



ECG data did not reveal the negative impact of the therapy with tiotropium bromide inhalation to the cardiovascular system.

Thus, the combination of COPD and IHD is a frequent comorbid disorder with the development of mutual aggravation syndrome. This combination is characterized by a more pronounced progression of COPD, is manifested by development of lung restriction and decreased reversibility of airway obstruction, reduced response to therapy with bronchodilators and worsening of quality of patients' life.

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THE IMPACT OF LIVER INFLAMMATION ON THE RENAL BLOOD FLOW IN HEPATORENAL SYNDROME

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Hepatorenal syndrome (HRS) is a relatively common complication of cirrhosis and occurs in 39% of cirrhosis patients within five years since the diagnosis has been made. Generally accepted theory is that blood vessels of kidneys constrict because of the dilation of blood vessels in the visceral circulation, which is caused by factors of the liver disease. Histamine, prostaglandins, and nitrous oxide (NO) affects unstriated muscle structure of vessels, causing the dilation of blood vessels, which increases the blood flow and circulating leukocytes in it. But the role of inflammatory cytokines in the pathogenesis of hepatorenal syndrome is still under the study.

The objective of the study was to analyze the impact of liver inflammation on the renal hemodynamic disorders in HRS. We examined 90 patients in total: 30 – with alcoholic liver cirrhosis (ALC)+normal renal function (group 1); 30 ALC+renal failure, but without HRS criteria (group 2); 30 ALC+HRS (group 3). We measured IL-6 and TNF- α levels in the blood serum by the kits of Immunoassay Cytoscreen (Biosource International, Camarillo, CA, USA), and NO level by Griess reaction. The index of interlobar arterial resistance (IARI) was estimated with the data of duplex dopplerography.

The mean value of IARI in group 3 (0.76 ± 0.02) was statistically higher than in group 1 (0.64 ± 0.04) and group 2 (0.68 ± 0.01) ($p < 0.05$). The numbers of NO were the highest in group 3 – 28.5 ± 3.2 mmol/L in comparison with 16.2 ± 2.5 mmol/L in group 1. There was no statistically significant differences between NO levels in groups 1 and 2 (17.6 ± 2.3 mmol/L) ($p > 0.05$). TNF- α levels in the blood serum were significantly overstated in group 3 – 2.79 ± 0.68 pg/mL ($p < 0.05$) in comparison with 1.89 ± 0.34 pg/mL – in group 2 and 1.89 ± 0.34 pg/mL – in group 1. Group 3 also revealed high level of IL-6 – 15.35 ± 0.93 pg/mL ($p < 0.05$), while in group 1 and 2 it was 12.39 ± 1.07 pg/mL and 11.64 ± 1.32 pg/mL, respectively.

Spearman's rank correlation analysis revealed the direct correlation between IARI and NO in the blood serum ($r = 0.86$), IARI and levels of TNF- α in the blood serum ($r = 0.73$), IARI and IL-6 in the blood serum ($r = 0.67$) ($p < 0.05$).

Thus, this paper proves that proinflammatory cytokines, including TNF- α , IL-6 and NO, play a key role in the pathophysiology of HRS. The identification of serum levels of these cytokines, along with the routine biochemical and ultrasound examination, can help in early detection of renal hemodynamic disorders in patients with ALC even before renal disfunction becomes clinically evident. It also makes possible the identification of a subgroup of ALC patients who have higher risks for HRS progression.

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STATE OF PLATELET-VESSEL HEMOSTASIS IN PATIENTS WITH HYPERTENSION, ABDOMINAL OBESITY AND NONALCOHOLIC FATTY LIVER DISEASE

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The aim of the research was to investigate the association of nonalcoholic steatohepatitis and steatohepatosis in patients with essential arterial hypertension (EAH) and abdominal obesity (AO) with signs of platelet-vascular hemostasis depending on the degree of obesity.

96 patients with nonalcoholic fatty liver disease (NAFLD), EAH 2nd stage, 1-2 degree, high and very high risk with concomitant AO, metabolic syndrome (MS): men – 41,67 % (40), women – 58,33 % (56), the average age was $53,70 \pm 5,34$ years, were involved in the prospective research. Abbreviated blood coagulogram has been studied by indexes of activated plasma recalcification time (APRT), recalcification time (RT), prothrombin index (PI), content of fibrinogen A (FGA); density of blood – by indexes of haematocrit (HT). Function of the liver has been studied by the activity of enzymes.

First degree abdominal obesity (AO) was found in 27,08% (26) people, OB II degree – in 58,33 % (56), OB III degree – in 14,58 % (14) patients; steatohepatitis with minimal activity of mesenchymal-inflammatory process has been established in 16,67 % (16) people, steatohepatosis – in the other 83,33 % (80) of patients. There has been established reliably higher level of PI, RT and CF in patients with EAH and AO I degree than in those with AO III degree by 9,94 % ($p = 0,048$), 13,88 % ($p = 0,029$) and 2,31 times ($p = 0,003$), respectively. Obtained data confirm a slowdown in the clotting process in two levels at a time: extension of the period of active thrombin generation by an external mechanism in the activation of compensatory fibrogenesis (plas factor and fibrinogen). The increase of FGA plasma content in patients with AO I degree against the background of higher content of leukocytes in the peripheral blood 25,92 % ($p =$