Tubercular pericardial effusion: a case report

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Citation

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Abstract

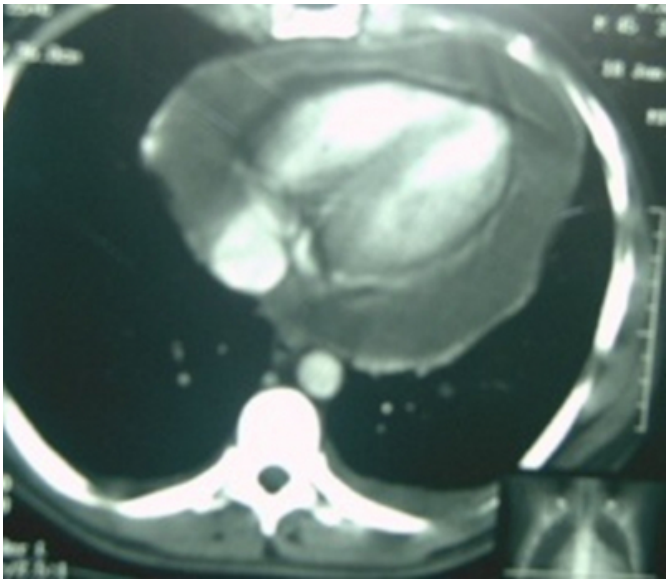
A case of tubercular pericardial effusion is reported in a 38 year old male. There were no stigmata of tuberculosis anywhere in the body or the any evidence of immuno-compromised state .Computed tomography scan with polymerase chain reaction was diagnostic in this case. Patient was treated with anti tubercular therapy and responded well.

CASE HISTORY

A 37 year old patient presented with fever, night sweats and weight loss of 3 months duration. He was being treated with broad spectrum antibiotics but was not responding .No history of dysponea , hemoptysis was elicited by patient. There was nothing significant in past history and no family history of tuberculosis. General examination showing temperature of 38 degree Celsius , blood pressure of 120/80 mm Hg. respiratory rate of 22/min., JVP was normal .No cyanosis ,clubbing or lymphadenopathy was seen. Heart sounds were muffled. Other systemic examination was normal. Mountax test was positive of more than 15 mm.HIV profile was negative. AFB of sputum and pericardial fluid were also negative . The blood culture did not yield any growth .Polymerase chain reaction (PCR) was positive for mycobacterium tuberculosis . X –ray chest was showing prominent hilar shadows. Computed tomography scan of chest showed pericardial thickening and pericardial effusion(Figure 1)

Figure 1

Fig.1 showing pericardial thickening with pericardial effusion



Doppler echocardiogram showing pericardial effusion. The patient was put on antitubercular drugs and responded well . He is regularly attending our follow up clinics.

DISCUSSION

Tubercular pericardial effusion is a un common form of extra-pulmonary tuberculosisbeing increasingly found, especially in immuno-suppressed persons [1] . Tuberculosis is the cause of 7% of cardiac tamponade cases .The pericardium may be involved in number of ways in tuberculosis. Route of spread is usually from mediastinal or hilar nodes or from lung and rarely as part of miliary tuberculosis. In rare cases, there may be direct spread from tuberculous pneumonia. Recurrent pericardial effusion

without any manifestations of tuberculosis can be seen occasionally in tuberculous pericarditis. A large effusion is most often found with adenitis; when the effusion is due to hematogenous seeding, little pericardial fluid is found. Approximately 10% of patients with tuberculous pericarditis develop constrictive pericarditis. Early cardiac tamponade is a good predictor of subsequent constrictive pericarditis presenting in up to 50% of patients [2]

A high index of suspicion is to be maintained in every case for diagnosis. Computed tomography scans findings are fibrotic thickening and, frequently, pericardial calcification. On echocardiography, thickened pericardium and fibrinous strands are seen [3] . Analysis of pericardial fluid analysis in with large effusion, without tamponade or suspected purulent pericarditis, has a very low (7%) diagnostic yield [4] . Lymphocytes predominant and high adenosine-deaminase activity in pericardial fluid is useful in diagnosing tuberculous effusion [5] . Polymerase chain reaction (PCR) is the gold standard diagnostic test in cases when other tests are negative [6] In the appropriate clinical context, marked nonhilar mediastinal lymphadenopathy on chest computed tomographic studies along with a strongly positive tuberculin skin test could be of value in the noninvasive diagnosis of pericardial effusion due to tuberculosis

Treatment of tuberculous pericarditis is by standard antituberculous chemotherapy. Corticosteroids are used where rapid improvement of symptoms is deemed desirable reduce mortality, but it does not influence the resolution of pericardial effusion [7] Percardiocentesis is often used for relief of symptoms , sometimes where complete drainage of fluid by pericardiocentesis is not possible, transcatheter intra pericardial urokinase given in early course causes fibrinolysis and provides relief. [8]

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