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THE STATE OF THE PLATELET LINK OF THE HEMOSTASIS SYSTEM IN CHRONIC HEPATITIS B

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Abstract:

It is known that disorders of the functional state of the liver in chronic diseases initiate hemostatic disorders that predispose to the manifestation of bleeding. In patients with chronic hepatitis B, disorders of the hemostasis system are observed mainly in the form of disseminated intravascular coagulation, the outcomes, stage and severity of which depend on the degree of invasiveness of endothelial cells and liver fibrosis.

Keywords: platelet factor, hemostasis, hemostatic homeostasis, hemolysate-aggregation test, chronic hepatitis.

The liver plays a central role in maintaining hemostasis, as most coagulation factors, anticoagulant proteins, fibrinolysis components, and thrombopocytopoiesis stimulants are synthesized by hepatocytes (1,5). Violations of the functional state of the liver In violation of the function of hepatocytes, hemostatic disorders are initiated, predisposing to the manifestation of bleeding (2,3,7). At present, despite numerous studies of violations of various components of hemostasis in chronic hepatitis, there is still a point of view about maintaining hemostatic balance even in conditions of severe liver damage by viruses.

This creates the basis for judgments about the insignificant initiating and predictive role of coagulation disorders in the development of hemorrhagic events in chronic liver diseases. On the other hand, it is suggested that patients with liver pathology are often predisposed to hypercoagulation and thrombosis (4,6,7). These circumstances significantly complicate the work of a practitioner and require clarification of diagnostic approaches to the assessment of patients with chronic liver diseases. The development, according to a comprehensive assessment, of hemostatic homeostasis disorders in chronic liver pathology is in the process of finding a solution to this problem (5). There is practically no data on the relationship of hemostatic homeostasis with fibrosis processes in chronic hepatitis, which is the key to understanding the pathogenesis of chronic hepatitis and the basis for improving non-invasive diagnosis of morphological and functional changes.

MATERIAL AND METHODS OF RESEARCH. A comprehensive examination of 38 patients with chronic hepatitis B (CHB) was conducted, of which 21 (55.2%) were men and 17 (44.8%) were women, who were hospitalized in the Department of Infectious Diseases of the Multidisciplinary Hospital of the Tashkent Medical Academy. The average age of the patients was 35.9+1.43 years.

In the study of the hemostasis system, certain conditions were met - blood sampling was carried out with a dry needle from the ulnar vein on an empty stomach, in plastic test tubes, without the use of a tourniquet and massage. The blood was stabilized with a stabilizing solution (sodium citrate 3.8%) and blood taking into account hemotacrit. The time interval between the receipt of blood and its research did not exceed 1 hour.

The hemolysate-aggregation test was carried out according to the method of L.Z. Barkagan, B.F. Arkhipov, V.M. Kuchersky (1984), the determination of the number of platelets in peripheral blood was carried out according to the method of Fono, activated plasma recalcification time (Bergerhof, Roka, 1980).

When evaluating the results obtained, statistical processing of the material was carried out using generally accepted methods of variation statistics. To characterize the variation series, statistical indicators were used: arithmetic mean, standard deviation, arithmetic mean error, Student's t-test, linear correlation coefficient. Mathematical data processing was carried out using the program "Microsoft Excel" for "Windows".

RESULTS AND DISCUSSION. It is known that in chronic hepatitis, the functional activity of platelets is often disturbed and their number decreases, which leads to a violation of primary hemostasis. About 1/3 of patients with chronic hepatitis have thrombocytopenia (70-90 • 109 / l), which increases in parallel with the progression of the disease and the development of hypersplenism. The level of thrombopoietin increases with thrombocytopenia, but to a lesser extent than occurs in patients with normal liver function.

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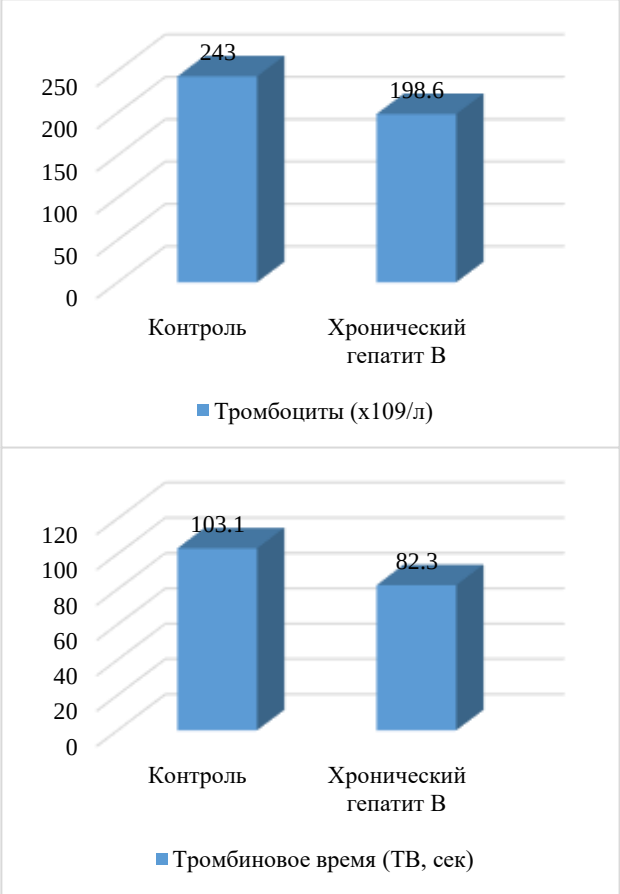

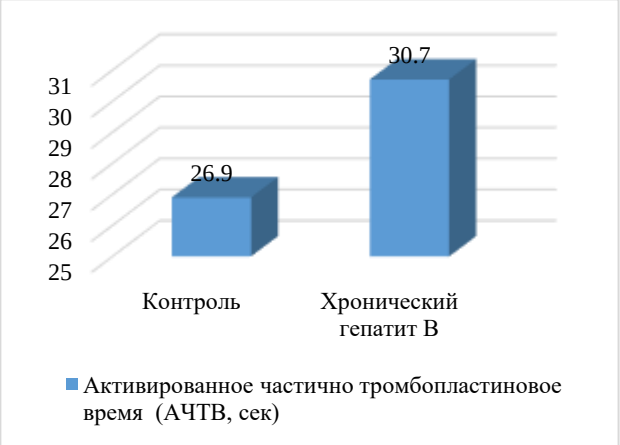

Fig.1. Dynamics of platelet parameters of the hemostasis system in HBV

As can be seen from the presented results of the studies, the number of platelets in the blood plasma in patients with HBV has a decrease in dynamics, in particular, when compared with healthy individuals, the concentration of platelets in the blood plasma decreases by an average of 18%. One of the factors of the internal pathway of activation of the hemostasis system is partially activated thromboplastin time. When analyzing the results obtained, there was an increase in time of this indicator in patients with CHB by an average of 14% when compared with the indicators of the control group.

This indicator is directly dependent on the level of endogenous anticoagulants. Consequently, the lengthening of the APTT index in time in patients with HBV, there are disturbances in the plasma link of the hemostasis system, which may be one of the causes of thrombohemorrhagic conditions.

Thus, in patients with CHB, disorders of the hemostasis system are observed mainly in the form of disseminated intrasucking blood coagulation, the outcomes, stage and severity of which depend on the degree of invasiveness of endothelial cells and liver fibrosis. At the same time, prognostic criteria for hemorrhagic complications were also revealed, as well as criteria for prognosis and early diagnosis of hemorrhagic complications.

LITERATURE

1. Evaluation of fibronectin and alpha-1-acid glycoprotein in chronic liver disease // The theory of recent scientific research in the field of pedagogy. – 2022. –T.1. – №4. – P. 144-147.
2. Akhmadaliev N.N., Khadzhimetov A.A., Atakhodzhaeva M.A., Khodzhaeva M.Yu., Rezhabbaeva N.L., Ergasheva V.Sh. (2022). Clinical features of chronic liver disease. *Innovative developments and research in education*, 1(12), 257-260.
3. Akhmadaliev N. N., Jabbarov A. Zh. Violation of the platelet-vascular link of the hemostasis system in experimental toxic hepatitis // Youth in science: New arguments. – 2017. – P. 108-110.
4. Nurbaev, F.E., Zhumaev, B.Z., Soliev, O.O., Savronov, E.E., Khozhimetov, A.A., Akhmadaliev, N.N. (2010). The significance of changes in the activity of enzymes with different intracellular localization in patients

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with viral hepatitis B. Infection, immunity and pharmacology. -2010, 5, 53-55.
5. Toshtemirov M.A., Khodzhimetov A.A., Akhmadaliev N.N. Features of the platelet-vascular link of the hemostasis system in acute viral hepatitis B. – 2001.
6. Khadzhimetov A.A. et al. Hemostasiological features of chronic liver diseases // Innovation in the modern education system. – 2022. – T. 3. – №. 25. – S. 23-27.
7. Khadzhimetov A.A., Atakhodzhaeva M.A., Akhmadaliev N.N., Khodzhaeva M.Yu., Rezhabbaeva N.L., Ergasheva V.Sh. (2022). Evaluation of serum fibrosis markers in chronic liver disease. Innovative developments and research in education, 1(12), 254-256.