

experience exacerbation of aggression after 1-3 months of treatment.

Clonidine, especially when combined with stimulants, has been used successfully with some "hyperaroused" ADHD patients. One special population for which clonidine has demonstrated effectiveness is for very young children, preschoolers and primary grade students, who are extraordinarily aggressive and hyperactive.

This presentation will discuss pharmacological interventions for ADDs with aggression in the context of a neurobiological model of brain function in various subtypes of ADDs.

MEDICATIONS FOR ADDs WITH COMORBID ANXIETY DISORDERS &/OR LEARNING DISORDERS. Rosemary Tannock, Department of Psychiatric Research, Hospital for Sick Children, Toronto, Ontario, Canada.

Epidemiological studies indicate that anxiety disorders occur comorbidly with ADDs at rates of approximately 25%, much greater than what would be statistically predicted from base rates of both disorders in the general population. Yet several studies indicate that this syndrome seems not to respond to conventional stimulant treatment so fully as do other subtypes of ADD. This presentation will review data on treatments for ADDs with comorbid anxiety disorders with stimulants and with alternative medications.

Learning disorders in combination with ADDs also constitute a major problem in childhood which frequently persists into adolescence and adulthood. The degree of overlap between ADHD and LD far exceeds chance rates even in those studies using stringent criteria for defining ADHD and LD, but the nature of the relationship is unclear.

Treatment responses of comorbid ADHD-LD to stimulant medications have not been well-studied. Yet many of the symptoms of some learning disorders overlap with symptoms of ADDs which have been found responsive to stimulants.

Some studies suggest that the effects of stimulants on information processing are global rather than specific. This suggests that stimulants may generally improve cognitive functioning of any ADD patient, including those with comorbid learning disorders, in ways that may enhance the patient's capacity to perform academic tasks and to respond to instruction.

This presentation will review aspects of the overlap between ADDs and learning disorders which may be responsive to available medications. It will also suggest some unresolved issues for future research.

MEDICATIONS FOR ADDs WITH COMORBID MOOD DISORDERS &/OR SUBSTANCE ABUSE. Thomas J. Spencer, Department of Psychiatry, Harvard University, Massachusetts General Hospital, Boston, MA.

In both clinical and epidemiological studies, reported rates of comorbidity between ADD + mood disorders (dysthymia, major depressive disorders, bipolar disorders) range from 15-75%. Pharmacological treatment of these comorbid combinations may require concurrent use of combined medications. This presentation will review clinical symptoms of this comorbid combination and will present research regarding efficacy, risks and benefits of various medication options to be consid-

ered. The role of psychoeducation and other multi-modal interventions will also be discussed.

Recent studies have also reported high rates of comorbidity between ADDs and substance abuse. Longterm outcome studies indicate that adults identified as having ADHD in childhood have 15-40% lifetime rates for alcohol abuse and 10-30% lifetime rates for drug abuse. This presentation will review data about comorbid ADHD and substance abuse and will offer guidelines for use of medications in treating persons with this comorbid combination. Special considerations, risks and benefits of various medications and other treatment options for recovering persons with ADDs will be discussed.

SYMPOSIUM

Effective Interventions for Homeless: Outcomes for Substance Abuse, Employment, Homelessness.

Chair: *Jesse B. Milby*, VA Medical Center, Birmingham, AL.

Discussant: *Robert Huebner*, National Institute on Alcohol and Alcoholism, Washington, DC.

EFFICACY OF DAY TREATMENT AND WORK THERAPY FOR HOMELESS SUBSTANCE ABUSERS. Jesse B. Milby, VA Medical Center, Birmingham, AL.

Cocaine abusing homeless are difficult to treat and retain. This study's purpose was to compare efficacy of two interventions.

Subjects were 176 homeless persons, 81% males, 92% African and 8% European Americans, average age 36, average education 12.1 years, 34% veterans.

Assessments for major outcomes were: Personal History Form (homelessness), Addiction Severity Index, and EMIT urine toxicologies.

The following procedure was followed: Subjects were randomly assigned to two interventions conducted in separate facilities after screening to define homelessness, substance abuse, and rule out psychotic disorders. Assessments were administered at baseline, two, six, and 12 months by interviewers, "blind" to subjects' assignment.

Usual care involved: medical evaluation, treatment and/or referral; referrals for housing and vocational services; AIDS education provided in both interventions; and weekly individual and group counseling. Counselors served as case managers.

Day treatment involved: transportation to and from shelters and lunch; group oriented interventions and individual counseling. After two months treatment, subjects had four months work therapy, where, contingent on drug-free urines, they refurbished dilapidated houses for program use as managed housing. Wages were used to rent managed housing and occupancy was contingent on drug-free urines. The building contractor provided supervision, training, tools, etc. and work references for subjects who attempted regular employment.

Eighty-nine completed 12 months. Significant differences favoring day treatment obtained in two of three major outcomes. Percent cocaine positive urine toxicologies after baseline, was significantly less ($p = .003$). Unemployment was not significantly different, but the within group difference for day treatment was ($p < .01$). Days homeless over the last 60 days, showed a significant reduction ($p = .026$).

This is one of the first demonstrations that homeless co-