FREQUENCY OF TUBERCULOSIS IN CERVICAL LYMPHADENOPATHY, OUR EXPERIENCE

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ABSTRACT

Objective: To find the frequency of tuberculosis in patients presenting with cervical lymphadenopathy.

Materials and method: It was a descriptive study of 2 years duration from 1st Jan 2011 to 31st Dec 2012, conducting in the Surgical department of Hayatabad Medical Complex Peshawar. A total of 214 patients of either gender and of any age who presented to the Out Patient Department (OPD) in these 2 years with cervical lymphadenopathy for more than 2 months were included and those with cervical lymphadenopathy of less than 2 months duration were excluded.

Results: In our study out of 214 patients 124 (57.9%) were male and most 133/214 (62.1%) were in 16-40 years age group. Majority of cervical lymphadenopathy was diagnosed as tuberculosis 143/214 (68.8%) followed by reactive hyperplasia 25/214 (11.7%) and metastatsis from unknown origin 21/214 (9.8%). The nodes found were mostly 137/214 (64%) matted and 77/214(36%) discretely enlarged.

Conclusion: Tuberculosis is still the most common cause of cervical lymphadenopathy in this part of the world.

Keywords: Cervical lymphadenopathy, tuberculosis.

INTRODUCTION

Cervical lymph nodes enlargement is a clinical manifestation of a variety of benign and malignant diseases which requires invasive investigations for proper diagnosis.[1] Tuberculosis is one of the most common cause of cervical lymphadenopathy which may present as a distinct entity or as a part of systemic tuberculosis.[1,2] Chronic cervical lymph node enlargement is a diagnostic dilemma for the clinicians as it may harbor an underlying disease. In the western countries chronic cervical lymphadenopathy due to tuberculosis is not relevant as compare to our country where it is a common problem.[3,4] Despite the decline of pulmonary and visceral tuberculosis in the west, incidence still remains high of tuberculous lymphadenitis in Pakistan.[5]

The most common extra-pulmonary manifestation of tuberculosis is lymph nodes involvement.[6]It remains a diagnostic and therapeutic challenge because it mimics other diseases like lymphoma and metastases from head and neck malignant tumours. The tuberculous lymphadenitis most commonly present as neck swelling followed by fever, weight loss and cold abscess which may burst forming a discharging sinus and non-healing ulcer.[2]

A detailed history followed by complete physical examination, routine pre-operative investigations and staining for acid-fast bacilli (AFB), fine needle aspiration cytology (FNAC) and excisional biopsy enable early diagnosis.[7] To confirm the histopathological diagnosis, an excision biopsy should be performed on the largest palpable and most firm node excised in total with intact capsule.[8]

The objective of this study was to determine the proportion of tuberculosis in patients with cervical lymph node enlargement, who presented to the Out Patient Department (OPD) of these two tertiary care hospitals. Tuberculosis is a curable disease if diagnosed and treated on time, is the commonest cause of cervical lymph nodes enlargement which is rare in the western world but it is still very common in Pakistan which poses a serious threat not only here but globally.

METHODOLOGY

This descriptive study was undertaken at the Surgical Department of Hayatabad Medical Complex from 1st Jan 2011 to 31st Dec 2012 (2 years duration). Patients with enlarged cervical lymph nodes for more than two months duration of either sex and of any age who presented to the OPD in these two years were included and those with cervical lymph node enlargement of less than 2 months duration were excluded. Sampling was done through consecutive sampling (non-probability), a total of 214 patients, with 95% confidence interval and 90% power of test under WHO software for sample size was determined.

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The study was conducted after getting approval from hospital ethical and research committee. The patients meeting the inclusion criteria were included in the study through OPD/ER department. The diagnosis of cervical lymphadenopathy was based upon complete head and neck examination and ultrasound confirmation of enlarged lymph nodes. The purpose, risks and benefits of the study were explained to all included patients, they were assured that the study is purely conducted for research and data publication and a written informed consent was obtained from all included patients.

Detailed history was taken from all patients followed by complete physical examination and routine pre-operative baseline investigations. Lymph nodes were examined for site, size, number, whether matted or discrete, presence of tenderness, consistency, and their relation to underlying structures. All the patients with cervical lymphadenopathy were sent for FNAC and later excision biopsy was performed under local anesthesia on same patients for confirmation of diagnosis. In case of cold abscess, the biopsy was taken from the wall of the lymph node. A diagnosis of tuberculosis was confirmed by demonstration of epitheloid granulomas with caseation necrosis on histopathological examination.

Post operatively all patients were kept under observations for 4 hours in ward and were sent home once stable. Postoperatively all patients were followed at regular intervals and finally once the biopsy results came patients were put on anti-tuberculous treatment. All the above-mentioned information including name, age, gender, address and telephone numbers were recorded on a pre-designed proforma.

All the data was entered and analyzed in SPSS 16(version 16). Frequencies and percentages were calculated for categorical variables like Gender and effectiveness. Mean+ SD was calculated for numerical variables like age. P value of < 0.05 was considered significant. All the results were presented as tables.

RESULTS

In our study, out of 214 patients who presented to the OPD, 124 were male (57.9%) and 90 were females (42.1%) with a male to female ratio of 1.4:1 (Table-1).

Most of the patients 62.1% (133/214) presented in the age group of 16-40 years (Table-2). Majority of the patients had matted enlarged lymph nodes (62%) while discrete lymph nodes were found in 36% patients (Table-3).

Majority of the patients (143/214) with cervical lymphadenopathy were diagnosed of having tuberculosis (68.8%) with reactive hyperplasia found in 25/214 (11.7%) patients (Table-4).

DISCUSSION

Table 1: Sex Distribution

Gender	No. of patients	Percentage
Male	124/214	57.9%
Female	90/214	42.1%

Table 2: Different Age Groups Affected

Age	No. of patients	Percentage
Less than 15 years	54/214	25.2%
16-40 years	133/214	62.1%
More than 40 years	27/214	12.6%

Table 3: Types of Node

Types of nodes	No. of patents	Percentage
Matted	137/214	64%
Discrete	77/214	36%

Table 4: Causes of Cervical Lymphadenopathy

Causes	No. of patients	Percentage
Tuberculosis	143/214	68.8%
Reactive hyperplasia	25/214	11,7%
Metastasis from unknown	21/214	9.8%
Lymphomas	18/214	8.4%
Kikuchi disease	4/214	1.9%
Rosai-Dorfman disease	3/214	1.4%

In our study 68.8% patients were having cervical lymph node enlargement due to tuberculosis diagnosed on excisional biopsy. It was consistent with a study conducted on clinically suspected 147 patients which showed tuberculous lymphadenopathy in 72.8% patients.[9] A local study showed 70% patients having tuberculosis infection[10] while another study showed this incidence to be 57.2%.[11] Choudary et al[12] reported 58% patients were having cervical lymphadenitis at presentation, of all the patients they studied. Another study showed an incidence of tuberculous lymphadenitis to be 36%, although tuberculosis had been the major cause of lymphadenopathy in their study as well but

values reported were less than those of our study. This disparity may be due to differences in patient selection and local referral pattern.[13]Our study also found very similar findings to a study conducted in Kathmandu.[14]

The ratio of male to female is 1.4:1 with the majority of the patients between 16-40 years. Another local study also showed similar results.[15] In another study 11-20 years is the commonest age group affected with less constitutional symptoms.[16] A study from India[17] reported more female involvement while most of the studies showed male preponderance.[18,19] Several factors may be playing this role in these marked differences in results, including treatment compliance, patient selection, social and cultural background, financial status of the patient and health care system of the country.

Tuberculous lymphadenitis has a broad spectrum of presentation; from solitary to multiple lymph node site involvement, which may be matted or discrete and may involve any group or may present as a cold abscess or discharging sinus. This spectrum was observed in this study as well as other studies.[20,21] Most of the patients in our study had matted lymph nodes and this was also seen in another study.[22] In our study posterior cervical lymph nodes were most commonly involved (50%), followed by submandibular lymph nodes (31%), and this finding is also supported by a study from Kathmandu, in which posterior cervical lymph nodes were affected in 42% cases followed by upper deep cervical 16% and submandibular lymph nodes in 15% cases.[14] In a local study out of 200 cases, 150 (75%) patients had involvement of posterior group of cervical lymph nodes, whilst submandibular lymph nodes were the 2nd most common affected site in the neck.[15] These findings were contrary to those of Dandapat et al in which the most common group affected was upper deep jugular followed by jugulodigastric node.[23]

CONCLUSION

Tuberculosis is still the most common cause of cervical lymphadenopathy in this part of the world. Tuberculosis is a curable disease when diagnosed and treated on time.

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