

## CLINICAL AND LABORATORY CHARACTERISTICS OF CHRONIC VIRAL HEPATITIS B IN PREGNANT WOMEN

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**SUMMERY:** The problem of viral hepatitis in pregnant women is one of the most pressing in modern medicine, since hepatitis B (HBV) and C (HCV) viruses are the most common cause of chronic liver diseases in women of childbearing age. According to the latest expert estimates, at the beginning of 2012, on average, 180 million people worldwide were chronically infected with the hepatitis C virus, and 35% of them were women of childbearing age. The problem of viral hepatitis in pregnant women is common to obstetricians, infectious disease specialists, hepatologists, and therapists, and requires the development of a common strategy for managing pregnancy in such women.

Particular attention is paid to the course of viral hepatitis in pregnant women, since during this period the load on the liver increases: the protein-synthetic and detoxification functions of the liver increase, and a significant increase in the concentration of estrogen increases the impact of stress factors on the organ. Increased formation of plastic substances leads to the accumulation of lipids in cell membranes, which reduces their permeability and reduces the intensity of the processes of uptake, transport and excretion of various substances in the hepatocyte.

The increase in the incidence of blood-borne viral hepatitis among persons of reproductive age creates the prerequisites for the involvement of pregnant women in the epidemic process. According to numerous studies, chronic hepatitis in recent years occupies one of the leading places in the structure of extragenital pathology in pregnant women (Igenbaeva G.A., 1998, Sologub T.V. et al., 1998, Pogromskaya M.N. 2000, Belopolskaya M. A., 2003). Hepatology research found that viral th hepatitis B and pregnancy are mutually aggravating influence. The manifestation of this influence is a high percentage of undermaturity - the threat of termination of pregnancy occurs 2.5 times more often than in healthy pregnant women; placental insufficiency - signs of intrauterine fetal hypoxia and intrauterine growth retardation syndrome are found in 22–25%, there is a threat of infection (Apuzzio J. et al. 2012, Reddick KLB et al. 2011). In most patients, pregnancy does not adversely affect the course of the disease and does not pose a risk to the mother. The course of chronic viral hepatitis in pregnant women is characterized, as a rule, by low activity and a rare exacerbation (Vlasova O.N. 2013

, Apuzzio J. et al. 2012). All of the above leads to an increase in the number of pregnant women and parturient women among women suffering from viral hepatitis B, which poses a real threat not only to the life and health of the expectant mother, but also to the child who can become an asymptomatic carrier of the infection, develop acute or chronic hepatitis with an outcome in cirrhosis and hepatocellular carcinoma.

**Key words:** pregnancy, chronic viral hepatitis B, anemia, cirrhosis.

**Research results:** The average age of pregnant women was  $28, 3 \pm 3.4$  years. When analyzing the awareness of women about the diagnosis of viral hepatitis B before pregnancy, only 19 patients (18,6 %) from the entire study group knew about the existence of the diagnosis. These assessments of reproductive function testified to an almost equal ratio of primiparous and multiparous - 61 (62,2%) and 37 (37,8 %), respectively. The gynecological anamnesis was burdened in every second patient, the most common were: inflammatory diseases of the pelvic organs - 25,5 % of cases; sexually transmitted infections - 32,6 %.

In the patients of the study group, in most cases, pregnancy proceeded against the background of various complications. The most frequently encountered in the early stages: the threat of termination of pregnancy - 18 (18,4 %) cases, early toxicosis - in 12 (12,2 %), anemia of pregnant women - in 19 (19,4 %) cases. Uncomplicated during the first half of pregnancy was observed in 48 (48,9 %) women. Phases of exacerbation of viral hepatitis in the first half of pregnancy were not observed in any patient.

The second half of pregnancy proceeded on the background of threatened abortion from 16 (16,3 %) patients, anemia was observed in 42 (42,8%) cases, moderate preeclampsia was detected in 13 (13,2%) of pregnant women. Disorders from the mother-placenta-fetus (hemodynamic disorders, intrauterine growth retardation (IGR)) were diagnosed in 13 (13,2 %) pregnant women, polyhydramnios - in 7 (7,1 %), oligohydramnios - in 6 (6,1 %) of patients. In 3 (3,1 %) women, the disease was accompanied by cholestatic syndrome. In the remaining 21 (21,4 %) cases, the course of the second half of pregnancy was not complicated.

Clinical symptoms of CVHB in all examined pregnant women in the 2nd and 3rd semester were characterized by the presence of intoxication, dyspeptic and icteric syndromes.

Intoxication syndrome manifested basically general weakness, malaise, loss of appetite, pain in the right upper quadrant and epigastrium, nausea, single or repeated vomiting.

A comparative analysis of the frequency of occurrence of clinical symptoms showed that pain in the right hypochondria and epigastrium was the most frequent symptom and was found in both study groups. The pain appeared regardless of food

intake and physical activity. It was detected in 58,1% of pregnant women with chronic viral hepatitis B. (Table No. 1 )

Table 1

**The incidence of the main clinical symptoms and laboratory tests in pregnant women with chronic hepatitis B in the 2nd and 3rd trimester**

No.	Signs	Study group (%)	Physiological pregnancy (%)
1	Pain in the right hypochondrium and epigastrium	58,1%	17,3%
2	Decreased appetite	12,2%	8,6%
3	General weakness	38,7%	19,5%
4	Nausea	36,7%	30,4%
5	Vomiting	31,6%	17,3%
6	Hepatomegaly	18,3%	4,3%
7	Yellowness of the skin and sclera	7,1%	-
8	Darkening of the color of urine	7,1%	-
9	Increase in the amount general bilirubin	7,1%	-
10	Increasing the amount of ALT	9,1%	-
11	Increasing the number of AST	8,1%	-
12	The increase in thymol test signs	11,2%	-
13	Increased alkaline phosphatase	7,1%	-

In all patients of the study groups, we observed changes in the digestive system. Thus, tongue lining and nausea were detected with the same frequency in both groups of patients. Vomiting was observed in pregnant women with CVHB in 31,6 % of cases. Hepatomegaly characterized by a uniform compaction and increase in liver parenchyma. At the same time, the lower edge of the liver protruded from under the costal arch by 1-4 cm. The contours were smoothed, without sharp deformation. The edge is even, smooth, palpation of the liver caused painful sensations. In patients with chronic hepatitis B, this symptom occurred in 18,3 %.

Icteric syndrome, clinically manifested by yellowing of the skin and sclera of varying severity and intensity, and was recorded in CVHB only in 7,1 %.

When managing patients, the main attention was paid to monitoring the biochemical parameters of the activity of hepatitis, i.e. monthly determined the level of bilirubin, the activity of ALT, ASAT, alkaline phosphatase.

Biochemical blood test revealed the following deviations: the average value of total protein was  $64,87 \pm 5,2$  g/l; bilirubin increase was found in 7 (7,1%) of pregnant

women (the maximum value was 58,6 mmol/l). In 36,8 % of pregnant women with HBV indicators ALT did not differ from the norm throughout the pregnancy, that is, there was a favorable course of hepatitis. The proportion of pregnant women with low activity of chronic hepatitis prevailed and occurred in 47,9% of cases. In these patients. Increase of ALT to 5 norms was observed in studying period. Moderate activity of the process (an increase in the ALT level from 5 to 10 norms) was recorded in 15,3 % of cases. High activity of hepatitis in women under our supervision was not revealed. An increase in thymol test was observed in 11 (11,2 %) pregnant women, up to a maximum of 7 U (N: up to 4 units), alkaline phosphatase was increased in 7 (7,1 %) patients .

No changes in coagulogram indices were found in any patient.

The most significant changes were noted by us in the activity of ALT and a slight increase in alkaline phosphatase and thymol test in women with CVHB during pregnancy.

To compare the indicators of biochemical screening in the patients of the study group with the indicators in physiologically ongoing pregnancy, a group of practically healthy women with an uncomplicated course of the gestational process was recruited.

**Conclusion:** The course of chronic viral hepatitis B in pregnant women was clinically characterized by the absence of complaints and hepatomegaly in most patients; laboratory examination most often showed low biochemical activity of hepatitis with normal bilirubin levels and rare development of cholestatic syndrome. The above data give us every reason to classify women with chronic viral hepatitis B as a high-risk group of possibly unfavorable outcomes of pregnancy and childbirth for the mother and fetus.

For the prevention of perinatal infection of newborns and the increase in the incidence of CVHB in the population, testing for parenteral viral hepatitis should be widely promoted when planning the birth of children in order to timely provide women of reproductive age with antiviral therapy before pregnancy and childbirth.

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