Isolated Mediastinal Tuberculosis: A Rare Entity

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Abstract
Tuberculosis is a common disease in India but isolated mediastinal tuberculosis in the form of a tumor has not been described in adults. We are presenting an immunocompetent, elderly male who presented with fever for 2 months. CT scan chest revealed an isolated mass like lesion in the mediastinum, extending to supraclavicular area. Histopathology of the lesion revealed tuberculosis.

Introduction
Tuberculosis is a very common disease in India often presenting in an uncommon form. It is a leading cause of death worldwide due to any single infectious agent. Lungs are the commonest organ to get involved in tuberculosis but incidence of extra pulmonary form is on rise because of concomitant HIV infection. Mediastinal involvement in tuberculosis commonly occurs in the form of lymphadenitis but without lung involvement it is very rare. Mediastinal tuberculous mass has been reported in pediatric patients but even after extensive search of literature we could not find such report in adult patient.

Case Report
A 76 years old male presented with high grade (102-103˚F) fever, anorexia and progressive weight loss for 2 months. There was no history of cough, chest pain, dyspnoea, diarrhea or urinary symptoms. Patient was a non smoker and non alcoholic.

Examination revealed an elderly thin man. His Temp. was 101˚F, Pulse rate of 96 per min, Blood pressure of 130/80 mm of Hg and respiratory rate of 20/min. One right supraclavicular swelling was palpable measuring 4 X 5 cm, non tender, stony hard and immobile. There was no discharge, ulceration, redness or increased temp. Respiratory examination showed few fine basal crepitations. Rest of the systemic examination was unremarkable.

His hematological investigations showed mild anemia (Hb 9gm %) and mild thrombocytopenia (platelets 100000/mm3). His liver enzymes were slightly high (ALT 62 IU/L, AST 69 IU/L) but bilirubin was normal (Total bilirubin 0.83mg/dl and Direct bilirubin 0.31mg/dl). After five days of ATT his liver function test showed Total bilirubin 2mg/dl, Direct bilirubin 1.6mg/dl ALT 128 IU/L, AST 171 IU/L.

Urine culture showed pseudomonas which was sensitive to Piperacilline Tazobactum combination.

His posteroanterior chest radiographs showed smooth, rounded, radiopaque shadow at the right infraclavicular, paratracheal region (Figure 1).

His CT scan of chest was done. Axial CT sections showed a homogenous soft tissue density mass in the right apical region extending to the right supra-clavicular region. Longitudinally this mass was measuring 6 cm and its vertebral limits were from D1 to D4 vertebra. There was no evidence of calcification within this lesion. (Figures 2 and 3). Lung parenchyma did not reveal any abnormality (Figure 4). Possibility of the Pancoast tumor was kept based on the radiological findings because of its supraclavicular extension.

FNAC was performed from the supraclavicular mass which was inconclusive. Therefore incisional biopsy was performed which showed infiltration by neutrophils, lymphocytes, plasma cells, histiocytes and occasional ill defined granulomas. Ziehl Neelson stain showed numerous Acid fast bacilli. Histopathogy did not reveal any evidence of lymph node.

As urine culture of patient showed pseudomonas for which he had received piperacilline and tazobactum combination for 10 days. Afterwards patient was started on Antitubercular treatment. His liver enzymes were increasing and his bilirubin was rising so ATT was stopped. Patient was advised modified ATT but he was not willing to continue treatment and did not come for follow up.

Discussion
Common anterior mediastinal masses are thymoma, lymphoma, teratomatous neoplasms, thyroid mass, vascular
masses, lymph node enlargement due to metastases or granulomatous disease, and pleuropicardial and bronchogenic cysts. Isolated involvement of mediastinum is a rare presentation of tuberculosis.\textsuperscript{4} It commonly affects mediastinum in the form of lymphadenopathy and presents as widened mediastinum. In a large series Tuberculosis was the fifth commonest cause of mediastinal enlargement, accounting for 6\% of 782 cases.\textsuperscript{5} Mediastinal lymphadenopathy is usually asymptomatic but it can compress upon various structures and produce symptoms accordingly. CT scan is an important tool to diagnose active tubercular mediastinal lymph node where it shows central low attenuation with peripheral rim enhancement.\textsuperscript{6} In our patient CT scan chest showed a mass lesion which was not suggestive of a lymph node. There was no pulmonary involvement as well. Diagnosis of tuberculosis was never thought in this patient. Sometimes multiple mediastinal lymph nodes can conglomerate together giving appearance of mass like lesion but in our patient, CT scan and histopathology of the mass did not show any evidence of lymph node. We could not find treatment recommendations for such condition in literature but as a rule for any tubercular mass after completion of Antitubercular therapy if it is not regressing surgical removal should be sought.

To conclude Tuberculosis can present as wide variety and we should keep its possibility in all atypical cases especially in India.

References