Screening Tool May Help Identify Alcohol Use

BY DAMIAN McNAMARA
Miami Bureau

ORLANDO — It is a good idea to routinely ask patients—particularly those with risk factors for dependence—about their alcohol use, George F. Koob, Ph.D., said at a psychopharmacology congress sponsored by the Neuroscience Education Institute.

However, patients are not always honest, copresenter Dr. Stephen M. Stahl pointed out. "Most of us try to screen patients for alcohol, but . . . I can't tell you the number of times I've been bamboozled by patients.

"In clinical practice, there are a lot of people who are heavy drinkers who do not think of themselves as alcoholics. They will be completely insulted if you tell them," said Dr. Stahl of the department of psychiatry, University of California, San Diego, and chairman of the institute.

He and Dr. Koob, professor and chairman of the committee on the neurobiology of addictive disorders at the Scripps Research Institute, La Jolla, Calif., recommended use of the Alcohol Use Disorders Identification Test (AUDIT). However, 84% of those attending the meeting indicated they have never used the AUDIT screening tool, according to an electronic poll.

According to Dr. Koob, two neurologic systems reinforce alcohol dependence—both dopamine and serotonin pathways—and make it more difficult for people to stop drinking, and advances in neurobiology are offering new insights into how the brain is altered by alcohol use, dependence, and withdrawal.

"The neurobiology has led us where there are spectacular new targets for treatment of alcoholism," Dr. Koob said. Rewarding effects of alcohol may be mediated by dopaminergic and opioidergic systems.

Researchers have long proposed that the pleasure provided through the mesolimbic pathway explains why people initially drink alcohol or take drugs. Dopamine is released in the front end of the brain while opioids activate the ventral tegmental area and nucleus accumbens. "So it's a combination of the opioids and dopamine effects that causes a pleasurable experience."

Impulsive drinking, particularly in young males, is an activation of reward mechanisms driven by initial pleasurable effects, Dr. Koob said. "As a person continues to drink, the reward system gets impaired but hyperarousal in brain is set up that only alcohol will suppress. So [drinking] becomes self-medicating," he noted.

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"Those people you knew in college who could drink everyone under the table ultimately end up with a problem," Dr. Koob said. "That starts the neuroadaptive process, so they end up needing that [higher] amount of alcohol."

The acute double action of alcohol is to enhance γ-aminobutyric acid (GABA) and decrease glutamate, Dr. Koob said. Both dopamine and serotonin pathways may mediate alcohol dependence. The frontal cortex, amygdala, and hippocampus are the brain areas that might contribute to dependence, Dr. Koob added.

Neurobiologists have found that consumption of alcohol also may alter regulatory agents of stress, particularly increasing corticotropin releasing factor (CRF) activity and decreasing neuropeptide Y. "While you are binging on alcohol, you are releasing the good guys like dopamine peptides, but when you get into withdrawal, you are recruiting the bad guys—the GABA system and the CRF stress hormone," Dr. Koob said.

"You have a double-whammy effect when you become dependent—you lose the good guys and gain the brain stress system—so you continue to self-medicate with your drug of choice." ■

Motivations of Opioid and Stimulant Abusers Differ

BY MARY ELLEN SCHNEIDER
New York Bureau

BOSTON — College students who abuse opioids do so for different reasons than students who abuse stimulants, according to research presented at the annual meeting of the American Public Health Association.

Opioid users were more likely to report that they used the drugs to relax or to get high, while stimulant users were more likely to say that they used the drugs to help improve performance at school or to increase alertness.

These differences could be helpful in crafting interventions, said Julie Brevard of Inflexxion Inc., a health, science, and technology research firm that is based in Newton, Mass.

Ms. Brevard, along with principal investigator Sarah Lord, Ph.D., and colleagues at Inflexxion, conducted an online survey of college students who admitted to ever using prescription opioids and stimulants recreationally.

The survey was advertised on an online social networking forum for college students and at the 27 colleges nationwide with the highest usage of the networking forum Web site.

The researchers received 689 responses, 522 of which passed data validity checks and were analyzed. The research was funded with a grant from the National Institutes of Health.

About 61% of the respondents reported that they had used both stimulants and opioids. Of the rest, 18% had used opioids only and 21% had used stimulants only. About 41% of respondents said they were regular stimulant users, which was defined as using the drug once a month or more. And 25% of respondents reported that they were regular opioid users.

Among opioid users, more than 70% said they used the prescription pain relievers to relax and nearly 68% said they took them to get high. A smaller percentage (27%) reported taking opioids to help with depression and anxiety or for chronic pain (19%).

Regular opioid users were more likely than infrequent users to cite depression or pain management as reasons for use. They also reported more symptoms of abuse and dependence and beliefs that prescription medications could give them a better high than other drugs, said Ms. Brevard.

Among stimulant users, nearly 78% reported that they took the drugs to help them perform better in school, and nearly 74% said they took them to help increase alertness. Nearly 24% reported they took stimulants to lose weight or prevent weight gain.

Regular stimulant users were more likely than were infrequent users to report that weight loss was a reason for use. And similar to opioid users, frequent stimulant users were also more likely than infrequent users to report symptoms of abuse and dependence and to have more positive views about prescription drug abuse.

Nearly half (49%) of respondents said they first used prescription drugs nonmedically during the years they were in high school. "It seems like high school is a critical experimentation time," said Ms. Brevard.

The college students who were surveyed said that they accessed the prescription drugs primarily through friends (84%). Parents, other family members, and the Internet were also avenues for access. About 7% of respondents reported that they had a valid prescription for all the medications they used. ■