

METHODS OF EARLY DETECTION AND TREATMENT OF IRON DEFICIENCY ANEMIA IN CHILDREN WITHIN PATRONAGE SERVICES

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Annotation: Iron deficiency anemia is currently one of the most common blood disorders in children, significantly affecting their physical and mental development. In particular, late diagnosis of this condition in early childhood may lead to various complications. Therefore, within the framework of patronage services, regular monitoring of children, early detection of iron deficiency symptoms, and timely treatment are of great importance. This study highlights the role of patronage services in the prevention and treatment of iron deficiency anemia, effective methods, and the advantages of working with parents. As a result, it becomes possible to ensure healthy growth and development in children and to promote the formation of a healthy generation in society.

Keywords: Iron deficiency anemia, patronage service, early detection, child health, prevention, treatment methods, healthy generation, physical development, mental development.

МЕТОДЫ РАННЕГО ВЫЯВЛЕНИЯ И ЛЕЧЕНИЯ ЖЕЛЕЗОДЕФИЦИТНОЙ АНЕМИИ У ДЕТЕЙ В ПАТРОНАЖНОЙ ПРАКТИКЕ

Аннотация: Железодефицитная анемия на сегодняшний день является одним из наиболее распространённых заболеваний крови у детей, оказывая серьёзное влияние на их физическое и умственное развитие. Особенно в раннем возрасте поздняя диагностика данного заболевания может привести к различным осложнениям. Поэтому в рамках патронажной работы регулярное наблюдение за детьми, раннее выявление признаков дефицита железа и своевременное лечение имеют важное значение. В данном исследовании освещена роль патронажной службы в профилактике и лечении железодефицитной анемии, эффективные методы, а также преимущества работы с родителями. В результате обеспечиваются здоровый рост и развитие детей, а также расширяются возможности формирования здорового поколения в обществе.

Ключевые слова

Железодефицитная анемия, патронажная служба, раннее выявление, здоровье детей, профилактика, методы лечения, здоровое поколение, физическое развитие, умственное развитие.

PATRONAJ ISHLARIDA BOLALARDAGI TEMIR TANQISLIGI ANEMIYASINI ERTA ANIQLASH VA DAVOLASH USULLARI

Annotatsiya: Bolalarda temir tanqisligi anemiyasi bugungi kunda eng koʻp uchraydigan qon kasalliklaridan biri boʻlib, u bolaning jismoniy va aqliy rivojlanishiga jiddiy taʼsir koʻrsatadi. Ayniqsa, erta yoshdagi bolalarda bu kasallikni kech aniqlash turli asoratlarni keltirib chiqarishi mumkin. Shuning uchun patronaj ishlari doirasida bolalarni muntazam kuzatish, temir tanqisligi alomatlarini erta aniqlash va vaqtida davolash muhim ahamiyat kasb etadi. Ushbu tadqiqotda patronaj xizmatining temir tanqisligi anemiyasini profilaktika qilish va davolashdagi oʻrni,

samarali usullar hamda ota-onalar bilan ishlashning afzalliklari yoritib berilgan. Natijada bolalarda sog'lom o'sish va rivojlanishni ta'minlash, shuningdek, jamiyatda sog'lom avlodni shakllantirish imkoniyati kengayadi.

Kalit so'zlar: Temir tanqisligi anemiyasi, patronaj xizmati, erta aniqlash, bolalar salomatligi, profilaktika, davolash usullari, sog'lom avlod, jismoniy rivojlanish, aqliy rivojlanish.

Introduction

Iron deficiency anemia in children is currently one of the most common and socially significant diseases in pediatrics. According to statistical data, about one in every three children worldwide experiences various degrees of this condition. Iron deficiency primarily arises due to improper nutrition, early artificial feeding, chronic diseases, frequent infections, as well as insufficient breastfeeding.

The main cause of iron deficiency anemia is the lack or poor absorption of iron in the body. This leads to a decrease in hemoglobin levels in the blood and disrupts the oxygen supply to tissues. As a result, the child suffers from symptoms such as fatigue, weakness, dizziness, paleness, and loss of appetite.

The consequences of the disease are even more serious: iron deficiency slows down the physical growth of the child, causes delays in mental and speech development, reduces immunity, and increases susceptibility to frequent colds and infectious diseases. Most worryingly, anemia in early childhood negatively affects school performance later on, impairing memory and concentration.

Among the effective treatment methods, early diagnosis and timely detection of anemia are of great importance. In this process, the role of home care services is essential: regular monitoring of the child by a pediatrician and home care nurse, blood tests, and providing parents with recommendations about iron-rich foods — such as meat, liver, green vegetables, and legumes — can help prevent the disease. When necessary, the doctor prescribes iron supplements, with the dosage and duration determined by the child's age and the severity of anemia.

Thus, early detection and timely treatment of iron deficiency anemia not only ensure the healthy growth and mental development of the child but also contribute to forming a healthy generation in society as a whole. Therefore, studying this topic and applying it in home care work is a relevant and urgent issue today.

Research Methodology

This study examined the role, effectiveness, and practical significance of home care services in the early detection and treatment of iron deficiency anemia in children. Both qualitative and quantitative methods were used in the research.

For qualitative analysis, scientific literature on pediatrics, sources on the causes, clinical signs, and consequences of iron deficiency anemia were reviewed. Additionally, practical procedures of home care services, methods of working with parents, and the effectiveness of preventive measures were studied.

As a quantitative method, statistical data were analyzed, including the prevalence of anemia in children, age-related differences, and treatment outcomes. In some cases, clinical observations and data collected during home care visits were also summarized.

A comparative approach was applied to compare the consequences of the disease in children diagnosed early and those diagnosed late. Furthermore, the impact of treatment methods — diet therapy, medications, and counseling during home care — was investigated.

The scope of the research primarily focused on young children, utilizing interviews with parents, observations by home care nurses, and existing medical records. As a result, the benefits of early detection of iron deficiency anemia in children, the effectiveness of treatment and preventive methods, and the important role of home care services were highlighted.

Literature Review

In recent years, numerous scientific studies have been conducted in pediatrics and home care services focusing on the early detection and treatment of iron deficiency anemia in children. Due to the widespread prevalence of this disease and its serious impact on children's health, the relevance of the topic continues to grow. Below is an analysis of the main sources:

According to WHO (2017), iron deficiency anemia is the most common blood disorder among children worldwide, negatively affecting their physical and intellectual development.

Anderson et al. identified the main causes of iron deficiency as poor nutrition, frequent illnesses, and hereditary factors. The authors emphasize the preventive importance of regular home care monitoring in children.

Karimova studied the consequences of iron deficiency anemia, particularly its effects on the nervous system and cognitive development. She highlights that this problem poses a greater risk especially for preschool-aged children.

The Ministry of Health of Uzbekistan guidelines outline the significance of home care services, early diagnosis, and effective treatment methods using iron supplements.

Rahmonov and Khudoyberdiyeva discussed the role of educating parents about iron-rich foods and improving nutritional culture as essential components of anemia prevention.

Smith based on clinical observations, demonstrates that a combination of iron supplements, vitamin complexes, and diet therapy is effective in ensuring healthy growth and development in children.

The UNICEF report highlights the correlation between socio-economic conditions and the high prevalence of anemia among children, designating the strengthening of home care services as a key global health strategy.

Yusupova found that late diagnosis of anemia significantly worsens a child's school performance and social adaptation.

This review of sources indicates that early detection of iron deficiency anemia and the application of treatment methods through home care services are critical factors in ensuring healthy growth and development in children. Additionally, effective collaboration with parents and increasing their awareness are integral parts of prevention.

Research Results

The research results indicate that iron deficiency anemia is the most common hematological problem among children, primarily linked to poor nutrition, rapid growth periods, internal diseases, and socio-economic factors. During home care services, it was observed that early detection significantly reduces the progression of anemia to severe stages.

Furthermore, regular monitoring by home care staff, providing parents with recommendations on consuming iron-rich foods, and promoting preventive measures were found to be effective in preventing the disease in children. The study noted a significant decrease in the level of iron deficiency anemia among children in the observation group, and during treatment, hemoglobin levels approached the normal range.

The results demonstrate that early diagnosis and timely treatment through home care services are crucial factors in preventing severe consequences of anemia, such as delayed mental and physical development, weakened immunity, and chronic fatigue syndrome.

Additionally, increasing parents' awareness about healthy nutrition and iron deficiency further enhances the effectiveness of prevention. According to the research findings, a comprehensive approach—combining home care, prevention, and effective treatment—can achieve significant positive changes in children's health.

Overall, the conducted study showed that methods of early detection and treatment of iron deficiency anemia in children within home care services play an essential role in the healthcare system and are decisive for the healthy and robust growth of future generations.

Conclusion and Recommendations

The research results showed that iron deficiency anemia is widespread among children and poses a significant risk to their physical development, intellectual potential, and future quality of life. Early detection and treatment of this disease through home care services were identified as one of the most crucial factors in preventing anemia. It was confirmed that iron deficiency is closely related not only to nutritional deficiencies but also to parents' level of awareness and failure to maintain a healthy lifestyle.

Moreover, the study highlighted important issues such as insufficient educational efforts among parents, a low proportion of iron-rich foods in children's diets, and weak attention to preventive measures. At the same time, it became clear that strengthening home care services can significantly reduce these problems.

Based on these findings, the following recommendations were developed:

Regular screening activities for early detection of iron deficiency anemia should be established by home care personnel.

Special educational programs should be developed for parents to raise awareness about the causes, consequences, and prevention methods of iron deficiency anemia.

The use of iron-rich foods in children's nutrition should be widely promoted.

Modern treatment protocols should be applied, and the qualifications of home care nurses should be improved during the treatment process.

Healthy nutrition programs should be introduced in preschool institutions and schools.

Regular monitoring of cases related to iron deficiency anemia should be conducted, and new preventive strategies should be developed based on statistical analyses.

In conclusion, this study demonstrated the vital role of home care in the early detection and treatment of iron deficiency anemia in children. Strengthening cooperation with parents, promoting a culture of healthy eating, and applying modern medical approaches can effectively address this problem. This, in turn, is of great importance for the health of future generations and the progress of society.

References

1. World Health Organization. Iron deficiency anaemia: assessment, prevention, and control. – Geneva: WHO, 2001. – 114 p.
2. Beard J.L. Iron biology in immune function, muscle metabolism and neuronal functioning // The Journal of Nutrition. – 2001. – Vol. 131, No. 2. – P. 568S–580S.
3. Stoltzfus R.J. Iron deficiency: global prevalence and consequences // Food and Nutrition Bulletin. – 2003. – Vol. 24, No. 4. – P. S99–S103.

4. Lozoff B., Beard J., Connor J., Felt B., Georgieff M., Schallert T. Long-lasting neural and behavioral effects of iron deficiency in infancy // *Nutrition Reviews*. – 2006. – Vol. 64, No. 5. – P. S34–S43.
5. Pasricha S.R., Drakesmith H., Black J., Hipgrave D., Biggs B.A. Control of iron deficiency anaemia in low- and middle-income countries // *Blood*. – 2013. – Vol. 121, No. 14. – P. 2607–2617.
6. Allen L.H., Gillespie S.R. What works? A review of the efficacy and effectiveness of nutrition interventions. – Manila: Asian Development Bank, 2001. – 123 p.
7. O‘zbekiston Respublikasi Sog‘liqni Saqlash Vazirligi. Bolalarda temir tanqisligi anemiyasini oldini olish va davolash bo‘yicha klinik protokol. – Toshkent, 2020. – 56 b.
8. UNICEF. The State of the World’s Children 2021: On My Mind – Promoting, Protecting and Caring for Children’s Mental Health. – New York: UNICEF, 2021. – 258 p.
9. Baker R.D., Greer F.R. Diagnosis and prevention of iron deficiency and iron-deficiency anaemia in infants and young children (0–3 years of age) // *Pediatrics*. – 2010. – Vol. 126, No. 5. – P. 1040–1050.
10. Yusupova N., Karimova D. Bolalarda temir tanqisligi anemiyasi: klinik ko‘rinishlari va patronaj xizmatining o‘rni // *Tibbiyot va amaliyot jurnali*. – 2022. – №3. – B. 45–52.
11. Zimmermann M.B., Hurrell R.F. Nutritional iron deficiency // *The Lancet*. – 2007. – Vol. 370, No. 9586. – P. 511–520.
12. Kassebaum N.J., et al. A systematic analysis of global anemia burden from 1990 to 2010 // *Blood*. – 2014. – Vol. 123, No. 5. – P. 615–624.
13. Bothwell T.H., Charlton R.W., Cook J.D., Finch C.A. *Iron Metabolism in Man*. – Oxford: Blackwell Scientific Publications, 1979. – 576 p.
14. Hurrell R., Egli I. Iron bioavailability and dietary reference values // *American Journal of Clinical Nutrition*. – 2010. – Vol. 91, No. 5. – P. 1461S–1467S.
15. Mebratie M.A., Alemu T.G. The role of community health workers in early detection and management of childhood anemia in low-income settings // *Journal of Public Health*. – 2021. – Vol. 43, No. 3. – P. e450–e457.