FEATURES OF A SERIES OF STUDIES ON THE ASSESSMENT OF THE SEVERITY OF ANEMIA IN CHILDREN LIVING AROUND THE ARAL SEA

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Summary. *Iron deficiency anemia clinical manifestations appear that are explained the development of anemic hypoxia, which in turn increases the metabolic changes and trophic disorders present in the body. Updated criteria allow for early diagnosis and treatment before the development of damage to internal organs.*

Key words: *Iron-deficiency anemia, assessment, around*

Anemia is a pathological condition characterized by a decrease in the number of red blood cells and/or hemoglobin per unit volume of blood. According to the World Health Organization (WHO), anemia ranks first among the 38 most common human diseases, affecting more than 3 billion people on Earth [1,13]. The risk of developing anemia is highest in children (especially the first two years of life) and women of reproductive age. According to S. Osendarp et al [2,3,5]. Around the world, about 50% of preschool children and pregnant women are anemic.

Epidemiological studies conducted in various regions of Uzbekistan have shown that among all anemias in childhood, the most common; iron deficiency form of anemia, and it occupies a leading place among anemias in the general population. Among anemia, according to UNICEF data assessing the prevalence of iron deficiency anemia (IDA), in the countries of Central Asia indicates a high and progressive level of anemia, especially among women and children [12]. However, the prevalence of IDA varies significantly depending on age and gender.

The highest prevalence of IDA is observed in children from 6 months to 3 years and adolescent girls over 12 years of age, so the detection of manifest iron deficiency in the form of IDA among the most vulnerable risk groups is impressive. At the same time, IDA is significantly common in risk groups in the regions of the Southern Aral Sea region, which is an area of environmental distress.

Considering that in all epidemiological studies, an analysis of hemoglobin (Hb) content in the blood is used as a screening method for identifying iron deficiency, which allows identifying only manifest (obvious) iron deficiency[4,7,8]. At the same time, the relevance of the problem of IDA in pediatrics is due not only to its widespread prevalence, but also to the significant adverse effect of iron deficiency on the health of children[10]. It has been proven that IDA causes dysfunction of many organs and systems of the body. The problem of iron deficiency without anemic syndrome began to be given great independent importance, as evidence emerged that clinically iron deficiency plays a role in the development of such conditions in children as sleep disturbance and emotional lability, which occurred in approximately half of children, regardless of age[9,11]. Typical manifestations of sideropenia in children of the first three years of life were decreased and/or perversion of appetite, tachycardia and functional systolic murmur, intestinal dyspepsia, muscle hypotension, including hypotonia of the abdominal wall and diaphragm muscles.

Thus, due to the developing environmental problems in the region, there was a significant increase in the total amount of anemia among the population of the Aral Sea region, exceeding the republican average[6].

Purpose of the study. Assessment of clinical manifestations and laboratory parameters in various degrees of severity of anemia in children of the Aral Sea region.

Material and methods: The study included 50 patients with IDA aged from 5 months to 17 years, including: up to 1 year - 9 children (19.0%), 1-3 years - 33 children (66.1%) , 4-12 years old - 2 people (3.3%) and over 12 years old - 10 teenagers 6 people (11.6%) who applied to the hematology department of the Multidisciplinary Children's Medical Center, Republic of Karakalpakstan, where, taking into account international recommendations, clinical and laboratory the diagnosis of anemia was verified.

The methods of clinical examination included: a survey, a general examination of patients by organs and systems according to the traditional scheme with details of hematological complaints.

Hematological parameters of peripheral blood were determined on a hematological automatic analyzer "SYSMEX. GLOBAL IMPEX, Japan", using reagents from HUMAN (Germany) and a myelogram using manual microscopy (LEICA ICC50 E, Germany) with a digital color camera of five megapixel resolution (2592 x 1944), the ESR indicator was determined using a Panchenkov apparatus (Russia). Statistical analysis of the results was carried out using the statistical software package "Microsoft Office Excel" and "Biostatistics 4.03".

Results. The conducted studies indicate that IDA in young children is caused by a complex of reasons, including unfavorable course of pregnancy and childbirth, burdened obstetric-gynecological and social history, as well as nutritional factors, and the child's increased needs for iron during periods of intensive growth. An analysis of the clinical manifestations of IDA showed that children experience a variety of anemic and sideropenic symptoms, the frequency and severity of which depend on the age of the patients, the severity and duration of anemia. The only symptom we observed in the clinical picture of all examined children was pallor of the skin and mucous membranes. Another symptom identified in most patients was

weakness. Anemic symptoms are associated with insufficient oxygen supply to tissues. Sleep disturbances and emotional lability occurred in approximately half of the children, regardless of age. The child's brain is very sensitive to iron deficiency and the identified behavioral disorders are caused primarily by sideropenia.

Conclusion.

A comparative analysis of statistical data on the incidence of the population of the Aral Sea region showed the leading groups of diseases that are indicators of the direct and indirect influence of the current ecological situation in nearby regions. In particular, these are classes of diseases such as diseases of the blood, hematopoietic organs and disorders of the immune status, the development of iron deficiency anemia, diseases of the nervous system, diseases of the eyes and its appendages, diseases of the digestive organs.

LITERATURE

1. Атаджанова, Ш., Арзикулов, А., Мелиева, Д., Акбарова, Р., Нуритдинова, Г. (2022). Клинико-анамнестические особенности динамики и трансформации железодефицитной анемии у девочек подростков. Международный журнал научной педиатрии, (3), 05-22. https:// d

2. Г.К. Жиемуратова; «Особенности взаимодействия меди и кобальта, участвующих в кроветворении, и влияние их дефицита на развитие анемии» Том 25, № 5 (2023).oi.org/10.56121/2181-2926-2022-3-05-22/

3. К. Аскамбай; Г.Е. Ильясова; «Некоторые факторы, влияющие на возникновение и течение железодефицитной анемии у детей младшего возраста» Наука о жизни и здоровья (5) 2019 г.

4. Казюкова Т. В. Основные принципы лечения железодефицитной анемии у детей: эффективность, безопасность, индивидуальный подход. Педиатрия. 2012. № 3. С. 74-90.

5. Фазилова Ш. М. АНАЛИЗ КЛИНИЧЕСКИХ И ЛАБОРАТОРНЫХ ИЗМЕНЕНИЙ ПРИ ОСТРЫХ ЛИМФОБЛАСТНЫХ ЛЕЙКОЗАХ //PEDAGOGS. – 2023. – Т. 48. – №. 1. – С. 31-33.

6. Фазилова Ш. М., Каримов Х. Я., Шевченко Л. И. Сравнительная оценка влияния препарата "Реоманнисол" на показатели периферической крови при гемолитической анемии в эксперименте // Вестник гематологии. 2019. №3.

7. Фазилова Ш. М., Хусаинов А. Ш., Каримов Ф. М. Рак молочной железы и причины его возникновения //Актуальные научные исследования в современном мире. – 2017. – №. 4-6. – С. 134-136.

8. Шабалов Н.П. / Под ред. Детские болезни: Учебник для вузов. 6-е изд. В двух томах, Т.2. - СПб. Питер, 2009. - 928 с.

9. Armitage AE, Moretti D. The importance of iron status for young children in low- and middle-income countries: a narrative review. Pharmaceuticals (Basel). 2019;12(2). pii: E59.https://doi.org/10.3390/ ph12020059

10. lkhamovna K. G., Mirkhamidovna F. S. FEATURES OF THE STATE OF THE LIVER IN ACUTE LEUKEMIA.(LITERATURE REVIEW) //PEDAGOG. – 2023. – Т. 6. – №. 6. – С. 285-290.

11. Mirkhamidovna F. S. REVIEW OF CLINICAL CHANGES IN ACUTE LYMPHOBLASTIC LEUKEMIA //Scientific Impulse. – 2023. – Т. 2. – №. 16. – С. 358-360.

12. Mirkhamidovna F. S., Soburovna M. D., Bakhadirovna A. S. In the Dynamics of the Development of Hemolytic Deficiency Industried with Phenylhydrasine of the new Product "Reomannisol". – 2022.

13. Zulayho E., Mirkhamidovna F. S. CLINICAL AND LABORATORY ASPECTS IN MULTIPLE MYELOMA (LITERATURE REVIEW) //O'ZBEKISTONDA FANLARARO INNOVATSIYALAR VA ILMIY TADQIQOTLAR JURNALI. – 2023. – Т. 2. – №. 20. – С. 203-206.