



A RARE CASE OF THYMIC HYDATID CYST

General Surgery

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ABSTRACT

Hydatid disease is rare parasitic illness with commonest site of occurrence being lung and liver. Rarely it is reported to be infecting in brain parenchyma, but intra-thoracic extra pulmonary origin of mediastinal hydatid disease is very rare and difficult to speculate. We reporter a rare case of mediastinal hydatid disease in a 53 year old male resending with cough breathlessness and intermittent fever. Only after the thoracotomy and careful observation origin of the cyst was traced to thymus. Large well defined multilocular cystic lesion of 27X17X10 cm was resected and found to be hydatid cyst. The post operative progress of patient was uneventful.

KEYWORDS

Thymus, Hydatid cyst, Mediastinum, Echinococcus granulosus,

Introduction:

Hydatid disease is uncommon parasitic illness caused by *Echinococcus granulosus*, *E. multilocularis* and *E. oligarthrus*. (Mrida, 2001) Higher susceptibility to hydatid disease is recorded in persons in contact with carnivores, sheep and cows. Liver (55-70%) and lungs (15-35%) are the most common sites with rarity of infection in brain (1.7%) as manifestations of infection, though almost all sites of body can be involved in the disease. (Peterson Extra-pulmonary location of the disease in the thorax is very rare. Recorded intra-thoracic extra-pulmonary locations are generally the mediastinum, pleura, pericardium and chest wall. (Oguzkaya, 1997) Mediastinal hydatid cysts are difficult to diagnose and remain undetected for years together. During this tenure they grow slowly at the projected rate of 1 cm/year. Diagnosis only becomes imminent in case of incidental finding or pressure symptoms on surrounding organs, though speculating hydatid cyst as diagnosis is one of the distant differentials.

This case report is purposed to report a rare incidence of thymic hydatid cyst.

Case Report: A 53 year old male patient, laborer by occupation was admitted in our hospital with chief complaints of cough, breathlessness (Grade 4), minimal mucoid expectoration and high grade intermittent fever since 15 days. His medical history was unremarkable except for history of anemia (Hb 6.0 g%) for which 2 units blood transfusion was done in past.

On clinical examination, scattered crackles and decreased breath sounds with increased vocal resonance on left side of chest was noted. A chest X-ray revealed homogenous opacification involving both right and left hemithorax (Fig 1). Multilocular mass in anterior mediastinum with soft tissue attenuation and calcific foci was seen on chest computed tomography (Fig 2). Laboratory tests were normal except microcytic hypochromic anemia and mild leukocytosis. Ultrasonography of chest revealed large well defined multilocular 20x17x10cm predominantly cystic lesion in anterior mediastinum extending to left hemithorax and left pleural effusion. Ultrasonography of abdomen and pelvis was normal. Left pleural fluid cytology showed predominantly polymorphs.

Cystic thymoma and cystic thymic carcinoma was considered as most probable diagnosis and hydatid cyst and cystic teratoma were considered to be remote diagnosis.

On further investigations, alpha fetoprotein was found to be within normal limits, Pleural fluid cytology revealed predominant polymorphs and was negative on malignant cells. Culture for aerobic

pyogenic organism was found to be negative. Serum protein electrophoresis was normal.



Fig 1: Chest X ray showing homogenous opacification involving both right and left hemithorax

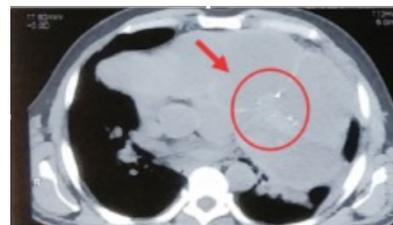


Fig 2: CT thorax showing multilocular mass in anterior mediastinum with soft tissue attenuation and calcific foci



Figure 3: Post-operative day 1 chest x ray (Can be compared with Pre-op X ray (Fig 1) to appreciate the difference.

Patient was planned to operate. Left thoracotomy was done through 5th intercostal space, and encountered the large cyst occupying the anterior mediastinum, involving entire left hemithorax and extending into right hemithorax. (Fig 4) The origin of lesion was traced to thymus. After Total cyst excision was performed. Cystic contents were removed and Capsule was separated from adjoining mediastinal viscera. (Fig 5) Intrathoracic space was irrigated with 3% sodium chloroxide and closure was done in layers. Postoperative stay of the patient in the hospital was uneventful with day 1 X-ray. Microscopy of the aspirated cystic fluid showed hooklets of *Echinococcus granulosus*. The patient was discharged on albendazole (400 mg once daily for one month).



Fig 4: Thoracotomy for cyst excision

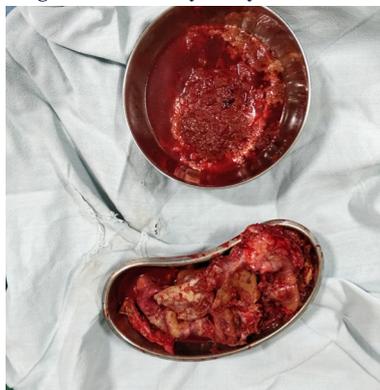


Fig 5: Hydatid cyst with Hydatid sand

Discussion: Hydatid disease has been acknowledged as an important clinical entity since ancient times. (Aletras,2000) The disease is a serious problem in India, where it is endemic. Although hydatid cysts are mostly seen in the liver and lungs, they may also be located in various tissues of the body. (Eren 2004, Oğuzkaya 1997) Extrapulmonary but intra-thoracic hydatid cysts are very rare. (Oğuzkaya 1997) The incidence of mediastinal echinococcosis is about 0.1%–0.5% among intrathoracichydatid cysts.(Özyurtkan 2009, Thameur 2000). Although extremely rare, is a distinct clinical entity, which must be considered in a patient with mediastinal mass in endemic regions. (Eroğlu,2002) In general, mediastinalechinococcosis is neither clinically nor radiologically distinguishable from other mediastinal cystic lesions. (Davis,1987) Diagnosis can be reached after the combined assessment of clinical, radiological, historical and laboratory data of patients, as in the case presented here. Complications of mediastinalhydatid cyst (El Kabiri, 2001, Kabiri 2007, Ozpolat 2005) necessitating the need of surgical excision of mediastinalhydatid cyst.

In conclusion, hydatid disease should be kept in the differential diagnosis of a cystic lesion of the mediastinum, especially in endemic regions. Computed tomography of chest is the reliable diagnostic test for such lesions. Surgical removal is the mainstay of the treatment followed by adjuvant medical therapy to prevent recurrence.

Conflict of Interest: Authors declare that they have no conflict of interest.

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