of optimal treatment strategies. In this study 50 adolescent psychiatric inpatients with depression diagnoses who were treated with SSRI antidepressant medications were followed up 30 and 120 days post discharge and examined for medication compliance. Baseline severity of depression and global psychopathology was examined, as was clinical change during hospitalization and duration of the inpatient medication trial. For the first 22 patients, medication compliance was 64% at both follow ups. Regression analysis found that the best predictor of 30-day compliance was global clinical change during hospital treatment, accounting for 40% of the variance in compliance. Specific changes in depression did not account for any variance in compliance when global change was considered. The best predictor of 120-day compliance was 30-day compliance, also accounting for 40% of the variance. Although this is not a formal efficacy study, the results indicate that adolescents with depression who experience clinical change during the initial stages of medication treatment are likely to comply with treatment for extended periods after discharge. Later research should address the specificity of medication effects, as compared to psychotherapeutic or milieu effects, in order to identify the specific predictors of medication compliance.

NR549 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Children in Foster Care: Unmet Need for Services

Bonnie T. Zima, M.D., Department of Psychiatry, UCLA-NPI, 300 Medical Plaza, Box 956967, Los Angeles CA 90095; Regina Bussing, M.D., Mel Widawski, M.A., Aaron Kaufman, B.A., Thomas R. Belin, Ph.D., Madeleine Zwart, B.A.

Summary:

Objective: To describe the level of unmet need for mental health services among school-aged children in foster care.

Method: Children were randomly selected from three L.A. County regions deemed to have the highest rates of out-of-home placements. On-site interviews of 226 children (aged 6–12 years) and their foster parents were conducted in two stages: (1) a lay interview using standardized child mental health measures followed by (2) a clinician evaluation.

Results: Almost one-third (31%) of the children tested in the clinical range for a behavior problem, 7% screened positive for depression, 36% tested positive for PTSD, and more than three-fourths (78%) were deemed to have at least moderate impairment (GAF < 61). Seventy-three percent of the children with symptoms of a behavior problem had ever received outpatient mental health services, 60% of those with depressive symptoms had ever received such services, and slightly more than one-half (52%) of children with PTSD symptoms had at least one contact with outpatient mental health services.

Conclusion: More than one-quarter of children who screened positive for a mental health problem had not received outpatient mental health services in their lifetime, a level of unmet need much smaller than that estimated for children in larger epidemiologic studies.

NR550 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Effectiveness of Outreach to Elderly Residents of Public Housing

Peter V. Rabins, M.D., Department of Psychiatry, Johns Hopkins Hospital, 600 N. Wolfe Street/Meyer 279, Baltimore

MD 21287-7279; Betty S. Black, Ph.D., Robert P. Roca, M.D., Marsden H. McGuire, M.D., Pearl German, Sc.D.

Summary:

Eighty percent of 945 individuals residing in six public housing sites for the elderly in Baltimore, Maryland, consented to participate in a trial of psychiatric treatment that combined elements of the PACT model of Stein and Test (outreach and in-home treatment) and the Gatekeeper model of Rashko (using community workers as case finders). A two-stage epidemiologic evaluation was used to identify subjects meeting DSM-IV criteria for psychiatric disorder; 36.9% of participating subjects met criteria for at least one psychiatric disorder. At baseline, between scores on the Brief Psychiatric Rating Scale (BPRS) and Montgomery Asberg Depression Rating Scale (MADRS) were similar at the treatment and comparison sites. The intervention was carried out in three housing sites and the other three served as nontreatment comparison sites. After 26 months the epidemiologic study was repeated.

Residents with a psychiatric disorder who resided at the treatment sites had significantly lower BPRS ($p = <.001$) and MADRS rating scales ($p = <.001$). There was no difference in rates of nursing home placement between treatment and nontreatment sites. These results demonstrate that a treatment model that targets persons with serious psychiatric illness who reside in a setting in which there are high rates of psychiatric disorder (public housing for the elderly, in this study) and that utilizes community workers as case finders and psychiatric nurses as case evaluators and treatment deliverers can effectively decrease the level of psychiatric symptoms in persons with a psychiatric disorder.

NR551 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Somatic Issues in Persons with Severe Psychiatric Illness and Homelessness

Ann L. Hackman, M.D., University of MD, 630 W Fayette Street Act Team, Baltimore MD 21201; Lisa B. Dixon, M.D., Leticia T. Postrado, Ph.D., Janine C. Delahanty, M.A.

Summary:

Objectives: Homeless persons with severe mental illness have been found to have poorer physical health status than other populations. This study describes the physical health status of a group of homeless persons with severe mental illness and the relationship of health status to clinical and demographic characteristics, use of health services, and other outcomes.

Methods: 150 homeless persons with SMI who were randomized to a program of assertive community treatment (PACT) or traditional mental health services were studied (67% men, 72% caucasian). Baseline, 2-, 6-, and 12 month interviews were conducted using the Short Form 36 (SF36) from the Medical Outcomes Survey (MOS). Monthly client interviews provided information on service use.

Results: A total of 95 (63%) persons reported their general health as fair or poor; 84 (56%) persons reported experiencing moderate to severe pain. Women reported significantly better health than men ($p < .01$) but worse physical functioning ($p < .02$). Persons with higher educational levels reported significantly worse health ($p < .05$). Greater physical pain was associated with more somatic ER visits ($p < .05$) and more outpatient substance abuse treatment ($p < .05$), but not use of inpatient and outpatient somatic services. Health functioning was not associated with use of psychiatric services.

Conclusions: The poor health and degree of pain reported by these homeless persons is noteworthy. The fact that ER but not outpatient somatic care use is increased suggests the need to assist these individuals in using services appropriately and cost-effectively.

NR552 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

How do Gastroenterologists Address the Psychosocial Components of Irritable Bowel Syndrome?

Bradley N. Gaynes, M.D., Department of Psychiatry, University of North Carolina, CB#7160, Chapel Hill NC 27599; Mark W. Russo, M.D., Douglas A. Drossman

Summary:

Objective: To characterize how gastroenterologists address the psychosocial components of irritable bowel syndrome (IBS), a common disorder where 40–60% of patients have comorbid psychiatric illness.

Method: We conducted a nationwide cross-sectional survey of 900 randomly selected American Gastroenterological Association members to evaluate attitudes, assessment, and management of psychosocial components of IBS.

Results: Of 818 eligible gastroenterologists, 365 responded (45% response rate). Most gastroenterologists agreed that psychosocial factors were important in the clinical expression of IBS (97%) and that gastroenterologists were responsible for taking a psychosocial history (87%). They reported psychosocial factors were important in 67% of IBS patients, and they typically assessed pertinent psychosocial factors. Management, however, infrequently involved psychosocial interventions. Antidepressants were used in less than 1/3 of patients, and psychiatric/psychologic consultation was used for 20%. Referral for psychotherapy (16% of patients) or cognitive-behavioral therapy (14%) was infrequent. Taking responsibility for addressing psychosocial issues was endorsed by only 62% of gastroenterologists, and only 52% felt the literature supported psychosocial interventions.

Conclusions: While gastroenterologists appreciate the importance of psychosocial factors in the expression and assessment of IBS, psychosocial interventions may be underutilized. Further research is needed to identify which patients would benefit from psychosocial interventions and whether these interventions are used appropriately.

NR553 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Do Patients and Clinicians Agree on Medication Compliance?

Marcia T. Valenstein, M.D., Psychiatry, University of Michigan, 400 E Eisenhower, Ann Arbor MI 48109; Kristen L. Barry, Ph.D., Frederic C. Blow, Ph.D., Laurel Copeland, M.P.H., Esther Ullman, M.S.W.

Summary:

Objectives: We examined whether seriously mentally ill (SMI) veterans and their clinicians agree about medication compliance; whether agreement increases with exposure to enhanced treatment programs; and whether compliance reports are associated with admission.

Methods: 1369 SMI veterans and their treating clinicians judged medication compliance at enrollment into enhanced programs or comparison "standard care" at 14 VA facilities. They reassessed medication compliance one and two years after enrollment. Overall agreement, agreement about compliance and noncompliance, and Cohen's kappa statistics were determined as was the association between compliance reports and admission.

Results: Patients rated themselves as significantly more compliant with medication than did clinicians. (Sign test; $p < 0.0001$). Cohen's kappa at enrollment was 0.095, indicating little agreement beyond chance. Kappas increased significantly at one and two years for the enhanced program patients, but continued to indicate poor to modest levels of agreement. There was a trend towards more agreement between enhanced program patients and clinicians than comparison program patients and clinicians (OR = 1.3,

p = .08). Clinician and patient reports of good compliance were associated with decreased odds of admission. (OR = 0.50, p < .0001; OR = 0.54, p < .05, respectively).

Conclusions: SMI patients and clinicians may have difficulty openly discussing medication use. Compliance-improving strategies that do not depend upon self-monitoring and disclosure of noncompliance such as "eyes on" medication and active case management may need to be emphasized.

NR554 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Psychiatric Diagnosis and Treatment in Elderly Primary Care Patients

Marcia T. Valenstein, M.D., Psychiatry, University of Michigan, 400 E Eisenhower, Ann Arbor MI 48109; Helen C. Kales, M.D., Alan M. Mellow, M.D., Kristen L. Barry, Ph.D., Frederic C. Blow, Ph.D., Gregory W. Dalack, M.D., Sara R. Figueroa, M.D.

Summary:

Objectives: To determine whether patient age is associated with the likelihood of psychiatric diagnosis and mental health treatment in a busy primary care clinic and, if so, whether implementing a screening and diagnostic instrument, the PRIME-MD, modifies these age-related differences.

Methods: Analysis of data from a prospective study of the impact of clinic support on use of the PRIME-MD, psychiatric diagnosis, and provider intervention in 952 younger and 1135 older patients (N = 2,087) attending a general medicine clinic. Outcome measures were: 1) PRIME-MD use, 2) overall and new psychiatric diagnosis, and 3) provider intervention.

Results: Older and younger patients did not differ in rates of PRIME-MD use. However, older patients were less likely to be diagnosed with a psychiatric disorder (OR = 0.42, p < 0.001), even with adjustment for "highly positive" screening questionnaires (OR = 0.45; p < 0.001). Older patients also had decreased rates of intervention, even with adjustment for whether a psychiatric diagnosis (OR = 0.62, p = .015) or a "new" psychiatric diagnosis (OR = 0.36, p < 0.001) was made during the study visit. Use of the PRIME-MD increased rates of diagnosis and intervention but did not alter age-related disparities.

Conclusions: Decreased intervention in older primary care patients is of concern. Screening with the PRIME-MD is likely to increase diagnosis and intervention but will need to be accompanied by additional measures to modify provider practices and eliminate age-related disparities.

Acknowledgment: This research was supported by an unrestricted educational grant from the Pfizer Corporation

NR555 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Collaborative Care of Depressed Patients in the Community

Marcia T. Valenstein, M.D., Psychiatry, University of Michigan, 400 E Eisenhower, Ann Arbor MI 48109; Sherry Becker, M.P.H., Michael Klinkman, M.D., Frederic C. Blow, Ph.D., Kristen L. Barry, Ph.D., Anjan Sattar, M.D., Elizabeth Hill, Ph.D.

Summary:

Objectives: Depressed patients are often treated solely by their primary care physicians (PCPs), although there is evidence that collaborative treatment by PCPs and mental health providers (MHPs) may result in better outcomes. In this study, we describe PCPs' perceptions of the frequency of concurrent treatment and the degree of communication and collaboration in these treatments. We also explore predictors of collaboration.

Methods: Distribution of a survey on concurrent treatment of depressed patients to a random sample of family practitioners in Michigan (N = 282). Primary analyses were descriptive statistics (point estimation) of PCP practice patterns. Secondary analyses explored predictors of "collaborative practice" with multivariate regression, using a composite index of collaborative care.

Results: 163 PCPs (58%) returned the survey. PCPs estimated that 18%; 95% CI [16%, 20%] of their patients had significant depressive symptoms, and that they co-treated 34%; 95% CI [31%, 38%] of these patients with MHPs. PCPs indicated they made contact with co-treating MHPs in about half of shared cases through letters, telephone, or in person, but this was seldom for joint treatment planning. In multivariate regression, co-location of practices (in the same building) was strongly associated with increased interaction and collaboration (p < .001). Reimbursement mix, PCP sex, and graduation year did not predict collaboration.

Conclusions: Concurrent treatment of depressed patients is relatively common. However, if concurrent treatment is to be collaborative—with provider contact, regular communication, and a high degree of provider comfort—co-location of practices appears important.

Acknowledgment: This research was supported by a grant from the Blue Cross/Blue Shield Foundation of Michigan.

NR556 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Chronic Medical Conditions and Major Depression in the Canadian General Population

Scott B. Patten, M.D., Dept Community Hlth Sci, 3330 Hospital Dr NW, Calgary AB T2N 4G5, Canada

Summary:

Objectives: To evaluate associations between chronic medical conditions and major depression in the Canadian population, and to examine the impact of these conditions on health care use and disability.

Methods: Data from the first wave of the Canadian National Population Health Survey (NPHS) were used. The NPHS utilized a probability sample of 17,626 Canadians and included questions about long-term medical conditions, health care utilization, disability, and also a brief predictor of major depression.

Results: A variety of chronic medical conditions were associated with an elevated prevalence of major depression. There was no evidence that subjects with major depression and comorbid medical conditions were more likely to be admitted to hospital or that they were more likely to be high utilizers of physician services. However, major depression in subjects with chronic medical conditions was associated with a greater than expected degree of disability.

Conclusions: A variety of chronic medical conditions is associated with an increased frequency of major depression in the Canadian population. Comorbid major depression and chronic medical conditions are associated with a considerable burden of disability, but not with excessive utilization.

This study was supported by a grant from the National Health Research and Development Program, Health and Welfare Canada: 6609-2085-NPHS.

NR557 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Psychiatric Morbidity in Primary Health Care of an Urban Area

Snezana Kuzmanovic, M.D., Center for Mental Community, Kozacinskog No 1 Belgrade, Belgrade YU 11000, Fr Yugoslavia; Marko Munjiza, Ph.D., Smildka Popovic-Deusic, Ph.D., Dejan Mandic, M.D., Vladah Starcevic, M.D., Natasa Ljubomirovic; M.D., Milorad Veliekovic, Ph.D.

Summary:

Objective: To ivestigate the prevalence rates of nonpsychotic disturbances in Belgrade's central urban area.

Method: There are approximately 100,000 adult inhabitants in central Belgrade's urban area. We randomly selected 1000 medical charts from three public health clinics in this area. Ten psychiatrists have interviewed subjects who agreed to participate in this research (85% of total number). The mean age of subjects was 42.7, SD ± 7.8 and age range was 18-76. Diagnostic Interview Schedule (DIS) was used for screening the patients and ICD-X diagnostic criteria.

Results: General prevalence rate for nonpsychotic disturbances was 27.6 (42.3% for females and 21.4 for males). Prevalence curve had bimodal shape with greatest values in year ranges of 25-34 and 45-54 ($p = 0.005$). Analysis of different clinical entities pointed out specific prevalence rates: the most frequent were dysthimia and anxious-depressive syndrome (15.4%); these disturbances were mostly represented among younger subjects ($p = 0.042$). The next were anxious disorders (12.4%), somatoform disorders (7.6%), personality disorders (6.4%), and tension headache (4.1%). General rates for females were much higher than for males (37.2% vs. 21.3%, $p = 0.045$).

Conclusion: Results obtained in this study are similar to those from studies conducted in urban areas worldwide (prevalence rates varied from 26 to 75%). We have observed tendency of growing up of nonpsychotic disorders compared with earlier studies in our community. Clinical sample randomly selected from given population is important for further research of possible etiologic factors, course, and outcome of these disorders, in the way of prospective clinical and epidemiological study.

NR558 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Rural Patients' Satisfaction with Telepsychiatry

Beverly N. Jones, M.D., Department of Psychiatry, Bowman Gray School of Med, Medical Center Boulevard, Winston-Salem NC 27157; Anthony A. Frasca, Wayne Cohen

Summary:

Objective: To identify geographical factors influencing geriatric patients' satisfaction with telepsychiatry.

Method: Patients on a geriatric psychiatry unit were interviewed using low-cost PC-based videoconferencing equipment. Ninety-four patients completed the interview. A psychiatrist administered a semistructured interview using videoconferencing equipment to see and hear the patient while a face-to-face rater simultaneously observed the participant and completed standardized ratings of symptoms and behavior. Participants completed a satisfaction questionnaire that compared the telemedicine interview with traditional face-to-face interview on a five-point Likert scale. Descriptive analysis of the satisfaction ratings was made. A t-test comparison of satisfaction ratings based on whether patients resided in urban or rural counties was made.

Results: The average satisfaction rating of the telemedicine interview was 2.89 where 3 indicated acceptance, confidence, and comfort equivalent to a traditional face-to-face interview. The average satisfaction rating of urban patients was 2.76, while the average satisfaction rating of rural patients was 2.95 ($t = 1.75$, $p < .041$). Three individual satisfaction items were significantly different between the rural and urban patients: Q1 "Confidence" ($p < .025$); Q2 "Acceptance" ($p < .029$); Q6 "Willingness to use repeatedly" ($p < .031$). Male patients had higher satisfaction scores than female patients (mean 3.04 vs. 2.51, $t = 1.99$, $p < 0.05$).

Conclusions: Participants' ratings of satisfaction and comfort indicate that telemedicine assessment of geriatric depression is generally acceptable to patients. However, these preliminary results indicate that rural patients' acceptance of telepsychiatry differs from that of urban residents, and that males were more satisfied than females. Proximity to medical care as well as gender may influence patients' acceptance of new mental health service delivery options such as telepsychiatry.

Supported by grant MH51552 (RISP) from the National Institutes of Health.

NR559 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Quality-of-Life Correlates in Community Living Older Adults

Cheryl A. Kennedy, M.D., Department of Psychiatry, UMDNJ-NJ Medical School, 185 South Orange Avenue, Newark NJ 07103; Bart Holland, Ph.D., Neil Kothari, B.S., Matthew Ryan, B.S., Martin Kron, B.S., Saima Latif, B.S., Mohamed Gaffoor, B.S., Beena Jani, B.S., Laura Aizenman, B.S.

Summary:

Objective: To identify psychosocial factors that, though related, are not traditionally the focus of psychiatric care, but can impact quality of life in community-living older adults.

Methods: At community-based settings, interviewers assessed depression (Zung Inventory), cognitive function, social support, nutritional risk (Nutrition Screening Initiative Checklist), and did clinical screening for taste and smell; multivariate regression analyzed these variables as determinants of three SF-36 subscales of general health (GH), physical functioning (PF), and vitality.

Results: Over 400 adults participated (females = 321; whites = 231; mean age = 76; range = 60–94). Fourteen percent had mild depression; 4% moderate, and 2% severe depression. Depression, lack of social support, and nutritional risk were significantly and independently associated with poor GH ($p = 0.05$ or less); PF was significantly and independently associated with nutritional risk, poor social support, and poor cognitive function ($p < 0.001$); Vitality was significantly and independently associated with depression, nutritional risk, and social support ($p < 0.001$).

Discussion: This study demonstrates the feasibility of community-level screening to identify quality of life cofactors that are amenable to intervention in the aging population. Psychiatrists are uniquely positioned to identify psychosocial variables that may present barriers to comprehensive care and effective treatment for depressed older adults.

Supported by an unrestricted grant from Accuhealth, Inc., Bronx, NY

NR560 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Depressive Symptoms, Medical Illness and Functional Status in Older Primary Care Patients

Telva E. Olivares, M.D., Psychiatry, University of Rochester, 3 Buchanan Rd, Pittsford NY 14534-3112; Jeffrey M. Lyness, M.D., Deborah A. King, Ph.D., Christopher Cox, Ph.D., Cynthia Doane, M.S., Eric D. Caine, M.D.

Summary:

The association of depressive symptoms with functional disability has been noted in several studies; however, most of these findings were limited by the use of self-report methodology. We used examiner ratings to study the relationships of depressive symptoms, diagnoses, and medical illness burden to overall functional status, hypothesizing that depression would be independently associated with functional disability. Based on our previously published work with psychiatric inpatients, we also hypothesized that functional measures of psychiatric and medical status would be more strongly associated with overall disability than would symptom-based measures.

Subjects were 305 patients age 60 or older recruited from primary care settings. Measures obtained included psychiatric diagnosis (Structured Clinical Interview for DSM-III-R), depressive symptom severity (Hamilton Rating Scale for Depression [Ham-D]), psychiatric function (Global Assessment of Functioning Scale [GAF]), cumulative organ system pathology (Cumulative Illness

Rating Scale [CIRS]), medical disability (Karnofsky Performance Status Scale [KPSS]), and overall functional status (Instrumental Activities of Daily Living [IADL] and Physical Self-Maintenance Scale [PSMS]). Poisson regression analyses were used to determine the independent associations of predictor variables to overall functional status, controlling for age, gender, and education.

Both the GAF and the KPSS were independently associated with poorer function on IADL and PSMS, with the KPSS accounting for a larger proportion of the variance. Neither Ham-D nor the CIRS were independently associated with functional status. Depressive diagnosis was independently associated with poorer function on the IADL but not on the PSMS, although this association did not remain after controlling for GAF.

Our results confirmed our hypotheses, supporting the importance of depression and psychiatric disability in older adults seen in primary care settings, and underscoring the need for researchers and clinicians to measure function as a related but separable construct when assessing symptoms, diagnosis, and medical burden.

Funding Source NIMH grants #MH01113 and #MH18911.

NR561 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Family Treatment Decisions in Alzheimer's Disease

Paul A. Kettl, M.D., Dept of Psychiatry, Penn State University, P.O. Box 850, Hershey PA 17033-0850

Summary:

Objective: To identify characteristics of patients whose family members direct palliative treatment for Alzheimer's disease.

Method: Family members of 60 of 61 sequentially admitted psychiatric inpatients with DSM-IV Alzheimer's disease were asked if they wanted donepezil and/or vitamin E treatment for their affected family members. The treatment group (N = 28) was compared with the nontreatment group (N = 32) for age and sex, severity of dementia (measured by MMSE), and where they were living before and after admission using chi square statistics.

Results: Both groups had an average age of 81, and were 21%–22% male. MMSE was higher in patients whose families directed treatment (16.4 vs. 10.3), (p = 0.08); 50% of the treatment group were admitted from home compared with 34% of the no-treatment group (NS). However, 32% of the treatment group returned home compared with only 9% of the no-treatment group (p = 0.053).

Conclusions: When palliative treatment for Alzheimer's disease is offered to all patients, family members of patients less severely demented and more likely to live at home may be more likely to accept available treatment.

NR562 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Rehabilitation and Quality of Life in Schizophrenia

Mario Guazzelli, M.D., Clinical Psichiatrica, Roma 67, Pisa 56100, Italy; Laura Palagini, M.D., Paolo Ardito, M.D., Loretta Giuntoli, Ph.D., Roberta Nassi, M.D., Patricia Panicucci, M.D., Pietro Pietrini, M.D.

Summary:

Objective: We previously showed that long-term psychosocial rehabilitation (PSR) in chronic schizophrenics (CS) patients living in a residential community remarkably improved occupational and interpersonal skills, as measured by COTES (1), and clinical symptoms. This study evaluated the effect of PSR on quality of life (QL) in CS patients.

Methods: BPRS, SAPS, SANS and QLS (2) were administered at T0 (January 1997) and T1 (December 1997) to 25 CS patients (DSM-IV criteria; mean age 30 ± 6 yrs; illness duration 13 ± 5 yrs; stay in the community 1–5 yrs) actually included in a clinical study on the effects of PSR on long-term course of schizophrenia in living in a residential community.

Results: COTES total score (T0 vs. T1): 60 ± 17 vs. 49 ± 17, $p < .05$; BPRS total score: 64 ± 15 vs. 57 ± 14, $p < .05$; SAPS items: Hallucinations 2.8 ± 1.7 vs. 2.1 ± 1.7, $p < .05$; Delusions 3.3 ± 1.6 vs 2.8 ± 1.5, ns; Bizarre Behaviors 3.9 ± 1.1 vs. 3.4 ± 1.2, ns; Formal Thought Disorders 3.5 ± 1.3 vs. 2.9 ± 1.4, ns; SANS items: Affective Flattening 3.1 ± 1.6 vs. 2.7 ± 1.7, $p < .05$, Alogia 3.0 ± 1.8 vs. 2.7 ± 1.6, ns; Avolition 3.4 ± 1.2 vs. 3.3 ± 1.2, ns; Anhedonia 3.7 ± 1.5 vs. 3.0 ± 1.6, $p < .001$; QLS total score: 9.4 ± 7.6 vs. 14.8 ± 9.3, ns.

Discussion: Despite significant changes in some behavioral and clinical measures, no significant improvement in QL was observed. While a relatively low sensitivity in QLS could partially account for these results, these findings also suggest that a more extensive amelioration of the schizophrenic symptoms, particularly of the positive ones, may be required for QL to improve.

NR563 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Cost-Effectiveness: Screening for Clinical Trials

Nina L. Miller, Ph.D., Psychiatry, New York Hospital, 525 E. 68th Street Box 147, New York NY 10021; John C. Markowitz, M.D., James H. Kocsis, M.D., Susan Brisco, B.A., Andrew C. Leon, Ph.D., Jessica L. Garno, B.S.

Summary:

Objective: This study evaluates the relationship between interviewer level of experience and the positive predictive value and cost of telephone screening of subjects for randomized clinical trials.

Methods: Respondents to ads for clinical trials involving treatment of depression received brief, semistructured telephone interviews performed either by research assistants (RA's) or by a senior research psychiatrist. Duration of each phone interview was recorded. Those who met criteria based on the phone interview were then interviewed in person using the SCID-P.

Results: Of 347 telephone screens, 162 were administered by the M.D. and 185 by two RA's. The RA's were not significantly different from the M.D. in the proportion of phone screen positives that were SCID positive or in the proportion of phone screen positives that were randomized. The M.D. performed phone screens significantly faster ($p < .001$) than the RA's. The M.D.'s higher salary generated a cost per randomized subject nearly twice that of RA's.

Conclusions: The results suggest greater cost-effectiveness for the use of trained research assistants for telephone screening of depressed patients for clinical trials. Further studies would be needed to determine whether the findings reported would generalize to other research settings or patient populations.

Funded in part by a grant from the NIMH (MH49635-02).

NR564 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Do Psychiatrists Prescribe Neuroleptics in the Same Manner to Men and to Women?

Isabelle Gasquet, M.D., Hop. P. Brousse, Unite De Samte, 12 Avenue P.V. Counturier, Nillejulf, France; Annie Fourrier, M.D., Bernard Begaud, P.R., Marie-Pierre Allicar, M.D., Myriam Bouhassira, M.D., Jean-Pierre Lepine, M.D.

Summary:

Objective: Neuroleptics are prescribed to men and women with equal frequency, but the prescription patterns probably differ, however, according to sex, in the same manner as for other psychotropic drugs. For patients taking neuroleptics prescribed by psychiatrists, we investigated whether women are treated differently from men for the same disorders.

Method: A study on a given day was performed in 1996 on a representative sample (type of practice and geographical distribution) of French psychiatrists. A questionnaire was filled in by the psychiatrist for each prescription of a neuroleptic drug and 1754 patients were included. The questionnaire included the diagnoses (international disease classification ICD-10 criteria) and the products prescribed. Single variant and multivariate analyses were performed.

Results: Compared with men, women present less frequently with certain diagnoses (schizoaffective disorders, depressive disorders, disturbances in eating behavior), more frequently other diagnoses (schizophrenic disorders, use of products, behavioural disorders), with a higher number of diagnoses (1.9 versus 1.8, $p = 0.04$). For the same diagnosis and treatment duration, there are fewer prescriptions of phenothiazines (OR = 0.08, $p = 0.03$) and more non-imipramine antidepressants (OR = 1.5, $p = 0.006$) in women than in men. For the same diagnosis, treatment duration and type and number of neuroleptics, there are more prescriptions for antihypotensives (OR = 1.5, $p = 0.04$) and laxatives (OR = 2, $p = 0.02$) in women than in men.

Conclusions: For the same disorder, the patterns of prescription of neuroleptics by psychiatrists differ according to the patients' sex. Other studies should be performed in order to explain these differences in therapeutic behavior.

NR565 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Response By Police to a Therapist's Warning

Michael G. Huber, M.D., Dept of Psychiatry, MUSC, 171 Ashley Ave, Charleston SC 29425-0001; Lawrence A. Labbate, M.D., Jill S. Hayes, M.S., Vidya H. Upadhyaya, M.D., Owen C. Grush, M.D., George W. Arana, M.D.

Summary:

Objective: The Tarasoff ruling led to therapists notifying police of patients' threats toward other individuals. We examine police procedures in response to therapists' reports.

Method: We telephoned 33 municipal or county police departments in South Carolina and administered a questionnaire. We asked if police received warnings from therapists, recorded warnings, the frequency of warnings, the presence of specific policy, if the potential victim was notified, if the threat was disseminated to other officers; if the potential victims were monitored, and whether are they familiar with the Tarasoff ruling. In the absence of a policy, the officers were asked the same questions. The length of service of the officer interviewed and populations published in 1996 were recorded.

Results: Seventeen municipal (mean population 22,062) and 16 county (mean population 118,406) police departments responded. Mean length of service for the officers was 16 $\pm$ 9 (SD) years. Nine stations (27.3%) had been warned by therapists, with a mean frequency of 2 $\pm$ 1.5 times per year. Only four (12.1%) stations had a specific policy regarding therapists' calls. Only one officer (3%) knew of the Tarasoff ruling. If a precinct received a call, 72% would record the warning, but only 56% would notify a potential victim. Only 6.5% would monitor the potential victim and 25% would notify other officers. Municipal police departments were more likely than county departments to notify potential victims (75% vs. 12.5%; $X^2 = 12.7$, $p < .001$). Of the respondents, 12% made derogatory comments about psychiatrists.

Conclusion: South Carolina police departments have rarely been contacted by therapists and rarely have knowledge of policy regarding the Tarasoff ruling. Although the police may investigate a report of a threat, many potential victims would not be warned. Calling the police may not be sufficient to warn and protect a threatened party.

NR566 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Suicide and Physical Illness Among Elders Treated by Primary Care Physicians

Yeates Conwell, M.D., Department of Psychiatry, University of Rochester, 300 Crittenden Boulevard, Rochester NY 14642; Jeffrey M. Lynes, M.D., Paul R. Duberstein, Ph.D., Christopher Cox, Ph.D., Larry Seidlitz, Ph.D., Eric D. Caine, M.D.

Summary:

Objective: To determine whether physical illness burden and specific physical illnesses common to later life distinguish older primary care patients who committed suicide from those who did not.

Method: Case-control study using data collected by psychological autopsy of suicides and prospective patient interviews for controls. Participants included 42 suicides age 60 or older who visited a primary care provider within 30 days of death, and 196 patients age 60 or older from a group practice of general internal medicine (n = 115) or family medicine (n = 81).

Results: In a multiple logistic regression analysis with age and gender entered as covariates, physical illness burden, measured with the Cumulative Illness Rating Scale (CIRS), was a significant predictor of suicide status. In a second regression in which 10 common physical disorders in late life served as independent variables, cancer and cardiovascular disease emerged as significant predictors of suicide as well.

Conclusions: In addition to psychiatric illness, mounting physical illness burden and diagnoses of cancer and cardiovascular disease place older primary care patients at increased risk for completed suicide. Further research is needed to determine the factors that cause some elders with these physical conditions to become suicidal while others do not.

Supported in part by NIMH grants MH54682 (Dr. Conwell), MH0113 (Dr. Lyness), and MH19811 (Dr. Caine).

NR567 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

The Social Supports of Formerly Maltreated Adults

Robert T. Muller, Ph.D., Psychology, York University, 4700 Keele Street, North York ON M3J 1P3, Canada

Summary:

Objective: Several investigators have demonstrated that social support is a significant protective factor in the development of psychopathology. However, research has not yet thoroughly examined the social supports of survivors of maltreatment. This is problematic given the high-risk nature of this population. The current study examined the specific components of social support perceived to be most important by high-risk, formerly maltreated adults. This included identifying the kinds of functional support as well as the social support providers whom these individuals reported most favourably.

Method: Sixty-six high-risk community members (24 men and 42 women) were recruited through flyers and notices presented throughout the greater Boston area, offering monetary inducements for research participation. Subjects were blind to the purposes of the study. They were screened on maltreatment history using empirically valid and reliable measures of prior abuse. Participation rates were above 72%. Subjects were tested at a university testing room by R.A.s who were blind to the hypotheses of the study. Self-report measures of current and past perceived and received social support were included, including the Norbeck and the Inventory of Socially Supportive Behaviors. Both are well-established measures of social support.

Results: Tests of significance were conducted on ANOVA and Chi Square statistics. Emotional support was rated significantly higher than were other kinds of functional support. Of the 10 support-provider categories, mothers and friends were rated most

highly (*ps* < .05). Furthermore, the amount of supportiveness attributed to support providers did not depend on who the abusive parent was. As such, participants abused primarily by mothers still ranked mothers as among their most important current and past support providers.

Conclusions: Findings suggest that high-risk survivors of maltreatment consider their mothers to be very important support providers, despite their prior abusive behaviors. Results appear to be consistent with prior research documenting both considerable inconsistency in the parenting interactions of abusive parents and their children as well as the strong sense of family loyalty survivors of abuse have toward their perpetrators.

NR568 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Polypharmacy Trends in Inpatient Treatment

Gabor I. Keitner, M.D., Department of Psychiatry, Rhode Island Hospital, 593 Eddy Street, Providence RI 02903; Christine E. Ryan, Ph.D., David A. Solomon, M.D., Joan E. Kelley

Summary:

We examined trends in the number, class, and type of medications given to patients (n = 18,000) on discharge from a psychiatric teaching hospital between 1987 and 1995. Data were analyzed by yearly changes in diagnoses, length of hospital stay, comorbidity, and readmission rates. The number of admissions increased by 33.5%, while the length of stay decreased by 42% from 15.8 to 9.1 days. Rates of comorbidity increased for most diagnostic groups. The readmission rate (20%) for the whole sample remained constant although it differed by diagnosis. Although the percent of patients who received one to three psychotropic drugs decreased from 94% to 89% the percent who received four or more increased significantly (6.4%–11.5%).

Patients with major depression had the most notable changes over the nine years: greatest increase in admissions (32%–47%), greatest decrease in length of stay (18.1–9.1 days), greatest increase in comorbidity (23%–48%), greatest increase in multiple classes of psychotropic drugs used per patient (4.5%–11.8%), large number of same-class drugs used concurrently (.5%–19.9%), and the greatest increase in percent of readmissions (29%–48%). More depressed patients with more comorbid illnesses were being treated faster with more medications but with higher rates of readmission.

Outcome studies evaluating the cost-benefit profile of such practice trends are needed.

NR569 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Antidepressant Change in a Clinical Treatment Setting

Paula L. Hensley, M.D., Department of Psychiatry, University of New Mexico, 2400 Tucker NE, Albuquerque NM 87131; Peter M. Thompson, M.D., H. George Nurnberg, M.D.

Summary:

Objective: This investigation focuses on the three most frequently used SRIs (paroxetine, fluoxetine, sertraline) and examines the rate of medication switches as a measure of effectiveness. We answer two questions: (1) What is the likelihood that a patient starting treatment on an SRI will complete treatment with the same agent? (2) Depending on the initial SRI agent used, do patients switch at different frequencies?

Method: From 2,779 patients treated in a university outpatient clinic, 263 patients given antidepressants were randomly selected; 214 were prescribed SRIs, 24 novels, and 25 TCAs.

Results: There is no significant difference in rate of switching between the different classes of antidepressant (p = .1) nor between drugs within the SRI class (p = .513). When medication change is the independent factor, significant differences between the groups are total time in treatment and number of visits (p < .001 and p = .011). Age, education, and CGI (on admission, discharge, and change) were not significantly different.

Conclusion: Approximately 25% of patients started on an SRI will switch to another antidepressant in the course of their treatment. The SRIs appear to be equivalent in effectiveness. They are not interchangeable because patients who discontinue one SRI for lack of tolerability or response can generally be treated effectively with another.

NR570 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Symptomatic and Functional Outcome of First-Episode Psychosis: Prospective, Six-Month Study of 257 Patients

Mauricio Tohen, M.D., Department of Research, Eli Lilly and Company, Lilly Corporate Center, Indianapolis IN 46285; Priscilla Gebre-Medhin, M.S., Ross J. Baldessarini, M.D., Carlos A. Zarate, Jr., M.D., John Hennen, Ph.D.

Summary:

Background: The Harvard-McLean First-Episode Psychosis Project recruited patients (1989–1995) for follow-up from the start of their first lifetime psychiatric hospitalization for psychotic illness.

Methods: Extensive assessments at initial evaluation and six-months follow-up in N = 257 cases yielded recovery outcomes defined by syndromal (absence of DSM-IV criteria for a current episode) and functional status (vocational and residential status at least at baseline levels). Time-to-recovery was assessed by survival analysis, and risk factors by multivariate logistic regression.

Results: Syndromal recovery was attained by 77% of cases over an average of 84 days. By diagnostic group, syndromal recovery rates ranked (p = 0.001): major affective disorders (81%), nonaffective acute psychoses (74%), schizoaffective disorders (70%) > schizophrenia (36%). Functional recovery rates (29%) averaged 2.7-times lower than syndromal rates, and 65% of syndromally recovered patients had not recovered functionally. Functionally recovered vs. nonrecovered patients, and women vs. men, showed 1.7-fold shorter time-to-50% syndromal recovery.

Conclusions: Syndromal recovery was achieved by nearly one-half of patients within three months of a first lifetime hospitalization for a psychotic illness, but functional recovery was not achieved by six months in nearly two-thirds of patients who had attained syndromal recovery.

NR571 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Neuroleptic Use in Bipolar Disorder: A Pharmacoepidemiologic Review

Mauricio Tohen, M.D., Department of Research, Eli Lilly and Company, Lilly Corporate Center, Indianapolis IN 46285; Fan Zhang, Ph.D., Carlos A. Zarate, Jr., M.D., Cindy Taylor, Ph.D., Todd Sanger, Ph.D., Patrick Burns, Pharm.D., Gary D. Tollefson, M.D.

Summary:

Neuroleptics have historically been used for the treatment of bipolar disorder; however, their use has been discouraged because of the extrapyramidal symptoms and tardive dyskinesia associated with neuroleptic treatment. In spite of this recommendation and the availability of mood stabilizing agents, the use of neuroleptics in the treatment of mania appears to be widespread. This pharmacoepidemiologic study was undertaken to determine the extent of current neuroleptic use in the acute and maintenance treatment of bipolar disorder. A medline search was used to identify publications that outlined medication usage of 2378 patients

diagnosed with bipolar disorder. A meta-analysis technique was used to estimate a weighted average of the proportion of the treatment use, where the weights were the reciprocals of the estimated variances for each study. Results of this meta-analysis revealed 84.7% of these patients received neuroleptics, of whom 90.7% were inpatients and 65.3% were outpatients. Neuroleptic monotherapy and neuroleptic/mood stabilizer combination therapy accounted for 53.8% and 47.4% of neuroleptic use in these patients, respectively. The results of this study indicate that neuroleptics are commonly used in the treatment of bipolar disorder, especially in inpatients where rapid alleviation of acute symptoms may be necessary.

NR572 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Comparing Subjective Medication Adherence with an Objective Method

Esperanza Diaz, M.D., Psychiatry, Yale University, 34 Park St, New Haven CT 06519-2103; Vincent Barry, M.D., Herbert Rowland Pearsall, M.D., Michelle Sullivan, R.N., Scott W. Woods, M.D.

Summary:

We hypothesized that when adherence to medications is measured with an objective method, the results are different from the subjective report.

Methods: Patients with schizophrenia and schizoaffective disorder were followed weekly for three months after hospital discharge. Discharge medications were dispensed in a bottle with a cap capable of measuring the number of openings with date and time: the Medication Event Monitoring System, MEMS. On weekly visits the patients were asked to give a subjective report of their medication compliance.

Results: At the present time, five patients have been followed for an average of 6 ± 4 weeks. The average medication compliance of available data was 72% for the subjective report and 59% for the MEMS.

Conclusions: An objective method to measure medication adherence showed a lower compliance rate than the subjective method. The subjective method may overestimate compliance.

Research funded partially from a NARSAD grant.

NR573 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

SSRI Antidepressant Use in Primary Care in the United Kingdom: A Multivariate Analysis

Rodney Dunn, M.S., The Medstat Group, 777 E. Eisenhower Pky Ste500, Ann Arbor MI 48108; John M. Donogahue, B.Sc., Ronald Ozminkowski, Ph.D., Timothy R. Hylan, Ph.D.

Summary:

Research has found differences in the pattern and duration of therapy between patients who initiate therapy on tricylic antidepressants or selective serotonin reuptake inhibitors (SSRIs). In light of the increased use of SSRIs, it is reasonable to evaluate whether differences also exist among individual SSRIs.

Objective: The purpose of this study was to assess the effects of initial SSRI antidepressant selection on the subsequent pattern and duration of antidepressant use.

Method: Logistic regression analysis of data from a large general practitioner medical records database (DINLINK) for the years 1992–97 was used to estimate the determinants of antidepressant drug use patterns for 6,007 patients with a "new" episode of antidepressant therapy who were prescribed one of three most often prescribed SSRIs: paroxetine, sertraline, or fluoxetine.

Results: Patients who initiated therapy on sertraline or paroxetine were less likely than patients who initiated therapy on fluoxetine to have four or more 30-day prescriptions of their initial antidepressant within the first six months. The magnitude of these differences was greater for patients who initiated SSRI therapy between 1995 and 1997 compared with 1992 through 1994.

Conclusion: Antidepressant prescribing patterns differ among specific SSRIs and appear to have changed over time.

Research funded by Eli Lilly and Company.

NR574 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

One-Year Costs of Alternative Second-Line Therapies for Depression

Erin M. Sullivan, M.P.H., Outcome Studies Group, Covance, 1100 New York Ave NW Ste 200E, Washington DC 20005; Robert I. Griffiths, Sc.D., Richard G. Frank, Ph.D., Robert J. Herbert, M.D., Michael J. Strauss, M.D., Howard H. Goldman, M.D.

Summary:

Objective: We compared patterns of medical resource use and costs among patients receiving venlafaxine (SNRI), an SSRI, a TCA or other second-line therapies for depression.

Methods: Using claims data from a managed care organization, we identified patients diagnosed with depression who received second-line antidepressant therapy between 1993 and 1997. Second-line therapy was defined as a switch between antidepressant classes. Patients with psychiatric comorbidities were excluded. We compared mean one-year medical expenditures using pairwise bivariate and multivariate statistical analysis.

Results: There were no significant differences in total one-year medical expenditures between patients receiving SNRI (n = 208), SSRI (n = 232), TCA (n = 191) or other (n = 250) second-line antidepressant therapies ($6945, $7237, $7925, and $7371, respectively; p = 0.88). Although medication expenditures were significantly higher among SNRI and SSRI patients compared with TCA patients, facility and professional service expenditures were significantly lower. Multivariate findings were consistent with bivariate comparisons. Notably, the prescribing physician was more likely to be a psychiatrist among SNRI patients compared with SSRI or TCA patients (46% versus 27% and 25%, respectively).

Conclusions: One-year medical expenditures are similar among patients receiving SNRI, SSRI, TCA, and other second-line therapies for depression. Further research should explore patterns of switching between antidepressants among these patients.

Research supported by Wyeth-Ayerst Laboratories, Philadelphia, PA.

NR575 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Outcomes Study of a Residential Rehabilitation Center

Cynthia L. Arfken, Ph.D., Psychiatry, Wayne State University, 9B UHC 4201 St Antoine, Detroit MI 48201; Jacquelyn G. Wilson, Pharm.D., Husseini K. Manji, M.D.

Summary:

The outcomes of patients after leaving a new residential center that combines behavioral therapy and rehabilitation with aggressive pharmacology are presented. Outcome measures were role functions, health care resource utilization, symptom severity (BPRS), depressive symptoms (BDI), abnormal involuntary movement (AIMS), and perceived health status (SF-36) for the entire cohort (n = 77) and by discharge status. The mean follow-up time was 2.5 ± 1.1 years (participation rate = 86%). The patients were predominately white males diagnosed with schizophrenia or schizoaffective disorder. The mean admission BPRS score was 40.5 ± 8.4. The patients at follow-up were mostly living in the community (77%), employed (31%), and in contact with physicians (91%). A minority had been hospitalized (31%) or had visited the

emergency department (25%). The mean decline in BPRS scores was highly significant (13.3 ± 11.3; p = .003). High BDI scores were reported by 14%. Scores on emotional problems, energy, and well-being were significantly lower than for other aspects of perceived health status. Clozapine was used by 81% of the cohort, with 94% continuing on clozapine for at least six months (from registrary data). The maintenance rates differed by discharge status (p = .039). The results suggested good outcomes and low current severity of symptoms. More definitive conclusions would require a randomized effectiveness trial.

Funded by Rose Hill Center

NR576 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Effect of Adherence To Guidelines on Relapse

Catherine A. Melfi, Ph.D., Department of Health Services, Eli Lilly and Co., Lilly Corporate Center, DC1850, Indianapolis, IN 46285; Anita J. Chawla, Ph.D., Thomas W. Croghan, M.D., Mark P. Hanna, M.S., Kate Sredl, B.A., Sean Kennedy, B.A.

Summary:

Objective: The purpose of this study is to examine the effect of following published guidelines for antidepressant (AD) treatment on relapse and recurrence of depression.

Method: Using a state Medicaid database covering 1989–1994, we identify patients who had an initial diagnosis of depression and received an AD at that time. We construct two-year episodes for each patient (n = 4052) and use survival analysis to predict the likelihood and time to relapse or recurrence. After controlling for covariates including patient demographics, provider type, comorbidities, and AD, we examine the effect of following guidelines on relapse and recurrence.

Results: About one-fourth of the patients in our sample had a relapse or recurrence during the 18 months following their initial six-month treatment episode. Those patients who continued therapy on their initial AD were least likely to have a relapse or recurrence; those who discontinued their AD therapy prematurely were 80% more likely to have a relapse or recurrence.

Conclusions: Our results indicate that adherence to treatment guidelines with the initial AD results in a lower probability of relapse or recurrence. These findings suggest that treatment of depression with an antidepressant that is most likely to result in continuous use can result in improved treatment outcomes.

Funding Source: Eli Lilly and Company

NR577 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Outcomes After Schizophrenia Relapse: Findings from a Prospective 684 Patient Cohort

Luella M. Engelhart, M.S., Janssen Res Foundation, 1125 Trenton-Harbourton Road, Titusville NJ 08560; Ramy A. Mahmound, M.D., Risperidone Effectiveness Outcomes of Study Group

Summary:

Patients suffering relapse, defined by clinical and service need parameters, were prospectively enrolled at 21 sites and followed for one year while receiving "natural" community care. Interviews at 4, 8, and 12 months recorded clinical status and quality of life, while treatment patterns were obtained through verified primary records of all types of psychiatric service use, prescribing, and dispensing.

Roughly 85% of patients completed the follow-up period. The largest diagnostic subgroups were paranoid type schizophrenia and schizoaffective disorder. Over 70% of patients had "government pay" insurance (e.g., Medicaid), 17% were V.A., and 11% were uninsured or private pay. The cohort showed ongoing improvements in both symptoms and quality of life during the year after relapse, despite the fact that over 50% required acute psychiatric rehospitalization. Rehospitalization rates and other patterns of service use were significantly and independently influenced by insurance category. Using standard national cost multipliers, total estimated psychiatric care costs exceeded $22,000 per patient. Drug therapy patterns were fragmented, with characteristics such as frequent switching (range 0–10 switches), simultaneous antipsychotic use, and a high proportion of nonmedication days (mean 34% of days). The results of this study inform patients and providers about real-world outcomes and identify many opportunities for improving quality of care.

NR578 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Psychiatric Resource Use Under Usual Care Conditions: Does Risperidone Increase Resource Use?

Ramy A. Mahmoud, M.D., Janssen, 1125 Trenton-Harbourton Road, Titusville NJ 08560; Luella M. Engelhart, M.S., G. Oster, Ph.D., D. Ollendorf, M.P.H., Risperidone Effectiveness Outcomes of Study Group

Summary:

There is concern that introduction of newer, more expensive antipsychotics will substantially increase the resources needed for schizophrenia patients. Observational studies and modeling projections from efficacy trials suggest this may not be the case.

We report resource use from a naturalistic multicenter effectiveness trial to address this issue. We randomized 684 schizophrenia patients at relapse to initial treatment with risperidone (RIS) or conventional antipsychotic therapy (CON). During one year of follow-up, treatment was per customary community practice with minimal protocol interference. All psychiatric medication and acute and routine services were verified by primary source documentation. Costs were estimated based on documented utilization.

Despite extensive nondrug periods (mean > 100 days), polypharmacy, and treatment mixing (41% and 74% of CON and RIS patients, respectively, received > 1 days of cross-over therapy), RIS patients had fewer hospitalizations, longer time to first hospitalization, and fewer days of acute care (albeit not significantly). In addition, among patients remaining in treatment arms, RIS patients had statistically lower acute care service costs. Data on drug treatment patterns suggest that opportunities exist for improving community treatment strategies to realize reductions in resource use.

NR579 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Evaluation of a Therapeutic Interchange Program

Shyam D. Karki, Ph.D., Pharmacy, Monroe Community Hospital, 435 E Henrietta Road, Rochester NY 14620; Terrance J. Bellnier, M.P.A., Herman Burliss, M.D.

Summary:

Valproic acid is used as a sole and adjunct therapy in convulsive disorders. It is also used as an adjunct therapy in schizophrenia. It has significant gastrointestinal adverse effects and is not tolerated well. Divalproex sodium, a derivative product of valproic acid, has been reported to be much more tolerable. However, with the advent of generic valproic acid, divalproex has become very expensive and to decrease costs, many patients have been switched from divalproex to valproic acid. We report our experience with such a therapeutic interchange program.

All (61) schizophrenic or schizoaffective patients, stabilized on divalproex were switched to valproic acid. Patients' charts were reviewed before and after the switch as to dosage, frequency, adverse drug effect, concomitant gastrointestinal medication and compliance.

Patients had a mean ± (SD) age of 48.4 ± 15.4 years, length of stay of 7.5 ± 9.6 years and were 72% men and 28% women. Mean daily doses decreased and use of gastrointestinal medications increased in seven patients. Valproic acid was discontinued in 14 patients at three months and additional seven patients at six months. Three patients were switched back to divalproex.

Automatic switch from divalproex to valproic acid failed in 31 (51%) patients in our experience.

NR580 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Six-Year Outcome for Cognitive-Behavioral Treatment of Residual Symptoms in Depression

Murray A. Morphy, M.D., Psychiatry, Suny At Buffalo, VAMC 116A 3495 Bailey Avenue, Buffalo NY 14215; Chiara Rafanelli, M.D., Giovanni A. Fava, M.D., Silvana Grandi, M.D., Cristina Valacchi, M.D.

Summary:

Objective: This study was designed to determine whether cognitive behavioral treatment of residual symptoms of depression might have a significant effect on relapse rate.

Method: Forty patients with primary major depressive disorder who had been successfully treated with antidepressant drugs were randomly assigned to either cognitive behavioral treatment (CBT) of residual symptoms or standard clinical management (CM). In both cases, antidepressant drugs were gradually tapered and discontinued. A six-year follow-up was performed.

Results: Ten (50%) of the patients in the CBT group and 15 (75%) in the CM group relapsed. The difference did not attain statistical significance by survival analysis. Of the 25 patients who relapsed 16 did it more than once during the observation period. Patients in the CBT group had a significantly lower number of depressive relapses than those in the CM group. In the majority of cases, patients responded to the same antidepressant drug of the index episode; in two cases (4%) they did not.

Conclusions: Cognitive behavioral treatment of residual symptoms was found to improve the term outcome of depression. Intermittent use of medication for relapses was found to be feasible, even though alternative antidepressants may occasionally be required.

NR581 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Can the Decreased Alexithymia Level Influence the Course of Coronary Heart Disease?

Margarita Beresnevaite, M.D., Rehabilitation, Cardiology, Kaunas, Lithuania

Summary:

Objective: The aim was to research if the decreased alexithymia level influences the course of coronary heart disease (CHD).

Methods: There were 20pts after myocardial infarction (MI) in the experimental group and 17pts in the control group. Toronto Alexithymia Scale (TAS) and affective trend of group psychotherapy (GP) were used. During the two-year follow-up after GP the course of CHD and ability were observed.

Results: The change of the means of TAS scores was statistically significant: 70.8 (±5.5) –62.8 (±9.8) ($p < 0.05$). Decreased TAS score was established in 11pts (55%); 2 (18%) pts had cardiac events and three (27%) pts were disabled. Among these with decreased alexithymia level, six (67%) pts had cardiac events and six (67%) pts were disabled among those without decreased alexithymia level. Positive dynamics in TAS score was not established in the control group; eight (47%) pts had cardiac events, 10 (67%) pts were disabled.

Conclusion: The results suggest that GP is able to decrease alexithymia level and the results can be stable for at least two years. The tendency of positive influence of decreased alexithymia level on the course of CHD is observed.

NR582 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Dialectical-Behavior Therapy Applied to a Partial Hospital Setting: A Hospital Diversion Program

Elizabeth B. Simpson, M.D., Department of Psychiatry, Butler Hospital, 345 Blackstone Blvd, Providence RI 02906; Karen J. Rosen, M.D., Jacqueline Pistorello, Ellen Costello, Ph.D., Ann Begin, Ph.D., Teri B. Pearlstein, M.D.

Summary:

The lack of reliably effective treatment for borderline personality disorder (BPD) is a significant public health concern. It is estimated that 11% of psychiatric outpatients and 19% of inpatients meet criteria for BPD, and about three-quarters are female. Dialectical behavior therapy (DBT), a cognitive-behavioral treatment developed by Marsha Linehan, is the only empirically-validated treatment for BPD. As BPD accounts for a significant proportion of patients seeking hospitalization, it is important to test the adaptability and effectiveness of incorporating DBT into a brief-stay partial hospital setting.

The present poster has two purposes. First, it will describe a DBT program developed for women with chronic emotional dysregulation, which encompasses a five-day partial hospital stay and a six-month aftercare coping skills group. The focus of the five-day hospital stay is to orient patients to DBT, teach them the basic concepts of behavioral principles, and introduce them to the four modules of coping skills outlined in DBT. The six-month aftercare group program provides weekly presentation and review of DBT coping skills and is designed to serve as a hospital diversion program. Second, it will present data regarding hospitalization rates at Butler Hospital before and after participation in this program.

T-tests comparing the average number of inpatient and partial day hospitalizations six months before and six months after a patient's index admission to the DBT Partial Program (the first time the patient enrolled in the program) were computed. Results indicated a statistically significant decrease in the number of episodes ($t(130) = 5.39$, $p < .001$) and in the average length of stay ($t(130) = 2.50$, $p < .01$) of inpatient hospitalization. This reduction in inpatient hospitalization was not accompanied by a significant increase in partial hospitalization episodes ($t(130) = -1.11$, $p > .10$) or partial hospital length of stay ($t(130) = -62$, $p > .10$). These findings corroborate Linehan's results showing a reduction in the utilization of high-cost mental health services in DBT patients relative to those in "treatment as usual" (Linehan et al., 1991).

NR583 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Day Treatment Helps Reduce Hospitalizations

Jeffrey B. Freedman, M.D., Saint Vincents Hospital, Department of Psychiatry, 203 West 12th Street, New York NY 10011

Summary:

Objective: Continuing day treatment program (CDTP) goals are to prevent relapse and provide rehabilitation for the chronically mentally ill. One measurable way to test the effectiveness of the CDTP is to examine if participation in this program helps decrease the frequency of inpatient admissions.

Method: Study subjects were patients who have been in the CDTP for at least one year, excluding those transferred from other day programs. Of the 115 patients enrolled in the CDTP as of August 1, 1996, 41 qualified for the study.

Results: 31 patients (76 percent) had at least one inpatient psychiatric admission one year prior to their admission to the

CDTP. Nine patients (22 percent) from that same population had at least one inpatient psychiatric admission in the year following their admission to the CDTP. Thus, patients were significantly more likely to avoid hospitalizations in their first year in the CDTP ($X^2 = 21.53$, df = 1, $p < .001$).

Conclusions: CDTPs help decrease hospitalizations. To prove that CDTPs are more effective than conventional outpatient treatments in reducing admissions, a prospective study with a comparison group is necessary.

NR584 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

A Group Intervention for Sexually Abused Women

Rory P. Houghtalen, M.D., Psychiatry, University of Rochester, 300 Crittenden Blvd, Rochester NY 14642-8409; Nancy L. Talbot, Ph.D., Paul R. Duberstein, Ph.D., Lyman C. Wynne, M.D.

Summary:

Objective: This study assessed the clinical effectiveness of a psychoeducational group intervention, Women's Safety in Recovery (WSIR), for women with histories of childhood sexual abuse (CSA) in a combined inpatient and partial hospital program.

Methods: Eighty-six women with CSA histories participated in either the treatment-as-usual control condition (n = 38) or the WSIR group (n = 48). The WSIR group met for three one-hour sessions/week in lieu of routinely scheduled activities. Outcome measures included the Symptom Checklist 90-Revised (SCL90-R), and patient and therapist reports of Experience in Treatment.

Results: Repeated-measures analyses of covariance were conducted on measures collected both at discharge and six-month follow-up. For measures collected only at discharge, analyses of covariance were used. The WSIR group participants showed greater improvement on six of nine SCL90-R subscales and reported that their CSA issues had been more thoroughly addressed than did control condition participants. These significant between-group differences were sustained at six-month follow-up.

Conclusions: Participants in the group intervention showed a positive response to treatment on a measure of psychological distress, indicating that some of the skepticism concerning the utility of addressing CSA issues in short-term treatment with acutely ill women may be unwarranted. Symptom improvement and patient satisfaction may be enhanced by attention to CSA issues.

NR585 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Course and Cost of Treatment with SSRIs

James M. Russell, M.D., Department of Psychiatry, Univ of Texas Med Branch, MMNP 11th & Texas Ave/Rt 0428, Galveston TX 77555-0428; Ernst R. Berndt, Ph.D., Robert Miceli, Ph.D.

Summary:

Introduction: Several retrospective comparative studies of SSRI treatment costs have been recently published. The time period for these studies was when sertraline and paroxetine were newly approved agents, making their use more likely in treatment refractory patients.

Objective: A 1995 and 1996 publicly available medical claims database (MarketScan®) was used to compare SSRI treatment course and costs in depressed patients to minimize the likelihood of disease severity and physician practice biases.

Method: Records of 2342 patients diagnosed with depression who began treatment with an SSRI in 1995 were identified from the MarketScan® database of over 600,000 covered lives. Treatment course and associated medical costs were examined.

Results: Nine hundred five sertraline, 492 paroxetine and 945 fluoxetine patients met inclusion criteria. The groups were similar and representative with respect to gender and age distribution. Mean doses for sertraline, paroxetine, and fluoxetine were 71.4 mg, 24.4 mg, and 24.7 mg. Of those titrated, the mean number of titrations were 1.7, 1.6, and 1.8, respectively ($p = 0.06$). Mean total antidepressant prescription costs were $446 for sertraline, $419 for paroxetine and $586 for fluoxetine ($p < 0.01$). During the 12 month follow-up period, average total cost for depression related outpatient visits was $627 for sertraline, $682 for paroxetine, and $638 for fluoxetine. Of those hospitalized, mean costs for all depression-related hospitalizations were $5220 for sertraline, $5733 for paroxetine, and $7525 for fluoxetine.

Conclusion: During this study period when the three SSRIs were established agents, similar treatment course and cost characteristics were observed. Pharmaceutical costs were greatest for fluoxetine.

Supported by a grant from Pfizer, Inc.

NR586 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Duration of SSRIs Therapy: A Consistent Pattern

David S. Hutchins, M.B.A., Outcomes Res, PCS Health System, 9501 E Shea Blvd MC034, Scottsdale AZ 85260; Catherine A. Melfi, Ph.D., William F. Signa, B.S., Christopher Young, Ph.D.

Summary:

Objective: This retrospective study examines the sensitivity to a variety of therapy duration measures for the relative rankings among fluoxetine, paroxetine, and sertraline.

Method: Prescription claims records were used to: (1) create cohorts of fluoxetine, paroxetine, or sertraline patients, (2) differentiate *initiators* (n = 21,480, no prior antidepressant use) from *all* patients (n = 128,046), and (3) produce duration measures. The duration measures included continuous days, persistent days, number of refills, medication possession ratio, continuous compliant months, compliant months, and refill months.

Results: Relative to paroxetine or sertraline patients, fluoxetine *initiators* had significantly more continuous days, more persistent days, greater number of refills, larger medication possession ratios, more continuous compliant months, more compliant months, and more refill months. Sertraline *initiators* experienced longer durations of therapy than paroxetine *initiators* on all measures. Findings for *all* patients were qualitatively the same as for *initiators*, although existing differences were larger in magnitude. Duration differences among the fluoxetine, paroxetine, and sertraline cohorts became evident within the first 30 days of therapy (or prior to the first refill).

Conclusions: Fluoxetine patients experienced longer therapy duration than sertraline or paroxetine patients. This result is robust across a variety of different duration measures.

Source of Funding: This study was conducted at PCS Health Systems, Inc., a wholly-owned subsidiary of Eli Lilly and Company through funding provided by Eli Lilly and Company.

NR587 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

SF-36 Outcome for Anxiety Diagnoses by Clinicians

William R. Yates, M.D., Dept of Psychiatry, University of Oklahoma, 2808 S Sheridan Road, Tulsa OK 74129; Rick Jones, Ph.D., Sally Williams, B.A., Miranda Zhou, M.S., Lisa Hardman, M.A.

Summary:

Objective: Anxiety disorders share many clinical features with the mood disorders, producing confusion about the boundaries between the two categories. The objective of this study was to

compare the outcome of clinician diagnosis of anxiety disorder with mood disorder.

Methods: Fifty-three subjects presenting for outpatient psychiatric care at a private psychiatric facility received a diagnosis of anxiety disorder by clinicians. A control group of subjects with a mood disorder were identified including 202 with major depression and 24 with dysthymia. SF-36 baseline profile and six-month outcome was compared by category using MANOVA and MANCOVA.

Results: Anxiety disorder diagnosis was associated with less impairment at baseline than major depression on the Vitality ($F = 2.88$, $df = 3.255$, $p = .036$), Social Functioning ($F = 3.37$, $df = 3,255$, $p = .019$), and Mental Health ($F = 6.50$, $df = 3,255$, $p = .001$) subscales of the SF-36. The anxiety disorder group did not differ from dysthymia on baseline SF-36 profile or at six months outcome. All groups demonstrated significant, but similar, levels of improvement in all subscales of the SF-36 at six months.

Conclusions: This study supports the clinical distinction of the anxiety disorders category from major depression. However, the anxiety disorders appear very similar in pattern of impairment and six month outcome to dysthymia.

Research supported by the Laureate Research Center, Tulsa, Oklahoma.

NR588 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

The Impact of a New High Acuity Subunit on Very Long-Term Psychiatric Inpatients in a State Hospital

Eric S. Cole, Ph.D., Delaware Psychiatric Center, 1901 N Dupont Highway, New Castle DE 19720; Cheryl K. Cantrell, M.D.

Summary:

Objective: Our previous studies indicate that patient subgroups on a chronic psychiatric unit vary in their rates of prn medication and seclusion use. This study examines the impact of developing a treatment sub-unit for high acuity patients.

Method: In January, 1997, an Intensive Treatment Module (ITM) was created by locking one of three unit wings. Of 31 continuously hospitalized patients, an average of 5.1 were assigned to the ITM by physician's order and treated with high-supervision low-stimulation programming. Daily patient specific data on seclusion and prn medication for 1996 and 1997 were compared using the paired t test.

Results: From 1996 to 1997, unit seclusions dropped (252 to 127, $p = 3E\text{-}9$) while prn's remained constant (2806 vs. 2632). For patients assigned to the ITM, seclusions dropped (226 vs. 99, $p = 9E\text{-}11$) and prn use increased (1011 vs. 1797, $p = 8E\text{-}29$). For the remaining patients, seclusions remained constant (26 vs. 28) and prn's decreased (1795 vs. 877, $p = 2E\text{-}31$).

Conclusions: Creation of a high acuity sub-unit on our chronic unit reduced the use of seclusion significantly and changed the pattern of prn medication use. The overall impression is that the sub-unit had a positive impact on unit functioning. Theoretical explanation is the next horizon.

NR589 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Evaluation of an Automated Standardized Method for Completing Mental Health Evaluations in a Military Population

Charles D. Magruder, M.D., Gulf War Studies, USACHPPM, 2009 Alabaster Drive, Silver Spring MD 20904; Michael B. First, M.D., Stephen Stein, Ph.D.

Summary:

Objective: Among veterans who have sought health care for a problem that might be associated with Gulf War service, approximately 37% have received a primary or secondary mental disorder diagnosis (ICD9CM: 290–319). The extent of these diagnoses and the variety differed by site. This experience compelled development of an automated standardized method to complete mental health evaluations in deployment settings.

Method: A committee of mental health professionals from several disciplines devised requirements for completing an initial mental health evaluation, reviewed various software products, and then proposed a model. This model was subsequently evaluated at six outpatient facilities for useability and feasibility by health care providers and patients.

Results: Most users perceived the automated process favorably in at least some aspects of its utility and performance (58.9%). Mental health technicians were more likely to embrace the process than senior health care providers such as psychiatrists (78.5% to 55.7%, respectively). Patients preferred the automated evaluation over an interview with mental health staff (76% to 23%, respectively).

Conclusions: An automated, standardized method for completing mental health evaluations is generally well received by mental health care providers. Reservations noted by senior providers may be addressed by modifying the process. The reasons why patients prefer this evaluation method over more traditional interviews needs to be explored further.

NR590 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Computerized Monitoring of Medication Use Guidelines

Daniel J. Luchins, M.D., Department of Psychiatry, University of Chicago, 5841 S. Maryland Ave., MC-3077, Chicago IL 60615; Mohsin Qayyum, M.D., David B. Klass, M.D., Valerie Davis Raskin, M.D., Patricia Hanrahan, Ph.D., Randy Malan, R.P.H.

Summary:

Using the Illinois Department of Human Services (IDHS) computerized pharmacy and laboratory monitoring system (Klass 1996) we examined whether physicians working in the twenty IDHS facilities respond appropriately to abnormal laboratory test related to the safe use of 20 medications. In one facility, we reviewed the clinical records of all cases ($n = 73$) identified during a six-month period by the computerized system as being handled inappropriately to determine whether these were clinically significant. Almost all the clinically significant cases (19 of 20) involved abnormal blood levels of medication (as opposed to abnormal blood chemistries, etc.), all cases (19 of 19) involved low as opposed to high levels of medication, and the majority (12 of 19) involved valproate levels. Studying all four Chicago facilities we compared the length of stay from the detection of a low valproate level until discharge of all patients whose physicians responded inappropriately ($n = 203$, 96 ± 77 days) versus those whose low valproate levels were handled appropriately ($n = 140$, 57 ± 65 days, $t = 5.1$, $p < .001$). There was also a statistically significant inverse relationship between a physician's overall percentage of appropriate responses to low valproate levels and the length of hospital stays of their valproate patients ($r = -28$, $p, <. 01$). In response to this information we are now providing increased education regarding loading dose strategies for valproate and will examine its effect on our system.

NR591 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Telemedicine: Patient Satisfaction in Mental Health and Non-Mental Health Consultation in the Primary Care Network of an Academic Health System

Robert E. Hales, M.D., Medical Director, Sacramento Cnty MH Trtmt Cntr, 2150 Stockton Boulevard, Sacramento CA 95817; Edward J. Callahan, Ph.D., Donald M. Hilty, M.D., Thomas S. Nesbitt, M.D.

Summary:

Telemedicine technology is one strategy to improve the accessibility and quality of mental health care, particularly for rural areas. The University of California, Davis Health System encompasses the medical center and 18 primary care clinics, including eight clinics that have care provided by telemedicine. This study was conducted to test the hypothesis that patient satisfaction would be reduced for patients who received mental health care via telemedicine compared with other specialty care using telemedicine, since this technology might adversely affect communication and the development of an effective doctor-patient relationship. From a review of the worldwide literature, there were no reports that assessed patient satisfaction with telemedicine for mental health care compared with other specialty care. We designed a study to test this hypothesis by having patients rate selected issues on a scale from 1 (poor) to 5 (excellent). The respondents rated their ability to speak freely when using telemedicine at 4.68, their preference for using telemedicine on subsequent visits at 4.86, and the experience of the physician with the telemedicine technology at 4.60. Data were collected on 31 mental health visits and 59 other specialty (cardiology, orthopedics, dermatology, and otolaryngology) visits via telemedicine. On the three issues assessed, no significant difference was noted between mental health care and other specialty care via telemedicine. Furthermore, 57% of 14 patients surveyed at one site responded that the telemedicine psychiatric visit was better than traditional care. The findings of this study and other studies that assess the quality and effectiveness of mental health services delivered by telemedicine will be discussed.

NR592 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Higher Cost of Olanzapine Compared with Risperidone in Acute Psychotic Relapse

Henry A. Nasrallah, M.D., Department of Psychiatry, Univ. of Mississippi Med Cntr, 1500 E Woodrow Wilson Drive, Jackson MS 39216; Yiu-Chung Chan, M.D., Nicholas A. Votolato, R.P.H.

Summary:

Introduction: The superior safety and broader efficacy of the atypical antipsychotics have made them the first-line choice for managing psychotic relapses. Although costlier than conventional neuroleptics, atypical antipsychotics reduce the overall costs of disease management in chronic schizophrenia. But how do the first-line atypical antipsychotics (risperidone and olanzapine) compare in terms of pharmacy costs during acute inpatient management of relapsed schizophrenia? Here, we report data on this issue.

Methods: A thorough retrospective review of the first 49 patients receiving olanzapine in a university inpatient facility was compared with all patients in the preceding year (64 patients) receiving risperidone. Patient charts were carefully reviewed for diagnosis, clinical improvement, side effects, concurrent medications, length of stay, dose, and the total cost to the institution of the agents in each group. Only patients with a definite diagnosis of schizophrenia or schizoaffective disorder were included in the analysis.

Results: The risperidone-treated patients had a mean final dose of 5.98 mg vs. 14.02 mg for the olanzapine-treated group. The mean length of hospital stay was 17.30 days for risperidone patients vs. 17.47 days for the olanzepine patients. We found that 67% of the risperidone patients improved vs. 70% of olanzapine patients. As for the drug-costs during the inpatient period, the risperidone group costs were $71.80 per patient but much higher ($238.90 per patient) in the olanzapine-treated group.

Conclusion: Although there was similar improvement in both groups of patients in this study, the costs of antipsychotic medication were significantly higher in the olanzapine group. Additional controlled studies are needed to clarify this pharmacoeconomic difference. Implications will be discussed.

NR593 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Psychiatric Referral by Managed Care Interviewers

Donald S. Ciccone, Ph.D., Psychiatry, NJ Medical School, 185 S. Orange Avenue, Newark NJ 07103; Myron Leopold Pulier, M.D., Cherie Castellano, M.A., Karen Marcus, M.S.W., Steven J. Schleifer, M.D.

Summary:

Objectives: In managed care, nonmedical telephone interviewers often make decisions to refer to medical vs nonmedical providers. Our Delegated Care Management (DCM) project permitted investigation of: referral decisions; keeping of appointments; and concurrence with the provider's ultimate treatment recommendation (medication vs psychotherapy).

Method: DCM provides nonemergent management and ambulatory care through our provider network. Masters level care-managers conduct structured telephone interviews and make initial referrals.

Results: Of 372 adult callers, 28% were referred to MD's. Except for current psychotropic use ($p < .001$), demographic/clinical data (symptoms/complaints/suicidal ideation) did not predict (by logistic regression) MD referral; 50% of users ($N = 60$) vs 23% of nonusers ($N = 312$) were referred to MD's. Non-MD referral was predicted by marital/family problems ($p < .01$); 45% did not keep first appointments, predicted only by appointment delay ($p < .05$); 12% of those keeping non-MD appointments were considered by their clinicians to require medication (MD) evaluation (not predicted by demographic/clinical data). Of 61 seeing psychiatrists, 38% were deemed not to require medication (26% of currently medicated, 43% of non-medicated).

Conclusions: Medication use has a strong, but not compelling, influence on choice of provider. Reports by nonphysician clinicians suggest that telephonic referrals are usually appropriate.

NR594 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Equitable Funding for Psychogeriatric Services

John P. Hirdes, Ph.D., Research, Providence Centre, 3276 St. Clair Avenue East, Scarborough ON M1L 1W1, Canada; Gary F. Teare, Ph.D., Trevor F. Smith, Ph.D.

Summary:

Objective: To determine whether the Resource Utilization Groups (RUG-III) case-mix system provides equitable funding for psychogeriatric patients in chronic hospitals.

Methods: A random sample of 929 patients in Toronto chronic hospitals were assessed by trained nurses using the Minimum Data Set for nursing homes (MDS 2.0). RUG-III is a relative index of resource intensity that uses MDS 2.0 items to differentiate patients into seven hierarchical levels and 44 separate funding categories. Multivariate analyses were used to examine the MDS scale for cognition and behaviour disturbance in relation to RUG-III categories.

Results: Mean scores on the MDS Cognitive Performance Scale (CPS) were not significantly different among six of the seven main RUG-III hierarchical levels. Similarly, there were no significant differences in mean case mix scores across cognition levels. There were also no unexpected differences in the proportion of patients with behavior disturbances according to RUG-III levels. However, disability is strongly correlated with cognitive impairment and resource intensity.

Conclusions: The allocation of resources to psychogeriatric patients is driven mainly by their level of functional impairment and medical complexity. There appears to be no evidence of a system-

atic bias against psychogeriatric patients in terms of case mix based funding using RUG-III.

NR595 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Primary Care Doctors on Access to Psychiatric Care

Miriam Shuchman, M.D., Psychiatry, Suny Buffalo, 462 Grider St 11th Floor, Buffalo NY 14215; Robert F. St. Peter, M.D.

Summary:

Many claim that Americans have more than adequate access to mental health care. We surveyed a nationwide sample of family practitioners, internists, and pediatricians (n = 5160) in 12 metropolitan and rural areas in 1996 and 1997. A key finding was that mental health care is difficult to obtain, even when judged medically necessary by a physician. In total, 68% of primary care physicians report they cannot always or almost always obtain high-quality inpatient mental health care for their patients, compared with 36% of physicians who have such difficulty obtaining nonemergency medical hospitalizations ($p < 0.05$). About 72% of physicians surveyed cannot always or almost always obtain high-quality outpatient mental health services for patients, compared with 18% who report such difficulty obtaining referrals to high-quality medical specialists ($p < 0.05$). Access problems are particularly acute in the cities of Phoenix, AZ, Seattle, WA, and Syracuse, NY. These results suggest that primary care patients' access to high-quality mental health services is less adequate than access to other medical services. This may reflect the impact of managed care behavioral health programs, the effects of limited insurance coverage for mental illness, and a maldistribution of mental health care resources.

NR596 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Advocacy Groups: A Cross-National Comparison

Ronald C. Kessler, Ph.D., Health Policy, Harvard University Med. School, 180 Longwood Avenue, Boston MA 02115; Mary T. Guardino, Jeanine Christiana, Paolo Morselli, M.D.

Summary:

Objective: To present preliminary results from an 11-country survey of nearly 10,000 patients and family members who participate in advocacy groups for anxiety and mood disorders. The survey assesses the following types of information: (1) patterns and correlates of delays in initial help-seeking; (2) patterns and correlates of delays in obtaining an accurate diagnosis after initial treatment contact; (3) barriers to current treatment; (4) variations in current treatment regimens and their association with treatment adherence; (5) side-effect profiles of common types of psychiatric medications, the extent to which physicians educate patients about these side effects, and the effects of side effects and patient education on treatment adherence with these medications; and (6) the role played by patient advocacy groups in the lives of patients and their families.

Method: An international consortium of patient advocacy groups in 11 countries participated in the research. Questionnaires were sent to a representative sample of over 10,000 members. Multiple recontacts were made with initial nonrespondents to increase the response rate. At the time of preparing the abstract approximately half of the field had been completed, with the remainder scheduled for completion in the fall of 1997.

Results: Analysis of results currently ongoing, final results will be available in April 98 and will be presented on this APA poster. However, preliminary data show a consistent delay in initial treatment seeking and lack of communication between physician and patient. This is very evident for information about side effects, which appear to be the major cause of poor compliance. Positive judgments emerge for the action of advocacy groups.

Projection: From these data it appears there is an essential need for the patient to have more information in order to speed up the treatment-seeking behavior, improving compliance and the need to strengthen the role of advocacy groups.

Funding sources: This survey was supported by an unrestricted educational grant from Bristol-Myers Squibb.

NR597 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Personality Traits in Schizophrenia

Ronald J. Gurrera, M.D., Department of Psychiatry, Brockton DVAMC, 940 Belmont Street 116A, Brockton MA 02401; Naheed Akhtar, M.D., Sare Akdag, B.S., Brian F. O'Donnell, Ph.D., Paul G. Nestor, Ph.D., Robert W. McCarley, M.D.

Summary:

Objective: To examine personality differences among normal and schizophrenic subjects using the five-factor model of personality.

Method: NEO Five-Factor Inventory (Form S; Costa & McCrae, 1991) scale scores were used to assess five personality domains: neuroticism (N), extroversion (E), openness (O), agreeableness (A), and conscientiousness (C). Patients were medicated and met DSM-IV criteria for chronic schizophrenia. All subjects were male.

Results: Schizophrenics (n = 25) differed significantly from normals (n = 46) ($F = 3.36$, $df = 65$, $p = .009$) by one-way MANOVA. Schizophrenic mean scores were significantly higher on N (22.6 vs 15.5; $F = 15.93$, $df = (1,69)$, $p < .0005$) and significantly lower on C (30.3 vs 34.1; $F = 4.91$, $df = (1,69)$, $p = .03$) and E (25.6 vs 29.0; $F = 4.35$, $df = (1,69)$, $p = .041$). Schizophrenics also showed a trend toward lower mean scores on O (26.7 vs 29.3; $F = 2.91$, $df = (1.69)$, $p = .092$).

Conclusion: Based on their review and meta-analysis of non-NEO data, Berenbaum and Fujita (1994) concluded that schizophrenics are more introverted, neurotic, and peculiar than normal subjects. Compared with normative data, non-acute schizophrenics score higher on NEO-N and lower on NEO-E and -A dimensions (Bagby et al., 1997). In contrast to Bagby et al., we found that schizophrenics score lower on C (i.e., are less purposeful, strong-willed, determined, scrupulous, punctual, reliable) and possibly O (i.e., are less imaginative, aesthetically sensitive, intellectually curious, attentive to inner feelings), but do not differ from normals on A (interpersonal tendencies of altruism, sympathy, cooperativeness, trust). Thus, schizophrenic subjects in our sample differed more distinctly from normals than has been shown previously using normative data. To our knowledge, this is the first time that the NEO FFI has been used to measure personality traits in schizophrenic patients and normal controls.

NR598 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Sensory Phenomena in OCD and Response to Clomipramine

Roseli G. Shavitt, M.D., Department of Psychiatry, University of Sao Paulo, Rua Ovidio Pires de Campos S/N, Sao Paulo 05403-010, Brazil; M. Conceicao do Rosar Campos, M.D., Marcos T. Mercadante, M.D., Raquel C. Valle, Euripedes C. Miguel, M.D.

Summary:

Background: Sensory phenomena (general uncomfortable feelings, urges or bodily sensations), autonomic anxiety, and cognitions are subjective experiences that can precede repetitive behaviors in OCD patients. Miguel et al. (1997) observed that patients with OCD without tics presented more cognitions and autonomic anxiety than those with OCD and tics or Tourette's syndrome (TS). Those presented more sensory phenomena pre-

ceding their repetitive behaviors. Those phenomenologic differences could predict different treatment responses.

Method: Twenty-one consecutive, drug-free outpatients (13 men, age-range = 17–50 years) have been studied. The Structured Clinical Interview for the DSM-IV, TS-OC Questionnaire, Yale Global Tic Severity Scale, USP-Harvard Repetitive Behaviors Interview, Yale-Brown Obsessive-Compulsive Scale, Global Clinical Impression, Beck Depression and Beck Anxiety Inventories were used in the first 12 weeks of clomipramine treatment (75–300 mg daily).

Results: Seven of the eight nonrespondent patients presented sensory phenomena associated with their repetitive behaviors, whereas only four of the 13 respondent patients experimented such phenomena (Fisher's exact test p = 0.024).

Conclusions: The presence of sensory phenomena in OCD patients seems to predict a poorer response to clocloimipramine in the short term. Further analyses of our data should clarify whether this becomes more significant when associated with earlier onset of the disease in male subjects with a comorbid tic disorder.

NR599 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Nefazodone in Patients with Treatment-Refractory PTSD

Sidney Zisook, M.D., Department of Psychiatry, University of CA at San Diego, 9500 Gilman Drive, La Jolla CA 92093; Yulia Chentsova-Dutton, B.A., Gary Ellenor, Pharm.D., Angela Kodsi, Pharm.D., Alison Smith-Vaniz, M.D., Neal A. Kline, M.D.

Summary:

Treatment response in veterans with combat-related PTSD has been disappointing. Although anxiolytics, anticonvulsants, antipsychotics, and antidepressants all have been tried, none consistently has been associated with across-the-board improvement in symptoms of traumatic recollections, avoidance, numbing, and hyperarousal. This study evaluates the use of nefazodone in a group of treatment refractory veterans with chronic PTSD related to combat in the Vietnam war.

Methods: 18 Vietnam combat veterans were treated with nefazodone for 12 weeks. Patients had to have failed a minimum of three previous medication trials, at least one with an SSRI. Patients were assessed with the Structured Clinical Interview for DSM-IV (SCID), a Hamilton Depression Rating Scale (HDRS), an Impact of Life Events (IES), and a series of Likert Scales measuring quality of life, sexual functioning, and sleep.

Results: Symptoms of PTSD were chronic (mean duration = 22 years) and multiple treatment failures were the rule (mean number of previous medication trials = 7; range = 3–14). Most patients had multiple comorbid Axis I disorders (mean number = 3.6), most commonly agoraphobia (N = 14), dysthymia (N = 12), major depression (N = 14), and panic disorder (N = 9). Depression symptom severity lessened (baseline HRS = 18, endpoint HRS = 11) as did PTSD symptoms of intrusive recollections (baseline IES-IR = 5.1, endpoint IES-IR = 3.2), avoidance (baseline IES-A = 5.0, endpoint IES-A = 3.3), and hyperarousal (baseline IES-H = 5.4, endpoint IES-H = 3.0). In addition, significant improvement of quality of life, sexual functioning, and sleep were reported. Most patients required relatively high doses of nefazodone (mean = 400 mg; range = 200–500 mg). Side effects tended to be mild and did not lead to discontinuation of treatment.

Conclusion: In this group of Vietnam veterans with chronic, treatment-refractory PTSD and comorbid Axis I psychiatric conditions, nefazodone was well tolerated and effective. Given its unique profile on anxiety, sleep architecture, and sexual functioning, nefazodone may prove to be a first-line treatment for PTSD.

Supported by Bristol-Myers Squibb.

NR600 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

The Influence of Pretreatment with Medroxyprogesterone on the Response to Pentagastrin

Jean-Michel Le Melledo, M.D., Department of Psychiatry, University of Alberta, 8440-112 Str., IE713-WMC, Edmonton, AB, T6G-2B9; Paula Lott, Michelle Van Driel, Abdullah Al-Mulhim, M.D., Gian S. Jhangri, M.Sc.

Summary:

There are many reasons to believe that female gonadal hormones influence the course of panic disorder (PD). However, owing to methodological difficulties inherent in prospective studies of the natural course of PD, the relationship between hormonal changes and PD has not been investigated in well-designed and well-controlled studies to date. Panic challenges such as pentagastrin administration are useful tools with which to study the pathophysiology of panic attacks in controlled laboratory situations. We hypothesized that exogenous administration of medroxyprogesterone would decrease the behavioral response to pentagastrin. We employed a double-blind, cross-over, placebo-controlled design, with randomization of the order of a three-day pretreatment with placebo or 10 mg of medroxyprogesterone prior to injections of 30μg of pentagastrin. The two injection visits took place in the early follicular phase of two consecutive menstrual cycles. Behavioral responses to pentagastrin were evaluated using a Panic Symptom Scale (PSS) and a 100 mm visual analogue scale for anxiety. Four women suffering from PD (DSM-IV) received both pretreatments prior to pentagastrin injections. Our preliminary data show a marginally statistically significant (2-tailed) decrease of the panic symptom sum intensity (25.7 ± 10.2 vs 32.5 ± 10.8, p = 0.06), as well as a decrease in the maximum anxiety (66 ± 19 vs 75 ± 17, p = 0.06), with medroxyprogesterone pretreatment. Our results suggest that medroxyprogesterone pretreatment decreases the response to the panicogenic agent, pentagastrin. Confirmation of these preliminary results is needed from a larger sample. Our preliminary data are consistent with the observed effects of female hormonal events on the course of PD and suggest that the therapeutic management of women with PD should take female characteristics into account.

NR601 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Body Dysmorphic Disorder in Children and Adolescents

Ralph S. Albertini, M.D., Outpatient, Butler Hospital, 345 Blackstone Blvd, Providence RI 02906; Katharine A. Phillips, M.D.

Summary:

Objective: Body dysmorphic disorder (BDD), a preoccupation with a nonexistent or slight defect in appearance, is often first manifested in adolescence. Because there have been no studies of BDD's demographics, phenomenology, associated psychopathology, or treatment response in children and adolescents, we assessed these features in the largest series of children and adolescents with BDD to date.

Method: Twenty-five patients with DSM-IV BDD (3 M, 22 F, age 14.6 ± 2.4 years, range 6–17) were assessed with a number of semistructured instruments, including the SCID or K-SADS.

Results: The subjects reported a lifetime average of 6.0 ± 5.5 bodily preoccupations, most commonly with "defects" of the skin (60%), hair (56%), and teeth (40%). Mean age of onset of BDD was 11.6 ± 2.5 years (range 5–17), although psychiatric treatment was not received until a mean age of 13.4 ± 2.4 years. All subjects had associated compulsive behaviors, most commonly camouflaging (e.g., with clothing) in 100%, mirror checking (84%), comparing with others (83%), and reassurance seeking (68%). We

found that 92% reported impairment in social functioning and 80% reported impairment in academic functioning due to BDD symptoms; 42% had been psychiatrically hospitalized and 24% had made a suicide attempt. The most common comorbid lifetime diagnoses were major depression (76%), obsessive compulsive disorder (40%), and social phobia (32%). Ten of 17 (59%) SRI trials, 0 of 7 trials with other psychotropic medications, 0 of 2 trials of behavior therapy, and 1 of 12 psychotherapy trials resulted in much or very much improvement in BDD symptoms on the CGI. Seven subjects (28%) received surgical, dermatologic, or dental treatment, with a poor outcome in all cases.

Conclusions: BDD is present and diagnosable in children and adolescents, with clinical features similar to that in adults. These preliminary data suggest that SRIs may be effective in its treatment.

Funded in part by an unrestricted grant from Solvay Pharmaceuticals.

NR602 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Medical and Surgical Treatment Received in Body Dysmorphic Disorder

Katharine A. Phillips, M.D., Butler Hospital, 345 Blackstone Boulevard, Providence RI 02906; Jon Grant, B.A., Lynne M. DeMarco, M.S.P.H.

Summary:

Background: It appears that many patients with body dysmorphic disorder (BDD) seek and receive nonpsychiatric medical and surgical treatment. Such patients are often referred to in the surgical literature as "insatiable patients" or "polysurgery addicts." However, the nonpsychiatric treatment received by these patients has not been systematically investigated.

Methods: 209 adults with DSM-IV BDD (105 female, 104 male, age 33.5 ± 10.2 years) were systematically assessed with a semi-structured instrument to evaluate nonpsychiatric medical treatment received.

Results: 136 (65.1%) subjects sought nonpsychiatric medical or surgical treatment, and 123 (58.9%) received such treatment. A total of 458 nonpsychiatric treatments were sought, with 245 nonpsychiatric treatments received. Eighty-four (40.2%) received dermatologic treatment (mean number of treatments = 1.4 ± 0.9), 51 (24.4%) had surgery (mean number of surgeries = 2.0 ± 1.4), 11 (5.3%) received dental treatment (mean number of treatments = 1.2 ± 0.6), and 10 (4.8%) received other types of medical treatment (mean number of treatments = 1.1 ± 0.3). Sixty-four (52.0%) of these patients received more than one nonpsychiatric treatment; in many cases the same procedure was repeated because the patient was dissatisfied with the treatment outcome. A majority (69.1%, n = 143) of the nonpsychiatric treatments resulted in no change or a worsening of concern with the treated body part. For those treatments that decreased concern with the treated body part (30.9%, n = 64), the overall severity of BDD symptoms remained unchanged or increased in a majority (71.4%) (due, for example, to a shifting of concern to another body area). In some cases, the poor treatment outcome precipitated hospitalization or threat of litigation.

Conclusion: These results suggest that a majority of patients with BDD seek nonpsychiatric treatment but tend to respond poorly.

NR603 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Insight and Treatment Response in Body Dysmorphic Disorder

Katharine A. Phillips, M.D., Butler Hospital, 345 Blackstone Boulevard, Providence RI 02906; Susan L. McElroy, M.D., Megan M. Dwight, M.D., Jane L. Eisen, M.D., Steven A. Rasmussen, M.D.

Summary:

Background: There are many unresolved questions regarding insight and treatment response. Does insight predict pharmacotherapy response? Can insight improve with non-neuroleptic medications? Research has been limited by the lack of reliable and valid scales to assess delusionality (insight).

Methods: 30 subjects (20 female, 10 male, 33.3 ± 9.0 years) with DSM-IV body dysmorphic disorder (BDD) received open-label fluvoxamine for 16 weeks. Subjects were assessed with the BDD-YBOCS (a measure of BDD severity) and the Brown Assessment of Beliefs Scale (BABS; a reliable and valid semi-structured scale that assesses delusionality [insight]).

Results: The correlation between baseline total BABS scores (14.5 ± 4.4) and change in BDD-YBOCS scores (31.1 ± 5.4 at baseline to 16.9 ± 11.8 at endpoint) was .19 ($p = .33$). All correlations between individual baseline BABS items and change in BDD-YBOCS scores were nonsignificant (–.29 to .14). Baseline BABS scores did not contribute significantly to endpoint BDD-YBOCS scores in a regression analysis ($t = .30$, $p = .77$). Delusional subjects (n = 5, 71.4%) were as likely as nondelusional subjects (n = 14, 60.9%) to respond to fluvoxamine. Insight significantly improved in fluvoxamine responders (BABS score of 15.1 ± 3.8 at baseline, 7.6 ± 5.1 at endpoint, $t = 6.6$, $df = 18$, $p < .001$) but not in nonresponders (13.5 ± 5.4 at baseline, 12.6 ± 5.6 at endpoint, $t = 0.8$, $df = 10$, $p = .46$). All fluvoxamine responders who were delusional at baseline (n = 5) were no longer delusional at study endpoint.

Conclusions: Degree of insight did not predict fluvoxamine response, and insight significantly improved in fluvoxamine responders. These preliminary findings suggest that SRIs may be effective for certain types of psychosis.

Supported by an unrestricted grant from Solvay Pharmaceuticals and Pharmacia and Upjohn.

NR604 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Panic Disorder and Cigarette Smoking Behavior

Michaela Amering, M.D., Department of Psychiatry, University of Vienna, Waehringer Guertel 18–20, Vienna 1090, Austria; Bettina Bankier, M.D., Dr. Peter Berger, Hemma Griengl, M.D., Dr. Johann Windhaber, Dr. Heinz Katschnig

Summary:

Objective: The purpose of this study was to assess the cigarette smoking behavior of panic disorder patients as well as the way panic disorder affects the habits of cigarette smokers and how changes in cigarette smoking in turn affect panic symptoms.

Method: 102 consecutive panic disorder patients attending the panic disorder clinic at the department of psychiatry at the University of Vienna with a DSM-III-R diagnosis of panic disorder with or without agoraphobia answered the questions of a specially designed structured clinical interview regarding their smoking habits and their association to panic disorder. Onset, duration, daily numbers of cigarettes, and changes in cigarette consumption during the course of panic disorder were recorded as were the impact of these changes on panic symptomatology.

Results: Both rates of smokers (56%) and of ex-smokers (28%) were substantially higher than in the general population (smokers: 27,5%, ex-smokers 15%; values for the general population outside 95% confidence intervals). However, a surprisingly high number of patients had succeeded in reducing or quitting cigarette smoking because of their panic disorder, although they experienced little benefit in regard to panic symptoms from doing so.

Conclusions: The motivation for changing smoking habits is high in this population with elevated smoking prevalence and should be taken into consideration by therapists.

NR605 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Sertraline Treatment of Panic Disorder: Clinical Correlates of Treatment Response

Mark H. Pollack, M.D., Department of Psychiatry, Massachusetts General Hospital, 15 Parkman Street, WACC-815, Boston MA 02114; Mark H. Rapaport, M.D., Robert Wolkow, M.D., Cathryn M. Clary, M.D.

Summary:

Objective: The acute antipanic efficacy of sertraline has been demonstrated in several placebo-controlled treatment studies. We analyzed the combined results from two flexible-dose studies to obtain data on the differential response to sertraline among clinical subgroups of panic patients.

Methods: Two placebo-controlled, 10-week treatment studies of patients diagnosed with panic disorder with or without agoraphobia were combined (n = 351) since the protocols were identical. Regression and analysis of variance models were run to assess the effect of key baseline clinical variables on outcome.

Results: Sertraline was found to be effective across the spectrum of clinical variables studied. Patients were defined with high vs. low severity by the CGI Severity score at baseline (5–6 or 3–4); in both groups sertraline was statistically superior to placebo, with the high severity group showing a more robust differentiation. In addition, treatment effect was the same for patients whether they had the presence or absence of agoraphobia at baseline (p = 0.52). The results of the CGI subscales, which measured treatment effect on a variety of clinical measures, including panic attacks, anticipatory anxiety, phobic avoidance, and social and occupational functioning, were also all statistically significant at the p < .005 level, and will be presented.

Conclusions: These findings suggest that sertraline treatment was beneficial for panic disorder as measured by either panic attack or phobic avoidance symptomatology. Furthermore, the beneficial effect did not depend upon the presence or absence of agoraphobia or the initial severity of symptoms.

This research was supported by Pfizer, Inc.

NR606 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Low End-Tidal CO2 and Treatment Outcome in Panic Disorder

Laszlo A. Papp, M.D., Department of Psychiatry, Columbia University, 722 West 168th Street, Unit 24, New York NY 10032; Jeremy D. Coplan, M.D., Katherine Shear, M.D., Jose Martinez, M.S., David H. Barlow, Ph.D., Scott Woods, M.D., Jack M. Gorman, M.D.

Summary:

Introduction: One of the most consistently reported respiratory abnormalities in patients with panic disorder (PD) is the tendency to hyperventilate. If hyperventilation induced low end-tidal CO2 level (ETCO2) is a state-specific phenomenon, clinical remission, regardless of the treatment modality, should be accompanied by increased ETCO2.

Methods: In the context of a multisite, placebo-controlled treatment study that was designed to compare the efficacy of antipanic medication (IMI), cognitive behavioral treatment (CBT), and the combination of the two, ETCO2 was monitored. Data are now available from 130 patients at baseline and at the end of the 12-week acute treatment period.

Results: Response to active treatment corresponded with significant increase in ETCO2, while nonresponders exhibited no change. When the treatment groups were analyzed separately, all active treatments were accompanied by increased ETCO2 but only the response to the combination of IMI and CBT corresponded with significant rise in ETCO2. Low ETCO2 appears to be a predictor of treatment response.

Conclusion: ETCO2 is a convenient respiratory factor that can be utilized to predict and monitor treatment response in panic disorder patients.

NR607 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Meteorological Factors in Panic Disorder

Galina Mindlin, M.D., Jefferson Medical College, 851 Red Lion Road #D5, Philadelphia PA 19115; Olga Kolosova, M.D., Ashwin A. Patkar, M.D.

Summary:

Objectives: Panic attacks seem to be related to environmental stimuli including meteorological factors (M-factors). The main aim of the study was to determine whether measures of psychophysiological reactivity are related to low atmospheric pressure, humidity, and wind among patients with panic disorder.

Methods: Thirty patients with panic disorder and 40 controls were studied. Assessments included personality tests (MMPI & Spielberg's Anxiety Scale) and psychophysiological measures (EMG, GSR, and EEG). Atmospheric recordings were obtained from a central meteorological station. Panic symptoms were assessed by clinical interviews and self-reports.

Results: Patients with panic disorder (100% were significantly more likely to be influenced by M-factors than were controls (50%). The most significant factors were low barometric pressure and strong wind (p,0.05). Furthermore, patients who reacted to M-factors were more likely to be women, of older age, with high introversion, high level of personal anxiety, and low a index on EEG compared with nonreacting patients.

Conclusion: Panic disorder seems to be influenced by meteorological stimuli, particularly low barometric pressure and strong wind. Moreover, there seems to be a relationship between these stimuli and personality and psychophysiological variables.

NR608 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Measurement of Dissociative States

J. Douglas Bremner, M.D., Department of Psychiatry, Yale University, P.O. Box 208038 Yale Station, New Haven CT 06520; Carolyn M. Mazure, Ph.D., Frank Putnam, M.D., Charles R. Marmar, M.D., Steven M. Southwick, M.D., Dennis S. Charney, M.D., John H. Krystal, M.D.

Summary:

Purpose: Alterations in benzodiazepine receptor function have been hypothesized to play a role in anxiety. Animal models showed decreased binding in frontal cortex and hippocampus. The purpose of this study was to examine benzodiazepine receptor binding in panic disorder.

Methods: Benzodiazepine receptor binding (volume of distribution) (VT') was measured with single photon emission computed tomography (SPECT) and [^{123}I]iomazenil in patients with panic disorder (N = 13) and healthy controls matched (N = 16) for age. Data were analyzed using statistical parametric mapping (spm96).

Results: A decrease in benzodiazepine receptor binding was found in left hippocampus (z score = 2.76; p = 0.003) and precuneus (z score = 2.79; p = 0.003) in panic disorder patients relative to comparison subjects. Decreased binding in prefrontal cortex (areas 8 and 9) was associated with an increase in panic symptomatology in patients with panic disorder.

Conclusions: These findings implicate alterations in hippocampus and frontal cortex benzodiazepine receptor binding in panic disorder.

NR609 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

OCD and Tic Disorders in Parents of Children with Pediatric Autoimmune Neuropsychiatric Disorders Associated with Streptococcal Infections

Lorraine Lougee, M.S., Child Psychiatry, NIMH, Bldg 10 Room 6N240 MSC 1255, Bethesda MD 20892; Susan J. Perlmutter, M.D., Marjorie Garvey, M.D., Susan E. Swedo, M.D.

Summary:

Objective: To determine the rates of OCD and tics in the parents of probands with pediatric autoimmune neuropsychiatric disorders associated with streptococcal infections (PANDAS).

Methods: There were 48 PANDAS probands, 38 males and 10 females. Twenty-four had a primary diagnosis of OCD, and 24 a primary diagnosis of a tic disorder. Eighty-nine (89) biological parents (47 mothers and 42 fathers), were evaluated with in-person interviews using the Schedule for Affective Disorders and Schizophrenia-Lifetime (SADS-L). Family histories, genograms, the NIMH Global OCD Scale, and the Yale Family Genetic Study Self Report Questionnaire were also used to gather information.

Results:

Table: Psychiatric Diagnoses in Parents of PANDAS Patients

	PANDAS/OCD[1] N(45)	%	PANDAS/TICS[1] N(44)	%
OCD	5	11	4	9
Subclinical OCD	3	7	9	21
Tic Disorder/Tourette Syndrome	6	13	5	11
	PANDAS/TOTAL N(89)	**%**	**OCD[1] N(89)**	**%**
OCD	9	10	15	17
Subclinical OCD	12	14	12	13
Tic Disorder/Tourette Syndrome	11	12	#	#

[1]PANDAS/OCD: primary diagnosis = OCD; PANDAS/TICS: primary diagnosis = tic disorder; OCD = previous cohorts
#Not reported

The rate of OCD in the parents of the PANDAS group (10.1%) was significantly greater than the 2.3% reported in the population ($x^2 = 5.2$, df = 1, p = .02) and was not significantly different from that seen in the contrast group (17%) ($x^2 = 2.0$, df = 1, p = .15).

Conclusion: Rates of OCD and tic disorders are elevated among the parents of PANDAS probands suggesting a familial pattern of vulnerability.

NR610 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Risperidone Treatment of Psychotic Features in PTSD

Mark B. Hammer, M.D., Department of Psychiatry, VAMC, 109 Bee Street (116A), Charleston SC 29401-5703; Helen Ulmer, M.S.N., Michael G. Huber, M.D., Michael O. Measom, M.D.

Summary:

Objective: Recent studies suggest that psychotic symptoms occur in up to 40 percent of combat veterans with PTSD. Although antidepressants may help global PTSD symptoms, there has been little systematic evaluation of the role of atypical antipsychotic treatment specifically for psychotic symptoms in these patients.

Method: Thirteen Vietnam veterans meeting DSM-IV criteria for PTSD had comorbid psychotic features assessed using the Structured Clinical Interview for DSM-III-R with Psychotic Screen (SCID-P) and the Positive and Negative Syndrome Scale (PANSS). All patients were on a stable antidepressant dose for at least three months (thus were partially treated). They then underwent six weeks of open-label treatment with risperidone titrated clinically. Symptom ratings included the Clinician Administered PTSD Scale (CAPS) and the PANSS given at baseline and following one and six weeks of treatment. Extrapyramidal side effects ratings were also administered.

Results: Ten of the 13 patients improved clinically (77%). There was a significant reduction in PANSS ratings (78.5 ± 5.0 versus 66.5 ± 5.8, t = 3.24, p < 0.01). The greatest magnitude of improvement in psychosis ratings was in the positive symptom subscale of the PANSS (18.8 ± 1.6 versus 14.2 ± 1.4, t = 4.12, p < 0.001). CAPS ratings remained the same, possibly reflecting prior antidepressant treatment (81.6 ± 9.2 versus 75.2 ± 10.3, t = 0.27, p < 0.40). The average dose of risperidone was 2.3mg (range of 1mg to 6mg per day). There were no extrapyramidal side effects except for possible akathisia in one patient.

Conclusions: Risperidone treatment was efficacious as an adjunct to antidepressant medication in this clinical series. Further study utilizing a randomized, placebo-controlled, double-blind design is indicated to better define the role of atypical antipsychotics in this PTSD population.

NR611 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Psychotic Features and Symptom Severity in PTSD

Mark B. Hammer, M.D., Department of Psychiatry, VAMC, 109 Bee Street (116A), Charleston SC 29401-5703; Helen Ulmer, M.S.N., David F. Horne, B.S., Christopher Frueh, Ph.D., Timothy J. Twomey, B.S., Keith Chobot, M.S.W.

Summary:

Objective: Psychotic symptoms are common in the comorbidity of PTSD, present in up to 40% of patients with combat-associated PTSD. In this study we hypothesized that psychotic symptom ratings would correlate with severity of PTSD.

Method: Twenty-two Vietnam combat veterans with PTSD and comorbid psychotic features (well-characterized from a multidisciplinary evaluation) underwent a Structured Clinical Interview for DSM-III-R with psychotic screen (SCID-P), Clinician Administered PTSD Scale (CAPS), Positive and Negative Syndrome Scale (PANSS), and the Hamilton Depression Rating Scale (HDRS).

Results: There was a significant positive correlation between the CAPS and PANSS global ratings (r = 0.83, p < 0.01). Subscales except for the CAPS-B subscale (reexperiencing) and the PANSS-positive symptom scale (r = 0.47, p = 0.20) showed significant intercorrelations. Severity of depressive symptoms (HDRS) also correlated significantly with both CAPS (r = 0.83, p < 0.03) and PANSS (r = 0.82, p < 0.02) global scores.

Conclusion: As expected, patients with more severe PTSD illness as measured by the CAPS also had more severe ratings on the PANSS and some, but not all, psychosis subscales. There is an overlap between symptoms rated by these scales although the PTSD reexperiencing scale (which includes psychotic symptoms) diverged from the positive symptom scale of the PANSS. PTSD with psychotic features may represent a more severe subtype of the disorder.

NR612 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Comorbid GAD Outcome of Treatment of Panic

Vladah Starcevic, M.D., Institute of Mental Health, Palmoticeva 37, Belgrade 11000, Yugoslavia; Milan Latas, M.D., Goran Bogojevic, M.D., Goran Trajkovic, M.D.

Summary:

Objective: To examine possible effects of comorbid generalized anxiety disorder (GAD) on the outcome of intensive, integrative treatment /IIT/ of panic disorder with agoraphobia (PDA).

Method: Sixty-six PDA patients were treated by IIT for a mean of 76 days. Diagnoses of PDA and GAD were established by the means of the SCID. Patients with and without GAD were compared at the beginning and end of IIT to assess symptom severity and global clinical status.

Results: In comparison with 30 (45%) patients without GAD, 36 (55%) PDA patients with comorbid GAD were rated as more severely ill on the Clinical Global Impressions Scale /p = 0.0001/ at the beginning of IIT, and also exhibited significantly more severe symptoms of anxiety /p = 0.0001 on the Beck Anxiety Inventory/ , depression /p = 0.0000 on the Beck Depression Inventory/ and somatization /p = 0.0001 on the Somatization scale of the Hopkins Symptom Checklist-90/, with more pronounced hypochondriacal tendencies in GAD patients showing a trend towards statistical significance /p = 0.0024 for Disease Phobia, and p = 0.0061 for Hypochondriacal Beliefs on the Illness Attitudes Scales/. In contrast, at the end of IIT, there were no significant differences between patients with and without comorbid GAD on scores on the clinician-rated outcome of treatment /Clinical Global Impressions - Change Scale/ and on all self-report instruments.

Conclusions: The comorbidity with GAD did not affect the outcome of IIT of PDA patients, suggesting that such comorbidity does not necessarily indicate a worse prognosis for PDA. This finding can be accounted for by adequate modifications of IIT, and especially by a more vigorous pharmacological treatment of GAD patients: thirty-four (95%) GAD patients received pharmacotherapy in contrast to 22 (73%) patients without GAD, and 14 (39%) GAD patients were treated with a combination of two medications in contrast to only two (7%) patients without GAD.

NR613 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Parental Shyness and Sociability in Social Phobia

Catherine L. Mancini, M.D., Department of Psychiatry, McMaster Medical Center, 1200 Main Street West, Hamilton ON L8N 3Z5, Canada; Michael A. Van Ameringen, M.D., Jonathan Oakman, Ph.D., Amy Shulist

Summary:

Objective: Early parent-child interactions have been implicated as a nongenetic factor associated with the etiology of social phobia. Shyness is defined as feelings of anxiety and inhibition in the presence of unfamiliar people. In contrast, sociability is defined as a preference for social interaction. This study attempts to examine the relationship of parental shyness and sociability to the development of social phobia.

Method: The modified Cheek and Buss Shyness and Sociability Scales were administered to 142 consecutive, SCID-diagnosed, DSM-IV primary anxiety disorders patients. Items were modified to reflect the degree of shyness and sociability observed in each of their parents.

Results: Discriminant analysis using the factors of parental shyness and sociability were all significant predictors of the presence of a diagnosis of social phobia. A regression analysis, entering factors of parental-same sex vs. parental-opposite sex sociability or shyness, revealed that low sociability of the same-sex parent was a significant, unique predictor of the presence of a diagnosis of social phobia.

Conclusion: These results support the role of behavioral modeling in the transmission of social phobic symptoms from parent to child. Thus, a parent with low sociability may not allow for the development of adequate social skills or exposure to social situations, leading the child to avoid social interactions.

NR614 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Are There Differences Between Panic Disorder With and Without Agoraphobia?

Hisanobu Kaiya, M.D., Panic Disorder Research Center, 1-15 Tsubaki-Cho Nakamura-ku, Nagoya 453, Japan; Yoshikazu Miyamae, Eiji Yoshida, M.D., Natsuko Kaiya, Manabu Yamanaka, M.D., Noriya Ishida, M.D.

Summary:

Subjects and Method: Random sampling of 50 DSM-III-R-defined panic disorder (PD) patients (mean age:36 ± 10 year-old, M/F:38/12) without agoraphobia was done from the data base of the PD Research Center of Nagoya Mental Clinic, which contains data on 550 patients visiting NMC in the last four years. Then, 50 patients with moderate or severe agoraphobia were selected from a similar age and gender group from the same data base. Variables of biography, clinical history, and symptoms at onset and intake, and medications were statistically compared.

Results: The following variables are higher in PD with agoraphobia compared to patients without agoraphobia ($p < 0.001$): maximum daily use of tablets; duration of illness ($p = 0.0028$): situational panic attacks; Sheehan's total scores at onset, depression scores at intake ($p = 0.0028$). No statistical differences were found in the following variables: age of onset; family history of PD, phobias, depression, and substance abuse; history of early separation; academic performance; marital status.

Discussion and Conclusion: Present results suggest that patients with agoraphobia seem to have suffered more severe PD. There is little evidence suggesting that PD without agoraphobia on the whole is a distinct disease entity from PD with agoraphobia.

NR615 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Symptom Subtypes and Family History in OCD

Laura J. Summerfeldt, M.A., Anxiety Disorders, Clarke Institute, 250 College Street, Toronto ON M5T 1R8, Canada; Margaret A. Richter, M.D.

Summary:

Objective: Despite some consensus regarding the familial nature of obsessive-compulsive disorder (OCD), existing findings exhibit inconsistencies. Potential heterogeneity within OCD in the form of symptom subtypes (e.g., checking, washing, and symmetry manifestations) has been posited as one contributing factor. This study examined the relationship between primary symptom subtypes in probands and familial history of OC phenomena and spectrum conditions (e.g., trichotillomania, tic-related disorders).

Method: Probands ($n = 60$) and selected first-degree relatives underwent structured interviews, with diagnoses made of clinical and subthreshold target disorders.

Results: Rates of OC phenomena were highest in relatives of probands with symmetry symptoms, with the greatest difference seen in rates of subthreshold OCD. A similar pattern was observed for several spectrum conditions. Symmetry symptoms in probands were associated with significantly elevated rates in relatives of tic-related disorders and behaviors, and impulse-related grooming habits.

Conclusions: Symptom subtypes may reflect disparate etiologies and be one key to understanding both familial transmission of OCD and the disorder's relationship with a range of nosologically distinct conditions. Symmetry symptoms in OC patients may represent alternate expression of a common genetic diathesis underlying the OC spectrum of disorders.

Funding provided by the Ontario Mental Health Foundation.

NR616 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Impulsivity in OCD and Other Anxiety Disorders

Karyn E. Hood, M.Ed., Anxiety Clinic, Clarke Institute, 250 College Street, Toronto ON M5T 1R8, Canada; Martin M. Antony, Ph.D., Margaret A. Richter, M.D., Richard P. Swinson, M.D.

Summary:

Objective: The relationship between impulsivity and the symptoms of obsessive compulsive disorder (OCD) has been debated in the literature in recent years. The present study examined: 1) whether OCD patients experienced increased levels of impulsivity as compared to patients with other anxiety disorders and non-clinical controls, and 2) whether OCD patients who were impulsive would experience increased disruption in daily functioning.

Method: Individuals with DSM-IV diagnoses of OCD (n = 20), panic disorder with or without agoraphobia (n = 34) and social phobia (n = 22), as well as a nonpsychiatric control group (n = 49) completed a series of self-report questionnaires which included the Barratt Impulsiveness Scale (BIS-10R), along with an interviewer-rated assessment of overall daily functioning (GAF).

Results: Patients in all three anxiety disorders groups reported higher levels of impulsiveness than the control group, but scores did not differ significantly among the three groups. The impulsivity scores of OCD patients and social phobia patients negatively correlated with a global assessment of functioning scale.

Conclusions: Although the present findings support the hypothesis that OCD is associated with increased levels of impulsivity, it appears that self-reported impulsiveness is also a feature of other anxiety disorders. This factor may have implications for clinical practice with these groups.

NR617 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Early-Onset OCD: A Different Subtype?

M. Conceicao do Rosar Campos, M.D., Department of Psychiatry, Fac Medicina USP, Rua Ovidio Pires de Campo S/N, Sao Paulo SP 05403-010, Brazil; Roseli G. Shavitt, M.D., Marcos T. Mercadante, M.D., Raquel C. Valle, Euripedes C. Miguel, M.D.

Summary:

Background: Recent studies suggest that some forms of OCD may represent a variant expression of Tourette syndrome (TS), and that patients with OCD associated to TS present more frequently tic-like compulsions and sensory phenomena. The purpose of this study was to identify characteristics that better differentiate the subgroup of OCD patients with the onset of their symptoms before the age of 10 (early-onset group-EOG) and after the age of 17 (late-onset group-LOG).

Method: Fourty-two patients meeting DSM-IV criteria for OCD were evaluated. The USP-HARVARD Repetitive Behavior Interview, Structured Clinical Interview for DSM-IV (SCID), Yale-Brown Obsessive Compulsive Scale, Yale Global Tic Severity Scale, Beck Depression Inventory and Beck Anxiety were administered to all patients.

Results: Among the EOG 10 patients also presented tics and/or TS, compared with two of the LOG ($p = 0.01$). Tic-like compulsions were present in 18 (85,70%) patients of the EOG when compared to 3 (14,28%) of the LOG ($p = 0.00001$). In the EOG all of the patients had at least one compulsion preceded by Sensory Phenomena compared to 14 (66,66%) of the LOG ($p = 0.008$).

Conclusions: These data suggest that tics, TS, tic-like compulsions and sensory phenomena are more frequent in the early-onset group. Therefore, these data add to the notion that early-onset OCD patients may represent a different phenomenologic subgroup.

NR618 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Cognition and Disabilities in Panic Disorder

Bettina Bankier, M.D., Department of Psychiatry, University of Vienna, Waehringer Guertel 18–20, Vienna 1090, Austria; Dr. Peter Berger, Michaela Amering, M.D., Dr. Gabriele Sachs, Dr. Anita Holzinger, Dagmar Maierhofer, M.D., Dr. Heinz Katschnig

Summary:

Dysfunctional cognitions represent a core element of panic disorder. We investigated the question whether certain cognitions are associated with disabilities in different areas of life.

In a study on the comparison of paroxetine with group psychotherapy in patients with panic disorder with or without agoraphobia, dysfunctional cognitions were assessed by the Agoraphobic Cognitions Questionnaire and psychosocial impairment was evaluated by the Sheehan Disability Scale.

Of 100 patients included in the study, 88 cases could be analyzed regarding this question due to complete data. Dysfunctional cognitions showed a significant correlation with disabilities in social relations and family life but not in functioning at work. As suggested in the literature, the most frequently reported cognitions were the fear of getting a heart attack (26.1%), the fear of fainting (19.3%), and the fear of dying (19.3%). However, cognitions which were associated with disabilities in daily life were characterized by the fear of loosing social control (doing something stupid (r = .38), loosing control (r = .30), and becoming crazy (r = .29)) and the fear of impairment that would result in dependency on the help of others.

The results suggest that cognitions with an interpersonal aspect have a greater impact on patient's role functioning aspect of quality of life than the cognition of fear of dying. It is concluded that it is advisable to concentrate on these interpersonal cognitions.

NR619 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Interpersonal Problems in Panic Disorder

Dr. Gabriele Sachs, Department of Psychiatry, University of Vienna, Waehringer Guertel 18-20, Vienna A-1090, Austria; Dr. Peter Berger, Michaela Amering, M.D., Dr. Karl Dantendorfer, Dagmar Maierhofer, M.D., Dr. Johann Windhaber, Dr. Heinz Katschnig

Summary:

Objective: The aim of the study was to clarify the role of social adaption and interpersonal problems for the course of panic disorder (PD).

Method: 100 consecutive DSM-IV PD outpatients (62% women, mean age 33.6 ± 8,3 years) with or without agoraphobia (80.4% with agoraphobia) were studied. All patients received pharmacological treatment with paroxetine (20–60 mg/d) and half of them were randomized to additional group psychotherapy (24 weeks, once weekly), including elements of cognitive and interpersonal therapy. Interpersonal problems were assessed with the Inventory of Interpersonal Problems (Horowitz et al 1994), disabilities were recorded with the Sheehan Disability Scale.

Results: At baseline higher severity if illness (CGI) was associated with increased social disabilities ($p < 0,01$) and specific interpersonal problems like being overly introverted, subassertive and nurturant ($p < 0,05$). Significant improvements were found in the main outcome criteria (panic attacks and disabilities) in both treatment groups after 24 weeks, but there were no significant differences between the treatment groups. However, at the end of treatment, nonresponders (CGI) were more frequently overly introverted and socially avoidant than responders ($p < 0,01$).

Conclusions: PD patients with interpersonal conflicts show an infavorable treatment response. We propose that including an interpersonal approach should be a main aim of PD treatment.

NR620 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Catastrophic Cognition and Avoidance Behavior in Panic Disorder

Dr. Johann Windhaber, Department of Psychiatry, University of Vienna, Waehringer Guertel 18-20, Vienna A1090, Austria; Michaela Amering, M.D., Dr. Karl Dantendorfer, Dagmar Maierhofer, M.D., Dr. Peter Berger, Dr. Gabriele Sachs, Dr. Heinz Katschnig

Summary:

Purpose: The intention of the present study was to further explore the influence of catastrophic cognitions on avoidance behaviour in panic disorder (PD) patients.

Method: The Mobility Inventory (MI), the Agoraphobic Cognition Questionnaire (ACQ) and the Beck Depression Inventory (BDI) were administered to 71 consecutive outpatients who received a DSM-III-R diagnosis of PD with or without agoraphobia.

Results: The average age of the total sample was 34.5 years. Sixty-two (87%) received a diagnosis of PD with agoraphobia, 46 (65%) were women. The average value of the ACQ was 2.01 (SD 0.55), of the MI-AAL (avoidance alone) 2.1 (SD 0.97) and of the BDI 17 (SD 9.4). Intercorrelations of the scores of the MI-AAL, the ACQ and the BDI showed one significant correlation (between ACQ and MI-AAL). In a multiple regression analysis (MI-AAL as dependent variable) only ACQ turned out to have a significant influence ($\beta = .27$, $p < 0.05$).

Discussion: The pattern of our results supports previous findings (e.g. Warren et al. 1989) that intensity of catastrophic cognitions is associated with extent of agoraphobic avoidance. In contrast to other studies (e.g. Chambless et al. 1984), we found neither significant correlations between BDI and the ACQ nor between BDI and avoidance behavior.

NR621 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Fluvoxamine Versus Clomipramine in OCD

Emanuela Mundo, M.D., Department of Neuropsych, Hosp S Raffaele, Via Luigi Prinetti 29, Milano 20127; Italy, John Van Den Berg, M.D.

Summary:

Drugs that act on the serotonergic system, such as the SSRIs and some tricyclic antidepressants, appear to be the most effective treatments for OCD. The aim of this large-scale, double-blind, multicenter study was therefore to compare the efficacy and safety of fluvoxamine with clomipramine in patients with DSM-III-R OCD (total score ≥7 on the NIMH-OC global rating scale). A total of 227 patients were randomized to flexible oral doses of fluvoxamine or clomipramine (both 150–300 mg/day) for 10 weeks. Efficacy was assessed by the NIMH-OC global rating scale, Y-BOCS (total and obsession and compulsion subscores), CGI severity of illness and global improvement scales, Clinical Anxiety Scale, and 17-item HAMD. A total of 217 patients (112 in the fluvoxamine group and 105 in the clomipramine group) were evaluated for efficacy. Fluvoxamine and clomipramine were both clinically effective and there were no statistically significant differences between them at any visit. However, there were clear differences in terms of safety. Clomipramine-treated patients had a higher incidence of treatment-related adverse events (especially dry mouth, constipation, and tremor) and premature withdrawals due to adverse events (18 vs. 9). In conclusion, results from this study show that fluvoxamine is equally as effective as, but better tolerated than, clomipramine in the treatment of OCD.

Investigation sponsored by Solvay Pharmaceuticals

NR622 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Phenomenology of Panic Disorder in Young and Old Patients

Javaid I. Sheikh, M.D., Dept Of Psychiatry, Stanford School of Medicine, Stanford CA 94305-5546; Pamela J. Swales, Ph.D.

Summary:

Rationale: Panic disorder is commonly a chronic disorder of remissions, relapses, and comorbidities (Liebowitz, 1997). Given its apparent course, there is a paucity of literature discussing the clinical and phenomenological characteristics of younger (age <55) versus older (age ≥55) adults. This presentation extends our research of phenomenological differences between younger and older groups of panic disorder patients (Sheikh & Swales, 1995).

Method: One hundred seventy-one (n = 171; 56 males, 115 females; age range = 20–83) self-referred patients were studied during their participation in a number of outpatient clinical treatment studies for panic disorder. At structured clinical interview, all met DSM-III-R criteria for panic disorder as a primary diagnosis. Measures assessing panic-associated domains included cognitions, physiological symptoms, behaviors, and global functioning. Additionally, family psychiatric history and traumatic and other significant life events were obtained.

Results: Analyses support that younger patients experience greater cognitive distress, greater numbers of avoidance behaviors, greater overall physiological arousal, greater severities of panic disorder, agoraphobia, and symptoms during an attack, and lower global functioning than their older counterparts.

Conclusions: Severity of panic disorder appears to be greater in younger patients. Possible contributions of life events, and medical and psychiatric comorbidity will be discussed.

Supported in part by NIMH Grant MH49226, U.S. Dept. of Health and Human Services

NR623 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Fluoxetine Versus Sertraline and Paroxetine in Major Depression: Tolerability and Efficacy in Patients with High- and Low-Baseline Anxiety

Sharon L. Hoog, M.D., Neuroscience, Eli Lilly and Company, Lilly Corporate Center, Indianapolis IN 46285; Maurizio Fava, M.D., Jerrold F. Rosenbaum, M.D., Joan Kopp, M.S., Mary Sayler, M.S., Rosalinda Tepner, R.P.H. and the Fluoxetine Collaborative Study Group

Summary:

Objective: To assess whether fluoxetine, sertraline, and paroxetine differ in efficacy and tolerability in depressed patients with high/low associated anxiety.

Methods: Patients (N = 284) with DSM-IV depression were randomized to fluoxetine, paroxetine, or sertraline treatment in a double-blind fashion. Using HAMD Anxiety/Somatization Factor score, patients were categorized as having high (≥7) or low anxiety (<7) at baseline. Changes in overall depression and anxiety were assessed.

Results: Within both subgroups, patients demonstrated similar HAMD-17 improvement (high anxiety subgroup: fluoxetine, −14.4, ±7.4; sertraline, −16.8, ±6.2; and paroxetine; −15.4, ±7.6; $p = 0.323$ and low anxiety subgroup: fluoxetine, −9.9, ±7.2; sertraline, −10.4, ±7.6; and paroxetine; −11.0, ±7.1; $p = 0.700$) and HAMD Anxiety/Somatization Factor improvement (high anxiety subgroup: fluoxetine, −4.7, ±2.6; sertraline, −5.8, ±2.6; and paroxetine; −5.3, ±2.7; $p = 0.199$ and low anxiety subgroup: fluoxetine, −2.5, ±2.4; sertraline, −2.6, ±2.4; and paroxetine; −2.7, ±2.2; $p = 0.935$). There were no significant differences between treatments in percentages of patients with substantial emergence, any worsening, worsening at endpoint, or improvement in items 9 (agitation), 10 (psychic anxiety), and 11 (somatic anxiety) in either subgroup.

Treatments were well tolerated in patients with both high and low baseline anxiety.

Conclusion: These data showed no significant differences in efficacy and tolerability of fluoxetine, sertraline, and paroxetine in patients with high/low baseline anxiety symptoms during the acute treatment of major depression.

Research funded by Eli Lilly and Company.

NR624 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Skin Paleness and OCD

Jesus J. De la Gandara, M.D., Psychiatry, H Divino Valles, Juan Del Enzima 60, Burgos 09006, Spain; Olga Sanz, M.D., Idoia Ortega, P.D.

Summary:

Introduction: The relation between changes of skin coloration and emotional states is well known. Some studies have suggested relation between obsessive compulsive disorder (OCD) and skin paleness, and in a previous poll we have checked that eight out of 10 patients with OCD presented the feature "extreme skin paleneess."

Objectives: To cheek if the feature "skin paleness" comes with more frequency in the OCD than in other disorders and to analyze their association with demographic, clinical, and therapeutic aspects of the OCD.

Methodology: It was carried out a prospective "case-control" study, comparing 35 OCD with other 35 sick people with other disorders, matched up by age and sex and selected in a serial and aleatory way. There was a selection of long term proves long OCD cases. The exploration included: demographic, clinical and evolutionary data an ecales of affective symptoms; the YBOCs questionnaire, a test of therapeutic evaluation; an exploration of Neurological Soft Signs (NSS); a questionnaire of evaluation of the obsessive slowness and a "Scale of Skin coloration", which had been elaborated by one already used in dermatology.

Results: There were not significant differences between OCD and controls in most of the demographic and clinical features that could explain the differences in the skin coloration. They presented the feature "extreme paleness" in the 40% of the OCD sample compared with only the 11% of the controls ($p < 0.000$). In comparison with the "dark-skinned" complexion, the "very pale" OCD subgroup was characterized by: more purity of the clinical picture, more time of evolution, less affective comorbidity, more global severity (YBOCs), more NSS, and more slowness. However, both groups differ neither in the therapeutic response nor in the "improvement" observed in the YBOCS.

Conclusions: OCD presents the "skin extreme paleness" feature with high frequency. The "very pale" OCD are more pure, more severe, slower and with more NSS. The relation between "paleness" and neurobiology of the OCD is uncertain, although who know the relation between serotonin and catecholamines and the regulation of the skin coloration.

NR625 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Rating Well-Being and Distress in Mood and Anxiety Disorders

Seung-Kyoon Park, M.D., Psychiatry, VA Medical Center, 3495 Bailey Avenue, Buffalo NY 14215-3021; Kye Y. Kim, M.D., Murray A. Morphy, M.D., Giovanni A. Fava, M.D.

Summary:

Objective: There is insufficient research on psychological well-being in mood and anxiety disorders. The aim of this study was to explore levels of well-being in 20 remitted patients with affective disorders (major depression, panic, social phobia, generalized anxiety disorder; obsessive-compulsive disorder) and 20 healthy control subjects matched for sociodemographic variables, and their relationship with residual symptomatology.

Method: One observer-rated instrument for detecting residual symptomatology (Paykel's Clinical Interview for Depression) and two self-rating scales (Ryff's scales of Psychological Well-Being and Kellner's Symptom Questionnaire) were administered to patients and controls.

Results: Remitted patients displayed significantly less well-being (autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, self-acceptance, relaxation, contentment, and physical well-being) than controls. They also had significantly higher levels of distress (anxiety, depression, and somatization) compared with controls.

Conclusions: The results suggest that patients who had been successfully treated for mood or anxiety disorders display less well-being and more distress compared with controls and that well-being cannot be equated to lack of distress.

NR626 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

PTSD and Irritable Bowel Syndrome

Lawrence A. Labbate, M.D., Department of Psychiatry, Medical University of SC, VA Med Ctr/109 Bee Street #116, Charleston SC 29401; Christopher Freuh, Ph.D., Mark B. Hamner, M.D., R. Bruce Lydiard, M.D.

Summary:

Objective: Patients with irritable bowel syndrome (IBS) have been shown to have high rates of sexual or physical abuse, panic disorder, and major depression. We determined the frequency of irritable bowel symptoms in men with combat-related post-traumatic stress disorder (PTSD).

Method: Consecutive patients in a PTSD treatment clinic were administered the Clinician Administered PTSD Scale (CAPS), and those meeting DSM-IV criteria for PTSD were administered the Diagnostic Interview Questions for Functional Gastrointestinal Disorders (Drossman, et al, 1992). We specifically identified those patients who met criteria for irritable bowel syndrome according to the questionnaire. A comparison group of treatment-seeking patients who did not have panic disorder or major depression as their primary diagnosis were also queried. We also asked if patients were seeking disability compensation.

Results: Twenty-eight men (mean age 47 $\pm$ 6 yrs) with PTSD and 26 men (mean age 48 $\pm$ 9 yrs) with other diagnoses (alcohol dependence [n = 15], schizophrenia [n = 6], bipolar I disorder [n = 5]) completed the questionnaire. Patients with PTSD were more likely to endorse symptoms consistent with a current IBS diagnosis than the comparison group (42% vs. 15%; $X^2 = 4.9$, df = 1, $p < 0.03$). Patients with IBS symptoms were not more likely to be seeking service-connected compensation than patients without IBS symptoms ($X^2 = 0.4$, p = NS).

Conclusion: IBS symptoms appear to be commonly endorsed among outpatients with combat related PTSD. Evaluating for symptoms of IBS may help in the treatment of these patients. The findings suggest that there may neurobiological correlates between the gut and the brain in PTSD.

NR627 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Open Trial of Fluvoxamine in Anxious Depression

Shamsah B. Sonawalla, M.D., Dept. of Psychiatry, Massachusetts General Hosp., 15 Parkman Street WAC 812, Boston MA 02114; Maya K. Spillmann, M.D., Andrea R. Kolsky, B.A., Jonathan E. Alpert, M.D., Andrew A. Nierenberg, M.D., Jerrold F. Rosenbaum, M.D., Maurizio Fava, M.D.

Summary:

Anxious depression is a common subtype of major depression, which is frequently reported to be associated with relatively poorer antidepressant treatment outcome.

Objective: The goal of our study was to assess the efficacy of fluvoxamine, a selective serotonin reuptake inhibitor marketed in the U.S. for the treatment of obsessive compulsive disorder, in an open trial with outpatients suffering from anxious depression.

Method: We enrolled 26 outpatients (mean age: 39.6 ± 10.8; 14 women and 12 men) with major depressive disorder accompanied by one or more comorbid anxiety disorders (as diagnosed with the SCID-P). These patients were treated openly with fluvoxamine 50 mg/day with a gradual upward titration to 200 mg/day. Efficacy assessments included the 17-item Hamilton Rating Scale for Depression (HAM-D) and two CGI Severity and Improvement scales for both depression and anxiety. The mean dose of fluvoxamine was 146 mg ± 43.1.

Results: Of the 26 patients enrolled, 11 had current panic disorder, 15 had current social phobia, 10 current simple phobia, four current OCD, six current PTSD, and 12 current GAD. The mean number of comorbid anxiety disorders was 2.2 ± 1.2. Following fluvoxamine treatment, the mean HAM-D score and the mean depression CGI-S score significantly dropped (t: 5.9; $p < .0001$; and t: 6.4; $p < .0001$, respectively) from 20.5 ± 3.2 to 12.2 ± 7.4 and from 4.0 ± 0.6 to 2.5 ± 1.2 (intent-to-treat analysis). Similarly, the mean anxiety CGI-S scores decreased significantly from 4.0 ± 0.8 to 2.6 ± 1.2 (t: 6.4; $p < .0001$) (intent-to-treat analysis) after fluvoxamine treatment.

Conclusion: Our open trial of fluvoxamine suggests that this SSRI may be effective in treating symptoms of both major depression and comorbid anxiety disorders among outpatients with anxious depression. Further, double-blind, placebo-controlled trials are needed to confirm these preliminary findings.

NR628 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Pattern Analysis of a Clinical Trial of Fluoxetine in Panic Disorder

Franklin R. Schneier, M.D., Dept. of Therapeutics, NY State Psychiatric Institute, 722 West 168th Street, Unit 13, New York NY 10032; Brian A. Fallon, M.D., Shu-Hsing Lin, Ph.D., Randall D. Marshall, M.D., Donna Vermes, R.N., Jose Arturo Sanchez-Lacay, M.D., Michael R. Liebowitz, M.D.

Summary:

Objective: To assess the utility of application of pattern analysis to a panic disorder clinical trial with a high placebo response rate.

Method: This double-blind, placebo-controlled eight-week clinical trial of fluoxetine and imipramine for 102 patients with panic disorder was conducted in an anxiety disorders clinic. It used standard outcome measures such as global response and change in panic attack frequency, as well as the novel application of longitudinal pattern of panic response, which was adapted from studies of major depression. Panic response at each weekly visit for each patient was defined by a 1 or 2 (much or very much improved) on a 7-point scale of change in panic attacks. Delayed persistent response was defined by onset of responder status after three weeks or more, with responder status maintained at all later visits.

Results: In the intent-to-treat sample there was no significant group difference in overall response rates at endpoint; however, delayed persistent response was more common for patients taking fluoxetine (33%) or imipramine (26%) than placebo (7%), $X^2 = 7.7$, $p = .02$.

Conclusion: Pattern analysis may be a sensitive method of detecting drug-placebo differences in panic disorder.

Funded by NIMH RO1 MH45846 and Eli Lilly Co.

NR629 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

A New Patient Diary to Study Performance Anxiety

Robert B. Pohl, M.D., Department of Psychiatry, Wayne State University, 2751 East Jefferson, Suite 200, Detroit MI 48207; Richard Balon, M.D., Patricia Chapman, M.S., Jennifer McBride, B.A.

Summary:

Objective: Most performance anxiety studies have been done in normal subjects or during sham performances. This study tests a patient diary as an outcome measure in patients with nongeneralized social phobia and significant performance anxiety.

Method: Eighteen patients were randomized to six weeks of treatment with prn placebo ($n = 8$) or propranolol ($n = 10$) after a two-week placebo lead-in period. Patients rated the level of anxiety and impairment for each performance situation and the likely level of symptoms that would have occurred prior to treatment. Patient visits were at two, four, and six weeks of treatment.

Results: Patient diaries showed statistically significant improvement in the propranolol group in the level of anxiety after both four ($p = 0.04$) and six weeks of treatment ($p = 0.04$). The perceived level of impairment was also significantly less in this group after six weeks of treatment ($p = 0.04$). In contrast, there were no significant findings on a number of other established self-rating scales for social phobia and performance anxiety, while investigator ratings did show a significant difference on the Liebowitz Social Phobia Disorders Rating Form.

Conclusions: Use of a patient diary appears to be a sensitive and robust measure of performance anxiety in real patients during real-life performance situations.

NR630 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Heart Early Link To Panic (HELP)

David J. Katzelnick, M.D., Dean Foundation, 8000 Excelsior Drive, Ste 302, Madison WI 53717; Gregory E. Simon, M.D., Willard G. Manning, Ph.D., Cindy P. Helstad, Ph.D., Steve Locke, M.D., Arthur J. Barsky III, M.D., Wayne J. Katon, M.D.

Summary:

This is a pilot study of an identification and treatment program for patients who present with cardiac symptoms and panic disorder (PD). Using computerized claims data, we identified patients with specific cardiac diagnosis and procedure codes during the previous year.

We telephone screened 635 patients using a two-stage process. Forty-five patients (7.0%) met SCID criteria for PD. Of these 55% had comorbid major depression but only 29% received adequate pharmacologic treatment for PD in the preceeding 90 days. Twenty patients met full treatment study criteria and agreed to complete three follow-up assessments over the next six months; 15 of these patients consented to the treatment program. Eligible patients were offered a psychiatric treatment program for six months. Half of the 20 study patients had comorbid major depression and 35% screened positive for agoraphobia. None of the study patients had a PD diagnosis code in the computerized claims. Average annual HMO costs for study-eligible patients were $5,435 compared with $3,573 for the 397 patients with cardiac symptoms without mental illness and $975 for the 122 noncardiac patients.

Average baseline clinical scores were 9.0 (SD 4.64) on the Panic Disorder Severity Scale (PDSS), 38.93 (SD 14.23) for the SF-36 Physical Component Summary, and 43.44 (SD 11.7) for the SF-36 Mental Health Component Summary. The clinical effectiveness results of the six-month treatment program will also be presented.

Sponsor: Pfizer Pharmaceuticals

NR631 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Serotonergic System and Carbon Dioxide Hypersensitivity in Panic Patients

Giampaolo Perna, M.D., Department of Psychiatry, H.S. Raffaele, Via Prinetti 29, Milan 20127, Italy; Riccardo Bussi, M.S., Laura Bellodi, M.D., Liliana Allevi, M.S., Angelo Bertani, M.D.

Summary:

Objective: Carbon dioxide (CO2) hyperreactivity might be considered one of the most valid laboratory markers of panic disorder (PD). Serotonergic system influence significantly the respiratory control mechanisms. We present herein preliminary data on the modulation of CO2 reactivity by short treatments with citalopram, the most selective among selective serotonin reuptake inhibitors (SSRIs), and paroxetine, the most potent inhibitor of serotonin uptake among SSRIs.

Method: The effects of one-week treatments with citalopram (10 mg) and paroxetine (10 mg) on the reactivity to inhalations of 35% CO2/65% O2 were compared in two groups of 11 panic patients who had positive responses to 35% CO2 inhalations. A single-blind, randomized design was applied. Each patient was given the 35% CO2 challenge before starting the treatment and seven days after.

Results: There were no significant differences in age, age at onset, baseline anxiety, and severity of panic symptomatology between the two groups. Wilcoxon test showed a significant attenuation of the anxiety reactivity to CO2 after 7 days in both citalopram ($z = 2.1$, $p < 0.04$) and paroxetine ($z = 2.4$, $p < 0.02$) groups. McNemar's tests showed significant ($p < 0.04$) reductions of rates of positive responses after seven days of treatments with both serotonergic compounds. Six (55%) patients in both groups became normosensitive to CO2. No significant differences in the effects of the two drugs on CO2 reactivity were found.

Conclusion: This preliminary data indicate that the modulation of serotonergic system with low doses of citalopram and paroxetine decreases hypersensitivity to 35% CO2 after few days.

NR632 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Diagnostic Accuracy In Social Phobia

Jeffrey E. Kelsey, M.D., Dept of Psychiatry, Emory University, 1639 Pierce Drive Suite 4000, Atlanta GA 30322; Tanya L. Burgos, B.S.

Summary:

Social phobia is among the most prevalent of psychiatric disorders, yet many individuals with this disorder go for years without diagnosis or treatment. These studies were designed to address a component of this problem, the diagnostic accuracy and subsequent selection of treatment modalities for this disorder. Surveys and clinical vignettes of patients with social phobia were mailed to psychiatrists (Psych), family practitioners (FP), internists, (IM) and obstetrician/gynecologists (Ob/gyn). Demographic information, diagnosis, and treatment selections were collected. The diagnosis from the clinical vignette is shown in the table by specialty.

Specialty	Social Phobia	Panic Disorder	Anxiety
Psychiatry	73%	7%	11%
FP	12	58	26
IM	10	37	37
Ob/Gyn	1	54	38

The diagnosis had an impact on reported treatments. The medication choice for the social phobia vignette was benzodiazepines (52% FP, 22% Psych), β-blockers (15% FP, 27% Psych), TCAs (14% FP, 20% Psych), buspirone (10% FP, 7% Psych) and SSRIs (7% FP, 9% Psych).

NR633 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Childhood ADHD Features Among Adults with Panic Disorder

Calvin Fones, M.D., Department of Psychiatry, Mass General Hospital, 15 Parkman Street, Boston MA 02114; Mark H. Pollack, M.D., Michael W. Otto, Ph.D., Lisa Susswein, B.A.

Summary:

The prevalence of ADHD features during childhood and its relationship to the course and presentation of panic disorder in adults was investigated in 84 subjects with DSM-III-R panic disorder enrolled for treatment in an anxiety disorders program.

Childhood ADHD features as ascertained by the ADHD companion module of the childhood version of the Schedule for Affective Disorders and Schizophrenia, Epidemiological version (Kiddie-SADS-E), occurred in 23.5% of panic subjects. This comprised 9.4% who had met full DSM-III-R criteria for ADHD and 14.1% with 'subthreshold' diagnoses. Two-thirds of the panic patients with ADHD features (ADHD-P) indicated that their symptoms had persisted into adulthood. The ADHD-P group were less likely to have married or completed college compared with those with panic disorder alone, although they did not differ significantly from other panic patients with regard to clinical pattern and severity of panic disorder at presentation, Axis I adult comorbidity, or prevalence of childhood anxiety disorders.

Comorbidity with ADHD may thus be an important clinical consideration in patients presenting with panic disorder. Optimal treatment should target any residual ADHD symptoms. The observed relationship with panic disorder also has possible implications for our understanding of the etiology, classification, clinical manifestation, differential treatment response, and lifetime course of ADHD.

NR634 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Predictors of Treatment-Response in Panic Disorder

Dr. Peter Berger, Department of Psychiatry, University of Vienna, Waehringer-Guertel 18-20, Vienna A1090, Austria; Dr. Gabriele Sachs, Michaela Amering, M.D., Dr. Anita Holzinger, Dagmar Maierhofer, M.D., Bettina Bankier, M.D., Dr. Heinz Katschnig

Summary:

Introduction: We analyzed the impact of personality disorders, the severity of the disorders, and the addition of cognitive therapy on the outcome of panic disorder treated with paroxetine.

Methods: Seventy-five outpatients suffering from panic disorder with or without agoraphobia completed at least six weeks of a randomized trial of 24 weeks of either paroxetine only or paroxetine and cognitive group therapy. Diagnostic assessment according to DSM-III-R was made by SCID for Axis I and by IPDE for Axis II. Two patients could not be assessed for personality disorders. The remaining 73 cases were analyzed by logistic regression using presence of panic attacks as outcome criterion. The baseline symptomatology, age at onset, comorbid major depression, treatment group, and comorbidity of a personality disorder were entered as predictor variables.

Results: Only the number of panic attacks at baseline and the comorbidity of a personality disorder were identified as significant predictors of treatment outcome. Both variables were also significant predictors in the 49 patients who completed 24 weeks of treatment. In a further logistic regression with the dimensional scores of the personality disorders, avoidant traits predicted negative outcome.

Conclusions: A more severe illness and a comorbid personality disorder (especially avoidant) predicts unfavorable response to treatment of panic disorder. An augmentation strategy centered on the panic symptomatology does not seem to be sufficient in these cases. Thus, they might profit from a treatment focused on the personality.

NR635 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

The Neurobiology of Social Phobia: A PET Study

Michael A. Van Ameringen, M.D., Department of Psychiatry, McMaster Medical Center, 1200 Main Street West, Hamilton, ONT L8N 3Z5, Canada; Catherine L. Mancini, M.D., Jonathan Oakman, Ph.D., Markad Kamath, Ph.D., Claude Nahmias, Ph.D., Henry Szechtman, Ph.D.

Summary:

Objective: The present study investigated which neural circuit(s) may mediate the subjective experience of social phobia.

Methods: Regional cerebral blood flow (rCBF) was measured by positron emission tomography (PET) in five newly diagnosed male patients with social phobia under two conditions: when viewing a videotaped interview either a) of an unknown person (BASELINE condition) or b) of the patient himself (EXPOSURE condition). In the EXPOSURE condition, patients viewed the video together with an audience of confederates who were introduced as "communication experts" evaluating the patient's videotaped performance. These "experts" were intended to heighten social/evaluative anxiety and were not present in the BASELINE condition. Each condition was repeated three times.

Results: Statistical analysis using SPM96 revealed significant activation of the lingual gyrus (BA18) and the medial frontal gyrus (BA11) when viewing the interview of the other person compared with viewing the self. No significant activation was found in the comparison of EXPOSURE to BASELINE conditions.

Conclusion: These findings are consistent with the hypothesis that the neural route to the subjective experience of social phobia may involve visual and medial frontal cortices and are suggestive of visual avoidance strategies employed by social phobics.

NR636 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Relationship Between PTSD and Attachment Style

Michael E. Dieperink, M.D., Department of Psychiatry, Minneapolis VAMC, One Veterans Drive, Minneapolis MN 55417; Jennie Leskela, Ph.D., Sean Nugent, B.S.

Summary:

There is a continuing need to understand factors involved in the etiology and propagation of post-traumatic stress disorder (PTSD) in combat veterans. Clearly, exposure to trauma is an important factor in development of PTSD. However, other factors are important since only 30% of Vietnam combat veterans develop PTSD. There is a need for studies on the impact of early development on the eventual formation of PTSD. Exploring current attachment styles is one way to begin expanding this area of research as it is thought that attachment style does not change over time.

We administered a categorical (BRQ) and a dimensional (ECRQ) measure of adult attachment in addition to the Mississippi Combat Scale to a sample of 16 combat veterans who have PTSD and are followed in our clinic. On the categorical measure, all 16 had an anxious attachment style ($p < 0.0001$) and 12 had the dismissive subtype of anxious attachment ($p < 0.0001$), both of which are significantly greater than in the general population. Furthermore, on the dimensional measure, greater dismissiveness correlates positively with higher Mississippi score ($R^2 = 0.603$, $p < 0.014$). The data are suggestive of preexisting anxious attachment style, particularly the dismissive subtype, being a factor in the development of PTSD. Alternatively, exposure to massive trauma could alter attachment style and create a dismissive attachment style.

NR637 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Panic Disorder and Response to Sertraline: The Effect of Previous Treatment with Benzodiazepines

Mark H. Rapaport, M.D., Department of Psychiatry, UCSD School of Medicine, 8950 Villa Jolla Drive, #2243, La Jolla CA 92037; Mark H. Pollack, M.D., Robert Wolkow, M.D., Cathryn M. Clary, M.D.

Summary:

Objective: Despite abuse, dependence, and withdrawal liability, benzodiazepines (BZ) continue to be widely prescribed treatments for panic disorder. Prior treatment with benzodiazepines has been suggested to be inversely correlated with response to serotonergic anxiolytics. We analyzed the combined results from four placebo-controlled sertraline treatment studies to assess whether prior exposure to benzodiazepines predicted a reduced response to sertraline, or a higher attrition rate, in patients with moderate-to-severe panic disorder.

Methods: Four placebo-controlled, 10–12 week treatment studies of patients diagnosed with panic disorder, with or without agoraphobia, were combined (n = 664). Patients were not allowed to take concomitant BZs during the studies. Analyses were conducted to assess whether prior treatment with benzodiazepines (whether taken for panic disorder, anxiety, or overall) was associated with differences in response to sertraline on a variety of panic disorder outcome parameters, or was associated with early attrition.

Results: 62% of patients at baseline had previously taken BZs. Prior BZ use did not affect sertraline efficacy on reduction of panic attacks ($p = 0.43$) and there was no differential attrition rate (BZ treated – 14%, BZ-naive – 19%) in the first three weeks of treatment. However, BZ-naiuve patients had significantly higher placebo response rates than patients with previous BZ treatment.

Conclusions: These findings suggest that prior BZ exposure does not predict a poorer response or a higher early attrition rate to sertraline treatment for patients with panic disorder.

This research was supported by Pfizer, Inc.

NR638 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Therapeutic Strategies in GAD Patients

Jean-Michel Chignon, M.D., Department of Psychiatry, CHR Annecy USS, BP 2333, Annecy-Cedex 74011, France; Daniel Martin, Ph.D., Daniel Gerard, M.D.

Summary:

Objectives: In spite of the high prevalence rate of generalized anxiety disorder, little is known about pharmaco-epidemiology and therapeutic strategies used in GAD patients.

Methods: Our analysis was based on a cross-sectional design. All patients, aged 18 to 65 years, referred for GAD according DSM-III-R criteria to a psychiatrist were included in the study. Patients who met diagnostic criteria for other anxiety disorders, mood disorders, and psychoactive use disorders were excluded. Diagnoses and demographic, clinical, and therapeutic data were assessed with a structured interview using DSM-III-R criteria. Degree of severity of anxious symptomatology was assessed with the Hamilton-Anxiety rating scale (HAM-A).

Results: We included 999 GAD patients (614 females and 385 males) in this study with a mean score of HAM-A of 21.1 (8.2). Most of the patients (n = 569; 56.9%) were treated with both anxiolytic drugs and psychotherapy; 260 patients (26.0%) received anxiolytics only, 104 patients (10.4%) were in psychother-

apy and did not received anxiolytics, and 66 subjects (6.6%) received no treatment for their anxiety disorder. One half of the patients received anxiolytics less than one month and 18.0% were treated with anxiolytics for more than three months. Although the mean age of patients receiving anxiolytics was higher than other patients ($p < .05$), other socio-demographic characteristics were similar in different strategy treatment subgroups. Patients with associated phobic and/or depressive symptomatology were more likely treated with both anxiolytics and psychotherapy. Moreover, patients with recurrent GAD episode and those with longer duration of current GAD episode were more often in psychotherapy than other patients. In addition, when considering duration of current episode of GAD, we did not found any statistical difference for socio-demographic parameters. However, it appears that patients with longer duration episodes were more likely to report depressive and phobic symptomatology. In contrast, the prevalence of alcoholic behaviors was similar whatever the duration of current episode of GAD.

Conclusions: A majority of GAD patients receive anxiolytic drugs. Therapeutic strategies in GAD patients are influenced by age of the patients, number of episodes of GAD, duration of current episode of GAD, and associated phobic and depressive symptomatology.

NR639 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Panic Disorder in Alcoholic Outpatients

Jean-Michel Chignon, M.D., Department of Psychiatry, CHR Annecy USS, BP 2333, Annecy-Cedex 74011, France; Laurent Jacquesy, M.D., Francois Huttin, M.D., Marie-Josee Cortez, M.D., Patrick Martin, Ph.D., Jean-Paul Chabannes, M.D.

Summary:

Objectives: Given the evidence for an important relationship between alcoholism and anxiety disorders, it is surprising that the relationship between alcohol and specific anxiety disorders has only recently begun to attract attention. The present study examined the prevalence of panic disorder in alcoholic patients.

Methods: In a cross-sectional design including outpatients referring for alcohol dependance according to DSM-III-R criteria, we used a specific standardized and structured interview allowing DSM-III-R diagnoses.

Results: We include 507 patients (343 males and 164 females). The mean age at study intake was 43.2 (SD:9.6) years with no difference between males and females. Ninety-five outpatients (18.7%), 54 males and 41 females (16.0% vs 25.3%; $p < .02$), met diagnostic criteria for lifetime panic disorder. The age of onset of alcohol dependence was younger in patients with lifetime history of panic disorder than in other alcoholic patients (28.6 ± 10.7 vs 31.1 ± 10.6 years; $p < .05$). Despite that the presence of either lifetime agoraphobia and/or social phobia was found associated with panic disorder (respectively, 46.3% vs 9.4%; $p < 001$ and 41.9% vs 18.1%; $p < .001$), it appears that alcoholic panic patients are not likely to have lifetime history of depression (52.0% vs 49.7%; NS) either among males or females and other addictive disorders (46.9% vs 20.3%; $p \leq .01$). The alcoholic patients with history of panic disorder more often attempted suicide than other alcoholic patients (33.7% vs 23.9%; $p < .05$). With regard to panic disorder history, it appears that majority of patients with primary alcoholism are males and those with secondary alcoholism are more likely to be females.

The different patterns of comorbidity in alcoholic patients who attempted suicide will be presented and discussed with logistic regression models integrating socio-demographic and clinical parameters.

NR640 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Disabilities in Panic Disorder with Comorbid Phobias

Dagmar Maierhofer, M.D., Department of Psychiatry, University Clinic, Waehringer Guertel 18–20, Vienna AV1090, Austria; Dr. Anita Holzinger, Dr. Gabriele Sachs, Dr. Peter Berger, Dr. Johann Windhaber, Dr. Karl Dantendorfer, Dr. Heinz Katschnig

Summary:

Objective: Comorbidity with any kind of phobia in patients with panic syndrome is about 30%. In contrast with frequency of panic attacks, phobic avoidance is significantly associated with quality of life and functional impairment. The aim of our study was to evaluate the various types of phobias which co-occur with panic disorder and the extent of their impact on the patients' impairment in work, social, and family life.

Method: A total of 100 consecutively recruted subjects with a current episode of panic disorder were diagnosed according to DSM-III-R criteria. CGI (Global Clinical Impression) was assessed by an experienced clinician. Data on functional impairment were collected with the Sheehan disability scale (SDS).

Results: From a total of 100 patients, mean age 33.7, comorbidity with agoraphobia was 76%, social phobia 22%, and simple phobia 16%. Group values for the whole comorbid group, for each phobia, and for co-occurrence of one to three phobias were tested against the non-phobia group. We found significant differences in social life function ($p < 0{,}001$) and for the CGI ($p < 0{,}05$).

Conclusions: The frequent co-occurence of all types of phobia in patients with panic syndrome and thereby resulting impairment require a broad psychiatric assessment and treatment.

NR641 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Impaired Conditional Discrimination in Patients with Panic Disorder

Dagmar Maierhofer, M.D., Department of Psychiatry, University Clinic, Waehringer Guertel 18–20, Vienna AV1090, Austria; Dr. Karl Dantendorfer, Dr. Heinz Katschnig

Summary:

Objective: An eyelid conditional discrimination (ECD) learning task, which has been shown to selectivly test temporal lobe function, was used to examine unconscious discrimination learning capacity in panic disorder (PD) patients to test the hypothesis that in PD the ability to differentiate between significant (i.e., dangerous) and unsignificant stimuli could be impaired.

Method: Thirty-seven PD patients diagnosed according to DSM-III-R criteria and matched healthy controls (HC) underwent an ECD experiment (as described by Daum, et al.). The response frequencies to reinforced (CRR) and unreinforced trials (CRU) were quantified.

Results: As predicted by our hypothesis the response ratio of CRR to CRU was reduced in PD patients as compared with HC (CRR $\pm$ SE/CRU $\pm$SE: PD 20.2 ± 3 / 17.2 ± 3.2; HC 33.8 ± 8 / 11.2 ± 3).

Conclusion: This is the first experimental study showing that there is an impaired ability to discriminate between significant and insignificant stimuli in PD patients. As suggested by brain imaging studies, showing functional and morphological brain abnormalities in PD, our study points out the possibility of temporal lobe dysfunctions at least in subgroups of PD patients.

NR642 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Double-Blind Comparison of Citalopram and Fluoxetine: Treatment of Depression With and Without Benzodiazepines

H.E. Hopfner Petersen, H. Lundbeck A/S, Ottiliavej 9, Copenhagen Dk-2500, Denmark; M. Patris, M.D., Mary Mackle, Ph.D.

Summary:

Objective: To compare citalopram and fluoxetine, with and without concomitant benzodiazepines, in the treatment of depression.

Method: The present study was a double-blind, multicenter, fixed-dose, parallel-group, eight-week comparison of citalopram and fluoxetine in primary care patients with DSM-III-R unipolar major depression. Citalopram and fluoxetine were both administered at a dose of 20 mg/d.

Results: There was a statistically significant ($P < .05$) higher response rate in the citalopram group after two weeks of treatment on both the Hamilton and Montgomery-Asberg Depression Rating scales, suggesting a more rapid onset of action for citalopram. Additionally, more than half the patients in both groups received concomitant benzodiazepines. Analysis of the patients who did not receive benzodiazepines revealed significantly greater improvement on the MADRS scale at weeks 2, 4, 6, and 8 for citalopram-treated patients as compared with fluoxetine-treated patients.

Conclusion: These findings are suggestive of an advantage for citalopram vs fluoxetine in patients not receiving concomitant benzodiazepines, sedatives, hypnotics, or antianxiety medications, possibly due to anxiogenic effects of fluoxetine and/or anxiolytic effects of citalopram. These results also support the conclusion that the concomitant use of benzodiazepines in comparative clinical trials of antidepressants may mask significant between-drug differences in antidepressant efficacy.

NR643 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Double-Blind, Placebo-Controlled Study of Once-Daily Venlafaxine Extended Release in Outpatients with GAD

Loren M. Aguiar, M.D., Clinical Research, Wyeth and Ayerst, 145 King of Prussia Road, Radnor PA 19010-1022; Thomas Haskins, Ph.D., Richard L. Rudolph, M.D., Allan Pallay, M.S., Albert T. Derivan, M.D.

Summary:

Objective: This randomized, double-blind, placebo-controlled, eight week study compared the safety and anxiolytic efficacy of once daily venlafaxine XR (V-XR) 75 mg, 150 mg, and 225 mg with placebo (Pbo) in outpatients with GAD.

Method: Patients (n = 377) who met DSM-IV criteria for GAD, but not major depressive disorder began treatment with Pbo or V-XR 75 mg/day. At week 2, the V-XR middle-dose and high-dose groups were increased to 150 mg/day; at week 3 the V-XR high-dose group was increased to 225 mg/day. Improvement was evaluated using the HAM-A total score, the HAM-A psychic anxiety factor, and the CGI scale, in the intent-to-treat population (n = 349) with the last observation carried forward for patients who discontinued prematurely.

Results: Discontinuations for adverse events occurred in 7%, 15%, 20%, and 19% of the Pbo and V-XR 75 mg, 150 mg and 225 mg groups, respectively. At week 8, the changes (significant differences from placebo indicated by [4]) from baseline were observed on the HAM-A total score (Pbo −9.4, V − XR 75 mg −11.1, 150 mg −11.7 and 225 mg −12.3[4]), the HAM-A psychic anxiety factor score (Pbo-5.6, V-XR 75 mg −6.7, 150 mg −7.1[4] and 225 mg −7.3[4]), CGI Severity (Pbo −1.3, V−XR 75 mg −1.5, 150 mg −1.6, and 225 mg −1.7[4]), and CGI Improvement (Pbo 2.6, V-XR 75 mg 2.3, 150 mg 2.3, and 225 mg 2.2[4]).

Conclusions: This study is the first demonstration of the effectiveness of an antidepressant in treating outpatients meeting DSM-IV criteria for GAD who do not have comorbid major depressive disorder. Significantly, these data suggest that V-XR is an effective, safe, once-daily agent for the treatment of GAD, which may provide an important alternative to currently available anxiolytics.

NR644 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Double-Blind, Placebo-Controlled Study of Once Daily Venlafaxine Extended Release and Buspirone in Outpatients with GAD

Richard Entsuah, Ph.D., Clinical Biostatistic, Wyeth-Ayerst Research, 145 King of Prussia Road, Radnor PA 19087; Albert T. Derivan, M.D., Thomas Haskins, Ph.D., Richard L. Rudolph, M.D., Loren Aquiar, M.D.

Summary:

Objective: This eight-week study compared the safety and the anxiolytic efficacy of once daily venlafaxine XR (V-XR) with placebo (Pbo) and buspirone (Bsp) 30 mg in outpatients with GAD.

Method: Patients (n = 405) who met the DSM-IV criteria for GAD, but not for major depression, began treatment with V-XR 75 mg, Bsp 15 mg, or Pbo. The primary efficacy variables were HAM-A Total, psychic anxiety factor, CGI-severity, with secondary variables, and the Hospital Anxiety and Depression Scale (HAD). Other key variables evaluated were the HAM-A anxious mood item. Significant ($p < 0.05$) results are shown for the Last Observation Carried Forward (LOCF) analysis in the intent-to-treat population (n-369).

Results: For the HAM-A psychic anxiety factor, V-XR 75 and 150 mg were better than Pbo at wk 8. For CGI severity, V-XR 75 was better than Pbo at wks 3, 4, 6, and 8. For HAD, V-XR 75 was better than Pbo and Bsp at wks 1 through 8; V-XR 150 mg was better than Pbo at wks 1, 3, 4, 6, and 8: and better than Pbo at wks 3, 4, 6, and 8. For HAM-A anxious mood item, V-XR 75 and 150 mg were better than Pbo at wks 2, 4, 6, and 8. The safety profile was consistent with venlafaxine, and V-XR use in depressed patients.

Conclusion: This study showed significant advantages for venlafaxine XR (75 or 150 mg/day) vs Pbo in the treatment of outpatients with GAD who do not have comorbid major depression, and suggested V-XR has significant advantages vs Bsp.

NR645 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

Temperament Markers As Predictors to Treatment Response in Panic Disorder

Gabor Faludi, M.D., Department of Psychiatry, Semmelweis Medical University, Kutvolgyi 4, Budapest 1125, Hungary

Summary:

Genetically determined personality dimensions seem to play an important role not only in shaping the nature of panic disorder, but also in affecting the response to therapy as well. The dimensions of temperament were postulated by Cloninger to be genetically homogenous and independent of one another. That is, different genes were postulated to influence the activation, maintenance, and inhibition of behavior. Thirty-three PD patients on fluvoxamine who had been symptom-free for at least five to six months were evaluated. Fluvoxamine was started at 25mg daily and the dose was then increased to a maximum 200mg/day. At the beginning of the treatment temperament and character dimensions were determined by the Temperament and Character Inventory (TCI, Cloninger, et al.). A total of 104 age- and sex-matched controls were healthy volunteers. The TCI scores showed that "harm avoidance" and "reward dependence" are the most frequent temperament dimensions, while "novelty seeking" is the most infrequent one in PD group. These dimensions are predicted to reflect individual differences in the brain's behavioral inhibition system and orienting responses, playing a crucial role in the neuromodulation of anxiety. Chronic serotonergic activity as induced by long-term fluvoxamine treatment is expected to produce a blunting of response to serotonin. PD patients characterized by a high score of "harm avoidance" temperament dimensions in the pre-treatment period show excellent clinical response to fluvoxamine.

NR646 Wednesday, June 3, 3:00 p.m.-5:00 p.m.

The Underdiagnosis of PTSD in an Outpatient Setting

Mark Zimmerman, M.D., Department of Psychiatry, Rhode Island Hospital, 235 Plain Street Ste 501, Providence RI 02905; Jill I. Mattia, Ph.D., Sharon Younken, B.A., Melissa Torres, B.A.

Summary:

Objective: To examine whether PTSD is underdiagnosed in routine clinical practice by comparing the clinical and demographic characteristics of three groups: (1) patients diagnosed by their clinicians with PTSD, (2) patients who screened positive for PTSD but who were not diagnosed with the disorder, and (3) patients who were neither diagnosed nor screened positive for PTSD.

Methods: A consecutive series of 500 psychiatric outpatients completed a psychiatric diagnostic screening questionnaire. Clinicians' diagnoses were made blind to results of the scale. The PTSD subscale consists of six questions assessing a history of trauma and the occurrence of PTSD symptoms during the past two weeks. Patients who scored four or more on the six-item scale were considered to have screened positive.

Results: Thirty-six (7.2%) patients were diagnosed with PTSD; one-quarter (25.1%) of the sample screened positive. The patients who were clinically diagnosed with PTSD (n = 36) and the patients who screened positive but were not given the diagnosis (n = 93) were similar in age, gender, and education. Both groups were significantly younger than the non-PTSD group, and had significantly lower GAF scores than the non-PTSD group. The frequency of suicidal thoughts were identical in the two PTSD groups and twice as high as the frequency in the non-PTSD group. Finally, scores on 10 of the other 12 psychopathology dimensions assessed by the screening questionnaire were significantly higher in the two PTSD groups than the non-PTSD group.

Conclusions: The demographic and clinical characteristics of patients diagnosed with PTSD were indistinguishable from patients not given the diagnosis but who screened positive for PTSD on a self-administered questionnaire. Both groups differed from the non-PTSD group. This is compelling, though indirect, evidence of underrecognition of PTSD in routine clinical care.

NR647 Thursday, June 4, 9:00 a.m.-10:30 a.m.

Double-Blind, Randomized Trial of Venlafaxine, Clomipramine and Trazodone in Elderly Depressed Patients

Fortunato Rizzo, M.D., Medical Affair, Wyeth SPA, VIA Nettunense 90, Arrilia 04011, Italy; Enrico Smeraldi, M.D.

Educational Objectives:

At the conclusion of this presentation the participant should be able to describe how venlafaxine and clomipramine were effective in elderly depressed patients.

Summary:

Objective: To compare the efficacy and tolerability of venlafaxine, trazodone, and clomipramine in geriatric inpatients and outpatients.

Methods: This was a multicenter, randomized, double-blind, 42-day trial in patients aged ≥ 65 years and satisfying DSM-III-R criteria for major depression. After dosage titration, patients were maintained on venlafaxine 37.5 mg b.i.d., clomipramine 25 mg b.i.d., or trazodone 50 mg t.i.d. On study day 14 or 21, if the MADRS score was ≥ 15, the dose could be increased further to venlafaxine 75 mg b.i.d., clomipramine 50 mg b.i.d., or trazodone 100 mg t.i.d. Efficacy was assessed from the final on-therapy HAM-D, MADRS, and CGI scores.

Results: Among 170 patients (58 clomipramine, 57 trazodone, 55 venlafaxine), venlafaxine and clomipramine produced a significantly greater response on the MADRS and the HAM-D compared with trazodone ($p \leq 0.05$). A CGI score of very much improved or much improved was attained by 74% of venlafaxine patients, 69% of clomipramine patients, and 57% of trazodone patients ($p \leq 0.05$). Significantly ($p \leq 0.05$) with venlafaxine 19% reported at least one adverse event compared with clomipramine (39%) and trazodone (43%).

Conclusion: Venlafaxine and clomipramine were effective in elderly depressed patients. The low incidence of adverse events make venlafaxine suitable for the treatment of depressed geriatric inpatients and outpatients.

References:

1. Mahapatra S, Hackett D: A randomized, double-blind, parallel-group comparison of venlafaxine and dothiepin in geriatric patients with major depression. *Int J Clin Pract* 1997;51:209–213.
2. Samuelian JC, Hackett D: A randomized, double-blind, parallel group comparison of venlafaxine and clomipramine in outpatients with major depression. *J Psychopharmacology,* in press.

NR648 Thursday, June 4, 9:00 a.m.-10:30 a.m.

Long-Term Treatment of OCD

Steven J. Romano, M.D., Neuroscience, Lilly Corporate Center, Lily Corporate Center DC 1046, Indianapolis IN 46285; Roy Tamura, Ph.D., Karen Sundell, B.S.

Educational Objectives:

At the conclusion of this session, participants should recognize that following acute response at 60mg/day, OCD patients who continue treatment with fluoxetine 60 mg/day are provided greater protection against relapse than patients switched to placebo.

Summary:

Objective: Evaluate the efficacy of continued treatment with fluoxetine or placebo in preventing relapse during a 52-week period following successful acute fluoxetine therapy for OCD.

Methods: Patients (N = 130) who met DSM-IV OCD criteria and had a Y-BOCS score ≥19 were treated with single-blind fluoxetine 20, 40, or 60 mg/day (based on physician assessment of response and tolerability). Responders to fluoxetine treatment at 20 weeks were randomized under double-blind conditions to continued treatment with fluoxetine (acute phase dosage) or placebo for an additional 52 weeks and monitored for relapse.

Results: A total of 71 patients (55%) who met acute phase response criteria (60 mg/day, n = 52; 40 mg/day, n = 18; 20 mg/day, n = 1) were randomized to continuation treatment. Among patients who responded to fluoxetine 60 mg/day, continued treatment with fluoxetine 60 mg/day was associated with a significantly lower rate of relapse than placebo treatment (Kaplan-Meier estimated one-year relapse rates: fluoxetine 17.5%; placebo 38.0%; one-tailed p-value = 0.041). Acute treatment responders to 40 or 20 mg/day had low overall rates of relapse and the difference between continued fluoxetine and placebo treatment was not significant.

Conclusion: Following acute response at 60mg/day, OCD patients who continue treatment with fluoxetine 60 mg/day are provided greater protection against relapse than patients switched to placebo.

Research funded by Eli Lilly & Company, Indianapolis, Indiana

References:

1. Montgomery SA: Long-term management of obsessive-compulsive disorder. Int Clin Psychopharmacol 1996;11(suppl 5):23–29.
2. Tollefson GD, Rampey AH, Potvin JH, Jenike MA, Rush AJ, Dominguez RA, Koran LM, Shear MK, Goodman W, Genduso LA: A multicenter investigation of fixed-dose fluoxetine in the

treatment of obsessive-compulsive disorder. Arch Gen Psychiatry 1994;51:559–567.

NR649 Thursday, June 4 9:00 a.m.-10:30 a.m.

Long-Term Treatment in Panic Disorder

David Michelson, M.D., Neuroscience, Eli Lilly and Company, Lilly Corporate Center, Indianapolis IN 46285; R. Bruce Lydiard, M.D., Mark H. Pollack, M.D., Roy Tamura, Ph.D., Rosalinda Tepner, R.P.H., Gary D. Tollefson, M.D.

Educational Objectives:

At the conclusion of this session, participant should be able to recognize that these data provide evidence for the efficacy of fluoxetine in improving clinical outcomes over a six-month period following response to acute treatment.

Summary:

Objective: Assess whether continued fluoxetine treatment following successful acute therapy is associated with continued improvement and prevention of relapse.

Method: Patients with panic disorder were treated for 10 weeks with fluoxetine 10 or 20 mg/day, or placebo. Fluoxetine responders were randomized to 24 additional weeks of fluoxetine or placebo. Relapse was measured using stringent criteria (CGI ≥ 4 for two visits) and sensitive criteria (CGI ≥3 for two visits, or CGI ≥3 and panic frequency increase ≥50%). We also assessed change in panic attack frequency, phobic avoidance, HAMD-21, HAMA, and SCL-90-R. Endpoint measures included clinician/patient-rated CGI items.

Results: Fluoxetine responders randomized to continued fluoxetine experienced statistically significant improvement in panic attack frequency and phobia rating scale score from randomization to Week 24, while those switched to placebo experienced statistically significant worsening in HAMA, HAMD, and SCL-90-R rating scores. Using stringent relapse criteria, 4 (8%) placebo-treated and one (3%) fluoxetine-treated patient relapsed (NS). Using sensitive criteria, 11 (22%) placebo-treated and four (11%) fluoxetine-treated patients relapsed (NS). In an observed-case visit-wise analysis, fluoxetine was superior to placebo on multiple measures. Placebo was not superior to fluoxetine on any measure.

Conclusions: These data provide evidence for the efficacy of fluoxetine in improving clinical outcomes over a six-month period following response to acute treatment.

Research funded by Eli Lilly and Company, Indianapolis, Indiana 46285.

References:

1. Pollack MH, Smoller JW: The longitudinal course and outcome of panic disorder. Psychiatric Clinics of North America 1995;18:785–801.
2. Shear MK, Maser JD: Standardized assessment for panic disorder research. A conference report. Archives of General Psychiatry 1994;51:346–354.

NR650 Thursday, June 4, 9:00 a.m.-10:30 a.m.

Sertraline Improves Psychosocial Functioning in Premenstrual Dysphoric Disorder

Teri B. Pearlstein, M.D., Butler Hospital, 345 Blackstone Blvd., Providence RI 02906; Roger Haskett, M.D., Anna Stout, Ph.D., Ellen Frank, Ph.D., Jean Endicott, Ph.D.

Educational Objectives:

At the conclusion of this presentation the participant should be able to describe how sertraline was superior to placebo in improving psychosocial functioning in women with PMDD.

Summary:

Objective: To evaluate the pretreatment psychosocial functioning of women with premenstrual dysphoric disorder (PMDD) and the effect of sertraline treatment on psychosocial functioning in these patients.

Methods: Two hundred women with PMDD recruited from 12 university-affiliated sites completed one cycle of single-blind placebo and randomization to three cycles of sertraline or placebo (funded by Pfizer). Psychosocial functioning was assessed by the Daily Record of Severity of Problems (DRSP), the Social Adjustment Scale (SAS), and Quality of Life (QOL).

Results: SAS scores of the entire sample during the follicular phase were similar to SAS scores of community norms, whereas the SAS scores during the luteal phase were similar to SAS scores of samples with major depressive disorder. Sertraline was significantly more effective than placebo in improving psychosocial functioning as measured by the SAS total and individual factor scores, and by the three DRSP items of impaired productivity, interference with social activities, and problems in relationships. Sertraline was significantly more effective than placebo in improving quality of life when luteal phase percent of total QOL scores (75.6 ± 14, 68.3 ± 11.6, respectively) were compared with luteal QOL scores at baseline (64.9 ± 12.6, 63.9 ± 11.8, respectively) by ANCOVA ($p < .01$).

Conclusion: Comparison of SAS scores in women with PMDD to published norms documents the degree of luteal phase functional impairment in women with PMDD (similar to major depression), and a relative absence of follicular phase impairment (similar to community norms). Sertraline was superior to placebo in improving psychosocial functioning in women with PMDD as reflected by SAS, QOL, and DRSP measures.

References:

1. Yonkers KA, Halbreich U, Freeman E, et al: Symptomatic improvement of premenstrual dysphoric disorder with sertraline treatment: A randomized controlled trial. *JAMA* 1997;278:983–988.
2. Endicott J, Nee J, Harrison W, et al: Quality of life enjoyment and satisfaction questionnaire: A new measure. Psychopharmacol Bull 1993, 29:321-326.

NR651 Thursday, June 4, 9:00 a.m.-10:30 a.m.

Black Women Receive Fewer SSRI Antidepressants

Andrew A. Nierenberg, M.D., Department of Psychiatry, Massachusetts General Hospital, 15 Parkman Street, WAC 812, Boston MA 02114-3117; Phillip S. Wang, M.D., Jerrold F. Rosenbaum, M.D., Maurizio Fava, M.D., Raia Levin, Ph.D., Jerry Avorn, M.D.

Educational Objectives:

At the conclusion of this presentation the participant should be able to describe, because Black women were less likely to be prescribed SSRI antidepressants than Caucasians, the need for better treatment of depressed minosrity women.

Summary:

Objective: To assess differences in prescribing patterns of antidepressants for minority and nonminority women.

Methods: We analyzed data from 1.7 million participants in the Medicaid and Pharmacy Assistance for the Aged and Disabled (PAAD) program of the State of New Jersey. Subjects were women over the age of 20 who participated in the Medicaid of PAAD program at any point from 1989 to 1991. A total of 38,273 women were prescribed antidepressants. We assessed the effect of race on antidepressant prescriptions in a multivariate regression model controlling for age, Medicaid vs. PAAD status, use of other psycho-

active drugs, Charlsen index of comorbidity, and utilization of nursing home or other psychiatric facility.

Results: Black women had a reduction of 10.4% in the likelihood of being prescribed fluoxetine vs. a non-SSRI antidepressant ($p < 0.002$; odds ratio of fluoxetine use in blacks 0.896; 95% confidence interval 0.837-0.960).

Conclusion: Black women were less likely to be prescribed SSRI antidepressants than Caucasians. We do not know the reasons for this discrepancy, but these data highlight the need for better treatment of depressed minority women, given the improved safety profile of SSRIs over non-SSRIs.

References:

1. Lawson WB: Racial and ethnic factors in psychiatric research. *Hosp Comm Psychiatry* 1986;37:50–54.

NR652 Thursday, June 4, 9:00 a.m.-10:30 a.m.

Paroxetine, Clomipramine and Cognitive Therapy in the Treatment of Panic Disorder

Abraham Bakker, M.D., Psychiatry, Free University, Valeriusplein 9, 1075BG Amsterdam NH, Netherlands; Richard Van Dyck, M.D., Philip Spinhoven, Ph.D., Anton J.L.M. Van Balkom, M.D.

Educational Objectives:

At the conclusion of this presentation the participant should be able to describe how paroxetine was more effective than placebo, whereas both clomipramine and CT were not.

Summary:

Objective: This 12-week, placebo-controlled study was carried out to compare the relative efficacy of paroxetine, clomipramine, and cognitive therapy (CT) in the treatment of DSM-III-R defined panic disorder.

Method: After three weeks single-blind placebo run-in, 131 patients were randomized to receive double-blind medication or 12 sessions CT based on the model by Clark. Efficacy assessments included the daily panic attack diary, the Clinical Global Impression Scale, the Hamilton Anxiety Scale, the Marks Sheehan Phobia Scale, the Montgomery Asberg Depression Rating Scale, and the Sheehan Disability Scale.

Results: All treatments, including pill-placebo, were effective in reducing both panic and agoraphobic complaints. Comparisons with placebo revealed statistical significant superiority of paroxetine (20-60 mg) on all outcome measures. On several measures paroxetine also showed better efficacy than CT. Both clomipramine (50-150 mg) and CT did not differ significantly from placebo. In comparison with placebo, the number of subjects becoming panic free (66 %) was higher and the onset of action was faster in the paroxetine treated group. Treatment with CT yielded the highest dropout rate (26 %).

Conclusion: In this 12-week study in panic disorder patients, paroxetine was more effective than placebo, whereas both clomipramine and CT were not.

References:

1. Clark DM, Salkovskis PM, Hackmann A, et al: A comparison of cognitive therapy, applied relaxation and imipramine in the treatment of panic disorder Br J Psychiatry 1994;164:759–769
2. Black DW, Wesner R, Bowers W, et al: A comparison of fluvoxamine, cognitive therapy, and placebo in the treatment of panic disorder Arch Gen Psychiatry 1993;50:44–50

NR653 Thursday, June 4, 9:00 a.m.-10:30 a.m.

Suicide Attempts in Bipolar Disorder

Jose de Leon, M.D., UK/MHRC, Eastern State Hospital, 627 West Fourth Street, Lexington KY 40508; Ana Gonzalez-Pinto, M.D., Miguel Gutierrez, M.D., Purificacion Lopez, M.D., Fernando Mosquera, M.D., Juan L. Figuerido-Poulain, M.D., Fernando Ramirez, M.D.

Educational Objectives:

At the conclusion of this presentation the participant should be able to describe how the earlier age of onset in bipolar disorder appears to lead to a higher rate of suicide.

Summary:

Background: Between 25%-50% of patients with bipolar disorder have at least one suicide attempt (Goodwin and Jamison, 1990). The present study investigates the relationship between suicide attempts and demographic and clinical variables.

Method: All 169 bipolar patients who attended any of the state of Alava's (Spain) mental health centers, from 1994 until 1996. They were studied using the SCID-P interview and DSM-III-R criteria and RDC-FH (family history). Sociodemographic data and age at onset were evaluated. Clinical records that are easily available in Alava were reviewed thoroughly to confirm all data.

Results: Fifty-six (33%) had at least one suicide attempt. The group with suicide attempts had an earlier onset of illness ($p = 0.006$) and had more relatives with mental disorders ($p = 0.004$) or affective disorders. There were no differences in gender, marital status, history of psychosis, or alcohol or drug abuse in either group. Earlier onset was the only significant variable in a logistic regression analysis.

Conclusions: The earlier age at onset in bipolar disorder appears to lead to a higher rate of suicide attempts (Brent et al, 1993). Suicide prevention programs are needed for patients with bipolar disorder particularly for those with early onset.

This study was funded by the Spanish government (FIS 97/0851) and the Basque government.

References:

1. Brent DA, et al: Suicide in affectively ill adolescents: a case control study. *J Affect Disord* 1994;31:193–202.
2. Goodwin FD, Jamison DR: Manic-Depressive Illness. Oxford University Press, Oxford, 1990.

NR654 Thursday, June 4, 9:00 a.m.-10:30 a.m.

Lamotrigine in Bipolar Depression

Charles L. Bowden, M.D., Department of Psychiatry, Univ. of TX, Health Sci. Cntr., 7703 Floyd Curl Drive, San Antonio TX 78284-7792; Joseph R. Calabrese, M.D., Gary S. Sachs, M.D., Arifulla Khan, M.D., John A. Ascher, M.D., David Rudd, R.P.H., Eileen Monaghan, B.A.

Educational Objectives:

At the conclusion of this presentation, the participant should be able to understand the methods and results of this clinical trial and the implications for the treatment of bipolar depression.

Summary:

Objective: Preliminary data suggest that lamotrigine (Lamictal) may possess a bimodal spectrum of efficacy (antidepressant and antimanic activity) in the treatment of bipolar disorder. This study (#602) was the first in a series of well-controlled trials designed to test the antidepressant efficacy of lamotrigine in bipolar patients.

Methods: A total of 192 outpatients were recruited from 21 sites in the U.S. and Europe. Subjects had a DSM-IV diagnosis of bipolar I disorder, current episode depressed, and HAM-D (17-item) total scores of at least 18. Subjects were randomized to one of three parallel groups: placebo, lamotrigine 50mg, and lamotrigine 200mg for seven weeks. Study visits were conducted at least weekly and included efficacy (Hamilton Depression, MADRS, SADS-C Mania Rating Scale, and CGI) and safety measures.

Results: Lamotrigine 200mg/day showed evidence of antidepressant efficacy in this population as assessed by Hamilton Depression (17-item) total and depressed mood item scores and by CGI severity and improvement ratings. Lamotrigine 50mg/day results were also positive for some of the above items and suggested a dose-response relationship.

Conclusions: The results from this controlled study provide evidence for the efficacy of lamotrigine in the treatment

Funded by Glaxo Wellcome

References:

1. Sporn J, Sachs G: The anticonvulsant lamotrigine in treatment-resistant manic-depressive illness. *J Clin Psychopharm* 1997;17:185–189.
2. Labbate L, Rubey R: Lamotrigine for treatment-refractory bipolar disorder. *Am J Psychiatry* 1997;154:1317.

NR655 Thursday, June 4, 9:00 a.m.-10:30 a.m.

MRI Brain Morphometry in Bipolar Disorder

Stephen M. Strakowski, M.D., Department of Psychiatry, Univ of Cincinnati Col of Med, 231 Bethesda Ave., Suite 7005, Cincinnati OH 45267-0559; Melissa P. DelBello, M.D., Kenji W. Sax, Ph.D., Molly E. Zimmerman, B.A., John M. Hawkins, M.D.

Educational Objectives:

At the end of this presentation, participants should be able to describe neural structures that may contribute to the pathophysiology of bipolar disorder.

Summary:

Background: Previous work indicates that bipolar patients may have abnormalities in neural pathways that modulate human mood states (Strakowski et al 1993; Soares & Mann, 1997). The authors examined differences in brain structures associated with these pathways between bipolar patients hospitalized with mania and normal community volunteers.

Methods: Twenty-five bipolar manic patients were recruited from admissions to an inpatient research unit. Fifteen normal volunteers were recruited from the community, matched to the patient sample for age, sex, race, and education. All subjects were scanned using a 3-D RF-spoiled FAST acquisition sequence on a 1.5 Tesla Picker MRI system. Scans were analyzed using brain image software. All image datasets were reformatted into the same plane prior to obtaining coronal slices for measurements. Total cerebral, prefrontal, caudate, thalamic, hippocampal, amygdala, and ventricular volumetric measurements were obtained blind to group identity with good interrater reliability (ICC > 0.90). Analyses were controlled for age, sex, race, education, whole brain volume, and substance abuse.

Results: Bipolar patients showed significantly enlarged left caudate and bilateral amygdala volumes, with decreased volume of the left prefrontal cortex. The left lateral ventricle was also enlarged. Duration of illness was not associated with any structural measurement. Substance abuse was associated with smaller left amygdala volumes.

Conclusions: Patients with bipolar disorder exhibit structural abnormalities in neural pathways thought to modulate human mood.

Supported in part by grants from the Ohio Department of Mental Health and NIMH (MH54317).

References:

1. Strakowski SM, Wilson DR, Tohen M, et al: Structural brain abnormalities in mania at first hospitalization. *Biol Psychiatry* 1993;33:602–609.
2. Soares JC, Mann JJ: The anatomy of mood disorders - review of structural neuroimaging studies. *Biol Psychiatry* 1997;41:86–106.

NR656 Thursday, June 4 9:00 a.m.-10:30 a.m.

MRI Change in First-Episode Schizophrenia

Yoshio Hirayasu, M.D., Psychiatry 116A, Brockton VA, 940 Belmont Street, Brockton MA 02401; Martha E. Shenton, Ph.D., Dean F. Salisbury, Ph.D., Jun Soo Kwon, M.D., Chandlee C. Dickey, M.D., Robert W. McCarley, M.D.

Educational Objectives:

At the conclusion of this presentation, the participant should be able to show how first episode schizophrenics showed a smaller left posterior superior temporal gyrus (STG) than either affectives or controls. Repeat MR of these subjects showed volume reduction in the left posterior STG of schizophrenia. Progressive volume reduction of the left posterior STG gray matter may occur in the early stage of schizophrenia.

Summary:

Objective: Magnetic resonance (MR) measures from this laboratory on chronic schizophrenics have shown reduced left posterior superior temporal gyrus (STG) cortical gray matter. However, it is unknown whether these abnormalities are confounded by chronicity or whether there is a continual degenerative pathologic process in schizophrenia.

Method: MR imaging was acquired from first-episode patients with schizophrenia, affective psychosis, and age-matched normal control subjects. Repeat MR was also acquired from these subjects with an average of 18 months after the first MR.

Results: MR data from the first episode schizophrenics (n = 17) showed significantly smaller gray matter in left posterior STG than either first-episode affective psychotics (n = 16) or controls (n = 18) (ANCOVA, age as covariate, $p = .012$; post hoc Tukey, $p < .05$). Schizophrenics had significant left < right asymmetry of the posterior STG (paired t-test, $p < .01$). In addition, repeat MR showed volume reduction in the left posterior STG of schizophrenia (n = 9) compared with the first MR (paired t-test, $p < .01$, 8/9 subjects showed a decrease). This volume change was not found in either affective psychotics (n = 5) or controls (n = 5).

Conclusions: These data suggest that the left posterior STG abnormalities are present at disease onset and are specific to schizophrenic psychosis and are not characteristic of affective psychosis. Progressive volume reduction of the left posterior STG gray matter may occur in the early stage of schizophrenia.

References:

1. Shenton ME, Kikinis R, Jolesz FA, et al: Abnormality of the left temporal lobe and thought disorder in schizophrenia: a quantitative magnetic resonance imaging study. N Engl J Med 1992;327:604–612.
2. McCarley RW, Shenton ME, O'Donnell BF, et al: Auditory P300 abnormalities and left posterior superior temporal gyrus volume reduction in schizophrenia. Arch Gen Psychiatry 1993;50:190– 197.

NR657 Thursday, June 4, 9:00 a.m.-10:30 a.m.

Cancer Incidence Following the Death of an Adult Son

Robert Kohn, M.D., Department of Psychiatry, Butler Hospital, 345 Blackstone Boulevard, Providence RI 02906; Itzhak Levav, M.D., Joseph Abramson, M.B., Wei Yann Tsai, Ph.D.

Educational Objectives:

At the conclusion of the presentation the participants should be able to understand the relationship between stress and the immune system and the development of cancer.

Summary:

Objective: The role of stress in cancer onset remains inconclusive. This study, supported by the National Cancer Institute, investigated the effect of bereavement following the death of an adult son, a paradigm of stress, on cancer incidence.

Method: 6,284 Jewish Israelis who lost an adult son in the 1973 Yom Kippur War or in an accident between 1970 and 1977 were followed for 20 years and compared with the nonbereaved general population. Incidence analyses used weighted logistic regression controlling for gender, year of birth, region of origin, and period of immigration. The Israel Cancer Registry was used to trace and identify subjects, neoplasms, and clinical information.

Results: Unlike uncontrolled analyses, which showed overall enhanced risk, controlled analyses yielded mixed results. Increased incidence of cancer was found for malignancies of lymphatic and hematopoietic origin among the accident (OR = 2.01) and the war-bereaved (OR = 1.47). Accident-bereaved parents also had an increased risk for respiratory cancer (OR = 1.50). Findings among fathers taken singly followed the same pattern of positive associations. Among mothers, positive associations also included uterine and ovarian tumors in accident-bereaved, and respiratory cancer among war-bereaved parents.

Conclusions: Controlled analyses found a clear effect on the hematopoietic/lymphatic system, suggesting psychoneuroimmunological compromise.

References:

1. Fox B: The role of psychological factors in cancer incidence and prognosis. Oncology 1995;9:345–256.
2. Spiegel D, Kate PM: Psychosocial influences on cancer incidence and progression. Harv Review Psychiatry 1996;4:10–26.

NR658 Thursday, June 4, 9:00 a.m.-10:30 a.m.

Treatment Outcome in Sexually Abused Children

Anthony P. Mannarino, Ph.D., Psychiatry, Allegheny University, 4 Allegneny Center Room 859, Pittsburg PA 15212; Judith A. Cohen, M.D.

Educational Objectives:

To demonstrate knowledge of basic components of two prominent treatment modalities for sexually abused children, and of empirical findings from a recent treatment outcome study comparing the efficacy of these modalities for symptom reduction.

Summary:

Objective: This study evaluated the relative efficacy of two alternative treatments for sexually abused children.

Method: Forty-nine recently sexually abused children 7–15 years old and their nonoffending parent(s) were randomly assigned to either Sexual Abuse Specific Cognitive Behavioral Therapy (SAS-CBT) or Nondirective Supportive Therapy (NST). Before and after receiving 12 sessions of the assigned modality, subjects completed the Trauma Symptom Checklist-Child Version (TSC-C), Child Depression Inventory (CDI), Children's Attribution and Perception Scale (CAPS), and State-Trait Anxiety Inventory for Children (STAIC). Parents completed the Child Behavior Checklist (CBCL) and Child Sexual Behavior Inventory (CSBI).

Results: Children receiving SAS-CBT demonstrated significant improvement on all six TSC-C subscales, the CSBI, CDI, three of four CBCL broad band factors, three of the CAPS subscales, and both STAIC subscales, while children receiving NST showed significant improvement on only one CAPS subscale and one STAIC subscale. Group x time interactions were significant for the CDI and one CBCL factor. Clinical findings indicated that SAS-CBT was more effective than NST in eliminating sexually inappropriate behaviors. Parental satisfaction with treatment was high in both treatment modalities.

Conclusion: This study demonstrated greater treatment effectiveness for SAS-CBT than NST in sexually abused children. Results of similar studies in this population are discussed.

Funding source: National Center on Child Abuse & Neglect grant #90-CA-1545

References:

1. Cohen JA, Mannarino AP (in submission): Interventions for sexually abused children: initial treatment findings.
2. Cohen JA, Mannarino AP (in submission): Child and familial factors which affect treatment outcome in sexually abused children.

NR659 Thursday, June 4, 12 noon-2:00 p.m.

Long-Term Efficacy of Fluoxetine in Premenstrual Dysphoric Disorder

Jesus J. De la Gandara, M.D., Psychiatry, H Divino Valles, Juan Del Enzima 60, Burgos 09006, Spain; Inmaculada Gilaberte, M.D.

Summary:

Introduction: Different studies have demonstrated efficacy of fluoxetine in premenstrual dysphoric disorder (PMDD). We report the results of a naturalistic study with 20 patients to assess the long-term efficacy of fluoxetine.

Method: Twenty women diagnosed with PMDD according to DSM-IV received fluoxetine 20 mg for a six-month period. Subjects were evaluated in each cycle. A PMDD scale (TDP), HAMD, HAMA, and CGI were used. After this period, nine women continued treatment until they completed a period of 18 months and 11 women discontinued fluoxetine by their own decision. All women were followed up to 18 months for the assessment of evolution with and without treatment.

Results: All patients completed six months of treatment with good tolerance. Significant improvements were observed when comparing baseline and six-month scores: HAMD (22.4 vs. 5.3; $p < 0.000$), HAMA (23.8 vs. 8.7; $p < 0.000$), TDP (36.4 vs. 18; $p < 0.000$). Patients who completed 18 months of treatment were in remission of their symptoms in contrast with patients who had discontinued fluoxetine after six months. Statistical differences were found between these groups at the 18th assessment: HAMD (4.2 vs. 18; $p = 0.001$), HAMA (5 vs. 20; $p = 0.001$), TDP (17.7 vs. 28; $p = 0.01$).

Conclusions: Fluoxetine maintained the efficacy for 18 months in PMDD, whereas patients who discontinued treatment relapsed during the following months.

NR660 Thursday, June 4, 12 noon-2:00 p.m.

Prescribing Characteristics of MAOIs in Michigan

Richard Balon, M.D., Department of Psychiatry, University Psychiatric Center, 2751 East Jefferson, Suite 200, Detroit MI 48207; Cynthia L. Arfken, Ph.D., Rizwan M. Mufti, M.D.

Summary:

Use of monoamine oxidase inhibitors (MAOIs) has declined in past decades. However, MAOIs are an effective treatment of various disorders. To highlight trends in prescribing MAOIs in Michigan, we sent a one-page questionnaire to 1,129 members of the Michigan Psychiatric Society in three mailings during the summer of 1997. We received 717 responses (65%), 573 from currently

practicing psychiatrists. Twelve percent of practicing psychiatrists never prescribed MAOIs, 27% prescribed more than three years ago, 17% prescribed one to three years ago, 14% prescribed three to 12 months ago, and 30% prescribed zero to three months ago. Of those who prescribed MAOIs and answered this question, 61% prescribed them rarely, 37% occasionally, and 3% frequently. The most frequent reasons for not prescribing MAOIs were: side effects and interactions (45%), preference of other therapies (30%), and dietary restrictions (17%). Ninety-two percent believed that MAOIs were useful for atypical depression, 63.7% for major depression, 53.8% for melancholic depression, 27.2% for dysthymia, 55.5% for panic disorder, 44.2% for social phobia, 12.2% for OCD, and 18.7% for PTSD. This study clearly documented the commonly held belief that practicing psychiatrists believe MAOIs are efficacious but use them infrequently, primarily due to concerns about side effects/interactions.

NR661 Thursday, June 4, 12 noon-2:00 p.m.

Sexual Dysfunction on Imipramine and Paroxetine

Francisco Montoya, M.D., Psychiatry, University Hospital, APDO Postal 3-4101, Monterrey NL, Mexico; Alfonso Ontiveros, M.D., Miguel Valdes, M.D., Antonio Costilla, M.D.

Summary:

Objective: To compare sexual dysfunctions (SDys) incidence in patients treated with imipramine (IMI) or paroxetine (PAR).

Method: Thirty-eight outpatients with major depression (DSM-III-R), 18 to 65 years old, and 22 points minimum in the HAM-D first 17 items; without other psychiatric diagnoses, relevant general medical condition, or use of other psychotropic drugs, were administered during a single-blind week of placebo, a semi-structured DSM-III-R sexual symptoms interview and the Sexual Function Questionaire (SFQ). Then they received random and double-blind PAR (20 mg/day) or IMI (150–250 mg/day) for six weeks. SDys measurement was repeated at the end of treatment.

Results: Groups were comparable in age, gender, and depression severity. Ten patients (26.3%) showed side effects in sexual function, 3/18 (16.6%) on IMI, and 7/20 (35%) on PAR (NS). Two males on PAR dropped out because of sexual side effects. The PAR group had significantly higher total SFQ scores after treatment, due to patients' decreased ability to become sexually excited ($p < 0.01$).

Conclusion: PAR was associated with more sexual SDys (sexual excitement phase dysfunction) than IMI. Larger-sample studies can qualify our findings.

NR662 Thursday, June 4, 12 noon-2:00 p.m.

Primary Care Antidepressant Use in the United Kingdom: A Comparison to Treatment Guidelines

Rodney Dunn, M.S., The Medstat Group, 777 E. Eisenhower Pky Ste500, Ann Arbor MI 48108; John M. Donogahue, B.Sc., Ronald Ozminkowski, Ph.D., Timothy R. Hylan, Ph.D.

Summary:

Objective: The purpose of this study was to assess the effects of initial antidepressant selection on the subsequent pattern and duration of antidepressant use in the United Kingdom.

Method: Logistic regression analysis of data from a large general practitioner medical records database (DINLINK) for the years 1992–97 was used to estimate the determinants of antidepressant drug use patterns for 15,888 patients with a "new" episode of antidepressant therapy who were prescribed one of the most often prescribed tricyclic and related antidepressants (amitriptyline, dotheipin, imipramine, and lofepramine) or selective serotonin reuptake inhibitors (SSRIs) paroxetine, sertraline, or fluoxetine. The use of four or more 30-day prescriptions at an effective dose was used as a reasonable approximation of therapy consistent with clinical practice guidelines, which recommend between four and nine months beyond initial symptom resolution.

Results: Patients who initiated therapy on a tricyclic antidepressant were less likely than patients who initiated therapy on an SSRI to have four or more prescriptions at an effective dose of their initial antidepressant within the first six months.

Conclusion: The findings suggest that antidepressant selection is an important determinant of the initial duration and pattern of antidepressant use consistent with current recommended depression treatment guidelines.

Research funded by Eli Lilly and Company.

NR663 Thursday, June 4, 12 noon-2:00 p.m.

Venlafaxine Inhibits Uptake of Serotonin and Norepinephrine in Male Volunteers

Annie Harvey, Ph.D., Psych. Resident, 1100 N St Francis Suite 200, Wichita KS 67214; Sheldon H. Preskorn, M.D.

Summary:

Objective: Pre-clinical data and the profile of side effects suggest that the antidepressant venlafaxine inhibits both serotonin (5-HT) and norepinephrine (NE) uptake over its clinically relevant dosing range, 75 to 375 mg/day. This study assessed the relative effects of venlafaxine on these two mechanisms of action as a function of dose and drug concentration in healthy male volunteers in comparison with two active but selective control drugs.

Method: Thirty-two male non-smokers 18 to 45 years old received either 75 mg/day or 375 mg/day venlafaxine, or the 5-HT uptake inhibitor sertraline (50 mg/day) or the NE uptake inhibitor maprotiline (150 mg/day) for two weeks. Platelet 5-HT uptake and the pressor response to iv. tyramine were used to assess 5-HT uptake and NE uptake, respectively.

Results: Venlafaxine inhibited 5-HT uptake. At the higher dose the magnitude of inhibition was equivalent to that of sertraline. The higher dose of venlafaxine also inhibited NE uptake. The comparator drugs sertraline and maprotiline were selective and specific inhibitors of 5-HT and NE uptake, respectively.

Conclusion: These data support the claim that both 5-HT uptake and NE uptake inhibition are mechanisms of action engaged by venlafaxine over its clinically relevant dosing range.

Supported by Wyeth-Ayerst.

NR664 Thursday, June 4, 12 noon-2:00 p.m.

Thyroid Indices and Severity of Depression

Mark A. Frye, M.D., NIMH, National Institute of Mtl Hlth, Building 10 Room 3N212, Bethesda MD 20892; George G. Klee, M.D., Teresa Huggins, Ph.D., John T. Little, M.D., Robert T. Dunn, M.D., Timothy A. Kimbrell, M.D., Robert M. Post, M.D.

Summary:

Thyroid physiology is clearly important in the regulation of mood and anxiety. The central evaluation (i.e., CSF) of iodothyronines, as well as the evaluation of iodothyronines as a measure of pathological severity, has not been well studied.

Fifty-two depressed patients (26 BP, 26 UP) and 33 controls hospitalized in the Biological Psychiatry Branch, NIMH, underwent a medication-free or double-blind, placebo lumbar puncture with same day phlebotomy to assess concurrent central and peripheral iodothyronines. Mood and anxiety were assessed using the Hamilton Rating Scale (Ham-D), an a priori subset of 10 Ham-D questions specifically assessing anxiety (Ham-Sub-Anx), and the Spielberger State Anxiety Scale (SA). Serum measurements included: TSH, total T4 and free T3 (T4-S, FT3-S, Chiron Diagnostics), free T4 and total T3 (FT4-S, T3-S, Abbott Labs), and reverse

T3 (rT3-S, Biodata). Central measurements included: total T4 and T3 (T3-CSF, T4-CSF), and reverse T3 (rT3-CSF).

Each iodothyronine was not significantly different in affective patients vs. controls, except for a reduced patient rT3-S ($p = 0.009$) and rT3-CSF ($p = 0.10$). Severity of depression correlated with T4-S ($n = 37$, $r = 0.55$, $p < 0.0001$), T4-CSF ($n = 48$, $r = 0.46$, $p = 0.001$), FT4-S ($n = 37$, $r = 0.53$, $p = 0.001$), and rT3-S ($n = 37$, $r = 0.56$, $p = 0.001$). Anxiety scales showed similar positive relationships.

These data suggest that severity of depression and anxiety are robustly correlated with peripheral and central (CSF) thyroid hormone indices. The mechanistic nature of this relationship and their potential application to therapeutics remain to be explored.

NR665 Thursday, June 4, 12 noon-2:00 p.m.

Low Reproductive and Hormonal Side Effect with Quetiapine Fumarate

Jeffrey M. Goldstein, Ph.D., MRCG, Zeneca Pharmaceuticals, 1800 Concord Pike, Wilmington DE 19850; Marc Cantillon, M.D.

Summary:

Many patients with schizophrenia are noncompliant with standard antipsychotic treatments because of the side effects they cause, including reproductive and hormonal side effects such as sexual dysfunction (e.g., impotence), menstrual irregularities, gynecomastia, and galactorrhea. Many of these troublesome side effects are related to chronic elevation of plasma prolactin (PRL). Quetiapine fumarate is a recently approved atypical dibenzothiazepine antipsychotic, which has demonstrated consistent efficacy in the treatment of the positive and negative symptoms of psychotic disorders, including schizophrenia. Additionally, quetiapine is well tolerated and does not produce treatment-emergent or dose-related extrapyramidal side effects and does not elevate PRL concentrations. We present here reproductive system/hormonal adverse event data from a pool of 2,387 patients receiving quetiapine, including 510 patients who received quetiapine in four short-term (≤ 6 weeks), placebo-controlled, randomized, double-blind clinical trials. The results showed that there was a very low incidence (<1%) of reproductive system/hormonal adverse events reported in patients treated with quetiapine. In the placebo-controlled trials, the incidence of these adverse events in the quetiapine-treated patients was very low and not unlike that of the placebo group. There were no statistically significant differences between quetiapine and placebo in the change from baseline in PRL in the placebo-controlled trials. Further there were no dose-related increases in PRL in a trial that evaluated five fixed doses of quetiapine ranging from 75 to 750 mg/day and placebo. These findings show that quetiapine is associated with a low incidence of reproductive system/hormonal adverse events. In addition, quetiapine did not elevate PRL. By avoiding the problematic reproductive system/hormonal side effects, particularly those associated with increased PRL levels, quetiapine therapy is likely to improve compliance and, ultimately, clinical outcome.

NR666 Thursday, June 4, 12 noon-2:00 p.m.

Safety of Switching to Quetiapine Fumarate

Jeffrey M. Goldstein, Ph.D., MRCG, Zeneca Pharmaceuticals, 1800 Concord Pike, Wilmington DE 19850; Marc Cantillon, M.D.

Summary:

Switching from one antipsychotic therapy to another can lead to uncomfortable side effects, such as anticholinergic withdrawal, and an increase in psychosis. Quetiapine fumarate, a promising new atypical antipsychotic agent, is effective in treating the positive and negative symptoms of schizophrenia and has a favorable safety profile. This trial assessed the safety of abruptly switching from conventional antipsychotics to quetiapine and subsequent abrupt withdrawal of quetiapine. Fifty men or women with selected psychotic disorders between the ages of 18 and 60 years were entered. Patients were in clinical remission for six months and had received one of the following antipsychotic therapies for at least one month: (1) haloperidol, 5 to 30 mg/day; (2) haloperidol, 5 to 30 mg/day plus an anticholinergic; (3) risperidone, 4 to 10 mg/day; or (4) thioridazine, 200 to 600 mg/day. At least 12 patients were recruited for each group. Prior antipsychotic therapy was continued until Trial Day 4 when it was abruptly replaced with quetiapine (unblinded switch), titrated to 300 mg bid by Day 15 and maintained for at least 16 days before randomization (double blind) to abrupt discontinuation or maintenance of therapy. Safety assessments included the UKU Side Effect Rating Scale, Simpson-Angus Scale, and Abnormal Involuntary Movement Scale. Psychiatric assessments included BPRS and CGI. Abrupt switching from any of the four antipsychotic therapies to quetiapine was generally well tolerated and patients remained clinically stable following switching with no change in mean BPRS and CGI scores. Only two (4%) of the patients had psychotic relapse. Most of the side effects were recognized effects of quetiapine titration. The abrupt withdrawal of quetiapine was also not associated with clinically important nonpsychiatric side effects. The results suggest that psychotic patients can be safely switched to quetiapine from conventional antipsychotic therapies and that quetiapine therapy can be safely discontinued when necessary.

NR667 Thursday, June 4, 12 noon-2:00 p.m.

Health Resource Utilization and Risperidone

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Summary:

Objective: This is an analysis of our experience with risperidone therapy in veterans with severe, suboptimally responsive psychosis from a perspective of clinical response and health resource utilization.

Methods: We conducted a computer search for all patients who received risperidone therapy at our facility from 2/92 until 7/96. At our facility, risperidone is prescribed for refractory or suboptimally responsive psychosis. A control group of patients on conventional antipsychotic therapy were also identified via the electronic database.

Results: A total of 120 patients received a mean of 5.2 SD ± 3.4 mg/day of risperidone, for a mean of 247 ± 223 days. The largest proportion of patients (48.1%) had marked improvement on risperidone. The 35 patients who received at least one year of risperidone therapy had a significant decrease in hospital length of stay (LOS) from 89.7 to 28.7 days ($p = .005$) on risperidone with no compensatory increase in outpatient visits. Conventional antipsychotic treated patients had a more modest reduction in LOS from 78.9 days during the initial identified year of conventional antipsychotic therapy to 56.4 days during the second year of conventional therapy ($p = 0.2$). Although patients treated with conventional antipsychotic had a 28.5% mean reduction in LOS compared with a 64.4% mean reduction in risperidone treated patients, the difference between groups did not reach statistical significance, possibly due to small sample size.

Conclusions: This preliminary study concurs with other reports that risperidone therapy may be effective in severely mentally ill patients and may be associated with significant reductions in health resource utilization. Comparison of resource utilization between risperidone and conventional antipsychotic treated patients should be explored in larger, prospective studies.

NR668 Thursday, June 4, 12 noon-2:00 p.m.

The Use of Mirtazapine In Primary Care

Milana V. Zivkov, M.D., Dept. of Medical Services, NV Organon, Molenstraat 110, Oss 5340BH, The Netherlands; Hans-Joachim Kreuzenbeck, M.D.

Summary:

Aim: To assess overall antidepressant efficacy as well as effects on anxiety and sleep disturbance symptoms, and tolerability, of mirtazapine in everyday clinical practice.

Methods: Depressed outpatients (n = 10405) of both sexes, older than 18 years, were treated with mirtazapine (15–45 mg/day) for six weeks in an open-label study. Clinical efficacy was assessed after six weeks of treatment by a German version of the CGI-Global Improvement Scale. UCs Tolerability was assessed by registering treatment-emergent adverse events.

Results: Thirty-three percent of patients included in the present study have switched from previous antidepressant treatment because of unsatisfactory efficacy. After six weeks of treatment with mirtazapine (mean dose: 30 mg/day), 82% of patients were classified as CGI responders. Prominent anxiety, present in 37% of patients at baseline, was present in only 1.1% at the end of the study. The respective percentages for prominent sleep disturbance are 44 and 2.1% and for agitation 47% and 1.5%. Adverse events were reported by only 5.3% of patients: somnolence by 1.3%, dizziness by 1.3%, dry mouth by 1.0%, and weight gain by 0.4%.

Conclusion: Mirtazapine was an effective and well tolerated treatment in depressed outpatients. The adverse events such as somnolence or weight gain, previously reported in placebo-controlled studies of mirtazapine, appear to be rare in everyday clinical practice.

NR669 Thursday, June 4, 12 noon-2:00 p.m.

Differential Rates of Antidepressant Metabolism in Depressed Patients

Robert P. Kraus, M.D., Dept of Psychiatry, LHSC, 375 South Street, London ON N6A 4G5, Canada; Geri O. Kraus, M.Sc., Andrea K. McEachran, B.A.

Summary:

Objectives: To determine rates and clinical correlates of AD metabolism in tricyclic antidepressant (TCA)-treated depressed patients.

Methods: TCA-treated (90% on desipramine) patients were monitored with serial plasma levels at varying doses to achieve best response. Patients with inconsistent levels were excluded. Given the accepted 150–300 mg/d dose and 550–1100 nmol/L (150–300 ng/ml) plasma range, metabolizers were defined—*slow:* <150mg produced levels >1200 nmol/L; *average:* 150–300mg produced levels 600–1100 nmol/L; *rapid:* ≤300mg produced levels <500 nmol/L, but 300–400mg produced levels 600–1100 nmol/L; *ultra-rapid:* ≤400mg produced levels <500 nmol/L.

Results: A total of 150 compliant patients undertook plasma levels (mean 3.6 tests) to determine metabolizer status. Seventeen (11%) were slow, 89 (59%) were average, 21 (14%) were rapid, and 20 (13%) were ultra-rapid metabolizers. Rapid/ultra-rapid metabolism was associated with a greater likelihood of past personal and/or family history of alcohol abuse (n = 28/41), and concurrent anticonvulsant use (n = 5). Achieving therapeutic levels in rapid and ultra-rapid metabolizers resulted in remission in >75%.

Conclusions: More than 25% of depressed patients may be rapid metabolizers of TCA's, presenting as "treatment-resistant" to "maximum" doses. A personal and/or family history of alcohol abuse, or concurrent anticonvulsants, may be associated with rapid AD metabolism. Achieving accepted therapeutic range plasma levels in rapid metabolizers resulted in remission in the majority of patients. Similar metabolic issues may relate to response to non-TCA's.

NR670 Thursday, June 4, 12 noon-2:00 p.m.

Treatment of Dysphoric Mania with Olanzapine

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Summary:

We present results of an open trial of olanzapine in the treatment of dysphoric mania. Subjects were nine inpatients at a provincial psychiatric hospital who met the DSM-IV diagnosis of bipolar mood disorder, most recent episode mixed. Olanzapine was added to the existing drug regime in patients who had failed to respond to adequate trials of mood stabilizers used alone or in combination with neuroleptics. Patients were administered the Brief Psychiatric Rating Scale (BPRS), Clinical Global Impression Scale (CGI), and the Global Assessment of Functioning Scale (GAF). These scales were repeated and patients were rated on the CGI-Improvement scale at the time of discharge. Pretreatment means and standard deviations (SD) for the CGI, BPRS, and GAF were 5.7 (1.1), 60.7 (13.7), and 17.8 (7.5), respectively. Post-treatment means and SD for the scales were 1.9 (0.6), 6.3 (3.3), and 71.7 (5.6), respectively. Paired t-tests on all measures indicated significant improvement in symptomatology with $t = 9.43$, $p < .001$ for CGI; $t = -13.28$, $p < .001$ for BPRS; $t = -21.83$, $p < .001$ for GAF. CGI-Improvement score mean was 1.3, SD = 0.5 at discharge. Olanzapine was well tolerated and was effective in the acute treatment of dysphoria.

NR671 Thursday, June 4, 12 noon-2:00 p.m.

Allergy to Tartrazine in Psychotropic Drugs

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Summary:

Allergic reactions to psychotropic drugs are frequently the result of an allergy to the dyes added to the drugs rather than the drugs themselves. These have not been correctly recognized and widely reported. The most frequently reported dye causing allergy is tartrazine. The common symptoms of allergy are urticaria, bronchospasm, angiooedema, etc. The present study reports on 56 patients with allergic reactions to tartrazine in various psychotropic drugs, including risperidone, haloperidol, trifluoperazine, trazodone, imipramine, amitriptyline, alprazolam, buspirone, zopiclone. All patients when shifted to the respective non-tartrazine containing drugs did not develop the allergic symptoms. The misdiagnosis of tartrazine allergy as allergy to the drug may lead to the discontinuation of valuable and effective treatment. Another important reason to recognize the allergy is that it may be misinterpreted as an exacerbation of actual illness.

NR672 Thursday, June 4, 12 noon-2:00 p.m.

Clonazepam Long-Term Efficacy in Social Phobia

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Summary:

Objective: To study the efficacy of active treatment with and the relapse rate on discontinuation of clonazepam in social phobic (SP) patients in a double-blind, placebo-controlled, follow-up study.

Method: After an eight-week, double-blind clonazepam vs placebo trial, responding SP patients continued with (1) another eight-weeks, double-blind on the same substance, (2) two-weeks of washout, and (3) six weeks of placebo (single-blind), for a total of 16 additional weeks of observation. Efficacy and safety were assessed bi-weekly.

Results: A total of 27 patients improved (20 of 26 on clonazepam, and 7 of 27 on placebo). Reasons for dropping out were: Clonazepam- 2 side effects and loss of efficacy, 1 unknown, and 1 administrative; Placebo- 1 unknown. Mean clonazepam dosage was 3 ± 1.2 mg/day. Relapses occured only in the clonazepam group, five during the six-week placebo period and three one month later. In the clonazepam group, only eight patients were symptom-free after six months of treatment.

Conclusion: These results support the efficacy of clonazepam in the long-term treatment of SP patients. However, very few patients were free of SP after four months of treatment and six months of observation.

NR673 Thursday, June 4, 12 noon-2:00 p.m.

New-Onset Diabetes Associated with Starting Olanzapine in Patients with Schizoaffective and Bipolar Disorders

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Summary:

Four cases where there was a temporal relationship between starting olanzapine and developing hyperglycemia will be presented: three with new-onset diabetes and one case of worsening blood glucose control within the first six months of starting olanzapine. All required hospitalization and none had evidence of infection or pancreatitis. Three were schizoaffective and one had severe bipolar disorder, and ages 41 to 47. Two of the four had a family history of diabetes. Two required admissions to the ICU: one with DKA and blood glucose of 1274 mg/dl and the other with blood glucose of 878 mg/dl and trace urine ketones. The latter had an apparent remission of his diabetes when off olanzapine for a few weeks and a recrudescence when re-challenged. Another was simultaneously diagnosed with diabetes (blood glucose of 567 mg/dl) and sleep apnea (O2 desaturation of 86%). There are case reports of diabetes associated with a structurally similar atypical neuroleptic clozapine, and with standard neuroleptics. A caveat is that although we may have found a rare side effect of a new drug, the natural occurrence of new-onset diabetes in patients with schizophrenia and affective disorders could be high, and the association spurious. Neuroendocrine studies, and epidemiological studies comparing rates of diabetes in various psychotic disorders on olanzapine and other agents (or untreated) are needed.

NR674 Thursday, June 4, 12 noon-2:00 p.m.

Benzodiazepines: Treatment for NMS?

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Summary:

Objective: The benefits of specific treatments for neuroleptic malignant syndrome (NMS) are disputed. The clinical similarities between NMS and catatonia, where benzodiazepines are an established treatment, prompted us to test their effectiveness in NMS.

Method: We identified records of 20 patients meeting DSM-IV criteria for NMS (15 also met Caroff [1993] criteria and five met Guerra [1992] "modified" criteria). All had rigidity and fever (> 38°C in 15). Both CPK (mean 3157) and WBC (mean 14.7k) were elevated. Lorazepam and/or other benzodiazepines were initiated within 48 hr (2.9 mg avg dose on day 1; 21.1 mg avg total dose).

Results: On average, rigidity resolved in 37.0 hr, fever abated in 28.1 hr, blood pressure normalized in 30.1 hr, and tachycardia resolved in 39.6 hr. CPK reduced by 50% within 66.2 hr, while WBC normalized in 73.1 hr. All patients recovered without adverse effects.

Conclusions: This case series suggests benzodiazepines rapidly resolve the major symptoms of NMS. The prompt response suggests benzodiazepines for initial treatment for NMS, since benefit occurs within 24–48 hr, compared with several days of illness reported without specific treatments (Caroff, 1993). A comparison of benzodiazepines with alternate treatments (e.g., bromocriptine) is warranted.

NR675 Thursday, June 4, 12 noon-2:00 p.m.

Mirtazapine Versus Fluoxetine: Efficacy on Symptoms Associated with Depression

Charlotte Kremer, M.D., Dept of Medical Services, Organon Inc, 375 Mount Pleasant, West Orange NJ 07052

Summary:

Aim: To compare the efficacy of mirtazapine and fluoxetine on depressed mood, as well as on anxiety, sleep, and retardation symptoms in depressed in patients and outpatients.

Methods: Patients with a major depressive episode (DSM-III-R), a baseline score of ≥ 21 on the 17-item HAMD, and ≥2 on depressed mood item, were randomized to a six-week treatment with either mirtazapine (n = 66; 15–60 mg/day) or fluoxetine (n = 67; 20–40 mg/day). Changes from baseline in depressed mood were assessed by item 1 ('depressed mood') of the HAMD, while anxiety disturbances, sleep disturbances, and retardation symptoms were respectively assessed by anxiety/somatization, sleep disturbance, and retardation factors of the HAMD. The efficacy analyses were performed on the Intent-to-Treat Group using the Last Observation Carried Forward method.

Results: On all efficacy variables treatment with mirtazapine has resulted in a larger magnitude of change from baseline than treatment with fluoxetine. During the first two weeks of treatment, the largest magnitude of change was observed in the anxiety/somatization and sleep disturbance factors. The changes in the "depressed mood" and the retardation factor were similar in both groups. From week 2 onward changes favoring mirtazapine were particularly prominent in the "depressed mood" item and the retardation factor. The difference on the "depressed mood" item favoring mirtazapine reached statistical significance at week 4.

Conclusion: The results demonstrate that treatment with mirtazapine is superior to fluoxetine in improving depressed mood. Pharmacological properties of mirtazapine, especially its specific actions on postsynaptic 5-HT receptors, may account for the consistent improvements in anxiety and sleep disturbances throughout the treatment period.

NR676 Thursday, June 4, 12 noon-2:00 p.m.

A Double-Blind Comparison of Fluoxetine and Amitriptyline in the Treatment of Major Depression with Associated Anxiety

Marcio V. Versiani, M.D., Department of Psychiatry, Federal Univ. Rio de Janeiro, R. Visconde de Piraja 407/805, Rio de Janeiro 22410–003, Brazil; Antonio Ontiveiros, M.D., Guido Mazzotti, M.D., Jorge Ospina, M.D., Jorge Davila, M.D., Salvador Mata, M.D., Antonio Pacheco, M.D., John M. Plewes II, M.D., Roy Tamura, Ph.D., Moramay Palacios, M.D., Lori Vance, B.S.

Summary:

Introduction: Agents with sedating properties (i.e., amitriptyline) are often prescribed for anxious depressed patients, while less sedating antidepressants (i.e., fluoxetine) may be reserved for nonanxious patients. This double-blind, randomized trial compared the efficacy of fluoxetine versus amitriptyline in depressed patients with anxious features (HAMA ≥ 18) from five Latin American countries.

Methods: Following a two-week, single-blind, placebo lead-in, 157 patients were randomized to fluoxetine (20 mg/day) or amitriptyline (50–250 mg/day; mean final dose 138.1 mg/day) for eight weeks. Response criteria included: ≥ 50% reduction in HAMD, ≥ 25% reduction in HAMA, and ≥ 2 point reduction in CGI-I score.

Results: Response was approximately 74% for both treatments. Improvement on the HAMA and HAMD factor scores was similar for both treatments, except the sleep factor, where amitriptyline-treated patients showed greater improvement ($p < .001$); however, at the expense of significantly higher rates of daytime somnolence. Amitriptyline-treated patients also reported statistically significantly greater incidence of dry mouth, constipation, tremor, amblyopia, anxiety, and weight gain. No events were statistically significantly greater in fluoxetine-treated patients.

Conclusion: Fluoxetine and amitriptyline were equally effective in these Latin American patients with major depression and anxious features; however, fluoxetine was better tolerated. The overall risk:benefit of treatment should be considered when selecting an antidepressant drug.

Research funded by Eli Lilly and Company, Indianapolis, Indiana 46285

NR677 Thursday, June 4, 12 noon-2:00 p.m.

Overall Efficacy and Tolerability of Reboxetine in Comparative Clinical Trials of 2,613 Patients with Depressive Illness

Marcio V. Versiani, M.D., Department of Psychiatry, Federal Univ. Rio de Janeiro, R. Visconde de Piraja 407/805, Rio de Janeiro 22410-003, Brazil

Summary:

Objectives: Tricyclic antidepressants (TCAs) and selective serotonin reuptake inhibitors (SSRIs) are the principal treatments for depressive illness; however, not all patients respond to or continue therapy. Here we report pooled results of comparative clinical trials of reboxetine, the first selective noradrenaline reuptake inhibitor.

Method: Data from seven short-term (4–8 weeks) and one long-term (up to 1 year) double-blind trials comparing reboxetine with imipramine, desipramine, fluoxetine, or placebo, in 2,613 patients with major depression or dysthymia, were pooled. Efficacy was assessed using the HAM-D scale.

Results: In the short term, 8–10 mg/day reboxetine was more effective than placebo (three of four studies) and as effective as fluoxetine (20–40 mg/day), imipramine (50–200 mg/day), or desipramine (200 mg/day). In the long term, reboxetine was also more effective than placebo in preventing relapse and recurrence of depression. In the 1,503 reboxetine-treated patients, the most common adverse events were dry mouth (22%), constipation (15%), sweating (12%), and insomnia (11%). Reboxetine was well tolerated-better tolerated than comparator TCAs and at least as well tolerated as fluoxetine.

Conclusions: Reboxetine is effective in short- and long-term treatment of depressive illness. Its clinical profile is comparable with TCAs and an SSRI; however, reboxetine is better tolerated than TCAs.

Funded by Pharmacia and Upjohn.

NR678 Thursday, June 4, 12 noon-2:00 p.m.

The Selective Noradrenaline Reuptake Inhibitor Reboxetine Has an Early Onset of Action

Marcio V. Versiani, M.D., Department of Psychiatry, Federal Univ. Rio de Janeiro, R. Visconde de Piraja 407/805, Rio de Janeiro 22410-003, Brazil

Summary:

Objectives: A delay in the time to onset of antidepressant effect can adversely influence patient compliance and increase the burden on health care providers. This report examines the time to relief of a range of depressive symptoms in patients given reboxetine, the first selective noradrenaline reuptake inhibitor.

Method: In this double-blind, parallel-group study, 52 patients with major depressive disorder were randomized to receive reboxetine, titrated to 10 mg/day from day 3, or placebo, for 42 days. Efficacy was principally assessed by reduction in total HAM-D score.

Results: Reboxetine produced significantly greater overall improvement in mean total HAM-D score compared with placebo (23.1 vs. 4.5, $p < 0.001$). This difference was first evident on day 10 ($p = 0.006$). Superior improvements in individual HAM-D domains over placebo were first seen for depressed mood ($p = 0.004$) on day 10, insomnia ($p = 0.006$) and interest in work and daily activities ($p = 0.003$) on day 14, and somatic symptoms ($p < 0.001$) and anxiety ($p < 0.001$) on day 21.

Conclusions: Reboxetine is an effective antidepressant with an early onset of action, evident within two weeks of starting therapy. HAM-D assessment shows that mood is elevated first, followed by aspects of social functioning such as motivation and interest in daily activities.

Funded by Pharmacia and Upjohn

NR679 Thursday, June 4, 12 noon-2:00 p.m.

Olanzapine Response in Psychotic Depression

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Summary:

Psychotic depression (PD) is more common than is generally realized, occurring in an estimated 16% to 54% of depressed patients. In controlled studies of patients with schizophrenia, the atypical antipsychotic olanzapine has been shown to be superior in efficacy to haloperidol at doses of 10mg/day. Since olanzapine may have antidepressant effects in addition to its antipsychotic properties, the purpose of this study was to assess the safety and efficacy of olanzapine in the treatment of PD. All hospitalized patients with the discharge diagnosis of PD who had been treated with olanzapine during the first nine months of its availability in the United States were identified. An age- and sex-matched sample of hospitalized patients with PD treated with other antipsychotics during the same time period was also identified. The medical records were expunged of all references to medication treatment and then reviewed and scored in a blind fashion for indications, doses, response, and side effects. Fifteen PD patients (10 women, 5 men), ages 36.9 ± 10.1 years who were treated with olanzapine were compared with 15 PD patients (10 women, 5 men), ages 35.0 ± 8.2 years treated with other antipsychotics. Ten (67%) of 15 patients on olanzapine were much or very much improved upon discharge compared with only four (27%) of 15 patients on other antipsychotics (Fisher's exact, $p = .037$). Olanzapine was well tolerated-no patient discontinued the medication because of side effects. Twelve (80%) of 15 patients in each group were on antidepressants in addition to the antipsychotic. Of the three patients on olanzapine and not on an antidepressant, two were

much or very much improved (one patient on olanzapine alone, one on olanzapine plus sodium valproate). Olanzapine appears to be effective and safe for patients with PD. Further prospective studies are warranted to ascertain whether olanzapine's unique pharmacologic profile may make it particularly useful for the treatment of PD either alone or in combination with antidepressants.

NR680 Thursday, June 4, 12 noon-2:00 p.m.

Behavioral Disinhibition on Alprazolam Versus Clonazepam

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Summary:

Objective: Several case reports have suggested that treatment with the benzodiazepine alprazolam can result in behavioral disinhibition.

Method: To address this question we reviewed the medical records (blind to all pharmacologic treatments the patients received) of 323 psychiatric inpatients treated with alprazolam (108 patients), clonazepam (111 patients), or no benzodiazepine (104 patients) between January 1989 and June, 1990 at McLean Hospital.

Results: During benzodiazepine treatment there were no significant differences among the three groups on the following measures: (a) acts of self-injury (alprazolam: 1.9%; clonazepam: 1.8%; no benzodiazepine: (2.9%); (b) assaults on staff or other patients (alprazolam: 0%; clonazepam: 0.9%; no benzodiazepine: 1.0%); (c) need for seclusion or restraints (alprazolam: 3.7%; clonazepam: 6.3%; no benzodiazepine: 4.8%); (d) increased need for observation by hospital staff (alprazolam: 8.3%; clonazepam: 7.2%; no benzodiazepine: 6.7%); and (e) decrease in patient privileges (alprazolam: 11.1%; clonazepam: 12.6%; no benzodiazepine: 11.5%).

Conclusions: The results indicate that in an inpatient psychiatric population the frequency of behavioral disturbances with alprazolam, clonazepam, or no benzodiazepine do not differ. This suggests that alprazolam does not possess unique disinhibitory activity. Secondly, these data suggest that disinhibition may not be an important clinical problem associated with benzodiazepine use. The design of the study does not allow one to establish a relationship between the prescription of the benzodiazepine and worsening behaviors, and the findings need to be interpreted conservatively since it was a retrospective review of a heterogeneous population. However, it is noteworthy that the incidence of adverse events was low even in this high-risk population and since the patients were in hospital and under constant observation, it allowed for the objective assessment of so-called paradoxical reactions in a controlled setting.

NR681 Thursday, June 4, 12 noon-2:00 p.m.

Treatment Emergent Adverse Events in Elderly Depressed Patients: Double-Blind Comparison Between Citalopram and Other SSRIs

Heikki Hakkarainen, M.D., Medical, Forest Laboratory, 909 Third Avenue, New York NY 10022; H.E. Hopfner Petersen

Summary:

Objective: Citalopram is the most selective serotonin reuptake inhibitor available and is used for the treatment of depression in 55 countries. Citalopram is frequently prescribed to elderly patients because of its favorable side-effect profile and its freedom from potential drug interactions. The present report compares the incidence of AEs in elderly depressed patients in double-blind, controlled trials with citalopram and other SSRIs.

Method: The AE profile of citalopram in the elderly has never been directly compared with that of another SSRI in a comparative geriatric depression study. However, double-blind depression studies have compared citalopram (20–40 mg/day) with fluoxetine (20 mg/day) or fluvoxamine (100–200 mg/day) in a total of 116 patients between 60 and 70 years of age. A pooled analysis of these studies examined the incidence of AEs in 66 elderly depressed patients receiving citalopram and 50 patients receiving fluoxetine or fluvoxamine.

Results: Twenty-one AEs with an incidence greater than 5% occurred in either the citalopram or comparative SSRI group; 18 of these showed a rate difference of at least 3%. Five AEs occurred more frequently in citalopram-treated patients, and 13 were more frequent in patients receiving the comparative SSRIs. Gastrointestinal side effects were evenly distributed: nausea and abdominal pain were more frequent in citalopram-treated patients, while diarrhea, dyspepsia, and constipation were more common in the patients treated with the comparator drugs. The comparator SSRIs were associated with more central and peripheral nervous system effects, including dizziness, anxiety, tremor, asthenia, and paresthesia, whereas only somnolence was reported more frequently by citalopram-treated patients. Increased sweating was more common with citalopram, but other autonomic signs, such as dry mouth and abnormal accommodation, occurred more frequently during treatment with fluoxetine or fluvoxamine. Tachycardia, weight decrease, and pruritus appeared at a higher rate in patients on the comparator SSRIs; flu-like symptoms were more common on citalopram.

Conclusion: Treatment of elderly depressed patients with citalopram appears to be associated with a side-effect profile similar to that of other SSRIs, but with a generally lower incidence of AEs, especially neurologic and psychiatric signs and symptoms.

NR682 Thursday, June 4, 12 noon-2:00 p.m.

Gender Differences in the Response to Citalopram Treatment of Depression

Marcelo Gutierrez, Ph.D., Medical, Forest Laboratory, 909 Third Avenue, New York NY 10022; Mary Mackle, Ph.D., Per Tanghoj

Summary:

Objective: This study examined potential gender differences in response to the selective serotonin reuptake inhibitor citalopram in the treatment of depression.

Method: Safety and efficacy data from a total of 844 women and 502 men who received citalopram in eight double-blind, placebo-controlled trials were compared with control data from the 317 female and 228 male patients who were treated with placebo in these studies.

Results: Analysis of patients with a baseline and at least one follow-up Hamilton Depression Rating Scale score revealed significantly greater improvement in patients treated with citalopram vs those treated with placebo ($P = .002$), with no significant treatment-by-gender interaction ($P = .610$), suggesting that drug-placebo differences were similar in men and women. Women treated with either citalopram or placebo showed a larger response to treatment than their male counterparts ($P = .039$). The most frequent adverse events (>10% incidence) during citalopram treatment were the same in men and women and they occurred with a similar incidence. Female placebo patients reported more AEs than male placebo patients. Gender-specific AEs, including evidence of sexual dysfunction, were reported infrequently by citalopram patients: ejaculation disorder (primarily increased latency), decreased libido, and impotence by 6%, 3%, and 2% of male patients, respec-

tively, and decreased libido (including anorgasmia) by 3% of female patients.

Conclusion: Citalopram's safety and efficacy profile is similar in men and women; however, its effects may be superimposed on a larger placebo effect in women.

NR683 Thursday, June 4, 12 noon-2:00 p.m.

Risk Factors in Toxic Delirium Associated with Clozapine Treatment

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Summary:

This study evaluated the occurrence of toxic delirium associated with clozapine. Computerized hospital pharmacy records and medical records were reviewed to identify prescriptions and clinical data of consecutive inpatients exposed to clozapine. Characteristics of the sample (N = 179) are: 90 men and 89 women of mean age 40.5 ± 14.2 years, hospitalized for 24.2 ± 22.1 days. Mean dose of clozapine = 291 ± 210 mg/day. Incidence of delirium of any severity = 19/179 = 10.6%. Risk of mild, moderate, and severe delirium was 6/179 (3.35%), 10/179 (5.59%), and 3/179 (1.68%). Factors associated with delirium included: [a] age (48.5 ± 14.6 vs. 39.5 ± 13.9 years for those with vs. without delirium; p = 0.009); [b] unsatisfactory clinical response to clozapine is associated with higher risk (6.42% vs. 19.6%; p = 0.012); [c] length of hospitalization (37.3 ± 130.1 vs. 22.7 ± 20.6 days; p = 0.006); and [d] agents with potential CNS toxicity (including sedatives and centrally active anticholinergics like benztropine and diphenhydramine) (p = 0.006). Factors unrelated to delirium included gender; diagnostic type; presence of any medical or neurological comorbidity; presence of other adjunctive agents, including anticonvulsants, lithium, other neuroleptics, and antidepressants.

NR684 Thursday, June 4, 12 noon-2:00 p.m.

Nefazodone in Adolescent Depression

Paul J. Goodnick, M.D., Department of Psychiatry, University of Miami, D79, 1400 NW 10th Avenue, Ste 304, Miami FL 33136; Cecilia M. Jorge, M.D., Thomas Ayres Hunter, M.D., Adarsh Kumar, Ph.D.

Summary:

Little is known regarding efficacy of antidepressants in adolescents. TCAs have never had efficacy established; a few successful studies exist on SSRIs such as fluoxetine (Emslie 1997) and sertraline (Alderman 1996). This open protocol was to extend these findings to nefazodone, a combination 5HT reuptake blocker and postsynaptic $5HT_2$ antagonist. The relationship of response to baseline platelet 5HT content as well as effects of nefazodone on this measure were also studied. Six females and 4 males with a mean age of 15 years meeting DSM-IV criteria for major depressive disorder underwent an eight-week trial with a maximum dose of 400 mg/day. Patients were seen at baseline, 1, 2, 4, and 8 weeks; BDB & HDRS were completed. A baseline and final platelet 5HT content were obtained. Seven of 10 responded (50% fall in HDRS); two dropped out before completion due to sedation. HDRS (completers) fell from 20.9 ± 4.9 to 8.9 ± 4.4 (p < .001); BDI, from 24.6 ± 9.8 to 10.2 ± 7.8 (p < .001). In LOCF analysis, HDRS fell from 21.6 ± 4.6 to 12.8 ± 9.8 (p = .01), & BDI, from 24.5 ± 8.7 to 13.4 ± 13.0 (p = .01). In contrast with SSRIs, platelet 5HT content was increased in eight of nine patients (p < .02). In seven completers, four (baseline 30 ng/10^8 plt) did better than three (baseline 30 ng/10^8 plt) [dHDRS: 15 vs 10.7, p = .07]. Thus, nefazodone may be effective in adolescents but more work is needed. Baseline 5HT content may relate to response; nefazodone appears to increase this parameter in contrast with both paroxetine (Goodnick, et al, 1995) and sertraline (Goodnick, et al, 1997).

NR685 Thursday, June 4, 12 noon-2:00 p.m.

Mirtazapine in Generalized Anxiety and Depression

Paul J. Goodnick, M.D., Department of Psychiatry, University of Miami, D79, 1400 NW 10th Avenue, Ste 304, Miami FL 33136; Alina Puig, M.D., C. Lindsay Devane, Ph.D.

Summary:

Mirtazapine (MTZ) is a unique new antidepressant with combined effects to increase presynaptic release of norepinephrine and serotonin, as well as block postsynaptic $5HT_2$ and $5HT_3$ receptors. It has been found to be effective in the treatment of major depression (Zivkov et al, 1995) as well as of anxiety symptoms (Sitsen & Moors, 1994). This open pilot study was to attempt to extend these findings to patients with combined symptoms of DSM-IV major depression and generalized anxiety disorder. Ten patients (4M,6F) with a mean age of 42.4 years received MTZ as follows: 15 mg x 1 wk, 30 mg x 3 wk, and 45 mg x 4 wks. At baseline and after 1, 2, 4, and 8 weeks, the BDI, HDRS, HARS, CGI, and a sexual functioning questionaire were administered. A plasma level of MTZ was collected at the last patient visit. Results indicated: (1) Significant reduction overall in the HDRS, BDI, and HARS that were seen as early as week 1 [Baseline vs Final: HDRS: 25.8 ± 4.4 to 7.9 ± 6.0 (p < .001); BDI: 32.7 ± 9.9 to 13.1 ± 12.4 (p < .001); HARS: 26.6 ± 7.6 to 8.5 ± 7.8 (p < .001)], (2) HDRS Factor Improvement in VI (Sleep) 4.3 to 1.3 (t = 7.6, p << .001), III (Cognitive) 5.2 to 0.9 (t = 6.1, p << .001), I (Anxiety/Somatic) 9.2 to 2.7 (t = 5.8, p << .001) & V (Retardation) 6.7 to 2.3 (t = 3.4, p < .01), (3) Correlation in improvement between HDRS & HARS (0.84, p < .05), and (4) an improvement in Quality of Life (QOL) questionaire (186 to 242, p = .01). Plasma results are pending. MTZ showed success in treatment in this open study in anxiety and depression; double-blind studies are indicated.

NR686 Thursday, June 4, 12 noon-2:00 p.m.

The Treatment of Adult ADHD with Mixed Amphetamine Salts

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Summary:

Objective: Effective treatments for attention-deficit/hyperactivity disorder (ADHD) in adults are still being defined. This study examined the efficacy of a mixed amphetamine salt product in the management of the core cognitive and behavioral difficulties in this population.

Method: Twenty-four outpatients (12 males, 12 females, mean age 33.3 years) with DSM-IV criteria ADHD were administered the drug in an open-label fashion, starting at 5 mg po bid, with titration according to clinical response across a 16-week period. Serial checklists (Copeland, BAADS-2) were completed by relatives or spouses of each patient.

Results: Fifteen patients (62.5%) responded in a robust, positive manner to the drug with minimal side effects. The mean effective dose was 10.33 mg/day (o.136 mg/kg/day). The mean Copeland score dropped from 95.60 to 46.33 (p < .001). The remaining nine patients (37.5%) experienced side effects, including near-immediate panic symptoms in four out of seven patients with a comorbid anxiety diagnosis.

Conclusions: This mixed amphetamine salt product appears to be an effective agent for the treatment of adult forms of ADHD.

However, individuals with comorbid anxiety may be particularly vulnerable to side effects. Further study will be required.

NR687 Thursday, June 4, 12 noon-2:00 p.m.

Serotonergic Agents in the Treatment of Neuroleptic-Induced Akathisia

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Summary:

Objective: Dopamine serotonin (5-HT) imbalance, with relative enhancement of 5-HT activity may underlie neuroleptic-induced akathisia (NIA). Our preliminary studies demonstrated a beneficial effect of the 5HT2A/2C antagonist mianserin in acute NIA. The presented double-blind, placebo-controlled study substantiates therapeutic efficacy of mianserin in NIA.

Method: Thirty inpatients (17 men, 13 women) treated with conventional antipsychotic agents who met the SDM-IV criteria for NIA and scored at least 2 (mild akathisia) on the global item of the Barnes Akathisia Scale (BAS) were enrolled. They were randomized to either mianserin (n = 15; 15 mg/day) or placebo (n-15) for the five-day trial. Akathisia was rated before, and on the third and fifth days of the study. Statistical analysis was performed by two-way analysis of covariance with repeated measurements (ANOCA-RM).

Results: There was greater decrease in the BAS score on the fifth day of treatment in the mianserin group ($p < .001$). Complete disappearance of NIA was revealed in 40% and 6.6% of patients in the mianserin and placebo groups, respectively ($p < .05$). No clinically significant side effects were noted.

Conclusion: Low-dose mianserin is superior to placebo in the treatment of acute NIA and may present an additional therapeutic option in patients with this iatrogenic side effect.

NR688 Thursday, June 4, 12 noon-2:00 p.m.

Olanzapine Increases Weight and Triglyceride Levels

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Summary:

Objective: Previous studies have suggested that clozapine increases weight and triglyceride (but not cholesterol) levels. Risperidone may not increase triglycerides. We wondered if olanzapine would increase lipid levels.

Methods: Twenty-five inpatients (21 male, 4 female) at Taunton State Hospital were treated with olanzapine and their outcome was tracked prospectively in a Medication Utilization Evaluation study.

Results: At baseline, mean values were: weight 190 lb. (SD 37), fasting total cholesterol 186 mg/dL (SD 36), triglycerides 162 mg/dL (SD 121). After 12 weeks of treatment with olanzapine (mean dose 14 mg), weight was 202 lb. (SD 33), an increase of 12 lb ($p < .002$ by t test); cholesterol was 189 mg/dL (SD 40), an increase of 3 mg/dL ($p = 0.76$, ns); but triglycerides were 222 mg/dL (SD 135), an increase of 60 mg/dL ($p < .04$). The triglyceride increase was even more significant when we excluded eight patients who received various interventions to lower lipid levels (e.g. - pravastatin, low fat diet) during the olanzapine trial. In the 17 remaining patients, triglyceride levels rose 76 mg/dL ($p = .01$). Increase in weight correlated with increase in triglyceride levels ($r = 0.48$, $p < .01$) but not with cholesterol ($r = 0.35$, $p < .09$), although triglyceride change correlated highly with cholesterol change (0.63, $p < .001$).

Conclusion: These results suggest olanzapine has significant effects on blood lipids, especially triglycerides, although this may not be independent of the effect that increases weight.

NR689 Thursday, June 4, 12 noon-2:00 p.m.

SSRIs in Breastmilk and Nursing Infants

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Summary:

The use of antidepressants during breast feeding has experienced an intensified research effort secondary to the increased awareness of the adverse impact of maternal depression on infant development, increased proportion of women choosing to breast feed, and recent data demonstrating very low concentrations in infant serum (if detectable). In contrast with the pregnancy database, the total number of cases for an individual medication is limited and the infant follow up data are sparse (Llewellyn, et al, 1997). The purpose of the current study was to characterize the pharmacokinetic profile of the individual SSRIs excretion into breast milk. These data would provide a mechanism for minimizing infant exposure by discarding breast milk at peak levels and determining the maximum infant daily dose for each medication. Further, we sought to determine if infant serum concentrations were related to infant daily dose. To date, we have collected breast milk samples (n = 266) for gradient and time course determination from 27 women taking SSRIs while breast feeding. Mother-infant serum pairs were collected from women taking fluoxetine (n = 2), paroxetine (n = 6), and sertraline (n = 20). Typically, infant serum measures were either undetectable or at the lowest linear range of the HPLC-UV curve. All infants exposed to paroxetine had undetectable serum concentrations (<2 ng/ml). The time course of excretion and maximum infant daily dose calculations for each medication will be discussed. The increased data in conjunction with our earlier investigation (Stowe, et al, 1997) underscores the potential value of breast milk concentration determination in the interpretation of infant serum concentrations.

Work supported by APA/Smithkline Beecham Young Faculty Award and an Unrestricted Grant from Pfizer Pharmaceuticals.

NR690 Thursday, June 4, 12 noon-2:00 p.m.

Venlafaxine in the Treatment of Postpartum Depression with Comorbid Anxiety Symptoms

Cassandra P. Morabito, M.Ed., Department of Psychiatry, Massachusetts General Hospital, 50 Staniford Street Psyc Res, Boston MA 02114; Lee S. Cohen, M.D., Mary H. Collins, M.D.

Summary:

Introduction: Studies of postpartum depression suggest that rates of postpartum mood disturbance are similar to those in matched nongravid women. The extent to which anxiety symptoms and disorders are seen more or less frequently in postpartum women compared with puerperal women has yet to be clarified.

Methods: Women with onset of postpartum depression during the first three puerperal months were accessioned into an eight week open trial of venlafaxine with a flexible dosing schedule (maximum dose = 225 mg/day). Subjects were evaluated at baseline and at weeks 2, 4, 6, and 8. The Structured Clinical Interview for the DSM-IV was administered at baseline. The Hamilton Depression Rating Scale (HAM-D), Beck Depression Inventory (BDI), Kellner Symptom Questionnaire, and Clinical Global Impression scales were also used to assess severity of mood and anxiety symptoms across the study.

Results: Interim analysis of the first 15 women (mean age 33.3, range 21–37) who completed the trial revealed a mean daily dose of 143 mg of venlafaxine, (range 75–225 mg). While all women met DSM-IV criteria for MDD at baseline, no patients met formal criteria for an anxiety disorder. Mean baseline score of anxiety as measured by the Kellner Symptom Questionnaire was 18.6 ± 3.97. Mean endpoint score was 4.6 ± 6.31. A paired t-test revealed a significant mean difference 14.00 ($t = 7.921$, $DF = 14$, $P < .0001$) between anxiety at baseline and endpoint, respectively.

Conclusion: Venlafaxine appears to treat symptoms of postpartum anxiety in women with postpartum depression. Given the apparent frequency with which heightened anxiety is clinically seen in women who suffer from puerperal mood disorder, venlafaxine appears to be an attractive agent for the treatment of this population.

NR691 Thursday, June 4, 12 noon-2:00 p.m.

Resource Use and Quality of Life Associated with Olanzapine Compared with Risperidone

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Summary:

Objective: To compare medical resource utilization and quality of life associated with olanzapine and risperidone treatment.

Method: An international, double-blind, 28-week prospective study was conducted with 339 schizophrenic patients. Patients were randomized to either olanzapine 10 to 20 mg/day or risperidone 4 to 12 mg/day. In addition to safety and efficacy assessments, medical resource use and quality of life were assessed at baseline, at eight week intervals, and at study completion. Quality of life was measured using the Heinrichs and Carpenter Quality of Life Scale (QLS).

Results: Mean change from baseline to endpoint on the QLS total score and on three of the four subscales revealed no statistically significant differences between treatment results. However, the olanzapine group demonstrated significantly ($p = 0.011$) greater improvement in interpersonal relations, and the difference favoring olanzapine in total score neared significance ($p = 0.074$). Numeric trends in medical resource use favored olanzapine across virtually all categories.

Conclusions: Few significant differences in resource use and quality of life were found between olanzapine and risperidone. However, trends in favor of olanzapine indicate that olanzapine's superior safety and efficacy profile (as demonstrated in this study) may translate to greater improvements in quality of life and resource utilization for olanzapine patients.

NR692 Thursday, June 4, 12 noon-2:00 p.m.

Meta-Analysis of Placebo-Controlled Trails of Citalopram in the Treatment of Depression

Charles Flicker, Ph.D., Medical, Forest Labs, 909 Third Avenue, New York NY 10022

Summary:

Objective: To conduct a pooled analysis of the results from placebo-controlled clinical trials in Europe and the United States evaluating the safety and efficacy of the selective serotonin reuptake inhibitor citalopram in the treatment of depression.

Method: Pooled data were analyzed from almost 1,000 citalopram-treated patients, 17 to 91 years of age, with a diagnosis of depression, who participated in one of five double-blind, parallel-group, placebo-controlled trials of up to six weeks in duration. Efficacy assessments included the HAM-D, MADRS, and CGI scales. The primary statistical analysis was an endpoint examination of the change from baseline to the last visit in all patients with an on-drug efficacy evaluation.

Results: Citalopram-treated patients exhibited significantly greater improvement ($P < .05$) than placebo patients on the HAM-D, MADRS, and CGI. Analysis of HAM-D subscales or individual items measuring symptoms of depressed mood, anxiety, psychomotor retardation, and melancholia all revealed significantly greater improvement in citalopram-treated patients vs placebo-treated patients. Significant differences vs placebo were apparent as early as the first week of double-blind treatment. Subgroup analyses of male and female patients, patients with moderate or severe depression, or patients with high or low anxiety all demonstrated a consistent therapeutic response to citalopram regardless of baseline patient characteristics.

Conclusion: This meta-analysis provides strong evidence for the antidepressant efficacy of citalopram across a broad range of depression symptoms and depression subpopulations.

NR693 Thursday, June 4, 12 noon-2:00 p.m.

Citalopram Treatment of Melancholia

Mary Mackle, Ph.D., Medical, Forest Laboratory, 909 Third Avenue, New York NY 10022

Summary:

Objective: The mood disturbance of depressed patients with melancholia has been generally characterized as especially severe and endogenous, with a probable biological origin. It has been suggested that SSRIs may not be the treatment of choice for melancholic patients, either because they are putatively less potent than more nonspecific alternative therapies or because side effects associated with some SSRIs—including psychomotor agitation, insomnia, anorexia, and weight loss—are also typical diagnostic features of melancholia. The present study provides an evaluation of the safety and efficacy of the selective serotonin reuptake inhibitor citalopram, the most selective of the currently available SSRIs, in the treatment of depressed patients with melancholia.

Method: In this multicenter, parallel-group study, 153 patients met DSM-III diagnostic criteria for melancholia and were randomized to double-blind treatment with citalopram (20–80 mg/day) or placebo.

Results: Citalopram produced significantly greater improvement ($P < .05$) than placebo on the HAM-D, CGI, and Zung Self-Rating Depression scales, the HAM-D depressed mood item, and the HAM-D melancholia subscale. A significant treatment effect was apparent during the first week of double-blind treatment. The incidence of agitation, insomnia, anorexia, and weight loss was similar in the citalopram and placebo treatment groups.

Conclusion: The results of this study support the conclusion that the SSRI citalopram is a safe and effective treatment for melancholic depression.

NR694 Thursday, June 4, 12 noon-2:00 p.m.

Buspirone Provides Relief for Sexual Side Effects Induced by SSRIs

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Summary:

Objective: To evaluate the possible influence of buspirone on sexual dysfunction in depressed patients treated with a selective serotonin reuptake inhibitor (SSRI).

Method: A retrospective analysis of data from a placebo-controlled trial designed to explore the efficacy of buspirone as add-on treatment for patients not responding to a SSRI (citalopram or

paroxetine) alone. At baseline, patients met the criteria for a major depressive episode according to DSM-IV, and had received citalopram or paroxetine during a minimum of four weeks. Buspirone (20–60 mg/day) or placebo was added to the SSRI for four weeks. Sexual dysfunction (decreased libido, ejaculatory dysfunction, orgasmic dysfunction) was evaluated using a structured interview. At baseline, 47 out of 117 patients (40%) reported at least one sexual dysfunction.

Results: Approximately 58% of subjects treated with buspirone and 25% to 30% in the placebo group reported an improvement with respect to sexual function ($p < 0.05$ for two of the four weeks), which was apparent the first week with no further improvement during the course of the study. By contrast, the antidepressant response increased throughout the four study weeks.

Conclusion: It is suggested that the effect of buspirone on sexual dysfunction is due to a reversal of SSRI-induced sexual side effects rather than to an antidepressant effect of the drug.

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Nonprescription Sleep Product Use in the Elderly

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Summary:

Sleep disorders are common in the elderly; however, the use of nonprescription products for sleep in this population has not been fully evaluated.

Objectives/Methods: Using a self-administered, 20-question survey we assessed the use, perceived effectiveness, and toxicity of nonprescription sleep products in an ambulatory elderly population. Recruitment took place during hospital or pharmacy visits throughout the province.

Results: Of the total number of respondents (n = 176, mean age 74 ± 7 years, 59% female), 84 (48%) indicated that they had used one or more therapies for sleep within the past year. These included nonprescription products (50% of therapies), prescription products (17%), and non-drug activities such as walking or drinking milk (34%). For those individuals who had used a nonprescription product in the past year (n = 47, 27% of total respondents) the most frequently used products were: dimenhydrinate (21%), acetaminophen (19%), diphenhydramine (15%), herbal products (15%), and alcohol (13%). Most took them at least one day per week (79%) and a third (32%) took them daily. These products subjectively improved sleep latency (mean 32 vs. 61 minutes, $p < 0.001$), number of nocturnal awakenings (mean 2 vs. 3 awakenings, $p < 0.001$), and total hours of sleep (mean 6.6 vs. 5.4 hours, $p < 0.001$). Mild side effects were reported by 35 respondents (75%), the most common being dry mouth (n = 22), daytime drowsiness (n = 13), and feeling agitated or restless (n = 10). Respondents were taking an average of four (SD ± 3, range 0–10) other medications currently.

Conclusions: Nonprescription products are widely used by these ambulatory elderly individuals for sleep disturbances. Most of the products were not marketed for sleep; however, they were perceived to be efficacious with low toxicity. The potential for drug interactions is high. Further research is warranted to evaluate the safety and efficacy of nonprescription sleep products in the elderly.

NR696 Thursday, June 4, 12 noon-2:00 p.m.

Paroxetine in the Treatment of Depression in Elderly Patients

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Summary:

The occurrence of depression in the elderly population is a significant public health issue. Although surveys have shown that elderly depression is highly prevalent within the community, double-blind, placebo-controlled studies have only recently emerged in the published literature regarding selective serotonin reuptake inhibitors (SSRIs) in treating depression in this population. This 12-week, placebo-controlled trial compared the efficacy of paroxetine in 210 (paroxetine = 103, placebo = 107) moderately depressed elderly outpatients (≥ 60 years of age) who exhibited no signs of dementia. The study employed a flexible dosage scheme for paroxetine with a range of 10–40mg given once daily. Efficacy was determined primarily by the HAMD total score (17-item) change from baseline, as well as the HAMD depressed mood item and Clinical Global Impressions (CGI), severity of illness changes from baseline.

Results: With respect to efficacy, paroxetine patients exhibited a greater mean (s.e.) HAMD change from baseline to last-observation-carried-forward endpoint (−12.3, s.e = 0.70) than placebo patients (−9.5, s.e. = 0.71). This difference between treatment groups was statistically significant ($p = 0.003$). Further substantiating this result was the HAMD depressed mood item mean (s.e.) change from baseline of −1.4 (s.e. = 0.15) for paroxetine and −0.9 (s.e. = 0.15) for placebo, which was highly statistically significant ($p < 0.001$). The CGI, severity of illness distribution at last-observation-carried-forward study endpoint was statistically significant in favor of paroxetine as well ($p = 0.019$). Paroxetine safety data related to adverse experiences commonly associated with SSRIs were as follows: somnolence 15%, insomnia 14%, ejaculatory disturbance 13%, nausea 13%; asthenia 12%; nervousness 6%. The incidence of these events was similar to that occurring in premarketing paroxetine studies, with the exception of nausea, which is substantially reduced from earlier studies (26%). In conclusion, these data are indicative of paroxetine's efficacy in treating elderly depression, as well as demonstating the absence of unexpected adverse experiences in this population.

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Safety of Paroxetine in the Long-Term Treatment of Depression

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Summary:

During recent years, the published literature has suggested that effective treatment of recurrent depression benefits from continued administration of an antidepressant agent for periods of at least five years. While studies have been conducted that evaluate the long-term efficacy of selective serotonin re-uptake inhibitors (SSRIs), there has been no descriptive comparison of adverse experiences (AE's) reported during chronic therapy to those frequently associated with *acute* SSRI treatment. Data from 18 months of randomized, double-blind treatment during which 125 patients received either paroxetine (20–50mg daily) or placebo, were descriptively compared with the incidence of the most frequently reported AE's associated with paroxetine during pre-marketing depression clinical trials (842 patients treated for up to six weeks). The most frequently reported AE's during these trials were: nausea (26%), somnolence (23%), asthenia (15%), insomnia (13%), dizziness (13%), ejaculatory disturbances (13%), sweating (11%), nervousness/anxiety (10%), tremor (8%), and decreased appetite (6%).

Results: This trial showed that, based on the criteria of ≥ 5% and being at least twice the incidence of placebo, the frequency of most of these events was substantially reduced in the intention-

to treat population. Adverse events showing decreased frequencies were: nausea (12%), insomnia (7%), somnolence (5%), nervousness/anxiety (5%), dizziness (5%), decreased appetite (2%), and tremors (0%). Of the AE's commonly associated with paroxetine acute therapy, only asthenia, sweating, (incidence of 10% for both), and ejaculatory disturbance (5%) remained as frequently occurring AE's relative to placebo (incidence at least two times greater). These data suggest that many of the adverse events frequently associated with *acute* paroxetine administration, may dissipate during chronic therapy. This study also revealed that depression in placebo patients recurred at a significantly greater rate than in paroxetine patients using a protocol defined criteria for recurrence combined with those who withdrew due to lack of therapeutic efficacy during the randomization phase (placebo = 57%, paroxetine = 15%; $p < 0.001$). In conclusion, these data provide support that paroxetine is effective for the prevention of recurrent episodes of depression, and when chronically administered for such treatment, patients may acclimate to adverse events that have been historically associated with acute therapy.

NR698 Thursday, June 4, 12 noon-2:00 p.m.

Combined Therapy Using SSRI with Neuroleptics in Delusional Depression

Frank Koenig, M.D., Psychiatry, ZFP Weissewau, University ULM, 88214 Ravensburg 88214, Germany; Thomas Barg, Iris Gruenewald, Tim Petersdorff, M.D., Wolfgang Kaschka, Sigrig Braun, M.D.

Summary:

Objective: The combination of an antidepressant with a neuroleptic is standard pharmacotherapy for delusional depression. In most studies tricyclic antidepressants and classical neuroleptics such as haloperidol or pherphenazine have been used. This paper, therefore, presents the preliminary findings of an open clinical study with citalopram, paroxetine in combination with the new atypical neuroleptic olanzapine.

Method: Fifteen depressive inpatients (severe depressive episode with psychotic features, DSM-III-R, ICD-10), four men and 11 women, average age = 46 years (± 14). They received 20 mg citalopram (N = 11) or 20 mg paroxetine (N = 4) and 10–15 mg olanzapine/per day. Benzodiazepine hypnotics were gives intermittently as required. The observation period was 28 days. The Hamilton Depression Scale (24-item version) was used. Statistics: Analysis of Variance, within-Design (Repeated Measure).

Results: A 50% improvement is taken as a criterion for response, and this was present in 11 patients (73%). The overall course shows a highly significant improvement (F 32.8; $p < 0.01$) of HAMD-Score from day 1 (43,5) to day 28 (14,2). We found only two dropouts.

Conclusion: The advantages of the neuroleptic olanzapine and antidepressants (such as SSRI) with a lower risk of side effects are evident. They lead to an improvement in compliance for maintenance therapy for relapse prophylaxis in delusional depression.

NR699 Thursday, June 4, 12 noon-2:00 p.m.

Predictors of Treatment Response and Outcome in Psychotic Patients Switched from Clozapine to Olanzapine

Michael J. Reinstein, M.D., Department of Psychiatry, University Hospital, 4755 N Kenmore Avenue, Chicago IL 60651; Larissa A. Sirotovskaya, M.D., Maxim A. Chasanov, M.D., Lynne E. Jones, R.N., Sangarapillai C. Mohan, M.D.

Summary:

Objective: To investigate safety and tolerability of clozapine to olanzapine in a broad outpatient population of individuals with schizophrenia and other psychotic disorders.

Method: Ninety clinic charts were reviewed to determine patient status and olanzapine treatment emergent events and diagnostic changes.

Results: The study consisted of 90 patients diagnosed with schizophrenia or a related psychotic disorder, or schizoaffective disorder. Of the 90 patients (100%) who were switched from clozapine to olanzapine, nine patients (10%) were hospitalized due to increased psychotic behavior and required discontinuation of olanzapine and were switched back to clozapine. Twenty-two patients (24.4%) were switched to olanzapine and did not show any exacerbation of behavior condition, any signs of deterioration of mental status, or suicidal ideations. Fifty-nine patients (65.6%) were returned to clozapine due to increased delusional and paranoid thinking, manic behavior, and other unstable psychiatric condition.

Conclusion: The data demonstrate a high percentage of therapeutic response favoring clozapine treatment over olanzapine. Data will be presented to evaluate which group of patients ranked by age, duration of clozapine therapy, and symptom pattern were better candidates for olanzapine.

NR700 Thursday, June 4, 12 noon-2:00 p.m.

A Comparative Study of Treatment of Hypersalivation Secondary to Clozapine with Benztropine and Terazosin Hydrochloride

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Summary:

Objective: Hypersalivation is a common side effect of patients on clozapine, estimated at 31%, and is frequently a cause of clozapine discontinuation. It appears to be a swallowing deficit related to clozapine and isolated case reports have described responses to benztropine and terazosin, but the issue lacks systematic research.

Method: Sixty consecutive patients, who were started on clozapine and developed hypersalivation within one month, were assigned to four treatment groups: (1) No treatment; (2) Treatment with benztropine; (3) Treatment with benztropine and terazosin and (4) Treatment with terazosin. Patients were monitored at weekly, monthly, and three-months intervals for response to treatment and its side effects.

Results: (1) Patients who did not receive any treatment for hypersalivation had more persistent hypersalivation and were more likely to discontinue clozapine. (2) Patients on benztropine were more likely to complain of constipation and tended to get an immediate partial response to benztropine, which persisted. (3) Patients on terazosin got a slower but more complete response. (4) Treatment with terazosin was associated with dizziness, drowsiness, and speed of response increased when combined with benztropine.

Conclusion: The preliminary findings suggest that terazosin hydrochloride may act as a significant buffer against hypersalivation when combined with benztropine.

NR701 Thursday, June 4, 12 noon-2:00 p.m.

Weight Gain with Atypical Antipsychotic Medications

Rohan Ganguli, M.D., Psychiatry, WPIC #966, 3811 O'Hara Street, Pittsburgh PA 15213-2593; Jaspreet S. Brar, M.D., Zenia Ayrton, B.S.

Summary:

Objective: Weight gain is a frequent consequence of treatment with antipsychotic medications. In order to determine whether atypical antipsychotics have any advantage with respect to weight gain, we compared two cohorts of patients with DSM-IV schizophrenia who had newly started treatment with either risperidone or olanzapine.

Method: Data were culled from existing records of 67 patients, 32 of whom were treated with risperidone and 35 with olanzapine. Body weight at the time of starting the new medication (baseline), and Body Mass Index (BMI = weight (kg) ÷ height (meters) squared) was compared with the body weight and BMI following four to six months of treatment with the same medication.

Results: There was no significant change in body weight (baseline = 80.9 kg ± 15.9, follow-up = 80.5 kg ± 15.1) or BMI (baseline = 28.7 ± 5.8, follow-up = 28.5 ± 5.4) in the group treated with risperidone. However, in the group treated with olanzapine, a significant increase in both body weight (baseline = 83.7 kg ± 26.7, follow-up = 86.0 kg ± 27.2; matched pair $t = 5.3$, $p < 0.001$) and BMI (baseline = 29.5 ± 8.1, follow-up = 30.4 ± 8.4; matched pair $t = 4.8$, $p < 0.001$) was observed.

Conclusion: Treatment with risperidone is not likely to be associated with weight gain.

NR702 Thursday, June 4, 12 noon-2:00 p.m.

The Modulation of Glucose Metabolism by Psychotropic Agents in PC12 Cells

Harold B. Pinkofsky, M.D., Psychiatry, Dept of Psychiatry, PO Box 33932, Shreveport LA 71130-3932; Donard Dwyer, Ph.D., Ronald Bradley, Ph.D.

Summary:

Objective: Cellular levels of glucose are normally maintained via specific glucose transport (GLUT) proteins. The brain expresses mainly two forms of these proteins, GLUT1 and GLUT3. PET and SPECT techniques have demonstrated changes in cerebral glucose metabolism with alterations in cerebral functioning. In the present investigation the antipsychotic compounds and the NMDA antagonist MK801 were examined for a role in modulating glucose metabolism using PC12 cells (a neuronal-like cell line).

Methods: PC12 cells were incubated in the presence or absence of various psychotropic agents (at concentrations from 0.2 to 20μM.) Western blot analysis was used to analyze the effect on GLUT expression, and uptake of 2-deoxyglucose was determined to analyze the effect of glucose metabolism.

Results: Clozapine, fluphenazine, and MK801 induce a 100% to 300% increase in GLUT3. Fluphenazine, clozapine, and MK801 induced approximately a 100% increase in the expression of GLUT1. Haloperidol appears to reduce the levels of GLUT1 and GLUT3 in the cells. Clozapine and fluphenazine potently inhibited 2-deoxyglucose uptake into PC12 cells, whereas haloperidol and MK801 displayed only marginal inhibition.

Discussion: The effect of psychotropic agents on cellular metabolism and glucose transporter regulation may have implications in the interpretation of PET and SPECT studies of cerebral metabolism and in the understanding of their pharmacological modes of action.

Supported by Department of Psychiatry, LSUMC-Shreveport.

NR703 Thursday, June 4, 12 noon-2:00 p.m.

The Safety of Fluoxetine in the Treatment of Depression With and Without Anxiety

John M. Plewes II, M.D., Neuroscience, Eli Lilly and Company, 15001 Senator Way, Indianapolis IN 46032; Teresa Vieira-Brisson, B.S., Mary Sayler, M.S., Stephanie Koke, M.S., Tim S. Krupa, B.S., Gary D. Tollefson, M.D.

Summary:

Objective: To assess whether the presence of comorbid anxiety affects the safety of fluoxetine.

Methods: We analyzed data from blinded clinical trials involving 3800 patients with major depression assigned to fluoxetine, a tricyclic antidepressant, or placebo. Patients were categorized as anxious or nonanxious by the Hamilton Rating Scale for Depression (HAMD-21) anxiety/somatization factor baseline score ≥7 or <7. Events were assessed by treatment-emergent adverse events and changes in HAMD items 9 (agitation), 10 (psychic anxiety), and 11 (somatic anxiety).

Results: Discontinuations for adverse events were significantly higher among patients treated with TCAs than fluoxetine. Among events suggestive of activation or sedation, discontinuation rates were low except for somnolence with TCAs. There were no significant differences between fluoxetine and placebo in the percentages of patients with emergent or worsening in items 9 and 11. A significantly higher percentage of placebo patients had worsening in item 10 within the nonanxious group. A significantly higher percentage of fluoxetine-treated patients had any worsening in items 9, 10, and 11 than TCA-treated patients within the anxious group; however, worsening at endpoint was significant for item 11 only.

Conclusion: The choice of antidepressant should be based on the overall risk:benefit ratio, not the presence or absence of anxiety.

Research funded by Eli Lilly and Company.

NR704 Thursday, June 4, 12 noon-2:00 p.m.

Adverse Events and Treatment Discontinuations in Fluoxetine Clinical Trials: An Updated Meta-Analysis

John M. Plewes II, M.D., Neuroscience, Eli Lilly and Company, 15001 Senator Way, Indianapolis IN 46032; Stephanie Koke, M.S., Mary Sayler, M.S.

Summary:

Objective: To provide updated adverse event and discontinuation data for fluoxetine compared with placebo and tricyclic antidepressants (TCAs).

Methods: We analyzed data from double-blind clinical trials involving 4016 patients with major depression assigned to treatment with fluoxetine (20 to 80 mg), a TCA, or placebo. Treatment-emergent adverse events, reasons for discontinuation, and events leading to discontinuation were compared between treatments.

Results: The adverse event profiles for fluoxetine and TCAs in these trials are consistent with those commonly thought of as being typical for selective serotonin reuptake inhibitors and TCAs. Compared with TCAs, the discontinuation rates due to lack of efficacy were not statistically significantly different. However, statistically significantly more TCA-treated patients discontinued because of an adverse event and for any reason compared with fluoxetine-treated patients. The most common events (≥2%) leading to discontinuation for fluoxetine-treated patients were asthenia, dizziness, insomnia, nausea, nervousness, somnolence, and tremor. The most common events leading to discontinuation for TCAs were abnormal vision, agitation, constipation, dizziness, dry mouth, headache, nausea, nervousness, rash, somnolence, sweating, and tremor.

Conclusion: Data from this large series of clinical trials confirm fluoxetine is safe and has superior tolerability compared with TCAs.

Research funded by Eli Lilly and Company.

NR705 Thursday, June 4, 12 noon-2:00 p.m.

The Efficacy of Fluoxetine in the Treatment of Depression With and Without Anxiety

John M. Plewes II, M.D., Neuroscience, Eli Lilly and Company, 15001 Senator Way, Indianapolis IN 46032; Teresa Vieira-Brisson, B.S., Mary Sayler, M.S., Stephanie Koke, M.S., Tim S. Krupa, B.S., Donna K. Pearson, B.S., Gary D. Tollefson, M.D.

Summary:

Objective: To assess whether the presence of comorbid anxiety affects the efficacy of fluoxetine.

Methods: We analyzed data from blinded clinical trials involving 3800 patients with major depression assigned to fluoxetine, a tricyclic antidepressant (TCA), or placebo. Patients were categorized as anxious or nonanxious by the Hamilton Rating Scale for Depression (HAMD-21) anxiety/somatization factor baseline score ≥7 or <7.

Results: Fluoxetine was significantly (p≤.002) more effective than placebo in treating both anxious and nonanxious major depression. Fluoxetine was also statistically significantly more effective than placebo in reducing the HAMD-21 anxiety/somatization factor scores in anxious patients and item 10 (psychic anxiety) scores in both anxious and nonanxious patients. The efficacy of fluoxetine and TCAs was comparable in reducing HAMD-21 total scores, HAMD-21 anxiety/somatization factor scores, item 9 (agitation), item 10 (psychic anxiety), and item 11 (somatic anxiety) scores in both anxious and nonanxious patients.

Conclusions: The presence or absence of associated anxiety in patients with depression does not appear to affect response to fluoxetine. Fluoxetine and TCAs have comparable efficacy in treating depression and the anxiety symptoms associated with depression.

Research funded by Eli Lilly and Company.

NR706 Thursday, June 4, 12 noon-2:00 p.m.

Attentional Functioning and Novel Antipsychotics

Patrick J. Moriarty, M.A., Department of Psychology, Hofstra University, Hempstead NY 11549; Anurag Singh, M.A., Dana G. Lieber, M.A., Vanessa Franklin, M.A., Mark R. Serper, Ph.D., Philip D. Harvey, Ph.D.

Summary:

One of the major cognitive impairments in schizophrenia is a deficient ability to acquire skills with practice. Combined with limitations in cognitive capacity, these impairments lead to a situation where patients are extremely impaired in their ability to benefit from rehabilitation programs aimed at improving functional outcome. As a result, practice-related learning is a major target for cognitive-enhancement interventions. In this study, patients with chronic schizophrenia who were participating in an ongoing program designed to enhance information-processing skills with practice and pharmacological treatment were randomly assigned to treatment with either conventional antipsychotic medication or risperidone. Patients performed the continuous performance test (CPT) on a daily basis for five weeks, with dual-task sessions on a weekly basis. After 10,000 practice trials, patients treated with risperidone (n = 5) were uniformly performing at the high end of the normal range ($d' > 2.5$ in all cases) on the CPT and manifesting automatic information processing as evidenced by equivalent performance while performing simultaneous and single tasks. Patients treated with conventional antipsychotics (n = 4) showed modest evidence of development of automatic information processing, but did not improve in performance on the test (mean endpoint $d' = 0.7$). These data suggest that an attention-enhancing effect, possibly associated with the blockade of the 5-HT2a receptor, is seen with risperidone treatment. This finding replicates several other studies that find enhancement of attentional functioning during treatment with risperidone and similar compounds. By the time of presentation, 10 patients per pharmacological condition will have completed the project.

Supported by an investigator-initiated grant from the Janssen Research Foundation (PDH).

NR707 Thursday, June 4, 12 noon-2:00 p.m.

Nefazodone Versus Maprotiline in Elderly Depressed Patients

Giovanni B. Cassano, M.D., Clinica Psiatrica, Ospedale S. Chiara II, VIA Roma 67, Pisa 50100, Italy; Giuseppe Fazzari, M.D., Alberto Giannelli, M.D., Giuseppe Ferrari, M.D., Giampaolo Guaraldi, M.D., Carlo Maggini, M.D., Marco Zibellini, M.D.

Summary:

Nefazodone is an antidepressant drug that inhibits serotonin reuptake and 5-HT2 receptor function. This multicenter, randomized, double-blind, parallel-group, six-week study compared the safety and efficacy of nefazodone (N: 100–400 mg/day) with that of maprotiline (M: 25–100 mg/day) in elderly patients with major depressive disorder (hospitalized and outpatients). Patients aged 60–84 (n = 105, with 74% female) meeting DSM-III criteria for major depressive episode (74% recurrent and 63% melancholic subtype) or bipolar depression (1%) received study medication. Eighty-six (82%) of the patients completed the study (N = 80%, M = 84%). Both treatment groups showed improvement in depression and anxiety symptoms and in overall disease state over the six weeks of therapy (change from baseline in HAM-D total: N = −11.7, M = −12.4; in the HAM-A total: N = −9.1, M = −10.0). The nefazodone mean dose at endpoint was approximately 300 mg/day, which was reached by week 4. In the hospitalized patients (30% of the total sample), there were more frequent discharges in the nefazodone group compared with the maprotiline group. Adverse events more frequently reported among nefazodone-treated patients were nausea and agitation, among maprotiline patients they were dry mouth, somnolence and tremor. This study indicates that nefazodone was well tolerated and had comparable antidepressant activity to maprotiline in elderly depressed patients.

Supported by a grant from Bristol-Myers Squibb.

NR708 Thursday, June 4, 12 noon-2:00 p.m.

An Open-Label Study of Nefazodone in Elderly Depressed Patients

Kenneth J. Weiss, M.D., 133 Ivy Ln, King Of Prussia PA 19406-2101; Stephen Stahl, M.D., Jan A. Fawcett, M.D., John M. Zajecka, M.D., Frances E. Borian, R.N., Walter W. Hong, M.D., Darlene N. Jody, M.D.

Summary:

Objectives: The purpose of this clinical trial was to evaluate the effectiveness, safety, and tolerability of nefazodone in depressed patients seen in the general psychiatric practice setting.

Methods: Of the 1151 patients enrolled in a 12-week, open-label study of nefazodone, 41 were considered elderly (65 to 75 years old). This subset of elderly patients is the basis for this report. Patients with depressive symptoms of sufficient severity to require antidepressant treatment were enrolled in the trial. Nefazodone, given BID, was to be titrated in the elderly patients at 100 mg/day (50 mg BID) for two weeks, then increased during the third week based on tolerability, to 200 mg/day (100 mg BID). Subsequent dose escalations were to be made based on clinical response and tolerance, at intervals no less than two weeks, to achieve an optimal therapeutic response within the dose range of 300–600 daily (150–300 mg BID). Efficacy assessments in-

cluded the CGI, the Patient Global Assessment (PGA), and patient self evaluations of anxiety, sleep quality, and sexual function.

Results: A significant reduction from screening in the mean CGI Severity of Illness scale score ($p < 0.002$) was noted beginning at the week 4 visit and continuing to the week 12 visit. Moreover, the change from screen in mean Severity of Illness scale scores continued to increase from the week 4 to the week 12 visit. In the observed-cases analysis at week 12, 15 of 19 patients (79%) of the Evaluable and the Intent-to-Treat patient samples were rated as much or very much improved (1 or 2) on the CGI Improvement Scale. In the Elderly Evaluable patient sample, significant improvements in anxiety and ability to sleep through the night were observed as early as the week 1 visit ($p < 0.007$). These improvements were sustained throughout the 12-week treatment period. Improvements were observed in overall sexual function as well as in male and female sexual function, however, not at a statistically significant level. Eleven elderly patients discontinued from the study due to adverse events. The rate of discontinuation due to adverse events may have been increased by lack of adherence to the proper titration; 35 of 40 patients were titrated too quickly, and of those patients, 20 of 40 started nefazodone at 200 mg/day instead of 100mg/day.

Conclusions: Approximately 79% of elderly patients who completed 12 weeks of nefazodone were thought to be responders by both physician and patient assessment. Many of the elderly patients treated with nefazodone experienced relief of anxiety and sleep difficulties. Nefazodone appears to be a safe antidepressant for elderly depressed patients. Nefazodone did not appear to compromise the sexual function of most elderly patients.

NR709 Thursday, June 4, 12 noon-2:00 p.m.

A Naturalistic Study of Mirtazapine in the German Psychiatric Practice

Annemiek Pattenier, M.D., Organon GMBH, Mittenheimer Str 62, Oberschleibheim 85764, Germany; Friedrich May, M.D.

Summary:

Aim: To assess clinical efficacy and tolerability of mirtazapine in everyday clinical practice in Germany.

Methods: Depressed inpatients and outpatients (n = 2460) of both sexes, older than 18 years, were treated with mirtazapine (15–45 mg/day) for six weeks in an open-label study. Clinical efficacy was assessed after one, three, and six weeks of treatment by a German version of the CGI -Severity of Illness and Global Improvement scales. Tolerability was assessed by registering treatment-emergent adverse events.

Results: Forty-eight percent of patients had an ICD-10 diagnosis of a recurrent depressive episode at baseline, while 73% were treated with antidepressants prior to inclusion in the study. The most common reason for switching to mirtazapine was lack of efficacy. After six weeks of treatment with mean dose of 30 mg/day of mirtazapine, 72% of patients were classified as CGI responders. At the same time point, in 45.4% the severity of illness was assessed as "mild," and in 22.6% as "moderate." Eighty-one percent of patients have not reported any treatment emergent adverse events. Somnolence was reported by 6% of patients, dizziness by 2.7%, weight gain by 2.1%, and restlessness by 2.1% of patients. Each of the remaining adverse events was reported by less than 2% of patients.

Conclusion: Mirtazapine was effective and well-tolerated treatment in everyday clinical practice. Despite the methodological limitation, our results are in line with previously reported double-blind randomized studies of mirtazapine.

NR710 Thursday, June 4, 12 noon-2:00 p.m.

Gender and Treatment Response to Antipsychotics

Ileana Berman, M.D., Department of Psychiatry, Taunton State Hosp/Harvard Med, Taunton State Hosp PO Box 4007, Taunton MA 02780; Rogelio D. Bayog, M.D., Demetra Pappas, B.S., Christina Wu, B.A., David N. Osser, M.D.

Summary:

Objectives: Gender has been recognized to be an important factor in the expression and treatment of the schizophrenic illness. As part of an outcome study in a long term state psychiatric hospital we assessed the response to treatment of a group of men and women during after a trial with an atypical neuroleptics.

Method: We examined 32 women and 50 men before and approximately six weeks after the initiation of an atypical antipsychotic. The men and women did not differ in age, age of illness onset, educational level, and dose of medication. The patients were assessed using the Positive and Negative Syndrome Scale for Schizophrenia (PANSS) and a battery of cognitive tests, that included measures of attention, executive function, auditory and visual memory, verbal fluency, and trails making tests. To compare the two groups we used t-test analysis of the change scores from baseline.

Results: The group as a whole improved significantly from baseline on both psychiatric and cognitive measures. The men and women, however, responded similarly to medication with no statistically significant sex differences in the psychiatric scores as measured by the PANSS. Compared to men, however, the women improved more in tests of visual attention and motor coordination such as the digit symbol ($p. < 0.04$) and trail making test (A) ($p = 0.03$). In addition, women did better on remote word memory ($p = 0.02$).

Conclusions: According to this data the women may improve more than men in cognitive performance when treated with atypical neuroleptics. However, further studies are necessary to identify the gender differences in the treatment response of patients with chronic psychosis.

NR711 Thursday, June 4, 12 noon-2:00 p.m.

Olanzapine in Pervasive Developmental Disorders

Marc N. Potenza, M.D., 34 Park Street, New Haven CT 06519; Janice P. Holmes, M.S.N., Stephen J. Kanes, M.D., Christopher J. McDougle, M.D.

Summary:

The efficacy and tolerability of olanzapine was examined in the treatment of children, adolescents, and adults with pervasive developmental disorders (PDDs). Eight patients with autistic disorder (n = 5) or PDD not otherwise specified (NOS) (n = 3) were given olanzapine in an open-label, prospective fashion for 12 weeks. Seven of eight patients completed the trial, and six of the completers were deemed clinical responders as measured by EOW-12 ratings of "much improved" or "very much improved" on the global improvement item of the Clinical Global Impression scale. Significant improvements in overall symptoms of autism, motor restlessness or hyperactivity, social relatedness, affectual reactions, sensory responses, language usage, self-injurious behavior, aggression, irritability or anger, anxiety, and depression were observed. Significant changes in repetitive behaviors were not observed for the group. The EOW-12 mean $\pm$ SD daily dose of olanzapine was 7.8 ± 4.7 mg/day. The drug was well tolerated, with adverse effects of increased appetite and weight gain noted in six patients and sedation in three. No evidence of extrapyramidal side effects or liver function abnormalities was seen. These preliminary results suggest that olanzapine may be an effective and well-tolerated drug in targeting core and related symptoms of PDDs in children, adolescents and adults.

Support: Biological Sciences Training Program, U.S. Public Health Service, Yale Children's Clinical Research Center, General Clinical Research Centers Program, National Center for Research Resources, NIH, a NARSAD Independent Investigator Award, Theodore and Vada Stanley Research Foundation, State of Connecticut, Department of Mental Health and Addiction Services, and NIMH RUPP Grant.

NR712 Thursday, June 4, 12 noon-2:00 p.m.

Visuo-Manual Testing in the Diagnosis of Extrapyramidal Side Effects of Antipsychotic Drugs

Mark Weiser, M.D., Memory Clinic, Sheba Medical Center, Beitan 39A, Tel Hashomer 52621, Israel; Michal Schmaider-Beeri, M.A., Shoshana Reiss, M.A., Shraga Hocherman, Ph.D., Michael Davidson, M.D.

Summary:

Objectives: 1) To investigate the sensitivity of VMT in quantifying antipsychotic-drug-induced extrapyramidal side effects (EPS) by comparing its results with the clinically assessed Extrapyramidal Signs Rating Scale (ESRS). 2) To compare EPS induced by typical and atypical antipsychotics (i.e. olanzapine, risperidone, clozapine). Visuo-Manual Testing (VMT) is a novel procedure that yields quantitative information on the ability to control the direction and speed of hand motion. This procedure consists of a digitizing tablet hidden from the subject's view by an overlying board, upon which a computer monitor is placed. Paths for tracing and tracking are displayed on the computer monitor. A screen cursor represents the location of an unseen handle, which is free to move over the digitizing tablet. The location of the handle is read by the computer.

Methods: Seventeen patients suffering from chronic schizophrenia treated with typical and atypical antipsychotic agents were assessed with the ESRS and VMT.

Results: 1) A positive correlation was found between the VMT measure of velocity control and the ESRS scores ($p < .05$). Since the VMT overcomes both floor and ceiling effects and uses a continuous scale. It is conceivable that the VMT is a more sensitive tool. 2) As expected, VMT scores are consistent with fewer EPS in patients receiving atypical antipsychotics. Differences among the atypical antipsychotics were also found.

Conclusions: VMT can quantitatively evaluate antipsychotic-induced EPS in schizophrenic patients with greater resolution than clinician-administered rating scales.

NR713 Thursday, June 4, 12 noon-2:00 p.m.

Gabapentin in the Treatment of Bipolar and Correlated Disorders

Alessandro Lenzi, Psychiatry, University of PISA, Via Rome 67, Pisa 56100, Italy; Donatella Marazziti, M.D.

Summary:

Gabapentin (GBP) is an anticonvulsant recently approved for the treatment of epilepsy with partial seizures. This medication is not metabolized by the liver, does not bind to plasma proteins, and is considered as a relatively safe drug in neurological reports. Since other anticonvulsant agents showed a good efficacy in the treatment and prophylaxis of bipolar disorders, some psychiatrists used GBP on bipolar patients refractory or with liver disorders.

Objective: We reported our experience with GBP in the treatment of refractory patients, not only affected by bipolar disorders, but also by correlated disorders such as schizoaffective and borderline personality disorders (BPD).

Material and Method: GBP (mean dosage: 600±102 mg) was added to the treatment of 20 patients, 11 male and nine female, mean age 38±6 year (min 20, max 71). The diagnoses were bipolar disorders for 11 patients, BPD for three, schizoaffective disorders for six. Every month the patients were assessed by means of the Global Assessment of Functioning scale (GAF). The patients were followed in naturalistic way for a period of mean length of 50 days (±23).

Results and Conclusion: Three patients left treatment for ineffectiveness, three for impairment; five of them were affected by schizoaffective disorders. None left the treatment because of side effects. The other patients (treated for at least a month) had a positive effect as judged by the psychiatrists, themselves, and the GAF scale, whose scores showed an increase from 55±15 to 75±12. This report confirms previous experience with bipolar patients and suggests a possible role of GBP in the care of BPD, while it does not seem effective in patients with psychotic features.

NR714 Thursday, June 4, 12 noon-2:00 p.m.

Does Fluoxetine Cause Activation, Sedation, Both or Neither?

Mary Sayler, M.S., Dept. Neuroscience, Eli Lilly & Co., Lilly Corporate Center DC2032, Indianapolis IN 46285; Joachim Wernicke, M.D., Stephanie Koke, M.S., Gary D. Tollefson, M.D.

Summary:

Objective: To evaluate activating and sedating effects with fluoxetine relative to placebo and tricyclic antidepressants (TCAs).

Methods: We analyzed data from blinded clinical trials involving 4016 patients with major depression assigned to fluoxetine (20–80 mg), a TCA, or placebo. Activation was defined as treatment-emergent agitation, akathisia, anxiety, central nervous system stimulation, insomnia, or nervousness. Sedation was defined as treatment-emergent apathy, asthenia, central nervous system depression, and somnolence.

Results: Most patients did not have either activation or sedation. Consistent with previous reports, significantly more activation and sedation was reported in fluoxetine-treated patients compared with placebo-treated patients. Significantly more activation was reported with fluoxetine than TCAs, and significantly more sedation was reported with TCAs than fluoxetine. Weekly analyses revealed similar results. Analysis of severity scores across visits revealed that very few patients reported severe events. There was not a significant difference in discontinuation due to activation between fluoxetine-treated and TCA-treated patients (and rates were low). Significantly more TCA-treated patients discontinued due to sedation than did fluoxetine-treated patients.

Conclusions: For the majority of patients, fluoxetine is neither activating nor sedating. When activation or sedation occurs, it rarely leads to discontinuation.

Research funded by Eli Lilly and Company.

NR715 Thursday, June 4, 12 noon-2:00 p.m.

Sertraline Versus Paroxetine Effects on Pindolol Pharmacokinetics

Pierre Blier, M.D., Department of Psychiatry, McGill University, 1033 Pine Avenue West, Montreal PQ H3A 1A1, Canada; Marc LeBel, Ph.D., Richard Bergeron, M.D., Vratislav Hadrava, M.D.

Summary:

Four double-blind studies support the notion that the serotonin (5-HT) $_{1A/B}$-adrenoreceptor pindolol accelerates the antidepressant effect of selective 5-HT reuptake inhibitors (SSRIs). Preliminary results suggest that pindolol addition may also produce an antidepressant effect when added to the regimen of depressed patients not responding to the SSRIs. Although all SSRIs share the same mechanism of action, they present significant differences in cytochrome P450 (CYP) enzyme inhibition. Studies on augmenting strategies concentrated mostly on pharmacodynamic aspects; pharmacokinetic factors are equally important for devel-

oping dosing strategy of combined medications and for avoiding hazardous drug-drug interactions. Paroxetine (PXT) shows significantly greater inhibition of the CYP 2D6 enzyme than does sertraline (STL). Seven healthy volunteers were given, in a randomized cross-over design, for seven days STL (50mg/day) and PXT (20mg/day), and then challenged with a single oral dose of 2,5 mg of racemic pindolol (PIN). Blood samples up to 24 hours after PIN dose were assayed by HPLC. Compared with STL, PXT administration resulted in statistically significant differences in total PIN pharmacokinetic parameters ($p<0.05$ using ANOVA for repeated measures):

PIN parameters	PIN/STL (mean+/-SD)	PIN/PXT (mean+/-SD)
AUC_{0-t} (ngxhr/ml)	27 +/- 13	47 +/- 32
C_{max} (ng/ml)	9 +/- 5	12 +/- 6
$Cl_{non-renal}$ (ml/min)	950 +/- 370	505 +/- 260
Cl_{total} (ml/min)	1500 +/- 640	1000 +/- 500

Similar statistically different data were obtained when comparing the effects of STL and PXT on the pharmacokinetics of the R(+) PIN enantiomer. The results for S(-) PIN from four subjects with detectable plasma levels showed a similar trend. In conclusion, pharmacokinetic considerations should be taken into account when using PIN in an antidepressant augmentation strategy.

NR716 Thursday, June 4, 12 noon-2:00 p.m.

The Safety of Abrupt Discontinuation of Nefazodone

John M. Zajecka, M.D., Department of Psychiatry, Rush-Presbyterian Medical Cntr, 1725 West Harrison, Suite 955, Chicago IL 60612; William S. Miles, M.D., Thomas G. Cobb, M.D., Shirley Chen, Robert McQuade, Ph.D.

Summary:

There are no known reports in the literature of a discontinuation syndrome with the novel antidepressant nefazodone. In two independent, double-blind, placebo-controlled trials of nefazodone in the maintenance treatment of depression, responders to nefazodone were randomized to either continued treatment or placebo. The relative frequencies of all new or worsened adverse events were collected from both placebo and active-treatment groups at 14 and 28 days post randomization. In the group randomized to continue active treatment with nefazodone (N=128), 22 (17.2%) reported at least one new-onset adverse event 14 days post randomization, and 39 (30.5%) reported at least one new-onset adverse event after 28 days. In the group randomized to placebo (N=130), 27 (20.6%) reported at least one new-onset adverse event 14 days post randomization, and 38 (29.0%) reported at least one new-onset adverse event after 28 days. There is no statistically significant difference in new-onset adverse events between those randomized to placebo and those randomized to continued nefazodone treatment (14 days and 28 days, p=0.98). Based upon a relative comparison of new-onset adverse events, it appears that abrupt discontinuation of nefazodone does not result in a clinically significant discontinuation syndrome.

NR717 Thursday, June 4, 12 noon-2:00 p.m.

Clozapine Treatment, Suicidality, Aggressiveness, Serum Lipids and Monoamine Plasma Levels

Baruch Spivak, M.D., Research Unit, Ness Ziona Hospital, PO Box 1, Ness Ziona 77100, Israel; Roberto Mester, M.D., Noach Gonen, M.D., Suzanna Roitman, M.D., Abraham Weizman, M.D.

Summary:

Objective: Impulsiveness and aggressiveness may be the most common behavioral correlates of central serotonergic dysfunction. The objective of the present study was to determine if clozapine, an atypical antipsychotic agent with a potent serotonergic antagonistic activity, can affect impulsiveness, aggression, and suicidality as well as serum lipids, platelet-poor plasma serotonin (5-HT), and norepinephrine (NE) levels.

Methods: Thirty neuroleptic-resistant chronic schizophrenic patients maintained on clozapine for one year were evaluated for aggressiveness, impulsiveness, and suicidality and compared with 30 chronic schizophrenic patients maintained on classical antipsychotic agents for the same period of time.

Results: Clozapine maintenance treatment was associated with less impulsiveness ($p<0.05$), aggressiveness ($p<0.01$), and suicidal attempts ($p<0.05$). Serum triglycerides and plasma NE levels were significantly higher ($p<0.01$ and $p<0.0001$, respectively) in the clozapine treated patients as compared with the classical neuroleptic treated patients.

Conclusions: Long-term clozapine treatment may be effective in controlling aggressive, impulsive, and suicidal behavior in neuroleptic-resistant chronic schizophrenic patients. The elevated plasma NE levels in clozapine treated patients as compared with classical neuroleptic treated patients may be relevant for the anti-aggressive/antisuicidal activity of clozapine.

NR718 Thursday, June 4, 12 noon-2:00 p.m.

A Double-Blind, Placebo-Controlled Evaluation of Paroxetine in the Prevention of Recurrent Depression

Ivan P. Gergel, M.D., SmithKline Beecham CNS Res, 1250 S Collegeville Road, Collegeville PA 19426; Cornelius D. Pitts, R.P.H., Rosemary Oakes, M.S.

Summary:

The published literature has, in recent years, suggested that following effective control of an index depressive episode, antidepressant treatment should continue in order to prevent recurrence of subsequent episodes. This study evaluated the efficacy of paroxetine in preventing recurrent depressive episodes.

Treatment was administered over a period extending up to 26 months to patients with a history of recurrent depression. Patients entering an open-label treatment phase of the trial had a mean HAMD score of 21, indicative of moderate depression. The goal of-open label treatment was to maintain an average HAMD ≤ 10 over five to eight months. The critical evaluation period of this trial was an 18 month randomized, double-blind phase during which 125 patients meeting the criteria for therapeutic response received either paroxetine ($n = 61$) or placebo ($n = 64$). During this period, the proportion of depressive recurrences in the treatment groups was compared based on two consecutive weeks in which the HAMD returned to at least 15. Using these protocol-specified recurrence criteria, paroxetine patients had numerically fewer recurrences of depression than placebo patients, 8.3% vs 19.7%, respectively ($p = 0.186$). However, there were also a significant number of withdrawals due to lack of efficacy during this double-blind treatment phase. When using this standard, 6.7% of patients receiving paroxetine withdrew, compared with 37.7% patients who were receiving placebo ($p = 0.001$). Combining these criteria, 15% of paroxetine patients and 57.4% of placebo patients exhibited apparent loss of efficacy during this double-blind treatment phase ($p < 0.001$). Further evidence of greater recurrence in placebo patients is provided by the change from double-blind baseline to Last Observation Carried Forward (LOCF) endpoint in the psychometric scores. Overall, these changes indicate worsening depression in placebo patients relative to paroxetine patients, the latter showing only small fluctuations in these scores. Safety data revealed no unexpected adverse experiences consequent to long

term treatment with paroxetine. During the double-blind treatment phase the incidence of adverse events commonly associated with SSRIs were: headache, 15%; nausea, 12%; insomnia, 7%; dizziness, 5%; ejaculatory disturbance, 5%; nervousness/anxiety, 5%; somnolence, 5%; tremor, 0%.

In conclusion, these data indicate that long-term paroxetine administration for preventing recurrent depressive episodes is an effective and safe mode of treatment.

NR719 Thursday, June 4, 12 noon-2:00 p.m.

Length of Treatment with SSRI Antidepressants in Primary Care in the United Kingdom

John M. Donogahue, B.Sc., Clatterbridge Hospital Pharmacy, Mount Road Bebington, Wirral L63 4JY, United Kingdom

Summary:

Consensus guidelines in the U.K. on the management of depression have offered advice on both dose of antidepressant and length of treatment (Paykel & Priest, 1992). Naturalistic studies of antidepressant use in primary care have shown that tricyclic antidepressants are rarely prescribed at adequate doses, while selective serotonin reuptake inhibitors (SSRIs) are almost always prescribed at an effective dose (Donoghue & Tylee, 1996). However, studies to date have not investigated the length of treatment.

Objective: This study was designed to investigate differences in the length of treatment in depressed primary care patients initiating treatment with fluoxetine, paroxetine, or sertraline.

Method: Data were extracted from a national primary care database in the UK (DIN-LINK) on patients with a primary care diagnosis of depression commencing treatment in 1995 with any of the study compounds. Length of continuous treatment was observed for up to 12 months following initiation.

Results and Conclusion: A total of 15,970 prescriptions were issued to 5126 patients. Patients treated with fluoxetine had the longest average length of treatment and were more likely to complete 60, 90, and 120 days continuous treatment than patients treated with sertraline.

Research funded by: Eli Lilly & Company

NR720 Thursday, June 4, 12 noon-2:00 p.m.

Lithium and EKG Findings

Marion E. Wolf, M.D., Department of Psychiatry, VA Medical Center, 3333 Green Bay Road, North Chicago IL 60064; Vasant Ranade, Ph.D., George Lutz, M.D., Aron D. Mosnaim, Ph.D.

Summary:

Our recent findings in a bipolar patient on maintenance lithium therapy who developed hypercalcemia and severe bradyarrhythmia prompted us to conduct a retrospective study of bipolar subjects with lithium-induced hypercalcemia (Group I, n = 12). We compared the electrocardiographic findings in these patients with those found among a control group of age- and sex-matched normocalcemic bipolar subjects treated with lithium for a comparable number of years (Group II, n = 40). We found that 58% of the patients in Group I had bradycardia and/or conduction defects as opposed to 22.5% of the patients in Group II (chi square 5.6; p = 0.018). Both lithium and calcium play an important role in the genesis of arrhythmia, as they interfere with the electrophysiological properties of cardiac cells involving currents of various ions. Our findings suggest that hypercalcemia potentiates lithium-induced bradyarrhythmia, and/or that lithium potentiates calcium-induced arrhythmias. These preliminary data emphasize the need for regular laboratory and electrocardiographic monitoring of patients on maintenance lithium therapy.

NR721 Thursday, June 4, 12 noon-2:00 p.m.

Lithium Dosage and Blood Count in Psychiatric Patients

L. Kola Oyewumi, M.D., Department of Psychiatry, U. Western Ontario, CEULPH, 850 Highbury Ave, London, ONT N6A 4H1, Canada; Maryanne McKnight, M.D., Zack Z. Cernovsky, Ph.D.

Summary:

Objective: We evaluated differences in WBC and granulocytes levels among patients who were on lithium alone, those on lithium combined with antipsychotic medications, and those on antipsychotic medications without lithium.

Method: Records of patients (n = 316) treated over the past three years in a long-stay hospital were examined to extract sociodemographic, clinical, and hematological data at an indexed period. Patients were divided into Group 1 comprising those on lithium alone (n = 38), Group 2 were on antipsychotic medications alone (n = 207), and Group 3 were on both medications (n = 71).

Results: Only two patients showed leucopenia, one (1.4%) from Group 3 and one from Group 2 (0.5%). The patients who received lithium treatment had significantly higher mean WBC count and granulocyte count than those on antipsychotic medication only (ANOVA, $p < 0.05$). The amount of lithium was significantly related to WBC ($r = .25$, $p < 001$) and also to granulocyte count ($r = .27$, $p < .001$) but not to the lymphocyte count ($r = .06$, $p = 286$). WBC and granulocyte levels were not significantly affected by polypharmacy (number of antipsychotic medications).

Conclusions: Lithium carbonate is associated with higher WBC and granulocyte levels. Its leucocytotic action may potentially be exploited in leucopenia during clozapine treatment.

NR722 Thursday, June 4, 12 noon-2:00 p.m.

Effect of Desipramine on Exercise in Adults and Children

Bruce D. Waslick, M.D., Child Psych, Columbia University, 722 West 168 Street Box 60, New York NY 10032; B. Timothy Walsh, M.D., Elsa Giardina, M.D., Laurence L. Greenhill, M.D., Karina Bilich, Thomas Bigger, M.D.

Summary:

Objective: Due to recent reports of sudden death in children being treated with desipramine (DMI), three of which were associated with physical exercise, we examined the effects of DMI on exercise in children and adults prior to and during medication treatment in this NIMH-funded study.

Method: Preceding DMI treatment, 22 subjects (nine children, 13 adults) participated in a treadmill exercise test using the Bruce Protocol. Outcome measures included exercise tolerance, cardiovascular and EKG parameters at progressive intensity levels, and serum norepinephrine (NE) levels prior to and after exercise testing. Subjects were then treated clinically with DMI and underwent a repeat exercise study.

Results: DMI treatment was associated with a significant elevation of circulating NE levels in the pre-exercise assessment (and a nonsignificant elevation in the post-exercise assessment). Exercise tolerance was not affected, blood pressure and heart rate effects were minor, and no differential effect of DMI on children's exercise measures compared with adults was detected. One adult subject experienced an exercise-associated, complicated arrhythmia during DMI treatment.

Conclusions: Exercise-induced arrhythmias may be a rare complication of treatment with DMI. Elevated levels of circulating catecholamines could theoretically be a mechanism for DMI-associated exercise-induced arrhythmias.

NR723 Thursday, June 4, 12 noon-2:00 p.m.

Nefazodone Versus Paroxetine in Depressed Outpatients

Patrick Lemoine, M.D., CHS Le Vinatier, 95 Boulevard Pinel, Bron Cedex 69677, France; Enrico Smeraldi, M.D., Tomas Palomo, M.D., Jean-Philippe Cosson, M.D., Marco Zibellini, M.D., Fernando Rico-Villademoros, Ronald N. Marcus, M.D.

Summary:

Nefazodone is a unique antidepressant drug that is both a 5-HT2 receptor antagonist and a serotonin (5-HT) reuptake inhibitor. This multicenter, randomized, double-blind, parallel-group, eight-week study compared the safety and efficacy of nefazodone (N: 200–600 mg/day) with that of paroxetine (P: 20–40 mg/day) in outpatients diagnosed with major depressive disorder. A total of 173 patients (78% female) meeting DSM-III-R criteria for major depressive episode (35% single and 63% recurrent) or bipolar depressed (2%) received study medication, 76% of the patients completing the study (N = 74%, P = 78%). Five nefazodone patients (6%) and eight paroxetine patients (9%) discontinued for adverse experience. In the intent-to-treat sample (84 in each treatment arm), both nefazodone and paroxetine resulted in progressive improvement in depressive symptoms over the eight weeks of therapy. At the end of the study, there were no statistically significant differences between the antidepressant efficacy of nefazodone and paroxetine as measured by Ham-D-17 score (N = −11.4, P = −12.2) or by the Clinical Global Improvement Scale (N = 69%, P = 73% rated much or very much improved). Adverse event profiles were comparable between treatment groups. This study indicates that both nefazodone and paroxetine have comparable antidepressant activity and both have a good tolerability profile.

Supported by a grant from Bristol-Myers Squibb

NR724 Thursday, June 4, 12 noon-2:00 p.m.

Tolerability of Mirtazapine in 15 Versus 30 mg Initial Dose: A Randomized, Double-Blind Study

Jon T.H. Helsdingen, M.D., Department of MSD, NV Organon, Molenstraat 110, Oss 5340BH, The Netherlands; Adjm Sitsen, M.D.

Summary:

Objective: To assess the tolerability of two different initial doses of mirtazapine, outpatients with a DSM-IV diagnosis of a major depressive episode were randomly assigned to an ascending dosage regimen (n = 71; mirtazapine 15 mg for one week, followed by 30 mg for one week) or a fixed dosage regimen (n = 69, 30 mg for two weeks).

Methods: Tolerability was assessed by recording of adverse events (AEs), and using the computer-assisted interactive telephone system for daily ratings on the VAMRS scale, with "Alert/drowsy" factor as an index of a day-time sedation. Efficacy was assessed by the 17-HAMD and CGI, and effects on sleep by self ratings on the LSEQ, using the same computer-assisted system.

Results: Tolerability of both treatments was good. A total of three patients in each treatment group dropped-out; respectively, one and two patients because of adverse events. During the first treatment week, AEs were reported with a similar incidence in both groups: somnolence by 9.9% of patients in the 15 mg group and by 10.1% in the 30 mg group; respective values for dizziness were 4.2% and 8.7%. On the "Alert/drowsy" factor a similar level of a day-time sedation was registered in both groups after the first dose of study medication, with subsequent immediate increase in alertness to baseline values and approx. at day 10, to the level of "normal" state. In both groups the 17-HAMD scores decreased similarly at endpoint (−9.5 ± 5.9 and −10.9 ± 6.5). On the LSEQ, 30 mg initial dose of mirtazapine was related to a statistically significantly longer duration of sleep at weeks 1 and 2, and to a significantly faster initiation of sleep at week 2.

Conclusion: There are no differences in tolerability of mirtazapine administered in initial doses of 15 or 30 mg, and both dosage regimens are well tolerated. The results on the LSEQ were in favor of the initial dose of 30 mg, with respect to onset and duration of sleep.

NR725 Thursday, June 4, 12 noon-2:00 p.m.

A Prospective Open Trial of Olanzapine for Poorly Responsive Psychosis

Gregory W. Dalack, M.D., Department of Psychiatry, Ann Arbor VAMC, 2215 Fuller Road (116C), Ann Arbor MI 48105; Ronald C. Albucher, M.D., Jane Marie Carnahan, M.D., Daniel J. Healy, M.D., Ziad A. Kronfol, M.D., James H. Meador-Woodruff, M.D.

Summary:

Objective: To prospectively examine the clinical effectiveness of olanzapine pharmacotherapy in a group of V.A. mental health clinic outpatients with chronic psychotic disorders deemed poorly responsive to typical antipsychotics.

Methods: Clinic outpatients were deemed poorly responsive to typical antipsychotics if they had demonstrated minimal improvement to two medications or if they were unable to tolerate adequate doses due to side effects. Ratings using the BPRS, SANS, AIMS, and Simpson-Angus Scale (SAS) were conducted prior to olanzapine initiation by clinicians trained to excellent interrater agreement in the use of these scales. Vital signs (VS), complete blood counts (CBC), and liver function tests (LFTs) were also taken at baseline. Typical antipsychotic medication was cross-tapered with olanzapine to reach an olanzapine dose of 10–15mg by the end of the first week. Subsequent ratings were performed at months 1,2,3,6,9, and 12.

Results: Thirty-seven patients have been enrolled in this open trial. Interim (approximately three-month) data analysis for the first 22 patients with adequate data indicated significant improvements in BPRS (13% mean decrease; $t = 2.1$; $df = 21$; $p = 0.05$), SANS (30% mean decrease; $t = 2.7$; $df = 21$; $p < 0.02$), and SAS scores (71% mean decrease; $t = 3.6$; $df = 21$; $p < 0.01$).

Conclusions: These data support the clinical effectiveness of olanzapine, particularly for negative symptoms and EPS, in outpatients with minimal response to typical antipsychotics. Further analysis of this experience will provide information about the time course and stability of symptomatic improvement during one year of treatment.

NR726 Thursday, June 4, 12 noon-2:00 p.m.

Antidepressant Withdrawal-Related Mania? Critical Prospective Observation and Theoretical Implications in Bipolar Disorder

Robert M. Post, M.D., Biology Psychiatry Branch, Nat'l Inst of Mental Health, 10 Center Drive, Room 3N212, Bethesda MD 20892; Tina R. Goldstein, B.A., Mark A. Frye, M.D., Kirk D. Denicoff, M.D., Earlian E. Smith-Jackson, R.N., Ann L. Bryan, B.A., S. Omar Ali, B.S.

Summary:

Numerous case reports describe precipitation of mania upon discontinuation of antidepressants in patients with unipolar depression. A recent retrospective study identified 12 episodes of antidepressant withdrawal-related mania in eight of 39 patients with bipolar illness. We critically examined five new cases of antidepressant withdrawal-related mania from a review of 73 bipolar patients.

Mood and medications were documented by the prospective life chart method (LCM, Leverich and Post, 1996). All five cases were unresponsive to the antidepressant treatment intervention despite adequate trials (range 35–480 days). Concomitant mood stabilization regimens included lithium monotherapy (n = 2), lithium/carbamazepine (n = 1), lithium/valproate (n = 1), and lithium/carbamazepine/valproate (n = 1). Antidepressant dose was abruptly discontinued in one case, rapidly tapered in another, and tapered steadily in the three remaining cases (average taper = 21.2 days). Prospective LCMs revealed three likely antidepressant withdrawal-related manias associated with SSRIs and two with tricyclics. Mean length of the ensuing manic episode was 22.8 days (range 12–49 days). These manias have characteristics which distinguish them from natural course of illness, induction by antidepressant treatment, and somatic antidepressant discontinuation actually induces mania. These observations, if replicated, suggest the need for further consideration of the potential biochemical mechanisms involved.

NR727 Thursday, June 4, 12 noon-2:00 p.m.

Venlafaxine Treatment of Somatic Disorders

Paul J. Markovitz, M.D., Mood & Anxiety Treatment Ctr, 2101 Richmond Rd, Suite 1030, Beachwood OH 44122; Susan C. Wagner, M.A., Hannah D. Stern, B.A.

Summary:

Objective: Somatic complaints frequently accompany psychiatric disorders. An open-label study was conducted to assess the efficacy of venlafaxine in treating headaches, fibromyalgia, temporomandibular joint dysfunction, nocturnal myoclonus, irritable bowel syndrome, premenstrual syndrome, neurodermatitis, sleep apnea, and migraines in patients with or without depressive disorders.

Methods: 25 patients with two or more of the above somatic syndromes were enrolled in a 12-week open trial of venlafaxine. Outcome was assessed by decreases in somatic complaints, McGill Pain Scale, Hopkins Symptom Checklist-90R (SCL), and Clinical Global Impression clinician (CGIc) and patient (CGIp).

Results: Complete elimination of somatic complaints occurred in 51 of 84 cases (61%). The McGill declined from 8.8 ± 7.8 to 3.8 ± 8.7. The SCL was reduced from 123.9 ± 60.2 to 42.5 ± 69.3, and all subscales improved. CGIc improved from 3.2 ± 1.0 to 1.7 ± 1.2; CGIp improved from 2.2 ± 0.8 to 1.4 ± 0.8. All of these results were statistically significant. The presence or absence of depression did not affect outcome on any of the scales.

Discussion: The data suggest venlafaxine is effective in reducing somatic complaints in depressed or anxious patients. The possibility that the neurochemical process causing the somatic complaints can also be causative of depression and/or anxiety disorders will be discussed. Controlled trials are indicated.

Partial funding of this study was provided by Wyeth-Ayerst Laboratories, Inc.

NR728 Thursday, June 4, 12 noon-2:00 p.m.

Mirtazapine Augmentation in the Treatment of Refractory Depression

Linda L. Carpenter, M.D., Brown University, Butler Hospital, 345 Blackstone Blvd, Providence RI 02906; Zeljko Jocic, M.D., Joan Hall, B.A., Steven A. Rasmussen, M.D., Lawrence H. Price, M.D.

Summary:

Background: Pharmacotherapeutic strategies that target specific actions at multiple neuronal receptors or cellular components may offer a superior approach for treatment of refractory depression. Mirtazapine is a novel antidepressant whose mechanism involves the enhancement of noradrenergic and serotonergic neurotransmission via blockade of alpha-2-adrenergic auto- and hetero-receptors, without activity at the serotonin transporter. Mirtazapine is thus a compelling candidate for augmentation treatment in patients who fail to achieve adequate response with other antidepressant medications.

Methods: Twenty patients with persistent depressive syndromes despite at least four weeks of standard antidepressant pharmacotherapy were given mirtazapine (15 to 30 mg po qhs) augmentation on an open-label basis. Clinical assessments of status at baseline, two weeks, and four weeks were used to rate response.

Results: Forty-five percent (n = 9) of the sample were responders at two weeks. At the four-week follow-up, 55% (n = 11) were responders, 30% (n = 6) were nonresponders, and 15% (n = 3) had discontinued treatment due to side effects. Common side effects included weight gain and sedation.

Conclusion: These data suggest that the addition of mirtazapine may be beneficial for patients who have refractory depression, but side effects are prominent at the doses we used. Controlled trials to further evaluate the efficacy and safety of mirtazapine augmentation are needed.

NR729 Thursday, June 4, 12 noon-2:00 p.m.

Olanzapine Versus Haloperidol in the Treatment of Psychosis

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Summary:

These analyses compare the effect of olanzapine verses haloperidol in the treatment of psychosis in an international, multicenter, double-blind, parellel trial. The efficacy and safety of a single dose range of olanzapine, 5–20 mg/day, was compared with a single dose range of haloperidol, 5–20 mg/day, in the treatment of 1,996 inpatients and outpatients with a DSM-III-R diagnosis of schizophrenia, schizophreniform disorder, or schizoaffective disorder. Patients were assigned by random allocations to double-blind therapy in the ratio of 2 olanzapine to 1 haloperidol assignment. The acute phase of the trial was six weeks in length, which was followed by a double-blind responder extension and a open-label nonresponder extension. Of the 1,996 patients enrolled in the trial, 83 (57 olanzapine, 26 haloperidol) were in their first episode of psychosis with an episode duration of > 5 years and age at onset of > 45 years. In this subgroup of first-episode patients, olanzapine was statistically significantly superior to haloperidol in the reduction of BPRS total score, BPRS negative score, PANSS total score, and PANSS positive score from baseline to endpoint of the acute phase (last-observation-carried-forward). Also, haloperidol first-episode patients suffered statistically significantly more EPS than olanzapine first-episode patients as measured by change in Simpson-Angus total from baseline to endpoint of the acute therapy. Additional results will be presented to investigate the difference in response between first-episode and multi-episode patients.

NR730 Thursday, June 4, 12 noon-2:00 p.m.

QEEG in Chronic Schizophrenia Patients Treated with Clozapine

Duncan J. MacCrimmon, M.D., Department of Psychiatry, Hamilton Psychiatric Hosp., 100 West 5th Street, Hamilton ON L8L 2B3, Canada; Margarita Criollo, M.D., Howard Galin, M.A., Susan J. Adams, B.M., Donald G. Brunet, M.D., James S. Lawson, Ph.D.

Summary:

Objectives: To evaluate QEEG in chronic schizophrenia before and after treatment with clozapine (CLZ) and to determine if EEG changes are related to clinical effect.

Method: Subjects were 20 chronic schizophrenic patients refractory to conventional neuroleptics. A QEEG database of 477 healthy controls. Data Collection: For QEEG there were 20 channels in the 10/20 configuration referenced to linked ears. Data expressed as log power were collected in the eyes closed alert condition in six frequency bands: delta (0.4–3.6 Hz), theta (4.2–7.8), alpha (8.2–11.8), beta1 (12.2–15.8), beta2 (16.2–19.8), and beta3 (20.2–23.8). The Positive and Negative Syndrome Scale (PANSS) was administered before and after stabilization on CLZ.

Results: CLZ produced clinical improvement in most cases. Topographic maps were marginally abnormal before CLZ (ie on conventional neuroleptics) and remained so after. Any changes were not related to degree of clinical improvement. Analysis of spectral power distributions showed marked power increase in the delta and theta bands after CLZ, but this was also unrelated to clinical response.

Conclusions: Although CLZ proves to be an effective therapeutic agent in chronic refractory schizophrenia, its therapeutic effects do not appear to depend on drug-induced EEG changes.

NR731 Thursday, June 4, 12 noon-2:00 p.m.

Melatonin Treatment of Psychotic Tourists Experiencing Jet Lag

Haim Y. Knobler, M.D., Jerusalem, Mental Health Center, Kfar Shaul Hospital, Jerusalem 91060, Israel; Gregory Katz, M.D., Hilla Knobler, M.D., Sergey Raskin, M.D., Rimona Durst, M.D.

Summary:

The occurrence of psychotic symptoms during "jet lag" following a transatlantic eastbound flight has been noticed among tourists admitted to the Jerusalem Mental Health Center.

Five tourists suffering from psychotic symptoms concomitant with jet lag were given 6 mg of melatonin together with antipsychotic medication. Melatonin treatment was continued up to 10 nights. The patients' diagnoses were bipolar with psychotic features (2), schizophrenia (1), atypical psychosis (1), and brief psychotic episode (1).

The combined treatment with melatonin resulted in an immediate restoration of the sleep pattern in all five patients. The resolution of the psychotic symptoms occurred from one day up to two weeks. No side effects were attributed to the melatonin treatment.

Conclusion: The combined use of melatonin—the pineal hormone involved in sleep and circadian rhythm—and antipsychotic medication restored the circadian rhythm and reduced signs of psychosis in five psychotic tourists suffering from jet lag. It is unclear whether melatonin may be the *only* treatment in such cases. The results may also suggest the possibility of adding melatonin to the treatment of psychotic patients suffering from other circadian phase disorders.

NR732 Thursday, June 4, 12 noon-2:00 p.m.

Divalproex in Alcohol and Drug Detoxification of Bipolar Affective Disorder Patients: Retrospective Chart Reviews

John R. Hubbard, M.D., Psychiatry, Vanderbilt, A 2205 MCN 21st Avenue, Nashville TN 37069; Peter R. Martin, M.D.

Summary:

Bipolar affective disorder (BPAD) patients have frequent comorbid substance use disorders. As divalproex has antiseizure and mood-stabilizing properties, it may be useful in detoxification of BPAD patients from central nervous system (CNS) depressant drugs of abuse. Studies on the possible efficacy of divalproex on withdrawal have, however, been limited. In order to investigate the efficacy of divalproex in detoxification of BPAD patients, we reviewed the charts of 24 patients with BPAD who were admitted to the Vanderbilt Addiction Center inpatient unit. None of the patients had seizures, delirium tremens, or other serious adverse events. The seven alcoholic BPAD patients who were treated with divalproex had fewer withdrawal symptoms (according to CIWA) compared with the five alcoholic BPAD subjects not treated with divalproex. Unlike the effect on alcoholic patients, the attenuation by divalproex of withdrawal symptoms was less obvious in five BPAD patients with non-CNS-depressant withdrawal. Six subjects were not evaluated due to only minimal or distant substance abuse problems and one due to a recent carbamazapine overdose. Overall, these case studies suggest that divalproex may be useful in reducing the symptoms of withdrawal in patients with comorbid alcohol dependence and BPAD. Future prospective controlled studies are suggested in this area.

Supported in part by Abbott Laboratories

NR733 Thursday, June 4, 12 noon-2:00 p.m.

The Adverse Effect Profile and Efficacy of Divalproex Sodium Compared to Valproic Acid

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Summary:

Background: Divalproex sodium (DVPX) has been reported to be better tolerated than valproic acid (VPA). To our knowledge no study has examined whether significant differences in the tolerability and efficacy exist between these preparations in psychiatric patients.

Objective: To compare the tolerability and efficacy of DVPX and VPA in psychiatric inpatients.

Methods: Information gathered from the medical records of 150 patients treated with DVPX was compared with that of 150 patients treated with VPA. These medical records were photocopied, and any mention of DVPX or VPA treatment was concealed. A series of demographic and clinical characteristics were compared.

Results: Patients treated with DVPX were less likely compared with patients treated with VPA to have gastrointestinal side effects (14.7% vs. 28.7%, $p = 0.003$), specifically anorexia (6.0% vs. 14.7%, $p = 0.014$), nausea or vomiting (6.7% vs. 16.7%, $p = 0.033$), and dyspepsia (11.3% vs. 22.0, $p = 0.013$). DVPX treated patients compared with VPA treated patients were less likely to have discontinued their medication because of side effects (18.2% vs. 40.9%, $p = 0.033$). Twelve of 19 (63.2%) patients who discontinued VPA because of gastrointestinal side effects were subsequently treated with DVPX of which only two continued with the gastrointestinal side effects.

Conclusion: DVPX was better tolerated than VPA in inpatients with a variety of diagnoses and on concomitant medications. Patients treated with DVPX compared with patients treated with VPA were less likely to experience gastrointestinal side effects and to have discontinued their medication because of an adverse event.

NR734 Thursday, June 4, 12 noon-2:00 p.m.

Knowledge and Attitudes of Psychiatric Inpatients and Outpatients About Their Medications

Pierre P. Leichner, M.D., Kingston Psych Hosp, PO Box 603, 752 King St West, Kingston, ONT K7L 4X3, Canada; Helen M. Gagne, Stephen A. Shigeishi

Summary:

Knowledge of medication among psychiatric patients has been associated with improved compliance and client satisfaction and is relevant to informed consent. Knowledge and attitudes concerning psychotropic medications were surveyed in 43 inpatients and 59 outpatients with a semistructured questionnaire that included the Drug Attitude Inventory (DAI-10). Demographic characteristics of subjects, such as sex, education, diagnosis, and chronicity, were obtained as well as a measure of mental status (Mini-Mental Status Exam [MMSE]). Over 85% of patients were able to accurately cite each of name, purpose, and frequency of administration of one medication that they were taking; less than 50% were able to name two side effects of one medication. Knowledge of a second medication in all areas surveyed was poorer, with only 37% of inpatients and 48% of outpatients displaying to identify one side effect. Of the accurate responses about side-effect knowledge, patients reported that awareness of side effects was derived from experience rather than from being informed in 62% of cases. Overall, medication knowledge in the areas surveyed was not associated with DAI, diagnosis, education level, sex, or chronicity, but was found to correlate significantly with MMSE score ($p < .05$) and was significantly higher in outpatients than inpatients ($p < .01$). These findings point to the assessment of cognitive ability and the identification of knowledge deficits as important aspects of patient education about medication.

NR735 Thursday, June 4, 12 noon-2:00 p.m.

In Vitro Metabolism of Enantiomers of Mirtazapine

Leon P.C. Delbressine, Ph.D., Department of Schaijk, NV Organon, Molenstraat 110, Oss 5340BH, The Netherlands; Ria M.E. Vos, Ph.D., Roger M. Pinder, Ph.D.

Summary:

Objective: To study the oxidative in vitro metabolism of S-(+)- and R-(−)-enantiomers of mirtazapine in microsomes from cells expressing a single human cytochrome P450 enzyme.

Materials and methods: In vitro metabolism of enantiomers of mirtazapine was studied in microsomes derived from cells expressing a single human cytochrome P450 isoenzyme (CYP 1A1, CYP1A2, CYP2A6, CYP2B6, CYP2C9, CYP2D6, CYP2E1, CYP3A4), and human liver microsomes incubated with [^{3}H]-labelled S-(+)-mirtazapine and R-(−) mirtazapine. Cytochrome P450 isoenzyme selective substrates were used as a positive control for enzymatic activity.

Results: During in vitro experiments, three metabolites were formed: 8-hydroxymirtazapine, N(2)-demethylmirtazapine and the N(2)-oxide of mirtazapine. For S-(+)-mirtazapine a significant Spearman rank correlation ($p < 0.01$) was found between the formation of the 8-hydroxy metabolite and the 1′-hydroxylation of bufuralol, a reaction considered to be a selective indicator of CYP2D6 activity. For R-(−)-mirtazapine a significant Spearman rank correlation ($p < 0.01$) was found between the formation of both the N(2)-demethyl- and the N(2)-oxide metabolites and the 6β-hydroxylation of testosterone, a CYP3A catalyzed reaction.

Conclusion: Preferred metabolic route in vitro for the S-(+)-enantiomer of mirtazapine is 8-hydroxylation catalyzed by CYP2D6, and for R-(−)-enantiomer preferred route is the N(2)-demethylation- and the N(2)-oxidation catalyzed by CYP3A.

NR736 Thursday, June 4, 12 noon-2:00 p.m.

History of Neuroleptic Use in Bipolar Patients

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Summary:

Despite ongoing concern about frequent use of typical neuroleptics in bipolar illness (Kane, 1988; Sernyak, 1993), few studies have looked at possible differences in course of illness variables in bipolar patients with or without neuroleptic exposure.

Review of 133 retrospective life charts of consecutive former NIMH bipolar patients found that 72% (n = 96) of the 133 patients had been treated with neuroleptics prior to coming to NIMH; 70% (n = 67) of patients with past neuroleptic treatment were BPIs while 30% were BPIIs. Neuroleptic-treated patients had an average of 3.2 concomitant medications, most frequently mood stabilizers (81%) and/or antidepressants (68%). The neuroleptic-treated patients had a mean number of 5.54 trials with an average dose of 164 mg/d chlorpromazine (CPZ) equivalents for an average of 166 days and a cumulative life time dose of 154,408 mg of CPZ equivalents. Of this previously neuroleptic-treated group (n = 96), only 12.5% (n = 12) were discharged from NIMH on neuroleptics (mean dose of 121 mg/d chlorpromazine equivalents).

When we compared the patients without prior neuroleptic exposure with the neuroleptic-treated group, we found that the neuroleptic group had a later age of onset of first mild symptoms ($p = .027$), but a more rapid progression from mild to moderate symptoms ($p = .012$), made more suicide attempts ($p = .044$), and required more hospitalizations ($p = .008$).

These and other findings in the literature indicate that a large number of the more seriously ill bipolar patients are still treated with neuroleptics in the community, although alternative approaches appear to be effective and possible for the vast majority.

NR737 Thursday, June 4, 12 noon-2:00 p.m.

Risperidone in Chronic Schizophrenia During Long-Term Follow-Up

Michael Philipp, M.D., Bezirks Krankenhaus, Prof Buchner Strasse 22, Landshut 84034, Germany; Margot Albus, M.D., Angela Klauder, M.D., Michael Linden, M.D.

Summary:

Objective: To document drug utilization, efficacy, and tolerability of risperidone in chronic schizophrenia during long-term follow-up.

Method: This is an interim analysis of an open long-term trial. Investigation of efficacy aims at CGI, PANSS positive and negative subscores (modified scale 0–3). Tolerability concerning extrapyramidal symptoms is evaluated at every visit (scale 0–3) including the documentation of other adverse events. Drug utilization aims at dosage, comedication, and supplementary therapy.

Results: 886 patients were analyzed, 51% were male, mean age is 41 ± 13 years, mean duration of disease 12 ± 9 years. Most patients have paranoid disease (55.5%). At onset patients had more prominent negative (1.7) than positive (0.9) symptoms and few EPS (0.5). During treatment all symptoms scores reduced highly significantly. In patients who had been switched to risperidone for EPS, the reduction was significantly higher than in others. Mean daily dosage was 4.7 mg risperidone. There was a tendency for risperidone monotherapy.

Discussion: These interim results show effectiveness and tolerability for long-term risperidone treatment. A mean daily dosage of 4.7 mg is sufficient, and there is a tendency for risperidone monotherapy.

NR738 Thursday, June 4, 12 noon-2:00 p.m.

Risperidone Dose Dependency in Elderly Patients

Wolfgang A. Wittgens, M.D., Herdecke University, Hans Prinshorn Hospital, Froensberger Str 71, Hemer D-58675, Germany; Ulrich Trenckmann, M.D.

Summary:

Objectives: Efficacy and safety of risperidone in younger patients with chronic schizophrenia is well established (mean daily dose 4–6mg). Application of risperidone in elderly patients has positive effects on symptoms of dementia (aggressiveness, affective symptoms; mean daily dose 0.5–2mg). It is, however, unclear whether there is a difference in optimal daily dosage concerning gender and age vs. old age.

Methods: Sex (F = female, M = male), age (dichotomised into A1 = 58 – 79 and A2 = 80 – 93 years), diagnosis (D1 = behavioural and psychological symptoms in dementia [BPSD] vs D2 = sychotic disorders) and risperidone daily dose at discharge were documented during 1996/97 in 183 patients treated in our hospital and discharged in stable condition. Dose was individually adjusted to maximize efficacy and to minimize side effects.

Results: Doses (mg) found in the eight groups were as follows (mean ± standard deviation [sample size]): diagnosis D1: F/A1: 1.84 ± 0.85 [41], F/A2: 1.41 ± 0.84 [37], M/A1: 1.64 ± 1.02 [25], M/A2: 1.56 ± 1.22 [18]; diagnosis D2: F/A1: 2.86 ± 1.81 [39], F/A2: 2.17 ± 1.17 [6], M/A1: 4.38 ± 2.01 [17], M/A2: [0]. Dose dependency of risperidone on sex, age, and diagnosis was analyzed by means of a 3-way-ANOVA. Significant main effects were found for sex ($p = 0.002$) and diagnosis ($p < 0.0001$); there was a significant sex by diagnosis interaction ($p = 0.001$).

Discussion: Results confirm that elderly psychotic patients receive higher risperidone doses than demented patients. Men seem to get higher optimal doses than women. The lack of age dependency needs further investigation.

NR739 Thursday, June 4, 12 noon-2:00 p.m.

Gender-Specific Prolactin Olanzapine Versus Haloperidol in Schizophrenia

Bruce Kinon, M.D., Eli Lilly and Company, Lilly Corporate Center, Indianapolis IN 46285; Bruce Basson, M.S., Gary D. Tollefson, M.D.

Summary:

Objective: The influence of gender upon prolactin (PRL) response to either olanzapine (OLZ) or haloperidol (HAL) was investigated for up to one year during a clinical trial.

Method: Within a double-blind, controlled, comparative clinical trial of OLZ and HAL in predominantly schizophrenic patients, serum PRL was assessed at baseline, after up to six weeks acute treatment, and after up to 52 weeks extended treatment. A subpopulation of HAL-treated patients ("HAL-OLZ" patients) was switched to open-label OLZ treatment after acute treatment and followed for up to 52 weeks.

Results: Mean PRL for males and females treated acutely with HAL was significantly higher than that of OLZ-treated males and females. After extended treatment, mean PRL for HAL-treated males and females remained significantly elevated compared with OLZ-treated and with HAL-OLZ patients now on OLZ. HAL-treated females compared with males had a significantly greater increase in mean change from baseline PRL. Mean change from baseline PRL did not differ significantly between OLZ-treated males and females.

Conclusions: Treatment with HAL is associated with a persistently marked increase in PRL in both males and females (females > males). HAL-associated increases in PRL are fully reversed when patients are subsequently switched to OLZ treatment.

NR740 Thursday, June 4, 12 noon-2:00 p.m.

Double-Blind Comparison of the Adverse Event Profile of the Tricyclic Antidepressants and the SSRI Citalopram

Per Tanghoj, H. Lundbeck A/S, Ottiliavej 9, Copenhagen DK-2500, Denmark; Heikki Hakkarainen, M.D.

Summary:

Objective: To compare the adverse effect profile of tricyclic antidepressants and citalopram.

Method: The safety profile of citalopram has been directly compared with that of the TCAs in double-blind trials including more than 1,200 patients. Comparative TCAs evaluated included imipramine, clomipramine, and amitriptyline. The incidence of adverse events was compared statistically in the pooled citalopram and TCA groups.

Results: For adverse events reported by at least 10% of patients in either group, dry mouth, somnolence, dizziness, constipation, and tremor occurred significantly more frequently in patients receiving TCAs. Only headache and nausea had a significantly higher incidence in the citalopram group. Blood pressure changes indicative of orthostatic hypotension were observed during TCA administration, but not in patients receiving citalopram.

Conclusion: Citalopram, the most selective of the SSRIs, produces no significant inhibition of catecholamine reuptake and has shown no significant affinity for any neurotransmitter receptor studied. The TCAs, by contrast, have been found to produce blockade of both presynaptic norepinephrine reuptake and postsynaptic muscarinic receptors, pharmacologic actions associated with cardiovascular adverse events and anticholinergic side effects. The results of this study confirm that treatment of depression with TCAs is associated with a greater incidence of adverse events and greater potential safety risks than treatment with the SSRI citalopram.

NR741 Thursday, June 4, 12 noon-2:00 p.m.

Citalopram Versus Imipramine in the Treatment of Inpatient Depression: Results from a Double-Blind, Placebo-Controlled Trial

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Summary:

Objective: Citalopram is a selective serotonin reuptake inhibitor used widely since 1989 for the treatment of depression. It is currently under regulatory review in the U.S. This study compared citalopram and imipramine with placebo in the treatment of inpatient depression.

Method: This double-blind, placebo-controlled, parallel-group, six-week, comparative pilot study (N = 46) examined the efficacy of citalopram (20–80 mg/day), imipramine (50–300 mg/day), and placebo in hospitalized patients diagnosed with major depression or bipolar disorder. Efficacy was evaluated on the basis of change from baseline in the 24-item Hamilton Depression Rating Scale (HAM-D), the Zung Self-Rating Depression Scale, and the Clinical Global Impressions (CGI) scale. The mean HAM-D at baseline was approximately 35, and most patients met diagnostic criteria for melancholia.

Results: Based on an intent-to-treat analysis of the change from baseline to endpoint, citalopram, but not imipramine or placebo, produced significant improvement on all scales.

Rating Scale	*Citalopram*	*Imipramine*	*Placebo*
HAM-D	−14.0[4]	−8.1[4]	−4.6
Zung	−13.1[4]	−3.6	+0.9
CGI Severity	−1.3[4]	−0.9[4]	−0.2

[4] Significantly different from baseline ($P < 0.05$).

Citalopram patients also rated themselves significantly less symptomatic at endpoint than did imipramine or placebo patients.

Conclusion: The results provide evidence for citalopram's effectiveness in treating inpatient depression.

NR742 Monday, June 4, 12 noon-2:00 p.m.

Principal Components of the Beck Depression Inventory

Robert T. Dunn, M.D., Biological Psychiatry, NIMH, NIH, 10 Center Dr/Bldg 10, Rm 3N212, Bethesda MD 20892; David Luckenbaugh, M.A., Mark A. Frye, M.D., Timothy A. Kimbrell, M.D., Elizabeth A. Osuch, M.D., Andrew M. Speer, M.D., Robert M. Post, M.D.

Summary:

Principal components or factor analysis of the Beck Depression Inventory (BDI) has been reported for several different psychiatric and nonpsychiatric populations, but few reports examined primary mood disorder patients. We performed principal components analysis of the BDI for a combined group of bipolar and unipolar patients. We also compared separately the correlations between components and between individual BDI items for bipolar and unipolar patients.

Sixty treatment-refractory affective disorder patients (27 BP, age = 36.7 ± 11.3, BDI = 16.4 ± 13.4; 33 UP age = 42.7 ± 13.2, BDI = 17.1 ± 8.4) were medication-free at the time of BDI administration. Varimax rotated orthogonal loading for principal components of the BDI using all patients produced four components. Highly loaded components with unique BDI items and apparent face validity were produced when only items loading ≥ 0.6 were included in components.

The highly loaded BDI components found may be conceptualized as: negative cognitions, psychomotor/anhedonia, vegetative symptoms, and somatic symptoms. Correlation analysis of the highly loaded components for bipolar and unipolar patients suggests that BDI depressive symptoms are more diffuse in a bipolar patient, and more clustered in a unipolar patient. Supporting these conclusions, bipolars had more BDI items than unipolars that significantly correlated with the cardinal symptoms of depression, sadness (BDI#1), and anhedonia (BDI#4). These results are consistent with phenomenological, and perhaps etiological, differences between bipolar and unipolar depression.

NR743 Thursday, June 4, 12 noon-2:00 p.m.

Efficacy and Safety of Sertraline in Depressed Geriatric Patients with Vascular Disease

P. Murali Doraiswamy, M.D., Department of Psychiatry, Duke University, Box 3018 Duke South Hospital, Durham, NC 27710; K. Ranga Rama Krishnan, M.D., Cathryn Clary, M.D.

Summary:

Objective: Rates of depression are significantly higher in elderly patients suffering from cardiovascular and cerebrovascular disease, but there are limited data available in the literature on the efficacy and safety of antidepressant treatment in this population. We examined the safety and efficacy of sertraline in depressed elderly subjects with comorbid vascular disease defined as current or past diagnosis of MI, CAD, CVD or peripheral vascular disease to address this question.

Method: We combined the results of patients taking sertraline (50–150 mg) from two 12-week, double-blind comparator studies in outpatients at least 60 years old suffering from major depression (HAM-D 24 ≥ 18).

Results: 220 sertraline patients were available for analysis; 109 (49.5%) met criteria for clinically significant vascular disease (currently or by history). Clinical/demographic variables were similar in both groups: 62% female, mean age 68 years. Vascular patients were more likely to have had recurrent depressive episodes (54% vs. 36%; $p < 0.01$). Efficacy results for sertraline were comparable for both groups, except for more endpoint improvement on both HAM-D (−13.19 vs. −11.08; $p = 0.057$) and CGI-global improvement (73% much/very much vs. 59%; $p < 0.05$) in the group with vascular disease. Sertraline was tolerated well in both groups. Efficacy and safety results will be presented in more detail and placed in the context of the efficacy and safety of sertraline in elderly patients treated in a placebo-controlled condition.

Conclusion: Sertraline treatment was well tolerated and equally effective in patients with and without vascular disease in this 12-week treatment study. The results of this study will be related to previous reports of more strictly defined vascular depression.

This research was supported by Pfizer, Inc.

NR744 Thursday, June 4, 12 noon-2:00 p.m.

Comparison of Risperidone and Olanzapine in Six Veterans Affairs Hospitals

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Summary:

Objective: To identify average doses (including age and diagnosis) and to assess the degree of dose escalation of risperidone and olanzapine.

Methods: Data were collected on over 12,000 outpatient risperidone and olanzapine prescriptions from six Veterans Affairs hospitals, by quarter, for one year. Additionally, data from all patients (n = 178) at one hospital were evaluated for diagnosis, age, and dose.

Results: There were 8,913 prescriptions for risperidone and 3,823 for olanzapine. The average dose per day for both groups did not vary more than 4% throughout the year (risperidone increased from 3.47 mg to 3.62 mg and olanzapine decreased to 10.01 mg from 10.48 mg). Average daily cost increased 5% for each drug (risperidone $3.59 to $3.79, olanzapine $5.29 to $5.56). The single hospital data showed the peak use of risperidone in the seventh decade, while maximum dose (4.71 mg) was in the 40s. Olanzapine's peak use was in the 40s, while maximum doses were in the 20s (11.25 mg). Dose for specific diagnosis showed average doses in the psychotic patient was 4.91 mg for risperidone and 7.89 mg for olanzapine. The demented patient used doses of 1.83 mg of risperidone and 6.78 mg of olanzapine.

Conclusion: The dosing and cost of each drug was fairly stable over a year. Risperidone is being used more in the older patient and olanzapine in the younger patient. Each shows decreasing doses after the fourth decade of life.

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