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Original Research

Evaluation of histopathological spectrum of lymphadenectomies

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ABSTRACT:

Background: The present study was conducted to evaluate histopathological spectrum of lymphadenectomies. **Materials & Methods:** 114 lymph node biopsies of both genders were included. Sections from formalin fixed, paraffin embedded blocks and stained with H and E, stains were studied in all cases. **Results:** Hodgkin lymphoma was seen in 32, non-hodgkin lymphoma in 46, follicular hyperplasia in 16, sinus histiocytosis in 10, paracortical hyperplasia in 18 and tuberculosis in 2 cases. The clinical features was cough in 72, fever in 45, weight loss in 80, night sweat in 32, lymph node pain in 58 and splenomegaly in 15 patients. The difference was significant (P< 0.05). **Conclusion:** Lymph node biopsies were found to be hodgkin lymphoma, non-hodgkin lymphoma, follicular hyperplasia and sinus histiocytosis.

Key words: Lymph node biopsies, follicular hyperplasia, Sinus histiocytosis.

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INTRODUCTION

Lymphadenopathy is a common clinical problem and biopsies are usually undertaken to determine the cause of nodal enlargement, which may be neoplastic or non-neoplastic.[1] The neoplastic disorders are mainly lympho- hematogenous malignancies and metastases while the causes of non-neoplastic lymphadenopathy are more varied such as infections (bacterial, viral, fungal), drug reactions (including certain vaccines), lipid storage disorders and a wide variety of miscellaneous non-neoplastic lymphoproliferative disorders such as Castleman disease, Rosai Dorfman disease, Kimura disease, Kikuchi Fujimoto disease and systemic lupus erythematosus (SLE).[2,3]

Lymphadenopathy is defined as abnormal size or structure of lymph node. It is a common problem in all age groups.[4] It is mostly caused by benign disorders and shows transient responses to the local or general infections but sometimes it is due to malignant disorders. Studies consider age, location of lymphadenopathy, duration of disease, being local or generalized, other signs and symptoms like fever and splenomegaly.[5]

Among the peripheral nodes, those in the upper part of the body (cervical, supraclavicular axillary) are preferentially biopsied than lower limb nodes (popliteal, inguinal or femoral) as the former are more likely to yield definitive diagnosis, whereas the latter are often characterized by nonspecific reactive or chronic inflammatory and fibrotic changes.[6] The present study was conducted to evaluate histopathological spectrum of lymphadenectomies.

MATERIALS & METHODS

The present study was conducted in the department of general pathology. It comprised of 114 lymph node biopsies of both genders. Ethical approval for the study was obtained before starting the study.

Sections from formalin fixed, paraffin embedded blocks and stained with H and E, stains were studied in all cases. Special stains including Ziehl Neelsen, periodic acid Schiff and Gomori's methenamine silver were used where indicated. Immuno histochemistry (IHC) was

performed using relevant antibodies according to the histomorphological features. Results were assessed statistically. P value less than 0.05 was considered significant (P< 0.05).

RESULTS

Table I Distribution of patients

Total- 114		
Gender	**Males**	**Females**
Number	103	11

Table I shows that out of 114 cases, 103 were seen in males and 11 in females.

Table II Distribution of different types of lesions on lymph node biopsy

Type	Number	P value
Hodgkin Lymphoma	32	0.05
Non-Hodgkin lymphoma	46	
Follicular hyperplasia	16	
Sinus histiocytosis	10	
Paracortical hyperplasia	18	
Tuberculosis	2	

Table II, graph I shows that hodgkin lymphoma was seen in 32, non-hodgkin lymphoma in 46, follicular hyperplasia in 16, sinus histiocytosis in 10, paracortical hyperplasia in 18 and tuberculosis in 2 cases. The difference was significant (P< 0.05).

Graph I Distribution of different types of lesions on lymph node biopsy

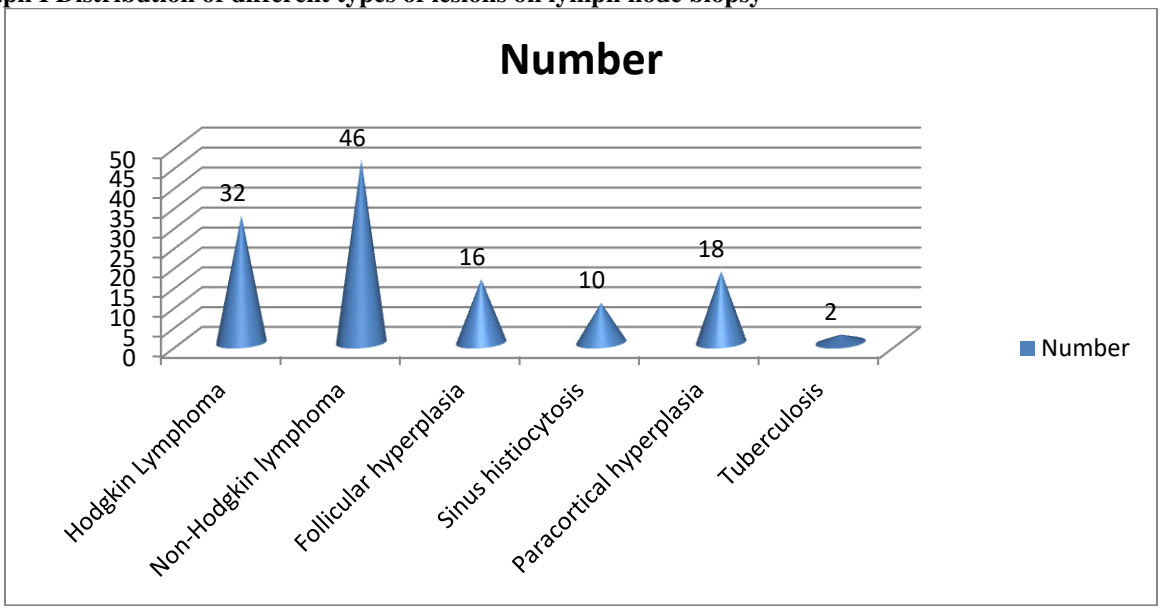
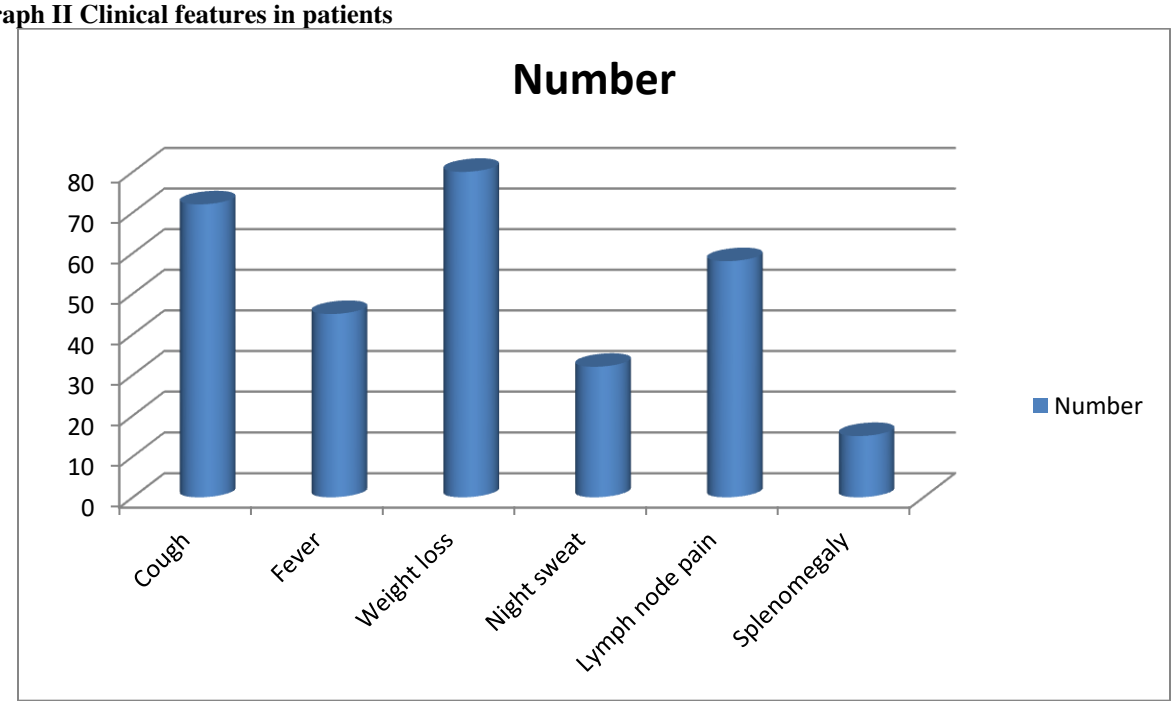


Table III Clinical features in patients

Clinical features	Number	P value
Cough	72	0.01
Fever	45	
Weight loss	80	
Night sweat	32	
Lymph node pain	58	
Splenomegaly	15	

Table III, graph II shows that clinical features was cough in 72, fever in 45, weight loss in 80, night sweat in 32, lymph node pain in 58 and splenomegaly in 15 patients. The difference was significant (P< 0.05).

Graph II Clinical features in patients



DISCUSSION

Palpable lymph nodes offer an important diagnostic clue to the etiology of the underlying condition. Though fine needle aspiration cytology is commonly used to establish the etiological diagnosis, excision biopsy of the lymph node remains the "gold standard" for diagnosis.[7] Physicians should consider level of referral and conditions of patient and epidemiologic background of that area for better approach to lymphadenopathy.[8] Indications of lymph node biopsy is not so clear and it depends on physician opinion and it should be performed considering all patient conditions, clinical features and epidemiologic information about different causes of lymphadenopathy.[9] The present study was conducted to evaluate histopathological spectrum of lymphadenectomies.

In present study, out of 114 cases, 103 were seen in males and 11 in females. We found that hodgkin lymphoma was seen in 32, non-hodgkin lymphoma in 46, follicular hyperplasia in 16, sinus histiocytosis in 10, paracortical hyperplasia in 18 and tuberculosis in 2 cases. Roy et al[10] found that neoplastic lesions were more common comprising 53% (535 cases) and included 32.1% (324 cases) of non-Hodgkin lymphoma, 12.4% (125 cases) of Hodgkin lymphoma and 8.5% (86 cases) of metastatic lesions. The non-neoplastic lesions were 47% (475 cases), which included 21.6% (218 cases) of non-specific reactive lymphoid hyperplasia, 6.8% (69 cases) of other reactive or specific lymphoid hyperplasia, 18% (182 cases) of tuberculous lymphadenitis, 0.6% (6 cases) of other granulomatous lesions.

We found that clinical features was cough in 72, fever in 45, weight loss in 80, night sweat in 32, lymph node pain in 58 and splenomegaly in 15 patients. Zahir et al[11] found that there were 208 specimens, 98 women (47.1%) and 110 men (52.9%). Mean age was 32.94 years. There were 45 cases (21.6%) of malignancy, 33 cases (15.9%) of infectious diseases and 130 cases (62.5%) of reactive lymphadenopathy. The most common histopathologic finding in all ages was reactive lymphadenopathy. Clinical signs and symptoms had significant relationship with pathologic findings. For a decision of lymph node biopsy attention to patients symptoms and signs especially B signs, size of the lymph node >2cm, generalized lymphadenopathy, mobility of lymph node and splenomegaly seems to be the useful guide lines for physician. In this study it seems that decision to take biopsy was correct in 75% of the cases.

Damle et al[12] in their study a total of 331 lymph node biopsies were studied. Age distribution varied from 4 to 81 years with male to female ratio of 1:1.4. Non – neoplastic lesions comprised of maximum cases (80.06%) while neoplastic lesion were present in (19.93%) cases. Reactive lymphadenitis was the predominant non-neoplastic finding followed by granulomatous lymphadenitis. Neoplastic lesions were

included 3.61% cases of lymphoma and 16.31% cases of metastatic lesions. Lymphadenopathy is not uncommon in our region so lymph node biopsy is an important tool for early diagnostic and prognostic purpose. Reactive lymphadenitis was the most common cause of lymphadenopathy followed by granulomatous lymphadenitis.

The limitation of the study is small sample size.

CONCLUSION

Authors found that lymph node biopsies were found to be hodgkin lymphoma, non-hodgkin lymphoma, follicular hyperplasia and sinus histiocytosis.

REFERENCES

1. Sibanda EN, Stanczuk G. Lymph node pathology in Zimbabwe: A review of 2194 specimens. Q J Med 1993;86:811-7.
2. Moore SW, Schneider JW, Schaaf HS. Diagnostic aspects of cervical lymphadenopathy in children in the developing world: A study of 1877 surgical specimens. Pediatr Surg Int 2003;19:240-4.
3. Kamat GC. A ten-year histopathological study of generalized lymphadenopathy in India. S Afr Fam Pract 2011; 53(3): 267-270.
4. Tiwari M, Aryal G, Shrestha R. Histopathologic diagnosis of lymph node biopsies. Nepal Med Coll J 2007; 9(4): 259-61.
5. Kim LH, Peh SC, Chan KS. Pattern of lymph node pathology in a private pathology laboratory. Malays J Pathol 1999; 21(2): 87-93.
6. Md Atiqur R, Md Mamun AB. Histopathological evaluation of lymph node biopsies: A hospital based study. J Enam Med Col 2012; 2(1): 8-14.
7. Olu-Eddo AN, Ohanaka CE. Peripheral lymphadenopathy in Nigerian adults.J Pak Med Assoc 2006; 56 : 405-8.
8. Saraswat A, Rajender A, Purohit K. Lymph node biopsy: Spectrum and clinical significance as diagnostic tool at tertiary care centre.J of Evolution Med and Dent Sci. 2015; 4(6): 1008-14.
9. F errer R. Lymphadenopathy: Differential diagnosis and evaluation. Am Fam Physician 1998;58:1313-20.
10. Roy A, Kar R, Basu D, Badhe BA. Spectrum of histopathologic diagnosis of lymph node biopsies: A descriptive study from a tertiary care center in South India over 5½ years. Indian J Pathol Microbiol 2013;56:103-8.
11. Zahir ST, Azimi A. Histopathologic findings of lymph node biopsy cases in comparison with clinical features. Pak J Med Sci. 2009 Oct 1;25(5):728-33.
12. Damle RP, Suryawanshi KH, Dravid NV, Newadkar DV, Deore PN. A Descriptive Study of Histopathological Patterns of Lymph Node Biopsies In A Tertiary Care Hospital. Annals of Pathology and Laboratory Medicine. 2017 Mar;4(02):131-6.