**METABOLIC DISORDERS IN MEN WITH ARTERIAL HYPERTENSION**

**Pytetska N.**

*Kharkiv National Medical University, Kharkiv, Ukraine*

**The goal** was to investigate particularities of anthropometric parameters and lipid metabolism in men with arterial hypertension (AH).

**Methods.** We observed 46 male patients with an average age of 50.24±1.17 years diagnosed with AH. All the patients underwent anthropometric measurements (growth, body mass, waist and hip circumference). Body mass index (BMI) was calculated to determine obesity type, waist-hip ratio (WHR) was applied to measure type of fat distribution. Markers of lipid metabolism (Cholesterol (C), low-density lipoproteins C (LDL-C), high-density lipoproteins C (HDL-C) and triglycerides (TGC), were detected by standard enzymatic methods (“LACHEMA”, Czech Republic). LDL-C levels were also estimated using Friedewald equation and atherogenic coefficient (AC). Statistical analysis was performed in «Microsoft Excel 2007». Student t-test was used to determine whether there was a significant difference between the mean values.

**Results.** We divided patients into three groups according to BMI values: the 1st group consisted of 11 (23.9%) males with a normal body mass, 2nd group included 18 (39.1%) overweight subjects and the 3rd one - 17 (37%) obese patients. Mean levels of C, TGC, HDL-C, LDL-C and AC in patients of the 1st group were 5.29±0,29 mmol/l; 0.90±0.05 mmol/l; 1.30±0.08 mmol/l; 3.81±0.33mmol/l and 3.23±0.35 respectively; in the 2nd group – 5.51±0.16 mmol/l; 1.33±0.11 mmol/l; 1.18±0.09 mmol/l; 3.90±0.27 mmol/l and 4.21±0.44 respectively; in the 3rd group – 5.38±0.20 mmol/l; 1.47±0.11 mmol/l; 1.03±0.07 mmol/l; 4.06±0.23 mmol/l and 4.90±0.74 respectively. While mean concentrations of C in males of the 2nd and 3rd groups were insignificantly higher compared with those of patients in the 1st group (р˃0.05), mean TGC levels in the 2nd and 3rd groups were markedly elevated in comparison with those in the 1st group (р<0.001). Mean concentration of HDL-C in the 2nd group was only slightly lower whereas in the 3rd group - significantly lower as compared with the values in the 1st group (р>0.05 and р<0.01 respectively). Increase of body weight was associated with non-relevant elevation of LDL-C concentration (р>0.05 in all cases). AC showed a tendency to increase in the 2nd group and a marked increase in the 3rd group as compared to AC values in the 3rd group (р>0.05 and р<0.05 respectively).

 Moreover, all patients were divided into two groups according to WHR values: a group 1 included 11 (23.9%) males with intermediate type of fat distribution, a group 2 - 35 (76.1%) men with abdominal type of fat distribution. Mean levels of C, TGC, HDL-C, LDL-C and AC in patients of the group 1 were 15.35±0.30 mmol/l; 1.09±1.15 mmol/l; 1.35±0.13 mmol/l; 3.78±0.34 mmol/l and 3.31±0.46 respectively; in subjects of the group 2 – 5.28±0.15 mmol/l; 1.34±0.07 mmol/l; 1.11±0.06 mmol/l; 3.90±0.19 mmol/l and 4.38±0.44 respectively. The mean TGC concentration in patients of the group 2 was significantly higher compared with that in patients of the group 1 (р<0.01), whereas elevation of LDL-C, AC values and decrease of HDL-C levels in the group 2 in comparison to those values in the group 1 did not reach a level of statistical significance and represented rather a tendency (р˃0.05).

**Conclusion.** We showed the predominance of overweight subjects with abdominal type of fat distribution among male hypertensive patients. Gynoid type of fat distribution was not typical for this cohort of patients. Relevant changes of lipid metabolism markers were associated with obesity and abdominal type of fat distribution.