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Resume

Purpose. To analyze the clinical manifestations in patients with acute leukemia.

Methods. The study was conducted with the participation of 102 patients with acute leukemia who sought medical care at the Republican Specialized Scientific and Practical Medical Center of Hematology (RSSPMCH).

Conclusions. The frequency of major clinical syndromes varied depending on the type of acute leukemia. Specifically, in patients with AML, the hyperplastic syndrome was recorded in one case (3.1%) as hepatomegaly, while in ALL, this syndrome was observed in 54.3% of cases.

Keywords: Acute leukemia, anemic syndrome, intoxication syndrome, hemorrhagic syndrome, hyperplastic syndrome, frequency.

Conclusion

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Conclusions. The frequency of major clinical syndromes varied depending on the type of acute leukemia. Specifically, in patients with AML, the hyperplastic syndrome was recorded in one case (3.1%) as hepatomegaly, while in ALL, this syndrome was observed in 54.3% of cases.

Keywords: Acute leukemia, anemic syndrome, intoxication syndrome, hemorrhagic syndrome, hyperplastic syndrome, frequency.

Summary

Objective. To analyze clinical manifestations in patients with acute leukemia.

Methods. The study was conducted with the participation of 102 patients with AL who sought medical help at the Republican specialized scientific - practical medical center of Hematology (RSSPMCH).

Conclusions. The incidence of major clinical syndromes varied depending on the variant of acute leukemia. In particular, in patients with AML,

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hyperplastic syndrome was registered in one case (3.1%) in the form of hepatomegaly, and in ALL, this syndrome was detected in 54.3%.

Key words: Acute leukemia, anemia syndrome, intoxication syndrome, hemorrhagic syndrome, hyperplastic syndrome, frequency.

Introduction. Leukemia is characterized by the infiltration of hematopoietic organs (bone marrow, blood, spleen, and other tissues) by abnormally differentiated and non-functional hematopoietic blasts. The high and uncontrolled proliferation of leukemic cells leads to the expulsion of the normal hematopoietic system and the loss of its functions, resulting in life-threatening symptoms such as thrombocytopenia, anemia, and immunodeficiency [1,2,6,10]. According to the 2020 GLOBOCAN report, leukemia accounted for 2.5% of new cancer cases worldwide, and 3.1% of cancer-related deaths were caused by this fatal disease [3,9].

The diagnosis of acute leukemia is usually suspected for the first time when a patient presents symptom such as fatigue or weakness due to low hemoglobin, bleeding or bruising due to thrombocytopenia, or fever caused by infection associated with neutropenia [2,4,8].

Thus, the clinical picture is often the starting point for studying acute leukemia and provides information that may be necessary for early diagnosis and prognosis [5,7].

Purpose. To analyze the clinical manifestations in patients with acute leukemia.

Materials and Methods. This is a prospective study involving 102 adult patients (Group 1) aged 18 to 74 years, diagnosed with acute leukemia between 2019 and 2023. Depending on the type of acute leukemia, Group 1 was divided into two subgroups: 1a (n=70) – patients with acute lymphoblastic leukemia (ALL), and 1b (n=32) – patients with acute myeloblastic leukemia (AML). The patients were examined at the Republican Specialized Scientific and Practical Medical Center of Hematology (Tashkent), where the diagnosis was verified according to international guidelines.

Results. At the stage of clinical examination of patients with acute leukemia in the main group, during the analysis of anamnesis data, it was found that the median duration of the deterioration of the general condition before the initial medical consultation was 2.3±0.3 months. Often, the first signs of the disease were the development of acute inflammatory conditions in the form of respiratory pathologies (34.3%/35), accompanied by fever, increasing general weakness and lethargy, decreased work capacity and physical activity, body aches, bone pain, abdominal pain, and the presence of enlarged axillary and inguinal lymph nodes. Over time, all patients (92.2%/94) also complained of dizziness and darkening of vision with sudden movements, as well as paleness of the skin. Additionally, some patients (57.8%/59) reported bruising, nosebleeds, gum bleeding, and uterine bleeding.

Thus, the above complaints served as specific clinical manifestations characteristic of the anemic (92.2%/94), hemorrhagic (57.8%/59), infectious (34.3%/35), intoxication (96.1%/98), and hyperplastic (38.2%/39) syndromes in acute leukemia, which varied in frequency depending on the type of the disease.

Upon admission, signs of anemic syndrome were identified in 92.2% (94) of the patients with acute leukemia, manifesting as pallor (92.2%/94), general weakness (92.2%/94), increased fatigue (92.2%/94), dizziness (46.1%/47), and darkening of vision (37.2%/38). Additionally, symptoms such as shortness of breath with physical activity were observed in 48.0% (49) of patients, increased heart rate at rest in 29.4% (30), and heart rhythm disturbances in 15.7% (16) of patients in the main group. When comparing the frequency of anemic syndrome symptoms in ALL and AML, no significant differences were found.

Hemorrhagic syndrome was observed in 57.8% (59) of patients in the main group with acute leukemia, manifesting as subcutaneous hemorrhages in 21.6% (22) of patients, hemorrhages in the sclera and oral cavity in 4.9% (5), nosebleeds in 18.6% (19), gum bleeding in 6.9% (7), and uterine bleeding in 5.9% (6). Meanwhile, the frequency and severity of the hemorrhagic syndrome were more pronounced in the group of patients with AML.

Infectious syndrome was observed in 34.3% (35) of patients in the main group with acute leukemia and was characterized by the presence of purulent-necrotic tonsillitis (23.5%/24), bronchitis (7.8%/8), and pneumonia (3.0%/3). While the differences in the frequency of these conditions between the ALL and AML groups were not significant, they were of greater intensity among patients with AML.

Intoxication syndrome was diagnosed in a larger proportion of patients with acute leukemia, totaling 96.1% (98), and was characterized by elevated body temperature (fever) (96.1%/98), lethargy (96.1%/98), body aches (66.7%/68), and headaches (32.4%/33), with the intensity of these symptoms being more pronounced in patients with AML.

Thus, the clinical manifestations of acute leukemia were characterized by a combination of symptoms in the form of anemic, hemorrhagic, infectious, intoxication, and hyperplastic syndromes. Among most patients with acute leukemia, upon presentation, anemic and febrile conditions were observed, accompanied by hemorrhagic and infectious complications. At the same time, hyperplastic syndrome was present only in patients with ALL, except for 3.1% (1) of cases with AML, where it manifested as hepatomegaly.

Conclusion. Thus, the clinical manifestations of acute leukemia were characterized by a combination of symptoms, including anemic, hemorrhagic, infectious, intoxication, and hyperplastic syndromes. In most patients with acute leukemia, at the time of presentation, anemic and febrile conditions were observed, accompanied by hemorrhagic and infectious complications. At the same time, hyperplastic syndrome was present only in patients with ALL, with the exception of 3.1% (1) of cases with AML, where it manifested as hepatomegaly.

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