

EFFECT OF VIRAL HEPATITIS ON MENSTRUAL CYCLE DISORDERS IN ADOLESCENT GIRLS

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Abstract. *This article provides a brief overview of the mechanisms by which viral hepatitis negatively affects the menstrual cycle of girls during prepubertal and pubertal periods of development. Hormonal imbalance, disruption of protein, fat and carbohydrate metabolism in hepatitis not only affects the development of reproductive function, but also negatively affects pregnancy, lactation and the formation and development of the fetus and newborn shown.*

Keywords: *prepubertal and pubertal periods, viral hepatitis, chronic liver diseases, menstrual cycle.*

Despite all ongoing therapeutic and preventive measures, the incidence of viral hepatitis, which has a long-term course and often leads to chronic liver failure, is still high against the background of environmental disturbances. In addition to toxic products used in everyday life, industry and agriculture, this is helped by the irrational use of various drugs that are metabolized in the liver. All this, in general, leads to a gradual increase in the frequency of chronic liver diseases. The unique wide functional properties of the liver cause constant interest in this organ not only by hepatologists and specialists in infectious diseases, but also by specialists in other clinical and theoretical fields of medicine and biology. Based on existing facts, considering the liver as the central metabolic system of the body and linking it to the leading internal organs along with the brain and endocrine system allows. The liver, like the brain, is the center of receiving, processing, storing and transmitting information. As an organ of systemic adaptation of metabolism and energy, the integral activity of the liver depends significantly on a number of external and internal factors. These include the quantity and quality of food, the level of muscle and nervous activity, and stressful situations. At the same time, hormones have the main physiological importance in the systemic regulation and self-management of various functions of the liver. General metabolic, adaptive hormones, first of all, glucocorticoids, somatotropin and prolactin, insulin, thyroid hormones have a strong adaptive effect on many enzymatic processes in liver cells through appropriate cell receptors. Being an integral organ, the liver coordinates both adaptive and reproductive processes. This organ takes part in the reproduction process as an important coordinator, as well as a purposeful supplier of trophic materials "placed" in various joints of the endocrine component of the reproduction process. The role of the liver in the implementation of this function is to provide the most important aspects of the biodynamics of sex hormones. Their metabolism, the production of special binding hormone transport proteins in the blood plasma, the synthesis and secretion of cholesterol, the use of lipoproteins as the main starting point by the gonads are the main manifestations of the biosynthesis of sex steroids. There are enough reasons to believe that the importance of the liver as a central metabolic system for regulating the function of endocrine communication of the reproductive system is basically equal to the participation of

the hypothalamus-pituitary system in its activity. But in liver diseases, especially hepatitis, there is a whole system of genetically determined relationships. Viral hepatitis is now common all over the world. About 41 million people die each year from causes related to them in one way or another. The incidence of viral hepatitis has remained high in recent years. It is especially high in Central Asian republics. The share of this region, where 15% of the population lives, accounted for more than 40% of cases of viral hepatitis.

According to official statistics, the majority of cases of viral hepatitis registered in these countries are hepatitis "A" 84.3-80.3%, and hepatitis "B" only 9.2-12.9%. The authors' data describing the specific weight of viral hepatitis "B" in the general incidence of viral hepatitis are contradictory and range from 20-80%. About 36,000 cases of hepatitis "B" virus are recorded in Uzbekistan every year, which is almost 5 times higher than the average rate in MDX, and this process has not yet shown a decreasing trend. Chronic viral liver diseases in children are among the most common diseases. The progressive nature and unfavorable outcome of chronic viral hepatitis and cirrhosis of the liver in childhood is explained by the incomplete formation of the immune system, the peculiarities of its response, susceptibility to viral and bacterial infections that worsen the course of the disease. N. V. Shuklina (1984) studied the physical development of girls with chronic inflammatory diseases of the hepatobiliary system. The author says that the period of sexual development is complicated by the presence of inflammatory diseases of the hepatobiliary system, the underdevelopment of secondary sexual characteristics, the formation of the menstrual cycle is disturbed. The latter is characterized by hyperpolymenorrhea, menorrhagia, algodysmenorrhea, and hypomenstrual syndrome. The same applies to girls born to mothers with diseases of the hepatobiliary system. It is known that the systemic metabolism of sex steroids and pituitary gonadotropins is carried out in the liver, and the sexual differentiation of liver functions is carried out through receptors for androgens and estrogens expressed in hepatocytes. The main stages of sexual differentiation occur in the prepubertal period, and with the completion of sexual and somatic development, the main metabolic functions of the liver are determined by sex.

Viral hepatitis is currently defined as a systemic viral infection in which liver inflammation is based on its clinical, biochemical, immunological and morphological manifestations. Pathogenesis of viral hepatitis at the current stage considered from the point of view of the viral-immunogenic theory of the concept, according to which it is determined by the severity of the course and the characteristics of the immune system response. At the same time, the virus itself does not have a cytopathogenic effect, and various degrees of damage to the liver parenchyma depend on the calling effect. At the same time, cytolysis of hepatocytes ensures elimination of the pathogenic virus. Viral hepatitis "B" made it possible to associate with diseases whose pathology is caused by immune disorders. It is no coincidence that some authors draw similarities between viral hepatitis "B" and autoimmune diseases, and suggest that these diseases are more common in women. A large number of authors focus on the significant frequency of menstrual dysfunction in girls with infectious diseases. A comprehensive study of girls aged 12 to 16 years showed that a high infectious index delayed the rate of sexual development by 2-3 years. During the study of the effect of the infectious process on the functional morphology and function of the ovaries, Yu.A. Gurkin (1979) came to the following conclusion: the nature of damage to the

ovaries almost does not depend on the type of infectious process and does not depend much on the severity of intoxication, on the contrary, the duration of the disease turned out to be a more important factor. The author attaches great importance to the internal development conditions of the child. Currently, little attention is paid to the study of hormonal disorders in viral hepatitis in children, but there are many reasons for developing this aspect of the problem.

Androgens play an important role in hypothalamic sexual differentiation. From the time of birth, the preoptic region of the hypothalamus is undifferentiated and is capable of cyclically releasing gonadotropins in both male and female organisms. The release of androgens blocks this area and in the future only to the tonic secretion of LH brings. According to the authors, the critical period for the effect of androgens (and, accordingly, for determining the nature of LH release) is determined by the level of maturity of the hypothalamus-pituitary system. For the structures of the anterior hypothalamus, it is 11-12 years. In patients with chronic liver diseases, damage to the endocrine system caused by changes in hormone metabolism in the pathologically changed liver is of particular clinical importance. The liver is one of the main target organs for the effects of estrogens. Estrogen receptors were found on the surface of hepatocytes in men and women.

All possibilities of reproductive function are finally determined only in the dynamics of pregnancy and lactation. The immune and other systems of children born to mothers with chronic hepatitis before and during pregnancy were negatively affected. In various regions of the world, including Uzbekistan, the incidence of viral hepatitis is high and has a tendency to develop. When viral hepatitis "B" is carried out in different periods of the life of teenage girls, it becomes relevant to identify the organ systems in which the problem is observed. Some of its aspects have already been studied in patients of reproductive age.

However, in the literature available to us, questions about the specific features of the formation of reproductive function and their effect on pregnancy and lactation period in adolescents infected with viral hepatitis "B" are poorly explained.

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