

RESULTS

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In this study, a total of 440 malignant tumors in children were studied. Out of them, 211 cases of malignant lymphoma were seen, ie.: a frequency of (47.9%) followed by soft tissue tumors 69 cases comprising (15.6%) ; the third in order was tumor of bones, they constituted 44 cases (10%). Kidney tumors were the fourth comprising 30 cases (6.8%); the fifth was retinoblastoma with a frequency of (5.4%) 24 cases, sympathetic nervous system tumors were 12 cases (2.7%) and the last was central nervous system comprising 4 cases (0.9%) in frequency (Table 2).

Table 2 : Relative Incidence data for common malignant tumors of Egyptian children under 12 years.

Neoplasm	No.	%
Lymphoma	211	47.9%
Soft tissue	69	15.6%
Bone tumors	44	10.0%
Kidney tumors	30	6.8%
Retinoblastoma	24	5.4%
Sympathetic nervous system	12	2.7%

Central neryous system	4	0.9%
Miscellaneous	46	10.4%
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TOTAL	440	100.0%
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* The data is derived from Pathology department in Cairo National Cancer Institute representig patients in the period from 1983-1987.

Table 3 : demonstrates the frequency of non-Hodgkin's lymphoma (NHL) to Hodgkin's disease (H.D.)

It was observed that Hodgkin's disease cases comprised 119 (56.3%) out of 211 cases representing the total lymphoma cases in Egypt, while non-Hodgkin's lymphoma cases represented 92 cases (43.6%).

The ratio of NHL to H.D. 1 : 1.2

Table 3 : Frequency of H.D. to NHL

Lymphoma type	No.	%
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NHL	92	43.6%
H.D.	119	56.3%
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TOTAL	211	100%
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Non-Hodgkin's lymphoma in children :

A) Nodal lymphoma

In our series total cases of NHL were 92 cases, out of which 77 cases (83.6%) were nodal.

i) Patients age : (Table 4).

We noticed that the most common age group was (4-9 y) 42 cases comprising (54.5%), followed by the age period (9-12y) comprising 22 cases (28.5%), the least were age group below 4 years representing 13 cases (16.8%).

Table 4 : Age distribution of nodal NHL

Age	No.	%
0-4	13	16.8%
4-9	42	54.5%
9-12	22	28.5%
TOTAL	77	100.0%

ii) Patients's sex : (Table 5)

As we see from table (5) total 77 cases of nodal NHL were studied. 58 males (75.3%) were affected, while 19 females were affected comprising only (24.6%). In NHL cases, there was male preponderance, the male to female ratio was 3.3 : 1.

Table 5 : Sex distribution of nodal NHL

Sex	No.	%
Male	58	75.3%
Female	19	24.6%
TOTAL	77	100.0%

iii) Histological types : (table 6).

According to the Working Formulation, NHL cases were classified into three grades.

The underlying table shows the different types and their frequency.

Table 6 : Types of Pediatric NHL according to Working Formulation

Type	NO.	%
Low grade ,	1*	0.01%
Intermediate grade	23**	25.00%
High grade	68***	73.90%
TOTAL	92	100.00%

* Only one case (small lymphocytic plasmacytoid cell type)
(0.01%)

** 23 cases under the item of intermediate grade (25%). One case of follicular with predominantly large cell.

11 cases of Diffuse small cleaved cell

5 cases Mixed small and large cell

4 cases diffuse large cell (cleaved)

2 cases diffuse large cell (non-cleaved)

*** 68 cases under the item of High grade (73.1%).

4 cases immunoblastic

15 cases lymphoblastic lymphoma

45 cases small non cleaved (Burkitt)

4 cases small non cleaved (non- Burkitt)

B. Extranodal lymphoma :

Out of the 92 NHL cases, 15 cases were extranodal (16.3%).

i) Patient's ages :

The cases studied aged between 2 to 10 years old with a median age 5.5 years.

ii) Patient's sex :

In our study males accounted for 13 cases (86.6%), while females were 2 cases only (13.3%). The male to female ratio was 6 : 1.

iii) Histological types :

Out of the 15 extranodal NHL cases, 9 cases (60%) were lymphoblastic lymphoma, while 4 cases (26.6%) were small non-cleaved (non-Burkitt) type and the remaining 2 cases (13.3%) were diffuse large cell (non-cleaved) type.

iv) Sites : (Table 7)

It is apparent that the most common extranodal site was in the gastro-intestinal tract comprising 8 cases out of 15, followed by 3 cases in the abdominal wall (20%) and 3 cases in the bone (20%) and only one case in the buccal mucosa (6.6%).

Table 7 : Extranodal sites of NHL children

Site	No.	%
Small intestine	8	53.3%
Abd.wall	3	20.0%
Bone	3	20.0%
Buccal mucosa	1	6.6%
TOTAL	15	100.0%

Hodgkin's disease in children :

In our study, out of 211 cases of lymphomas, Hodgkin's disease (H.D.) accounted for 119 cases with a frequency (56.3%).

ii) Patient's age (Table 8)

From table 8 it is apparent that the commonest age group affected was 4-9 years comprising 70 cases (58.8%), followed by 9-12 years which represented 34 cases (28.5%) while 0-4 years was the least age affected 15 cases (12.6%).

Table 8 : Age distribution of H.D. in children

Age	No.	%
0-4	15	12.6%
4-9	70	58.8%
9-12	34	28.5%
TOTAL	119	100.0%

ii) Patient's sex : Table 9

In our work 119 of H.D. were studied out of them 87 cases (73.1%) were males, while females were 32 cases only (26.8%). There is male predominance in H.D. the male to female ratio was 2 : 7 : 1.

Table 9 : Sex distribution of H.D. in children.

Sex	No.	%
Male	87	73.1%
Female	32	26.8%
TOTAL	119	100.0%

iii) Histological types: (Table 10)

In our study the total H.D. children were 119 out of which the Mixed Cellularity type were the most common representing 71 cases (59.6%) , followed by Lymphocytic Predominance comprising 17 cases (14.2%).

The Nodular Sclerosis type was 14 cases (11.7%) while the least common were Lymphocytic Depletion type accounting for 4 case (3.3%).

Table 10 : Different histological types of H.D. in children

Type of H.D.	No.	%
Mixed Cellularity	71	59.6%
Lymphocytic Predominance	17	14.2%
Nodular Sclerosis	14	11.7%
Lymphocytic Depletion	4	3.3%
Unclassified	13	10.9%
TOTAL	119	100.0%