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**THE COURSE OF PREGNANCY AND CHILDBIRTH IN WOMEN WITH VIRAL  
HEPATITIS "B"  
(ON THE EXAMPLE OF MATERNITY HOSPITAL IN YAKUTSK)**

**Summary**

To determine the influence of viral hepatitis "B" on pregnancy and childbirth, we studied individual records of pregnant women of the prenatal clinic of Yakutsk Clinical Hospital No. 3 and childbirth records of Yakutsk Clinical Hospital from 2003 to 2011 with a diagnosis of "viral hepatitis", at various stages of pregnancy. It was found that acute viral hepatitis "B" adversely affect the course and outcome of pregnancy, which is shown by an increased risk of threatened miscarriage, threatened preterm labor. Chronic viral hepatitis "B" in childbirth increases the frequency of preterm rupture of membranes, bleeding in the early postpartum period. Viral hepatitis "B" affects the fetoplacental complex, which is manifested in chronic hypoxia, intrauterine growth retardation, and the possibility of transmission of the virus from mother to fetus.

**Keywords:** Viral hepatitis "B", HBsAg, jaundice, complications of pregnancy and childbirth.

**Introduction**

According to a number of separate epidemiological studies from 50% to 82% of pregnant women have some kind of chronic diseases of the internal organs. Over the past 10 years extragenital morbidity has increased dramatically, including 4-fold increase in the pathology of hepato-biliary system. During normal pregnancy liver functions are not changed. However, during normal pregnancy the liver is under condition of tension of functional reserves. Therefore, in pregnant women in case of diseases of the hepato-biliary system or development of complications of pregnancy, compensatory and adaptive capacities of the liver dry out much faster than in the absence of pregnancy [7]. Liver pathology is one of the leading causes of maternal mortality from bleeding due to hepatitis and severe complications of pregnancy. The study of peculiarities of hepatitis in pregnant women is also relevant to the epidemiological vigilance in the whole region.

**Purpose:** To investigate the clinical features of pregnancy and childbirth in viral hepatitis "B" and find out the specifics of the early neonatal period in infants born to mothers with hepatitis "B", as well as the possibility of perinatal transmission of HBsAg.

**Materials:** We studied individual records of pregnant women from the prenatal clinic at Yakutsk Clinical Hospital No. 3 (62 cases) and birth records of Yakutsk City Clinical Hospital from 2003 to 2011, 412 women with a diagnosis of "viral hepatitis", at various stages of pregnancy. The share of chronic viral hepatitis was 93.6%, of acute viral hepatitis 6.4%. Also the analysis of 2 groups was carried out: basic - 62 individual case histories of pregnant diagnosed women and 62 pregnant women in control group, who were examined after with the suspicion of viral hepatitis. According to the results of clinical examination in the control group, suspicion of viral hepatitis has been cancelled and was not subject to further study.

**Results of the study:** The structure of acute viral hepatitis was dominated by acute viral hepatitis "B" in 46.1% of cases, in 3.3% hepatitis "A" was identified, "D" in 7.6%, "C" in 3.84%; 19.2% of cases were not verified. Acute viral hepatitis "B" was often recorded in the first trimester of pregnancy in 75%, in the 2<sup>nd</sup> trimester in 8.36%, in the 3<sup>rd</sup> trimester in 16.64% (Fig. 1).

During the analysis of the severity of the disease it was found that in pregnant women severe forms of acute viral hepatitis (AVH) dominated in 58.4%, moderate forms in 33.3%, mild forms in 8.3%. The most severe forms were registered in the 3<sup>rd</sup> trimester of pregnancy (Fig. 2)

. As for comparative analysis of the clinical picture of the AHB (acute hepatitis B) in pregnant women of the study group, there is marked dyspeptic syndrome in 83.3% of cases, asthenovegetative syndrome in 82.9 %, skin lesions in 41.7 % and 25.0 % recorded in the form of hemorrhagic syndrome, bleeding gums and nose bleeds, arthralgic option flow in 16.6 % of cases (Fig. 3).

In 2 cases pregnancy was terminated in pregnant women with acute viral hepatitis "B" for medical reasons, and there was 1 case of registered spontaneous abortion. The most common complications in patients with AVH were: threatened termination of pregnancy (33.3%), intrauterine fetal hypoxia (56.7%), intrauterine growth retardation (5%).

Infants of mothers with AVH did not show: yellowness of the skin, hepatomegaly, or other manifestations of perinatal hepatitis. The structure of chronic viral hepatitis in pregnant women is as follows: the largest percentage was shown by chronic viral hepatitis "B" - 64.3%, chronic hepatitis "C" - 13.9%, 5.3% of pregnant women had markers of viral hepatitis "B" and "C"; hepatitis "D" was found in 15.2%, not verified cases of chronic hepatitis were registered in 1.3% of pregnant women (Fig. 4).

Chronic hepatitis with minimal and mild degree of activity was found in 75.9% of cases, with moderate activity in 18.8%, with significant activity in 5.3% of the cases (Fig. 5).

Among pregnant women with chronic hepatitis "B" more often there were such symptoms as discomfort, heaviness in the right hypochondrium - 44.1%, weakness - 92.2%, itchy skin - 8.2%. Less commonly observed were such phenomena as yellowness of the skin - 20.8%, hepatomegaly - 9%, spider veins - 2.0%.

All pregnant women with HBsAg showed with the same frequency extragenital pathology, mainly in the gastrointestinal tract: chronic cholecystitis 8.2%, chronic gastritis 15.45%, biliary dyskinesia 12.7% and urinary system 44 %.

ALT levels during exacerbation of chronic hepatitis "B", according to the results of biochemical tests, reached to 337 U/L, the level of bilirubin in the blood of pregnant women with chronic hepatitis "B" increased to 82 mmol/l. Also there were signs of hypoproteinemia and disproteinemia expressed in reduced albumin (17%) in blood and increase of the gamma globulin fraction (8%), and a slight increase in thymol test results (14%).

Childbirth in patients with chronic hepatitis "B" was accompanied by the following complications: premature rupture of membranes was noted in 18.3%, uterine inertia in 8.3%, early post-natal bleeding in 22.5%, fetal anomalies were not observed (Fig. 6 ).

An analysis of health status of children born to mothers with chronic hepatitis "B" showed that the proportion of premature infants in this group was low and amounted to 13.3%. At the same time, significantly higher was intrauterine hypoxia 58.3%, perinatal hypotrophy 5.8%, feto-placental insufficiency in 22.6%, according to ultrasonic data.

The condition of babies born to mothers with hepatitis "B" was rated as satisfactory in 66.5%, moderate in 26.0%, and severe in 7.5% of newborns. On Apgar score in children born to mothers with chronic hepatitis "B", the occurrence of low levels was higher than in the control group, but no significant differences between the groups were revealed. Of all newborns in question tests for HBsAg showed positive results in 6.8% (Fig. 7).

The data on the course of pregnancy in women with viral hepatitis "B" are the basis for the development and implementation in outpatient care diagnostics of targeted tactics for further examination after discharge from the hospital, clinical examination and rehabilitation therapy, focus on timely vaccination of newborns, prevention of complications of pregnancy, childbirth, and transmission of infection from mother to fetus.

### **Findings**

1. The most common clinical variant of hepatitis "B" in pregnant women are chronic forms of the disease with minimal and mild degrees of activity.
2. Acute hepatitis "B" adversely affects the course and outcome of pregnancy, which is shown in an increased risk of threatened abortion, threatened preterm labor.
3. For women with chronic viral hepatitis "B" in labor there is an increased frequency of premature rupture of membranes, bleeding in the early postpartum period.
4. Viral hepatitis "B" affects the fetoplacental complex, which is manifested in chronic hypoxia, intrauterine growth retardation, and the possibility of transmission of the virus from mother to fetus.

**Conclusion:** Only timely pregravid preparation, right decisions made about the carrying of pregnancy and prevention activities, gentle and careful management of labor and postpartum period can increase probability of a favorable outcome for mother and fetus.

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Fig.1 The Frequency of Hepatitis by Trimesters

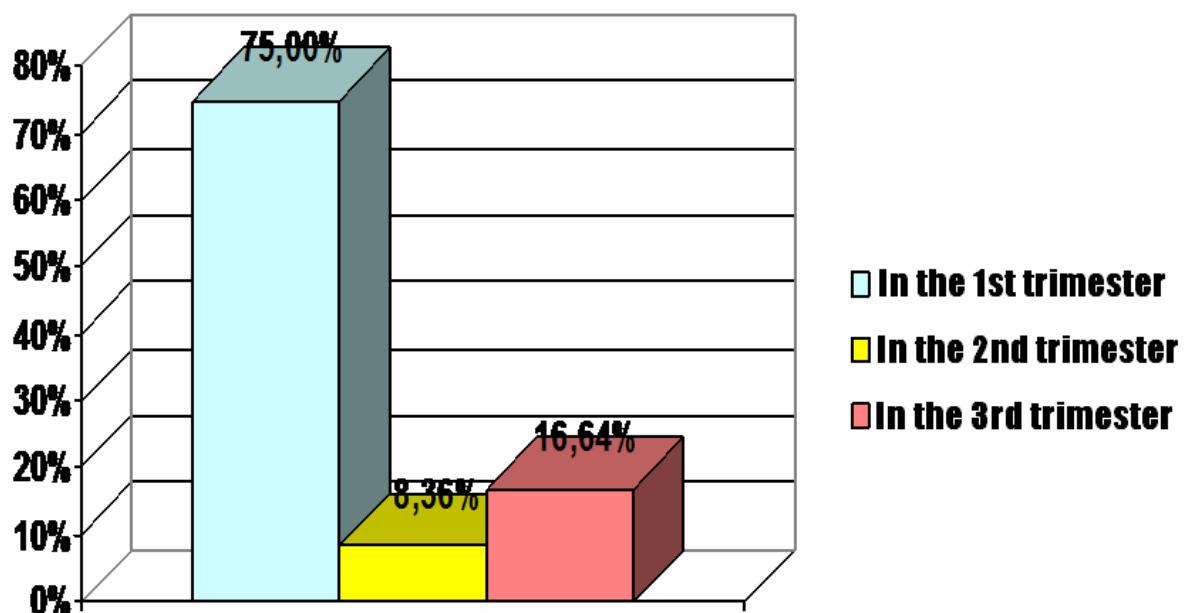


Fig.2 The Spread of Hepatitis by Cases Severity

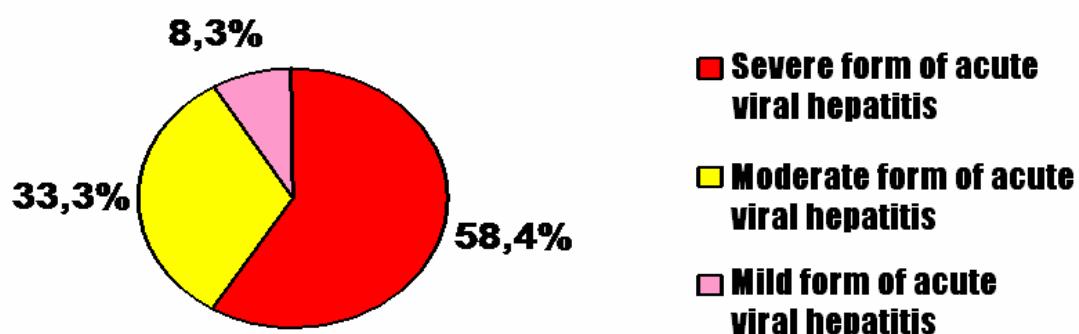


Fig.3 The Characteristic Hepatitis Syndroms

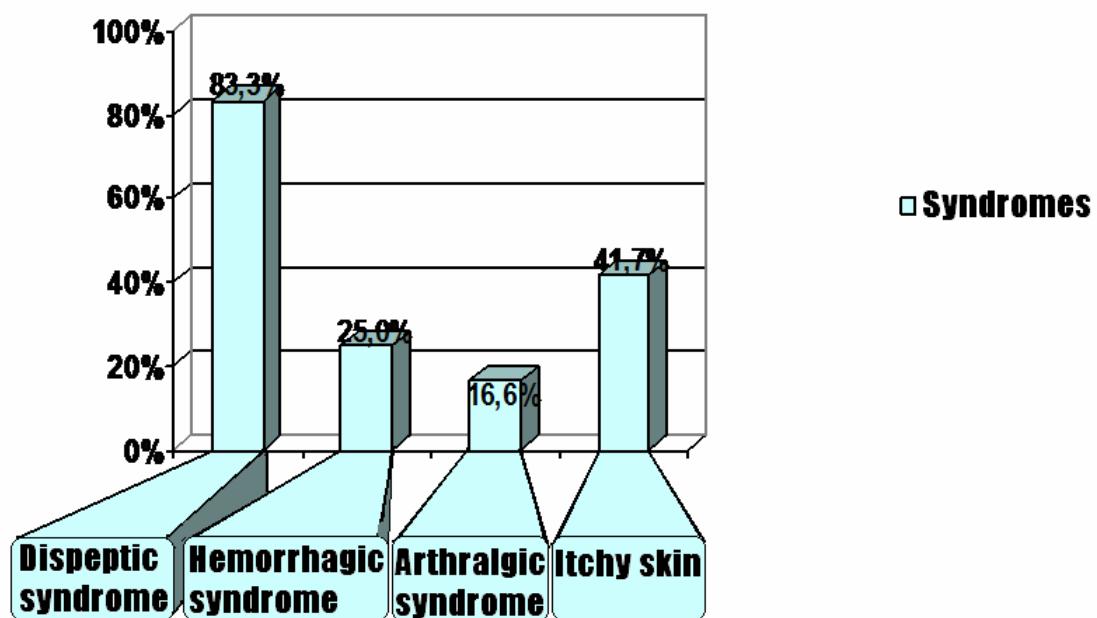


Fig.4 The Indicators of Hepatitis Frequency by Types

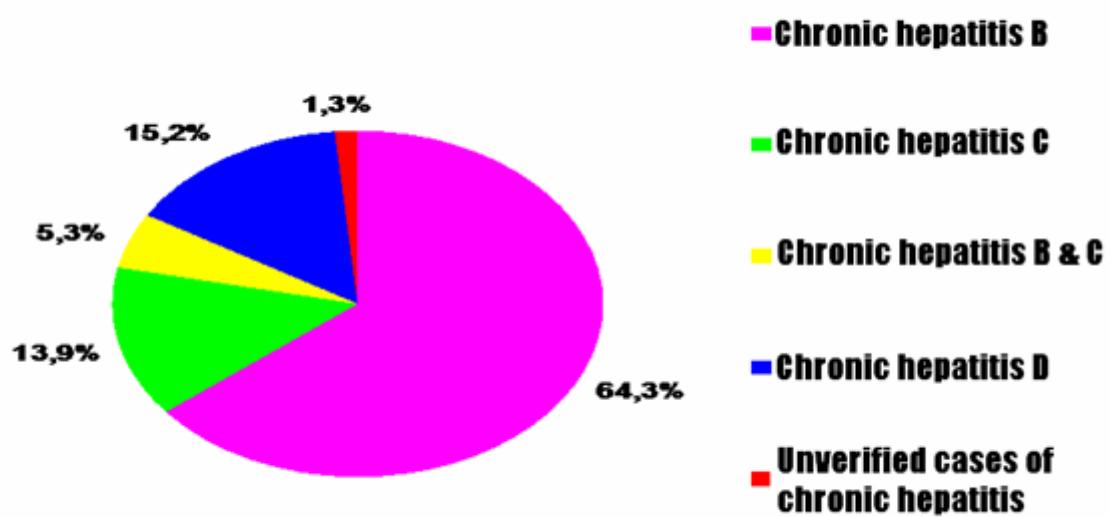


Fig.5 The Degree of Hepatitis activity

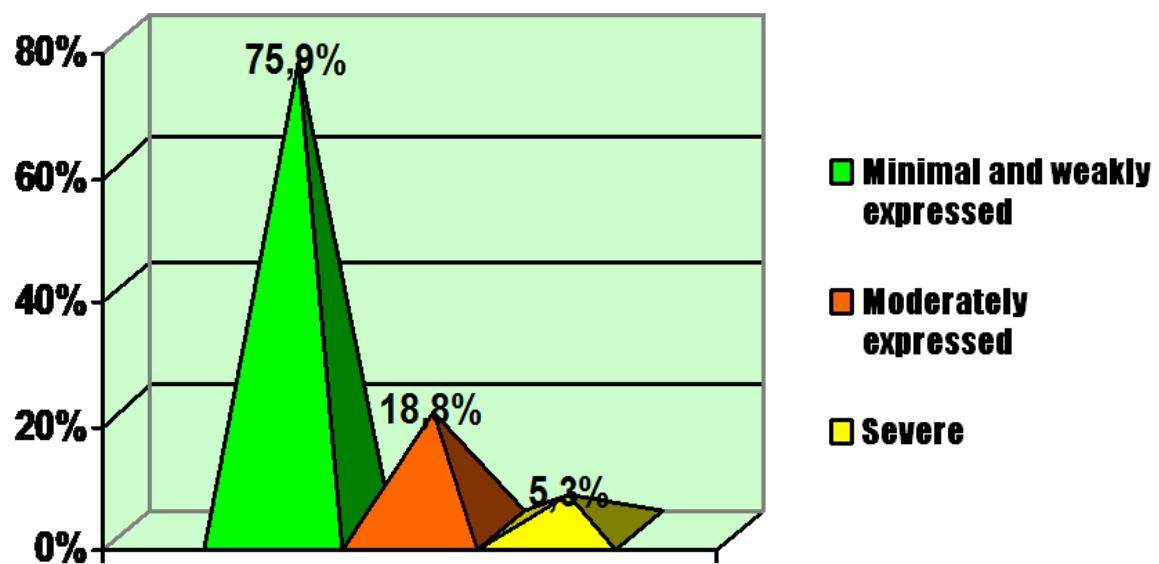


Fig.6 The frequency of complications in childbirth

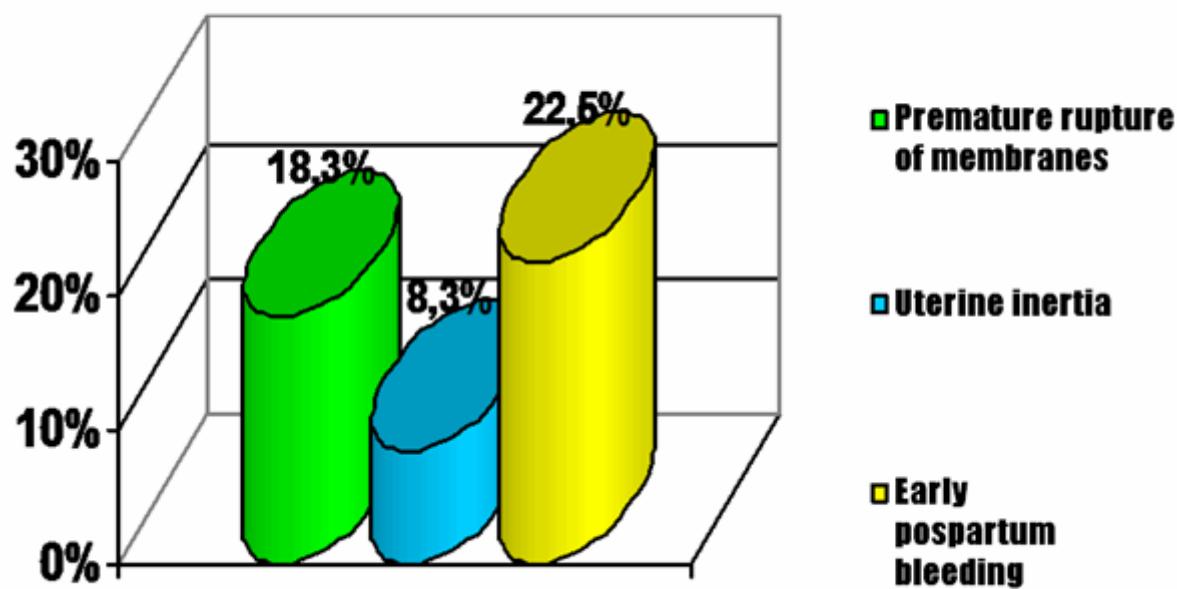


Fig.7 The Frequency of HBSAg Detection

