

SYMBOL INDICATORS OF FERROKINETICS AND ENDOGENOUS ERYTHROPOIETIN IN ANEMIA DURING PREGNANCY AND AFTER CHILDBIRTH

N.A.Oripova <https://orcid.org/0009-0006-2625-4529>

*Department of histology, cytology and embryology,
Bukhara State Medical Institute.*

Resume: Iron deficiency anemia (IDA) is the condition that most often complicates the course of pregnancy and arises as a result of insufficient satisfaction of the increased need of the mother and fetus for iron necessary for hematopoiesis. Iron deficiency anemia (IDA) is an urgent problem in modern society, since it affects a significant private population of the world.

Key words: Iron deficiency anemia, ferrokinetics, erythropoietin.

СИМВОЛ ИНДИКАТОРЫ ФЕРРОКИНЕТИКИ И ЭНДОГЕННОГО ЭРИТРОПОЭТИНА ПРИ АНЕМИИ БЕРЕМЕННЫХ И ПОСЛЕ РОДОВ

Орипова Наргиза Ахтамовна <https://orcid.org/0009-0006-2625-4529>

*Кафедра гистология, цитология и эмбриология,
Бухарский государственный медицинский институт.*

Резюме: Железодефицитная анемия (ЖДА) – это состояние, наиболее часто осложняющее течение беременности и возникающее в результате недостаточного удовлетворения повышенной потребности организма матери и плода в железе, необходимом для кроветворения. Железодефицитная анемия (ЖДА) является актуальной проблемой современного общества, поскольку затрагивает значительную часть населения мира.

Ключевые слова: Железодефицитная анемия, феррокинетики, эритропоэтин.

HOMILADORLIK VA TUG'RUQDAN KEYINGI ANEMIYADA FERROKINETIK VA ENDOGEN ERITROPOETINNING RAMZ KO'RSATKICHLARI

Oripova Nargiza Axtamovna <https://orcid.org/0009-0006-2625-4529>

Buxoro davlat tibbiyot instituti gistologiya, sitologiya va embriologiya kafedراسي.

Rezume: Temir tanqisligi anemiyasi (TET) homiladorlikning ko'p vaqtini murakkablashtiradigan holat bo'lib, ona va homilaning gematopoez uchun zarur bo'lgan temirga bo'lgan ehtiyojini etarli darajada

qondirmaslik natijasida yuzaga keladi. Temir tanqisligi anemiyasi (TTA) zamonaviy jamiyatda dolzarb muammo hisoblanadi, chunki u dunyo aholisining muhim qismiga ta'sir qiladi.

Kalit so'zlar: Temir tanqisligi anemiyasi, ferrokinetika, eritropoetin.

Relevance. The main criteria for IDA are a decrease in the level of hemoglobin and a color index reflecting the hemoglobin content in the erythrocyte. Morphologically determined hypochromia, erythrocytes, microcytosis, anisocytosis and poikilocytosis. The content of reticulocytes in the blood, as a rule, remains within the normal range. An important diagnostic value is a decrease in the level of serum gland and ferritin and an increase above the standard values of transferrin and the total iron binding capacity of the serum. Recently, the importance of determining the level of transferrin receptors in blood plasma, which is a sensitive indicator of the degree of tissue iron deficiency. According to the WHO recommendation, the lower limit of normal hemoglobin concentration for a pregnant woman is reduced to 110 g / l (outside pregnancy - 120 g / l), hematocrit - to 33% (non-pregnant - 36%). Laboratory criteria: In addition to hemoglobin (Hb), as a parameter of the functional fund, other hematological parameters are determined: red blood cell count (RBC) and hematocrit (Ht) [1,2,4,8,9].The reserve fund is estimated by the level of serum ferritin (SF), and iron – regulatory - by erythrokinetic indicators: erythropoietin (EPO) and the coefficient of adequacy of EPO products.

Research objectives: To study the parameters of ferrokinetics in the dynamics of pregnancy, taking into account the severity of anemia

Material and research methods For the period from 2017-2019. We examined 90 pregnant women with anemia, 50 of them were untreated, received in the maternity ward with a kind of activity, and 40 were treated in the department of pathology of pregnant women. The control group consisted of 40 conditionally healthy pregnant women. Under our supervision and examination, there were 40 pregnant women with anemia, aged 17–35 (28 ± 0.1) years, who were registered in female consultations and were treated in the department of pathology of pregnant urban maternity complex No.1. Bukhara.

Hemoglobin content 95 g / l and below, serum iron 15 μmol / l and below, gestational age of 20 weeks or more, and absence of other blood diseases were the criteria for selection of pregnant women into groups.

The main complaints of pregnant women with anemia were general weakness, fatigue, shortness of breath with mild physical exertion, flickering of "flies" before the eyes, dizziness, nasal hemorrhages, sleep

disorders and mood for no apparent reason, decreased appetite, memory loss.

Depending on the type of antianemic therapy, the patients were divided into 2 groups: the comparison group – 18 pregnant women – received ferron 100 mg, 1-2 capsules daily for 2-3 months, until normal hemoglobin level in the blood was reached; the main group - 22 pregnant women, received ferron 100 mg 1-2 capsules daily for 2-3 months, until normal hemoglobin level in blood and REPO 2000 MED are achieved subcutaneously after 3 days 2-3 injections depending on the severity anemia. The distribution of pregnant women, depending on the severity of anemia, is presented in table 1. Table .1 Distribution of pregnant women depending on the severity of anemia (M ± m)

The degree of anemia (Hb g / l)	The main group (n = 22)		Comparison Group (n = 18)	
	Abc	%	Abc	%
Lightweight (110 - 91)	7	32	6	33,3
Moderate (90 -71)	10	45	9	50
	5	23	3	16.7

Among the examined in the groups, recurrent and multiparous women with a second or third pregnancy, which did not differ in significantly significant limits, prevailed. In the obstetric and gynecological history, women had: honey. abortion - 13 women (15.6%), spontaneous miscarriages - 8 women (9.6%), non-developing pregnancy - 4 women (4.8), antenatal fetal death – 2 (3.6). Table .2 Outcomes of previous pregnancies in surveyed women [5,6,7,9,10].

Outcomes of Past Pregnancies	Pregnant groups			
	I comparison group (n = 18)		II group main (n = 22)	
	Abc	%	Abc	%
Medical abortion	2	11.1	4	18
Spontaneous miscarriages	1	5.6	2	9
Non-developing pregnancy	2	11.1	2	9
Antenatal fetal death	7	38.9	1	4.5

The health index of the examined women, taking into account the presence of extra-traumatic diseases, was relatively satisfactory. As can be seen from table 4, ARVI and anemia occupied the leading place in all groups, the remaining extragenital diseases were found in a small number of patients.

Table .3**Extragenital diseases in the history of the examined women**

Pregnancy				
	Comparison group (n = 18)		Basic group (n = 22)	
	Abc	%	Abc	%
Respiratory diseases:				
Chronic. Tonsillitis	1	5.6	1	4.5
Chronic. Sinusitis			1	4.5
Chronic. Bronchitis				
ARVI	8	44.4	10	45.4
CCC diseases:				
Hypertonic disease	1	5.6	1	4.5
Vegetative-vascular dystonia				
Varicose veins	1	5.6	1	4.5
Kidney disease				
Chronic pyelonephritis				
Blood diseases:				
Anemia	18	100	22	100
Gastrointestinal Disorders:				
Gastritis, colitis			1	4.5
Chronic. Hepatitis				
Metabolic pathology:				
Thyroid disease	3	16.7	9	41
Obesity	1	5.6	1	4.5
Diabetes				

The contingent of pregnant women was subjected to a thorough clinical and laboratory research. The clinical examination included a study of complaints, life, obstetric and gynecological anamnesis, taking into account the diseases suffered before and during this pregnancy. A general and special obstetric study was conducted: external palpation, auscultation of the fetus, examination in the mirrors with a prenatal rupture of the membranes and discharge of water, vaginal examination, determination of the degree of cervical dilatation. The mothers underwent a general analysis of blood, urine, discharge from the cervical canal, vagina, urethra. The group and Rh affiliation of the blood, the blood test for HBsAg, RW, by agreement of the woman to HIV / AIDS were determined. Some biochemical parameters of peripheral blood were also determined: total protein, ALT, AST, coagulogram. According to the testimony conducted tests on Zimnitsky, Nechiporenko, ECG was taken. The localization of the placenta and the size of the fetus were determined by ultrasound. All pregnant women are consulted by the therapist. The diagnosis of IDA was set on the basis of complaints, anamnestic data and clinical data, as well as the content of HB, erythrocytes, color index and indicators of iron

metabolism (serum iron, OZHSS and ferritin) [11,12]. The severity of anemia was assessed by the WHO classification (1999) (Table 4). Classification of anemia by severity

Severity	Hemoglobin (g / l) (r/a)	Red blood cells (10x12 / l)
I – light	110 – 91	3,6 - 3,2
II – medium	90 – 71	3,2 - 3,0
III – heavy	70 and below	3,0 – 1,5

Quantitative determination of hemoglobin in the blood was carried out with such hemoglobin cyanide method, and a method was used to determine the concentration of iron in the blood serum, and the determination of ferritin in the blood serum. The results obtained for the iron metabolism indicators of the examined pregnant women indicated that anemia in the examined pregnant women was jellied. Deficiency of iron in the depot and serum progressed as the severity of anemia and gestational period increased, which indicates an increased need for the maternal organism.

Therapy REPO has proven to be an effective and safe method of treating iron therapy, resistant to ferrotherapy. Hb level <90 g / l and non-efficacy of ferrotherapy for 2-4 weeks are sufficient indications for initiating REPO therapy. The treatment of IDA in pregnant women was carried out to a HB level of 110-120 g / l and then switched to a prophylactic dose of iron - 30 mg / day per os until the end of pregnancy.

It was established that the progression of mild anemia in every second, the development of PE and prenatal discharge of water in every third was a distinctive feature of the course of pregnancy. Births were often complicated by bleeding during pregnancy (PONRP - 6.3%) and after delivery (13.5%) and injuries of the soft birth canal (70%). Syndrome of delayed fetal development and the birth of low-weight babies was observed in 30% of patients.

The findings showed that anemia is a high risk factor for the development of pregnancy complications and rhodes, which dictated the need to optimize complex therapies for pathology throughout the entire gestation period, which will prevent complicated pregnancy and childbirth and will be one of the antenatal measures fetal protection.

FINDINGS

A study of ferrokinetics in the dynamics of pregnancy has shown that anemia is iron deficient, with the degree of reduction of iron content, KNTZh and ferritin and increase of transferrin level depends on the severity of the disease. Treatment of IDA with iron-containing drugs only is not effective enough. Hb level <90g / l and resistance of anemia to treatment with Fe preparations is an indication for REPO therapy, especially when preparing for delivery. Combined ferrotherapy with

REPO is an effective and relatively fast method for stopping the IDA of pregnant women that allows to replace blood transfusion.

BIBLIOGRAPHY

1. Aylamazyan, E.K., Samarin, A.V., Tarasov.A. The use of recombinant erythropoietin for the treatment of anemia in obstetric practice, // Gynecology 2010.

2. Artikhodzhaeva G.Sh.Modern approaches to the treatment of iron deficiency anemia in pregnant women // Medicaexpress. - Tashkent, 2010. - №1. - C. 28-29.

3.Asadov...D.A., .Nazhmitdinov AM, Sabirov D.M. Screening, prevention and treatment of iron deficiency anemia. Clinical management.-Tashkent-2010.-C.7-22

4. Asadov D. A. isoavt. Clinical guidelines for screening, prevention and treatment of IDA. // News of dermatovenerology and reproductive health. - Tashkent, 2004, - №3. -C.2-8.

5.Ahmedova D.R. Features of microelement status in pregnant women with iron-deficiency anemia - residents of the Karaulbazar district of the Bukhara region // News of dermatovenerology and reproductive health- Tashkent, 2004.- №4.C.1113.

6.Akhmedova D. R., Kurbanov D. D. Treatment of iron deficiency anemia in pregnant women from the standpoint of microelementosis of the body // News of dermatovenerology and reproductive health. - Tashkent, 2010. - N3. - C. 85-88 (Code H9 / 2010/3).

7.Ayupova FM, Inoyatova F.Kh., Saidzhalilova DD, Shukurov F.I. Dynamics of hemoglobin content and iron parameters in experimental anemia in pregnant women and their correction // Uzb. biol. journals - Tashkent, 2002. - №4. - C. 8-

8. Sh, D., Kharibova, E., & Davronov, R. (2021). Ultrastructural features of the white thymus stromal cells. The Scientific Heritage, (79-2), 29-30.

9. Давронова, Ш. Р. (2020). СТРОЕНИЕ ТИМУСА БЕЛЫХ КРЫС ПРИ ДЕЙСТВИИ ТЕМПЕРАТУРНОГО ФАКТОРА. Морфология, 157(2-3), 67-67.

10.Rakhmatovna, A. G. (2021). Efficiency of PDT in severe cervical dysplasia. ACADEMICIA: An International Multidisciplinary Research Journal, 11(3), 2566-2568.

11.Davronovich, D. R., & Rahmonovna, D. S. MODERN VIEWS ON THE PARTICIPATION OF THE THYMUS IN THE PROCESSES OF IMMUNOGENESIS.

12. Давронова, Ш. Р. (2020). УЛЬТРАСТРУКТУРНЫЕ ОСОБЕННОСТИ КЛЕТОК ТИМУСА БЕЛЫХ ЛАБОРАТОРНЫХ КРЫС

В ДИНАМИКЕ ТЕМПЕРАТУРНОГО ВОЗДЕЙСТВИЯ. Новый день в медицине, (4), 634-635.

13. Давронов, Р. Д., & Давронова, Ш. Р. (2020). СТРУКТУРНО-ФУНКЦИОНАЛЬНЫЕ ИЗМЕНЕНИЯ КОСТНОГО МОЗГА В ДИНАМИКЕ АНТИГЕННОГО ВОЗДЕЙСТВИЯ (экспериментального сальмонеллеза). Новый день в медицине, (1), 487-489.

14. Давронов, Р. Д., & Давронова, Ш. Р. (2008). Структурно-функциональные особенности адаптивных изменений органов системы иммунитета при антигенном воздействии. Морфология, 133(2), 38с-38с.

УДК 599.323.41-092.2:612.014.44

ЭКСПЕРИМЕНТАЛЬНАЯ ТЕМНОВАЯ ДЕПРИВАЦИЯ КАК ФАКТОР, ВЛИЯЮЩИЙ НА МАССУ И КРАНИОКАУДАЛЬНЫЙ РАЗМЕР ЭМБРИОНОВ МЫШЕВИДНЫХ ГРЫЗУНОВ

Пашинская Е.С. <https://orcid.org/0000-0002-5473-4240>

Соболевская И.С. <https://orcid.org/0000-0001-8300-7547>

Чичерова К.А. <https://orcid.org/0009-0006-7489-7406>

Яшкина А.В. <https://orcid.org/0009-0000-1241-8189>

*Учреждение образования «Витебский государственный ордена Дружбы
народов медицинский университет»*

Резюме. Цель исследования – изучить влияние экспериментальной темновой депривации на массу и краниокаудальный размер эмбрионов самок крыс. Для постановки эксперимента использовали 60 самок крыс линии Wistar массой тела 180-200 г. Экспериментальных животных случайным образом разделяли на 2 группы: контрольная группа – 30 самок крыс, находящиеся в условиях стандартного фиксированного освещения (12 ч свет/12 ч темнота), экспериментальная группа – 30 самок крыс, животные с моделированием темновой депривации в условиях круглосуточного освещения (24 ч свет). У самок крыс производили подсчет общего количество эмбрионов, количества живых эмбрионов, измеряли их массу и краниокаудальный размер с последующей фиксацией результатов. За единицу наблюдения принимали данные помета от одной самки. В результате исследования выявлено, что хронодеструкция, вызванная темновой депривацией, способствует