PLASMA OXIDATIVE STRESS MARKERS IN OBSTRUCTIVE SLEEP APNEA SEVERITY IN NORMOGLYCEMIC MALES.

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Researches of the early stages of atherosclerosis, involving oxidative stress, may explain cardiovascular context of obstructive sleep apnea (OSA) syndrome. The aim of the study was to analyze selected markers of oxidative stress in the research model of increasing severity of OSA. 96 OSA-suspected males with no acute or severe chronic disease were enrolled. Non-smoking Caucasians aged 34-64 with BMI 25,0-35,0 kg/m^2 submitted clinical, biochemical and polysomnographic examinations. EMBLA system was used to establish the apnea/hypopnea index (AHI). Oral glucose tolerance test was used to select normoglycemic persons, who were divided into groups: OSA-0 (AHI <5), OSA-1 (AHI 5-15), OSA-2 (AHI 16-30) – every group of 24 patients, OSA-3 (AHI≥31) – 24 patients. Complete blood count, high sensitivity C-reactive protein, fasting plasma lipids (T-C, HDL-C, TG, LDL-C) and insulin were determined as well as plasma parameters of oxidative stress. These included: total antioxidant status, TAS (Randox) and the products of plasma lipid peroxidation as thiobarbituric acid reacting substances, TBARS (Sigma reagents). The measurements were conducted using spectrophotometric methods. TAS/TBARS index was proposed and calculated. Statistical analysis using Statistica 10.0 was made. Date are presented as median and lower–upper quartile. Results: 1. The study groups did not differ in their characteristics, except HDL-C decreases in OSA-2 and OSA-3 comparing with OSA-0. 2. Decreasing TAS was observed from OSA-0 to OSA-3; 3. Increasing TBARS was observed from OSA-0 to OSA-3. 4.Decreasing TAS/TBARS index was observed from OSA-0 to OSA-3.Conclusion: In normoglycemic men OSA pathology increases oxidative stress markers consecutively with the intensity of sleep pathology.