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Morphological Characteristics of Hodgkin's Lymphomas in Special Regions

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Abstract This article provides a retrospective analysis of case histories and outpatient cards of patients living in the Khorezm region who were diagnosed with Hodgkin's lymphoma and who were treated at the Khorezm branch of the Republican Specialized Scientific and Practical Center of Oncology and Radiology during 2019-2023. The results of the analysis were studied, pathomorphological changes that occur in the lymph nodes of patients diagnosed with Hodgkin's lymphoma, and histological and immunohistochemical changes in microscopic forms of Hodgkin's lymphoma were described.

Keywords Hodgkin's lymphoma, Microscopic changes, Pathomorphological characteristics of Hodgkin's lymphoma, Histological forms of Hodgkin's lymphoma, The importance of immunohistochemical studies in the diagnosis of Hodgkin's lymphoma

1. Introduction

Hodgkin lymphoma is a relatively rare tumor, accounting for 30% of all lymphomas (Stein X et al(2001), Metzger ML, Mauz-Körholz C (2019)). The authors note that the incidence of Hodgkin's lymphoma has been increasing in recent decades, in different age populations and among women in Asian countries.

To this day, the exact cause of this disease remains unknown, but may be related to the increasing prevalence of lifestyle and metabolic risk factors. The death rate from Hodgkin lymphoma is decreasing due to advances in early diagnosis and treatment of this cancer. The increased incidence of Hodgkin's lymphoma in women, among different age populations, and in Asian countries may be due to increasing trends in obesity and metabolic diseases. For example, it has been found that the prevalence of the disease is 9.4-27.2% among women and men, and one of the main causes of overweight (obesity) has increased from 30% in 1980 to 38% in 2013. Between 1985 and 2014, obesity was 16.3-33.9% among 15-40-year-olds, and 43.6-57.9% among the elderly. The proportion of obese women in Asian countries has increased faster than the global average, and the associated medical and social problems emphasize the importance of studying the various aspects of the disease, including its morphological features, especially in the context of regional characteristics.

In the modern literature, there is information confirming that Hodgkin's lymphoma has a polyetiological nature and that it is largely dependent on geographic factors.

From this point of view, there is an interest in studying Hodgkin's lymphomas regionally.

The purpose of scientific work. To study the pathomorphological characteristics, cytological and pathogistological forms of lymphomas, operations performed on patients and their importance in diagnosis among patients with Hodgkin's lymphoma living in Khorezm region.

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2. Material and Methods

During the years 2019-2023, the medical histories and patient cards of 80 patients with Hodgkin's lymphoma were treated retrospectively, histological and immunohistochemical examinations were conducted, and the results of the operations performed on the patients were studied at the Khorezm Branch of the Republican Specialized Scientific and Practical Medical Center of Oncology and Radiology.

Discussion of the results obtained during the study. Research results of 80 patients who were diagnosed with Hodgkin's lymphoma and received treatment at the dispensary during 2019-2023 at Khorezm Branch of the Republican Scientific and Practical Center of Oncology were analyzed. The classic variant of the disease was detected in 31 (38.75) patients, of which 16 (20.0%) were in the neck lymph nodes, 2 (2.5%) were in the lymph nodes around the mesentery, 8 (10.0%) were in the axilla. lymph nodes and in 5 (6.25%) cases, the lymph nodes were identified in the lymph nodes; The variant of nodular sclerosis was detected in 26 (32.50%) patients, of which 14 (17.5%) were neck, 1 (1.25%) intestinal retention, 9 (11.25%) axilla, 2 (2.5 %) pelvic lymph, the lymph nodes

were found in the lymph nodes; In the mixed variant, a total of 14 (17.50%) patients were identified, of which 7 (8.75%) were identified in the neck, 1(1.25%) in the mesentery, 5(6.25%) in the axillary lymph node, and 1(1.25%) in the pelvic lymph node.; Low variant of lymphoid cells was detected in 9(11.25%) patients, and it was observed in 4(5.0%) patients. It was found in 3 (3.75%) patients in axillary lymph nodes and in 10 (12.50%) patients in the pelvic lymph node. The results obtained during the scientific research are reflected in Table 1.

Table 1. The incidence rate of histological forms of Hodgkin's lymphoma.

Histological variants	General		Neck		Intestinal mesentery		Axillary lymph node		Pelvic lymph node	
	abs	%	abs	%	abs	%	abs	%	abs	%
Classic	31	38,75%	16	20.0%	2	2.5%	8	10.0%	5	6,25%
Nodular sclerosis	26	32,50%	14	17.5%	1	1.25%	9	11,25%	2	2.5%
Mix	14	17,50%	7	8.75%	1	1.25%	5	6.25%	1	1.25%
Lymphoid cells are few	9	11,25%	4	5.0%	0	%	3	3.75%	2	2.5%
Total	80	100	41	51,25%	4	5,00%	25	31,25%	10	12,50%

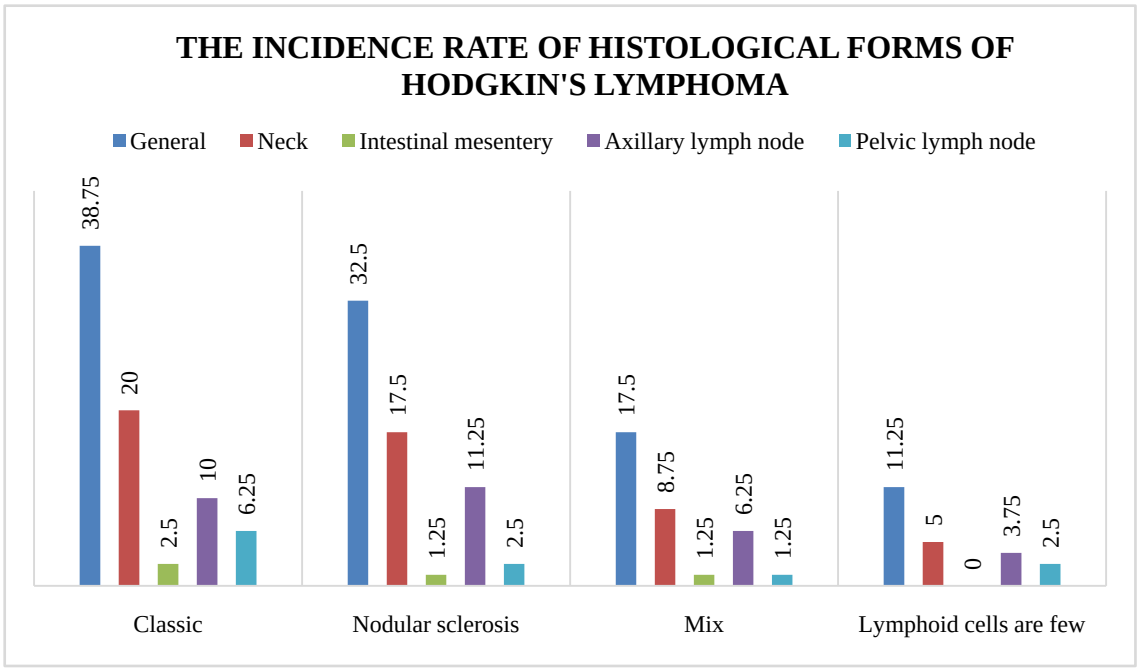

Figure 1

The histological diagnosis of lymphogranulomatosis (Hodgkin's lymphoma) includes two indispensable components: 1) the diagnosis of Berezovsky-Sternberg-Reed tumors and 2) the diagnosis of tumors The definition of Hodgkin's lymphoma, which constitutes one of the histological variants, was developed. The results of the obtained studies show that CD3, CD15, CD20 and CD30 sensitivity was detected in 36.2% of cases with a predominance of lymphoid cells in Hodgkin's lymphoma, in 28.4% of cases with nodular type, + CD45 chain, in 21.8% of other cases, CD57 sockets CD23 sensitivity was detected.

In classical Hodgkin's lymphoma, more than 90% of tests using immunohistochemical markers were found to be positive. In Hodgkin's lymphoma of the classic variant, lymphohistiocytic cells and mononuclear forms with a large number of lymphocytes were detected when examined with the CD15 marker. Expression of the CD30 marker in the cell membrane and perinuclear zone of the cytoplasm was detected in almost all (90%) of 17 patients, and expression of the CD15 marker in 75% of cases. Expression with the CD20 marker was observed in about 40% of cases.

Out of 80 patients who were treated and monitored by the dispensary during 2019-2023, immunohistochemical tests were performed on only 17 of them, and as a result of these immunohistochemical tests, the most common type of Hodgkin's lymphoma was the mixed cell type, which was observed in 6 cases and accounted for 7.5%. Lymphogistiocytic (classical) type was identified in 4 cases and accounted for 5.0%, Nodular sclerosis type was identified in 4 cases and accounted for 5.0%. The type of meeting with a decrease in lymphocytes was observed in 3 patients and was 3.75%, it can be seen that among the diagnostic methods used in the diagnosis of Hodgkin's lymphoma, the importance of histological and immunohistochemical methods prevailed due to their high accuracy.

Table 2

Histological types	Number	Percentage
Mixed cell type	6	7.5%
Nodular sclerosis	4	5.0%
Lyphohistiocyte (classic)	4	5.0%
Transient with depletion of lymphocytes	3	3.75%

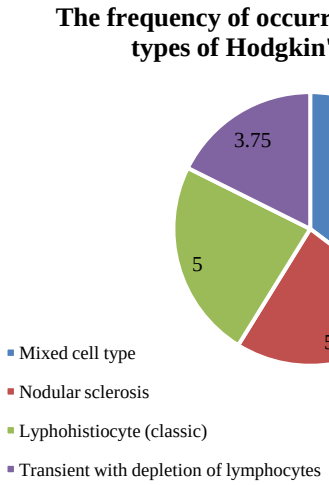

Figure 2

An analysis of operations performed on patients with Hodgkin's lymphoma found that the majority of these operations were biopsy procedures performed to make a definitive diagnosis. Among the performed operations, the left neck lymph node took the first place and made up 19 (23.75%) people. Operations on the right neck lymph node were in the next place, observed in 8 cases and accounted for 10%. Operations performed on the cervical, submandibular and supraspinal lymph nodes were observed in 4 cases, each of which accounted for 5.0%.

In the next places, thoracic lymph nodes and axillary lymph nodes are located, 2 cases of which were 2.5%.

Splenoectomy was also performed in 4 patients, accounting for 5.0%. In turn, Hodgkin's lymphoma can cause the spleen to function more than normal and cause hemolytic anemia or immune thrombocytopenia.

Table 3

Transactions carried out	Number	Percentage
Left neck lymph node	19	41.9%
Right neck lymph node	8	17.1%
Submandibular lymph node	4	8.5%
Spinal lymph node	4	8.5%
Thoracic lymph node	2	4.5%
Axillary lymph node	2	4.5%
Cervical lymph node	4	8.5%
Splenectomy	3	6.5%
Total	45	100%

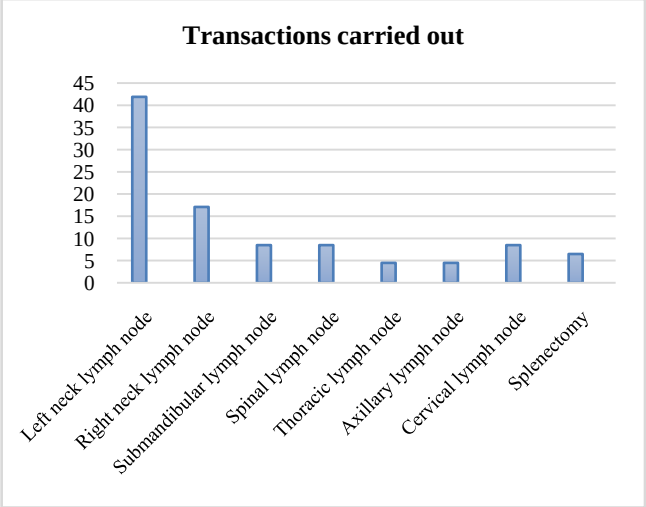

Figure 3

3. Conclusions

It can be said that the classic type of Hodgkin's lymphoma is observed more often than other types, and the first place of localization is the neck lymph nodes. It can be seen that the first closest lymph node can be damaged due to the decrease in immunity after acute viral diseases, pharyngitis, laryngitis.

It should also be noted that in the diagnosis of patients with Hodgkin's lymphoma, cytology prevails over laboratory examination due to the high importance of histological and immunohistochemical examination methods.

REFERENCES

[1] Abbasbeyli F. M. et al. Clinical capabilities of flow cytometry in Hodgkin's lymphoma // Oncohematology. - 2023. - Vol. 18. - No. 3. - P. 70-77.

[2] Baram D. V., Krivolapov Yu. A. Causes of lymphadenopathies in patients with HIV infection according to the results of lymph node biopsies // Bulletin of hematology. - 2022. - Vol. 18. - No. 2. - P. 38-39.

[3] Bakytkyzy D. A. et al. Features of the course of Hodgkin's lymphoma in children of different ages // Colloquium-journal. - Golopristanskyi regional employment center, 2020. - No. 10 (62). – P. 87-89.

[4] Gilmullina A. Z., Peretochkina P. A. Clinical, morphological and molecular-genetic features of Hodgkin's lymphoma in the Republic of Tatarstan for the period 2018-2021 // Bulletin of the Reaviz Medical Institute: rehabilitation, doctor and health. – 2023. – Vol. 13. – No. 2S. – P. 108-108.

[5] Gilmullina A. Z., Peretochkina P. A. Morphology, pathology, clinical and laboratory diagnostics // Bulletin. – 2023. – P. 107.

[6] Demina E. A. et al. Hodgkin's lymphoma // Modern oncology. – 2020. – Vol. 22. – No. 2. – P. 6-33.

[7] Demina E. A., Tumyan G. S., Chekan A. A., Kichigina M. Yu., Antipova A. S., Probatova N. A., Pavlovskaya A. I., Kokosadze N. E., Kovrigina A. M., Trofimova O. P., Osmanov E. A. Rare disease - Nodular Hodgkin's lymphoma with lymphocyte predominance: a literature review and our own observations // Clinical oncohematology. 2014. No. 4.

[8] Ermakov N. B. et al. Hodgkin's lymphoma in the Republic of Belarus. Treatment results for patients diagnosed in 2010-2015, according to the Belarusian Cancer Registry // Medical news. - 2020. - No. 6 (309). – P. 52-56.

[9] Kamolova F. Sh. et al. Epidemiological and clinical features of lymphoproliferative diseases affecting the head and neck organs // Oncohematology. – 2021. – Vol. 16. – No. 3. – P. 105-117.

[10] Katsuba K. E. et al. Diagnostic potential of CD30 (+)-plasma nanovesicles in Hodgkin's lymphoma // Oncohematology. – 2023. – Vol. 18. – No. 4. – P. 145-155.

[11] Kitaeva Yu. S., Praskurnichy E. A. Algorithm for assessing risk factors for bone mineral density disorders during pathogenetic therapy for Hodgkin's lymphoma // Siberian Medical Review. – 2023. – No. 1 (139). – P. 31-36.

[12] Kovalskaya V. Yu. et al. Experience in treating Hodgkin's lymphoma associated with HIV // Russian Journal of Personalized Medicine. – 2023. – Vol. 3. – No. 5. – P. 60-73.

[13] Kovrigin A. M. Comparative pathomorphological characteristics of changes in the lymph nodes in Kikuchi-Fujimoto disease and autoimmune diseases associated with lymphadenopathy (own data) // Clinical oncohematology. Fundamental research and clinical practice. – 2021. – Vol. 14. – No. 1. – P. 80-90.