



**ORIGINAL RESEARCH PAPER**

**Pulmonary Medicine**

**PULMONARY TUBERCULOSIS-AS AN UPPER LOBE MASS A RARE CASE REPORT.**

**KEY WORDS:**

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**ABSTRACT**

Tuberculosis is the worldwide serious health problem. Pulmonary tuberculosis is most commonly seen in India. The usual manifestation of tuberculosis is in the form of consolidation in upper lobe or superior segment of lower lobe. (1) But sometimes the disease has variable atypical presentation such as a mass. The diagnosis of Pulmonary tuberculosis or malignancy can be easily made when observed with CT or chest radiography. However some tuberculous lesions may clinically and radiographically mimic a neoplasia (2) This may lead to misdiagnosis or delayed treatment. Here we discuss a similar case of a 24 year old female.

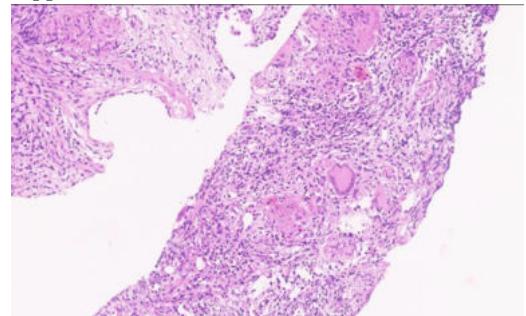
**BACKGROUND**

In the year of 2019 an estimated 10 million people fell ill with tuberculosis worldwide. It is the second leading cause for death in India. There are many similarities between tuberculosis and lung cancer presenting as mass lesion. Both are very common having high prevalence involving lung parenchyma and having similar symptoms. Symptoms such as fever, , expectoration, hemoptysis , weight loss and anorexia are common to tuberculosis and lung cancer. It is unusual for Tuberculosis to present as a pulmonary mass. TB Arise from a discharge of cavitating lesion And subsequent hypersensitivity reaction that may evolve into pulmonary mass.

**CASE**

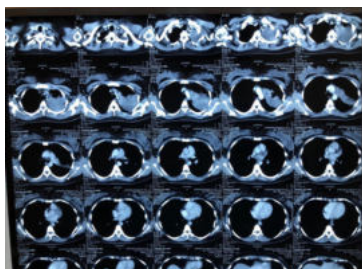
A 24-year-old female presented it with the complaint of dry cough for 10 days.No history of dyspnea , chest pain ,loss of weight, loss of appetite, hemoptysis. Not a known case of diabetes or hypertension. No history of tuberculosis previously. She is a non-smoker with normal immune status. Bowel and bladder moment the regular. On inspection, a left supra clavicular and infra clavicular fullness is present with decreased movements. On percussion, there is dullness and absent breath sounds on auscultation in supra clavicular and infra clavicular areas.

CT chest done, showed left apical lobe mass with smooth borders without any calcification . Cavitation is present which is not invading the bronchus, pushing the left main bronchus to the opposite side.

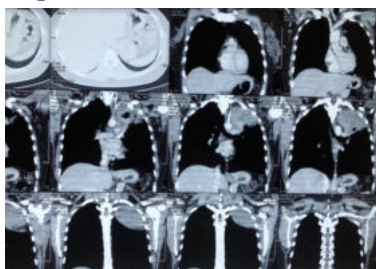


**Fig. 2.0 HPE depicts composed granulomas with no necrosis**

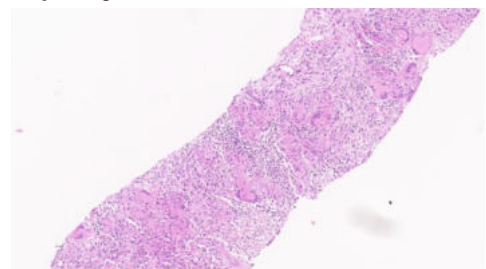
Bronchus cut off sign negative.No significant lymphadenopathy. zCT guided biopsy was done and showed lung tissue with multiple granulomas composed of epithelioid histiocytes and multi nucleated giant cells of Langhans and foreign body type. Mild interstitial infiltrate composed of lymphocytes and occasional eosinophils noted . there is no necrosis and no evidence of malignancy. Special stain for acid fast bacilli and fungi are negative. Based on the above data,differential diagnosis of histopathology are tuberculosis and sarcoidosis. As there are no hilar lymphadenopathy or parenchymal centri lobular nodules and Mantoux test was positive with normal serum ACE and calcium levels, Sarcoidosis was ruled out and patient was diagnosed with tuberculosis. No evidence of any extra pulmonary manifestations. Hence a diagnosis of tuberculosis presenting as left upper lobe mass was made. Patient was started on ATT (Anti tuberculosis treatment) according to NTEP regimen and is currently doing well now.



**Fig1.0 HRCT chest mediastinal window Sagittal section showing left apical lobe mass with smooth borders**



**Fig 1.2 HRCT chest coronal view showing apical mass with presence of minimal cavitation**



**Fig 2.1 Presence of multinucleated giant cells with lymphocytes and occasional eosinophils.**

**DISCUSSION**

Tuberculosis is an infectious disease is caused by mycobacterium tuberculosis. It typically affects the lungs. Pulmonary tuberculosis and lung cancer have similar symptoms like cough,expectoration ,fever, hemoptysis ,weight loss and breathlessness However careful history and examination can help to suspected tuberculosis. Tuberculosis most commonly present with cough for more than two weeks, fever with evening rise of temperature, weight loss and anorexia . Chest x-ray and sputum examination will help in diagnosis. If patient presents with mass lesion on chest x-ray then should be evaluated because diseases like tuberculosis is potentially treatable .

**DIFFERENTIAL DIAGNOSIS FOR UPPER LOBE MASS**

1. BRONCHOGENIC CARCINOMA (Typically non small cell)
2. MESOTHELIOMA
3. LYMPHOMA
4. ANTERIOR MEDIASTINAL MASS (Thymoma, Germ cell tumour,Thyroid cancer)
3. METASTATIC DISEASE
4. VASCULAR ANEURYSM ( Carotid pseudo aneurysm)
5. GRANULOMATOUS INFECTION (Tuberculosis / Fungal)
6. LYMPHADENOPATHY
7. PULMONARY NODULES
8. CONSOLIDATION
9. SARCOIDOSIS

**Table 1.0 List of differential diagnosis for upper lobe mass.(3)**

TB presenting as a mass is very atypical. Active tuberculosis typically presents as cavity, consolidation, centrilobular and tree in bud appearance, military nodules, lymphadenopathy, pleural effusion. Inactive Tuberculosis presents as fibromodular scarring (peri bronchial fibrosis, well defined modular opacities, traction bronchiectasis, apical and upper lung zone volume loss) and calcified granulomas our lymph nodes. The prevalence of TB presenting as an upper lobe mass is less than 7% of infected.(4)

**CONCLUSION**

In a country like India, if a young patient, with no history of smoking presents with a mass then a biopsy should definitely be done to rule out tuberculosis as tuberculosis has many unpredictable presentations one among which is a mass. Total number of 58 million lives were saved through effective diagnosis and treatment (2000-2018)(1)

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