

Parasomnias Require Thorough Evaluations

BY JANE SALODOF MACNEIL
Senior Editor

SCOTTSDALE, ARIZ. — Even though sleepwalking, night terrors, and other parasomnias are usually benign and do not call for specific interventions, Dr. Teofilo L. Lee-Chiong Jr. urged that they be thoroughly evaluated in children and adults.

Violent and potentially injurious behavior can endanger the person and/or the person's bed partner, according to Dr. Lee-Chiong, head of the sleep medicine section at National Jewish Medical and Research Center in Denver. A recent patient, for example, walked for 4 hours along a busy interstate highway while fast asleep, Dr. Lee-Chiong said at a meeting on sleep medicine sponsored by the American College of Chest Physicians.

Another concern, he added, is that a patient with REM sleep behavior disorder could have undiagnosed Parkinson's disease or another neurological disorder. Characteristics of this condition include abnormal behavior during REM sleep, REM sleep without atonia, and the enactment of altered, unpleasant, or violent dreams.

"I believe assessment should be extensive," Dr. Lee-Chiong said, recommending a comprehensive neurological evaluation with EEG and brain MRI in REM sleep behavior disorder cases.

Even if these tests prove negative, he urged that the patient be closely monitored for years afterward in case a neurological disorder is late in emerging.

Dr. Lee-Chiong defined parasomnias as undesirable physical phenomena or behaviors that appear "alongside sleep," but



are not associated with more common complaints such as excess sleepiness or insomnia. "We all seem to know what it is, but deep down we know very little," he said, adding afterward in an interview, "If you take [posttraumatic stress disorder] away, there really is no psychopathology that predicts the development of parasomnias."

A variety of factors make evaluation difficult, according to Dr. Lee-Chiong. Patients are unaware of some parasomnias. Descriptions are often inaccurate or misleading. The clinician rarely sees the parasomnia. If it is not related to sleep architecture, then polysomnography may not be useful. Moreover, a single negative test does not rule out infrequent events.

Polysomnography is indicated when an underlying seizure disorder is suspected, someone has been injured, the case has medical-legal implications, or the person presents with REM sleep behavior disorder, according to Dr. Lee-Chiong. EEG electrodes should be used if seizures are a possibility. In REM sleep behavior disorder cases, he also recommends EMG monitoring of the upper extremities. Often four to six studies are required before a diagnosis can be made, he advised, and technicians need to be trained to recognize subtle features.

Dr. Lee-Chiong characterized sleepwalking, sleep terrors, and confusional arousals as disorders of arousal that usually occur in non-REM sleep during the first third of the night. These are four times as common in childhood, he said, with a prevalence of 16% vs. 4% in adults. Febrile illness in children and medications

Tips for Making Bedrooms Safer

Removing weapons such as guns and knives from the bedroom is a given when people present with parasomnias that put them and their bed partners in harm's way.

Yet Dr. Teofilo L. Lee-Chiong Jr. said in an interview that he knows of no cases in which these weapons have caused injury during a parasomnia. Other, less obvious changes are at least as important, he said, offering the following recommendations for a safe bedroom:

- ▶ Keep the floor very clean. There should be no object on the floor that could cause a person to slide or trip.
- ▶ Make sure nothing breakable is within reach of the person. Glasses

and mirrors might have to be removed from the bedroom.

- ▶ Exclude sharp objects, including pens.
- ▶ Pad sharp edges of bedroom furniture.
- ▶ Close the bathroom door—add a barrier, if necessary—to keep out a person having a parasomnia. The floor is harder, and fixtures can create a dangerous obstacle course for a person who is not fully awake.
- ▶ Sleep on the first floor if possible. Stairs and upper story windows are hazards.
- ▶ Use heavy curtains to prevent cuts to the hand and forearm, if a person strikes out and breaks the glass.

Even if tests prove negative, it makes sense to closely monitor the patient for years afterward.

DR. LEE-CHIONG

in the elderly are among the predisposing factors, though sleep terrors are uncommon in older people.

Genetics appears to play a role in sleepwalking, according to Dr. Lee-Chiong. Prevalence is 45% if one parent engaged in sleepwalking, and 60% if both parents had the condition. In addition, the DQB1*0501 allele is more common among sleepwalkers.

Treatments can range from proper sleep hygiene and relaxation techniques to pharmacologic agents, including low-dose benzodiazepines, SSRIs, tricyclic antidepressants, and trazodone.

In cases of confusional arousals (waking with disorientation, inappropriate behavior, or inability to be consoled), Dr. Lee-Chiong suggested attempting to break the cycle by waking a child about 15 minutes before the time these usually occur.

REM sleep parasomnias typically occur

during early morning hours, he said. Unlike sleepwalkers, people with REM sleep behavior disorder usually keep their eyes closed and can recall their dreams afterward. The condition is more common in men and can include screaming, punching, kicking, jumping, and running. "True intent to harm" should be considered in the differential diagnosis.

A host of medications—for example, alcohol, amphetamines, anticholinergics, antidepressants other than bupropion, biperiden, cocaine, sedative-hypnotics, and selegiline—might precipitate REM sleep behavior disorder, as can withdrawal from alcohol, hypnotic agents, and REM suppressants.

Deciding whether and how to treat can be problematic, according to Dr. Lee-Chiong. Daily medication might be riskier than infrequent parasomnias. Clonazepam has been successful in 87% of cases, he said. ■

Obstructive Sleep Apnea Hypopnea Raises Risk of Crashes

BY KERRI WACHTER
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Patients with obstructive sleep apnea hypopnea had a greater rate of motor vehicle crashes than did matched controls, and they were three times more likely to be involved in crashes involving personal injury, according to researchers in British Columbia.

"Our data indicate that the increased risk of motor vehicle crash occurs at all levels of OSAH severity," Dr. Alan T. Mulgrew, of the University of British Columbia, Vancouver, and his colleagues wrote (Thorax 2008 Jan. 30 [Epub doi:10.1136/thx.2007.085464]).

The study involved 783 adult patients who were referred for overnight polysomnography for suspected sleep-disordered breathing. Patients were excluded if they had symptoms of an-

other sleep disorder known to cause daytime sleepiness (periodic limb movement disorder), or if they had another serious medical condition or overt psychiatric disease. They were also excluded if they were already being treated for OSAH.

Overnight polysomnography was performed using conventional instrumentation, and analysis was performed according to the American Academy of Sleep Medicine's recommendations on syndrome definition and measurement techniques. Patients completed a number of surveys on the night of their polysomnography study. Daytime sleepiness was assessed using the Epworth Sleepiness Scale.

All motorists in British Columbia are insured by a single insurance corporation: the Insurance Corporation of British

Columbia (ICBC). Objective crash data for patients—including crash severity type—was obtained for 3 years prior to the sleep study.

All patients were matched with an individual control from the ICBC database based on age, gender, type of license, driving experience, and postal region, Dr. Mulgrew said.

Patients were categorized by OSAH severity based on the apnea hypopnea index (AHI): normal polysomnography (AHI of 5 or fewer events per hour), mild OSAH (AHI greater than 5 and up to 15), moderate OSAH (AHI greater than 15 but less than 30), and severe OSAH (AHI of 30 or more per hour).

Most patients (71%) were men, and the average patient age was 50 years. The average AHI was 22.6 events per hour, and the average Epworth Sleepi-

ness Scale score was 10. The mean body mass index (BMI) was 31.8 kg/m². The average distance driven each week was 236 km (145 miles).

In terms of OSAH severity, 18% of patients had normal polysomnography, 30% had mild OSAH, 26% had moderate OSAH, and 26% had severe OSAH.

In all, there were 374 crashes, of which 251 (67%) happened to patients. In the patient group, 94 of 251 crashes caused minor property damage, 83 crashes caused major property damage, and 74 crashes caused injuries. This compared with 48, 52, and 23 in the control group.

When compared with controls, patients with OSAH had a significantly increased rate of motor vehicle crashes, with relative risks ranging from 1.9 to 2.6. In comparison, patients without

OSAH (AHI 0-5 events per hour) were at lower risk of motor vehicle crashes than were patients with OSAH.

The presence of OSAH was linked with a 3.0- to 4.8-fold increase in the rate of more severe motor vehicle crashes.

Within the patient group, there appeared to be a dose-response relationship between OSAH severity and the rate of motor vehicle crashes involving personal injury.

In patients with an AHI of 0-5, motor vehicle crashes involving personal injury accounted for 9% of crashes, compared with 37% in those with an AHI greater than 30.

Compared with patients with an AHI of 0-5, patients with severe OSAH were 6.1 times more likely to be in a crash involving personal injury, the researchers reported. ■