

Severe Sleep Apnea Called Stroke Risk in Elderly

August 03, 2006 | [Atrial Fibrillation](#) [1], [Cerebrovascular Diseases](#) [2], [Cholesterol Disorders](#) [3], [Sleep Disorders](#) [4], [Geriatrics](#) [5]

PAMPLONA, Spain -- Severe obstructive sleep apnea more than doubled the risk of a first ischemic stroke in persons over age 70, researchers here reported.

PAMPLONA, Spain, Aug. 3 -- Severe obstructive sleep apnea more than doubled the risk of a first ischemic stroke in patients older than 70 compared with mild or moderate apnea, or none at all, researchers here reported.

In a six-year longitudinal, population-based study of 394 home-living, initially ischemic event-free patients (70 to 100 years old), there were 20 ischemic strokes, confirmed by a neurologist. This amounted to an annual incidence of 11.28 per 1,000 person-years, according to an online report in the August issue of *Stroke*.

After adjustment for a long list of confounding factors, those with severe sleep apnea hypopnea (apnea-hypopnea index \geq 30) had 2.5 times the increased risk of developing a stroke (hazard ratio 2.52, 95% CI, 1.04 to 6.01, $P = 0.04$), said Roberto Munoz, M.D., at the Hospital de Navarra here and colleagues.

Most sleep-apnea and stroke studies have focused on middle-age people, excluding the elderly population from the analysis, Dr. Munoz said. Until now it was believed that severe sleep apnea among the elderly was less of a health risk compared with the risk for middle-age people. However, this study provides evidence that compared with elderly persons with no or mild apnea, severe apnea hypopnea increases the stroke risk, independent of known confounding factors, Dr. Munoz said.

The participants (median age 77.3 years; 57.1% male) were recruited from the Vitoria Sleep Project in Vitoria, a little town in northern Spain. After an initial interview to gather basic information such as weight, neck circumference, and medications, the participants' breathing patterns-respiration, tracheal sounds, chest and abdominal sounds, for example--were monitored overnight with standard equipment in a sleep study.

Confounding factors assessed at baseline, often similar to those for stroke, included age, sex, smoking and alcohol consumption, body mass index, blood pressure, total serum cholesterol levels, and the presence or absence of diabetes, atrial fibrillation, and hypertension, the researchers reported.

Following Spanish Respiratory Society guidelines that recommend continuous positive airway (CPAP) therapy for patients with severe apnea, a few participants who accepted therapy were treated, but tolerance was limited, and these participants were excluded from the follow-up study, the researchers said.

Somewhat surprising, the researchers said, was the observation that classic risk factors such as hypertension, atrial fibrillation, and diabetes were not associated with stroke. This, the researchers said, could be explained by the fact that practically every participant was being correctly treated for these conditions.

Among other potential weaknesses of the study, the researchers wrote, would be the possibility of underestimating the incidence of fatal stroke, because often old people are found dead at home and are not admitted to a hospital.

Also, the participants who completed both phases of the study (interview and overnight sleep measurements) differed from the larger group that completed only the earlier phase. For this reason the final cohort may not have been fully representative, they said.

"Sleep apnea is two to three times more common in the elderly compared with middle-aged people, Dr. Munoz said. However, typical symptoms, such as loud snoring or excessive daytime sleepiness, are less common among the elderly compared with middle-aged people.

Yet "we should be aware of these symptoms and look for repetitive breathing pauses in our patients and relatives," he said.

The incidence of stroke increases with age, and 75% of strokes occur in the elderly, the investigators said. With the increasing life expectancy, this proportion is likely to rise. In this study, contrary to

previous suggestions that obstructive sleep apnea hypopnea lacks relevance in advanced ages, this study has found that it represents a risk factor for stroke in the elderly.

"We believe that a randomized trial designed to investigate the influence of CPAP therapy on stroke is required to complete the demonstration of a causative relationship," Dr. Munoz said.

Source URL:

<http://www.patientcareonline.com/articles/severe-sleep-apnea-called-stroke-risk-elderly>

Links:

- [1] <http://www.patientcareonline.com/atrial-fibrillation>
- [2] <http://www.patientcareonline.com/cerebrovascular-diseases>
- [3] <http://www.patientcareonline.com/cholesterol-disorders>
- [4] <http://www.patientcareonline.com/sleep-disorders>
- [5] <http://www.patientcareonline.com/geriatrics>