

**EVALUATION OF SELECTED ANTROPOMETRIC FACTORS IN ASSESSMENT OF THE RISK OF OBSTRUCTIVE SLEEP APNEA (OSA) IN PATIENTS WITH METABOLIC SYNDROME.**

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Introduction: Metabolic syndrome (MS) is related to a higher incidence of cardio-vascular diseases and mortality. A factor that determines the progression of cardiovascular diseases is a presence of Obstructive Sleep Apnea syndrome (OSA) in patients. The aim of the study was an evaluation of usefulness of selected antropometric obesity characteristics in the assessment of the risk of Obstructive Sleep Apnea in patients with a diagnosed MS.

Material and methods: The experimental group consisted of 50 obese men with MS (average age  $48,5 \pm 7,9$  years). In all serum glucose levels and lipidogram were measured. BMI index, neck circumference, waist circumference (WC) as well as waist-to-hip ratio (WHR) were also assessed. On the basis of full polysomnography and evaluation of clinical symptoms (Epworth Sleep Scale, entry survey) patients were qualified for the experimental (with OSA) or control (with MS) groups. In 31 patients OSA was diagnosed, with a mean AHI ratio of  $45,05 \pm 16,2$  with mean SaO<sub>2</sub> min of  $70,5 \pm 10,6\%$ . In 26 the severe, and in 5 patients moderate OSA was found. Control group consisted of 19 men.

Results: No statistically significant differences in terms of BMI, WC or WHR were found. Such differences were confirmed between groups in the matter of neck circumference (mean neck circumference in OSA group of  $46,2 \pm 3,18$  cm, mean circumference in MS group  $43 \pm 2,6$  cm;  $p=0,008$ ). A correlation between neck circumference and AHI results was demonstrated.

Conclusion: In obese patients suffering from metabolic syndrome increased neck circumference is an important risk factor of OSA presence.