

HYPERTENSION PATIENTS CARBOHYDRATE METABOLISM DISORDERS AFFECTED BY OBESITY

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Obesity affects the overall morbidity and mortality rates, and the reason of such consequences recorded in more than 10% of the cases, is associated with high risk of cardiovascular complications and mortality. Overweight and obesity have become the reasons for the increasing number of patients with diabetes, hypertension, coronary heart disease.

The purpose of the research. To study hypertension patients carbohydrate metabolism disorders affected by obesity

Materials and methods. 47 patients with essential hypertension (HTN) were examined, including 35 (74,5%) patients with obesity and 12 patients (25,5%) without obesity. The age of patients ranged from 30 to 67 years (average age 51, $17 \pm 1,35$ years). There were 19 men and 28 women examined. HTN duration ranged from six months to 35 years, the average increase in blood pressure was about $8,2 \pm 0,67$ years. A study of anthropometric indexes changes (body mass index, waist and hips and their relationship), hemodynamic and metabolic parameters (fasting blood glucose, HbA1s) was held. The presence and degree of obesity was assessed by body mass index ($BMI (kg / m^2) = weight (kg) / height (m^2)$). Patients were examined comprehensively, including general clinical and additional methods. Glucose was determined by glucose oxidase test.

Obtained results. It was proved that the average BMI was statistically higher in HTN patients with obesity compared to the group of HTN patients without obesity. Insulin concentration increased sustainably ($p < 0,05$ in all cases), but in patients with the 3rd degree of obesity it decreased slightly, however, it was significantly different from the group with the standard body weight ($p < 0,05$). Glycated hemoglobin rate in compared groups was significantly elevated in the 1-3 rd obesity degrees ($p < 0,05$ in all cases). Fasting glucose rate was characterized by a similar growth trend in obesity groups, the highest indicator was marked in patients with obesity of the 3rd degree ($p < 0,05$ in all cases). IP Index – NOMA probably increased significantly in patients with varying degrees of obesity.

Summary. HTN patients have carbohydrate metabolism disorders along with increasing degree of obesity. This results in hyperinsulinemia, increased rates of glucose and glycated hemoglobin, and in increased insulin resistance (according to the increase in HOMA index).