

ISOLATED SYMPTOMATIC PERICARDIAL HYDATID CYST

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Abstract

Cardiac hydatid cysts is uncommon disease. its mostly located in the left ventricle, interventricular septum and right ventricle . Isolated hydatid Pericardial involvement without involvement of heart or other organs is considered extremely rare , Her in we represent a case of symptomatic isolated pericardial hydatid cyst in queen alia heart institute in jordan.

Keywords:

Cardiac tamponade,
Hydatid cyst.

Introduction

Hydatid disease is a parasitic infection caused by *Echinococcus granulosus* (1). It has wide geographic distribution, mainly found in subtropical and tropical regions of developed country of the the Middle East, South America, Mediterranean and Africa . Humans may be infected incidently with the intermediate hosts of the parasites life cycle by ingesting of contaminated water or food by eggs (feco_oral) or by contact directly with infected dogs. As the parasite find their way through the intestinal wall and reach the lymphatic or portal system, the liver reacts as the first line of resistance (defense) ,so that its the most infected organ in 70% of cases, followed by lung 20% of cases, and others in 10% (1,2)

Cardiac invovement by hydatid cysts present only in (1 to 2%) of cases of systemic echinococcus granulosus infection (3,4). The most location is the left ventricle, followed by the interventricular septum and right ventricle. Isolated Pericardial cyst without myocardial infestation is also extremely rare. Patients with pericardial cyst (hydatid) either remain free of symptoms for many years or suffering from multiple nonspecific complaints such as fatigue , general weakness , chest discofort , shortness of breath , orthopnea , but it may associated with an increase risk of catastrophic complications , including pericardial rupture causing cardiac tamponade, or systemic rupture leading to anaphylaxis and also death, if not diagnosed and treated properly (3,7)

Choosing a correct treatment is difficult as it require a good awareness and correct diagnosis based on clinical, radiological , surgical and histopathological approach.

Case presentation

A 68-year-old female patient with hypertension ,obese, COPD, Normal coronary angiography on 2012 , here son wife and daughter had liver hydatid cyst recently, admitted to the hospital with atypical chest pain, dry cough, and dyspnea on minimal effort . Her complaints had started 3 months ago and her dyspnea increased gradually. On physical examination , her temperature 37 °C , pulse rate of 100 beats/min and BP of 110/60 mmHg. She is dyspnoic , orthopnic, mild peripheral edema , with jugular venous distention, no murmur or friction rub audible . Chest roentogram (chest x-ray) showing increase in cardiac sillhouett . ECG IS normal . Transthoracic echocardiography demonstrated unilocular intrapericardial cyst, at anterolateral aspect of the heart compressing RV with RA ,SVC And IVC dilation (figure 1) . contrast enhanced thoracic CT scan done and revealed (9x8x5) cm well defined hypodense encystic lesion in anterolateral aspect and extending inferiorly (figure 2) , there is no other cystic lesion on mediastinum ,lung, or liver, another brain CT scan were done and free result. Given these findings, the diagnosis is isolated pericardial cyst;. A tuberculin skin test were negative. Median sternotomy (figure 3 and figure 4) and total excision of pericardial cyst with partial pericardictomy was done(figure 5), histo pathological examination reveal lamellar eosiphillic stained cuticular membrane.

Discussion

Hydatid cyst is well known zoonotic disease, caused by echinococcus granulosus larvae. In human being the most frequent locations of hydatid cysts are the hepatic (70% of cases), pulmonary (20%), kidney (2-6%), and other location including pericardium (3). Cardiac hydatid cyst disease is rare, responsible for about 1% to 2% of all cyst related cases. The most frequent location of the cyst is the myocardium, particularly the left ventricular free wall and interventricular septum. Isolated cardiac hydatid disease is very rare, and just few cases reported (5). In our case, the hydatid cyst located within the pericardial cavity with out myocardial involvement.

Clinical scenarios of cardiac hydatid cysts depending on the size, location, number of cysts and presence of any complications (2,8). Most of cases remain free of symptoms for many years or having multiple nonspecific complaints, just like fatigue, fever, night sweating, and atypical chest pain. However, catastrophic and lethal complications can occur like:

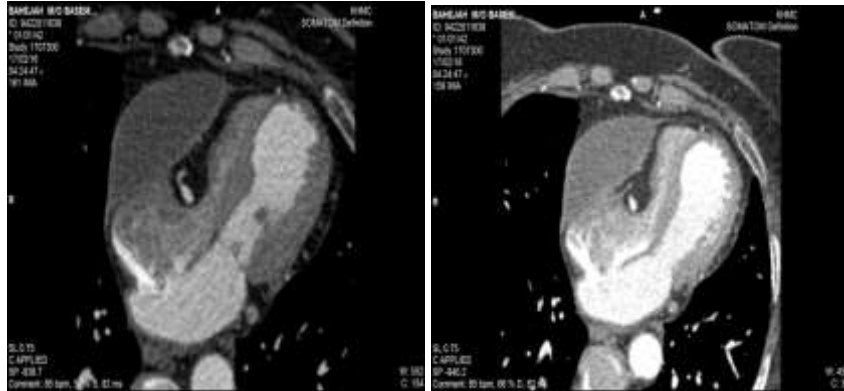
1. Anaphylactic shock which happened due to systemic cyst rupture into the blood stream.
2. Pan systemic or pulmonary hydatid embolisation.
3. Valvular involvement in form of valve obstruction or regurgitation due to papillary muscle involvement.
4. Arrhythmia and atrioventricular conduction defect.

Symptoms of a pericardial hydatid cyst are generally due to mass effect and pressure on the myocardium by an increasing size of cyst causing breath difficulties, dyspnea, sleeping difficulties and orthopnea, or due to rupture of hydatid cysts into the pericardium leading to pericarditis with pericardial effusion, cardiac tamponade and deposition of secondary cysts (7,8). The diagnosis of cardio-pericardial hydatid cysts is considered challenging, and the differential diagnosis consists of pleuro-peri-cardial cyst, hematomas, congenital pericardial cyst, myocardial aneurysm, myocardial abscess, cystic tumor degeneration (6, 8). If there is a history of hydatid cyst any cardio-pericardial mass should be considered as hydatid cyst until proofing otherwise.

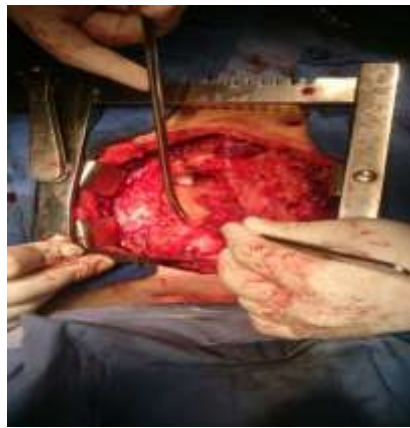
Chest X-RAY may show the lesion but it is scanty for lesion characterization. Echocardiography is the investigation of choice for studying cardio-pericardial hydatid disease. The ultrasonographic signs of a hydatid cyst depending mainly on the stage of the disease of affected organ. the diagnostic sign is a detached membrane; the appearance of a round, echolucent, thin-walled and multiseptate mass is characteristic of the echinococcal cyst (2). A hydatid cyst should be considered when ever there is an intracardiac cystic mass. unfortunately, the multiloculated and echolucent nature of hydatid cysts not always present, and they may appear as a tumour-like mass (2,9). CT may help to distinguish between watery tumors from solid tumors and intra-cavitary thromboses. They are also effective for looking for other lesions in other locations like cerebral, thoracic and abdominal. It can show the site of the abnormality and provide precise information for the surgeon (9,10). The recommended management once diagnosis established or to proof the diagnosis is excision of the cyst because of the possibility of severe complications, including cyst rupture and sudden death, even in asymptomatic patients (6,7,8).



(figure 1)



(figure 2)



(figure 3)



(figure 4)



(figure 5)

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