



Chronic Cervical Lymphadenopathy: A Clinico-Pathological Profile.

Dr Mogre D A

Intern , Rajiv Gandhi Medical College and Chhatrapati Shivaji Maharaj Hospital ,Kalwa,Thane

ABSTRACT

It has been documented that Cervical lymphadenopathy is the most frequent site of regional lymphadenopathy. Cervical Tuberculous lymphadenitis is the most common form of extra-pulmonary Tuberculosis. A single observer cross sectional prospective study was conducted in the department of Pathology of Rajiv Gandhi Medical College attached to a tertiary level Chhatrapati Shivaji Maharaj Hospital over the period of 1st of August 2011 to 31st of January 2012 total 250 cases of Cervical lymphadenitis were assessed clinically and by FNAC. In the cytological diagnosis, tubercular lymph-adenitis was most prevalent diagnosis (40.40%). Among the metastatic secondaries, squamous cell carcinoma was most common. Tuberculous lymphadenopathy was most common in third decade with a female preponderance. Posterior triangle (level V) groups of Lymph nodes were found significantly more involved by reactive and non specific lymphadenitis whereas Jugulo-diagastic (level II) were more commonly involved in TB. The clinico-pathological study of cervical lymphadenopathy will help clinicians in better managements of patients.

KEYWORDS

Cervical lymphadenopathy, Tuberculosis, Fine needle aspiration cytology (FNAC)

INTRODUCTION

It has been documented that Cervical lymphadenopathy is the most frequent site of regional lymphadenopathy[1]. The condition most commonly represents a transient response to a local or generalized infection or chronic infections including mycobacterial infections, viral infection and less frequently neoplasms, collagen vascular diseases, and medications[2]. Cervical Tuberculous lymphadenitis is the most common form of extra-pulmonary Tuberculosis [3]. Cervical lymphadenopathy remains a diagnostic and therapeutic challenge because it mimics other pathologic processes and yields inconsistent physical and laboratory findings[4]. Fine needle aspiration cytology (FNAC) is a easy, safe and cost effective procedure to diagnose lymphadenopathy.

Although there are many studies depicting the clinico-pathological presentation of cervical lymphadenopathy in children, similar studies of general population are few. This study aims to know the overall prevalence and the clinical manifestations of Cervical lymphadenopathy.

Image 1. Clinical photograph of patient with chronic cervical lymphadenopathy.

Aims and Objectives:

To Study the clinical manifestations of Cervical lymphadenopathy.

To know the distribution of various lesions amongst the patient population.

Materials and Methods:

A single observer cross sectional prospective study was conducted in the department of Pathology of Rajiv Gandhi Medical College attached to a tertiary level Chhatrapati Shivaji Maharaj Hospital, Kalwa, Thane, Maharashtra after taking approval from institutional Ethical committee.

STUDY SETTING : Pathology Department.

STUDY PERIOD: August 2011-January 2012, 6 months.

STUDY POPULATION: Comprised of all patients of cervical lymphadenopathy of both sexes regardless of the age with inclusion and exclusion criteria

SAMPLE SIZE : 250

INCLUSION CRITERIAS:

Patients with chronic cervical lymphadenopathy

Patients not responding to medical treatment.

Availability of informed consent and informed assent from parents or guardian.

EXCLUSION CRITERIA :

Who were unable to tolerate FNAC with local anesthesia due to concurrent medical or haematological conditions

Patients unwilling to give consents.

Data was collected from the case records of Patients with chronic lymphadenopathy who underwent Fine needle aspiration cytology (FNAC) during the study period. Data was recorded on proformas, including demographic characteristics and clinical features. The cytopathologic findings were also analyzed so as to find out the proportion of various causes of chronic cervical lymphadenitis.



RESULTS

The present study over the period of 1st of August 2011 to 31st of January 2012 total 250 cases of Cervical lymphadenitis were assessed clinically and by FNAC. Out of total 250 patients 142 were females and 108 were males with a mean age of 26.20 years [SD = 15.86yrs]. Age ranged from 1 month -80 years

Diagnosis	Number	Percentage (%)
Tuberculous lymphadenitis	73	29.20
Tuberculous Abscess	25	10.00
Tuberculosis with superadded infection	3	1.20
Granulomatous lymphadenitis suggestive of tuberculosis.	39	15.60
Reactive lymphadenitis	37	14.80
Neoplastic	15	6.00
Non specific lymphadenitis	21	8.40
No opinion possible	27	10.80
Miscellaneous	10	4.00
Total	250	100 %

Table 1.Prevalence of various lesions responsible for cervical lymphadenopathy.

101 patients [40.40%] presented with Tuberculous lymphadenitis ; the demographic distribution of patients with Tuberculous lymphadenitis is shown in fig 1.

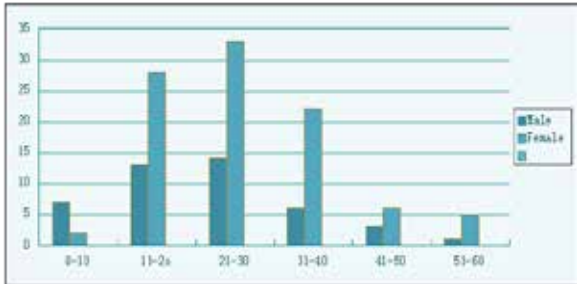


Fig 1 : Age-sex distribution of patients with tuberculous lymphadenitis.

Out of all the patients of tuberculous lymphadenitis 52 patients [51.48%] presented with fever , 20 patients [19.80 %] each presented with anorexia and significant weight loss. 28 patients [27.72 %] gave past history of Koch's and 7 patients [00.69 %] had history of hocks contact.

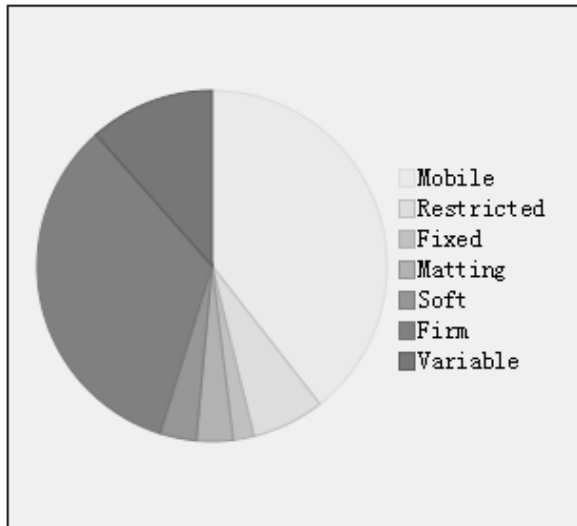


Fig 2 : Pie chart showing clinical characteristics of tuberculous lymphadenitis.

Average size of lymphnode in tuberculous lymphadenitis was 4.32 sq. cm, Granulomatous lymphadenitis 6.17 sq. cm , Neoplastic lymphnodes 8.12 sq. cm and no opinion was possible if size was less than 2.9 sq cm.

Out of all groups of lymph nodes as per American Academy of Otolaryngology and Head Neck Surgery (AAO-HNS) classification (level-I to VI) showed that tuberculosis most commonly manifested as upper deep cervical lymphadenopathy [Level II] 32 nodes [31.68%] ; followed by 26 [25.74%] posterior triangle nodes [Level V] rest all groups of nodes showed average 13.54 % incidence of tuberculosis. Reactive lymphadenitis was most common in posterior triangle nodes [Level V] 44.74 %] followed by Non specific lymphadenitis in posterior triangle nodes [Level V] 33.33%]. Rest site specific analysis was not significant.

Out of 15 patients of neoplastic lymphadenopathy 6 patients had metastatic squamous cell carcinoma 5 patients had lymphoreticular malignancy 2 patients had thyroid neoplasms one soft tissue neoplasm and 2 metastases of unknown origin.

Discussion :

The study documented the fact that out of 250 patients 104 patients [40.40%] presented with Tuberculous lymphadenitis and 39 patients [15.60%] had Granulomatous lymphadenitis suggestive of tuberculosis. reiterating the fact that the tuberculosis is the most common cause of cervical lymphadenopathy study by Bhatt et al showed that out of 532 patients , the tuberculous lesions were 276 (51.9 %) which is consistent with our findings.[5]

The lesions arising in the lymph node can be found in patients ranging from early to advanced age, in our study youngest patient was 1 month old and oldest was 80 years of age. The mean age was 26.20 years with standard deviation of 15.86 yrs . The prevalence of tuberculous lymphadenitis had maximum i.e. 47(46.53%) cases within the range of 21 to 30 years , Biswas also showed that peak TB lymphadenitis occurred in 2nd-3rd decades of life. [6]

A declining trend was noted in incidence of tubercular lymphadenitis after 30 years of age. It may be due to the development of immunity in older patients. Thus tuberculous lymphadenitis seems to affect the young adult age group. These findings are consistent with findings of other studies.[7]

In this study we noticed female predominance which is correlating with a study by Mansoor Ibrahim and Abdul-Aziz Sayed . [8]

The Constitutional symptoms in all the patients of tuberculous lymphadenitis such as fever with evening rise of temperature 52 patients [51.48%], anorexia and significant weight loss was seen in only 20 patients [19.80 %] of cases and .Jha et al have also reported similar findings.[9]

Clinical history of patients with tuberculous lymphadenopathy revealed 28 patients [27.72 %] cases had past history of Koch's with and 7 patients [00.69 %] had history of Koch's contact . This shows that tuberculous lymphadenitis could be due to reactivation of endogenous mycobacteria or reinfection where as history of Koch's contact in family doesn't show any remarkable effect as most of the study population consisted of young adults. However , Positive history of Koch's contact in the family was a significant epidemiological indicator of tuberculous glands in children , Narang et al.[10]

Palpatory findings of patients showed that most of the cases of tuberculous lymphadenopathy showed a solitary painless nodes with average size of 4.32 sq. Cm are firm in consistency 70(69.31%) and freely mobile 82(81.80%) .Only 7 [00.69 %] lymph nodes showed matting .None of the lymph nodes showed sinus formation or fistulous tracts or collar stud abscess of evidence of ulceration. This might be due to better immunity and early presentation of the disease. This study

is consistent with the changing clinical pattern of tuberculous lymphadenitis seen by Jha *et al*.

Tuberculosis most commonly manifested as upper deep cervical lymphadenopathy [Level II] 32 nodes [31.68%]; followed by 26 [25.74 %] posterior triangle nodes [Level V] where as Dass reported that upper jugular nodes were most commonly affected by TB.[11]

Supraclavicular (level VB) groups of lymph node were found to be involved mostly by malignancy . In contrast Jugulo-digastric (level II), groups were found to be involved most commonly and significantly by tuberculosis. However, involvement of the submental (level IA) group of lymph node was not significantly associated with any particular disease and Reactive lymphadenitis followed by Non specific lymphadenitis was most common in posterior triangle nodes [Level V] this can be predicted to some extent by the anatomical basis of lymphatic drainage of the primary sites especially the nasopharynx.[12]

The prevalence of malignancies was most common in the 4th and 5th decade caused by metastatic cervical lymphadenopathy; 6 patients had metastatic squamous cell carcinoma and 2 undifferentiated Carcinoma 5 patients had lymphoreticular malignancy 2 patients had thyroid neoplasms . Similar findings were revealed in many studies . [13,14]

CONCLUSION

The study concluded the fact that the tuberculosis is the most common cause

of cervical lymphadenopathy. The present study describes the age-sex distribution of chronic cervical lymph node diseases, their mode of presentation and predilection for different lymph node groups. The clinico-pathological study of cervical lymphadenopathy will help clinicians in better managements of patients.

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