Summary
SYNDROME OF ENDOGENOUS INTOXICATION IN PATIENTS WITH LIVER CIRRHOSIS AND COMORBID INTESTINAL DYSBIOSIS
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Keywords: liver cirrhosis, medium molecular peptides, syndrome of endogenous intoxication, medication of Lactobacillus and Bifidobacterium, Methylsiliconic acid hydrogel.

Introduction. Nowadays in Ukraine and throughout the world there is a tendency to the growth of liver disease, their progressive course leading to the formation of liver cirrhosis (LC). LC is often accompanied with the development of endogenous intoxication syndrome (EI). An important role in the pathogenesis of endogenous intoxication syndrome belongs to the microbial factor, in particular exo- and endotoxins. Recent studies have proven the lipopolysaccharides produced by gram-negative microflora of intestinal ecological community mainly contribute to the occurrence of this condition. In physiological conditions about 95% of intestinal lipopolysaccharides run through the liver, where they are almost completely eliminated by the system of Kupffer cells, which may phagocyte. Due to their phagocytic activity Kupffer cells remove intestinal bacteria and neutralize endotoxins that enter the bloodstream from the intestine. In case of LC the cooperation of the cell populations involved in detoxification is disrupted that leads to increased intake of endotoxins into the systemic circulation. Moreover, in patients with LC a large number of endotoxins enters the general circulation, passing through the sinusoids through intra- and extrahepatic portal systemic shunts due to a syndrome of portal hypertension and due to translocation of intestinal bacteria and their toxins outside the intestines.

The aim was to study the influence of medication of Lactobacillus and Bifidobacterium - «Bifilakt Extra» («LB») and Methylsiliconic acid hydrogel - «Enterosgelum» («MAH») on the level of middle molecular peptides in patients with liver cirrhosis and comorbid intestinal dysbiosis.

Materials and Methods. 65 patients with LC of different genesis were involved into the study. 15 healthy individuals formed the control group.

Diagnosis was guided by the classification of the International Working Group and the World Congress of Gastroenterology in Los Angeles, 1994, and ICD-10. The diagnosis of LC was verified according to clinical and laboratory and instrumental examination in accordance with the order of the Ministry of Health Care of Ukraine № 271 dated 13.06.2005. In addition to generally accepted clinical and laboratory findings in patients who were under observation were studied the dynamics of the level of medium molecular peptides (MMP) in the serum by the method of N. I. Gabriyelyan.

Patients were divided into 2 groups. 33 patients who made up the 1st group took basic therapy, and 32 patients of the 2nd group took basic therapy and the medication of «LB» and «MAH».

Results. It was found all the patients examined before the treatment demonstrated high level of MMP fractions in serum, namely: peptide (MMP254) by 58,3 % (to 0,334 ± 0,010 c.u ) and to 64,5 % (to 0,347 ± 0,011 c.u ) and nucleotide (MMP280 ) by 38,4 % (to 0,411 ± 0,011 c.u ) and 48,1 % (to 0,440 ± 0,009 c.u ) in the 1st and 2nd groups respectively (p <0,05). These figures were significantly different from the levels detected in healthy individuals − respectively 0,211±0,013 and 0,297 ± 0,015 c.u. There was a decrease of nucleotide as peptide index lowered to 1,23 and 1,27 in the examined patients of both groups respectively vs 1,41 in healthy individuals.

After treatment in the patients of the 1st group the level of MMP254 decreased by 13,48 % and MMP280 by 9,01 % (p <0,05 ) relative to their levels before the treatment. In patients of 1st group nucleotide - peptide index increased to 1,29. These data can indicate a tendency of endogenous toxins in the body under the influence of basic treatment. Adding of bifilakt extra and enterosgel to the main therapy we observed a significant reduction of MMP254 at 32,57% and MMP280 – 26,37 % (p< 0,05). In 2nd group nucleotide - peptide index increased to 1,38. All this points to more efficient treatment regimens including medication of «LB» and «MAH», than standard therapy.

Conclusions. Patients with liver cirrhosis and comorbid intestinal dysbiosis show significant changes in biochemical parameters as improving MMP on the background of nucleotide - peptide index reduction in serum, indicating the presence of SEI in the studied patients. The combined treatment of patients with liver cirrhosis and intestinal dysbiosis by medication of «LB» and «MAH» leads to the normalization of these indicators by SEI eliminating.