

Sleep apnea may be risk factor for sudden cardiac death

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OSA is a condition that disrupts breathing during sleep and is associated with obesity.

The study identified OSA as one of two traits that contribute to the highest risk of SCD. The other is age - patients who are 60 years old or older.

SCD can happen when the heart's electrical system malfunctions; if treatment - cardiopulmonary resuscitation and defibrillation - is not administered quickly, a person dies.

If further studies validate these findings, OSA would join established risk factors such as smoking, obesity, high cholesterol and high blood pressure. Mayo Clinic cardiologist Apoor Gami, M.D., the lead researcher on the study, presents the findings today at the American Heart Association's Scientific Sessions 2008 in New Orleans.

Physicians have suspected for years that OSA might be implicated in SCD because of evidence that low oxygen alters the blood vessels in a way that promotes heart disease. This is the first large study to rigorously test the hypothesis, Dr. Gami says.

"Nighttime low oxygen saturation in the blood is an important complication of obstructive sleep apnea," says Virend Somers, M.D., Ph.D., the study's principal investigator. "Our data showed that an average nighttime oxygen saturation of the blood of 93 percent and lowest nighttime saturation of 78 percent strongly predicted SCD, independent of other well-established risk factors, such as high cholesterol. These findings implicate OSA, a relatively common condition, as a novel risk factor for SCD."

Dr. Somers says these early results are relevant to clinical care. He urges physicians to watch for OSA in their heart patients and consider treating severe cases. "It is possible that diagnosing and treating sleep apnea may prove to be an important opportunity to advance our efforts at preventing and treating heart disease," he says.

OSA is a common breathing disorder associated with frequent and repeated instances of upper airway obstruction during sleep. Restless sleep and extremely loud snoring are typical symptoms. Obstruction can be caused by excess tissue in the airway, a large tongue or large tonsils, or nasal passage irregularities that diminish airflow. Obesity is a major cause of the condition. Treatments are available, such as a customized appliance worn during sleep to stabilize tissues.

Given the rising incidence of obesity in children and adults, OSA is also becoming more common, Dr. Somers says. So concerned are major heart physicians' groups about this emerging public health trend that last summer the American Heart Association and the American College of Cardiology issued a joint statement calling for studies probing the link between OSA and SCD, says Dr. Somers. He chaired the committee that wrote the statement.

The researchers reviewed data from 10,701 consecutive adults who underwent an initial

diagnostic sleep laboratory analysis session between 1987 and 2003. During a follow-up period of up to 15 years, researchers assessed cases where patients had sudden cardiac arrest, and either died (SCD) or were resuscitated, in relationship to the presence of OSA and other data, including nighttime levels of oxygen saturation in the blood. Results showed that during an average follow-up of 5.3 years, 142 patients had suffered SCD and either died or were resuscitated.

Source: Mayo Clinic

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