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Presentation Feature of Lymphoma in the Kirkuk City

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Abstract

Lymphoma is one of the commonest cancer in the Iraq. While the incidence is only 3 % in the western world, in the middle ease almost 10 % of all cancer are lymphoid. Because of the advanced medicine in the developed world, most of the cases are diagnosed at early stages of the disease. In the underdeveloped and even developing world the situation seems to be different. The true object of this study was to screen our lymphoma patients at presentation to see the stage and pattern of their disease. This is simple descriptive study; performed from July 2018 to June 2019 that reviewed retrospectively in Kirkuk hematology oncology Cancer in Kirkuk city. The total number collected were 126 patients, the information were taken from records of the file system assigned for each patient in Kirkuk hematology oncology Cancer, Cases newly diagnosed with lymphoma, both sexes over ten years old were eligible to participate in this study. Stages of lymphoma are based on time of presentation and staged according to the Ann Arbor system, takes both types Hodgkin and Non Hodgkin Lymphoma with their subtypes and presence or absence of B symptoms. Lymphoma simply means cancer of lymph nodes and the lymphatic tissues in the body and most commonly occurring hematological malignancies which are comparable with other countries and consider as highly curable cancer in our patients. The frequency of Non Hodgkin lymphoma which is higher than Hodgkin lymphoma. Nodular sclerosis was the commonest histopathologicl subtypes in Hodgkin lymphoma, while in Non Hodgkin lymphoma diffuse large B cell was common. In Hodgkin lymphoma we found that peak age group of presentation was younger than Non Hodgkin lymphoma, male predominance in NHL & female predominance in HL and absence of B symptom are more common in our study.

Keyword: Lymphoma; Hodgkin; Non Hodgkin; Chemotherapy; Ann Arbor staging system

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Introduction

Lymphoma is a type of malignancy that originates in the lymphocytes of the immune system. They frequently originate in lymph nodes, presenting as enlargement in lymph node, subdivision of lymphoma is into Hodgkin lymphoma & Non Hodgkin lymphoma & this based on presence of Reed- sterng cells in Hodgkin lymphoma. [1] Hodgkin lymphoma accounts for about 1% of new cancer annually in the USA, or 7000 cases per year. [2] Hodgkin lymphoma has two age group of distribution in developed countries, with the first peak at third decade of life and the second peak at after age of 50 years. [(3, 4)] HL in the elderly had a poorer prognosis than younger age patients. [5] . **World Health Organization Classification Classification of Hodgkin Lymphoma**. [6]

1.Nodular lymphocyte predominant. (NLP)

2. Classical Hodgkin Lymphoma : Nodular sclerosis (NS), Mixed cellularity (MC), Lymphocyte rich(LR), Lymphocyte depleted(LD). [6]

Non-Hodgkin lymphoma is more likely to occur in older people with male predominant, and increase with age. [5] World Health Organization Classification for Non Hodgkin Lymphoma in two main groups : B-cell

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lymphoma and their sub-groped which are origin from B-lymphocyte cells and their precursor. [5] T-cell lymphoma and their sub-groped which are origin from T-lymphocyte cells and their precursor. [5]

Staging :

The "staging" for both NHL and HL are depend on Ann Arbor staging system:

Stage I (early disease)

Stage II (locally advanced disease)

Stage III (advanced disease)

Stage IV (widespread or disseminated disease) [(7),(8)]

Both HL and NHL are extra classified with letters An "A" or "B" term indicates whether that person had symptoms such as drenching night sweating, fevers>38c and /or weight loss about 10% of last 6 months at the time of diagnosis. "A" indicates no such symptoms, and "B" indicates these symptoms. [(1, 3)] An "E" term indicates that tumor cell are spread directly from a lymph node into other organ. [9] Obtaining local data on the pattern of lymphoma in our community at presentation and comparing with the international figures to detect our lymphoma feature.

Material and method

This is simple descriptive study; performed over one year that reviewed retrospectively in Kirkuk hematology oncology Cancer in Kirkuk city. The total number collected were 126 patients, the information were taken from records of the file system assigned for each patient Kirkuk hematology oncology Cancer that included patients of local province as well as patients from other provinces of Iraq.

Cases newly diagnosed with lymphoma, both sexes over ten years old were eligible to participate in this study. While those with age less than 10 years & relapsed cases were excluded from this study. In regard to this study, the following were considered:

Gender: male and female.
Age group: (10-19) years , (20-29) years , (30-39) years , (40-49) years , (50-59) years , (60-69) years ,(> 70) years .
Stages of lymphoma: based on time of presentation and staged depend on Ann Arbor staging system.
Lymphoma types: Hodgkin and Non Hodgkin.
Subtypes: according to histopathological reports with presence or absence of B symptome.

Statistical analysis

Statistical analysis was performed using SPSS. Univariate analyses included the X^2 test followed by Scheffe´ test for differences between groups. Known prognostic variables were included in a multivariable logistic regression analysis. A final model of risk factors for cesarean delivery was created using the maximum likelihood estimation ($P < 0.5$).

Findings

Among 126 cases with lymphoma studied, the age group ranged between (10->70) years. Figure 1 shows the peak age of presentation of HL was (20-29) years & represents (40%), while in NHL was (40-49) year & represent (22%). For all lymphoma patients there were 72 male (57.1%), 54 female (42.9%). The male: female ratio is 1.3:1. Figure 2 shows that in HL female was affected more than male (58.8%), while in NHL male was more affected (63.3%). Table 1 shows there are 58 cases HL (46%), 68 cases NHL (54%), commonest subtype of HL was NS 45 cases represent (77.6%) and in NHL was DLBL 57 cases and represent (83.8%). Table 2 shows that in HL & NHL the stage II & absence of B symptoms was commonest and represents (51.7%), (32.3%) & (53.4%), (55.9%) respectively. Figure 3 shows that in all cases absence of B symptoms represent (64%) in early stage I & II & (41.1%) in stage III & IV.

Table 1. The frequency distribution of type & subtype of lymphoma.

Variables	Frequency	Percentage (%)

Type of lymphoma HL NHL	58 68	46.0 54.0
Subtype of HL NS MC	45 13	77.6 22.4
Subtype of NHL DLBL BL SLL MALT	 57 3 7 1	 83.8 4.4 10.3 1.5

Table 2. Association between stages & presence or absence of B symptoms with types of lymphoma.

Variables	Type of lymphoma		P value
	HL N (%)	NHL N (%)	
Stage I II III IV IE II E (Extra nodal) III E (Extra nodal) I S (Spleen) III S (Spleen)	 7(12.1) 30(51.7) 16(27.6) 3(5.2) 1(1.7) 0(0.0) 1(1.7) 0(0.0) 0(0.0)	 6(8.8) 22(32.3) 19(28.0) 10(14.7) 2(3.0) 5(7.2) 0(0.0) 2(3.0) 2(3.0)	0.04
Symptoms A B	 31(53.4) 27(46.6)	 38(55.9) 30(44.1)	0.438

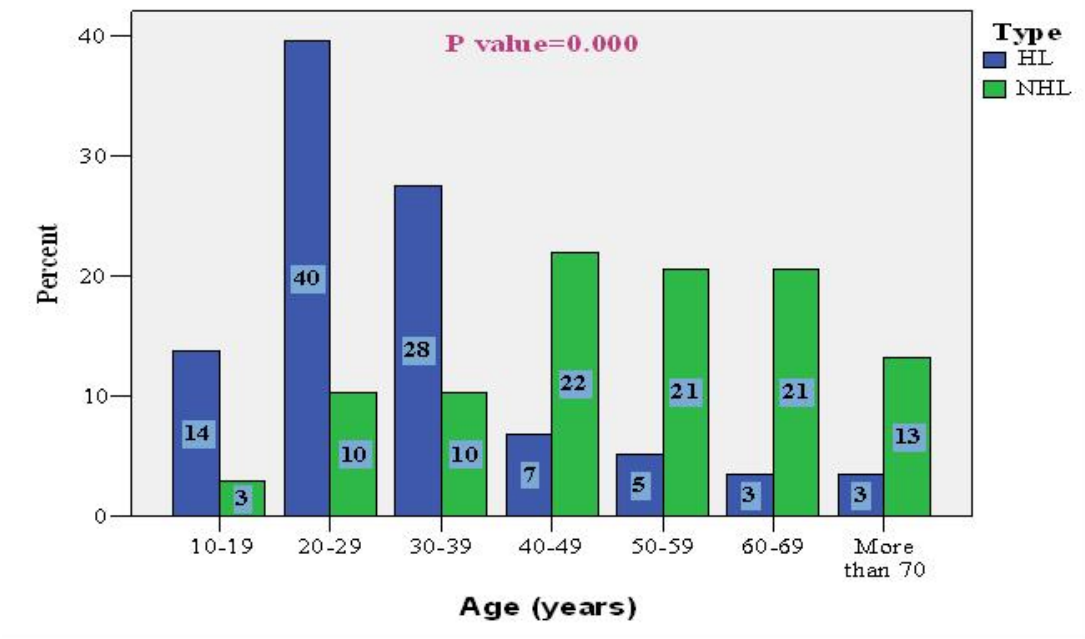

Figure 1. Association between age presentation & lymphoma type.

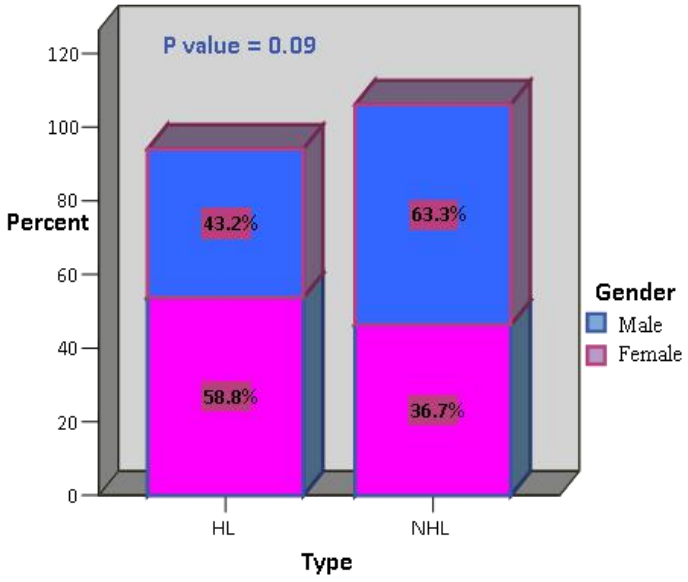

Figure 2. Association between gender & lymphoma types.

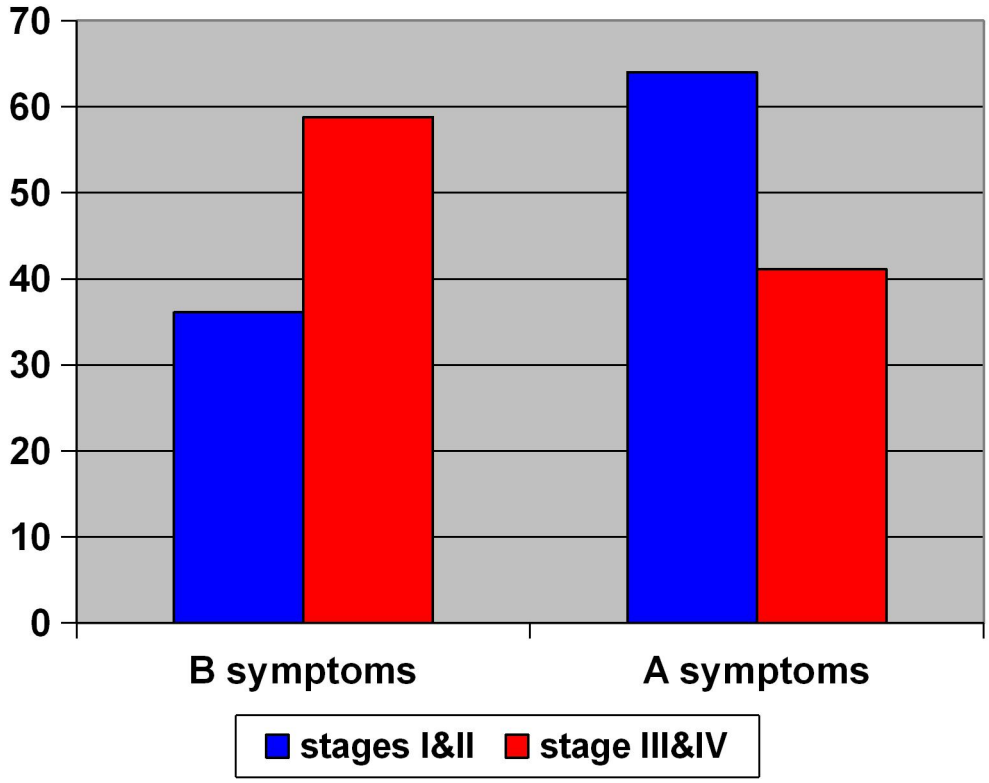

Figure 3. Association between stages and presence or absence of B symptoms.

Discussion

Lymphoma simply means malignancy in the lymph nodes and the other lymphatic tissues in the body and most commonly occurring hematological malignancies in the United States and consider as highly curable cancer in our patients. In Hodgkin lymphoma we found that peak age group of presentation was (20-29) years which represent (40%) this association considered highly significant statistically with (P-value = 0.000), which is similar to first peak age presentation in Europe and North America.[5, 10] In developed country the second peak of age presentation occurring after age of 50 years [5, 11], but we did not observe the second peak of age presentation in our patients may be due to short period and small sample size of our study. In Non Hodgkin lymphoma the peak age group of presentation was (40-49) years and represent (22%) with high significant statistically with (P-value = 0.000), while in UK the incidence increased with rates and age sharply in people more than 50 years and two third of cases are diagnosed as more than 60 years. [11] In lymphoma in general male: female ratio was 1.3:1. In Hodgkin lymphoma female was slightly higher than male with ratio is 1.3:1, but statistically not considered significant (p- value=0.09) which is contradict to international standard in USA that in favor male than female with ratio 2:1. [12] In non Hodgkin lymphoma male to female ratio was 1.7:1, compared to ratio 1.5:1 according to international figures [13], but statistically not considered significant (p- value=0.09) . The frequency of Non Hodgkin lymphoma was (54%) which is higher than Hodgkin lymphoma (46%), it is similar to what seen in USA. [11] Nodular sclerosis was the most common histopathologicl subtypes in Hodgkin lymphoma and correspond to (77.6%) compared to (70%) in WHO data, while in Non Hodgkin lymphoma diffuse large B cell lymphoma was comments one and represent (83.8%) compared to >1/3 in Middle East and (19.7%) according to NCI figures. [11] Regarding the stage at presentation stage (II) represented comments stage in both Hodgkin & Non Hodgkin lymphoma (51.7%) & (32.3%) respectively which was significant statistically (P value= 0.04). In USA stage (I, II) of HL was at top and correspond to (60%) [(11),] compared to (66%) in our patients and (54%) of our NHL patients had stage (I&II) compared to (46 %) according to NCI. [11] B symptoms present in (45%) in our patients while (55%) of them did not have B symptoms and this may related to early presentation of our patients and because B symptoms often present with more aggressive disease. These results where reassessed according to the stages of disease and the results were as follow: In patients who presented with stage I &II lymphoma the incidence of B symptoms was (36.1%) versus (58.8%) in patients with stage III & IV lymphoma, compared to <10% & 30-40% respectively in the international figure. [5]

Conclusions: Non Hodgkin lymphoma was more common than Hodgkin lymphoma. Nodular sclerosis was commonest histopathological subtype in the Hodgkin lymphoma & diffuse large B cell lymphoma was commonest histopathological subtype in the Non Hodgkin lymphoma. High percentage of patients present with early stage (II) & with lack of B symptoms at presentation. Male predominance in NHL & female predominance in HL and peak age group was (20-29) years in HL, while in NHL was (40-49) years.

Conflict of interest: non

Source of findings: self findings.

Ethical clearance: This research was carried out with the patient's verbal and analytical approval before the sample was taken.

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