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EXUDATIVE PLEURAL EFFUSION IN LEFT OBLIQUE FISSURE MASQUERADING AS PSEUDOTUMOR - A RARE CASE REPORT

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ABSTRACT

A pleural effusion is an excessive accumulation of fluid in the pleural space. It can pose a diagnostic dilemma to the treating physician because it may be related to disorders of the lung or pleura, or to a systemic disorder. Pleural effusion may extend into the major fissures and give them a characteristic appearance, particularly in heart failure, and manifest as vanishing or phantom tumors (pseudotumors). Pulmonary inflammatory tumors, are also referred to as pseudotumor. We present a case of a 62 years old female presenting to us with breathlessness and on radiological examination was found to have fluid in horizontal fissure which vanished with appropriate treatment.

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INTRODUCTION

Collection of an abnormal quality of fluid in the pleural cavity is called pleural effusion. Collection of fluid in pleural cavity has a varied etiological factors. It is a common respiratory condition known since the time of Hippocrates (641 – 539 B.C). It constitutes one of the major causes of morbidity in India as well in other parts of world. Because of the various etiologies that can cause pleural effusion, it often present a diagnostic problem, even after extensive investigations. The initial step is the distinction between transudates and exudates as this gives an indication of pathophysiological mechanisms, differential diagnosis and the need for further investigation. There are number of criteria to differentiate exudates from transudates but none has 100% sensitivity and specificity [1]

Case report

A 62 years old female presented to us with complaints of breathlessness, cough with expectoration, fever since 22 days. She was a known hypertensive and a diabetic on appropriate therapy. The patient was worked up with CBC coming out to be normal. Her chest xray posteroanterior view [figure 1] showed blunting of left costophrenic angle with homogenous opacity occupying the middle and lower zones along with

encysted pleural effusion left side. The roentgenographic appearance of the lesion was that of a pseudotumor.



Figure 1 chest xray pa view - homogenous opacity occupying the middle and lower zones along with encysted pleural effusion on the left side (pseudotumour)

Contrast Enhanced Chest Tomography was done which showed moderate amount of free fluid in left lung along with fluid in the left oblique fissure.

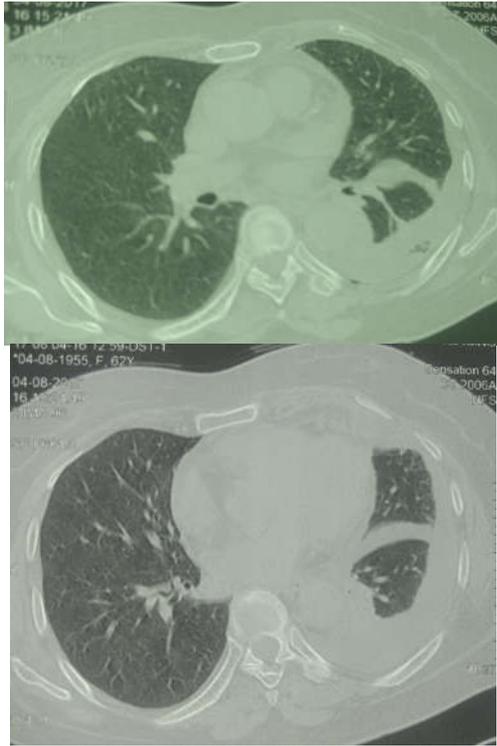


Figure 2 cect showing fluid in left oblique fissure and free fluid left side

[figure 2] Her electrocardiograph and echocardiography was normal; also there were no other features suggestive of any cardiac problem hence ruling out cardiac failure. An ultrasound guided tap was done and almost 100 ml of yellow colored turbid fluid was aspirated and sent for investigations. On cytology it came out to be lymphocytic predominant (90 %) with absence of malignant cells. There was elevation of total leucocyte count (4850 /cumm); on biochemistry it was an exudative picture with glucose of 133 mg/dl and proteins of 6.05gm/dl. Adenosine Deaminase (ADA) was 35 U/l. No acid fast bacilli (AFB) or growth of any other micro organism was seen. Cartridge Bases Nucleic Acid Amplification Test (CBNAAT) of the fluid also indicated no *Mycobacterium tuberculosis*. Her sputum for AFB as well as Mantoux test were also negative hence ruling out tubercular infection. The patient was started on antibacterials and after three weeks showed complete resolution of the fluid [figure 3]



Figure 3 complete resolution of symptoms

DISCUSSION

A pleural effusion is collection of fluid abnormally present in the pleural space, usually resulting from excess fluid production and/or decreased lymphatic absorption. Analysis of the relevant clinical history, physical examination, chest radiography and diagnostic thoracentesis is useful in identifying the cause of pleural effusion in majority of the cases [2]. Differential diagnosis of loculated pleural effusions within the fissure includes - A. Transudates - left ventricular failure or renal failure, B. Exudates - parapneumonic pleural effusions, malignant pleural effusions, and benign asbestos-related pleural effusions, hemothorax, chylothorax, and fibrous tumors originating from the visceral pleura of the interlobar fissure.[3]

Pleural effusion in the inter-lobar fissure mimicking a tumor, which resolves with diuretic therapy is a well-known sequel of heart failure.[4,5] Tumor like appearance of pleural fluid in heart failure is to transient fluid loculation in the interlobar fissures (oblique or horizontal fissure).[5] The inter-lobar pleural fluid and the tumor like appearance it produces disappear with therapy for heart failure. Pseudotumor due to pleural effusion often occur along lobar fissures and characteristically have tapering ends.[5] Though the opacity in this case was along the line of oblique fissure, lack of tapering ends made the suspicion inconclusive in chest X-ray. Pulmonary inflammatory tumors, frequently referred as pseudotumor are benign pulmonary parenchymal mass lesions, which occur as a result of an inflammatory reaction probably due to respiratory infection.[6] Unlike the vanishing tumor of heart failure which resolves spontaneously, pulmonary inflammatory tumors need surgical excision [6]; though some cases they do show spontaneous resolution also [7]

In conclusion we present this case so as to emphasise the importance of the fact that all pseudotumours or pleural effusion in the fissure are not always due to cardiac component. Sometimes it can be a simple case of encysted pyogenic effusion only

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