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Case Report

Pulmonary tuberculosis mimicking a lung mass

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ABSTRACT

Pulmonary tuberculosis is commonly seen in India. The usual presentation of the disease is in the form of consolidation involving the upper lobe or the superior segment of the lower lobe. But sometimes the disease has an atypical presentation. Here, we are describing a case report in which the pulmonary tuberculosis presented radiologically as a lung mass and the diagnosis was made by fine needle aspiration cytology from the mass like opacity in the right lung.

Keywords: Pulmonary tuberculosis, Lung mass, Necrotising granuloma

INTRODUCTION

Pulmonary tuberculosis is a widely prevalent disease in India. Pulmonary tuberculosis commonly presents as consolidation which may be segmental or lobar usually involving the upper lobe or the superior segment of the lower lobe.[1,2] The consolidation may be associated with cavitation. Here, we are describing an unusual presentation of pulmonary tuberculosis which presented to us as a lung mass.

CASE REPORT

A 52 year old male presented to us with the chief complaints of fever, dry cough and MMRC grade 2 breathlessness since two months along with right sided chest pain since one month. He also complained of loss of appetite since one month. The patient was a non-smoker, occasional tobacco chewer with no other comorbid illness. There was no previous history of antitubercular treatment in the patient. The general examination in the patient was normal but respiratory system examination revealed decreased breath sounds in right suprascapular area with a dull percussion note in the area. No added sounds were present.

Investigations

Blood investigations revealed Hb% - 11.2gm/dl, TLC-$12.1\times10^5/mm^3$ and a platelet count of 3.5 lakh/mm^3. The chest x-ray revealed a rounded homogenous opacity in the right upper zone. The patient was not having any sputum production and hence a CT scan thorax was done to determine the nature of the lesion. CT thorax revealed a homogenous rounded opacity >3 cm in diameter with smooth margins in the posterior segment of the right upper lobe (Figure 1). The opacity was abutting the posterior chest wall and hence CT guided fine needle aspiration cytology (FNAC) was done. The cytological examination of the FNAC sample revealed necrotising granulomas with no evidence of atypical cells. The FNAC sample was negative for acid fast bacilli (AFB). The patient was put on four drug antitubercular treatment (rifampicin, isoniazid, ethambutol, pyrazinamide) according to weight. After two weeks of initiation of antitubercular treatment, the patient developed expectoration of sputum. The sputum examination for AFB smear was positive and a repeat CT scan thorax revealed central cavitation in the previously homogenous rounded opacity in the right upper lobe (Figure 2).

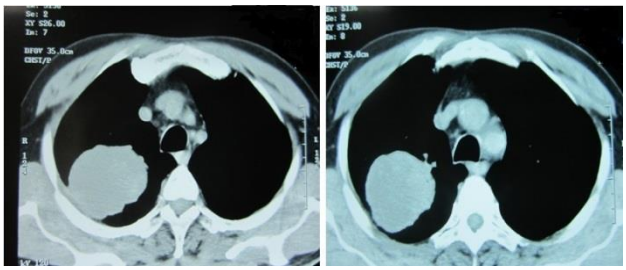

Figure 1: Rounded homogenous opacity in right upper lobe.

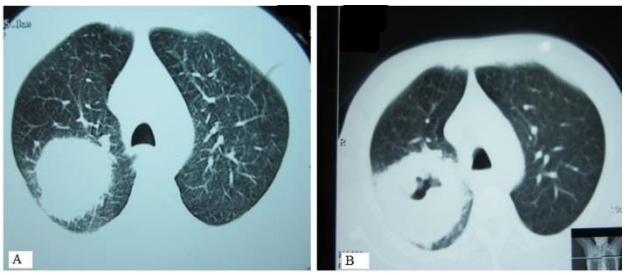

Figure 2: (A) Rounded opacity in right upper lobe at the start of antitubercular treatment. (B) Rounded opacity with cavitation after two weeks.

Treatment

The patient was put on four drug antitubercular treatment (rifampicin-600mg, isoniazid-300mg, ethambutol-1000mg and pyrazinamide-1500mg) according to weight. The patient showed significant clinical improvement with the antitubercular treatment with the subsidence of fever and increase in the appetite of the patient.

DISCUSSION

Pulmonary tuberculosis most frequently presents as patchy or lobar consolidation.[1] X-ray chest and sputum examination for AFB smear are the primary investigational tools for the diagnosis of pulmonary tuberculosis although a definitive diagnosis can be made only by culturing the etiological agent, Mycobacterium tuberculosis, from the sputum specimen.[3,4] CT scan thorax is not a frequently required investigation in the diagnosis of pulmonary tuberculosis but may be required in cases of atypical presentation of the disease. Pulmonary tuberculosis has been reported to present atypically as cannon-ball opacities in the lung[5] and as a mediastinal mass.[6] Pulmonary tuberculosis may also present as community acquired pneumonia[7] and in such cases a bronchoalveolar lavage may be required for diagnosis if the patient's sputum is negative for the AFB smear.

The patient in our case presented as a rounded lung mass like lesion in the upper lobe of the right lung. It is an unusual presentation of pulmonary tuberculosis and is rarely seen. After the initial investigation of a CT thorax, the diagnosis was finally made by FNAC from the lesion. The demonstration of AFB in the sputum at a later stage further aided in establishing the diagnosis in the patient.

Learning points

1. Pulmonary tuberculosis may present atypically as a lung mass.
2. Pulmonary tuberculosis may have an atypical presentation and hence additional investigations apart from the routine chest x-ray and sputum examination for AFB smear may be required to make a diagnosis in such cases.

Differential diagnosis

1. Bronchogenic carcinoma
2. Lung cyst
3. Lymphoma
4. Hydatid cyst of lung
5. Carcinoid tumour
6. Fungal infection of lung
7. Rounded bacterial pneumonia of lung
8. Metastatic lung cancer
9. Lung abscess

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