

CIRCULATING P-SELECTIN AND ITS GLYCOPROTEIN LIGAND IN NON-DIABETIC OBSTRUCTIVE SLEEP APNEA PATIENTS.

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Background: Selectins and their ligands play an important role in early stages of atherosclerosis. Understanding the influence of obstructive sleep apnea on circulating adhesion molecules may be clinically relevant to patients.

The aim of the study was to assess the serum concentrations of platelet selectin (P-SEL) and P-selectin glycoprotein ligand 1 (SELPLG) in different stage-OSA patients.

Methods: OSA-suspected consecutive subjects with neither acute nor chronic disease were qualified for polysomnography and oral glucose tolerance test in 2017-2018. Arterial blood pressure, lipid profile and high sensitivity C-reactive protein (hsCRP) were also measured. Finally, in non-diabetic persons aged 32-71 with hsCRP < 8.0 mg/l, apnea/hypopnea index (AHI) was used to diagnose: OSA-0 (no disturbances, AHI < 5), OSA-1 (AHI 5-15), OSA-2 (AHI 16-30) and OSA-3 (AHI > 30), each group n=16. The concentrations of P-SEL and SELPLG were measured by ELISA method and analyzed using Statistica 12.0v. program.

Results: Subjects did not differ in their age, arterial blood pressure, and glucose, lipid, hsCRP results. P-SEL and SELPLG increased from OSA-0 to OSA-3 (p < 0.0001 and p = 0.0031, respectively). In OSA-0 group the positive correlation SELPLG&hsCRP was observed. The relationships between adhesion molecules and anthropometric parameters, oxygen saturation indices and architecture of sleep were observed in OSA-1 (mild) group especially. Positive correlations P-SEL&AHI and SELPLG&AHI, and P-SEL&SELPLG were observed in all OSA-patients and OSA-2 (moderate) and OSA-3 (severe) groups separately.

Conclusion:

In non-diabetic obstructive sleep apnea patients moderate and severe stage of the disease could make the concentration of adhesion molecules dependent only to apnea/hypopnea episodes, regardless of other factor.