AN AUDIT OF 90 CASES OF CERVICAL LYMPHADENOPATHY AT TEACHING HOSPITALS

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ABSTRACT

BACKGROUND: Cervical lymphadenopathy is the enlargement of cervical lymph nodes beyond 1cm in diameter. It may be due to various causes and can involve different age group and sites.

OBJECTIVE: To find out various causes of cervical lymphadenopathies in the study group.

MATERIAL AND METHODS: This cross sectional study was conducted at Departments of ENT, Head and Neck Surgery, Saidu Teaching Hospital Swat, from April 2010 to June 2013. Patients having enlarged lymph nodes, of either sex and of any age were included in the study for the determination of frequency of various diseases in cervical lymphadenopathy. Clinically diagnosed cases of cervical lymphadenopathy as well as those patients not willing for admission were excluded from the study. Fine needle aspiration cytology (FNAC) was done in all patients for the diagnosis of various diseases. Specific investigations like pus for AFB/culture and excisional/incisional biopsy employed in patients in whom FNAC was inconclusive.

RESULTS: Out of 90 patients, 47 (53%) females and 43 (47%) were males. Most of the patients were between 1-10 years. Chronic granulomatous diseases especially the tuberculous cervical lymphadenopathy was the most common histological diagnosis in 32(36%) patients, lymphoma 22 (24%), reactive hyperplasia in 20(22%), metastasis to cervical lymph nodes in 15 (17%), and non-specific lymphadenitis in 2(1%) case.

CONCLUSION: Tuberculosis is still the commonest cause of cervical lymphadenopathy in this region after excluding reactive hyperplasia.

KEY WORDS: Cervical lymphadenopathy; histopathology; causes.

INTRODUCTION

Lymphadenopathy refers to abnormal nodes in terms of either size, consistency or number. The common causes include infection, autoimmune diseases or malignancies. There are various classifications of lymphadenopathy, but a simple and clinically useful system is to classify lymphadenopathy as "generalized" if lymph nodes are enlarged in two or more noncontiguous areas or "localized" if only one area is involved^{1,2}.

Cervical lymphadenopathy is the increase in the size of cervical lymph nodal tissue by more than 1 cm in diameter. Cervical lymphadenopathy is a manifestation of a spectrum of diseases ranging from benign to malignant^{1,2, 3}. Lymphadenopathy

can involve different age groups and any site of the body. Various diseases that may lead to enlarged cervical lymph nodes include tuberculosis, lymphoma and metastatic focus of malignant lesions of head and neck.^{1,4} Cervical lymph nodes may get enlarged due to different diseases, like tuberculosis, lymphoma, metastatic focus of malignant lesions, sarcoidosis and other viral and bacterial infections of head, neck, throat and face.

Despite the decline of pulmonary tuberculosis in western world, incidence of tuberculous lymphadenitis has remained same⁷. Cervical lymph node tuberculosis being the most common manifestation accounting for almost 50% of the cases of extra-pulmonary tuberculosis⁸. It is

recommended that there should be access for all patients with cervical lymphadenopathy to weekly neck lump clinic with standardized protocols for lymphoma diagnosis⁹. Hodgkin's lymphoma, squamous cell carcinoma and metastatic carcinoma can co-exist in cervical lymph nodes.¹⁰

The objective of this study was to find out various causes of cervical lymphadenopathy in the study group.

MATERIAL AND METHODS

This cross sectional study was conducted at Departments of ENT, Head and Neck Surgery, Saidu Teaching Hospital Swat from April 2010 to June 2013. A total of 90 patients of either sex and age having enlarged lymph node(s) not responding to conservative treatment were included in the study. Also those cases in whom there was suspicion of malignancy on the FNAC (Fine needle aspiration cytology) report was also included in the study. Clinically diagnosed cases of cervical lymphadenopathy as well as those patients who were not willing for admission were excluded from the study. An informed consent for recruitment into the study was obtained from all patients. A detailed history of neck node was taken. The node was examined for site, size, number, and relation to underlying structures.

Clinical presentation and history of contact with tuberculosis, duration of illness and other relevant information were also obtained and a separate proforma was filled for each patient. Following investigations were carried out in all cases, complete blood count, erythrocyte sedimentation rate (ESR), chest x-ray, ultra sound of the neck and FNAC of the lymph nodes. Specific investigations like pus for AFB (acid fast bacilli) culture and excisional/incisional biopsy of lymph node were employed in patients in whom FNAC was inconclusive.

Statistical analysis was done using SPSS version 10. The frequencies and percentages were

calculated for qualitative variables like gender of patients, age grouping, side and level of the neck involvement. Mean and $\pm$ SD was calculated for quantitative variables like age of the patient.

RESULTS

A total of ninety (90) patients were included in the study. Chronic granulomatous diseases especially cervical lymphadenopathy due to tuberculosis was the most common histological diagnosis in 32(36%) patients, lymphoma 22 (24%), reactive hyperplasia in 20(22%), metastasis to cervical lymph nodes in 15 (17%), and non-specific lymphadenitis in 2(1%) case. There were 47(53%) females and 43(47%) male. Most of the patients 27(30%) were between 1-10 years. Lymph nodes involvement on the right side was more common 40 (44%) than on the left side 35(39%). Lymph nodes at level III 27(24.3%) were the most common group enlarged followed by level I 24 (21.6%). In 10 (9.9%) of the patients all levels of the cervical lymph nodes were enlarged. (Table. 1)

Table-1: Various Characteristics Of Patients With Cervical Lymphadenopathy (n=90)

CHARACTERISTICS	No. of Patients (%)	MEAN/RATIO
Gender		
Male	43 (47%)	
Female	47 (53%)	
Age (in years)		
01 – 10 years	27 (30%)	
11 – 20 years	25 (27.7%)	
21 – 30 years	14 (15.5%)	
31 – 40 years	10 (11.1%)	
41 – 50 years	03 (3.3%)	
51 – 60 years	10 (11.1%)	
61 – 70 years	01 (1.1%)	Mean age = 32.55 $\pm$ 13.63
Frequency of various causes (diseases)		
Chronic granulomatous diseases	32 (36%)	
Reactive hyperplasia	20 (22%)	
Metastatic carcinoma	15 (17%)	
Lymphoma	22 (24%)	
Schwanomma	02 (01%)	

Laterality		
Left side	35 (39%)	
Right side	40 (44%)	
Bilateral	15 (17%)	
Levels of neck involved		
Level I	24 (21.60%)	
Level II	08 (07.20%)	
Level III	27 (24.30%)	
Level II & III	16 (14.40%)	
Level IV	00 (00.00%)	
Level V	05 (04.50%)	
Level VI	00 (00.00%)	
Level VII	00 (00.00%)	
All levels	10 (09.90%)	

DISCUSSION

Majority of the patients in the present study were in the first decade of their life. Almost similar results were also reported in a local study in which age of the patients ranged between 10-70 years¹¹. In one study the commonest age group affected was 11-20 years and constitutional symptoms were not present in most of the patients¹². Contrary to these reports, in another study the age group mostly involved was 21-40 years¹³. Results of another study showed that the maximum number of patients (68.75%) was in pediatric age group¹⁴.

In the present study predominantly females (53%) were affected, as supported by the results in a study from India¹⁵. But other studies have reported male preponderance as compared to females^{16,17}. Similarly males were predominantly involved with tuberculosis in a local study conducted by Siddiqui FG, and Ahmed Q showing that 52.9% of cases were male and 47.1% were female¹⁸.

In this study besides tuberculous cervical lymphadenopathy, reactive hyperplasia was found in 22% cases, metastasis to cervical lymph nodes in 17%, lymphoma in 24% and non-specific lymphadenitis in 1% case. Similar results are reported in a study conducted in Kathmandu, in which causes of cervical lymphadenopathy were tuberculous

lymphadenitis (54%), reactive hyperplasia (33%) and metastatic lesion in lymph nodes (11.1%)¹⁹.

Similar to our reports another local study reported that out of total 220 patients with enlarged neck lymph nodes tuberculous lymphadenitis was the most common occurrence (70.45%)²⁰. Choudury N²¹ reported that all of the tuberculous patients they studied, 58% had cervical adenitis at presentation. Another study showed an incidence of 36%, although tuberculosis had been the major cause of lymphadenopathy in their study as well but total incidence was lesser as compared to our study. This disparity might have been due to differences in patient selection and local referral pattern²².

Cervical lymph node involvement at level III(24.3%) was the most common site, followed by level I(21.6%). A study conducted at Khatmandu Medical College also showed that posterior cervical lymph does at level VI were affected in 42% cases followed by level II and III (16%) and level I lymph nodes in 15% of cases¹⁷. In a local study out of 200 cases 150 patients had involvement of level VI cervical lymph nodes, while level I i.e submandibular lymph nodes were the 2nd most common affected site in the neck. In that study like our results. In majority of the cases there was unilateral cervical lymph node involvement²³.

The present study is limited because of the small study group. A large sized, prospective, randomized and a multi centre study is recommended to study the various causes of cervical lymphadenopathy.

CONCLUSIONS

Tuberculosis is still the commonest cause of cervical lymphadenopathy in this region after excluding reactive hyperplasia. Open biopsy of cervical lymph node is not recommended in a clinically suspected case of metastatic lymphadenopathy. Such cases should be initially evaluated with vigilant clinical and radiological

evaluation and panendoscopy followed by FNAC of the lymph node.

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