



Extrapulmonary Tuberculosis Manifested as Cervical Lymph Adenitis in a Teenage Girl: A Case Report

* B.J. Deepthy ** K.R. Ramkumar

* Assistant Professor, Department of Microbiology, DM WIMS, Meppady, Wayanad District, Kerala, India.

** Department of Pathology, DM WIMS Medical College, Wayanad, Kerala, India.

ABSTRACT

A 16 year old girl visited our hospital with painless swelling of the left side of the neck which was becoming progressively prominent. Laboratory data were normal except for elevated erythrocyte sedimentation rate (ESR) and lymphocytosis. Fine needle aspiration cytology of the node revealed granulomatous lesion comprising of epithelioid cells, a few Langhans giant cells, and lymphocytes in caseous material. Smear of Fine needle aspirate revealed acid fast bacilli, morphologically resembling tubercle bacilli. Extra-pulmonary Tuberculosis was confirmed and anti-tuberculosis treatment initiated. Lymphocytic TB is becoming common in teenage children, which makes these findings worth reporting.

Keywords : Extra-pulmonary tuberculosis, Tubercle bacilli, lymphadenitis, Acid Fast Bacilli

Back ground: *Mycobacterium tuberculosis* (*M. tuberculosis*) primarily causes pulmonary and extra-pulmonary tuberculosis. Extra-pulmonary sites of involvement are lymph nodes, bones, brain, skin, renal and genito urinary system. Lymphatic TB is the commonest extra pulmonary tuberculosis¹ and is more common among women^{2,3,4}.

Diagnosis of extra pulmonary tuberculosis is very difficult due to restriction in diagnostic tests. This report presents a case of extra pulmonary tuberculosis exhibited as cervical lymphadenitis in a 16 year old girl.

Case presentation: A 16 year old girl was referred from ENT department with a history of swelling in the left side of the neck (figure 1). There was no past history of fever, cough or weight loss. Physical examination revealed one firm and painless lymph node of 2X2 cm, on the cervical region. Radiograph of chest and neck revealed normal lung fields, but soft tissue opacity on either side of C3-C7 vertebrae with no obvious intra thoracic extension.



Result: The lymph node aspiration revealed cheesy material. The smear revealed well formed granulomatous lesion comprising of epithelioid cells, a few Langhans giant cells,

and lymphocytes in a caseous back ground. The smear examined for AFB revealed acid fast bacilli morphologically resembling tubercle bacilli.

Two sputum samples collected from the patient and tested for acid fast bacilli by Ziehl Neelsen staining were negative thus confirming extra-pulmonary TB. A sample biopsy was suggested for documenting diagnosis of extra-pulmonary tuberculosis. The histopathological findings of granuloma with caseation are highly suggestive of tuberculosis. However, the diagnosis should be confirmed by detecting AFB by culture on LJ medium.

Discussion: Tuberculosis is an important infectious disease which can involve respiratory system and other organs. It is caused by the bacillus *M. tuberculosis*. *M. tuberculosis* infects about one third of the world's population and kills about three million patients each year and so is the single most important infectious cause of death.³ Superficial lymph nodes are one of the common sites of involvement and this constitutes 20-40% of extra-pulmonary tuberculosis. It is more common in children and women. We are reporting lymph adenitis in a 16 year old girl and there are studies which prove the same conditions in young adults of 12-20 years of age⁹. Some studies represents a wide range of patients in all age groups¹⁰. Dandapat *et al* reports a higher incidence of tubercular lymphadenitis in female patients and explains that females are more conscious of their appearance and in a male dominated society they have a low nutritional status.

The most common systemic symptoms of malaise and weight loss were not present in the present reported case. She had no history of fever, chronic cough or weight loss and she don't have any previous history of close contact with tuberculosis. But there are studies reporting weight loss in 77% and fever in 73% cases¹¹. So in this respect our observation differs significantly from those of others.

Fine needle aspiration cytology (FNAC) is a well established diagnostic tool in assessment of cervical masses. In the developing countries where tuberculosis infection is common and other granulomatous diseases are rare, the presence of

granulomatous features on FNAC is highly suggestive of tuberculosis¹². In this case we found it a very useful diagnostic tool to identify the infection.

Conclusion: Cervical lymphadenopathy is a presentation of tuberculosis, however other diagnosis should be ruled out. Patients with cervical lymphadenitis should be properly screened and fully investigated to rule out extra-pulmonary tuberculosis. This will increase the possibility of early diagnosis, as well as proper and early management. It is difficult

to rule out active tuberculosis in other organs⁶. Culturing for tubercle bacilli is very sensitive and it is the standard test for detection of tuberculosis but it is time consuming^{7, 8}. Early diagnosis of extra pulmonary tuberculosis in a resource limited setting can be achieved with FNAC and Ziehl nelson staining technique. This will ensure prompt treatment and thus reduces mortality and morbidity.

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