

## **Sleep-related breathing disorders**

### **The Blood Pressure Variability of Sleep Apnea Patients**

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Obstructive sleep apnea (OSA) syndrome is common respiratory disorder associated with hypertension and cardiovascular complications. Blood pressure variability (BPV) may be a sign of a risk of cardiovascular events. The aim of this study was to investigate the hypothesis that severe OSA syndrome is associated with increased BPV. Based on respiratory polygraphy 58 patients were categorized into two groups: severe OSA syndrome with apnoe/hypopnoe index - AHI>30/h (52.2±19/h) and mild to moderate OSA syndrome with AHI >5/h and <30/h (20.2±7.8/h). 24-hours noninvasive blood pressure monitoring was performed. The standard deviation of mean blood pressure was used as the indicator of BPV. In patients with severe as compared to mild to moderate OSA syndrome higher values of mean night-time systolic blood pressure (133.2±17.4 mmHg vs 117.7±31.2 mmHg, p< 0.05) and night-time diastolic blood pressure (80.9±13.1 mmHg vs 73.8±9.2, p<0.01), night-time systolic BPV (12.1±6.0 vs 7.6±4.3 p<0.01), night-time diastolic BPV (10.5±6.1 vs 7.3±4.0 p<0.05), and night-time mean BPV (9.1± 4.9 mmHg vs 9.1±4.9, p<0.05) were detected. The results of the study indicate that in patients with severe OSA syndrome there are two important known risk factors of cardiovascular complications, occurring during sleep: increased systolic and diastolic BP and increased nocturnal BPV

Key words: obstructive sleep apnea, blood pressure variability, hypertension