Is Your Apnea Patient at Risk for a Car Accident?

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SCOTTSDALE, ARIZ. — Evidence-based medicine provides no easy answers for a physician who must decide whether to report an obstructive sleep apnea patient to the state department of motor vehicles, according to Dr. Brian A. Boehlecke.

Numerous studies have failed to identify a method for determining which individuals with obstructive sleep apnea are more likely to have motor vehicle accidents, he said at a meeting on sleep medicine sponsored by the American College of Chest Physicians.

"There is no correlation between symptoms and objective measures of vigilance or performance," said Dr. Boehlecke, a professor of medicine at the University of North Carolina in Chapel Hill, reviewing one of many studies with similar findings.

People with the disorder are more likely to be in a motor vehicle accident, he said, but the overall risk is low. In one report, patients had more crashes than did a control group during a 3-year period (odds ratio 2.6). Some patients had two and three crashes, but most did not have any accidents, and no physiologic markers predicted which patients were at greater risk (Am. J. Respir. Crit. Care Med. 1998;158:18-22).

How a person responds to sleep loss varies from individual to individual, Dr. Boehlecke said.

In study after study, objective measures such as scores on the Epworth Sleepiness Scale, Karolinska Sleepiness Scale, respiratory disturbance index, and the apnea-hypopnea index did not predict reaction time or driving performance.

He cited a U.S. Department of Transportation–commissioned review of the literature from 1960 to 2000 (Report No. DOT HS 809 690). The author concluded that commonly used measures of sleep apnea severity "are not very useful" in identifying people at risk for crashes.

In a more recent trial, 20 obstructive sleep apnea patients and 40 controls took a battery of tests, including a driving simulator (Eur. Respir. J. 2005;25:75-80). Dr. Boehlecke said that almost all the apnea patients had some impairment of vigilance or attention, but no one test predicted ability to remain awake and attentive.

Effectiveness of measures to counteract night drowsiness also is highly variable, according to Dr. Boehlecke. Drinking caffeine or taking a nap helped most participants in another study, but the effects ranged widely among individuals (Ann. Intern. Med. 2006;144:785-91.)

Dr. Boehlecke referred physicians treating sleep apnea patients to recommendations of the American Thoracic Society (Am. J. Respir. Crit. Care Med. 1994;150:1463-73) and a statement on commercial drivers from a Joint Task Force of the American College of Chest Physicians, the American College of Occupational and Environmental Medicine, and the National Sleep Foundation (Chest 2006;130:902-5).

The thoracic society calls on physicians to know the applicable laws in their state, to give high-risk drivers a warning of risk, and to report high-risk drivers who insist on driving before being treated for obstructive sleep apnea or who fail to comply with treatment.

Dr. Boehlecke noted that the joint statement gives an apnea-hypopnea index of 5 or more during titration and 10 or more, "depending on clinical findings," as objective measures for when commercial drivers should be allowed to return to work. He questioned whether the thresholds were realistic given the inconclusive literature. It also calls for evaluation of compliance with treatment.

In the absence of an easy method for predicting when a patient poses a danger, he urged physicians to rely on their clinical judgment.

Two important considerations, he suggested, are whether the patient perceives a risk and whether he or she is willing to take actions to reduce it, such as treatment.

In North Carolina the law does not require him to report obstructive sleep apnea patients who pose a risk. Nonetheless, he reported a school bus driver who told him she "needs to work." Her license was suspended while he confirmed the diagnosis, and it was reinstated after she started treatment.

"You've got to live with yourself, and do what you think is right," Dr. Boehlecke said. "Don't be afraid to use your clinical judgment because nothing is a strong predictor of risk." ■