

An Unusual Presentation of Massive Pleural Effusion Due To Tuberculosis In A Patient With Chronic Kidney Disease.

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Abstract: Pleural effusion is one of the extrapulmonary manifestations of tuberculosis in patients of chronic kidney disease. Tuberculous pleural effusion is insidious in onset.

Herein we report a case of sudden onset of massive pleural effusion due to tuberculosis (TB) with an unusual precedence of ipsilateral iatrogenic hemothorax.

Key words : massive, tuberculosis, pleural effusion, CKD

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I. Case details

A 56 years aged woman ,known case of chronic kidney disease stage 5 ND had developed massive hemothorax following removal of malpositioned left internal jugular dialysis catheter. She recovered with intercostal tube drainage and conservative measures. At discharge her serum creatinine was 4.2mg/dl, chest was clear, chest X-ray was normal.(fig1) 2 weeks later, she presented with progressive breathlessness of 3 days duration. On examination, she was tachypneic, blood pressure was 120/80 mm of Hg, absent breath sounds in left hemithorax. A suspicion of reaccumulation of hemothorax was considered. Chest X-ray showed haziness of left hemithorax with mediastinal shift.(fig2). In view of the suspicion of hemothorax , intercostal drainage was planned. Before she was arranged for ICD, diagnostic pleurocentesis was done. Fluid was straw coloured. As there was no hemothorax, a therapeutic pleurocentesis was done. Pleural fluid analysis showed protein of 5gm/L, LDH of 650IU/L, cell count of 480 with predominant lymphocytes, ADA was 70 IU/L, sugar 111mg/dl. Based on Light's criteria, ratio of pleural fluid protein to serum protein was >0.5. Mantoux was negative With this, an empirical diagnosis of tuberculous pleural effusion was made and hence was initiated on antituberculous therapy. Four weeks after the treatment, there was complete resolution of pleural effusion.(fig3)

II. Discussion

TB pleural effusion is insidious in onset. Our patient had iatrogenic hemothorax followed by rapid development of tuberculous pleural effusion. The time duration between the disappearance of hemothorax and appearance of pleural effusion was 2 weeks. Though initially , hemothorax was considered based on chest xray, the pleural fluid analysis was exudative with high levels of ADA ,thus suggestive of TB. Confirmation tests like TB –PCR ,pleural fluid culture or biopsy, IGRA assay could not be done as patient did not agree for further evaluation. In addition, complete disappearance of effusion with treatment also gives a clue towards the aetiology being probably tuberculosis. In a recent study by S.Kundu etal , the incidence of symptomatic pleural effusion was found to be 6.7% in CKD and renal transplant recipients. In his study, TB and uremic effusions were common causes of exudative effusions. In our patient, uremic effusion is unlikely as the fluid is not serosanguinous

Massive pleural effusion is rare in tuberculosis even in general population. One case of massive TB pleural effusion was reported in 18 year old student by Mermigikis etal, in whom the fluid was hemorrhagic and the diagnosis was confirmed with pleural biopsy.(2) Massive TB pleural effusion is not reported in chronic kidney disease though massive pleural effusions due to hydrothorax are reported in patients of continuous peritoneal dialysis. Is it all mere coincidence or is there any scientific explanation of rapid occurrence of massive TB pleural effusion following hemothorax is not clear.

The points of interest in our case are two fold:

1. Massive pleural effusion due to tuberculosis is unusual in chronic kidney disease.
2. Tuberculosis needs to be considered as one of the differential diagnosis in case of massive pleural effusion in patients with chronic kidney disease.

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