

NON-HODGKIN'S LYMPHOMA CLINICOPATHOLOGICAL PATTERN

Pages with reference to book, From 205 To 207

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ABSTRACT

A study of histopathological and clinical features of non- Hodgkin's lymphoma in 495 consecutive cases, diagnosed at AFIP during 1984-1989 is presented. Children below the age of 15 years were not included in this study. The relative frequency of non- Hodgkin's lymphoma was 4.29% in our material. Non-Hodgkin's lymphoma was more frequent than Hodgkin's disease, ratio being 2.44:1. Lymphadenopathy (78.78%), fever (33.08%), weight loss (31.62%) and anemia (30.14%) were the main presenting features. New working formulation was used for morphological characterisation. Follicular lymphoma constituted 8.08% of all cases. Follicular lymphoma was seen only in older age whereas diffuse lymphoma occurred in all age groups. Intermediate and high grade lymphoma represented 73.54% of all NHL. Small lymphocytic lymphoma was common in low grade tumours (13.13%). Extra nodal lymphoma was encountered in a significant proportion (21.22%), gastrointestinal tract being the most frequent site. This study outlines certain interesting features of NHL in Pakistan. (JPMA 42: 205, 1992).

INTRODUCTION

Non-Hodgkin's lymphoma (NHL) like Hodgkin's disease shows geographical and ethnic variations in histopathological features and clinical presentation^{1,3}. Recent work in Hodgkin's disease has resulted in improved histological classification^{4,5} but no such universally acceptable classification is available for non-Hodgkin's lymphomas. New working formulation (NWF) was introduced in 1982⁶ to bring uniformity in this field. Although it is not considered as a classification, it enjoys growing international acceptance and usage. We have used this formulation in this study to highlight the clinic pathological presentation of these tumours in Pakistan.

MATERIAL AND METHODS

Four hundred and ninety-five cases of non-Hodgkin's lymphoma diagnosed at Armed Forces Institute of Pathology, during 1984- 1989 were included in this study. They did not include patients of paediatric NHL (<15 years). Armed Forces Institute of Pathology is not only the reference laboratory for the armed forces, but it also receives referred material from the civilian institutions. The majority of cases (62%) were civilians. A detailed clinical information of all patients was recorded. Ten percent formalin and B5 were used as fixatives. The slides were stained with haematoxylin and eosin. Reticulin, PAS, MGP and giemsa stains were also used when needed. The diagnosis was independently made by two of us (MA,AHK) using NWF.

RESULTS

During the period of this study 11,548 cases of malignant tumours were diagnosed at Armed Forces Institute of Pathology. Non- Hodgkin's lymphoma was diagnosed in 495 (4.29%) and Hodgkin's

disease in 203 (1.76%) cases. The ratio between non-Hodgkin's lymphoma and Hodgkin's disease was 2.44:1. Ninety-eight percent of patients belonged to the northern districts of Punjab and the adjoining areas of Kashmir and North West Frontier Province

Age/sex

Age varied between 15 and 84 years (mean age 48.2 years). No difference was observed between the mean age of patients with diffuse or follicular lymphomas. Male to female ratio was 2.93:1. Male preponderance was seen in both types.

Clinical features

Main clinical features included lymphadenopathy, fever, weight loss, anaemia and general ill health (Figure 1).

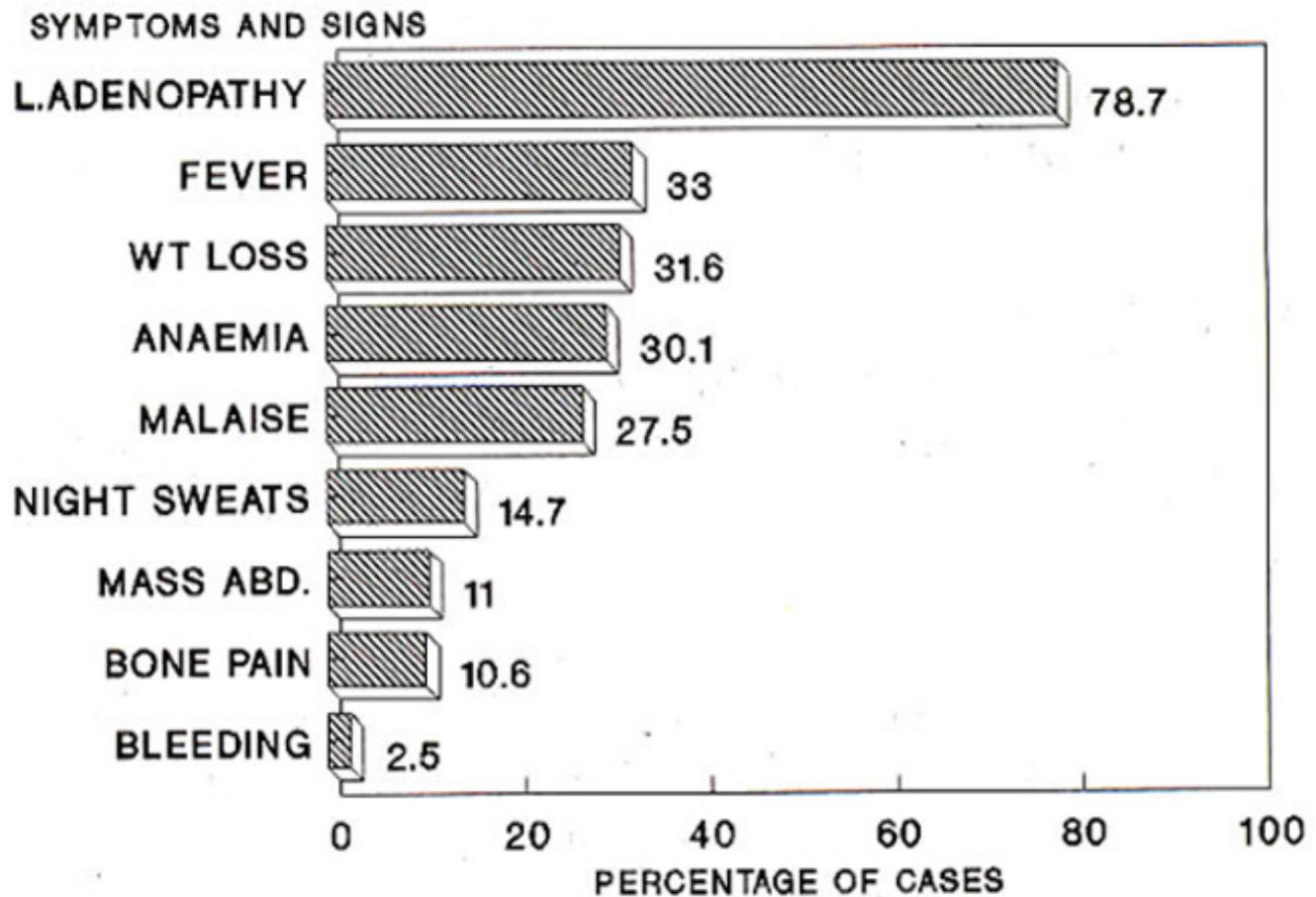


Figure 1. Clinical features in non-Hodgkin's lymphoma.

Three hundred and ninety (78.8%) cases presented with nodal and 105 (21.2%) with extra nodal involvement (Figure 2).

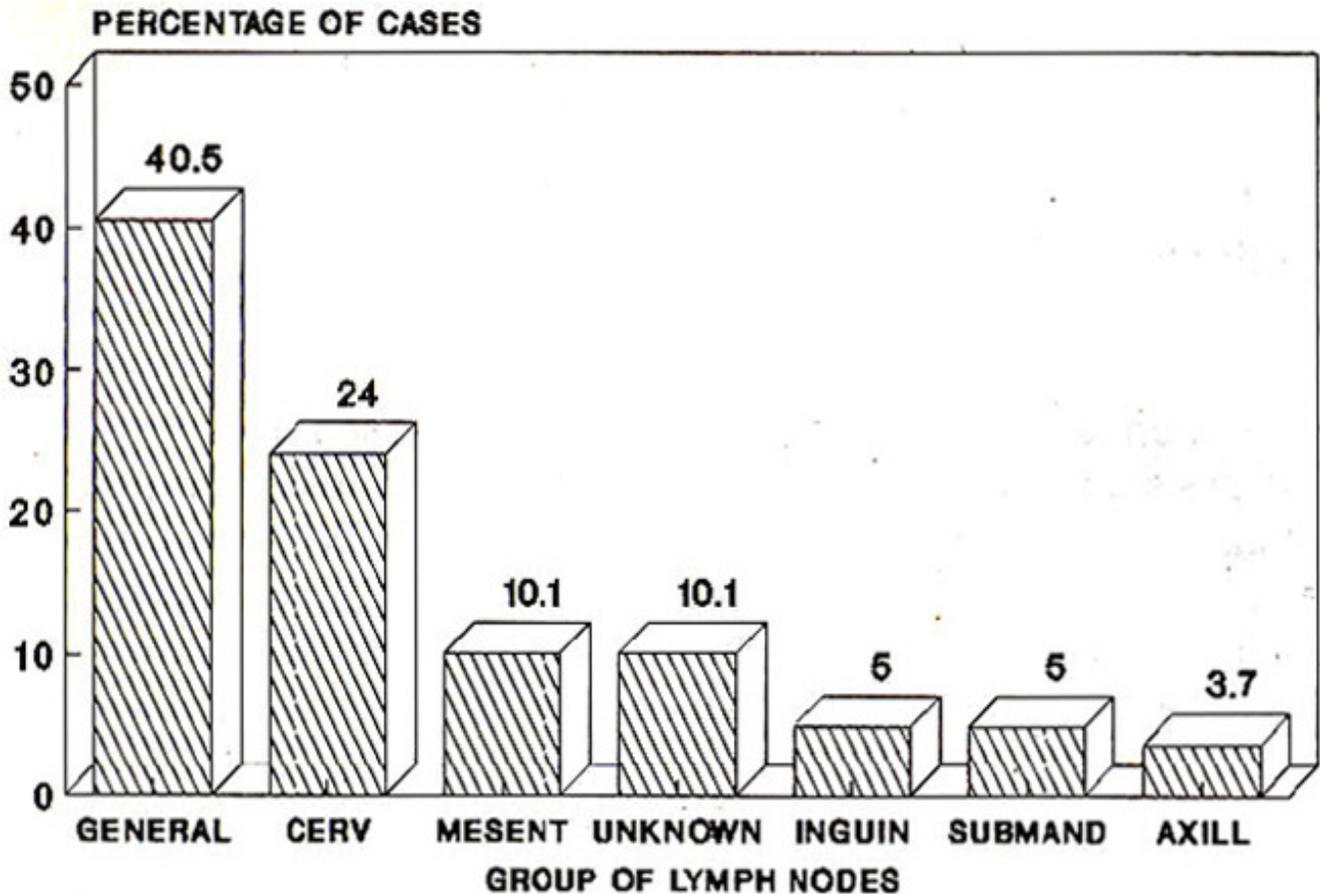


Figure 2. Involvement of various groups of lymph nodes in NHL.

Those with nodal disease mostly presented with generalized lymphadenopathy and 19.19% had hepatosplenomegaly. Extra nodal tumours mainly involved gastrointestinal tract (42.86%) and presented with abdominal mass or sub acute intestinal obstruction.

Histological type

Follicular NHL was 8.08%. All these cases were nodal except one which was in ileum. Follicular mixed cell type was the commonest. Two percent follicular lymphomas had concurrent diffuse areas. Diffuse lymphomas were the commonest both at nodal and extranodal sites. Most of these (55.56% of all cases) were intermediate grade lymphomas. The large cell type was most frequent (41.01%). High grade tumours mostly immunoblastic type were present in 17.98% cases. It was seen in older patients. Burkitt's lymphoma was the second most common tumour in high grade. Clinical presentation of these cases was non sAfrican type. In low grade group (26.46%) small lymphocytic lymphoma was common constituting 13.13% of the total casys. These patients presented with generalised lymphadenopathy and 16% showed bone marrow involvement.

DISCUSSION

Non-Hodgkin's lymphomas are not an uncommon group of tumours. They constituted 4.29% of total malignancies in our material. Although population based data is not available, these results indicate the prevalence of non-Hodgkin's lymphoma is comparable to that seen in other countries. The ratio between non-Hodgkin's lymphoma and Hodgkin's disease was 2.44:1. In general mean age is lower (48.2 years) than in developed countries (56.4 years)^{7,8}. It may be due to younger population, shorter life span, ethnic variations or other unknown reasons. Males were affected more than females. This

preponderance was seen in all types. The true significance of this finding is difficult to determine in a male oriented society of our country. Follicular lymphomas (8.08%) was less frequent when compared with countries like USA¹ (44%) and more frequent than China (2%). In general these tumours are less frequent in developing countries² (Table).

TABLE I. Frequency of diffuse and follicular non-Hodgkin's lymphoma in different series*

	No. of cases	Diffuse		Nodular		D/N ratio
		No.	(%)	No.	(%)	
U.S.A.						
New York	499	384	(77)	104	(21)	3.7:1
Philadelphia, PA	293	164	(56)	129	(44)	1.3:1
Stanford, CA	405	227	(?)	178	(44)	1.3:1
EUROPE						
Netherlands	332	269	(81)	63	(19)	4.3:1
Paris, France	244	168	(69)	53	(22)	3.2:1
ASIA						
Kogoshima, Japan	493	365	(74)	128	(26)	2.9:1
China	427	419	(98)	8	(2)	52.4:1
New Delhi, India	238	206	(87)	21	(9)	9.8:1
Pakistan - AFIP	495	424	(85)	40	(8)	10.6:1
(Current study)						

*Modified and reproduced from Cancer 1985;56:972-977.

The reasons for this difference are not fully understood. Patients usually seek treatment after considerable delay in these countries. It has been shown that in Pakistan cases of lymphomas on average sought treatment after nearly a year of onset of symptoms. It is possible that some of diffuse lymphomas cases may have started as follicular type. Intermediate grade tumours constituted vast majority of the total cases. Intermediate and high grade tumours together constituted (73.54%) of all cases. The situation is similar to that observed in Hodgkin's disease where the subtypes with bad prognosis are more frequent in developing countries^{1,2}. Most of the extra nodal tumours were from GI tract. It is possible that the extranodal tumours may have been under reported in this study as the laparotomy is required for diagnosis of these cases. This facility is limited as compared to the biopsy of a peripheral node. The mixed cell type was the commonest in extranodal lymphomas. Similar findings have been reported by others^{9,12}. None of the cases presented with malabsorption syndrome. Our intestinal lymphoma cases therefore do not resemble the "Middle East" intestinal lymphoma^{13,17}. Our study shows that histologically and anatomically gastrointestinal lymphomas in Pakistan resemble "Western" type^{18,19}. The pattern of non-Hodgkin's lymphoma in general is similar to that seen in other developing countries. However, if we compare our findings with India which is geographically a neighbouring country, a few interesting differences emerge. Although different classification have been used a comparison can still be made. Small lymphocytic and Burkitt's lymphomas are more common than in India. It is difficult to ascribe definite reasons for these differences at this stage. More work is necessary to arrive at some conclusion. It however, appears that the pattern observed in our material is intermediate between that seen in developed and developing countries.

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