PHARMACOTHERAPY OF MODERN IRON PREPARATIONS IN THE TREATMENT OF IRON DEFICIENCY ANEMIAS

Khayatova Shoira Telmanovna
Samarkand State Medical University
Department of Pharmaceutical Business
Organization Assistant
Abdukadirova Nargiza Batyrbekovna
Samarkand State Medical University
Department of Propaedeutics of Children's
Diseases Assistant

Аннотация

Хроническая ЖДА является следствием длительного отрицательного баланса железа в организме. Причинами его развития могут быть хронические кровопотери вследствие желудочно-кишечных кровотечений (эрозивный гастрит, язвенная болезнь, геморрой, прием ацетилсалициловой кислоты, ибупрофена), маточные кровотечения при обильных менструациях, а также опухоли (колоректальный и ободочный рак, рак мочевого пузыря), донорство. , повышенная потребность в железе во время беременности и лактации, в подростковом возрасте (ювенильный хлороз), при паразитарных заболеваниях (дифиллоботриоз), недостаточном поступлении железа (гастродуоденит, колит, гастрэктомия), алиментарном дефиците железа у вегетарианцев).

Ключевые слова: хроническая анемия, повышенная потребность в железе, алиментарный дефицит железа, хроническая кровопотеря.

The main source of iron for humans is animal foods, which contain iron in the most absorbable form. The absorption of iron from foods decreases after their heat treatment, freezing, and long-term storage.

Iron is absorbed in the intestines with food, most intensively in the 12 denum and the initial part of the large intestine. The absorption of iron depends on the nature of the food, the caloric content of the diet, and the absorption capacity of the small intestine. The iron in the hemo is absorbed much better. People who eat meat get more heme iron in myoglobin than vegetarians. Fructose, hydrochloric acid, ascorbic acid, succinic acid, pyruvic acids, cysteine, sorbitol and alcohol increase iron resorption.

From the gastrointestinal tract, iron is adsorbed only in the divalent state, which is converted only by organic acids, in particular ascorbic acid. In tissues, iron is deposited in the form of ferritin and hemosiderin, with predominant deposition in the liver, spleen and muscles. Iron deficiency occurs when iron loss exceeds 2 mg/day.

However, not all iron deficiency is accompanied by anemia – there are also prelatent and latent iron deficiency. Over-patched iron deficiency develops when the intake of iron with food does not meet the physiological needs – during the growth of the body, menstruation, pregnancy, but the insufficient intake of iron is covered by its reserves. At the same time, iron reserves are depleted. Latent deficiency is the next stage, in which the supply of iron to the cells of the erythroid sprout is reduced and the production of red blood cells is restricted. IDA with hypochromia and microcytosis develops as a result of long-term negative iron balance, when hemoglobin synthesis is reduced. The clinical picture of IDA depends on the stage of iron deficiency.

Stages of iron deficiency (IG):

- pre-latent iron is characterized by a decrease in iron reserves, but without a decrease in its amount spent on erythropoiesis (deficiency of reserve iron).

- Latent LD is characterized by complete depletion of iron reserves in the depot, a decrease in the level of ferritin in the blood serum, an increase in the total iron-binding capacity of serum iron and the level of transferrin without signs of anemia (transport iron deficiency).

- IDA is the final stage of IDA, which occurs when the hemoglobin background of iron decreases and is manifested by symptoms of anemia and siderosis (obvious iron deficiency).

Treatment. In accordance with the etiological and pathogenetic factors of IDA, treatment should be comprehensive, aimed at eliminating the cause of the disease, and include an adequate intake of trace elements, vitamins, proteins and correction of iron deficiency.

Iron is most efficiently absorbed from foods that contain it in the form of hemo, when it is actively captured and absorbed by the cells of the intestinal mucosa in an unchanged form (beef tongue, rabbit meat, chicken, turkey, beef). The processes of absorption of hemo in the intestine do not depend on the acidity of the environment and inhibitory nutrients. As already mentioned, in cereals, fruits and vegetables, iron is in a non-heme form, and absorption from them is much worse. The presence of oxalates, phosphates, tannins and other inhibitors of ferroabsorption also contributes to a decrease in absorption. It should be borne in mind that a complete and balanced diet in terms of the main ingredients only covers the physiological need of the body for iron, but does not eliminate its deficiency, and should be considered as one of the components of therapy.

Currently, the indications for parenteral use of iron preparations have been narrowed: they are used in the presence of intestinal pathology with malabsorption (various enteritis, malabsorption syndrome, small intestine resection, gastrectomy according to Billroth 2 with the formation of a blind loop). Parenteral iron supplements may be the treatment of choice if oral iron supplements are poorly tolerated. At present,

the oral use of combined drugs (containing both iron salts and other components) seems promising in the treatment of IDA, the leading of which is Ferro-Foils – a multifactorial hemopoetic that includes all the necessary components (1 capsule contains 112.6 mg of iron sulfate equivalent to 37 mg of iron ion, 5 mg of folia0.01 mg cyano cobalamin), which provide stimulation of A and a number of enzymes by the red sprout of the bone marrow. The drug also contains ascorbic acid. Ferrous sulfate replenishes iron deficiency in the body. Iron is a component of hemoglobin, myoglobin and a number of enzymes. As a structural component of heme, it takes part in erythropoiesis. Ascorbic acid helps to improve the adsorption of iron in the intestine. Cyanogen, cobalamin (vitamin B12) and folic acid are involved in the formation and maturation of red blood cells. The active components of Ferro-Foils are in a special neutral coating that ensures their absorption, mainly from the upper part of the small intestine. The absence of a local irritant effect on the gastric mucosa contributes to good gastrointestinal tolerability of the drug.

The good clinical effect of the drug is confirmed by the data of numerous clinical trials. A total of 83 persons (22 men and 61 women) aged 17 to 92 years were under the authors' supervision. In the group, the average hemoglobin level was reduced to 87.8, and the average duration of anemia was 1.5 years. The causes of anemia were acute or chronic blood loss (in 54.3% of cases), malabsorption (in 28.3% of cases), other or combined causes (in 17.3% of cases). With the use of Ferro-Foils in the correction of IDA, a more pronounced positive dynamics of both clinical and laboratory parameters was observed in comparison with other ferro-containing drugs. The high efficacy of the drug in chronic heart failure has also been proven.

Ferro-foils have also been shown to be highly effective in the treatment of anemia in pregnant women. Thus, a number of studies were carried out on the basis of the 7th family polyclinic on the problem of iron deficiency conditions in pregnant women, puerperal women and gynecological patients. The clinical efficacy of the ferro-foil drug, which has been successfully used for the treatment of latent iron deficiency (LJ) and manifest iron deficiency (MJ) in obstetric and gynecological patients, both alone and in combination with recombinant erythropoietin, has been studied most fully. The results obtained showed that the unique ratio between the optimal content of ferric iron, folic acid and cyanogen cobalamin in one capsule of Ferro-Foil allows achieving good results in the treatment of pregnant women, puerperal women and gynecological patients with MJ not only of mild and moderate and severe severity. The presence of folic acid and cyanogen cobalamin in the preparation is its additional advantage, since it is currently ferro-foils in women outside and during pregnancy, as well as after childbirth.

References:

1.Базарова Н. С., Зиядуллаев Ш. Х. Современные аспекты полиморфных генов матриксной металлопротеиназ и ее тканевых ингибиторов у детей с хроническим гломерулонефритом и прогноз заболевания //журнал гепато-гастроэнтерологических исследований. – 2022. – Т. 3. – №. 1.

2.Sobirjonovna B. N. New aspects of the genetic disposition of various forms of chronic nephritic syndrome in children //Journal of Universal Science Research. – 2023. – Т. 1. – №. 6. – С. 778-782.

3. Clinical dynamics of chronic nephritic syndrome in children

BN Sobirjonovna, TS Kurakbaevna - Eurasian Medical Research Periodical, 2023

4. Sobirjonovna B. N., Kurakbaevna T. S. Clinical dynamics of chronic nephritic syndrome in children //Eurasian Medical Research Periodical. – 2023. – Т. 19. – С. 53-56.

4. Clinical dynamics of chronic nephritic syndrome in children

BN Sobirjonovna, TS Kurakbaevna - Eurasian Medical Research Periodical, 2023

5.Бозорова Н., Анорбаева Ш., Назарова Л. ЗНАЧЕНИЕ ПОДДОРОЖНИКА В НАРОДНОЙ МЕДИЦИНЕ //Инновационные исследования в современном мире: теория и практика. – 2023. – Т. 2. – №. 10. – С. 5-6.

6.Sobirjonovna B. N. et al. ZUBTURUM O'SIMLIGINING XALQ TABOBATIDAGI AHAMIYATI //JOURNAL OF INNOVATIONS IN SCIENTIFIC AND EDUCATIONAL RESEARCH. – 2023. – Т. 6. – №. 2. – С. 215-216.

7.Султонов Ш. А., Шомуродова Ш. Ш. ХИЗМАТ КЎРСАТИШ СОҲАСИДА ТАДБИРКОРЛИКНИ РИВОЖЛАНТИРИШ ВА АҲОЛИНИНГ ТУРМУШ ДАРАЖАСИ ВА СИФАТИНИ ОШИРИШ ЙЎЛЛАРИ //Новости образования: исследование в XXI веке. – 2023. – Т. 1. – №. 12. – С. 248-252.

8. Шомуродова Ш. Ш. ИННОВАЦИОН САЛОҲИЯТ ВА УНИ АНИҚЛАШНИНГ ИЛМИЙ-УСЛУБИЙ МАСАЛАЛАРИ //IJODKOR O'QITUVCHI. – 2023. – Т. 3. – №. 30. – С. 189-195.

9.Sulonov S. A., Shomurodova S. S. XIZMAT KO'RSATISH SOHASIDA TADBIRKORLIKNI RIVOJLANTIRIB, AHOLI TURMUSH DARAJASI VA SIFATINI OSHIRISHNING ISTIQBOLLI YO'NALISHLARI //Научный Фокус. – 2023. – Т. 1. – №. 6. – С. 247-251.

10.Шомуродова Ш. Ш. ПЕРСПЕКТИВНЫЕ НАПРАВЛЕНИЯ ПОВЫШЕНИЯ УРОВНЯ ЖИЗНИ И КАЧЕСТВА НАСЕЛЕНИЯ ЗА СЧЕТ РАЗВИТИЯ ПРЕДПРИНИМАТЕЛЬСТВА В СФЕРЕ УСЛУГ //Лучшие интеллектуальные исследования. – 2024. – Т. 13. – №. 4. – С. 132-138.

11. Алтыбоева М. Г., Бозорова Н. С. СОВРЕМЕННЫЕ ВЗГЛЯДЫ НА КИШЕЧНУЮ МИКРОФЛОРУ У ДЕТЕЙ //Научный Фокус. – 2023. – Т. 1. – №. 5. – С. 109-112.

12. Alikovna J. F. et al. SALVIA O'SIMLIGINING XUSUSIYATLARI //JOURNAL OF INNOVATIONS IN SCIENTIFIC AND EDUCATIONAL RESEARCH. – 2023. – Т. 6. – №. 2. – С. 217-218.

13. G'ulomovna O. M., Sobirjonovna B. N. MODERN VIEWS ON INTESTINAL MICROFLORA IN CHILDREN //Научный Фокус. – 2023. – Т. 1. – №. 6. – С. 279-282.

14. Mavsuma O. MEDICINAL PROPERTIES OF SEA BUCKTHORN (Hippophae Rhamnoides L.) OIL PLANT //Horizon: Journal of Humanity and Artificial Intelligence. – 2023. – Т. 2. – №. 3. – С. 1-3.

15. D. Togayeva (2023). ANALYSIS OF THE DEVELOPMENT OF SMALL BUSINESS AND PRIVATE ENTREPRENEURSHIP IN THE SAMARKAND REGION. Science and innovation, 2 (A1), 103-106. doi: 10.5281/zenodo.7541692

16. Hasanov, H., Sultonov, B., Norbekov, F., & Togayeva, D. (2023). FOIZ STAVKASI VA DAROMADNING ISTE'MOL XARAJATLARIGA TA'SIRI TAHLILI. *JOURNAL OF ECONOMY, TOURISM AND SERVICE*, *2*(4), 5-13.

17.Togayeva, D. (2023). QISHLOQ JOYLARDA KICHIK BIZNES VA TADBIRKORLIKNI RIVOJLANTIRISHDAGI MASALALAR. *SO 'NGI ILMIY TADQIQOTLAR NAZARIYASI*, *6*(6), 223-227.

18. Azamatovna, T. D., & Abduxalilovich, S. B. (2023). The role of retail trade in raising the standard of living of the rural population. *Journal of Universal Science Research*, *1*(6), 754-758.

19. Uchkunov S., Mamadaliyev J., Djuraeva B. EYE DISEASES IN MEDICINE //Евразийский журнал медицинских и естественных наук. – 2024. – Т. 4. – №. 1 Part 2. – С. 128-135.

20. Djuraeva B., Malikova Z., To'ychiyeva M. WISDOM TEETH IN HUMANS //Евразийский журнал медицинских и естественных наук. – 2023. – Т. 3. – №. 12. – С. 132-135.

21. Djuraeva B., Mamurjonova S., Ruzmatova M. SKIN-RELATED PROBLEMS //Евразийский журнал медицинских и естественных наук. – 2023. – Т. 3. – №. 12. – С. 127-131.

22. Djuraeva B., Kuylibayeva I., Abdugafforov B. INTESTINAL DISEASES: DUODENITIS //Евразийский журнал медицинских и естественных наук. – 2023. – Т. 3. – №. 12. – С. 120-126.

23.Ахмедов Б., Буриев З. ДОРИВОР АНОР (PUNICA GRANATUM L.) ЭКСПЛАНТЛАРИНИ ТАНЛАШ ВА СТЕРИЛИЗАЦИЯ ҚИЛИШ //Евразийский журнал медицинских и естественных наук. – 2023. – Т. 3. – №. 1 Part 2. – С. 131-134.

24.Akhmedov B., Buriev Z. SELECTION AND STERILIZATION OF MEDICINAL POMEGRANATE (PUNICA GRANATUM L.) EXPLANTS //Центральноазиатский журнал образования и инноваций. – 2023. – Т. 2. – №. 1. – С. 106-108.

25. Telmanovna X. S., Batirbekovich X. R. Psychopharmacotherapy of Depressive Disorders in Alcoholism //Eurasian Research Bulletin. – 2023. – Т. 16. – С. 179-182.

26.Abdukadirova N. B., Telmanovna X. S. Assessment of the Level of Immunoglobulins in the Blood Serum in Young Children Depending on the Type of Feeding //Eurasian Research Bulletin. – 2023. – Т. 17. – С. 164-166.

27. Abdukadirova N. B., Telmanovna X. S. Options clinical manifestations of giardiasis in children //Eurasian Research Bulletin. – 2023. – Т. 17. – С. 167-170.

28.Хаятова Ш. Т., Абдукадирова Н. Б. ОСОБЕННОСТИ ТЕЧЕНИЯ ЖЕЛЕЗО-ДЕФИЦИТНЫХ АНЕМИЙ НА ФОНЕ ЗАБОЛЕВАНИЙ ЖЕЛУДОЧНО-КИШЕЧНОГО ТРАКТА //Новости образования: исследование в XXI веке. – 2023. – Т. 2. – №. 13. – С. 277-280.

29. Azizkhonovna N. M. et al. ALTHAEA ARMENIACA TEN AND ITS USEFUL PROPERTIES IN MEDICINE //Научный Фокус. – 2023. – Т. 1. – №. 6. – С. 256-259.

30.Azizkhonovna N. M. FEATURES OF A TIMELY APPROACH TO ANEMIA IN CHILDREN //International journal of advanced research in education, technology and management. – 2024. – Т. 3. – №. 1. – С. 54-61.

31. Azizxonovna N. M. ZAMONAVIY TIBBIYOTDA BOLALARDA ANEMIYAGA O'Z VAQTIDA YONDASHISH XUSUSIYATLARI //Лучшие интеллектуальные исследования. – 2024. – Т. 13. – №. 4. – С. 45-50.

32. Nabieva F. S., Narzullayeva M. A., Bo'Riyev M. G. YUQUMLI KASALLIKLARNI TASHXISLASHDA IMMUNOFERMENT TAHLILINING AHAMIYATI //Research Focus. – 2022. – Т. 1. – №. 4. – С. 161-164.