

Study links sleep apnea and sudden deafness

By Genevra Pittman

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(Reuters Health) - Sudden hearing loss might be tied to an underlying sleep disorder that interrupts breathing, suggests a new study from Taiwan.

Consulting a large health insurance database, researchers found that people who'd suffered sudden deafness were more likely to have a previous diagnosis of sleep apnea than a comparison group without hearing loss.

The absolute difference was small: 1.7 percent of those with hearing loss had sleep apnea, compared to 1.2 percent without hearing trouble.

"If there is sudden hearing loss, I would investigate the presence of apnea as well, given that it's easy to diagnose and it's easy to treat," said Dr. Seva Polotsky, a sleep apnea researcher from Johns Hopkins University School of Medicine in Baltimore who wasn't involved in the new study.

"Obviously we don't know from this paper whether treating apnea will reduce hearing loss," or the chance of having hearing problems in the first place.

For now, he said, "There are more questions than answers."

Polotsky added, it's possible that sleep apnea, which is known to increase the buildup of plaque in blood vessels, could affect vessels in areas of the brain that control hearing, or vessels that feed the nerves responsible for hearing.

But he said more research will be needed to find out what could be behind this link -- or whether something besides the apnea, itself, might explain an increased risk of deafness.

There are about 4,000 new cases of sudden deafness each year in the United States, according to the National Institutes of Health, and there are many possible causes, including infections and head injuries.

Typically the deafness only occurs in one ear, and most people regain their hearing over a period of weeks, sometimes aided by steroid treatment. But occasionally the hearing loss becomes more serious.

Looking at health records of one million Taiwanese, researchers led by Dr. Jau-Juan Sheu, of Taipei Medical University Hospital, found almost 3,200 had been diagnosed with sudden deafness between 2000 and 2008. For each of those people, they picked out another five of the same age and sex without hearing loss to serve as a comparison.

Out of those 19,000 people in total, 240 had been diagnosed with sleep apnea before the episode of sudden deafness occurred.

When researchers took into account health and lifestyle factors that may be related to both sleep problems and hearing loss -- such as obesity and heart disease -- they found that men with sudden deafness were 48 percent more likely to have a previous sleep apnea diagnosis than men without hearing loss.

The association for women was less clear, the researchers reported in the Archives of Otolaryngology-Head & Neck Surgery.

Sleep apnea is characterized by closing off of the airways during sleep, leading to repeated drops in oxygen levels in the blood and frequent short wake-ups, along with snoring. It's often treated with a mask and breathing device, called continuous positive airway pressure, or CPAP, but one of the most effective treatments is weight loss.

The new study doesn't prove that sleep apnea causes sudden hearing loss. The researchers couldn't account for people's smoking and drinking, for example, which may affect the risk of both conditions.

Sheu and colleagues speculated, however, that inflammation and changes in blood vessels linked to sleep apnea could contribute to the risk of deafness.

Tinnitus, the sensation of ringing in the ears, has been linked to circulatory disorders, for example.

Polotsky added that most of the complications associated with sleep apnea, which include high blood pressure and diabetes, are thought to result from frequent oxygen fluctuations during the night.

And sudden hearing loss could fit into that category, he told Reuters Health.

But the current study, Polotsky said, "doesn't really establish that. It just shows us a new potential area to research."

SOURCE: bit.ly/AgF7gE Archives of Otolaryngology-Head & Neck Surgery, January 2012.