



STUDY OF THE EFFICACY OF TREATMENT OF MANIFEST IRON DEFICIENCY IN PREGNANT WOMEN WITH TARDIFERON

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Article history:	Abstract:
Received: February 28 th 2022 Accepted: March 26 th 2022 Published: May 6 th 2022	Anemia is a decrease in the number of erythrocytes and hemoglobin in the blood. Abnormal forms of erythrocytes appear in the blood, as well as changes in the balance of vitamins, reduced number of trace elements and enzymes in the body. During pregnancy, a woman's blood volume increases by 50%, which require more hemoglobin and iron reserves. This is of great importance in the development of the placenta and the baby. Anemia is the most common condition in pregnancy.

Keywords: Anemia, Tardiferone, Pregnancy

INTRODUCTION. The main goal of obstetrics is to provide optimal conditions for maternal health and the birth of a healthy, viable baby. It is known that the growth and development of the child begins in utero. During pregnancy, metabolic processes in the body significantly change, the intensity of biochemical reactions increases, which leads to increased need of pregnant women in vitamins. Iron deficiency anemia (IDA) is one of the most common pathologies occurring during pregnancy. Some women have a relative decrease in the number of red blood cells due to an increase in circulating plasma volume, but in many cases pregnant women develop true anemia.

40-70% of pregnant women have iron deficiency. Under normal conditions, a woman's body has an iron reserve of 300 mg. During pregnancy, the need for iron increases to 1290 mg, which provides an increase in blood cells, contributes to the formation of the placenta and fetal development. The normal development of the fetus and the formation of the placenta requires 350 mg, to increase the number of red blood cells - 450 mg, to make up for the loss of iron during pregnancy - 240 mg, during childbirth - 250 mg. This equals 1,290 mg. This iron deficiency accounts for the high incidence of iron deficiency anemia in pregnant women who do not take iron supplements. Iron deficiency can lead to premature birth, low birth weight, and even death of the newborn. Deficiencies of vitamins C, B1, B12, B6, folic acid, and others are noted in anemia of pregnant women. Vitamins are substances of high biological activity that participate in many biochemical processes occurring in the body. B-group vitamins (B1, B2, B6, pantothenic acid and nicotinamide) are involved in metabolism of carbohydrates, proteins and fats, and nervous system activity. Vitamin A is essential for the

functioning of epithelial cells and the synthesis of visual pigment. Vitamin D regulates calcium absorption and provides mineralization of bone and dental tissue. Vitamin C promotes the absorption of iron and is involved in many redox processes in the body. Vitamin E is a physiological antioxidant. Micronutrients are also important for the mother and the fetus. They are part of the connective tissue, are activators and an integral part of enzymes and hormones. Calcium and phosphorus play a major role in the mineralization of bone and dental tissue, activate numerous enzymes, regulate the permeability of membranes. Iron and copper, along with B vitamins, are necessary for erythropoiesis. Magnesium, manganese and molybdenum, which are part of the enzymes, are involved in major biochemical reactions. Antianemic drug, the effect of which is due to the properties of its constituent components. Iron sulfate is a salt of iron, a trace element necessary for the synthesis of hemoglobin. Iron is part of hemoglobin, myoglobin and a number of enzymes. When iron is used in the form of salts, its deficiency in the body is quickly compensated, which leads to a gradual regression of clinical (weakness, fatigue, dizziness, tachycardia, soreness and dry skin) and laboratory symptoms of anemia. Mucoproteose ensures better tolerability of the drug and increases bioavailability and gradual release of divalent iron (Fe²⁺) from the drug. Ascorbic acid promotes iron absorption.

Special neutral coating of tablets ensures absorption of active ingredients mainly in the distal part of the small intestine. The absence of local irritation to the gastric mucosa contributes to good tolerability of the drug on the gastrointestinal side. After drug administration, iron absorption occurs mainly in the duodenum and in the proximal jejunum.



Cmax of iron ions in blood plasma is reached 7 hours after the drug administration and remains elevated during the day. On average, 10-20% of the administered dose is absorbed. Absorption increases with decreasing iron reserves in the body. Binding of iron to plasma proteins is 90% or more. It is deposited as ferritin or hemosiderin in the cells of the system of phagocytic macrophages, and a small amount is deposited as myoglobin in the muscles. Iron is excreted with feces, urine and sweat.

OBJECTIVE OF THE STUDY. To study the efficacy of the therapy of manifest iron deficiency in pregnant women by tardiferon.

MATERIAL AND METHODS. A total of 110 pregnant women with singleton pregnancies and mild iron deficiency anemia (MAD) were followed up for 2020-2022. Group 1 (treatment group) consisted of 55 pregnant women treated with iron sulfate (tardiferon) and Group 2 (comparison group) consisted of 55 pregnant women treated with iron (III) hydroxide polymaltosate at 100 mg.

RESULTS OF THE STUDY. The main hemogram parameters in the patients of Group 1, who received tardiferone therapy, were higher compared with those of Group 2. Side effects were noted in 21 (39.6%) pregnant women treated with iron (III) hydroxide polymaltosate and in 5 (9.1%) pregnant women treated with tardiferon, which indicates good tolerability and, therefore, high adherence to treatment.

CONCLUSION. Treatment with iron preparations in pregnant women with anemia leads to reliable normalization of ferrokinetic parameters, which improves tissue oxygenation and leads to favorable changes in pregnant women with anemia and, as a result, to a positive clinical effect.

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