



**CLINICOPATHOLOGICAL STUDY OF CERVICAL LYMPHADENOPATHY IN PATIENTS ADMITTED IN TERTIARY CARE CENTRE**

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**ABSTRACT**

Cervical lymphadenopathy is most common in India and presents as often diagnostic problem to the clinician. Diseases affecting cervical lymph nodes are of varying severity starting from simple curable infection to difficult incurable malignant disease. The purpose of this study was to observe the various clinical presentations of cervical lymphadenopathy and correlate histopathological findings with the clinical diagnosis. In this present clinicopathological study of cervical lymphadenopathy 40 cases have been evaluated. The patients were seen as out patients and in patients in the department of general surgery in a Tertiary care hospital during a period from December 2017 to December 2019. In this series, tissue diagnosis by biopsy found Tuberculosis (TB) in 60% cases, metastatic carcinoma in 7.5%, and reactive lymphadenitis 22.5% and lymphomas constitute 15% of cases. Maximum number of cases were 12-20 years of age. Tuberculous cervical lymphadenopathy is the most common disease affecting the cervical lymph node (60%) followed by reactive lymphadenitis (22.5%), secondaries (2.5%) and lymphomas (15%).

**KEYWORDS :** Cervical Lymphadenopathy, lymphomas, Reactive lymphadenitis

**INTRODUCTION**

The prime function of lymph node is to deal with antigen, whether this be in the form of organisms or other particulate material, or even soluble antigen. Lymph nodes are strategically placed along the drainage of tissue and body fluids, they are most numerous in those areas which are in direct contact with the exterior of the individual.

Neck consists of 300 lymph nodes nearly 1/3rd of total lymph nodes of the body. The enlargement of these nodes is significant because of many etiologic factors.

Lymphadenopathy is a very common clinical manifestation of many diseases. It is defined as an abnormality in the size or character of lymph nodes, caused by the invasion or propagation of either inflammatory cells or neoplastic cells into the node.

The analysis of lymph node enlargement in the neck is not an easy task and the diagnosis of the condition is a problem because most of the diseases resemble each other.

The swelling in the cervical region can be diagnostic challenge. The study intends to find out systematically the various pathological conditions presenting with enlarged lymph nodes in the neck, also the various modes of clinical presentation and behaviors of these conditions. It also intends to know the role of FNAC in diagnosing these conditions after correlating with a lymph node biopsy confirmation.

**MATERIALS**

In this present clinicopathological study of cervical lymphadenopathy 40 cases have been evaluated. The patients were seen as out patients and in patients in the department of general surgery in a Tertiary care hospital during a period from December 2017 to December 2019. Diagnosis is made on the basis of histopathological findings.

**INCLUSION CRITERIA**

1. Patients more than 12 years of age.
2. Patients presenting with cervical lymph node enlargement.

**EXCLUSION CRITERIA**

1. Patients less than 12 years of age.
2. Patients with cervical swellings other than lymphadenopathy

**METHODS**

In this study the data was taken from tertiary care hospital.

According to proforma detailed history was taken, thorough examination was carried and basic relevant investigations were done in all patients to arrive at a provisional diagnosis.

Investigations like Fine Needle Aspiration Cytology and blood examination were done as a routine. Biopsy was done for all patients. Radiological examination of the chest was done to find primary lesion of lung. Lymph node biopsy specimen was sent to pathologist for expert opinion.

Also ENT opinion, contrast radiological investigations, X-ray and endoscopy were carried out in relevant cases. Since cervical lymphadenopathy is a common disease which present to the surgery department. A prospective observational study conducted in the above mentioned period. All the patients were asked to attend the surgical OP for the follow up after discharge and necessary advice given.

**RESULTS**

In this study, the observation made was, the maximum number of cases were in the age group of 12-20 years (11 cases, 27.5%). Next common age group was between 21 and 30 years (10 cases, 25%). 9 cases (22.5%) were in the age group of 31-40 years and 7 cases (17.5%) were in the age group of 41-50 years and 1 case (2.5%) between 51 and 60 years. Only 2 cases (5%) were documented above the age of 60 years.

The constitutional symptoms considered were fever, pain, cough, sinus, loss of weight, loss of appetite. The presence of any of the symptoms was considered positive for constitutional symptoms. All cases presented with swelling in neck. Fever was the most commonly present symptom, seen in 85% of cases, followed by cough in 40% of cases.

**Site distribution of tubercular cervical lymphadenitis, reactive lymphadenitis, lymphomas, secondaries**

Site	Tubercular cervical lymphadenitis	Reactive lymphadenitis	Lymphomas	Secondaries	Total
Submental	2	0	0	0	2
Sub mandibular	0	1	0	0	1
Jugular	5	5	2	0	12

Posterior triangle	11	3	3	1	18
Supraclavicular	6	0	1	0	6
Pre tracheal and pre laryngeal	0	0	0	0	0
Total	24	9	6	1	40

In the present series, it was observed that posterior triangle group was the commonest to get involved in tuberculosis (45.83%) followed by supraclavicular (25%), deep jugular (20.83%) submental (8.33%).

In Reactive lymphadenitis, deep jugular is most commonly affected. Secondaries posterior triangle is affected. Similarly, in lymphomas posterior triangle are mostly involved.

## DISCUSSION

In the present study, 40 cases of cervical lymphadenopathy, 33 were non-neoplastic lesions and 7 were neoplastic lesions.

In the present study, tuberculosis accounted for 60% of cases, 9% turned out to be reactive lymphadenitis. Among the neoplastic lesions, malignant secondaries accounted for 2.5% while non-Hodgkin's lymphoma and Hodgkin's lymphoma accounted for 10% and 5% respectively.

Most common presentation of cervical lymphadenitis was swelling in the neck. Lymphadenitis is the most common extra pulmonary manifestation of tuberculosis (35% cases worldwide). Lymph node TB presents as painless swelling of the nodes, most commonly at posterior and supra clavicular sites.

In this study, more number of cases are in the age group of 12 – 20 and 21-30 accounting to 27.5% and 25% followed by 22.5% in age group of 31-40 and 17.5% in 41-50, 5% in >60, 2.5% in 51-60. TB lymphadenitis is observed more in the age group 31-40 and 21-30 years. Secondaries in 51-60 group. lymphomas in 12-20 and 21 -30.

In the present study, the male to female ratio is 1:2.3, female preponderance. Pulmonary tuberculosis have higher incidence in male. Tuberculosis lymphadenitis have higher incidence among female.

In the present study, the most common presenting complaint was swelling in neck. 100% (40 cases) patients had presented with this complaint. The next common complaint was fever, which was present in 34 cases (85%). Next complaint was cough in 16 cases (40%), pain in 10 cases (25%), loss of weight in 6 cases (15%), loss of appetite 4 cases (10%).

In the present study, the consistency of swelling was firm in 28 cases (70%), soft in 6 cases (15%), hard in 1 cases (2.5%), variable in 2 cases (5%), rubbery in 3 cases (7.5%). Swellings are fixed in 7 cases (17.5%).

In the present study matting seen in 19 cases (47.5% cases), Jha B.C. et al.<sup>39</sup> study showed matting in 38.3% of cases.

Most common side affected in the present study is right side 20 cases (50%), 14 Cases on left side, B/L are 4 cases, two cases presented with submental group

Most common group of lymph node affected in the present study is posterior triangle in tuberculosis. In the present study, the presentation of lymphomas was less when compared to tb lymphadenopathy and reactive lymphadenitis. Lymphomas constitute 6 cases (15%).

In the present study, 3 cases had lymph nodes which are rubbery and mobile in consistency, other cases had firm and fixed in consistency.

All cases of lymphomas are referred to oncology center for chemotherapy.

In the present study, second most common presentation was

reactive lymphadenitis after TB lymphadenopathy, which constitute 9 cases (22.5%), most common lymph node group involved in cases of reactive lymphadenitis was jugular group, consistency of lymph nodes soft in 6 cases remaining 3 cases had lymph nodes firm in consistency.

In the present study only one case (2.5%) had found to be secondaries of unknown origin, with hard and fixed lymph node of age more than 60 years.

As all cases were subjected for FNAC, only 3 (7.5%) cases are malignant remaining are benign (37 cases, 92.5%). In the benign lesions, TB lymphadenitis accounted for 24 cases (60%), 13 (32.5%) cases are reactive lymphadenitis.

In the present study, 32 cases are consistent with FNAC, remaining 8 cases are not correlating with FNAC findings. Hence the clinical diagnosis accuracy in the present study is 80%.

All 40 cases are subjected for FNAC and biopsy, among those only 5 cases are not consistent with biopsy and remaining 35 cases had similar diagnosis with that of FNAC and biopsy.

It is observed from this study data, FNAC form an important diagnostic tool to aid in the diagnosis of cervical lymphadenopathy as FNAC is very cost effective. It is safe and easy procedure. The most common cause of cervical lymphadenopathy was tuberculosis. The high incidence of TB in the study may be due to the endemicity of the disease in India. This may be explained by the fact that in a developing country like India, all cases of granulomatous lymphadenopathy were considered to be due to tuberculosis.

For reactive lymphadenitis, tubercular lymphadenitis medical treatment was instituted.

For secondaries and lymphoma, which needs radiotherapy, chemotherapy and expert oncologic surgeries, patients were referred to Institute of Oncology.

For all patients, necessary advice given and were asked to attend the surgical outpatient department for follow-up

## CONCLUSION

- Lymphadenopathy is clinical manifestation of regional as well as systemic disease of, which serves as excellent clue to diagnosis.
- It can be of benign or malignant cause.
- Tuberculosis was found to be the commonest cause of cervical lymphadenopathy which constitute 24 cases out of 40 patients, followed by reactive lymphadenitis which constitute 9 cases.
- Benign lesions were more common than malignant.
- Females were more commonly affected in tuberculous lymphadenitis.
- The most common group affected in tuberculous lymphadenitis was posterior group of lymph nodes.
- All the patients presented to the surgery OPD with palpable swelling in the neck and associated symptoms like pain, fever, cough which are variable in different patients.
- The response of tuberculous lymphadenitis to anti tuberculous treatment was excellent and all patients are recovered promptly
- The malignant lesions were referred to oncology center for further management.
- FNAC was done in all 40 cases, out of which it was compatible in 32 cases with clinical diagnosis.
- Accuracy of FNAC was found to be 80% when compared to clinical diagnosis.
- The accuracy of FNAC was found to be 100% in

tuberculous lymphadenitis, 69.2% in reactive lymphadenitis, 33.3% in diagnosing lymphomas, 100 % in secondaries.

- Thus FNAC was found to be simple, cost effective, reliable and cheap method of diagnosis of cervical lymphadenopathy, which can be carried out as an outpatient procedure with no significant morbidity and good patient compliance.

### Summary

- Tuberculous cervical lymphadenopathy is the most common disease affecting the cervical lymph node (60%) followed by reactive lymphadenitis (22.5%), secondaries (2.5%) and lymphomas (15%). We had no case of cat scratch disease, toxoplasma gondi or syphilis indicating these disease are very rare to cause cervical lymphadenopathy.
- The cases of secondaries in lymph node and lymphomas were referred to oncology centre for further management.

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