

CAN CPAP THERAPY IMPROVE EARLY ATHEROSCLEROTIC MARKERS IN SEVERE OBSTRUCTIVE SLEEP APNEA SYNDROME?

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Continuous positive airway pressure therapy is the evidence based therapy of obstructive sleep apnea syndrome. The effective treatment of obstructive sleep apnea can decrease sympatheticotony, consequently blood pressure, inflammatory and metabolic parameters can improve, leading to decreased progression of atherosclerosis.

Twenty one severe obstructive sleep apnea patients were examined (apnea-hypopnoea index 30/h; mean age: 54.8±11 years). On the morning of polysomnography (Alice 5 PSG, Respirationics) cardiovascular questionnaire were filled, and fasting blood tests were performed. Common carotid artery intima-media thickness (CCA-IMT) were measured by carotid duplex ultrasound (Philips XD 11 XE), and functional Transcranial Doppler (Multidop X, DWL) examination were made by breath holding. Cerebrovascular reserve capacity was calculated. We repeated these examinations after adjustment of effective CPAP therapy. SPSS vs 22 software were used for statistical analysis.

Mean follow-up time was 6.7±2.4 months, mean CPAP pressure was CPAP 8.7±1.3 H₂Ocm. Parameters of polysomnography improved after CPAP therapy (AHI: 59.9±17.8 vs. 6.1±6.2/h, p0.001; DI: 52.3±29.1/h vs 8.1±8.1/h, p0.001). HgA1C decreased near the CPAP therapy (HgA1C: 6.4±1.04 vs 6.1±1.1%, p=0.069). Early atherosclerotic markers did not change during this short follow-up time (IMT: 0.65±1.2 and 0.64±1.1 mm; CVR: 42.7±4.5% and 41.2±4.1%).

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