



General Surgery

A CASE REPORT : A RARE CASE OF TRAUMATIC TENSION PNEUMOTHORAX SECONDARY TO KOCH 'S / PULMONARY TB

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ABSTRACT A 20 year old man presented to the casualty with alleged h/o trauma to chest due to road traffic accident. Patient has right sided chest pain associated with difficulty in breathing. He had low grade fever, productive cough and loss of appetite for 14 days before presentation. On examination ,his respiratory rate was 30 breath's per minute, Oxygen saturation at room air is 92%, Blood pressure was 100/70 mm hg and pulse rate was 110 / min. Trachea deviated to left with reduced breath sounds on right hemithorax . Tension pneumothorax was suspected ,and urgent chest X-ray was done. Urgent ICD placement done. Investigations showed white cell count of 24000 cell/cumm. HRCT chest showing right lung abscess and cavities. Sputum and blood cultures were negative, Bronchoscopy was done and diagnosed as pulmonary tuberculosis. Patient was kept on ATT, gradually patient condition got improved and ICD tube removed on 7th day .

KEYWORDS : Tension pneumothorax, pulmonary tuberculosis

INTRODUCTION

Although detection of spontaneous pneumothorax during evolvement active pulmonary tuberculosis is not uncommon, presentation of pulmonary tuberculosis as tension pneumothorax is rare. There is limited literature regarding pneumothorax complicating pulmonary tuberculosis. Pneumothorax due to tuberculosis can be managed by intercostal drainage in the majority; only a minority need surgical intervention. Many patients need intercostal drainage for a prolonged period. We are reporting a patient presenting with a tension pneumothorax who was found to have active pulmonary tuberculosis. His pneumothorax was managed successfully with prolonged intercostal drainage. Lessons learnt during the management of this patient.

DISCUSSION

Pulmonary tuberculosis is a common worldwide lung infection. Classically, tuberculosis is divided into primary, common in childhood, and postprimary, usually presenting in adults . The most characteristic radiological feature in primary tuberculosis is lymphadenopathy . On enhanced CT, hilar and mediastinal nodes with a central hypodense area suggest the diagnosis. Cavitation is the hallmark of postprimary tuberculosis and appears in around half of patients . Patchy, poorly defined consolidation in the apical and posterior segments of the upper lobes, and in the superior segment of the lower lobe is also commonly observed .

Several complications are associated with tuberculous infection, such as haematogenous dissemination (miliary tuberculosis) or extension to the pleura, resulting in pleural effusion . Late complications of tuberculosis comprise a heterogeneous group of processes including tuberculoma, bronchial stenosis, bronchiectasis, broncholithiasis, aspergilloma, bronchoesophageal fistula and fibrosing mediastinitis .

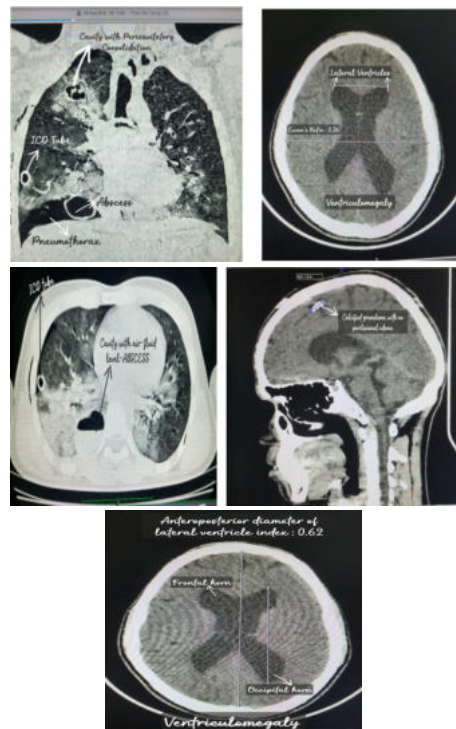
Tuberculosis is a long-recognized and well-documented cause of secondary spontaneous pneumothorax, with an incidence of approximately 5% in postprimary (pulmonary) tuberculosis patients, usually in severe cavitory disease. Overall, around 1% of patients with active tuberculosis present with secondary spontaneous pneumothorax. Nevertheless the initial presentation as spontaneous tuberculosis is exceptional.

Pleural infection results from rupture of subpleural caseous lesions, resulting in accumulation of a chronic empyema. A bronchopleural fistula may occur spontaneously during the natural history of the disease. Both chronic empyema and bronchopleural fistula may result in spontaneous pneumothorax, the latter with a more acute presentation.

In our case, The poorly differentiated multifocal consolidations predominately in the upper lobes, with tree-in-bud pattern and cavitation of some of them, suggest an active post-primary tuberculosis. In addition, the patient developed a spontaneous hydropneumothorax as a complication.

Tube thoracostomy is the indicated treatment, in conjunction with appropriate pharmacologic management of tuberculosis and other infections .

We conclude that secondary spontaneous pneumothorax in patients with tuberculosis occurs especially in cases presenting a destroyed lung. It is not uncommon in the end stages of tuberculosis with a prolonged process of cavitation, spread to new areas, and subsequent fibrosis.



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