

Expert: Obstructive Sleep Apnea Warrants Therapy

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Contributing Writer

NEW ORLEANS — Obstructive sleep apnea appears to contribute significantly to both the development and severity of hypertension and may play a role in heart failure as well. The good news is that regular use of continuous positive airway pressure not only treats the apnea but also lowers blood pressure in some patients, according to speakers at the annu-

al meeting of the American Society of Hypertension.

Obstructive sleep apnea (OSA) has been observed in approximately 40% of persons with treatable hypertension, compared with approximately 25% of men and 10% of women in the general population, according to Dr. David Calhoun of the department of medicine at the University of Alabama at Birmingham.

"A number of studies suggest that nocturnal blood pressure may be a better pre-

dictor of cardiovascular outcomes than daytime elevations in blood pressure, so there is growing interest in what is happening during the night, especially when blood pressure fails to decrease. One factor in this is obstructive sleep apnea," Dr. Calhoun said at a press conference on the topic.

Others have found a dose-dependent increased risk of developing hypertension in relationship to OSA. In a prospective evaluation of normotensive patients, those

with the most severe OSA at baseline had more than twice the risk of developing hypertension over 4 years (JAMA 2000;283:1829-36).

"This confirmed the relationship between OSA and hypertension, establishing sleep apnea as a potential cause," he said.

Other studies also have found that, the more severe the sleep apnea, the higher a patient's nocturnal and daytime blood pressure, as well. One important study documented the overall prevalence of OSA (defined as more than 10 events per hour) to be 83% among persons with drug-resistant hypertension, including 96% among men and 65% among women.

"You are seemingly at much higher risk of having sleep apnea if you have difficulty to control hypertension. And it suggests that having sleep apnea contributes to difficulties in treating hypertension," Dr. Calhoun noted.

OSA also has been associated with heart failure, according to Dr. Alexander G. Logan of Mount Sinai Hospital, Toronto, and the University of Toronto. In the Sleep Heart Health Study (Am. J. Resp. Crit. Care Med. 2001;163:19-25), persons with sleep-disordered breathing had an odds ratio of 2.38 for developing heart failure, as well as an increased risk of stroke and coronary heart disease, versus those without. Numerous other studies have also shown an increased risk of OSA in persons with heart failure, he said.

Treatment of OSA with continuous positive airway pressure (CPAP) may help some patients, a number of studies have shown, the speakers said.

While the data may not be "very compelling," according to Dr. Calhoun, randomized studies have shown that about 5 hours of CPAP per night is associated with small reductions in mean arterial pressure and about a 10-mm Hg reduction in systolic and diastolic pressures. In one study of patients with resistant hypertension, regular use of CPAP for 2 months was associated with substantial reductions in 24-hour, daytime, and nocturnal blood pressures (Eur. Respir. J. 2003;21:241-7), a finding that established CPAP as an important adjunct to treatment of patients with resistant hypertension, he said.

"The benefit of CPAP appears to be strongest in nocturnal blood pressures," he added. "CPAP appears to help restore the 'dipping' pattern (10% decrease in blood pressure) overnight."

Dr. Calhoun believes this translates into cardiovascular benefits. French investigators found fewer cardiovascular events among hypertensive patients who adhered to CPAP for 5 years, vs. those patients who discontinued CPAP (Eur. Heart J. 2004;25:728-734). Event rates were 24% vs. 58%, respectively.

Dr. Logan noted that in medically treated heart failure patients with OSA, the use of CPAP reduces blood systolic blood pressure, partly as a result of a decrease in sympathetic vasoconstrictor tone; improves left ventricular systolic function; improves baroreflex sensitivity; decreases the frequency of ventricular premature beats; and improves the quality of life in hypersomnolent patients. ■



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