

Case Report

A case report on caseating tuberculous lymphadenitis and anti-tuberculosis treatment induced hepatitis in the backdrop of undifferentiated connective tissue disorder

Bincy Charley^{1*}, Archana Rajan¹, Sunil Antony²

¹Believers Church Medical College Hospital, Thiruvalla, Kerala, India

²Department of General Medicine, Believers Church Medical College Hospital, Thiruvalla, Kerala, India

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*Correspondence:

Dr. Bincy Charley,

E-mail: bincharley0399@gmail.com

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ABSTRACT

Extra pulmonary tuberculosis (TB) is rare occurring in 0.05-5% of patients with tuberculosis. In this way, this disease rarely features in the differential diagnosis of head and neck lesions. We present a case of a 22-year-old female patient with a painless swelling in her left submandibular region. Her histopathology report revealed caseating granuloma – suggestive of Tuberculosis. In the backdrop of this scenario, she was also diagnosed with undifferentiated connective tissue disease. This case report presents a complication in continuing with the usual basic Anti-tuberculosis treatment regimen as our patient developed ATT induced hepatitis two months from commencing the treatment. Hence, this case scenario sheds light upon yet another challenge in actively managing extrapulmonary tuberculosis. Although manifestations of TB are atypical in head and neck area, clinicians should integrate them in the differential diagnosis.

Keywords: Extra pulmonary tuberculosis, Tuberculous lymphadenitis, Antituberculosis treatment induced hepatitis, Caseating granuloma

INTRODUCTION

Tuberculosis (TB) is typically caused by *Mycobacterium tuberculosis*, which is a systematic disease. Though there has been a rise in extra pulmonary TB in recent years, the initial lesions are usually pulmonary. This also affects the head and neck region, with the most common cause being a mass in the cervical area.¹ It is anticipated to have a prevalence of approximately 8 million individuals each year, and 3 million individuals die of complications related with the ailment. Extra pulmonary TB is rare occurring in 0.05-5% of patients with TB. In this way, this disease rarely features in the differential diagnosis of head and neck lesions.²

We present a case of a 22-year-old female patient with a painless swelling in her left submandibular region. She was diagnosed with left submandibular TB lymphadenitis based on histopathology report.

CASE REPORT

Patient presentation and clinical findings

A previously healthy 21-year-old female patient presented initially to general medicine department with complaints of cough and fever since 1 week for which she was managed primarily on outpatient department (OPD) basis with antibiotics, bronchodilators and antihistamines. Two months later she started to notice a painless swelling on the left side of her neck and hence came to general surgery department, where upon general physical examination she was found to have enlarged matted lymph nodes (2×2 cm mobile swelling) in the left supraclavicular region since 1 month and no other areas of lymphadenopathy and no signs of hepatosplenomegaly. During this presentation, she also complained of persisting cough for more than 2 weeks, not subsiding on medication and not associated with fever. She was advised to undergo fine needle aspiration cytology

(FNAC) and was also prescribed an antibiotic course of tablet cefpodoxime 200 mg BD for 7 days.

Diagnostic assessment and treatment

FNAC report revealed reactive lymphadenitis, hence advised lymph node excision along with biopsy and was admitted for the same under general surgery department. She underwent lymph node excision under local anesthesia and intra-operatively she was found to have 3 large cervical lymph nodes in the supraclavicular region and the same was sent for histopathology. Post-operative day one patient complained of cough and generalised weakness during evening time, hence high-resolution computed tomography (HRCT) thorax was taken and sputum was sent for culture and sensitivity. She was discharged with tablet cefuroxime 500 mg BD for 5 days, antihistamine and anti-inflammatory medications as well as a cough syrup. Upon discharge she was also asked to consult pulmonology OPD during follow up visit.

On subsequent follow up in the surgery department, histopathology report revealed caseating granuloma – suggestive of TB. HRCT thorax showed enlarged mediastinal nodes (mediastinal adenopathy) as well as bilateral ground-glass opacity in upper zone lungs whereas sputum AFB was negative. Hence, she was referred to community medicine for initiating anti-tubercular treatment (ATT). Upon pulmonology consultation, she was examined and her chest examination showed occasional crepts. She was provisionally diagnosed as pulmonary and lymph node TB. She was, hence, planned on directly observed treatment, short-course (DOTS) consultation to initiate ATT, to send sputum sample for cartridge-based nucleic acid amplification test (CBNAAT) to look for any ATT resistance and to repeat HRCT after 3 months to assess for resolution. After 2 months of initiating ATT, patient developed gastritis and nausea with difficulty in food intake but her cough was found to be subsided. Hence she came for review in pulmonology OPD with the above complaints. Upon general physical examination, the lymph nodes decreased in size. She was prescribed anti-emetics for three days if needed.

Two months later she presented herself to general medicine department with persisting symptoms of nausea, vomiting with no symptoms of fever. She also gave complaints of upper back pain and heel pain in the morning, for which ANA profile was ordered in suspicion of any autoimmune disease. She was then referred to gastroenterology department for the same and upon assessing her liver function status; she was found to have highly elevated liver enzymes (SGPT – 436, SGOT – 347). Therefore, in view of ATT induced hepatitis, tablet isoniazid and tablet rifampicin were stopped but tablet ethambutol 400 mg BD was asked to continue along with tablet levofloxacin 250 mg BD and serial liver function test (LFT) was advised. International normalized ratio (INR), upon investigation was found to be elevated (1.5) which could be due to liver injury due to ATT. Complete baseline

blood investigations performed were unremarkable, however, erythrocyte sedimentation rate (ESR) was raised; 53 mm/ hour. Her ANA profile was found to be positive hence was referred to rheumatology for further evaluation and management consideration. Upon rheumatology consultation, her complaints of heel pain in the morning, occasional upper back pain, fatigue, eye –grittiness, dryness and evening chills were noted. Upon physical examination, no tender joints were found. Hence, she was asked to review one week later with repeat ANA profile. Upon follow up she presented with complaints of dryness of lips and polyarthralgia. Her repeat ANA profile revealed ANA SSA RO52 – strong positive. She was diagnosed as undifferentiated connective tissue disease. She was prescribed Tablet Hydroxychloroquine 200 mg OD for 2 months. 2 weeks later, she came to gastroenterologist OPD for review and her LFT was found to be normalised (SGPT-21) and hence she was asked to continue on tablet ethambutol and tablet levofloxacin. Currently, she is on regular follow up in general medicine, gastroenterology and rheumatology departments.

DISCUSSION

TB has remained a major global and public health challenge. Extrapulmonary TB (EPTB) is seen in nearly 15%-20% of all cases of TB. Cervical lymph nodes are the most common site of tuberculous lymphadenopathy in 60-90% of cases.³ Extra pulmonary TB of the oral cavity, head, neck and associated structures are diagnostic challenge. Lesions are often slow developing, painless, and hence are primarily ignored.² In the present case the patient had a swelling of about 2×2 cm in the left supraclavicular region. The presence of matting in the mass of the swelling and nonodontogenic nature of the swelling was taken into consideration for a clinical diagnosis of left supraclavicular tuberculous lymphadenitis. The target organ of *Mycobacterium tuberculosis* is the bronchopulmonary apparatus and the head and neck are usually secondary.⁴

FNAC is the most frequent and useful diagnostic technique available to diagnose lymph node TB.⁴ FNAC was performed in this case as well according to latest guidelines to arrive at a proper tissue diagnosis.³ Histopathological examinations of the biopsy specimens or material collected by fine needle aspiration of the cervical swellings was an important aid in the diagnosis of the disease because the finding of caseating granulomatous lesions was highly suggestive of TB. Diagnosis of TB and initiation of ATT was a challenging decision in our patient as she did not have any typical systemic symptoms suggestive of the infection such as night sweats, weight loss or fever. FNAC and biopsy played a huge role in this case to come to a proper conclusion and hence, to start the definitive treatment targeting the infection.³ The basic principles for the treatment of pulmonary TB apply to extra-pulmonary TB as well. For TB at any site, a 6-9months course of treatment regimen that include INH and RIF is recommended.² However, this case report presents a complication in continuing with the usual basic ATT

regimen as our patient developed ATT induced hepatitis two months from commencing the treatment. Hence, this case scenario sheds light upon yet another challenge in actively managing extrapulmonary tuberculosis. Emergence of DILI in this particular case has narrowed the treatment option to ethambutol and levofloxacin, a secondary antitubercular drug.

CONCLUSION

TB of the head and neck region though not very redundant, still remains an imperative clinical subsistence, which should be kept in mind, especially in developing countries. At instances like the current case, where there is the absence of systemic signs and symptoms, swift identification of TB can become challenging. Awareness by the clinician of such atypical presentations would make identification of TB uncomplicated. Although manifestations of TB are atypical in head and neck area, clinicians should integrate them in the differential diagnosis. Initial diagnosis of the ailment would be beneficial not only to provide early treatment to the patient, but also averting the spread of the disease to others. A hasty diagnosis with well-timed treatment can thwart complications.

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