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Cardiology

PERICARDIAL HYDATIDOSIS-A RARE CASE REPORT

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ABSTRACT Hydatidosis is the accidental infestation of humans by the larvae of Echinococcus granulosus in sheep and cattle rearing countries. Although liver and lungs are the most commonly affected organs , cardiac involvement which occurs very rarely can have serious implications in the form of heart failure, arrhythmia , valvular or conduction abnormalities and very rarely cyst rupture in the pericardial cavity can result in tamponade. Pericardial hydatid cyst is extremely rare manifestation. Here , we report a case of pericardial and hepatic hydatic cyst in a relatively young male who presented with nonspecific symptoms and was managed conservatively with medical management only.

KEYWORDS : hydatidosis, pericardial, echinococcus granulosis

INTRODUCTION

Hydatid disease of the heart is a rare manifestation of the cystic echinococcosis caused in humans by the larvae of the parasite Echinococcosis granulosis . Humans get infected accidentally by ingestion of unwashed and uncooked vegetables contaminated by(the ova of the parasite) excreata of canines like dogs etc who are the definitive hosts. Echinococcosis continues to be endemic in many livestock rearing countries including Indian subcontinent.(1,2)) In India ,it is commonly encountered in Kerala ,Andhra Pradesh and Kashmir. The most common site of hydatid cyst is liver (50-70%) and lungs(25%). Cardiac involvement is extremely rare and is seen only in 0.5-2% of cases.(3,4) We report a case of pericardial and hepatic hydatid cyst in a young male from rural area of Kashmir.

CASE REPORT

A 18 year old young male with no significant past medical history presented with exertional dyspnoea and palpitations lasting for over six months. On physical examination , the patient had temperature of 99°F,heart rate of 110 bpm and blood pressure of 100/70 mm Hg. There was no respiratory distress and the general physical examination was unremarkable. Chest radiograph revealed increased cardiac size while the rest of routine blood tests including electrocardiography were normal. On echocardiography, a cystic mass lesion with posterior acoustic enhancement was detected in relation to posterior inferior wall of right ventricle. Contrast enhanced thorax CT revealed a well defined cystic lesion, 68×62×60mm with internal membranes and foci of calcification in the pericardial space mildly compressing the posterior –inferior wall of right ventricle.(Fig. 1 and Fig. 2). It is also abutting the inferior venecava with no evidence of luminal compression. Another cystic

lesion with foci of calcification , measuring 45×35×38mm is seen in liver. There was no other cystic lesion in mediastinum or lung parenchyma. (Fig. 3 and Fig. 4). A diagnosis of hydatid disease was made which was confirmed by positive Casoni's test. The patient was adviced surgical resection of the cyst which was refused by the patient. He was discharged with 15mg/kg albendazole treatment twice a day and was adviced to follow regularly. CT scan which was repeated after almost 15 months did not show either marked change in the cyst size nor spread to other viscera. Thus , medical treatment may not prove successful in the management of hydatid cysts but can limit there growth and spread.

DISCUSSION

Cardiac echinococcosis is extremely rare even in endemic areas. Left ventricle is the most commonly affected site(50-60%) because of its rich blood supply followed by interventricular septum (10-20%), right ventricle(5-15%)and right or left atrium (5-8%).(5,6). Pericardial involvement is very rare and there are few case reports in literature . In the present case ,the pericardial cyst was present adjacent to right ventricle and was compressing the ventricular cavity. It was also abutting the inferior venecava but did not cause any luminal obstruction.

Most of the patients are asymptomatic as the cysts are slow growing. An average cysts grows @ 1cm /year and takes 10-20 years to grow and cause symptoms. The index patient presented at a very young age as it is not the usual age of presentation, the cysts being slow growing. The symptoms may be non-specific like chest pain ,breathlessness, cough or palpitations or may be due to complications . A cyst may compress adjacent structures like coronary vessels and can present as angina or a cyst lying along left ventricular outflow tract can present with features of mitral stenosis. Right heart cyst can present with hepatomegaly ,ascites or cor pulmonale. Sometimes a cyst may rupture resulting in tamponade, anaphylaxis or sudden death. Embolization into pulmonary or systemic circulation have also been reported. Percarditis due to continous slow leakage of cyst contents can also occur. (6,7,8) Our patient was asymptomatic for many years after infection and came to medical attention only after non specific complains of palpitations and breathlessness.

Diagnosis is based on high degree of suspicion. A person from endemic area presenting with cardiac sillhoutte sign should be evaluated extensively . 2D-Echo is indespensible for diagnosis of hydatid cyst and is the best diagnostic procedure. On echo, a well marginated unilocular cyst with internal trabeculations corresponding to daughter cells is diagnostic. Besides, echo can analyse cyst characteristics ,topography , appearance and relationship with heart chambers. (8) Other imaging modalities include chest radiograph, ultrasonography , CT and MRI . Bood tests are normal in most of the patients with hydatid disease. Eosinophilia is seen in few patients. Serological tests are not reliable as they have high specificity but low sensitivity. Besides in patients with intact cysts, antibody titre rises only after cyst leak. The pathological examination confirms the diagnosis but carries great risk of cyst rupture and anaphylaxis. (9,10)

The cysts have to be differentiated from other conditions like bronchial carcinoma, tumors of heart and benign tumors of mediastinum and aneurysm of great vessels. Once diagnosis is confirmed , complete excision is the only definitive treatment and the results are satisfactory. Post-operative albendazole or mebendazole should be prescribed as an adjuvant therapy to prevent recurrence of disease.(6,7)

Hydatisosis which was previously considered to be the disease of cattle rearing countries has now become a world-wide health problem due to increase travel and immigration. Therefore, high index of suspicion in endemic areas as well as non endemic areas is important for its early diagnosis and timely initiation of treatment.

Fig1

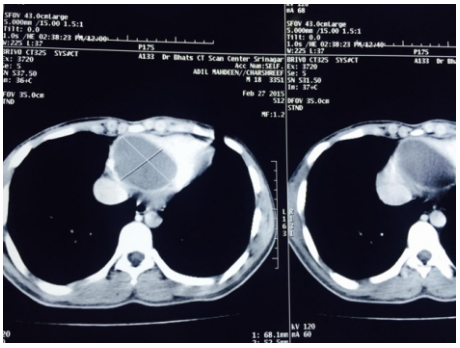


Fig2

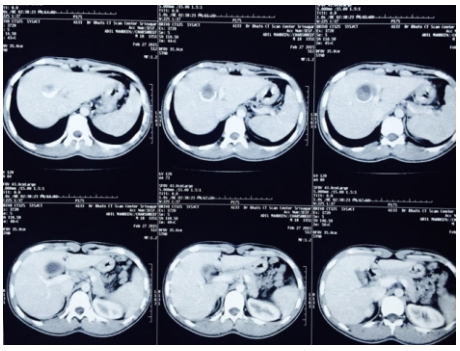


Fig 3

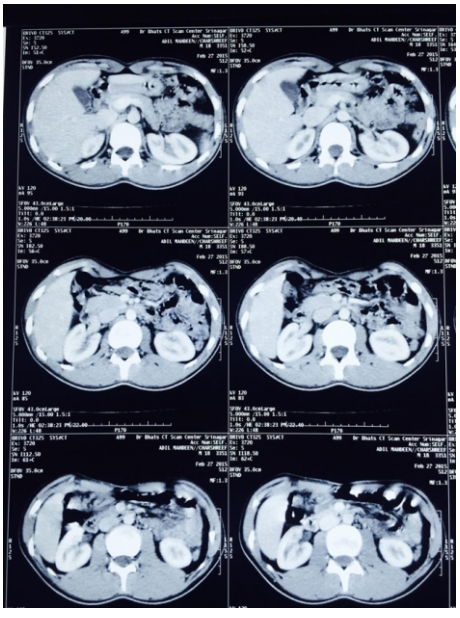


Fig4

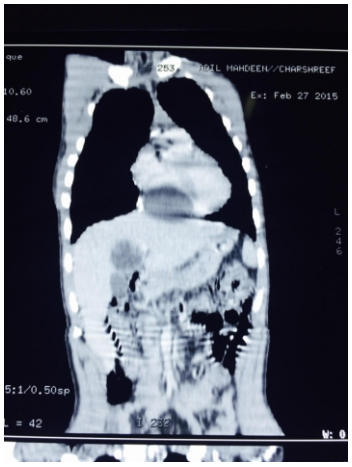


Fig 5

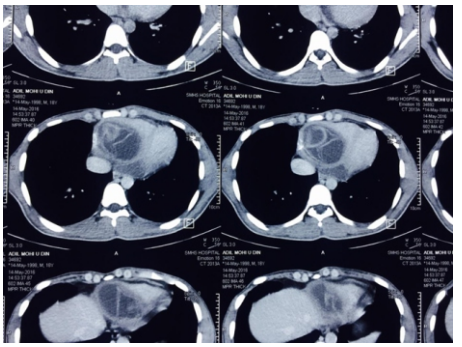
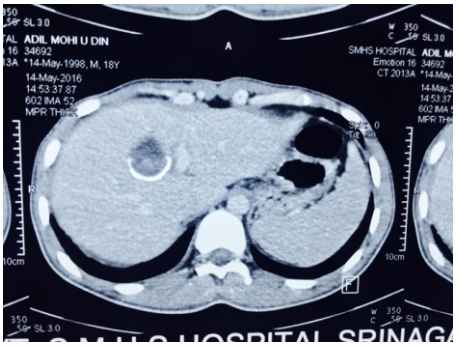


Fig 6



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