ICU
MANAGEMENT & PRACTICE

Obstructive Sleep Apnea Raises Risk of Sudden Cardiac Death, Mayo Clinic Finds

People who have obstructive sleep apnea — when a person stops breathing for periods during sleep — have a greater risk of sudden cardiac death, according to a study published online today in the Journal of the American College of Cardiology. An estimated 12 million American adults have obstructive sleep apnea, and many of them are undiagnosed, according to the National Heart, Lung and Blood Institute (NHLBI).

In the study, funded by the NHLBI, 10,701 people who participated in sleep studies were followed for an average of 5.3 years for incidence of sudden cardiac death. In that time, 142 patients died of sudden cardiac death. The most common predictors were an age of 60 or older, 20 or more apnea episodes per hour of sleep, and an oxygen saturation below 78 percent during sleep.

"What we found that is new with this study is that if you have sleep apnea, your risk of sudden death increases almost twofold, particularly if you stopped breathing more than 20 times per hour of sleep and if you had severe falls in oxygen saturation during sleep," says senior author Virend Somers, M.D., Ph.D., a Mayo Clinic cardiologist.

When a person is breathing properly, the oxygen saturation level — when air flows through the lungs — during sleep is 100 percent, Dr. Somers says. This study showed that if a person is not breathing properly and the oxygen saturation level falls to as low as 78 percent, the risk of sudden cardiac death significantly increases, he says.

Lead author Apoor Gami, M.D., says Mayo Clinic's previous research showed that people with sleep apnea have a much higher risk of sudden cardiac death between midnight and 6 a.m., when people are typically asleep, while people without sleep apnea die more often from sudden cardiac death between 6 a.m. and noon.

"So we knew that sleep apnea changed the time of sudden cardiac death, but we didn't know if it changed the overall risk," Dr. Gami says. "This new study shows that sleep apnea does indeed increase the overall risk of sudden cardiac death independently of other important risk factors.

"The prevalence of obstructive sleep apnea in Western populations is high, and because of the relationship between weight and sleep apnea, the current obesity epidemic is going to further increase the scope of this problem," noted Dr. Gami, formerly at Mayo Clinic and now a cardiologist at Midwest Heart Specialists-Advocate Medical Group in Elmhurst, Ill.

Research has shown that sleep apnea is potentially an important cause of cardiovascular conditions, such as high blood pressure, atrial fibrillation, heart attacks and strokes, Dr. Somers says. Sleep apnea is treatable. In addition to weight loss, physicians also can recommend sleep posture changes and devices, such as a machine that delivers air pressure through a mask placed over the nose while a person sleeps, he says.

Source: Mayo Clinic

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