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Clinico Pathological Study of Lymphomas

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Abstract: ***Background and Aim: To study the histomorphology of lymphomas. To use Immunohistochemistry to Categorize lymphomas in HL and NHL to use panel of markers based on histological diagnosis and sub typing of various lymphomas. Materials and Methods: A total of 50 lymph node biopsies are received during two years period from Jan 2012 to Dec 2013 are Included. The nodal and extranodal lymphomas are included the lymphnodes are fixed in 10% formaline, subjected to histopathology, Routine Paraffin embedding was done Diagnosed by histopathology and confirmed by Immune histochemistry. Results: The results showed that Non Hodgkin's lymphoma was frequent type. The commonest age group was 21-40 years. Males are most common type. The cervical lymphnode was frequently involved. Extranodel lymphoma was also observed. Among the Hodgkin's lymphoma MC variant commonest type. Conclusion: Our findings compared with literature. The diagnosis made by histopathology. The Immunohistochemistry used for confirmation, panel of markers used to subtyping of Non Hodgkin's lymphoma.***

Keywords: Lymphomas, immunohistochemistry

1. Introduction

Lymphomas are tumors of cells residing in the Immune System. Lymphomas can involve lymphnodes as well as extranodal sites like GIT, Skin, Brain and various sites. The lymphomas are classified in to two major types Hodgkin's lymphoma (HL) and Non Hodgkin's lymphoma (NHL). Lymphomas can occur at any age. Hodgkin's lymphoma (HL) has bimodal age distribution lymphomas may be asymptomatic present with symptoms like fever, night sweats and weight loss. They can cause pressure symptoms due to massivelymphadenopathy. The extra nodal lymphomas produce symptoms related to the involvement of the organ (Ref 1). Sometimes benign lesions are misdiagnosed as lymphomas (Ref 2) subjected to treatment. Malignant lesions misdiagnosed as benign lesion (Ref 3). The diagnosis of lymphoma is based on the histopathological examination.Immunohistochemistry for confirmation and sub typing.The lymphomas are commonest hematological malignancies. The NHL is most common type followed by HL. There are the most common malignancies in children and elderly individuals. Among NHL the B Cell malignancies are the most common type followed by T cell. Among the HL the MCL variant most frequent type. There are most common in men lymphomas are treatable and curable malignancies. The treatment depends upon the types. Therefore proper diagnosis with histopathology and IHC become integral part in management of lymphomas.

2. Aims and Objectives

1) To study the histopathology of lymphomas.
2) To categorize the various lymphomas in to HL and NHL
3) To use panel of IHC markers based on histological diagnosis and sub typing of lymphomas.

Inclusion Criteria:

1) All age groups excision biopsics and resected specimens of both nodal and extra nodal lymphoma.

Exclusion Criteria:

1) Patients already diagnosed as lymphoma and on treatment.
2) Inadequate specimen and multiple bits.

3. Material and Methods

The lymphnode biopsies received during the period from Jan 2012 to Dec 2013 are included. A total of 50 cases are reported. Both nodal and extra nodal lymphomas are included in the study. A minor number of specimens came from outside the hospital. FNAC was done in almost all the cases. The specimens are fixed in 10% formalin subjected to histopathology. Routine paraffin embedding was done. Special stains like PAS and Reticulin used where ever necessary. IHC done for NHL only. The HL was diagnosed and categorized by histopathological examination. The panel of markers used are LCA, CD20 and CD5.

4. Results

Distribution of Hodgkin's lymphoma and Non Hodgkin's lymphoma.

Table 1

Type	*Nog Cases``*
NHL	43
HL	7

The NHL was commonest type.

Table 2: Age and Sex wise distribution of lymphomas

Age in years	*No. of lymphomas*
< 20	8
21 – 40	10
41 – 60	24
61 – 80	8
> 80	0

The commonest age group was 41 – 60 years.

Table 3: Sex wise distribution of lymphomas

Type	Type	*HL*
Male	25	4
Female	18	3

Males are most commonly affected

Table 4: Site was distribution of lymphomas

Lymphanode	45
Extranoda Site	5

The nodal site was commonest type.

Table 5: Site wise distribution of lymphomas

Site	*No. of Paticuts*
Cervical	30
Axillary	12
Inguinal	4
Mesenteric	0
Retro peritoneal	1
Illiac	0
Umental	1
Mediastinal	1
Femoral	1

The cervical group of lymphnodes are commonly involved followed by Axillary and Inguinal.

Table 6: Site wise distribution of Extra nodal lymphomas

Site	*No. of Cases*
GIT	3
Breast	1
Skin	1

The GIT was the freaquent site.

Table 7: The relative distribution of Follicular and diffuse lymphomas of NHL

Sub type	*No. of Patients*
Follicular	8
Diffuse	35

The diffuse lymphomas are commonest type.

Table 8: Distribution of B cell and T cell NHL

NHL (subtype)	*No. of patients*
B Cell	40
T Cell	3

The B cell type most freaquent type

Table 9: Histological subtypes of Hodgkin's lymphoma

HL (Subtype)	No. of patients
Mixed cellularity	4
Lymphocyte depleted	0
Noduler lymphocyte predominant	1
lymphocyte rich	0
NS Variant	2

MC variant was most common type

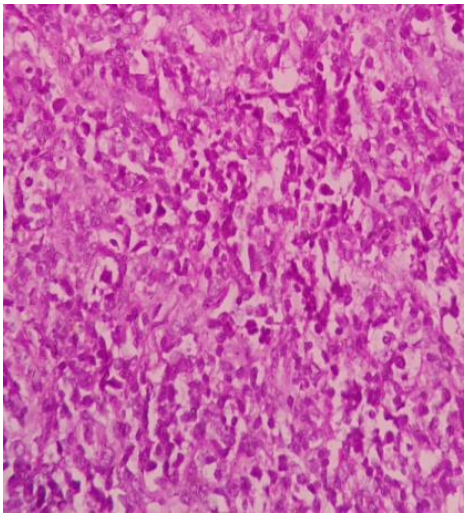

Figure 1: High power photo micrography {Hand E stain x40 x }

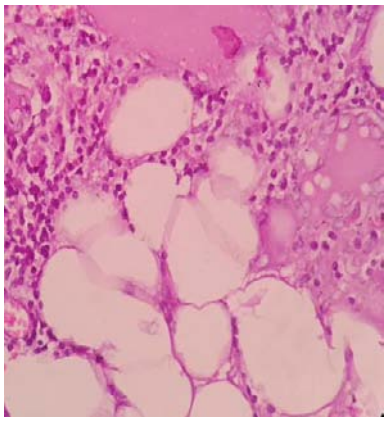

Figure 2: High power photo micrography Lymphoma cells infiltrating in to fat {H and E stain x40 x }

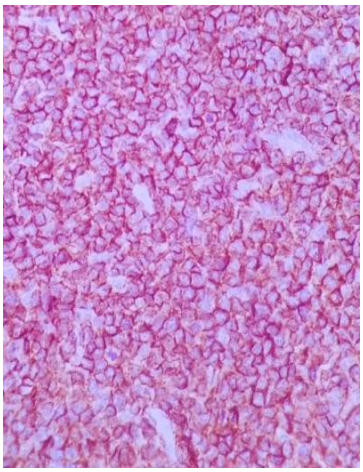

Figure 3: Cells are immun histo chemically positive For LCA

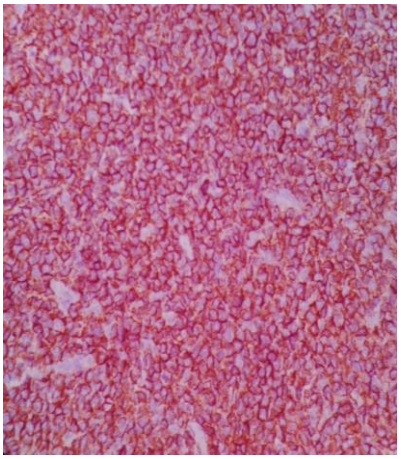

Figure 4: Cells are immun histo chemically positive For CD.20

5. Discussion

Lymphomas are heterogeneous neoplasms which differ in epidemiology and aetiology in different geographic locations. The incidence as well as distribution of histological subtype varies considerably among different populations. In the present study the NHL was commonest type followed by HL. The most common age group affected was 41 to 60 years which is similar to most studies. The age group in another study done by Hingojo et al (Ref 4) was 41 to 60 years which is similar to our study. The males are commonly affected followed by females. It was observed both in NHL and HL. The common mode of presentation in the present study was lymphadenopathy. The peripheral lymphadenopathy common in most of the cases. In our study the extra nodal lymphomas are rare and lower in incidence when compared to studies conducted by Advaniet al (Ref 5) and shit and liang (Ref 6).The extra nodal lymphomas in the present study are NHL which is similar to the study conducted by Aoki, et al (Ref 7). The GIT commonest site which was similar to study conducted by Newtan, et al (Ref 8). Among HL the males are commonly affected MC variant was frequent type followed by NS variant. The most common presentation was lymphadenopathy. It was similar to studies conducted in Korean and Iran population. Among the subtypes of NHL the diffuse B cell type lymphomas are common similar to the study conducted by Marcose et al (Ref 9) and Yang et at (Ref 10). The diagnosis in the present study was done by histopathology and confirmed with immunohistochemistry.

6. Conclusion

In the present study NHL was commonest type followed HL. The males are most commonly affected. The commonest presentation was lymphadenopathy. The frequent age group affected was 41 to 60 years similar to other studies. The frequent group of lymphanode involved was cervical.The commonest extra nodal site was GIT. Among the NHL diffuse B cell type was most common type. In HL mixed cellular variant most frequent type compared with similar studies. The diagnosis was made by histopathological examination with H & E stain and confirmed by Immunohistochemistry. The definite diagnosis was made by surface marker expression. Hence diagnosis of lymphoma was made by histopathology aided by Immunohistochemistry. The Immunohistochemistry helps in sub typing the lymphomas.

References

[1] Jose BO, Koerner P, Spanos WJ, Paris KJ, Yashav et al, Hodgkin's lymphoma in adults – clinical features. JkymedAssoc2005 ; 103 : 15-7.
[2] Phelan E, Lang E, Gormley P, Langa J, Kikuchi Fujimoto disease ; a report of 3 cases, Ear nose Throat J 2007; 86; 412 – 3.
[3] AL Moiberrek AF, Arafahn, Siddiqui N. An African male with cough, lemoplgsin, weight loss and Hypercalcaemia ; TB {or} not TB ? Eru respire J 2002; 20: 1060 – 3.
[4] Hingorjo MR, Syed S, Presentation, staging, diagnosis of lymphoma a clinical perspective, J. Ayob Med Coll, 2008; 20(4) ; 24-7.
[5] Slih, L; &liang, D. (1991) Non Hodgkin's lymphoma in Asia Hematology/oncology clinies of North America, 5(5), 983, ISSN 0889-8588.
[6] Advani, S.H; Banavali, S.D., Agrawala, S;Gopal, R., Dinschaw, K., Borges, A; et al. (1990) The pattern of malignant lymphoma in India; a study of 1371 cases. leukaemia and lymphoma, 2(5), 307-316, ISSN 1042 – 8194.
[7] Aoki, R;Kavube, K., Sugita. Y., Nimura Y., Shimizu, K., Kimura, Y., et al (2008). Distribution of malignant lymphoma in Japan; analysis of 2260 cases, 2001-2006. Pathology International 58(3) 174-182, ISSN 1320 – 5463.
[8] Newton, R., Ferlay, J., Beral, V., ; 2 Devesa, S.S. (1997). The epidemiology of Non Hodgkin's lymphoma; comparision of Nodel and extra nodal sites. International Journal of Cancer, 72(6), 923-930, ISSN 0020-7128.
[9] Marcos – Gragera R, Allemani C, Tereanu C, De angelis R, Capocaccia R, Maynadie et al Haemacare working group (2011) survival of European patients diagnosed with lymphnodal neoplasms in 2000-2002; results of the HAEMOCARE Project. Haematologica 96(5); 720-728, E Pub 2011 Feb 17.
[10] Yang QP, Zhang WY, YU JB, 2 Lao S, XUH, Wang WY, Bi CF, 2002, Wang XQ, Haung J, Dia L, Liv WP (2011) sub type distribution of lymphoma in Southwest clive; analysis of 6,382 cases using who classification in a single institution. DiagnPathol 6:77.