

ELEVATED URIC ACID AND PRO-ATHEROGENIC SOLUBLE LIGAND CD40 AS BIOCHEMICAL MARKERS OF INCREASED RISK OF ATHEROMATOSIS IN THE PATIENTS WITH THE OBSTRUCTIVE SLEEP APNEA SYNDROME

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Introduction: The aim of the study was to evaluate the risk of atheromatosis based on the concentrations of the pro-atherogenic soluble CD40L ligand (sCD40L) and in the relation of the serum uric acid in the patients with obstructive sleep apnea (OSA) syndrome.

Material and methods: The serum levels of sCD40L and uric acid were measured in 79 OSA syndrome patients (mean apnea/hypopnea index - AHI - 34.4 ± 20.9) and in 40 healthy controls.

Results: sCD40L concentration was higher in the patients with OSA syndrome than in control subjects (8.3 ng/ml vs 7.08 ng/ml, $p < 0.05$). There was a positive correlation of sCD40L with AHI ($p = 0.01$) and negative with the mean of the minimal SaO_2 during sleep ($p < 0.05$). Uric acid negatively correlated with mean and minimal SaO_2 during sleep and positively with oxygen desaturation index ($p < 0.05$). sCD40L concentration was higher in the patients with elevated than with normal levels of uric acid (8.97 ng/ml vs 7.97 ng/ml, $p < 0.05$). In OSA patients with elevated uric acid there was higher incidence of hypertension and ischemic heart disease.

Conclusion: In the OSA patients with increased uric acid concentrations there is increased risk of atheromatosis, as indicated by elevated concentrations of soluble pro-atherogenic ligand CD40, and higher incidence of cardiovascular disease.