

Addiction Therapy Takes On Cognitive Deficits

BY BRUCE JANCIN

ISTANBUL, TURKEY — Remediation of the cognitive deficits often present in chronic substance abusers offers an exciting new opportunity to treat addictive disorders.

Two approaches are under investigation: computer-assisted cognitive rehabilitation (CACR) using structured exercises to improve cognitive flexibility and, more recently, pharmacologic manipulation of various neurotransmitter systems that are involved in the cognitive impairment, Frank Vocci, Ph.D., said at the annual congress of the European College of Neuropsychopharmacology.

Findings from numerous studies have established that although vocabulary and verbal skills are preserved in substance abusers, deficits in many other areas of cognition are common.

"The deficits have a high prevalence and are oftentimes as severe as those seen in traumatic brain injury," said Dr. Vocci, corporate president of the Friends Research Institute, Baltimore.

"They evolve over an extended period of time. They usually go unrecognized by providers. You can't tell who's cognitively impaired based upon a clinical interview; you have to run neuropsychologic batteries. And the patient behaviors are often attributed to personality and character, not cognitive impairment," he said.

This misinterpretation of cognitive dysfunction as a fixed characterologic issue often sets up a poor therapeutic alliance and patient/therapist mismatch.

The therapist views the substance abuse patient as unmotivated to par-

ticipate fully in the learning experience, which cognitive-behavioral therapy or its variants are supposed to be.

Cognitive impairment has been shown to be adversely related to treatment engagement. In turn, treatment engagement is related to length of stay in a treatment program, which in turn is strongly related to treatment outcome, he continued.

The cognitive impairment will gradually improve spontaneously during the first 6 months or so of sobriety. But treatment programs in the United States are becoming shorter, which means that patients may not be in treatment long enough to achieve significant cognitive improvement.

"Spontaneous recovery may be too little, too late to be of any real consequence," according to Dr. Vocci. "We end up with a terrible mismatch: The greatest amount of therapy may be given at a time when a person is cognitively impaired and has the least ability to learn from it."

This is the impetus for accelerating cognitive recovery.

The initial success came with CACR. William Fals-Stewart, Ph.D., and his colleagues at the State University of New York, Buffalo, Research Institute on Addictions showed in the late 1990s and early part of this decade that CACR that had been designed to address attention, memory, executive function, and problem-solving skills led to improvement in multiple cognitive do-

main in participants in a 6-month residential recovery program.

In a study involving 120 patients, those who were randomized to three 50-minute CACR sessions per week for 2 months in addition to standard treatment stayed in the treatment program for an average of 200 days, which was significantly longer than the 128 and 132 days in two control groups.

And CACR made a real difference in treatment outcomes: The CACR group had more than twice the program graduation rate, fewer subsequent problems in employment, better family and social functioning, and less medical problems, all of which were fully mediated by the differences in length of stay in the treatment program, Dr. Vocci explained.

However, most of the work with CACR has been done in residential treatment settings, which are becoming increasingly rare. Much research remains to be done before it is known how well CACR will translate to the outpatient setting.

Turning to pharmacologic strategies for accelerating cognitive remediation in substance abusers, Dr. Vocci said that the big news in that regard is that a large, double-blind, placebo-controlled, multicenter randomized trial of modafinil (Provigil) at 200-400 mg/day in methamphetamine abusers has just been completed.

The data of the National Institute on Drug Abuse-sponsored study are now

being analyzed in preparation for presentation of the results in 2010.

"This trial is the paradigm shift—looking at medications to enhance cognition in order to enhance treatment," he observed.

Beyond modafinil, numerous other pharmacologic agents are under study in pharmacology laboratories as selective modulators of a multiplicity of neurotransmitter systems that are believed to play key roles in the cognitive deficits characteristic of substance abusers.

An example is attentional set shifting. In animal models, attentional set shifting can be remediated with use of the veterinary α_2 noradrenergic antagonist atipamezole (Antisedan), as well as by D-1 dopamine agonists, D-4 dopamine antagonists, or 5-HT₆ antagonists. So there is a rich pipeline for pharmacologic remediation of cognitive impairment as a means of enhancing the treatment of addictive disorders.

Some members of the audience commented that they thought giving a psychoactive stimulant such as modafinil to substance abusers sounded somewhat risky.

However, Dr. Vocci responded that he and his colleagues were concerned about that possibility, but that they had found that cocaine and methamphetamine abusers who were given even high doses of modafinil under laboratory conditions didn't get high from it. "It doesn't seem to be as addicting as other drugs, and we haven't seen a problem with it in our patient population."

Dr. Vocci disclosed serving as a paid consultant to multiple pharmaceutical companies; however, the fees go to the Friends Research Institute rather than to him personally. ■

Patient behaviors are often attributed to personality and character and not cognitive impairment, which often sets up a poor therapeutic alliance.

Hispanics and Nonmedical Use of Prescription Drugs

BY RENÉE MATTHEWS

BETHESDA, MD. — Younger Hispanics born in the United States were more likely to report nonmedical use of prescription drugs than were their foreign-born counterparts, according to findings from a study of more than 2,000 people.

No significant differences in nonmedical prescription-drug use were found between immigrants who had been in the United States for fewer than 5 years and those who had lived there for 5 or more years, suggesting that duration of residency did not change the rates of nonmedical use, noted Yehuda Neumark, Ph.D., who presented the data at the annual conference of the Association for Medical Education and Research in Substance Abuse.

The conference was sponsored by Brown Medical School, Providence, R.I.

Minority groups, including Hispanics, "tend to face greater medical and social adverse consequences of substance use.

"Therefore, understanding the factors that determine the origin and course of substance use disorders within these minority groups is essential for the development of primary and secondary prevention services," he said.

Dr. Neumark, of Hebrew University-Hadassah Braun

School of Public Health, Jerusalem, and his colleagues used data from the 2002-2003 National Latino and Asian American Study of 2,554 noninstitutionalized individuals aged 18 years and older who lived in the United States.

The study gathered information on the prevalence of psychiatric disorders and use of mental health services, but participants also were asked about lifetime and past-year use of prescription drugs with or without a recommendation from a provider.

The lifetime and past-year prevalence of nonmedical use of prescription drugs among Hispanics in the United States was 8.1% and 1.6%, respectively, and both of these prevalences were higher in U.S.-born Hispanics (14.4% and 2.7%) than in immigrant Hispanics (4.3% and 0.9%). Hispanic men were more likely than were women to report nonmedical use of these drugs, as were all individuals aged 18-29 and 30-44 years. Income and region of residence were not associated with use.

After controlling for relevant confounding factors, both groups—U.S.-born and immigrant—were more likely to report nonmedical prescription-drug use if they

had been diagnosed with a depressive disorder (adjusted odds ratio, 1.9), chronic pain (AOR, 2.9), or alcohol dependence (AOR, 3.4). The association between nonmedical use and an anxiety disorder diagnosis was not significant (AOR, 1.5).

The researchers said it was important to understand the mechanisms driving the factors that affect the prevalence of nonmedical use of prescription drugs in immigrant and U.S.-born Hispanics to be able to develop and better target preventive and treatment programs.

Among those factors were migration patterns, country of origin, values that reinforce substance use, acculturation gaps, maladaptation, and lack of social capital.

Dr. Neumark noted that this was particularly important given that the Hispanic population in the United States is projected to reach 30% of the American population in 2050 and that this trend is being driven "primarily by a large influx of socially vulnerable" Hispanic immigrants and their U.S.-born children.

None of the researchers reported any financial disclosures. ■

The lifetime prevalence of the nonmedical use of prescription drugs was 14.4% among Hispanics born in the United States and 4.3% among immigrant Hispanics.