

ANEMIA IN PREGNANT WOMEN AND ITS PREVENTION

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Abstract: It is important to check a pregnant woman for anemia and to regularly perform general blood tests, which will prevent large deviations of the hemoglobin level from the norm. With the rapid development of anemia, the level of serum iron in the blood should be determined, and the reasons for the breakdown and digestion of iron should be determined.

Key words: Pregnancy, anemia, bleeding, hemoglobin, premature birth.

INTRODUCTION.

Anemia of pregnancy is a series of anemia conditions that occur during pregnancy, complicate its course, and usually disappear quickly after birth or termination. Since the prevalence of anemia in pregnant women is much higher than in non-pregnant women, it is logical to assume that most of these anemias are related to pregnancy itself. The most common consequences of anemia in pregnancy are miscarriages, premature births, intrauterine growth retardation, and an increased risk of low birth weight newborns[1].

Modern classification is based on clinical and laboratory characteristics that allow differential diagnosis of anemia. In the process of determining the causes of anemic syndrome, the "blood ferritin serum" indicator has a special place in conducting a set of medical studies. There are three main mechanisms of anemia development:

1. Anemia caused by disruption of normal erythrocyte formation and hemoglobin synthesis. This mechanism of development is observed in diseases of red bone marrow, iron, vitamin B12, folic acid deficiency.
2. As a result of the loss of erythrocytes, it is mainly associated with acute blood loss (injury, surgery). It should be noted that the cause of anemia in small amounts of chronic blood loss is not the loss of erythrocytes, but the loss of iron along with them.
3. As a result of massive destruction of erythrocytes. Normally, the life span of red blood cells is 120 days. In some cases (hemolytic anemia, hemoglobinopathies, etc.), red blood cells die faster. Sometimes the consumption of large amounts of acetic acid contributes to the death of erythrocytes.

According to the mechanisms of development of the pathological process, it is classified as follows[2]:

- Iron deficiency anemia is associated with a lack of iron trace element;
- Post hemorrhagic anemia — associated with acute or chronic blood loss;
- Hemolytic anemia is associated with massive destruction of red blood cells;
- B12 deficiency — is associated with a violation of DNA and RNA synthesis;
- Folic acid deficiency anemia.

There are more than 400 types of anemia. Some are more common during pregnancy including: iron-deficiency anemia, folate-deficiency anemia, vitamin B12 deficiency anemia. Anemia can affect the growth of the fetus, especially during the first trimester.

Based on the above, three types of anemia are distinguished depending on the degree of decrease in the amount of hemoglobin:

Mild - the hemoglobin level is below the norm, but above 90 g/l;

Average hemoglobin level is between 90-70 g/l;

Severe - hemoglobin level is less than 70 g/l.

Among all types of anemia during pregnancy, the type associated with iron deficiency is the most common[3]. This is due to an increase in the daily need for iron from 0.6 to 3.5 mg, and this need is greater than the ability of the trace element to be absorbed from food (1.8-2 mg per day). Iron is used for the formation of the fetus and placenta. Factors predisposing to the development of iron deficiency anemia in pregnant women, for example, frequent placental bleeding; anemia present during pregnancy and early childbirth, as well as corresponding changes in the composition of food, there is a lack of vitamins in the winter-spring period. If anemia continues during pregnancy, it can cause serious consequences, in particular: the occurrence of hypoxia in the fetus, which has a negative effect on its normal development; women with severe anemia feel worse during pregnancy; the probability of premature birth increases[4,5,6]. The development of anemia in the 1st and 2nd trimesters of pregnancy is associated with a doubling of the risk of premature birth. Many researchers believe that iron reserves in the fetus do not depend on the iron content of the mother's body. The transfer of iron from the mother through the placenta is regulated by the needs of the fetus, even against the concentration gradient, and mainly occurs in the 3rd trimester of pregnancy[7]. Therefore, the development of iron deficiency is possible only in premature babies. In addition, the risk of infection after childbirth is higher. In recent years, the number of women suffering from urogenital infections (colpitis, cervicitis, bacterial vaginosis, pyelonephritis, etc.), which often occur secretly, has been increasing. However, approximately 30% of pregnant women with urogenital infections approach delivery in anemic condition despite repeated correction with iron supplements[8]. This anemia is defined as "hypochromic anemia without iron deficiency" in which body iron stores are normal or high. Prevention of iron deficiency during pregnancy planning is the main foundation of prevention of this disease in pregnant women.

This adverse effect of anemia in pregnancy is usually associated with a hemoglobin level < 90 g/l. If the hemoglobin level is 90-110 g/l in the second half of pregnancy, the prognosis for the woman and the child is favorable. At the same time, hemoglobin concentration exceeding 120 g/l in this period of pregnancy is fraught with a high risk of complications (in particular, preeclampsia)[9]. Any pregnancy leads to an increase in plasma volume, which is on average 1250 ml. This is approximately 1.5 times the plasma volume in non-pregnant women. This condition is one of the main reasons for the relative decrease in hemoglobin level in pregnant women.

Vitamin B12 and iron supplements are mainly used in the treatment of anemia. Treatment of individual forms of anemia is carried out taking into account etiology and pathogenesis. In general, the treatment strategy depends on the type of anemia and the severity of the patient's condition.

1. Treatment is carried out in an inpatient setting;
2. The diet should be complete, contain enough protein, iron and vitamins;
3. According to vital signs, hemodynamics is severely disturbed, hemoglobin level drops below 70-80 g/l, and hemotransfusion is applied;
4. In the case of acute posthemorrhagic anemia, it is necessary to stop the bleeding first. After a large amount of blood loss, iron preparations are prescribed;
5. Pathogenetic treatment of iron deficiency anemia involves oral administration of iron preparations (hemostimulin, ferroplex, tardiferon) or parenteral administration (ferrum-lek, ferbitol, ectofer)[10];
6. Vitamin B12 deficiency is treated with parenteral administration of vitamin preparations, and sometimes with addition of coenzyme - adenosinecobalamin. The indicator of the effectiveness of the therapy is the reticulocyte crisis - a 20-30% increase in the number of reticulocytes for 5-6 days.
7. Treatment of aplastic anemia includes blood transfusion, bone marrow transplantation, treatment with glucocorticoid and anabolic hormones.

MATERIALS AND METHODS

In order to study anemia during pregnancy, the health status of 53 women aged 20-25 years was studied. In order to more fully study the level of the disease, a general blood analysis was taken, and a questionnaire was conducted. Accordingly, it was found that 41 (77.35%) women have various forms of anemia.

To date, the lower limit of normal hemoglobin concentration in pregnant women is 110 g/l, Hb from 90 to 110 g/l - 1 degree anemia, from 70 to 90 g/l - 2 degree anemia, < 70 g/l. According to WHO, anemia is detected in 35-75% of pregnant women in the world every year.

In the course of our study, the average hemoglobin content of 12 women was -117 g/l, the average hemoglobin content of 27 women was -97.2 g/l, and the average hemoglobin content of 14 women was 78 g/l.

Anemia in pregnancy is multifactorial and iron deficiency is not the only cause of anemia in pregnancy. Accordingly, recommendations were given to all women according to their level of health.

CONCLUSION.

The main means of prevention of anemia is to follow a balanced and vitamin-rich diet, as well as to use iron-sparing drugs according to the recommendations of the attending physician. The daily norm of iron trace element is 20-25 mg.

The main part of this amount (90%) is endogenous iron released during the breakdown of red blood cells, and 10% is exogenous iron that enters with food products. Women need this trace element more than men due to cyclical blood loss.

Primary prevention of iron deficiency anemia in pregnant women is aimed at reducing the prevalence of iron deficiency during pregnancy and preventing its negative effects on the woman and the fetus. To prevent anemia in pregnant women, iron preparations are prescribed to

patients during preparation before pregnancy, taking into account the initial hemoglobin level[11].

The use of therapeutic drugs that increase the level of iron in the blood helps to maintain a high level of hemoglobin, because the hemoglobin molecule contains iron. In the human body, it is best absorbed by ferrous sulfate due to its divalency. Elimination of iron deficiency is also urgent. The use of red meat-liver, meat products in the diet helps to maintain the level of hemoglobin. Many fruits and vegetables contain iron, such as apples or pomegranates.

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