Sleep Apnea Severity Tied to Glycemic Control

BY SUSAN LONDON

SEATTLE — Treating obstructive sleep apnea in patients with type 2 diabetes may improve glycemic control, according to observational study results.

The study of 54 patients with type 2 diabetes indicated that blood glucose levels may be harder to control in cases of untreated OSA, Dr. Renee Simon Aronsohn reported at the annual meeting of the Associated Professional Sleep Societies.

Results showed that mean glycocylated hemoglobin (HbA_{1c}) rose significantly when patients had OSA, she said.

Dr. Aronsohn, an endocrinology fellow at the University of Chicago, and colleagues enrolled 54 patients seen in outpatient clinics during 2000-2008 who had physician-diagnosed type 2 diabetes and were on stable doses of medication. A total of 29 patients (54%) were women, and 29 (54%) were black.

Overall, 76% of the patients had OSA, which was classified as mild in 35%, moderate in 26%, and severe in 15%. Compared with their counterparts without OSA, patients with OSA, on average, were older (60 years vs. 53 years), had a higher body mass index (35 kg/m^2 vs. 29 kg/m^2), and had a greater prevalence of diabetic complications (68% vs. 23%). The patients with OSA also had less total sleep time on polysomnography (6.3 hours vs. 7.2 hours), poorer sleep efficiency (81% vs. 90%), and less time spent in REM sleep (20% vs. 27%).

In a multivariate analysis that adjusted for potential confounders, mean HbA_{1c} increased significantly across OSA categories, with values of 6.5%, 7.5%. 7.8%, and 8.7% among patients with no, mild, moderate, and severe OSA, respectively.

The results of studies on continuous positive airway pressure treatment and glycemic control in type 2 diabetes have been confounded by compliance issues, she noted. "So, our next step is looking at how treatment affects control," said Dr. Aronsohn, who reported having no conflicts of interest. ■

OSA May Independently Point to Type 2

SEATTLE — The risk of type 2 diabetes increased with the severity of obstructive sleep apnea, even after obesity was taken into account, researchers reported at the annual meeting of the Associated Professional Sleep Societies.

Dr. Sonia Togeiro and her colleagues conducted a population-based study of OSA and diabetes among 1,042 men and women aged 20-80 years living in São Paulo, Brazil. All study participants underwent full-night polysomnography.

A total of 62% of participants did not have OSA, 21% had mild OSA, and 17% had moderate or severe OSA, reported Dr. Togeiro, an endocrinologist at Federal University of São Paulo. A total of 7% overall had diabetes. In addition, 38% were overweight, and 21% were obese.

Compared with patients who did not have OSA, those with mild OSA and participants with moderate or severe OSA alike were older (mean age 37 years vs. 48 years and 53 years, respectively), had a higher body mass index (25 kg/m^2 vs. 28 and 30 kg/m^2), and were more likely to have diabetes (3% vs. 9% and 21%).

The presence and severity of OSA were also associated with a more unfavorable metabolic profile, Dr. Togeiro noted. Both OSA groups had higher levels of total cholesterol, triglycerides, fasting glucose, and fasting insulin, and a higher homeostasis model assessment index, compared with the unaffected group.

In a multivariate analysis, participants with mild OSA had a nonsignificant increase in the risk of diabetes relative to their counterparts who did not have OSA (odds ratio 1.07), and participants with moderate or severe OSA had a significant near doubling of risk (odds ratio 1.97).

OSA also was more prevalent in participants with diabetes. A total of 73% of individuals with diabetes had the condition, compared with 36% of those without diabetes, said Dr. Togeiro, who reported having no conflicts of interest.

—Susan London