WEB OF SCIENTIST: INTERNATIONAL SCIENTIFIC RESEARCH JOURNAL
ISSN: 2776-0979, Volume 3, Issue 10, Oct., 2022

OCCURRENCE AND CYTOLOGICAL DIAGNOSTICS OF MICROCYTIC HYPOCHROMIC IRON-DEFICIENCY ANEMIA

Olimova Aziza Zokirovna
BukhSMI, RSCEM Bukh.Branch

Sanoev Bakhtiyor Abdurasulovich
BukhSMI, RSCEM Bukh.Branch

Summary
The most common (80–95% of all anemias) in therapeutic practice is chronic iron deficiency anemia (IDA) - a painful condition caused by impaired hemoglobin synthesis due to iron deficiency. The condition is observed in 10-30% of the adult population, more often in women. Children get sick less often than adults [D.I. Trukhan, S.N. Filimonov, N.V. Bagisheva, 2021]. Microcytic hypochromic iron deficiency anemia was detected in 4,000 out of 45,000 patients who underwent a complete blood count in the laboratory of the Bukhara branch of the RRCEM for 1 year.

Keywords: iron deficiency anemia, hypochromic anemia, cytology, microcytic anemia.

ВСТРЕЧАЕМОСТЬ И ЦИТОЛОГИЧЕСКАЯ ДИАГНОСТИКА МИКРОЦИТАРНОЙ ГИПОХРОМНОЙ ЖЕЛЕЗОДЕФИЦИТНОЙ АНЕМИИ

Олимова Азиза Зокировна, Саноев Бахтиёр Абдурасулович
БухГосМИ, РНЦЭМП Бух.филиал

Резюме
Наиболее часто (80–95% всех анемий) в терапевтической практике встречается хроническая железодефицитная анемия (ЖДА) – болезненное состояние, обусловленное нарушением синтеза гемоглобина вследствие дефицита железа. Состояние наблюдают у 10–30% взрослого населения, чаще у женщин. Дети заболевают реже взрослых [Д.И. Трухан, С.Н. Филимонов, Н.В. Багишева, 2021]. Микроцитарная гипохромная железодефицитная анемия была выявлена у 4000 из 45 000 больных, которым был проведен общий анализ крови в лаборатории Бухарского филиала РНЦЭМП в течение 1 года.

WEB OF SCIENTIST: INTERNATIONAL SCIENTIFIC RESEARCH JOURNAL
ISSN: 2776-0979, Volume 3, Issue 10, Oct., 2022

Ключевые слова: железодефицитная анемия, гипохромная анемия, цитология, микроцитарная анемия.

MIKROTSITAR GIPOXROM TEMIR TASHQISHLIGI KAMQONLIGINING UCHRASHI VA SITOLOGIK TASHXISI.

Olimova Aziza Zokirovna, Sanoev Baxtiyor Abdurasulovich
Buxoro davlat tibbiyot instituti, RSHTYOIM Buxoro filiali

Annotatsiya
Terapevtik amaliyotda eng keng tarqalgan (barcha anemiyalarning 80-95%) surunkali temir tanqisligi anemiyasi (IDA) - temir tanqisligi tufayli gemoglobin sintezining buzilishi natijasida yuzaga keladigan og'riqli holat. Vaziyat kattalar aholisining 10-30 foizida, ko'pincha ayollarda kuzatiladi. Bolalar kattalarga qaraganda kamroq kasal bo'lishadi [D.I. Truxan, S.N. Filimonov, N.V. Bagisheva, 2021]. RSHTYOIM Buxoro filiali laboratoriyasida 1 yil davomida umumiy qon tahlilidan o‘tkazilgan 45000 nafar bemorning 4000 nafarida mikrotsitar gipoxrom temir tanqisligi anemiyasi aniqlandi.

Kalit so'zlar: temir tanqisligi anemiyasi, gipoxrom anemiya, sitologiya, mikrositar anemiya.

Relevance
Anemia is a condition characterized by a decrease in hemoglobin in the blood (< 130 g/l for men and < 120 g/l for women) and, in most cases, a decrease in the concentration of red blood cells. Currently, widespread anemia is noted throughout the world. According to the World Health Organization, about 1.8 billion people on Earth suffer from anemia of varying severity. A wide variety of factors underlying the development of anemia makes the problem of their differential diagnosis very important [O.A. Kurilyak, 2019].

So, at the first stage, the laboratory should analyze the sample on a hematological analyzer. When detecting a decrease in hemoglobin, it is necessary first of all to determine the nature of anemia: hypo-, normo- or hyperchromic. The criterion is the value of MCH, reflecting, as you know, the average content of hemoglobin in the erythrocyte.

Hypochromic anemias are characterized by a low MSI (<27 pg), they are usually microcytic - the average erythrocyte volume (MCV) does not exceed 80 fl. At the same time, the average concentration of hemoglobin in the erythrocyte (MCHC) remains

within the normal range, i.e. the decrease in hemoglobin is primarily due to the predominance of erythrocytes with a reduced volume in the blood. Another characteristic feature of this type of anemia is the shift of the erythrocyte histogram to the left (to the area of small volumes) and in some cases (for example, at the initial stage of IDA and during the treatment of IDA with iron preparations) - an increase in RDW - an indicator of the width of the distribution of erythrocytes by volume due to anisocytosis erythrocytes. Microcytic-hypochromic are iron deficiency anemia (IDA), anemia in chronic diseases (ACD), anemia associated with a violation of the synthesis of porphyrins, thalassemia.

Hypochromic microcytic anemia

1. Verification of iron deficiency anemia

As mentioned above, if a patient has a hypochromic nature of anemia, IDA should be suspected in the first place (all IDA are hypochromic!). However, the fact of the presence of hypochromic anemia in itself does not exclude other pathogenetic variants of anemia, since not all hypochromic anemias are iron-deficient. For example, hypochromic anemia can occur when hemoglobin synthesis is impaired as a result of a violation of the inclusion of iron in its molecule with a normal or even elevated level of iron in the blood serum (see impaired synthesis of porphyrins). Therefore, for the differential diagnosis of these conditions, it is necessary first of all to conduct a study of the content of iron in the serum. Moreover, this analysis must be performed before prescribing iron medications to patients or carrying out erythrocyte transfusions.

If the level of iron in the blood serum is within the normal range or elevated, anemia associated with a violation of the synthesis of porphyrins or thalassemia should be suspected in the patient, and at the next stage of diagnosis it is advisable to determine the concentration of reticulocytes. The detection of a low level of iron in the blood serum clearly indicates the need to determine other indicators of iron metabolism (OZHSS and ferritin levels) [O.A. Kurilyak, 2019].

Purpose of the Study. The aim of this study is to determine the incidence and cytological diagnosis of microcytic hypochromic iron deficiency anemia.

Research Methods. The material of the study was 45,000 general blood tests carried out in the laboratory of the Bukhara branch of the Republican Scientific Center for Emergency Medicine for 1 year.

WEB OF SCIENTIST: INTERNATIONAL SCIENTIFIC RESEARCH JOURNAL
ISSN: 2776-0979, Volume 3, Issue 10, Oct., 2022

Research Results. Microcytic hypochromic iron deficiency anemia was detected in 4,000 out of 45,000 patients who underwent a complete blood count in the laboratory of the Bukhara branch of the RRCEM for 1 year.

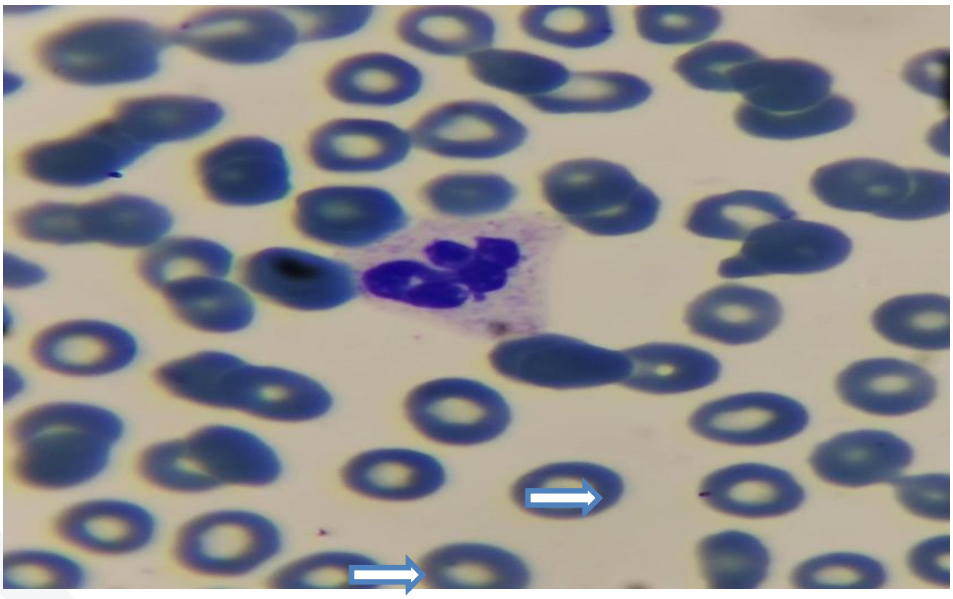

Figure 1. Cytological examination of blood smears.

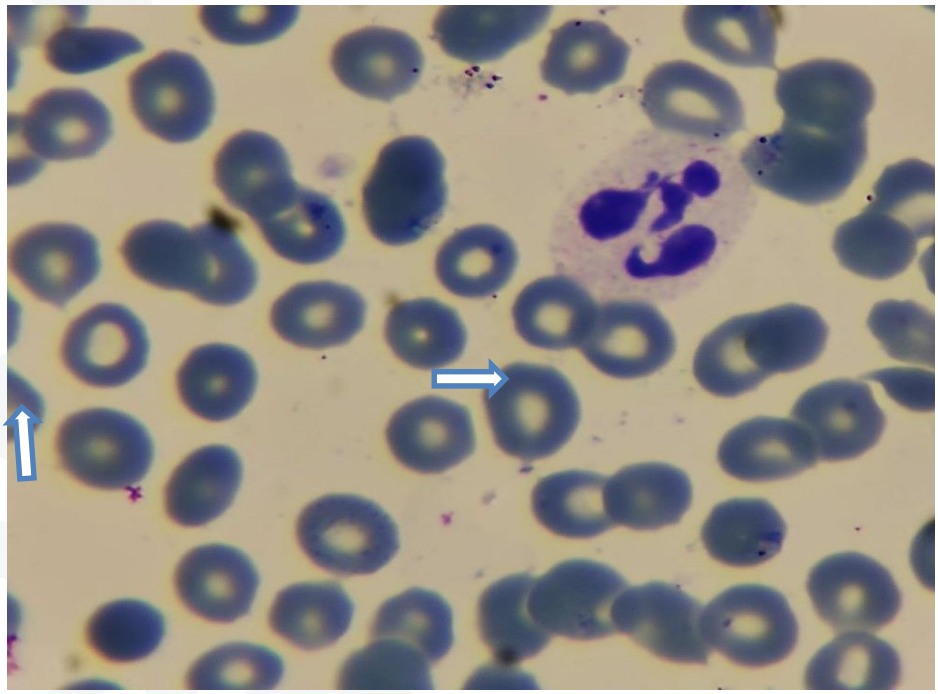

Figure 2. Cytological examination of blood smears.

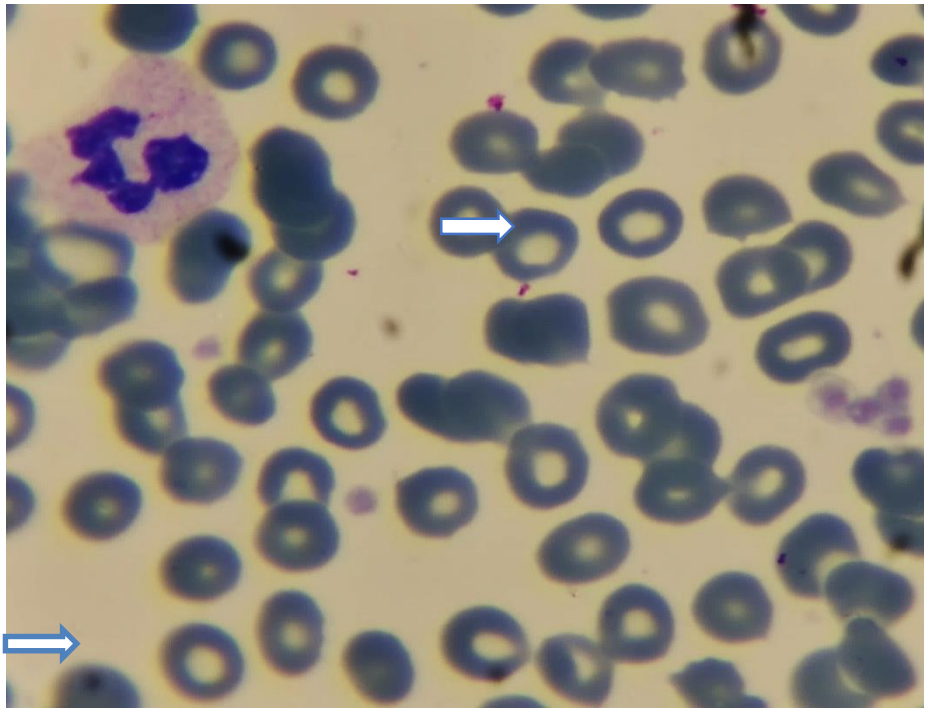

Figure 3. Cytological examination of blood smears.

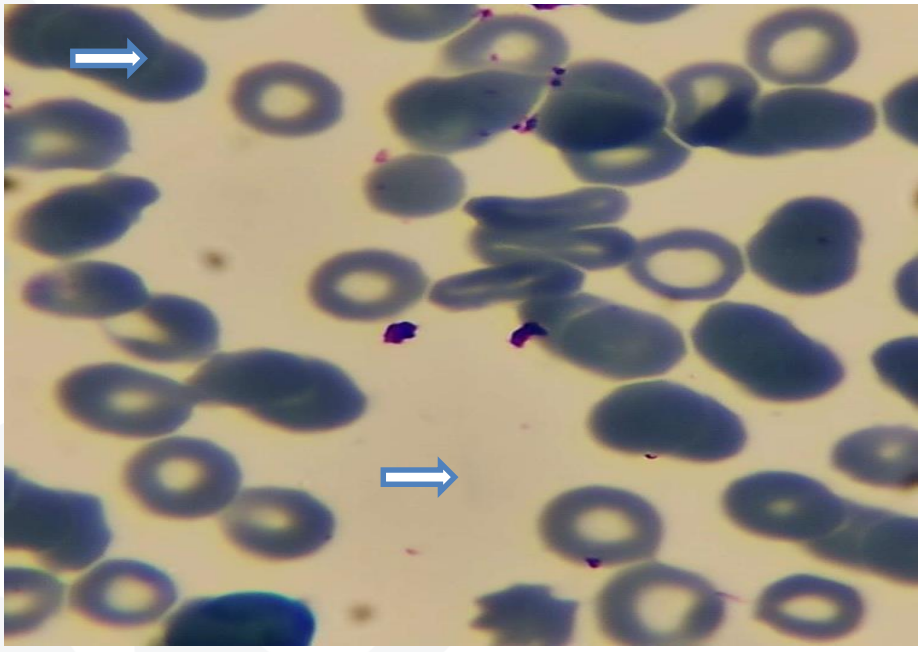

Figure 4. Cytological examination of blood smears.

Literature

1. Stuklov Nikolay Igorevich, Semenova Elena Nikolaevna Iron deficiency anemia. Sovremennaya tactic diagnostics and treatment, criteria of effectiveness of therapy // Clinical medicine. 2013. No. 12.
2. Smirnova L.A. Anemia: differential-diagnostic aspects // Meditsinskie novosti. 2013. No. 2 (221).

3. Goncharik I.I. Iron-deficit anemia in practical therapy // Meditsinskie novosti. 2016. No. 9 (264).
4. Treatment of diseases in outpatient practice. 2-e izdanie, ispravlennoe i dopolnennoe. Pod ed. prof. I. L. Davydkina. M.: GEOTAR-Media, 2014. 184 p.
5. Hematology. National leadership. Pod ed. O.A. Rukavitsyna. M.: GEOTAR-Media, 2019. 784 p.
6. Endocrinology. National leadership. Kratkoe izdanie. Pod ed. I.I. Dedova, G.A. Melnichenko. M.: GEOTAR-Media, 2020. 832 p.
7. Trukhan D.I., Filimonov S.N. Clinic, diagnosis and treatment of basic endocrine and hematological diseases. Uchebnoe posobie. Novokuznetsk: OOO Polygraphist. 2015. 119 p.
8. Sanoev B.A., Israilov R.I. and Djuraeva G.B. QUANTITATIVE INDICATORS AND METHODS FOR MODELING STRUCTURAL UNITS IN PLACENTAL INSUFFICIENCY // World Journal of Pharmaceutical Research. Volume: 09 Issue: 12 | 2020. 37-47 p
9. RI Israilov, BA Sanoev, AZ Olimova Pathologically Undifferentiated Placental Morphology in Primary Placental Insufficiency // American Journal of Medicine and Medical Sciences. Volume: 10 Issue: 09 | 2020. 660-663 p
10. Sanoev Bakhtiyor Abdurasulovich MORPHOLOGICAL AND MORPHOMETRIC CHARACTERISTICS OF THE PLACENTA IN NORMAL PREGNANCY.// DEVELOPMENT OF A MODERN EDUCATION SYSTEM AND CREATIVE IDEAS FOR IT, REPUBLICAN SCIENTIFIC-PRACTICAL ONLINE CONFERENCE ON "SUGGESTIONS AND SOLUTIONS" Issue: 06 | 2020. 94-96 p
11. БА Саноев, ТШ Ниёзова, НИ Хикматова МАКРО-И МИКРОСКОПИЧЕСКИЕ ПРОЯВЛЕНИЯ ЛЕЙОМИОМ МАТКИ // Новый день в медицине. Номер 2 . 2020. С. 526-528
12. Sanoyev Bakhtiyor Abdurasulovich, Olimova Aziza Zokirovna. Pathology of Precancerous Conditions of the Ovaries in Women of Reproductive Age. // Volume: 01 Issue: 06 | 2021.
13. Aziza Zokirovna Olimova, Sanoyev Bakhtiyor Abdurasulovich. OVARIAN DISEASES IN AGE OF REPRODUCTIVE WOMEN: DERMOID CYST. // Volume: 01 Issue: 06 | 2021. 154-161 p
14. Aziza Zokirovna Olimova, (2021, July). COMPARATIVE CHARACTERISTICS OF THE MORPHOLOGICAL PARAMETERS OF THE LIVER AT DIFFERENT PERIODS OF TRAUMATIC BRAIN INJURY. // In Euro-Asia Conferences (pp. 139-142).

15. Aziza Zokirovna Olimova. Частота Встречаемости Миомы Матки У Женщин В Репродуктивном Возрасте. // JOURNAL OF ADVANCED RESEARCH AND STABILITY (JARS). Volume: 01 Issue: 06 | 2021. 551-556 p
16. Aziza Zokirovna Olimova. РЕПРОДУКТИВ ЁШДАГИ ЭРКАКЛАРДА БЕПУШТЛИК САБАБЛАРИ: БУХОРО ТУМАНИ ЭПИДЕМИОЛОГИЯСИ. // SCIENTIFIC PROGRESS. 2021 й 499-502p
17. Aziza Zokirovna Olimova. MACRO- AND MICROSCOPIC STRUCTURE OF THE LIVER OF THREE MONTHLY WHITE RATS. // ACADEMIC RESEARCH IN EDUCATIONAL SCIENCES /2021 й. 309-312 p
18. Aziza Zokirovna Olimova. Cytological screening of cervical diseases: pap test research in the bukhara regional diagnostic center for the period 2015-2019 // Web of Scientist: International Scientific Research 3 (7), 2022, 121-128
19. OA Zokirovna Technique for cutting biopsy and surgical material in the practice of pathological anatomy and forensic medicine // Web of Scientist: International Scientific Research Journal 3 (7), 2022, 116-120
20. Мухидова, Г. Х., &Тешаев, Ш. Ж. (2016). Морфометрические особенности параметров физического развития и антропометрических параметров верхней конечности 13 летных компьютернозависимых подростков мальчиков. Problems of biology and medicine (89) 2016г.стр, 52-56.
21. Мухидова, Г. Х. (2021). Сравнительная характеристика компютерно-зависимых компютерно-независимых подростков по антропометрическим показателям. Тиббиётдаянгикун, 5, 37.
22. Khasanovna, M. G. (2021). Features of Computer Dependence Comparative Characteristics of Computer-Dependent and Computer-Independent Adolescents by Anthropometric Indicators.International Journal of Innovative Analyses and Emerging Technology, 1(6), 213-217.
23. Мухидова, Г. Х. (2021). Comparative Characteristics of morphometric parameters of physical development and anthropo extremities of healthy and computer.Research. Jet Journal of Analysis and Inventions-RJAI, 2(9), 14-17.
24. Khasanovna, M. G. (2021). COMPARATIVE CHARACTERISTICS OF MORPHOMETRIC PARAMETERS OF PHYSICAL DEVELOPMENT AND ANTHROPOMETRIC DATA OF THE UPPER EXTREMITIES OF HEALTHY AND COMPUTER-DEPENDENT CHILDREN. Research Jet Journal of Analysis and Inventions, 2(09), 14-17.
25. Мухидова, Г. Х. (2021). Феномен «компьютерной зависимости: особенности интернетзависимости у подростков». Eurasian journal of medical and natural sciences, 22-26.

26. Саноев, Б. А., & Мухидова, Г. Х. (2022). МАКРОИ МИКРОСКОПИЧЕСКИЕ ПРОЯВЛЕНИЯ ПОЛИПА ЭНДОМЕТРИЯ. Oriental renaissance: Innovative, educational, natural and social sciences, 2(2), 835-840.
27. MORPHOLOGICAL, S. B. MORPHOMETRIC CHARACTERISTICS OF THE PLACENTA IN NORMAL PREGNANCY. SCIENTIFIC COMMUNITY: INTERDISCIPLINARY RESEARCH, 492-498.
28. Саноев, Б. А., &Мухидова, Г. Х. (2022). МАКРОИ МИКРОСКОПИЧЕСКИЕ ПРОЯВЛЕНИЯ ПОЛИПА ЭНДОМЕТРИЯ. Oriental renaissance: Innovative, educational, natural and social sciences, 2(2), 835-840.
29. Mukhidova, G. X., &Sanoev, B. A. (2022). Causes and Occurrence of Uterine Endometrial Polyps in Women in Bukhara Region. International Journal of Discoveries and Innovations in Applied Sciences, 2(3), 42-45.
30. Мухидова Г.Х. “Zamonaviy ta`lim: muammo va yechimlari”. Особенности антропометрических параметров компьютерно-зависимых подростков мальчиков. 2021г стр 49-50.
31. Мухидова Г.Х. “Zamonaviy ta`lim: muammo va yechimlari”. Морфофизиологические особенности и степень интернет-зависимости у подростков. 2021г стр 45-46.
32. Sanoev B.A., Israilov R.I. and Djuraeva G.B. QUANTITATIVE INDICATORS AND METHODS FOR MODELING STRUCTURAL UNITS IN PLACENTAL INSUFFICIENCY // World Journal of Pharmaceutical Research. Volume: 09 Issue: 12 | 2020. 37-47 p.