METABOLIC CONTRIBUTION TO PLASMA TOTAL ANTIOXIDANT STATUS IN OBSTRUCTIVE SLEEP APNEA MEN.

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Oxidative stress and metabolic aspects of obstructive sleep apnea pathology are intensively discussed. The aim of the study was to asses total antioxidant status and its plasma components in different stage-obstructive sleep apnea (OSA) subjects. OSA-suspected males with BMI 25-40 kg/m^2, aged 34-64, after excluding an acute disease or severe chronic disorder, were submitted clinical, biochemical and full-night polysomnography Consecutive results of apnea/hypopnea index (AHI) were used to form the study groups, each consisting of 20 individuals: OSA-0 (AHI 0-4,9), OSA-1 (AHI 5-15), OSA-2 (AHI 16-30), OSA-3 (AHI≥31). Plasma total antioxidant status (TAS) and its proposed determinants, like albumin (ALB), transferin (TRF), ceruloplasmin (CP), uric acid (UA) and bilirubin (BIL) were estimated. TAS concentration was measured spectrofotometrically using RANDOX kit. ALB, TRF and CP concentrations were determined on Behring Nephelometer II. UA and BIL, just like glycemia and serum lipid profile were estimated among routine parameters Statistical calculation was performed using Statistica10.0 program. Subjects did not differ in their plasma components of TAS. Increasing values of TAS concentrations were observed in OSA-1 and OSA-2 groups as compared to OSA-0. In each group different correlations between TAS and plasma factors were presented. From among the relationships the positive correlations of TAS&UA were noticed in OSA-1 and OSA-2, different correlations between TAS and CP, BIL, glucose levels were calculated from OSA-0 to OSA-3. In conclusion metabolic contribution to plasma total antioxidant status in obstructive sleep apnea should be considered besides the influence of breathing.