MODERN MEDICINE AND PRACTICE
https://inovatus.es/index.php/ejmmp
EUROPEAN JOURNAL OF MODERN MEDICINE AND PRACTICE
Vol. 3 No. 11 (Nov - 2023) EJMMP ISSN: 2795-921X

# CHARACTERISTICS OF CHILDREN'S ACUTE LEUKEMIA

***Hamidova Saodat Khikmatovna***
*Bukhara State Medical Institute*

**Annotation:** Leukemia in children during the first months of life is an extremely rare pathology. Hostile leukemia is detected, as a rule, soon after birth, is acute, according to literature data, children die in the first 3-4, less often 6 weeks. We watched a child who was growing up to 3.5 months, developing normally and not suffering from anything, the fatal outcome came at 5.5 months from leukemia. The child is 3.5 months old, was admitted to the Shofirkan regional hospital, the children's department with a diagnosis of Acute respiratory viral infection. Sop. Umbilical and inguinal herd.

**Key words:** Leukemia, diagnosis, lymph nodes, Liver protrudes, Diuresis.

On admission, there were complaints of fever, dry cough, restlessness, distended abdomen, refusal of the chest, edema and swelling in the navel and groin area.

From the anamnesis of life it was known that the child from the second pregnancy and childbirth, proceeding without pathology, weight at birth 3150.0 g. He shouted at once, attached to his chest in the delivery room. Breastfeeding until now. Everyone in the family is healthy. The child had not been ill with anything before. He was not registered at the dispensary.

The state on admission is of moderate severity, clear consciousness, temperature 38.6 C. The child is restless, the skin is of a normal color, subcutaneous fatty tissue is poorly developed, turgor and tissue elasticity is reduced, peripheral lymph nodes of the submandibular and axillary region are soft, subcutaneous up to 0.2 cm. The pharynx is hyperemic. Tongue moist, breathing freely through the nose, breathing hard in the lungs, no wheezing. The borders of the heart are not expanded. Heart sounds are clear, rhythmic. The abdomen is distended, there is an umbilical hernia, painful inaccessible to deep palpation. The liver protrudes from under the edge of the costal arch by 6 cm, the spleen by 8 cm. Stool up to 3-4, a day, bright yellow, with mucus and greens, poorly digested. Diuresis is sufficient.

Within 10 days, the child retained a high fever, despite the ongoing antibiotic therapy.

Laboratory examination revealed in the peripheral blood a mild decrease in hemoglobin (100 g / l) and ESR (17 mm), an increase in the number of leukocytes (62.5-1012), erythrocytes 2.7-10, color index 1.0, hematocrit-0.35, segmented-11%, stab-neutrophils-12%, eosinophils-6%, lymphocytes-71%.

In the next 10 days, a subfebrile temperature, pallor and an increase in the volume of the abdomen remained.

The child was consulted by a hematologist, transferred to the Regional Children's Multidisciplinary Medical Center, a hematology department for further examination

The child underwent infusion and antibacterial therapy, the patient's condition was ulcerated, the temperature returned to normal.

After 3 days, repeated general blood analysis revealed a sharp decrease in hemoglobin -80 g / l and erythrocytes - 2.1.10, c.p-1.1. Leukocytes 24.5, ESR - 17 mm / h, platelets-46000, myelocytes-5%, metamyelocytes-3%, segmented-15%, stab-15, eosinophils-6%, lymphocytes-42%, non-deferential blasts-10% , monocytes - 4%, anisopoikilocytosis is pronounced, normachromia.

Data of additional examination methods: Blood group: B (II), Rh factor positive (Rh +).

Total bilirubin 9.4 μmol / l, direct –avs, indirect – 9.4 μmol / l, ALT-62 u / l, AST-57-u / l. Calcium in blood serum is 1.9 mm / l.

Total protein 59 g / l, albumin 26.8 g / l, urea 5.0 mmol / l, creatinine 80.4 μmol / l.

Coagulogram: blood coagulation time according to Lee-White 2 min 35 s, prothrombin index 70.3%, fibrinogen A 1.75 g / l, recalcification time 2 min 35 s.

The child was transfused with red blood cells - 50 ml, infusion and antibacterial therapy was carried out.

Repeated blood alanisis revealed an increase in hemoglobin up to 105 g / l, after which the child was returned to the department to continue treatment.

Complaints about fever up to 38.8-39.50C, regurgitation, cough, shortness of breath, anxiety. The purpose of the diagnosis was a chest x-ray. There was a decrease in transparency in the lower sections, expansion of the roots of the lungs. Conclusion: Focal community-acquired pneumonia, acute course.

An ultrasound of the abdominal organs was performed: liver + 8 cm, contour, parenchyma is common, unilateral. The gallbladder is oval in shape, reduced, the wall is unconsolidated, undeformed, the contents are homogeneous. The pancreas is 11x6x12 mm, the contours are clear, the echo structure is homogeneous, the echo density is not changed, the spleen is + 10 mm.

In the future, the patient's condition remained serious due to intoxication syndrome, hyperthermia, diarrheal syndrome and a growing anemia (as seen from Table 1).

**Table 1. Studies of peripheral blood**

| Date | Hb, g / l | Eryth | Lake | Pal | Segm | Lymph | Mon | ESR | Throm |
|---|---|---|---|---|---|---|---|---|---|
| 12.10 | 108 | 2,9 | 11,0 | 3 | 40 | 47 | 2 | 5 | 174,0 |
| 20.10 | 80 | 2,1 | 4,0 | 2 | 41 | 53 | 2 | 18 | 140,0 |
| | Plasma cells 2, Anisocytosis +, hypochromia + | | | | | | | | |
| 26.10 | 76 | 1,8 | 17,0 | 2 | - | 58 | | 24 | 58,0 |
| | Nedif. Blasts 5% | | | | | | | | |

The child was consulted by a hematologist. Due to the inability to clarify the diagnosis without the results of bone marrow examination, bone marrow puncture from the ilium was performed. The analysis of bone marrow puncture is presented in Table 2.

**Table 2. Bone marrow studies**

| 26.10 | blasts | Promyelocytes | myelocytes | metamyelocytes | P / I | s / I | Eoz | limf | Plasmacytes | erythroblasts | pronormocytes | polychromatophile | oxophile | LEI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 35,8 | 4,0 | 3,8 | 2,6 | 4,2 | 6,4 | 5,6 | 14,0 | 0,2 | 0,2 | 0,4 | 15,8 | 1,4 | 4:1 |

Testing for TORCH infection revealed antibodies in the form of IgG to cytomegalovirus, herpes simplex virus and toxoplasma.

After the treatment, the child's temperature returned to normal, within 4 days its values were within normal limits, but unstable stool remained.

In the general blood test: hemoglobin 70 g / l, erythrocytes 2.75 .1012, leukocytes 3.7 .109,, stab 8%, segmented 16%, lymphocytes 68%, monocytes 9, ESR 15 mm / h, osmotic resistance of erythrocytes : min 0.42, max 0.26, platelets 225 thousand, reticulocytes 23%, anisocytosis ++, hypochromia ++.

Pathological changes persisted in the coprogram: green color, k / o consistency, mucus-cords, leukocytes 10-12 in p / sp, up to 20 in sisi, small amount of fat, starch, fatty acids, soap-moderate amount

-After 2 days at home, while bathing the child, the mother found multiple soft swellings with a size of 0.6-0.7 cm on the parietal region of the scalp, which forced her to consult a hematologist.

The child was again admitted to the hospital after 5 days in the direction of a hematologist with a diagnosis of Leukomoid reaction of the lymphocytic type. Anemia of the 3rd degree.

Complaints upon admission to a temperature increase of up to 39.80C, unstable stool, regurgitation, and restlessness. Within 3 days, the child had a high fever - up to 39-39.7 ° C for no reason. Shortness of breath and physical findings in the lungs were absent, but for the purpose of diagnosis, a chest x-ray was taken.

An ultrasound scan of the abdominal organs was performed: liver + 12 cm, contour, parenchyma ordinary, unilateral. The gallbladder is oval in shape, reduced, the wall is unconsolidated, undeformed, the contents are homogeneous. The pancreas is 11x6x12 mm, the contours are clear, the echo structure is homogeneous, the echo density is not changed, the spleen is + 10 mm.

Chest X-ray - Bilateral lower lobe pneumonia. The conclusion of the hematologist at the moment of osmostra: Acute leukemia, myeloblastic variant with complication - hepatosplenomegaly. Concomitant diagnosis: Community-acquired bronchopneumonia, acute course. Bilateral inguinal hernia.

The child continues to have febrile fever, his condition worsens, signs of respiratory failure have appeared, and hemoglobin has sharply decreased again. The child is admitted to the Department of Hematology in an extremely serious condition with drowning breathing, shortness of breath, signs of respiratory failure, 2-3 degrees.

A general blood test in dynamics is presented in table 3. Biochemical research: total calcium 1.96 mmol / l, total protein 53 g / l, albumin 38, g / l, urea 5.0 mmol / l, creatinine 86.6 mmol / l, coagulogram: coagulation time 4: 15-4: 30 s, prothrombin index 68%, fibrinogen A 1.66 g / l, fibrin-6 mg.

**Table 3. Studies of peripheral blood**

| Date | Hb, g / l | Eryth | Lake | Pal | Segm | Lymph | Mon | ESR | Throm |
|---|---|---|---|---|---|---|---|---|---|
| 12.11 | 84 | 2,1 | 4,0 | 3 | 37 | 55 | 5 | 16 | 134,0 |
| 22.11 | 78 | 2,1 | 16,0 | 2 | 34 | 44 | 2 | 18 | 160,0 |
| | Nedif. blasts-18%, Anisocytosis +, hypochromia + | | | | | | | | |

Clinical diagnosis:

Main: 1. Bilateral community-acquired lower lobe bronchopneumonia 2. Acute leukemia, myeloblastic variant with complication - hepatosplenomegaly. Concomitant diagnosis: Bilateral inguinal hernia. Complication: Multiple organ failure, cerebral edema, cardiovascular failure.

Pathological diagnosis: Acute myeloid leukemia. Complications of the underlying disease Bilateral focal bronchopneumonia, disseminated intravascular coagulation syndrome, hemorrhages of parenchymal organs. Swelling and swelling of the brain substance.

**Conclusions:**

1. Acute leukemia in young children is a rare pathology, little known to pediatricians and general practitioners.
2. If anemia and leukemoid reaction of the lymphocytic type are detected in a young self-induced patient, it should be consulted by a hematologist as soon as possible.
3. Intoxication and diarrheal syndrome can be an early manifestation of congenital leukemia.
4. Late diagnosis of congenital leukemia is also associated with the complexity of the differential diagnosis with pneumonia due to the similarity of the clinical picture and multiple organ lesions.
5. In doubtful cases, bone marrow examination is mandatory, it should be carried out as early as possible.

**References**

1. Сулейманов С. Ф., Худайкулова Н. И. Экологические факторы и система иммунитета //Проблемы билогии и медицины. – 2003. – №. 4. – С. 58-59.
2. Сулейманов С. Ф., Сулейманова Г. С. Значение самостоятельной работы студентов в освоении вирусологии и иммунологии в ВУЗе //Педагогика&Психология. Теория и практика. Международный научный журнал. – 2021. – Т. 2. – №. 34. – С. 10-11.
3. Suleymanov S. F. Infringement Of The Immune Status And Its Correction In Patients With Chronic Pancreatitis //European Research: Innovation In Science, Education And Technology. – 2019. – С. 80-82.
4. Fayzullayevich S. S. Application of immunotherapy in patients with the duodenal ulcer deseases //International scientific review. – 2019. – №. LVI. – С. 81-83.
5. Fayzullaevich S. S. Impaired immune homeostasis and its correction in patients with chronic cholecystitis //European science review. – 2018. – №. 1-2. – С. 139-142.
6. Nurova G. U., Nurov U. I., Boboqulova D. F. Studying and Analysis of Medical and Social Aspects of the Course of Vasomotor Rhinitis in Patients in a Comparative Aspect // Barqarorlik va yetakchi tadqiqotlar onlayn ilmiy jurnali. – 2021. – Т. 1. – №. 6. – С. 545-550.
7. Нурова Г. У. Особенности течения вазомоторного ринита у больных с нарушениями функции щитовидной железы //актуальные вопросы медицины критических состояний. – 2021. – С. 54-55.
8. Нурова Г. У., Иноятов А. Ш. Исследование транспортной функции слизистой оболочки полости носа при вазомоторном рините //Фармакология разных стран. – 2020. – С. 124-125.
9. Nurov U. I., Ikramova F. S., Alimova S. A. Functional status of immune status in inflammatory diseases of the paranasal sinuses in twin children //Academic research in educational sciences. – 2021. – Т. 2. – №. 5. – С. 238-246.
10. Nurov U. I., Ikramova F. S. Association of Allergic Rhinitis with Liver Diseases //Scholastic: Journal of Natural and Medical Education. – 2023. – Т. 2. – №. 1. – С. 131-136.
11. Nurov U. I. et al. Aspects of hiv infection and aids in otorhinolaryngology //boshqaruv va etika qoidalari onlayn ilmiy jurnali. – 2023. – Т. 3. – №. 9. – С. 11-14.
12. Akhmedova D. B., Khodjiyeva D. T. Improvement of the algoritm for the use of hirudotherapy for the prevention of chronic tension headache //American journal of medicine and medical science. – 2021. – Т. 2. – №. 11. – С. 69-70.

13. Bahodirovna A. D., Tadjiyevna H. D. Observation of vegetative disorders in patients with chronic tension headache and migraine //British medical journal. – 2021. – Т. 1. – №. 1.2.
14. Bahodirovna A. D. Frequency of observation of anxiety and depression in the diagnosis of primary headaches //Art of Medicine. International Medical Scientific Journal. – 2021. – Т. 1. – №. 2.
15. Саъдуллоева И. К., Карoматова Ф. А. Состояние кортикоидного статуса при врожденных пороках сердца у детей //журнал новый день в медицины. – 2021. – Т. 3. – С. 35.
16. Саъдуллоева И. К., Карoматова Ф. А. COVID-19 билан касалланган оналардан туғилган чақалоқларда интеферон ҳолатининг хусусиятлари //Journal of Science-Innovative Research in Uzbekistan. – 2023. – Т. 1. – №. 2. – С. 175-180.
17. Саъдуллоева И. К. Характеристика госпитализированных детей с врожденными пороками сердца по бухарской области //barqarorlik va yetakchi tadqiqotlar onlayn ilmiy jurnali. – 2022. – Т. 2. – №. 12. – С. 439-443.
18. Sadulloeva I. K. Peculiarities of the functioning of the neuro-immuno-endocreen system in congenital heart diseases in children. – 2022.
19. Саъдуллоева И. К., Карoматова Ф. А. Особенности Новорожденных Родившихся От Матерей С Covid-19 //Central Asian Journal of Medical and Natural Science. – 2021. – С. 362-366.
20. Назаров Ж. С., Рахимов Д. Влияние динамики мутаций генома МТВС на образование лекарственной устойчивости микобактериальных штаммов (литературный обзор) //Профилактическая медицина и здоровье. – 2023. – Т. 2. – №. 1. – С. 96-110.
21. Erkinovich N. J. S. Assessment of the ecological state and water quality class of water bodies in the Bukhara Region according to the periphyton indicators //Indian Journal of Environmental Protection. – 2022. – Т. 42. – №. 3. – С. 367-373.
22. Temirovich T. T. The importance of additives that cause respiratory failure in children with pinevmonia //Academicia Globe. – 2021. – Т. 2. – №. 6. – С. 219-224.
23. Temirovich T. T. Features of acute emergency in children with allergies. – 2022.
24. Temirovich T. T. Electric Systol In Acute Complicated Pneumonia Depending On Clinical Syndromes //Journal of Pharmaceutical Negative Results. – 2022. – С. 4805-4811.
25. Temirovich T. T. Assessment of immune system state of children with pneumonia //Journal of new century innovations. – 2023. – Т. 27. – №. 3. – С. 135-141.
26. Khikmatovna H. S. Drinking water quality source of life. – 2021.