REVIEW OF CLINICAL CHANGES IN ACUTE LYMPHOBLASTIC LEUKEMIA

Fazilova Sharifa Mirkhamidovna
PhD in\and associate professor of the department of "Military field therapy and hematology" Tashkent Medical Academy of Urgench branch.

Annotation.*Clinical and laboratory manifestations of ALL are of significant diagnostic value for ALL, largely determining the prognosis of the disease. Thus, the detection of molecular genetic changes in the tumor clone, as well as the comprehensive assessment of the main signaling pathways in tumor cells, not only allows understanding tumor biology, but alsoprovides new information in patients with acute leukemia requires additional scientific research to help develop diagnostic and treatment criteria*

Key words. *hemoblastosis, mutations, allows, requires, leukemia.*

In acute leukemia (AL), the normalhematopoiesis: excessive production of abnormal immature blood cells, usually progenitorsleukocytes (blast cells), which, multiplying and accumulating in the bone marrow, interfere with the production and functioning of normal blood cells, which causes the main symptoms of the disease [4,13,14]. Predisposition to the development of malignant neoplasms and tumor progression are modified by allelic variants of genes that control cell division, apoptosis and DNA excision repair [6,8,9]. Average ratio of myeloid and lymphoid variantsRL is 6:1. In adult patients over the age of 40 years, 80% of cases are myeloid, and in children 80-90% are lymphoid forms of acute leukemia [5,15].

Acute leukemia is characterized by a variety of clinical and laboratory manifestations, the severity of which determines the severity of the patient's condition [7]. Based on research, it is possible not only to determine laboratory markers of the disease, but also to identify predictors of an unfavorable prognosis of OL [1,2,3]. Despite the successes of recent decades, the overall mortality rate from AL remains quite high [11,13].

At the same time, patients with different types of program therapy experience relapses of the disease [10]. The study of the mechanisms of development, progression of acute leukemia, as well as the search for early diagnostic and targeted therapeutic approaches is a priority direction of modern oncohematology [12].

Purpose of the study. To analyze the frequency of clinical and laboratory manifestations in patients with acute lymphoblastic leukemia.

Material and methods:The study included 100 patients who applied to the advisory clinic of the Republican Specialized Scientific and Practical Medical Center of Hematology (RSNPMCG, Tashkent), where, taking into account international recommendations, the diagnosis of ALL was clinically and laboratory 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 determined on a hematology 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), indicatorESR was determined using the Panchenkov apparatus (Russia).

Statistical analysis of the results was carried out using the statistical software package “Microsoft Office Excel” and “Biostatistics 4.03”.

Results.During a clinical examination, it was revealed that in 75% (75) of patients the disease began spontaneously, for no apparent reason, while in 25% (25) the onset of the disease was preceded by various viral infections.

During the clinical examination, a number of clinical manifestations characteristic of the disease associated with impaired hematopoiesis were identified. In particular, due to the development of anemic and intoxication syndrome in patients in 100% (100) cases, rapid fatigue, shortness of breath at the slightest physical exertion, severe general weakness, pallor of the skin, malaise, tachycardia and an increase in body temperature to 38-390C are observed.

At the same time, in (67%/67) patients, the onset of the disease was associated with the appearance of hemorrhagic syndrome in the form of nosebleeds (34%/34), hemorrhages in the visible mucous membranes of the eyes and oral cavity (17%/17) and the appearance of ecchymosis and hemorrhagic rash on the skin of the body and extremities (67% 67), hematuria and gastrointestinal bleeding in (11/11%) patients. The combination of these clinical manifestations prompted patients to consult a doctor.

A set of laboratory studies carried out in patients with ALL allowed us to identify significant changes in laboratory parameters. Thus, in peripheral blood the hemoglobin level compared to the control significantly decreased by 2.7($P<0.05$) times, the number of erythrocytes decreased by 2.33 times ($P<0.05$). The average number of leukocytes increased 3.8 times, while the median blast cells reached 47.2±2.8%.

In terms of hematological parameters, the myelogram showed an increase in the number of blast cells to an average of 58.9±3.7%. At the same time, cytochemical studyperformed by light microscopy, staining for phospholipids with Sudan black, staining for myeloperoxidase, nonspecific esterase, reaction to glycogen (PAS reaction), and acid phosphataseshowed the presence of blast cells.

Conclusion.Clinical and laboratory manifestations of ALL are of significant diagnostic value for ALL, largely determining the prognosis of the disease.

REFERENCES:

1. Abdullaev R.B., Khalmatova N.M., Matkarimova D.S. Some features of the pathogenetic course of immune microthrombovasculitis and thrombocytopathy in pre-conscripts living in the Southern Aral Sea region // Journal "Bulletin of the Association of Doctors of Uzbekistan". Tashkent. – 2011. – No. 1. – pp. 17-20.

2. Abdullaev R.B. et al. The Aral crisis: problems of environmental culture and health // Monograph. Urgench. – 2012. – T. 120.

3. Abdurakhmanova D.N., Matrizaeva G.D., Matkarimova D.S. Chronic pyelonephritis as a risk factor for preeclampsia in women living in the Aral Sea region //The Ninth European Conference on Biology and Medical Sciences. – 2016. – P. 3-6.

4. Karimov HY, Matkarimova DS, Boboev KT Allelic polymorphism of the il-1β (rs1143627) gene in patients with immune thrombocytopenia. – 2021.

5. Matkarimova D. S., Matirzaeva G. D., Razzakberganova G. O. REGIONAL FEATURES OF SOME HEMORRHAGIC DIATHESES //The First International conference on development of education and psychological science in Eurasia. – 2015. – pp. 16-19.

6. Usenova A.A."Epidemiological and molecular genetic features of acute leukemia in children in Kyrgyzstan"https://vak.kg/wp-content/uploads/2023/05/Doktorskaya-dissertaciya-okonchatelnyj-variant-02.04.23.docx

7. Fazilova Sh. M., Khusainov A. Sh., Karimov F. M. Breast cancer and the causes of its occurrence // Current scientific research in the modern world. – 2017. – No. 4-6. – pp. 134-136.

8. Shukurlaev K. Sh., Kurbaniyazova R. K., Fazilova Sh. M. Side effects of non-steroidal anti-inflammatory drugs. Ilm sarchashmala-Ri //Ilm sarchashmala-Ri. – 2015. – No. 7. – P. 12.

9. Berry DA, Zhou S, Higley H, et al: Aassociation of minimal residual disease with clinical outcome in pediatric and adult acute lymphoblastic leukemia: A meta-analysis. JAMA Oncol 3(7): e170580, 2017. doi:10.1001/jamaoncol.2017.0580

10. A. Hellström, D. Ley, I. Hansen-Pupp, B. Hallberg, 2018

11. F.D. Groves, B.T.Watkins, D.J.Roberts, T.C.Tucker, T. Shen, T.J.Flood, 2019.

12. Zulayho E., Mirkhamidovna FS CLINICAL AND LABORATORY ASPECTS IN MULTIPLE MYELOMA (LITERATURE REVIEW) //O'ZBEKISTONDA FANLARARO INNOVATSIYALAR VA ILMIY TADQIQOTLAR JURNALI. – 2023. – T. 2. – No. 20. – pp. 203-206.

13. Ilkhamovna KG, Mirkhamidovna FS FEATURES OF THE STATE OF THE LIVER IN ACUTE LEUKEMIA.(LITERATURE REVIEW) //PEDAGOG. – 2023. – T. 6. – No. 6. – pp. 285-290.

14. Mirkhamidovna FS, Soburovna MD THE RANGE OF FUNCTIONAL MUTATIONS AND THEIR CONTRIBUTION TO THE FORMATION OF BLAST CELLS AND THE DEVELOPMENT OF LEUKEMIA (LITERATURE REVIEW) //Finland International Scientific Journal of Education, Social Science & Humanities. – 2023. – T. 11. – No. 6. – pp. 450-458.