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CASE REPORT

Misdiagnosis of Tuberculosis

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ABSTRACT

Introduction: High incidence of tubercular cases in developing countries, similar clinical presentation of tuberculosis and malignancy, lack of adequate infrastructure, and lack of proper follow up are the most common factors associated with misdiagnosis.

Case Summary: A 72 years old male CAME with complains of cough with expectoration for 2 month, intermittent fever associated with chills and rigors for 1 month, loss of appetite and weight, intermittent pain in right side of the chest for 1 month. Patient was a known smoker and alcoholic. On auscultation bilateral air entry was decreased with occasional rhonchi. Patient's chest x-ray was suggestive of consolidation in right upper zone of chest. His sputum was negative for AFB from outside, patient started on ATT, 2 months prior to date of admission from private clinic on empirical basis that was continued till the date of admission. Patient showed no improvement, even after 2 months of ATT. His chest X-Ray was suggestive of right upper zone consolidation, patient had no prior radiography for comparison. He was continued on ATT as he had already taken treatment for 2 months from outside. Patient was tested negative for sputum AFB 1 and 2, CBNAAT and culture.

Patient presented to emergency after a gap of two months in state of drowsiness with complains of breathlessness and severe right side chest pain. He was intubated in emergency and managed on ventilator support. Patient recovered and a CECT thorax was done suggestive of likely possibility of right lung upper lobe neoplasm with metastatic lymphadenopathy with possibility of multiple liver and bilateral adrenal metastasis and changes of chronic airways disease with fibro bullous changes in bilateral upper lobe apical segments. The FNAC was positive for malignant cells with features suggestive of non-small cell carcinoma – (possibly adenocarcinoma). Patient was further managed in the department of Radiation Oncology by chemotherapy. We discuss the radiographical progression and subsequent investigations required to make a proper diagnosis.

Conclusion: It is imperative to form a conclusive diagnosis using available diagnostic modalities in smear negative tubercular cases to avoid delay in management of other possible life-threatening diseases like lung carcinomas.

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INTRODUCTION

Lung cancer is one of the most common form of cancer and also cause of cancer related deaths. It accounts for **13% of all new cancer** cases and 19 percent of cancer related deaths. In India, lung cancer constitutes 5.9% of all new cancer cases and 8.1 percent of all cancer related deaths in both sexes.[1]

Considering the epidemiology of tuberculosis in India the average prevalence of all forms of tuberculosis is estimated to be **5.05 per thousand with smear positive** case prevalence to be **2.27 per thousand** and average annual incidence of smear positive cases at **84 per I lakh annually.**[2]

Many a times the clinical symptoms of tuberculosis mimic those of lung carcinoma. Due to higher prevalence of tuberculosis, inadequate infrastructure, lack of diagnostic modalities as well as lack of awareness and proper follow up by patients, lung carcinoma may be misdiagnosed as pulmonary tuberculosis.

In this article we will be reporting the case of a 72-years-old male that was started on anti tubercular treatment (ATT) empirically, and later diagnosed as a case of non-small cell carcinoma by the use of diagnostic technologies available in tertiary care centre.

CASE SUMMARY

A 72-years-old male, admitted to our hospital with complains of cough with expectoration for 2 months, intermittent fever associated with chills and rigors for 1-month, loss of appetite and weight, intermittent pain in right side of the chest for 1-month. Patient was a known smoker and alcoholic. On examination, patient was found to be conscious and oriented to time place and person, requiring oxygen support to maintain saturation of 92%. On auscultation bilateral air entry was decreased with occasional rhonchi. Patient's chest x-ray was suggestive of consolidation in right upper zone of chest. His sputum was negative for AFB from outside, patient started on ATT, 2 months prior to date of admission from private clinic on empirical basis that was continued till the date

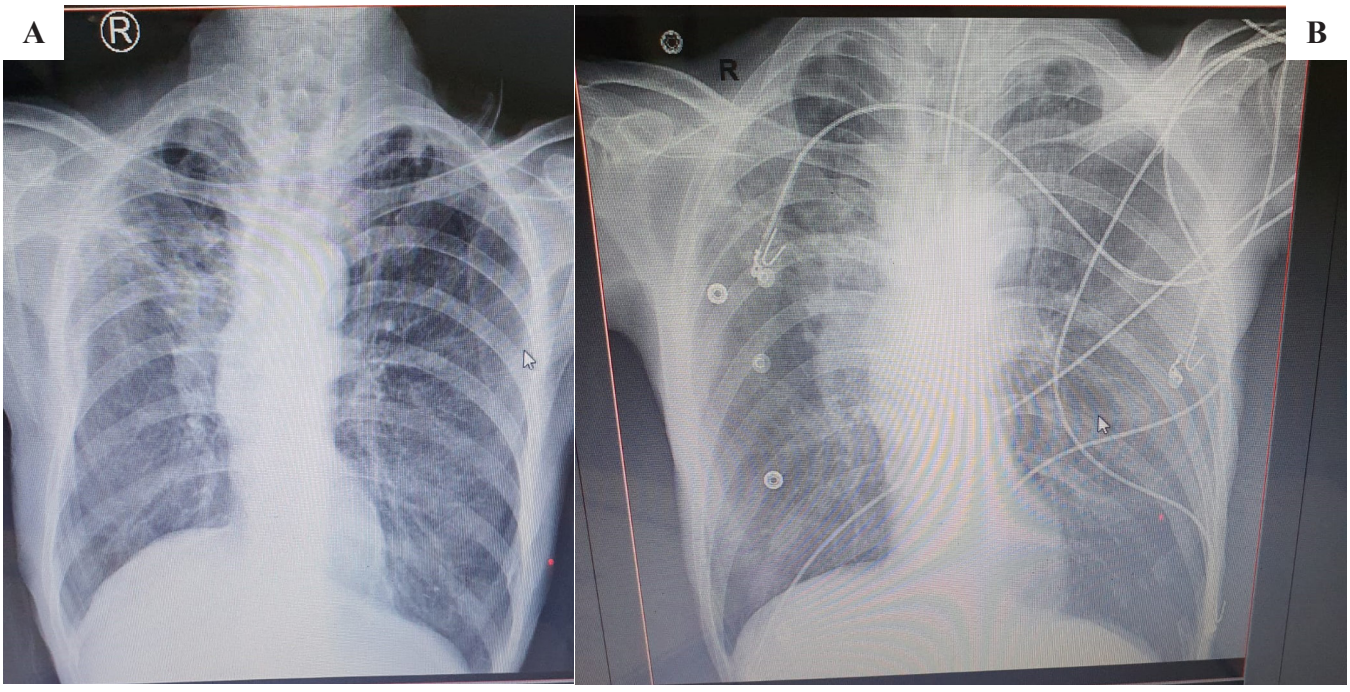

Figure 1: A: shows consolidation in right upper zone, B: After 2 months persistent right upper zone consolidation

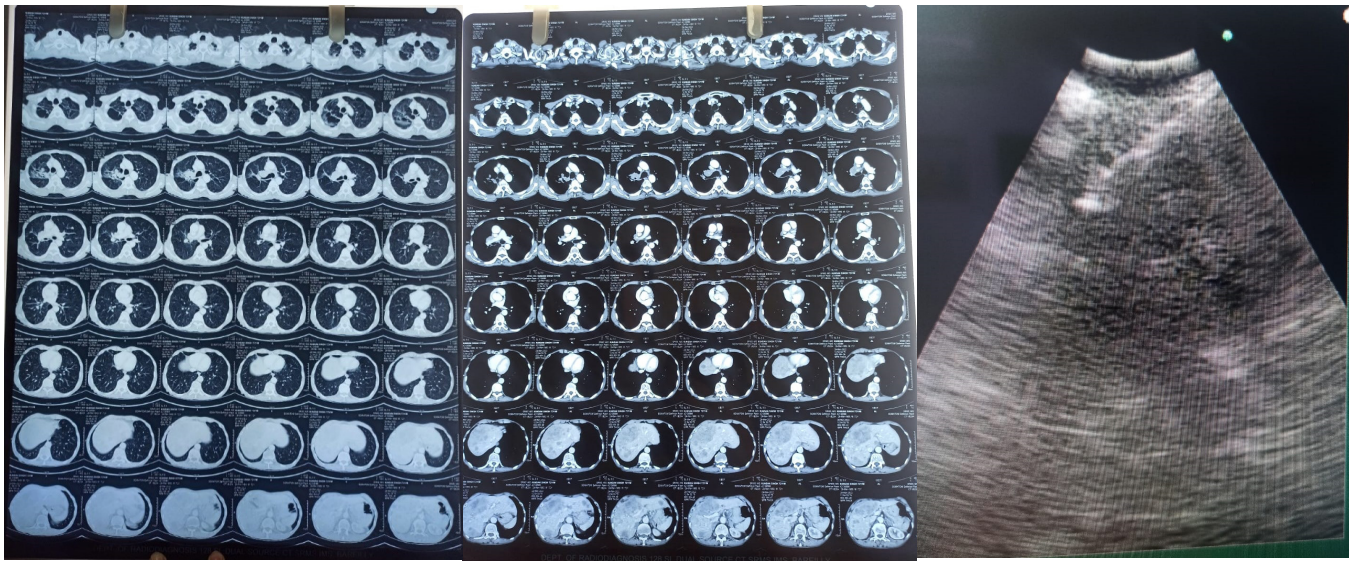

Figure 2: Endoscopic ultrasound shows 4R lymph node from which sample was taken

of admission. The patient showed no improvement, even after 2 months of ATT. The chest X-Ray suggested the right upper zone consolidation, and patient had no prior radiography for comparison. He was continued on ATT as he had already taken treatment for 2 months from outside. The patient was tested negative for sputum AFB 1 and 2, cartridge- based nucleic acid amplification test (CBNAAT) and culture. He was advised for CECT thorax in view of persisting symptoms, but he refused and requested for discharge. The patient was discharged on ATT and supportive COPD management. He failed to follow up in outpatient department of pulmonary medicine. Opinion was taken from Intervention radiologist and biopsy was not possible as the lesion was small to take the sample.

The patient was brought to emergency after a gap of two months in state of drowsiness with complains of breathlessness and severe right side chest pain. He was intubated in emergency and managed on ventilator support. Patient recovered and a CECT thorax was done s/o likely possibility of right lung upper lobe neoplasm with metastatic lymphadenopathy with possibility of multiple liver and bilateral adrenal metastasis and changes of chronic airways disease with fibro bullous changes in bilateral upper lobe apical segments.

Patient was planned for EBUS from 4R Lymphnode (Figure 2).

The FNAC was Positive for malignant cells with Features s/o non- small cell carcinoma – (possibly adenocarcinoma). Patient was referred to radiation

oncology department where patient was planned and given chemotherapy.

DISCUSSION

There are many similarities in radiological and clinical presentation of tuberculosis and lung carcinoma. In a non- specific retrospective study done most often cases initially misdiagnosed as tuberculosis, were pneumonia (52%), lung cancer (20%).[3]

Sputum negative patients started clinically on ATT should be timely referred to speciality and tertiary care centre, Delay in diagnosis of lung cancer can be caused by the wrong diagnosis of tuberculosis (TB) in TB endemic countries.

In a study conducted proven lung cancer patients, who had received anti-tubercular treatment (ATT) since onset of current symptoms, were studied retrospectively during the period of Nov-07 to Nov-08-Total of 14 out of 70 patients received wrong diagnosis of TB and had received ATT (male-12, female-2; mean age 58.07-/+6.81; Non Small Cell Lung Cancer (NSCLC) -12, Small Cell Lung Cancer (SCLC) -2),.(4) In another study done - out of 195 diagnosed cases of bronchogenic carcinoma, 79 (40%) were taking anti-tubercular therapy for at least 1 month duration.[5]

Several factors are responsible for this situation in developing countries, including lack of awareness, inadequate infrastructure, and socio-economic factors.[6] Missed or wrong diagnosis of lung cancer by clinician or general practitioner can lead to delays in treatment, wrong treatments, or no treatments at all.[6]

CONCLUSION

It is imperative to form a conclusive diagnosis using available diagnostic modalities in smear negative tubercular cases to avoid delay in management of other possible life-threatening diseases like lung carcinomas.

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