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THE ROLE OF TUMOR NECROSIS FACTOR- α I IN PATHOGENESIS OF NONALCOHOLIC FATTY LIVER DISEASE

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Tumor necrosis factor- α (TNF- α) is an adipokine that can cause the cytotoxic effects and can stimulate the apoptosis, impairing liver function. There is a need in further study of TNF- α influence on liver cells properties and its role in the pathogenesis of nonalcoholic fatty liver disease (NAFLD) against the background of diabetes mellitus (DM) type 2 and obesity.

Purpose. To assess the correlation between TNF- α and indexes of liver function in patients with NAFLD combined with DM type 2 and obesity.

Materials and Methods. 50 patients with NAFLD in combination with DM type 2 and obesity (body mass index $\geq 30\text{kg/m}^2$) were examined. The control group included 20 healthy individuals. Indexes of enzyme and pigment metabolism were defined by biochemical methods («Dac spectroMed» kit). The level of TNF- α was determined by immunoassay method («Vector-best» kit).

Results. The mean level of TNF- α in patients was significantly increased ($96,65 \pm 0,72$ pg/ml; $p < 0.001$) in comparison with the control group ($29,19 \pm 1,05$ pg/ml). The direct correlation was established between TNF- α and aspartate aminotransferase ($r = 0,58$; $p < 0.05$), alanine aminotransferase ($r = 0,47$; $p < 0.05$), total bilirubin ($r = 0,59$; $p < 0.05$), conjugated bilirubin ($r = 0,59$; $p < 0.05$), alkaline phosphatase ($r = 0,77$; $p < 0.05$).

Conclusion. The increase of TNF- α level can negatively affect on liver function, amplifying the processes of citolysis and cholestasis in patients with NAFLD in combination with DM type 2 and obesity.