

## Study of cervical lymphadenopathy

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**Abstract:** *Background:* Cervical lymphadenopathy is commonly seen in surgical practice. This study is aimed to study causes of cervical lymphadenopathy, age group of involment, group of lymph node involment and characteristic of involed lymph node. *Method:* Carried out by prospectively collected 78 cases of chronic cervical lymphadenopathy from the Department of General Surgery. *Results:* Tuberculous adenitis is the common cause of cervical lymphadenitis with 70% cases followed by chronic non-specific lymphadenitis with 15% cases, lymphoma with 5% cases, secondary carcinoma with 5% cases and drug induced 5%, there were 46% males and 54% females Most of the patients belong to the poor socio-economical class and commonest presenting symptom was swelling in the neck, unilateral lymph node involvement was seen in 90%, upper anterior deep cervical lymph node 46% followed by Sub-mandibular and sub- mental nodal involvement 26% cases were seen. *Conclusion:* Tuberculous adenitis is most common cause of cervical lymphadenopathy usually present as unilateral lymph nodes enlargement without constitutional symptoms upper and anterior deep cervical followed by sub-mandibular and sub-mental commonly involed lymph node.

**Keywords:** Cervical lymphadenopathy, Tubercular lymphadenitis, FNAC

### Introduction

Localized or regional lymphadenopathy is defined as the enlargement of lymph nodes within contiguous anatomic regions [1]. Neck is the most common site of peripheral lymph node enlargement, cervical lymphadenopathy, a common presentation, is frequently seen in children [2]. Based on duration, cervical lymphadenopathy is classified as acute lymphadenopathy (2 weeks duration), sub acute lymphadenopathy (2-6 weeks duration) and chronic lymphadenopathy which is considered as any lymphadenopathy that does not resolve by 6 weeks (Sambandan and Christeffi Mabel 2011) [3].

Etiological profile of cervical lymphadenopathy varies from region to region, in developing countries like India, acute respiratory infection, suppurative skin infection and tuberculosis are main causes for cervical lymphadenopathy while in developed countries secondary carcinoma are the most frequent causes for cervical lymphadenopathy [4]. Peripheral tuberculous lymphadenopathy is the commonest form of extra

pulmonary tuberculosis not only in the Indian subcontinent but also in most countries of Asia and Africa with varying frequency of 43-56% and cervical lymph nodes are the commonest to be involved [5].

Cervical lymph node metastases as a first symptom of cancer is a well-known fact. Carcinoma metastatic to the neck with an unknown primary tumor site accounts for approximately 3% to 5% of all head and neck cancers [6].

Fine needle aspiration cytology is a cheap and accurate first line investigation in lymphadenopathy [3]. Because of early availability of results, simplicity, minimal trauma and complications, the aspiration cytology is now considered as a valuable diagnostic aid and it provides ease in following patients with known malignancy and ready identification of metastasis or recurrence [7].

Here we are going to present our experience regarding cervical lymphadenopathy.

**Material and Methods**

The present study was carried out by prospectively collected 78 cases of chronic cervical lymphadenopathy from the Department of General Surgery, at Institute of Medical Sciences and Research, Mayani, Satara, Maharashtra, India from January 2013 December 2014.

In these patients, age group, sex distribution, socio economical class and incidence of tuberculosis in cervical lymphadenopathy were studied. History, clinical presentation and family history were recorded. Relative investigations were carried out which included Blood Picture, Erythrocyte Sedimentation Rate (ESR) and Chest X-Rays. FNAC was done for tissue diagnosis, and when FNAC was non-conclusive, other investigations like excision biopsies were done. Exclusion criteria included patients who were already diagnosed, on treatment and with relapses within 1 year of age and lymph node of size less than 1 cm. Data was collected, statistically analyzed.

**Results**

Causes	Number	Percentage
Tuberculous adenitis	55	70%
Chronic non-sp. adenitis	11	15%
Lymphoma	04	05%
Secondary CA	04	05%
Drug induced	04	05%
Total	78	100%

In the present series, Tuberculous adenitis is the most common cause of cervical of cervical lymphadenopathy.

Age	Number	Percentage
3-10	16	20%
11-20	20	25%
21-30	8	10%
31-40	26	35%
41-50	8	10%
Total	78	100%

In the present series, this is commonly effects in fourth and third decade, with minimum age of three years and maximum age of 50 years, ranging from 3 to 50 years.

Sex	Number	Percentage
Male	36	46%
Female	42	54%
Total	78	100%

Male: female ratio= 1:1.2

Income group	Number	Percentage
Low income upto Rs600/month	51	65%
Middle income Rs600-1500/month	23	30%
High income greater than Rs1500/month	4	05%
Total	78	100%

Urban/Rural	Number	Percentage
Urban	19	25%
Rural	59	75%
Total	78	100%

Symptoms	Number	Percentage
Swelling in neck	78	100%
Fever and cough	42	54%
Loss of weight and appetite	55	70%
Dysphagia and pain in throat	7	9%
Other symptoms involved	12	15%
Other lymph nodes involved	4	5%
<b>TB exposure history</b>		
Yes	9	12%
No	69	88%

Unilateral/Bilateral	Number	Percentage
Unilateral	70	90%
Bilateral with other groups involved	8	10%
<b>Parameters of enlarged lymph nodes</b>		
Firm, matted and mobile	23	30%
Firm and discrete	43	55%
Fluctuant without sinus	6	8%
Rubbery and discrete	4	5%
Hard in consistency	2	2%
<b>Affected group of Lymph nodes</b>		
Sub-mandibular and sub-mental	20	26%
Upper ant. deep cervical	36	46%
Upper post. deep cervical	12	16%
Lower ant. deep cervical	8	10%
Lower post. deep cervical	2	2%

<b>Table-7: Investigations</b>		
Radiological evidence of TB	Number	Percentage
No evidence (normal)	74	95%
Evidence of active TB	4	05%
Total	78	100%
<b>FNAC</b>		
Conclusive	70	90%
Non-conclusive	6	07%
Open biopsy	2	03%
Total	78	100%

**Discussion**

In the present series, tuberculous adenitis is the common cause of cervical lymphadenitis with 55 (70%) cases followed by chronic non-specific lymphadenitis with 11 (15%) cases, lymphoma with 4 (5%) cases, secondary carcinoma with 4 (5%) cases and drug induced 4 (5%). study conducted by Maharajan et al. (2009) causes of cervical lymphadenopathy were tuberculous lymphadenitis 54%, reactive hyperplasia 33%,

and metastatic lymphadenopathy 11.1%. In the present series, the disease commonly affects in the fourth and third decades of life, 17 (34 %) cases and 12 (24%) cases respectively [8].

Study conducted by (Abdul Qayoom Daudpota et al., 2013) shows tuberculous lymphadenitis 76.11%, reactive hyperplasia 11.67%, chronic non-specific lymphadenitis 8.89%, lymphoma 2.78%, metastasis to cervical lymph nodes 0.55%[9]. Bhatt et al. [10] in their study observed 51.9, 27.6, 9, 6.4, 2 and 2.3% lymph node involvement by T.B, Reactive hyperplasia, Abscess, Metastatic deposit from other primary Carcinoma, cystic deformity of lymph node, and lymphoma respectively. In the present series, the disease commonly affects in the fourth and second decades of life, 26 (35 %) cases and 20 (25%) cases respectively. While in the study conducted by Abdul Qayoom Daudpota et al. (2013) [9], cervical lymphadenopathy is more common below 30 years of age with 68.88% and in above 30 years it is 31.12%, and in the study conducted by Abdul Haque Khan (2011) age ranged from 12 years to 85 years.[11].

In our study, there were 36 (46%) males and 42 (54%) females Findings in present study are in concurrence with the studies like Mutiullah et al (1;1.4), Umer et al (1;2.8), and Sayyad et al (1;1.2) where female predominance was reported [4-6]. Peripheral tuberculus lymphadenopathy is the commonest form of extra pulmonary tuberculosis not only in the Indian subcontinent but also in most countries of Asia and Africa with varying frequency of 43-56% and cervical lymph nodes are the commonest to be involved [5]. Most of the patients of cervical lymphadenopathy in our study belong to the poor socio-economical class results are similar with other studies [9, 12].

In most of the cases the presenting symptom was swelling in the neck and few of them had other constitutional symptoms which were not significant, results are similar with other studies [9]. In our study, unilateral lymph node involvement was 90% and 10% having bilateral lymph node involvement results are

similar with other studies [13]. In our study, upper anterior deep cervical lymph node enlargement was seen in 46% of the cases while lower anterior deep cervical lymph node enlargement was seen in 10% cases. Upper posterior deep cervical lymph node was seen in 16% cases. Sub-mandibular and sub-mental nodal involvement comprised of 26% cases and lower posterior deep cervical lymph nodal involvement was seen in 2% cases.

Shaik et al. [10] described that posterior group of lymph node was most commonly affected (in 150 out of 200 patients), submandibular was the 2nd most common affected site. GROUP C: 78 Patients [14]. In our study, only 5% of the patient showed evidence of active tuberculosis on

radiology Abdul Qayoom Daudpota et al. (2013) showed 3.64% cases having the same[9].FNAC is conclusive up to 90% in our study as compared to 96% in the study conducted by Jilani S. Awati et al[14].

### Conclusion

Tuberculous adenitis is the most common cause of cervical of cervical lymphadenopathy commonly effects in fourth and third decade. Commonly seen in females, poor socio-economical class, swelling in the neck as common presenting symptom ,unilateral involvement upper anterior deep cervical lymph node followed by Sub-mandibular and sub-mental nodal enlargement was seen were commonly involved lymph nodes.

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