

IDENTIFICATION OF ANEMIA SYNDROME IN URBAN AND RURAL LEUKEMIA PATIENTS IN DYNAMICS FOR 2019-2023***Suleymanova D.N.,******Ulugova Sh.T.****Doctor of Medical Sciences, Professor**Republican Specialized Scientific Research Medical Center of Hematology*

Abstract: Iron deficiency anemia (IDA) is often associated with various chronic diseases, including oncological and oncohematological diseases (leukemia, multiple myeloma, myelodysplastic syndrome, etc.) (1,4,5). According to the World Health Organization (WHO), about 1.62 billion people on the planet suffer from various pathogenetic variants of anemia. IDA accounts for 80% of all forms of anemia in adults [2,3]. The pathogenesis of anemia in chronic diseases (ACD) is associated with iron metabolism, which changes due to an increase in the level of hepcidin, which inhibits the absorption and recirculation of iron. As a result, iron absorption in the duodenum and small intestine decreases, iron recirculation is impaired [8]. The development of anemic syndrome and iron metabolism in patients with hemoblastoses, and in particular leukemia, have been insufficiently studied and have conflicting opinions (2,3).

Keywords: Anemic syndrome, hematology, oncological, iron, leukemia, metabolism.

Introduction. Retrospective studies covered 505 case histories from the archive of the clinic of the Republican Specialized Scientific Research Center of Hematology. Of these, 280 are men, 225 are women. The age of patients is 18-81 years. 240 are urban residents, 265 are rural. Analyzes from venous blood of patients were performed on a modern hematology analyzer mindray Bc-5600. Hospitalization of patients with leukemia in the hematology department for 2019-2023 showed that during the years of the Covid-19 epidemic (2020-2021), the number of patients was significantly higher than before and after the Covid-19 epidemic. Anemic syndrome is detected in 86-100% of patients with leukemia, in the dynamics for 2019-2023, no reliable differences in the indicators of anemic syndrome were found. Among urban patients, the detection rate of mild anemia was significantly higher than in rural patients 46.81% and 34.52%, respectively, and the detection rate of moderate anemia was significantly higher in rural patients - 43.25%, compared to urban patients - 31.06%. In the Republic of Uzbekistan, the dynamics of treated patients with leukemia and anemic syndrome for 2019-2023 have not been studied. Pathogenetic approaches to the diagnosis and treatment of anemic syndrome in patients with leukemia have also not been studied. These studies will identify the dynamics of treated patients with leukemia in recent years and evaluate existing approaches in hematological practice to the diagnosis and treatment of anemic syndrome in patients with leukemia

Materials and methods. Retrospective studies covered 505 case histories of treated patients with leukemia for the period 2019-2023 in the clinic of the RSSPMCG. Of these, 280 were men, 225 were women. The age of patients was 18-81 years. 240 were urban residents, 265 were rural. Analyses from venous blood of patients were carried out on a modern hematology analyzer mindray Bc-5600.

Results and discussion

The study of the dynamics of anemic syndrome in patients with leukemia hospitalized in the clinic of the RSSPMCG in 2019-2023 is presented below. A comparative assessment of the indicators of rural and urban residents was carried out.

Table 1

Rates of hospitalization of patients with leukemia in the hematology clinic

RSNPMCG for 2019-2023

№	year	Rural		City		Total	
		Abc	%	Abc	%	Abc	%
1	2019	49	18,71	47	19,34	96	19,00
2	2020	63	24,06	59	24,28	122	24,16
3	2021	53	20,23	60	24,69	113	22,38
4	2022	39	14,86	29	11,94	68	13,47
5	2023	58	22,14	48	19,75	106	20,99
	Total	262	100,00	243	100,00	505	100,00

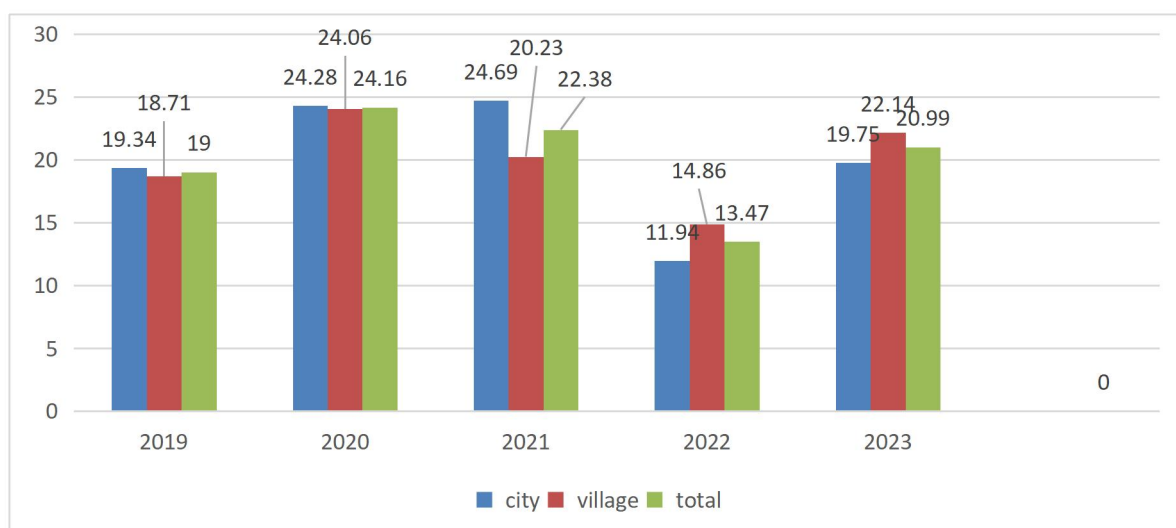
In 2019-2023, only 505 patients with leukemia were admitted to the clinic, of which 51.89% were rural residents, 48.11% were urban, no significant difference was found between the indicators. A study of the indicators in dynamics over 5 years also did not reveal a reliable difference, therefore, the number of patients with leukemia admitted to the clinic, both urban and rural, did not differ significantly. However, a study of the dynamics of admission of patients with leukemia to the clinic over 5 years indicates that the largest number of patients were admitted in 2020-2021 - 22.38% and 24.16%, which coincides with the years of the Covid-19 epidemic. The smallest number of patients was noted in 2023 - 13.47%, the difference is reliable. In 2024, the number of patients increased again to 20.99%, which corresponds to the number of patients in 2019, i.e. before the epidemic.

Therefore, the Covid-19 epidemic contributed to the increase in the number of patients with leukemia in both rural and urban environments.

Diagram 1

Rates of hospitalization of patients with leukemia in the hematology clinic

RSNPMCG for 2019-2023



It is possible that this was facilitated by a decrease in the immunity of patients due to a viral infection, perhaps there are other reasons for the increase in the incidence of leukemia during the years of the Covid-19 epidemic, this issue requires further comprehensive study.

A study of the detection of anemic syndrome among patients with leukemia showed that among urban patients, anemic syndrome was detected in 99.57%, in rural patients 96.18, the difference is insignificant. The dynamics of anemia indicators for 2019 - 2023 did not reveal a significant difference between urban and rural patients.

Among urban patients, the detection of mild anemia was significantly higher than in rural patients 46.81% and 34.52%, respectively. Moderate to severe anemia was more often detected in rural patients - 43.25%, compared to urban - 31.06%, the difference is significant. The rates of severe anemia did not differ significantly and amounted to 21.70% in urban patients and 22.22% in rural patients.

Thus, although the rates of anemic syndrome detection in urban and rural patients did not differ significantly, mild anemia rates significantly prevailed among urban patients, while moderate anemia rates significantly prevailed among rural patients.

Slow development of leukemia and mild anemia contribute to the appearance of minor clinical manifestations, or they may be absent. In patients with leukemia, in most cases, the symptoms of the underlying disease prevail over anemia, but sometimes anemic syndrome may be its first manifestation. In patients with anemia, leukemia patients experience symptoms such as fatigue, weakness, pale skin, palpitations, shortness of breath, and decreased tolerance to physical activity. However, these same symptoms are also characteristic of leukemia, so many patients with leukemia receive antianemic treatment at the initial stages of the disease, sometimes this period lasts for several months. In most cases, after unsuccessful treatment of anemia, and the appearance of such specific symptoms of leukemia as - enlargement of peripheral lymph nodes, liver, spleen, development of hemorrhagic syndrome, fever, patients are referred to a hematologist, most patients are admitted to the clinic with late diagnosis, and about 20% in the terminal stage. It should also be emphasized that patients with leukemia may have other factors that lead to anemic syndrome: iron deficiency, folic acid deficiency or vitamin B12 (1,2,3,4). Why is it important to promptly identify and treat anemic syndrome in patients with leukemia? Anemia worsens the results of chemotherapy and radiation therapy, which have a negative effect on the bone marrow. Anemia reduces immunity and worsens the prognosis of the outcome of leukemia. According to the literature, the prevalence of anemia in patients with hemoblastoses varies from 22% to 90%; in some diseases, in particular, in myelodysplastic syndrome, anemia may be the only manifestation of the disease [6,7].

CONCLUSIONS

1. Hospitalization of patients with leukemia in the hematology department for 2019-2023 showed that during the years of the Covid-19 epidemic (2020-2021), the number of patients was significantly higher than before and after the epidemic.
2. Anemic syndrome is detected in 86-100% of patients with leukemia, in the dynamics for 2019-2023, no significant differences in the indicators were found.
3. Among urban patients, the detection of mild anemia was significantly higher than in rural patients 46.81% and 34.52%, respectively, and the detection of moderate anemia was significantly higher in rural patients - 43.25%, compared to urban - 31.06%.

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