RELATIONSHIP BETWEEN ADIPONECTIN AND ANTHROPOMETRIC PARAMETERS, INSULIN RESISTANCE AND TRANSAMINASE LEVELS IN PATIENTS WITH NONALCOHOLIC FATTY LIVER DISEASE AND TYPE 2 DIABETES

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The basis of the pathogenesis of nonalcoholic fatty liver disease (NAFLD) is insulin resistance (IR) which appears on the background of abdominal obesity (AO) which, in turn, is a key factor in the emergence of an imbalance between adipocytokines entailing a disturbance of lipid and carbohydrate metabolism, which ultimately leads to the damage of the liver cells, the development of inflammation, fibrosis and apoptosis.

The goal - to study features of changes in the level of adiponectin (AN), depending on the function of the liver and IR index in patients with NAFLD and type 2diabetesmellitus (T2DM) and AO.

Methods.25 patients with NAFLD andT2DM (HbA1c<7.5%) and control group (n=10) underwent clinical examination including assessment of body mass index (BMI), waist circumference (WC), liver function (transaminases – ALT, AST) and index HOMA-IR.

Results. The changes in BMI were observed in 94.5% of patients, including obesity 1st degree - in 54.6%, 2nd degree - in 31.4% and 4.6% - obesity 3rd degree. AN level was reduced compared to control (8.7 ± 2.4 ng/ml vs. 15.4 ± 2.1 ng/ml, $p < 0.05$) and correlated with the degree of obesity - 6,5 ± 2,1 ng/mL in patients with grade 3 obesity ($p < 0.05$). There was a negative relationship between the level of ANand BMI ($r = -0.36$; $p < 0.01$), WC ($r = -0.34$; $p < 0.05$).The level of AN significantly decreased with increasing levels of ALT ($r = -0.44$, $p < 0.001$) and AST ($r = -0.46$; $p < 0.001$). An inverse relationship between the level of AN and the index HOMA-IR was determined ($r = -0.46$; $p < 0.001$).

Conclusions. Hypoadiponektinemia in patients with NAFLD and T2DM is associated with AO, the deterioration of the liver function and progression of IR that contributes to the further development of metabolic abnormalities in the liver.