

Hydatid Cyst of the Left Ventricle, Interventricular Septum , Liver and Lung

N.Givtaj M.D, R.Baghaei M.D , A.Dehestani M.D , H.Vafae M.D , M.Rezaee M.D

Abstract:

Cardiac Echinococcosis is a rare and the most serious of all Hydatid manifestation. We report here the case of 12 year old boy who had Hydatid Cyst in the liver, lung , left ventricle & inter ventricular septum .

The patient underwent cardiac surgery after 2 months medical therapy with Albendazole.

Case Report:

A 12 year old boy presented with left side chest pain, cough and palpitation from 52 days ago . Clinical examination revealed raised of jugular venous pressure,mild hepatomegaly.

On auscultation normal s1,s2 with 3/6 murmur was heard most strongly in left sternal border & apex . ECG was normal. Hematologic investigations revealed normal ESR, eosinophilia. Chest X-Ray showed a well circumscribe lesion in upper lobe of left lung, suggested aborted cyst.

In CT of thorax & abdomen showed cystic mass in the left ventricle , interventricular septum (IVS) , left lung & small cyst in the liver .(The images of this CT were not available)

Patient was diagnosed to have hydatid cyst in liver , lung & heart . He was treated with Albendazole 400mg twice daily for 8 week. After 2 months medical therapy there was no change in cardiac cyst size, so after consultation with infectious disease service, patient referred to us and surgical therapy was recommended.

In CXR that was taken in our center typical bulging in left border of heart was seen.(Fig 1),and TEE showed two

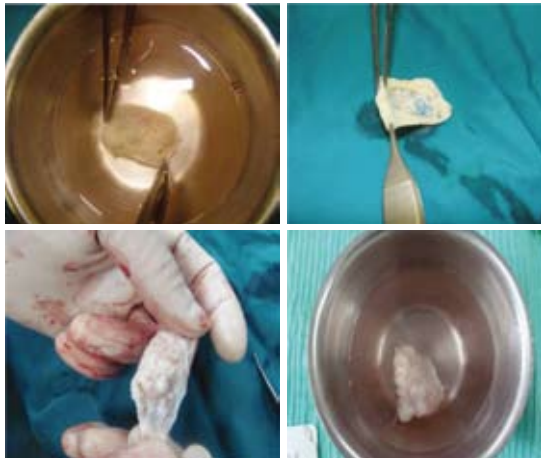
cystic space occupying lesion in IVS & LV free wall, the one in IVS was larger & elliptical(7x3.5cm).it was echolucent & had three distinct layers. The smaller cyst (3x4cm)was in midway between mitral annulus & apex in LV free wall with extension to LVPW& has similar appearance with the larger one.



Fig. 1: Chest X Ray

Through a mid sternotomy incision , after total cardiopulmonary bypass with moderate systemic hypothermia (32 °C) and cardioplegic arrest, right atrium was opened. After putting AgNo3 pad around LV,roof of cyst was opened and daughter cyst & germinal layer was removed (fig 2) , and defect was repaired by pericardial patch . Then through RA, after putting

AgNO₃ pad around cyst in IVS, large cyst was resected (fig 3), and defect was repaired. He was weaned off cardiopulmonary bypass with out problem & discharge one week after operation, and was advised Albendazole 400mg BD for two weeks.



(Fig 2,3) LV & IVS hydatid cyst

Discussion:

Echinococcosis is a widely known zoonosis caused by the larve of *Echinococcus granulosus*, where man is the accidental host, sheep is the intermediate host & dog definitive host. Human infection follows ingestion eggs passed by infected dogs.

In humans, the most frequent location of hydatid cyst of the liver (60%) & the lungs (20-30%). (1) Cardiac involvement ranges from 0.01% to 2%.

The left ventricle is most commonly involved, while the less commonly involved sites in the heart include the right ventricle, inter ventricular septum, left atrium & pericardium.(2)

Patient cardiac hydatid cyst may remain asymptomatic or have symptoms depending on the location & sizes of cysts. There are usually due to cyst perforation, pressure, arrhythmias, angina, valvular dysfunction, pericardial reaction, pulmonary or systemic embolism and anaphylactic reaction. (3,4)

Although hydatid cysts are more frequently in left ventricle, right ventricle hydatid cysts are more frequently prone to rupture leading to pulmonary embolism, anaphylactic reaction or sudden death.

Morbidity from Echinococcosis in men is 3 times higher in

women.

Solitary cysts occur in almost 60% of the cases. Echocardiography, CT & MRI are valuable diagnostic tools in the detection of cardiac hydatid cysts. Although a high & prolonged use of benzimidazol is effective in the treatment of cardiac & non-cardiac hydatosis, this cannot prevent serious complications. Therefore surgical intervention is the definitive therapy for cardiac hydatosis. (5,6)

In choosing the technique of operation, the location, number and sizes of cyst are important. (7)

Conclusion:

To conclude cardiac Echinococcosis is rare and the most serious form of all hydatid manifestations. Cardiac hydatid can now be effectively diagnosed by excellent non-invasive diagnostic imaging procedures & managed by equally effective surgical intervention.

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