

[gw22-e0648]

HEART RHYTHM DISORDER IN PATIENTS WITH OBSTRUCTIVE SLEEP APNOEA SYNDROMEMen Xiaoqian *The Third Hospital of Hebei Medical University*

10.1136/heartjnl-2011-300867.614

Objective To investigate the risk factors which lead to arrhythmias in patients with obstructive sleep apnoea syndrome (OSAS), to explore incidence and types of arrhythmias and to assess the impact of nasal continuous positive airway pressure (nCPAP) on the arrhythmias.

Methods All 446 subjects were received polysomnography examination and classified as having mild ($5 \leq \text{AHI} \leq 20/\text{h}$) or moderate ($20 < \text{AHI} \leq 40/\text{h}$) or severe ($\text{AHI} > 40/\text{h}$) OSAS. 39 patients with both OSAS and heart rhythm disorder (HRD) were given nCPAP therapy for one night (at least 6 h).

Results Among 446 patients, the incidence of arrhythmias were 24.4%. Age ($p=0.003$, $\text{Exp}=1.030$) and the severity of OSAS ($p=0.043$, $\text{Exp}=1.857$) had a closed relationship with incidence of arrhythmias. Sinus bradycardia (79.1%, $p<0.01$) and sporadic ventricular premature beat (54.5%, $p=0.01$) were most likely happened than other types of arrhythmias. With increasing of AHI, the incidence of sinus bradycardia ($p<0.05$), frequent atrial premature beat ($p<0.05$), complex arrhythmias ($p<0.01$), atrial fibrillation ($p<0.01$) and atrioventricular block ($p<0.05$) also increased. After more than 6 h of using nCPAP over one night, the incidence of arrhythmias in OSAS patients decreased obviously.

Conclusions Arrhythmia is a common complication in patients with OSA. Age and the severity of OSAS are risk factors for the incidence of arrhythmias. Sinus bradycardia and sporadic ventricular premature beat are most commonly seen in OSAS patients. In mild group, ventricular premature beat, sporadic atrial premature beat are the most common while in moderate and severe group, sinus bradycardia, frequent atrial premature beat, atrial fibrillation, atrioventricular block and complex arrhythmias are the most likely to occur. After therapy of nCPAP at least 6 h, not only the condition of OSAS but also the incidence of arrhythmias have been reduced.