

CLINICAL AND IMMUNOLOGICAL CHARACTERISTICS  
OF VIRAL HEPATITIS B AND C IN ADOLESCENTS

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**Relevance of the topic.** Viral liver lesions are still one of the pressing medical and social problems of modern hepatology due to their widespread prevalence, diversity of clinical course and frequent adverse outcomes.

In recent years, many countries of the world, including Russia, have noted an increase in the proportion of hemocontact hepatitis. St. Petersburg is one of the regions with the highest level of registration of HBV and HCV. The incidence of HCV here is 3.5 times higher than the average for Russia, and has even exceeded the incidence of HBV, which was stopped by the introduction of mass vaccination. High infection with the hepatitis B virus persists in families with patients with chronic forms, and here powerful, long-term foci of infection with a slowly developing epidemic process, which involves new generations, are often formed. The incidence of HCV in children is lower than in adults, but it is necessary to emphasize the alarming situation developing in the adolescent group, where there is a clear increase in infection associated with the spread of intravenous drug addiction.

According to the data, 60-64% of adolescents have chronic VG and are usually detected during a random examination. Many researchers associate the process of chronicity with an imbalance between the populations of CD 4+ T-helper lymphocyte clones of types 1 and 2 (Th1 and Th2) and a change in the production of various cytokines. Studying the nature of the immune response and determining the cytokine profile helps clarify the mechanisms of pathogenesis of many diseases. However, with VG, these studies are fragmentary. The role of such cytokines as IL-4, IL-6, IL-8, TNF- $\alpha$ , TGF- $\beta$  in the pathogenesis of VG is still unclear.

**Objective of the study.** To establish clinical, epidemiological and immunological features of various forms of HBV and HCV in adolescents and to develop criteria for prognosticating the course of the disease and the effectiveness of rational antiviral therapy regimens based on the data obtained.

Research objectives

1. To study the characteristics of the clinical course and outcomes of HBV and HCV in adolescents depending on the timing of infection, cytolytic, replicative activity and morphological changes in the liver.

2. To study the dynamics of immunoglobulin A, M, B, E and cytokine levels in adolescents with various clinical forms of HBV and HCV and against the background of interferon therapy.

3. To compare the clinical picture of acute and chronic forms of HBV and HCV in adolescents with the level of production of immunoglobulins, as well as proinflammatory and anti-inflammatory cytokines in dynamics, to identify correlation relationships and criteria for prognosticating the course of the disease.

4. To establish the nature of the effect of the drug Interferon on the dynamics of clinical symptoms, the severity of cytolysis, the activity of the viral process and the production of cytokines and to evaluate the effectiveness.

**Materials and method.** The study of clinical and epidemiological features of the course and outcomes of acute and chronic forms of HBV and HCV in adolescents was conducted. Correlations between the HBV genotype, the duration of the disease and the amount of virus in the blood serum were established. Features of the immune status in adolescents with acute and chronic forms of HBV and HCV were determined. Immunological criteria for predicting a favorable and unfavorable course of acute and chronic forms of HBV and HCV in the early stages of the disease were identified. The role of cellular and humoral immunity in the formation of chronic or protracted course of HBV and HCV was determined. High efficiency and immunomodulatory effect of the drug  $\alpha$ -IFN interferon, as well as the antiviral action of the interferon inducer cycloferon. Immunological criteria for predicting the effectiveness of therapy for chronic hepatitis B and chronic hepatitis C with  $\alpha$ -1PT\G preparations have been established. Schemes for treating acute and chronic forms of hepatitis B and hepatitis C with interferon and cycloferon preparations have been proposed.

**Conclusions.** The developed immunological criteria for the prognosis of the course of hepatitis B make it possible to identify patients at the early stages of the infectious process with a risk of developing protracted and chronic forms of the disease and to determine therapeutic tactics. Clarification of the causes of chronic hepatitis B justifies the need to use the immunomodulator cycloferon in OH at the early stages of the disease. In the treatment of patients with chronic hepatitis C, the antiviral effect of cycloferon and the advisability of using its long courses have been proven. The effectiveness of the drug Interferon in the treatment of chronic hepatitis C has been confirmed. Prognostic immunological criteria for the effectiveness of this therapy have been determined.

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