

Chronic Liver Diseases

Islamov Shavkat Erjigitovich

DSc, Associate Professor, Samarkand state medical university, Samarkand, Uzbekistan

Makhmatmuradova Nargiza Negmatullaevna

PhD, Associate Professor, Samarkand state medical university, Samarkand, Uzbekistan

Karimov Nodirbek Bakhtiyorovich

Samarkand state medical university, Samarkand, Uzbekistan

Annotation: The article is devoted to liver damage, which causes serious disturbances in the regulation of metabolism, detoxification and antimicrobial protection. There is also a high risk of liver diseases in cotton workers and in people living in areas of intensive cotton growing. The increasing medical and social significance of chronic liver diseases requires new efforts in the development of issues of etiology, pathogenesis, immunology, diagnostics, treatment and prevention of these diseases.

Keywords: liver, chronic diseases, causes, medical significance.

Introduction. In economically developed countries, chronic liver diseases are among the six main causes of death in patients aged 35 to 60 years, accounting for 14-30 cases per 100 thousand population. Every year, 40 million people die worldwide from liver cirrhosis and hepatocellular carcinoma developing against the background of carriage of the hepatitis B virus. In the CIS countries, cirrhosis occurs in 1% of the population (Akalaev R.N., et al., 2020) [2].

It is more often observed in men: the ratio of men to women is on average 3:1. The disease can develop in all age groups, but most often after 40 years. Liver diseases most often develop with prolonged alcohol intoxication (according to various sources, from 40-50 to 70-80%) and against the background of viral hepatitis B, C and D (30-40%). Less common causes are diseases of the biliary tract, congestive heart failure, various chemical and drug intoxications. Chronic liver diseases develop in both hereditary metabolic disorders (hemochromatosis, hepatolenticular degeneration, α 1-antitrypsin deficiency) and occlusive processes in the portal vein system (phleboportal cirrhosis). Primary biliary cirrhosis of the liver occurs without apparent cause. In approximately 10-35% of patients, the etiology remains unclear (Boone L., et al., 2015) [9].

The increasing medical and social significance of chronic liver diseases requires new efforts in the development of issues of etiology, pathogenesis, immunology, diagnosis, treatment and prevention of these diseases.

Liver damage causes serious disruptions in the regulation of metabolism, detoxification and antimicrobial protection. There is also a high risk of liver disease in cotton workers and people living in areas of intensive cotton growing. Often the reason for this is due to the fact that a person does not adapt well to new living and working conditions, the body cannot adjust its work to the optimal mode; its organs and systems work under overload, which leads to the emergence and development of chronic diseases, including liver diseases (Abzalova Sh., 2018) [1].

In medicine and veterinary science, there is a search for the latest effective methods of treating liver pathologies. Liver diseases have a steady tendency to grow all over the world. More than 2 million people a year fall ill with acute viral hepatitis, and in 1/10 of them the disease becomes chronic. Unfortunately, Asia is one of the regions with a high prevalence of hepatitis B and C and with a steady tendency for its growth in recent years. It should be noted that the course and outcome of acute viral hepatitis are determined not only by the pathogenic properties of the infecting agent, but mainly by the

reaction of the immune system to the virus that has penetrated the liver cells. As a result of the cellular immune response aimed at neutralizing viral antigens, the infected cell dies along with the pathogen: the optimal response leads to complete elimination of the pathogen and recovery. Autoimmune mechanisms are realized through the destruction of surface or intracellular structures by autoantigens in the presence of complement or due to antibody-mediated cellular cytotoxicity, the formation of circulating immune complexes autoantigen-autoantibody, subsequently developing a complement fixation reaction (Alimova L.A., et al., 2014; Krishna, M., 2017) [3,11].

Alcohol-induced liver disease is second only to acute and chronic viral liver diseases in terms of prevalence and social significance. Over the past decades, the alcohol factor has been steadily increasing in most industrialized countries and often outpaces the infectious factor in the frequency of chronic lesions (Moiseev V.S., et al., 2014) [8].

Only 9.5% of all adverse drug reactions involve liver damage. Currently, more than 1,000 medicinal compounds are known to have hepatotoxic potential.

Toxic liver damage has become numerous due to the deterioration of environmental conditions of human habitation, "chemicalization" of food and everyday life. The main mechanism for removing xenobiotics entering the body of humans and animals from the external environment is their oxidation. An increase in the polarity of hydrophobic molecules promotes the transition of non-polar substances from the hydrophobic space of membranes to the aqueous space of the cell. The main monooxygenase system that carries out such reactions is the system containing cytochrome P-450, which is capable of activating molecular oxygen and using one of its atoms to oxidize organic substances (Berdalinova A.K., et al., 2015; Zobov V.V., 2015) [5,7].

Despite the wide variety of agents that cause liver damage, there are several types of responses from hepatocytes. One of the leading pathogenetic mechanisms for the development of pathological conditions in the liver is the development of lipid peroxidation processes in biological membranes (Bakhriev I.I., et al., 2020) [4].

In the conditions of experimental toxic hepatitis caused by the use of CCl₄, when studying immunoallergic reactivity with the determination of T- and B-lymphocytes, phagocytic activity of neutrophils, and indirect reaction of mast cell degranulation, a change in the body's immunoreactivity was noted, depending on the dose of CCl₄ used, which indicates a regulatory relationship between the liver and immunogenic reactivity (Goncharov N.V., et al., 2017) [10].

The main principles of treatment of damage to the organs of the hepatobiliary system, as a rule, provide for the inclusion of diet therapy, drug therapy in combination with physiotherapy, balneotherapy and exercise therapy. Therapeutic measures should, on the one hand, help prevent or limit the process of hepatocyte necrobiosis and normalize metabolic disorders, provide more favorable conditions for the fastest and most complete completion of reparative processes in the liver. On the other hand, any agents that can directly or indirectly have a damaging effect on the liver should be excluded (Voloshchuk O.N., et al., 2014) [6].

Conclusion. It has been found that liver damage causes serious disturbances in the regulation of metabolism, detoxification and antimicrobial protection. There is also a high risk of liver disease in cotton workers and in people living in areas of intensive cotton growing. The increasing medical and social significance of chronic liver diseases requires new efforts in developing issues of etiology, pathogenesis, immunology, diagnostics, treatment and prevention of these diseases.

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