

Sleep apnea common in atrial fibrillation patients

September 11 2017

A study involving cardiac patients at the University Hospital of Umeå shows that over 80 percent of patients treated for atrial fibrillation also have sleep apnea - a condition with pauses in breathing during sleep. The study, presented in a dissertation at Umeå University, indicates that the prevalence of sleep apnea is not affected by electrical cardioversion.

"The results of our study emphasises the importance of examining if [patients](#) with cardiac arrhythmia patients also suffer from [sleep apnea](#). Previous studies show that the treatment of atrial [fibrillation](#) can be improved if the patient is simultaneously treated for sleep apnea," says Niklas Höglund, doctoral student at the Department of Public Health and Clinical Medicine.

Atrial fibrillation is a condition of [abnormal heart rhythm](#) and can be treated using electrical cardioversion, a treatment converting the heart rhythm through electrical shock. In the current study, carried out at the University Hospital of Umeå, 23 patients who needed electric cardioversion treatment for atrial fibrillation were offered sleep apnea evaluation before and after the treatment. Neither of the patients in the study had a previously known sleep apnea.

The results showed that 74 percent of the participants had [obstructive sleep apnea](#) while 26 percent had central sleep apnea. Five individuals in the study had both obstructive and central sleep apnea. The follow-up showed that electrical cardioversion treatment for atrial fibrillation did not affect the prevalence of sleep apnea.

Obstructive sleep apnea is a condition with pauses in breathing caused by blockages in the upper airways. Central sleep apnea is caused by signals from the brain to breathing muscles ceasing during short periods.

Previous research has shown a connection between sleep apnea and an increased risk of cardiovascular disease. Obstructive sleep apnea can be treated by the patient wearing a CPAP (continuous positive airway pressure) mask during sleep, providing mechanical breathing aid.

Another option is using a dental splint that prevents the tongue to fall back and block the airways. Life style changes such as weightloss and reduced alcohol consumption can also have an effect.

"Obstructive sleep apnea contributes to the increase of atrial fibrillation by generating a negative pressure in the chest while breathing through closed airways, which affects the heart's atria. Furthermore, lack of oxygen, increased carbon dioxide levels in the blood and secretion of stress hormones can also lead to the development of [atrial fibrillation](#)," explains Niklas Höglund.

Niklas Höglund grew up in Jakobstad in Finland. He got his Degree of Master of Science in Medicine at Uppsala University in 1995. Niklas Höglund is a specialist in general medicine and cardiology and is now senior physician at the Arrhythmia Clinic at the Heart Centre at the University Hospital of Umeå. His main field of work is invasive arrhythmia [treatment](#).

Provided by Umea University

Citation: Sleep apnea common in atrial fibrillation patients (2017, September 11) retrieved 2 May 2024 from <https://medicalxpress.com/news/2017-09-apnea-common-atrial-fibrillation-patients.html>

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