

THE IMPACT OF 75G GLUCOSE STIMULUS ON L-SELECTINE EXPRESSION AND CONCENTRATION IN BLOOD OF OBSTRUCTIVE APNEA MALES

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Background: Early markers of atherosclerosis are discussed in obstructive sleep apnea (OSA) pathology. The objective was to assess leukocyte selectin (L-selectin) circulating in plasma and expressions of gene for L-selectin during oral glucose tolerance test (OGTT), in different stage OSA patients. **Methods:** OSA-suspected, non-smoking Caucasians with no acute/chronic disease, aged 34-64, BMI 25,0-35,0 kg/m² submitted polysomnography (EMBLA) and 75-g OGTT to select normal glucose tolerance persons. Apnea/hypopnea index (AHI) was used to establish 22-male groups: OSA-0 (AHI <5), OSA-1 (AHI 5-15), OSA-2 (AHI 16-30), OSA-3 (AHI ≥31). Plasma L-selectin, L-sel (ELISA, R&D Systems) and leukocyte expression of gene for L-selectins, xL-sel (real-time quantitative PCR, Roche Diagnostics), at 0-minute (0') and 120-minute (120') of OGTT, and difference DL-sel={120' minus 0'} and ratio RxL-sel =[120'/0'] were determined. **Results:** 1. Increasing fasting L-sel and xL-sel were observed from OSA-0 to OSA-3 (p<0,0001). 2. Different DL-sel and RxL-sel were observed among studied groups, with the highest values in no OSA individuals and smaller D and R with increasing severity of the disease. **Conclusion:** The increasing leukocyte expression and serum concentration of L-selectin might be the regular short-effect of 75-g glucose stimulus in normoglycemic individuals without OSA pathology. Sleep-related breathing disorder could limit the relevant leukocyte metabolism.