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THE INFLUENCE OF TUMOR NECROSIS FACTOR- $\alpha$  ON PROCESSES OF  
CITOLYSIS AND CHOLESTASIS IN PATIENTS WITH COMORBID  
PATHOLOGY

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Tumor necrosis factor- $\alpha$  (TNF- $\alpha$ ) 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- $\alpha$  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- $\alpha$  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  $\geq 30$  kg/m<sup>2</sup>) 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- $\alpha$  was determined by immunoassay method («Vector-best» kit).

**Results.** The mean level of TNF- $\alpha$  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- $\alpha$  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- $\alpha$  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.