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## **THE ROLE OF THE LIVER HISTOLOGICAL AND NECROINFLAMMATORY ACTIVITY IN THE DEVELOPMENT OF PORTAL HYPERTENSION SYNDROME**

**ABSTRACT. Background.** Liver cirrhosis is the most often cause of the portal hypertension syndrome development, though structural and morphological liver remodeling usually begins on the stage of chronic hepatitis. Morphologic patterns of the development of portal hypertension syndrome on the pre-clinical stage are still poorly investigated. **Objective.** To determine the histological and necroinflammatory activity of the liver in patients with portal hypertension. **Methods.** Patients were divided into four groups: I group (n=38) – chronic hepatitis without clinical signs of portal hypertension; II group (n=42) - chronic hepatitis transforming to cirrhosis with clinical signs of portal hypertension (varicose veins of the esophagus and/or the cardia, splenomegaly, ascitis); III group (n=34) – complicated portal hypertension on the background of liver cirrhosis (bleeding from the varices of the esophagus and/or the cardia, hypersplenism); control group (n=30) - physically healthy individuals aged 23-37 years. An integrated evaluation of the liver histological and necroinflammatory activity through the set of laboratory tests was performed (the method of “FibroTest-ActiTest”; immunofermental analysis of L-FABP concentration). **Results.** It is found that the patients with pre-clinical stage of portal hypertension syndrome show portal and periportal fibrosis with single septa, and the patients with clinical stages of portal hypertension show portal and periportal cirrhosis with multiple septa. Patients with the complications of portal hypertension show cirrhosis of the liver. With the increase of the necroinflammatory activity the portal pressure increases directly. This fact was confirmed with the increase of L-FABP protein level in the plasma, along with the increase of the actitest results. **Conclusion.** The diagnostic methodic of “FibroTest-ActiTest” and the plasma level of L-FABP are the modern models for chronic liver disease histological and necroinflammatory activity evaluation, though there is still the need to determine the correlation with the direct histological picture of liver biopsy.

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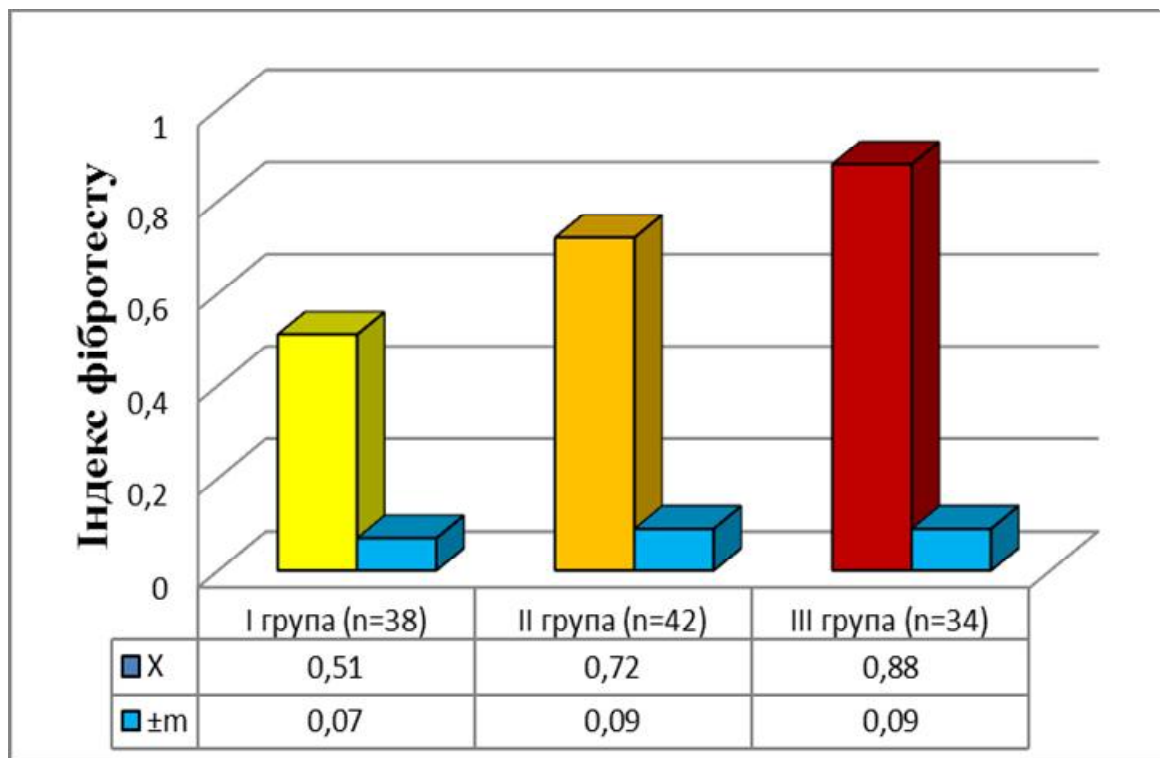


Fig. 1. The diagram of the “Fibrotest” dynamics in the groups of patients with portal hypertension syndrome.

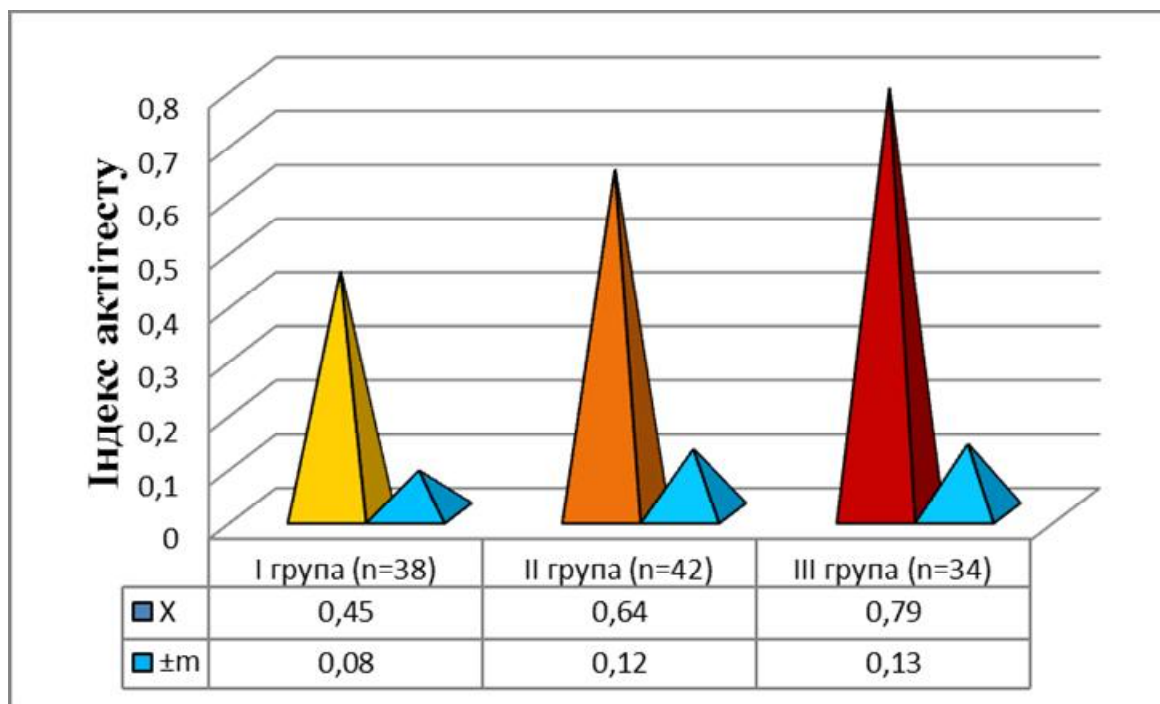


Fig. 2. The diagram of the “Actitest” dynamics in the groups of patients with portal hypertension syndrome.

*References:*

1. Gorbashko AI, Rakhmanov RK. [Diagnosis and treatment of acute esophageal bleeding in cirrhosis and portal hypertension]. In: [Controversial issues of portal hypertension surgical treatment in patients with liver cirrhosis. 6<sup>th</sup> Soviet Symposium; 1988; Tashkent]. Tashkent; 1988. p. 44-6. Russian.
2. Buster EH, van Erpecum KJ, Schalm SW, Zaaijer HL, Brouwer JT, Gelderblom HC, de Knegt RJ, Minke Bakker C, Reesink HW, Janssen HL; Netherlands Association of Gastroenterologists and Hepatologists. Treatment of chronic hepatitis B virus infection - Dutch national guidelines. *Neth J Med.* 2008 Jul-Aug;66(7):292-306. Cited in: PubMed; PMID: 18663260.
3. Garbuzenko DV. [Hemorrhage from varicose veins of the esophagus and the stomach in patients with liver cirrhosis: pathogenesis, prevention and treatment]. Chelyabinsk: Publishing House 'Vostochnyye vorota'; 2004. 63 p. Russian.
4. Aprosin ZG. Khronicheskiy aktivnyy gepatit kak sistemnoye zabolevaniye [Chronic active hepatitis as systemic disease]. Moscow: Meditsina; 1981. 248 p. Russian.
5. Ivashkin VT, Nadinskaya My. [Treatment of bleeding due to portal hypertension]. *Consilium medicum.* 2001; 3 (11): 1-9. Russian.
6. Bernthal P, Hays A, Tarter RE, Van Thiel D, Lecky J, Hegedus A. Cerebral CT scan abnormalities in cholestatic and hepatocellular disease and their relationship to neuropsychologic test performance. *Hepatology.* 1987 Jan-Feb;7(1):107-14. Cited in: PubMed; PMID: 3804189.