THE IMPACT OF BLOOD OXYGEN SATURATION ON E- SELECTIN, L-SELECTIN AND P-SELECTIN CONCENTRATIONS IN BLOOD OF NON-DIABETIC OBSTRUCTIVE SLEEP APNEA PATIENTS.

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The pathology of obstructive sleep apnea (OSA) may explain increased blood concentration of selectins. The apnea-hypopnea-index (AHI), an indicator of OSA severity, doesn`t provide the metabolic aspects of OSA episodes. We propose the average blood oxygen saturation (Osat-aver)-related model to investigate selectin levels in OSA patients. New OSA evaluation proposal could initiate the modification of OSA classification. The aim of the study was to assess the serum concentrations of selectins: platelet (P-sel) leucocyte (L-sel) and endothelial (E-sel) in OSA-patients, according to the Osat-aver cathegory.

Patients without inflammatory diseases were qualified for full-night polysomnography. 72 non-diabetic persons (aged 27-71, CRP< 8,0 mg/l, AHI≥5) were divided into groups corresponding to the quartiles (Q1-Q4) of the Osat-aver distribution: Osat-aver-Q1, Osat-aver-Q2, Osat-aver-Q3, Osat-aver-Q4. E, L, P-selectins were measured by ELISA in blood. Statistica 12.0 programm was used to analyze the data.

E-sel, P-sel decreased from Osat-aver-Q1 to Osat-aver-Q4 patients (p=0,0001, p=0,0181 respectively) and no differences were observed for L-sel (p=0,0897). Differences occurred especially between Osat-aver-Q1 and Osat-aver-Q4. Different correlations were observed between selectins and other metabolic factors in study groups.

In non-diabetic obstructive sleep apnea patients, decreased Osat affects strongly the concentration of E-sel and moderately P-sel.