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RESEARCH ARTICLE

TREATMENT OUTCOME OF TUBERCULOUS LYMPHADENITIS

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ABSTRACT

Objective: To evaluate treatment outcome of tuberculous (TB) lymphadenitis at Bhausaheb Sardesai Talegaon Rural Hospital (BSTRH), Attached with M.I.M.E.R. Medical college, Talegaon Dabhade, Maharashtra.

Results: Of total 757 tuberculosis cases and 202 extrapulmonary amongst them, 70 (9.24%) patients had TB lymphadenitis.The mean age was 28.8±12years. Commonly affected site observed cervical group 40 (57.1%) with single node involvement seen in 54 (77.1%) cases. Sputum AFB positive in 1 patient (1.4%), HIV association seen in 3 (4.3%) cases. Fever and anorexia were most frequently reported sympoms. Fine needle aspiration showed positive results in majority of cases 61 (n=70, 87.1%). One (1.4%) patient diagnosed multiple drug resistance. Paradoxical reaction was observed in 5 (7.2%) patients. All patients were treated with Directly Observed Therapy. Fifty nine (84.3%) patients were treated successfully, 4 (5.7%) patients required extension of treatment. five (7.2%) patients exhibited paradoxical reaction, one (1.4%) patient showed relapse. One(1.4%) patient diagnosed multiple drug resistance and required 2nd line of antitubercular treatment.

Conclusion*:* Lymphnode is commonly affected organ by tuberculosis (9.24%). Lymphnode tuberculosis is most common form of extrapulmonary tuberculosis (34.6%). Incidence was slightly higher in female than male gender. FNA is most reliable diagnostic test. TB lymphadenitis cases showing paradoxical reaction and or relapse should be subjected for drug susceptibility testing to rule out drug resistant tuberculosis.

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INTRODUCTION

Tuberculous lymphadenitis is the most common form of extrapulmonary tuberculosis. It has been also called as "scrofulla." In Europe, it was known as "King's Evil," where the royal touch was believed to cure the the disease untill 18th century (Grzybowsky and Allen, 1995). Lymphnode tuberculosis constitutes 20-40% of extrapulmonary tuberculosis (Guptam, 2004). Cervical lymphnodes are the most common site of lymphnode group involvement by tuberculosis. It is reported in 60 to 90% patients with or without involvement of other lymphoid tissue (Mohpatra and Janmeja, 2009). Tuberculosis can spread to other body tissues and organs through the blood stream and the lymphatic system (Fuentes and Caminero, 2006). Tuberculous lymphadenopathy is usually postprimary and primary site is usually in the lung. It may be a manifestaion of systemic tuberculosis including pulmonary TB or a unique clinical entity localized to neck (Shah *et al*., 2013). It presents with single or multiple painless lump, commonly located in the posterior cervical or supraclavicular region.

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Though tuberculous lymphadenitis is most common form of extrapulmonary tuberculosis in developing countries including India, chest radiology is not emphasized in common practices. Chest x-ray should be obtained in all patients suspected to be suffering from tuberculous lymphadenitis, it not only exclude any coexisting intrathoracic disease but the presence of an active or healed pulmonary lesions. Frequency of associated pulmonary involvement varies from 5 – 62% (Guptam, 2004).

Objective

Objectives of this study were to find out abnormalities and diversities of findings on the chest x-ray PA view in confirmed cases of tuberculous lymphadenitis and incidence of associated pulmonary TB.

MATERIALS AND METHODS

This study was conducted in the Dept of Pulmonology, MIMER Medical College. Bhausaheb Sardesai Rural Hospital, MIMER medical college, Talegaon is tertiary care centre and referral centre for tuberculosis patients. All patients with confirmed diagnosis of tuberculous lymphadenitis from year

2012 to 2015 were studied prospectively. The study was approved by the Ethics Committee of MIMER Medical college. Informed consent was obtained from each patient before inclusion in the study. Patients attending the chest out patient department and referred from medicine/ paediatric, otorhynolaringology and surgery department of study centre with peripheral, superficial lymphnode enlargement were assessed for inclusion. General clinical assessment using medical history, physical examination and routine laboratory test was performed. Fine – needle aspiration cytology and or lymph node excision biopsy were performed to establish the diagnosis. Chest x-ray posterior anterior (PA) view was performed in each cofirmed case of tuberculous lymphadenitis. Chest x-ray findings were classified as pulmonary infiltrate, cavitations, hilar or paratracheal lymphnode enlargement, pleural effusion presented as obliteration of costophrenic angle. Unilateral, bilateral or extensive involvement with any other abnormality recorded.

Statistical analysis

The data were analyzed using statistical software SPSS version 16. The data with quantitative variables are presented as mean (± standard deviation).

Table 1. Chest X-Ray findings in association with Tuberculous Lymphadenitis

CXR findings	No of patients showing findings
Infiltration	3
Hilar Lymphnode enlargement	3
Pleural Effusion	1
Upper lobe cavity with Medial end of Clavicle showing Lytic lesions	1
Total	8

n=70, CXR lesions= 11.42%

RESULTS

Total 70 patients, with mean age of 28.8±12 years were included in the study. Of 70, 29 cases (41.4%) were male and 41 cases (58.6%) were female. With the male to female ratio 0.71:1.00. Incidence of TB lymphadenitis was highest among the age group of 20-29 years (38.6%). Commonest site of distribution of lesion reported was cervical group of lymphnode (57.1%) followed by axillary (12.9%), submandibular (12.9%) and supraclavicular (10%). Of 70 cases of tuberculous lymphadenitis, normal CXR was in 62 cases (88.57%), while abnormal CXR in 8 cases (11.42%). Lung Parenchymal lesion was the commonest radiological finding. Pulmonary infiltrate and cavity seen in 4 cases (5.7%). Distribution of infiltrates and or cavity was predominently in upper lobes. Right lung was involved more commonly, 3cases (4.2%) and bilateral lung involvement in one case (1.42%). Hilar lymphnode enlargement was found in 3 cases (4.28%), 2 patient's cxr showed bilateral hilar lymphnode and in one x-ray it was right hilar lymphnode enlargement. Pleuaral effusion was seen in 1 case (1.42%) radiologically presented as obliteration of right costophrenic angle. Bony involvement was found in one case (1.42%) in the form of medial end of right clavicular lytic lesions associated with right upper lobe cavity which is a rare finding. This finding was confirmed with CT thorax and showed improvement after treatment. Abnormal chest x-ray finding was associated predominently with cervical group of lymphnode tuberculosis, was seen in 5 cases of cervical lymphnode TB, 2 cases of supraclavicular lymphnode TB and one case of mesentric lymphnode TB. 7 patients out of 8 with abnormal cxr were chest asymptomatic while only one case was chest symptomatic. In one case sputum AFB examination was positive.

DISCUSSION

Cervical tuberculous lymphadenitis is one of the commonest form of extrapulmonary tuberculosis. It may be purely a localised disease or a local manifestation of systemic disease. Incidence of tuberculous lymphadenitis is more in female children and young females (Sangeeta Sharma *et al*., 2010; Dutta and Gupta, 2014). This observation is confirmed in this study, male to female ratio of affection is 0.71:1.00. Diagnosis of TB cervical lymphadenitis is usually done by FNAC. FNAC of lymphnode was the most common first line method to establish the diagnosis of tuberculous lymphadenitis (Amer Hayat Khan *et al*.,). In patients with TB lymphadenitis, chest x-ray abnormalities may be classified into parenchymal, hilar, mediastinal, paratracheal and plural. In tuberculous cervical lymphadenitis, chest x-ray findings consistant with TB may be seen in 14-20% cases (Bayazit *et al*., 2004). Fontanilla et al has mentioned, chest radiograph findings may be positive in 10-40% of patients and positive sputum AFB stains or culture results may be present for a small proportion of HIV-negative cases (Fontanilla *et al*., 2011). In present study, normal chest skiagram was found in 88.57% cases and abnormal chest skiagram was noted in 11.42% cases. In study of cervical tuberculous lymphadenitis done at Government Medical College hospital Chandigarh, India; chest lesions on radioghraphy were evident in 16% of the patients (Jha *et al*., 2001). Bhattacharyya SK et al reported normal chest x-ray in 72.13% cases and abnormal chest x-ray in 27.87% cases with pulmonary infiltration was observed as the commonest radiological findings (17.49%) followed by hilar enlargement (9.29%), right paratracheal opacity (1.09%), obliteration of costophrenic angle (1.64%) and milliary mottling(0.55%) cases (Bhattacharyya *et al*., 2013). Multicentre operational study done by Jindal SK in India reported presence of localised infiltrate only in six patients while in 404 patients cxr was normal (Jindal *et al*.,). In study done at referral centre of Northern India, chest x-ray suggestive of TB was seen in 14.7% of cases (Singh and Tiwari, 2016). After reviewing various studies, it shows that chest x-ray abnormal findings in tuberculous lymphadenitis exhibits varied percentage of affection but hilighting its importance.

Conclusion

To conclude, routine chest x-ray PA view should be done in all chest asymptomatic tuberculous lymphadenitis cases before categorisation of patient. Provision for chest x-ray in extrapulmonary TB might prevent underestimation of the coincidence of pulmonary TB.

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