Original Research Article

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A prospective clinico-pathological study of cervical lymphadenopathy

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ABSTRACT

Background: Lymphadenopathy refers to one or more lymph nodes that are abnormal in size, consistency or number. There are various causes for lymphadenopathy which range from benign conditions to malignant either primary or secondary from draining primary tumour. Lymphadenopathy can be localised to a single group or generalised.

Methods: Prospective observational study was performed for the patients attending outpatient department of general surgery at Kamineni academy of medical sciences, LB nagar Hyderabad, Telangana with complaints of enlarged or swollen lymph nodes in the neck. This study included 46 cases. In cases where fine needle aspiration cytology was inconclusive and there was need for excision biopsy, only these cases were included in the study. After biopsy lymph node was sent for gross and microscopic examination for expert opinion from department of pathology.

Results: The present study includes 46 patients in a period of two years from 01-8-2015 to 31-7-2017. Of these case tuberculosis lymphadenopathy (n=25,54.3%) was the most common aetiology followed by nonspecific chronic lymphadenopathy (n=16,34.7%) followed by some relatively rare cases and unusual presentation Schwannoma, pleomorphic adenoma, Kikuchi disease, non-Hodgkin's lymphoma and secondaries from carcinoma tongue (n=1,2.1%).

Conclusions: In the present prospective study tubercular lymphadenopathy was the most common cause for cervical lymphadenopathy followed by chronic nonspecific lymphadenopathy.

Keywords: Cervical, Lymphadenopathy, Tuberculosis

INTRODUCTION

Lymphadenopathy refers to one or more lymph nodes that are abnormal in size, consistency or number. There are various causes for lymphadenopathy which range from benign conditions to malignant either primary or secondary from draining primary tumour. Lymphadenopathy can be localised to a single group or generalised. In this study we would like to study the clinical features and their correlation with pathological examination in cervical group of lymph nodes. The differential diagnoses for cervical lymphadenopathy are vast in general practice. Worldwide the most common

cause for cervical lymph node enlargement is infection including pyogenic and tuberculous.

In one large retrospective study from India in tertiary referral hospital studying diagnosis in 1724 patients who have undergone lymph node excision biopsy showed tuberculous adenitis in 31%, malignancy in 26% and had non-specific lymphadenitis in 31%. Lymph nodes which are interspersed in the intervening lymphatic channels vary in size from millimetre to centimetre. Generally, lymph node of size more than 1 cm in cervical region is considered significant. For axillary 0.5cm and for inguinal 1.5 cm. Definitive diagnosis is generally made on lymph node biopsy of most representative enlarged node. It allows view of complete architecture of node and

histopathological confirmation of pathology.³ Aim of the study was to perform a prospective clinical pathological study of cervical lymphadenopathy.

Objectives

- To study the demographic variables in cervical lymphadenopathy.
- To study the various causes of cervical lymphadenopathy.
- To study the incidence of tubercular lymphadenopathy.
- Sensitivity of FNAC among various aetiologies.

METHODS

Prospective observational study was performed for the patients attending outpatient department of general surgery at Kamineni Academy of Medical Sciences, LB nagar Hyderabad, Telangana, India with complaints of enlarged or swollen lymph nodes in the neck. This study included 46 cases. Tender lymph nodes were excluded from the study. Diagnosis was based on history, clinical examination, cytological and histo-pathological findings. A proforma was drafted which included relevant history, age, sex, contact with a tuberculosis patient.

Clinical examination included site, size, number, matting, surrounding skin changes and involvement of other groups of lymph nodes like axillary and inguinal. In case of clinical suspicion of secondaries primary area of drainage was examined to find out the primary tumour. After making a clinical diagnosis patient was subjected to fine needle aspiration cytology.

In cases where fine needle aspiration cytology was inconclusive and there was need for excision biopsy, only these cases were included in the study. After biopsy lymph node was sent for gross and microscopic examination for expert opinion from department of pathology. Patients were discharged and advised for follow up. Treatment was given as per histopathology report. Cases were referred to specific departments as per requirement.

Statistical analysis was done calculating sample percentage.

RESULTS

The present study includes 46 patients in a period of two years from 01-8-2015 to 31-7-2017. Of these case tuberculosis lymphadenopathy (n=25,54.3%) was the most common aetiology followed by nonspecific chronic lymphadenopathy (n=16,34.7%) followed by some relatively rare cases and unusual presentation Schwannoma, pleomorphic adenoma, Kikuchi disease, non-Hodgkin's lymphoma and secondaries from carcinoma tongue (n=1, 2.1%). In the case of carcinoma

tongue patient was followed in the department of surgical oncology and histopathology report was confirmed.

Out of 46 cases studied 22 cases were male and 24 cases female with a male: female (1:1.09). In the present study it was noted that majority of cases fell in the age group of 21-30 years (n=15,32.6%) followed by 31-40 (n=11,23.9%) followed by 11-20 (n=8,17.3%) followed by 0-10 years (n=5,10.8%) followed by 41-50 (n=4,8.6%) in 51-60 (n=2,4.3%) and above 60 years (n=1,2.5%).

Out of 46 cases n=34 (73.9%) cases were having unilateral cervical lymphadenopathy and n=12 cases (26.1%) were having bilateral lymphadenopathy.

Of the 46 cases n=6(13%) cases had history of contact tuberculosis patient, of these only n=2 (33.33%) were having cervical lymphadenopathy due to tuberculosis remaining n=4 (66.66%) were having chronic nonspecific lymphadenopathy as diagnosis.

Out of n=25 cases of tb lymphadenopathy n=14(56%) were females, n=24 (96%) cases had unilateral cervical lymphadenopathy and only n=2 (8%) cases had history of contact with tuberculosis. Fine needle aspiration cytology suggested tuberculosis in n=22(88%) cases.

Table 1: Age distribution.

Age distribution	No. of patients
0-10	5
11-20	8
21-30	15
31-40	11
41-50	4
51-60	2
>60	1

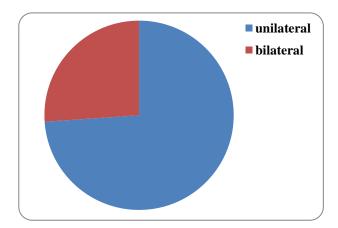


Figure 1: Unilateral versus bilateral.

Out of 16 cases of chronic nonspecific lymphadenopathy, n=8 (50%) cases were female, n=9 (56.2%) cases were bilateral, n=4 (25%) had history of contact with tuberculosis and fine needle aspiration was suggestive of nonspecific lymphadenopathy in n=14 (87.5%).

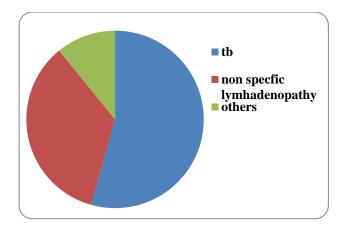


Figure 2: Aetiology.

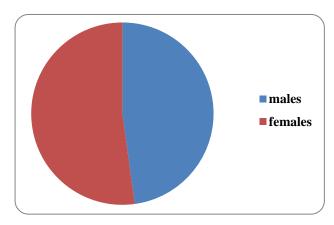


Figure 3: Sex distribution.

DISCUSSION

In the present prospective study tubercular lymphadenopathy was the most common cause for cervical lymphadenopathy followed by chronic nonspecific lymphadenopathy the results of which are consistent with the study.⁴⁻⁷

Table 2: Aetiology.

Name of study	Tubercular	Non specific	Others
Present study	54.3%	34.78%	10.8%
Jha BC et al ⁴	63.5%	15.5%	20.7%
Aurora B et al ⁵	62%	17%	21%
Padhy RK et al ⁶	45%	26%	29%
Vedi et al ⁷	50%	30%	20%

In this study most, common age of presentation was second and third decades (32.6%, 23.9%) followed by first decade (17.3%). These results are comparable to study most common second and third decades (25% and 32%).⁸ Followed by fourth decade (13.1%), SD Pamra, et al most common age group distribution second and third decades (25% and 35%).⁹ In the present study cervical lymphadenopathy was more common in females compared to males similar to Purohit et al.¹⁰ A study done by SD Pamra et al, described of the total cases of cervical

lymphadenopathy 57.08% were females similar to our present study where of the 25 cases of tubercular cervical lymphadenopathy 14 (56%) were females. In our study there is preponderence of unilateral cervical lymphadenopathy (73.9%) similar in comparison with other studies like Vedi et al (78.56), Padhy RK et al, (80%) and Baskota et al (83%). 67,11

Out of the 25 cases of tubercular cervical lymphadenopathy 22 cases had no significant history of contact with tuberculosis patient. Only 3 patients had history of contact with tuberculosis patient. Study done by Tripathy et al, had results of 78.8% and 19.1% for no history of contact and history of contact with tuberculosis patient respectively. The sensitivity and specificity of fine needle aspiration cytology for tuberculosis and chronic nonspecific lymphadenopathy of present study in comparison to other studies is mention in Table 3.

Table 3: Tuberculosis.

Study	Sensitivity	Specificity
Present study	95.4	83.3
Padhy et al ⁶	91.11	93.6
Biswas et al ¹³	86.6	100
Shreshta et al ¹⁴	85.7	99.8

Table 4: Chronic nonspecific lymphadenopathy.

Study	Sensitivity	Specificity
Present study	93.75	96.66
Padhy et al ⁶	89.65	95.96
Qadri et al ¹⁵	86	95.9

CONCLUSION

Tuberculosis is the most common cause for cervical lymphadenopathy. These patients need not have contact with a tuberculosis patient. Fine needle aspiration cytology is a reliable investigation for diagnosing tubercular lymphadenopathy.

However, excision biopsy remains gold standard for diagnosing tubercular lymphadenopathy. Early diagnosis with clinical examination and histopathology is possible and it can be cured with anti-tubercular drugs depending on regimen.

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Ethical approval: The study was approved by the

Institutional Ethics Committee

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