

**Perfection the methods of placental insufficiency therapy in women with viral hepatitis  
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**Совершенствование методов терапии плацентарной недостаточности у женщин с  
вирусным гепатитом  
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**Abstract:** *viral hepatitis and pregnancy is one of the actual problems in obstetrics. The frequency of viral hepatitis in pregnant women has increased lately 10 years acquiring scale "epidemic".*

**Аннотация:** *вирусный гепатит и беременность остаются одной из актуальных проблем в акушерстве. Частота вирусного гепатита за последние 10 лет у беременных возросла, приобретая масштабы «эпидемии».*

**Keywords:** *placental insufficiency, hepatitis, therapy.*

**Ключевые слова:** *плацентарная недостаточность, гепатит, терапия.*

It was established that in the presence of similar conditions for infection in the foci of infection the pregnant often has infected with viral hepatitis 5 times than non-pregnant women which can be explained by the high receptivity of the organism of pregnant to the virus of the infectious hepatitis in consequence of changes in hepatic function weakened immune power of the body [5, p. 171].

In pregnant viral hepatitis is taking more severe than in non-pregnant and represents a serious danger to mother and fetus. Pregnant with this disease concern to the high-risk, as gestation in given group of women is accompanied by a high rate of complications, both from mother and from fetus [6, p. 39].

From the fetus more frequent disturbance is increased the incidence of growth restriction syndrome (GRSF) as manifestation of placental insufficiency (PI). Actuality of the problem is determined also an important social significance for the birth of a healthy baby in mother with severe extragenital pathology.

PI is one of the main causes of disorders of the child's physical and mental development, as well as increased somatic and infectious diseases of newborns and children for the 1st year of life [4, p. 3].

It is established one of the pathogenetic mechanisms of PI development in various complications of pregnancy is the formation of endothelial dysfunction due to the increase in blood levels of asymmetric dimethylarginine, inhibiting the synthesis of nitrogen oxide [4, p. 278]. It is proved that nitrogen oxide synthesizing by endothelial cells is a regulator of vascular tonus and platelet aggregation inhibitor [2, p. 39].

Numerous researches of cardiologists and neurologists have shown the significance and effectiveness of the normalization the level of nitrogen oxide for restoration of blood flow, micro- and macrocirculation [3, p.23]. In recently, in the scientific medical literature has been appeared information on studying the role of nitrogen oxide in the pathological physiology of obstetric conditions [5, c. 109]. The results of these studies established the foundation for the clinical use of nitrogen oxide donors as new pharmacological tools.

**The aim** of this research was to study the clinical effectiveness of Tivortin<sup>®</sup> preparation for medicamental therapy of intrauterine growth restriction syndrome of fetus in women with viral hepatitis.

**Material and methods.** The research included 60 pregnant women with chronic viral hepatitis B, which is diagnosed of PI at the period of pregnancy 28-38 weeks. The comparison group included healthy pregnant women. The diagnosis of chronic viral hepatitis is confirmed by laboratory data - with positive HBeAg, high levels of HBV DNA, normal levels of alanine aminotransferase (ALT) and absence or minimal inflammation of the liver, established by a fibro scanning. In order to assess the state of fetoplacental complex was used ultrasound diagnostics (fetometry, placentography, estimation the amount of amniotic fluid) and fetal biophysical profile. All patients in the dependence on the period of gestation was administered Tivortin<sup>®</sup> ("Yuriya Farm", Ukraine), in dose of 100 ml intravenous, drip № 5-10 with the transition to oral Tivortin asparate 5 ml 5 times a day for 14 days.

**Results.** The average age of the patients was 25,3 ± 1,2 years. In the analysis of obstetric history it was noted that the primiparas were composed of 66.7% (40) observations, multipards 33.3% (20) of cases. In studying the characteristics of obstetric history revealed that almost every second multigravida with GRSF placental insufficiency was noted in previous pregnancies (45%). In the main group of women, in contrast to the control group, the anamnesis was revealed premature detachment of normally located placenta (11.7%) and antenatal death of fetus (16.6%). All this gives evidence about negative influence of chronic viral hepatitis in previous pregnancies. From accompanying of somatic pathology pays itself attention large percentage of iron deficiency anemia in various severities (in 100% of patients). From complications of present pregnancy should be noted a high frequency of danger of interruption (91.7%) and vomiting pregnant in various degrees of severity (70%). In 11 (18.3%) women were observed pre-eclampsia in various degrees of severity. Development of GRSF accounted for terms of 28-30 weeks in 13 (21.7%), 30-32 weeks - in 13 (21.7%); 32-34 - in 10 (15.3%), 34-36 - in 15 (25%), 36-38 weeks - in 9 (15%) of pregnant women. Condition of

fetoplacental system according to the USE: the thinning of the placenta occurred in 34 (65.7%) women, thrombosis of intervillous space - in 14 (23.3%), oligohydramnios - in 29 (48.3%), in 23 (38,3%) observations were noted heterogeneity of the placenta with areas of increased echogenicity of 0.5-4 cm in diameter. Syndrome of growth restriction of the fetus with varying degrees was diagnosed in all women. GRSF the 2nd degree was diagnosed in 28 (46.7%) women and the 1st degree - in 32 (53.3%) patients.

All patients for treatment of PI and GRSF against the background of treatment of the main disease was administered Tivortin<sup>®</sup> by the described above scheme. The results of treatment were evaluated after 5-10-17-24 days. When used for correction PI Tivortin was noted the improvement in the utero-placental blood flow and reduction of GRF. Against the background for treatment we have managed to reduce the number of pregnant women with PFU the 2nd degree from 46.7% to 20%. It was increased the number of patients with GRSF the 1st degree to 26.7%, which indicates the effectiveness of our therapy. It is particular noted that the nitrogen donator - Tivortin - has a beneficial effect on the course of pre-eclampsia in mild degree in 9 patients, we did not observe the progression of the disease and high blood pressure, as a result, managed to maintain a pregnancy to full-term period. Timeliness of delivery pregnancy ended in 71.7% of women. 28.3% of pregnant women were labor ahead of time. Indications for ahead of time termination of pregnancy were: severe pre-eclampsia, decompensated placental insufficiency, lack of effect of complex therapy. The act of delivery through vaginally were held in 45 (75%) women. By cesarean section labors 15 (25%) of pregnant women. Newborns have a body weight from 980 to 3100 grams (average -  $2487,0 \pm 438$  g) and the increase from 37 to 50 cm (mean -  $47.5 \pm 3.1$  cm). Evaluation of newborns on Apgar score at 1 and 5 minute was composed on average -  $6.87 \pm 0.6$  and  $8.07 \pm 0.5$ . Perinatal loss was composed of 4 newborns, pregnant mothers whose complicated severe pre-eclampsia and premature detachment of the placenta normally located on the background of chronic hepatitis B in pregnancy of 32, 35, 37 weeks.

### Conclusions.

1. Chronic viral hepatitis during pregnancy leads to the development of placental insufficiency and fetal growth retardation syndrome.

2. Nitrogen donator - Tivortin<sup>®</sup> plays an important role in the prevention and treatment of placental insufficiency in women with chronic viral hepatitis – contributes the improvement of utero-placental circulation and corrects the lag growth retardation in 26.7% of cases.

3. Use of Tivortin<sup>®</sup> in the treatment of fetal growth lag improves perinatal outcomes, that is exceptional importance for solutions of questions in the prophylaxy of perinatal morbidity and mortality in women with chronic viral hepatitis.

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