



Tactics of Treatment for Idiopathic Thrombocytopenic Purpura in Pregnant Women

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ABSTRACT

The article shows the results of 12 pregnant women with a complication of idiopathic thrombocytopenic purpura in the form of hemorrhagic syndrome. Their clinic, diagnosis, conservative and surgical treatment. Traditional and inhalation injection of glucocorticoid hormones, as well as intravenous injection of immunoglobulin in 75% of patients had positive effect and remission was obtained on days 3-4. If the conservative treatment was ineffective, surgeries were performed splenectomy (SE), and uterine bleeding stopped on 2-3 days and platelets increased to 210 thousand. During pregnancy, patients with idiopathic thrombocytopenic purpura (ITP), complicated by hemorrhagic syndrome, conservative and surgical treatment in 100% of cases performed a positive effect.

Keywords:

immune thrombocytopenia, pregnancy, delivery

Target. Idiopathic thrombocytopenic purpura (ITP) is a disease that usually develops as a result of an immune conflict directed to antigens of either platelets or megakaryocytes, which is characterized by a decrease in the number of platelets, in the absence of other abnormalities in the count of blood cells, and hemorrhagic syndrome [1,5,6,8,9]. Today, you can meet many women with various autoimmune diseases associated with blood clotting, which a woman may not be aware of. Especially, the clinical manifestation occurs during pregnancy.

Since a large load is placed on the woman's body, a new blood circulation is added, called fetoplacental, which includes the mother-child-placenta. One of the most common autoimmune blood diseases is ITP, which, with a decrease in the number of

platelets in the blood, is often accompanied by a hemorrhagic syndrome. According to the literature, the prevalence of ITP among adults and children ranges from 7 to 13 per 10,000 people [1,5,6,8,9]. According to the data of S. S. Barkagan [3], per 100,000 population there are 7.5 females and 4.5 males. V. A. Klimansky [12] believes that among patients with ITP, women predominate in a ratio of 3.9:1, and in reproductive age this ratio increases to 8:1.

The predominant lesion of women may be due to the fairly frequent development of endocrine disorders at puberty. ITP most often (in 40% of cases) is the cause of hemorrhagic syndrome in both hematological and obstetric practice [15,16,17,19]. The majority (80-90%) of pregnant women have a chronic form of ITH1, 10% have an acute form. According to the period of the disease, exacerbation (crisis),

clinical compensation (no manifestations of hemorrhagic syndrome with persistent thrombocytopenia) and clinical hematological remission are distinguished. Thrombocytopenia syndrome is registered in 10% of pregnant women, and about 1/3 of them require additional therapy. With ITP, pregnancy cannot be terminated without obstetric indications only because of thrombocytopenia and hemorrhagic syndrome. Pregnancy planning is one of the most important conditions for its successful course. The onset of pregnancy should occur in a state of clinical compensation of patients, i.e. in the absence of hemorrhagic syndrome and the number of platelets above the critical level ($30-50.0 \times 10^9/l$) [15,16,17,19,20,21]. Triggers of ITP can be infections (often viral) - 59%, pregnancy - 20%, stress - 15%, surgical procedures - 4%, physical activity - 1% and vaccinations in 1% of cases [1,5,6,8,9,10,11,13].

The combination of autoimmune thrombocytopenia and pregnancy leads to an increase in the number of obstetric complications, of which the most severe is premature detachment of a normally located placenta, bleeding in the postpartum period, observed in 15-20% of women with ITP [15-21].

Purpose Of The Study. Development of tactics for the treatment of pregnant women with ITP hemorrhagic syndrome. The following tasks were set: To substantiate the tactics of treatment for bleeding in pregnant women with ITP; To substantiate indications for emergency splenectomy in pregnant women.

Materials And Methods. We studied 69 adult female hematological patients diagnosed with ITP, aged 19-35 years, who were in the Department of Surgical Hematology of the Research Institute of Hematology and Blood Transfusion, and in the maternity wards of other clinics. Of these, 2 (1.4%) were pregnant women: with an acute form 5 (41.7%), a chronic form 7 (58.3%). In the first trimester of pregnancy there were 5 (41.7%) patients women In the second trimester 4 (33.3%) sick women. In the third trimester

there were 3 (25.0%) sick women. 2 women with an acute form, and 5 with a chronic form had skin hemorrhagic signs, and in the blood test platelets up to 30 thousand. 5 (41.7%) pregnant women with ITP at various times were admitted with uterine bleeding. In the blood test, platelets were from one to 20 thousand: of them with an acute form in 3 (60.0%) pregnant women, the only symptom was uterine bleeding, and the rest had skin ecchymosis, petechiae and other hemorrhagic manifestations. One of them was admitted with a complication - cerebral hemorrhage. In 2 (40.0%) pregnant women with a chronic form, skin ecchymosis and uterine bleeding were noted, blood tests showed platelets from one to 20 thousand. At admission, all patients had pallor of the skin and mucous membranes, anemia of varying degrees in the general blood test. In 7 (58.3%) pregnant women: posthemorrhagic anemia in 3 (42.9%) mild, 3 (42.9%) moderate and 1 (14.2%) severe. In all cases, thrombocytopenia ranged from one to $20.0 \times 10^9/l$ - $30.0 \times 10^9/l$. In coagulograms - hypocoagulation, bleeding time, thrombin time are prolonged, plasma tolerance to heparin is reduced, blood clot retraction is reduced. To clarify the diagnosis in pregnant women with an acute form, blood was taken for a myelogram under anesthesia. In the myelogram, the number of megakaryocytes is normal or increased. In biochemical analyzes without any significant changes. In all cases, the lymph nodes were not palpated, there was no hepatosplenomegaly. According to the ultrasound data, in all patients the fetus developed according to the gestational age, signs of intrauterine suffering of the fetus were detected in the form of hypoxia in 6 pregnant women. The duration of the disease with the chronic form of ITP ranged from 8 months to 5 years, and during this period, patients received treatment from 1 to 5 or more times.

All patients received conservative treatment: restorative agents, hemostatic and vasoconstrictive drugs, glucocorticosteroid (GCS) hormones - prednisolone or dexamethasone in tablets, intravenously or inhaled injections, including pulse therapy and immunoglobulin, simultaneously with the

treatment of comorbidities. During examination, 2 pregnant women had moderate diabetes mellitus, 3 had hypertension, and 2 had a history of chronic duodenal ulcer. Patients with diabetes mellitus and hypertension received conservative treatment, including intravenous immunoglobulin (IVIG) at a dose of 2 grams per 1 kg of body weight (course dose), distributed over 2-5 consecutive days (daily dose, depending on the number of days, was administered from 0,4 (with 5-day administration) up to 1 g/kg of body weight). Pregnant women 23-24 and 37-38 weeks with chronic duodenal ulcer received dexamethasone in the form of inhalation for 5 days. The remaining patients received conservative treatment from the very beginning, including glucocorticoid therapy. Conservative treatment had no effect in two patients, uterine bleeding continued, and these patients underwent emergency splenectomy. A patient with intracranial hemorrhage developed bruises in the oral mucosa and hemorrhages in the sclera, and an emergency splenectomy was also performed. Splenectomy in patients with ITP with severe hemorrhagic diathesis is most often complicated by bleeding during and after surgery.

These patients underwent splenectomy by the modified method proposed by us, in which the bleeding associated with the operation technique was minimal. In the postoperative period on the 2nd day, the signs of hemorrhagic diathesis were stopped.

Example 1: Patient N., aged 28, was admitted to the maternity ward with a pregnancy of 37-38 weeks and diagnosed with chronic ITP, hemorrhagic syndrome - petechiae, ecchymosis, gingival and uterine bleeding. In the analyzes, thrombocytopenia $12.0 \cdot 10^9/l$, hypocoagulation. Conservative treatment for 3 days (loading dose of corticosteroids) had no effect, hemorrhagic syndrome persisted. In order to prevent possible bleeding, the patient was taken for a caesarean section after appropriate preparation. The operation was performed by two teams: the first stage was a caesarean section by a team of obstetricians and gynecologists. After a caesarean section, a

splenectomy was performed using the method we proposed, postoperative bleeding was about 30 ml, the operation was uneventful. On the 1st day after splenectomy, clinical remission occurred, platelets rose to 120 thousand with a final stop of hemorrhagic signs.

Example 2: Patient K., 32 years old, was admitted to the maternity ward with a pregnancy of 36-37 weeks and diagnosed with an acute form of ITP, severe hemorrhagic syndrome - petechiae, ecchymosis, gingival bleeding, bruising of the oral cavity, hemorrhage in the sclera, uterine bleeding and intracranial hemorrhage. Moderate anemia. The patient received conservative treatment and pulse therapy with methylprednisolone 1 g per day intravenously for 1-2 hours on 3 days, which was not effective. The patient had hemorrhagic and neurological syndromes preserved. PS - 98-100 beats per minute. A/D 100/65 mm Hg Hemoglobin-87 g/l. Hypocoagulation. The rest of the analyzes are unremarkable. The patient was taken for surgery after consulting a therapist, neurologist, anesthesiologist and appropriate training. The operation was performed by two teams: the first stage was a caesarean section by a team of obstetricians and gynecologists. After a caesarean section, a splenectomy was performed using the method we proposed, postoperative bleeding was about 50 ml. The operation went without complications.

The postoperative period proceeded in the intensive care unit, without complications. On the 1st day after the operation, the patient's platelets rose to 38,000 with bleeding stopping. In addition to the ongoing treatment, the administration of intravenous immunoglobulin at a dose of 2 grams per 1 kg of body weight was prescribed to suppress the formation of antibodies to platelets, and a clinical hematological effect was obtained. On the 3rd day of the operation, the patient's platelets rose to 210 thousand with the final stop of hemorrhagic signs.

Results Of The Research. Out of 12 pregnant women with ITP, 5 with an acute form: after conservative treatment with corticosteroids,

three pregnant women received a clinical and clinical-hematological effect, platelets increased from 120 to 218 thousand on days 3-4. In two patients with uterine bleeding, conservative treatment did not give any effect; after hysterectomy, splenectomy was performed and a clinical effect was obtained at 36-37 and 37-38 weeks of pregnancy. Platelets increased from 50,000 to 120,000 on days 2-3 and the bleeding stopped.

A patient with an acute form of cerebral hemorrhage after splenectomy with 38 thousand platelets received intravenous immunoglobulin, on the 3rd day the platelets rose to 210 thousand and a clinical and hematological effect was obtained, with a final stop of hemorrhagic signs, and additionally received treatment from a neuropathologist. Of the 7 pregnant women with chronic ITP, two with uterine bleeding: one pregnant woman at 23-24 weeks after conservative treatment including corticosteroids, platelets rose to 180 thousand and a clinical and hematological effect was obtained. In another pregnant woman with a period of 37-38 weeks, after conservative treatment, uterine bleeding continued and after a cesarean section a splenectomy was performed, platelets rose to 120 thousand on days 2-3 and a clinical effect was obtained with a final stop of hemorrhagic signs.

Three pregnant women with a chronic form received IVIG and a clinical and clinical-hematological effect was obtained. In two pregnant women who received GCS hormones in the form of inhalation for 5 days, platelets rose from 160 to 180.0 thousand on days 3-4. During pregnancy, any form of pathology accompanied by thrombocytopenia may develop. Given the lack of a single confirmatory test for ITP, at the stage of diagnosing newly diagnosed thrombocytopenia in pregnant women, it is important first of all to exclude life-threatening complications that require urgent therapeutic or surgical measures. Pregnancy in patients with ITP is not contraindicated, but should proceed in a state of clinical compensation of ITP (absence of hemorrhagic syndrome and platelet count of at least $50.0 \times 10^9/l$), achieved at previous stages

of therapy. With ITP, pregnancy cannot be terminated without obstetric indications only because of thrombocytopenia and hemorrhagic syndrome. All women with ITP should be under joint supervision of a hematologist and gynecologist, and before delivery - by an obstetrician and anesthetist.

In the process of observation, the obstetric status comes to the fore, then the state of the pregnant woman - hemorrhagic syndrome, platelet count. The frequency of dynamic observation of a pregnant woman with thrombocytopenia is determined by the clinical condition of the patient and increases with the duration of pregnancy. With ITP in the I and II trimesters of pregnancy, the frequency of observation by a gynecologist and monitoring of blood parameters is 1 time per month, after 28 weeks - 1 time in 2 weeks, and after 36 weeks. pregnancy weekly. In the case of pregnancy in women with ITP in remission or clinical compensation, only dynamic monitoring should be carried out. Women with severe, resistant ITP need treatment before pregnancy and planning for its onset during remission or clinical and hematological compensation.

Conclusion. Thus: patients with ITP with profuse uterine bleeding with the ineffectiveness of conservative therapy for 3-4 days are indicated for emergency splenectomy, as well as patients with ITP with intracranial hemorrhage with severe hemorrhagic syndrome. Postponing the operation, the disease leads to death. During pregnancy, splenectomy can be performed at any time, however, it is preferable to perform it in the first trimester of pregnancy or after childbirth, since the operation is accompanied by a high rate of preterm birth and fetal death.

Early delivery by caesarean section is indicated with an increase in symptoms of hemorrhagic diathesis, anemia and a deterioration in the general condition of the pregnant woman, and splenectomy should also be performed at the same time. This is the prevention of maternal mortality and disability of women. Pregnancy complicated by the presence of ITP in the mother is always a

challenge for the obstetrician-gynecologist, therefore, in the early stages of pregnancy, such a patient should be examined in a medical institution of the highest level of accreditation. Strict adherence to the algorithm of clinical and laboratory diagnostics, effective consultation of specialists contributes to the achievement of a positive outcome of pregnancy and the birth of children without perinatal complications.

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