Serum Testosterone, Sleep Apnea May Be Linked

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CARMEL, CALIF. — Low baseline total serum testosterone levels could be a marker for obstructive sleep apnea in older men, Yao Schmidt reported at the Western regional meeting of the American Federation for Medical Research.

Of men aged 60-80 years, 20%-60% have borderline hypogonadism, said Ms. Schmidt, who is a second-year medical student at the University of Colorado Health Sciences Center, Denver.

She and associates evaluated 28 men aged 60-80 years. They recorded apnea-hypopnea index (AHI), baseline total serum testosterone level, age, body mass index (BMI), neck size, and LDL cholesterol level. Mean age was 67 years, mean BMI was 29 kg/m^2, mean serum testosterone level was 288 ng/dL, mean neck diameter was 16 inches, and mean LDL cholesterol level was 103 mg/dL.

Patients were divided into two groups: 14 with obstructive sleep apnea, defined as having an AHI of 10 or greater, and 14 men without.

Mean baseline serum testosterone level in the men with obstructive sleep apnea was 262 ng/dL, compared with a mean of 315 ng/dL in the men without, which was statistically significant. There were no significant differences between groups in age, BMI, neck diameter, and LDL cholesterol level.

"Does obstructive sleep apnea cause lower testosterone levels, or do lower testosterone levels cause obstructive sleep apnea?" Ms. Schmidt asked. "It's unclear. Chronic hypoxemia could cause some brief atrophy, which could possibly [affect] the hypothalamus-pituitary axis."

Limitations of the study include the fact that the range of testosterone levels was limited to 200-350 ng/dL and the evaluation did not include overnight polysomnography. ■