

Hepatic and Pericardial Hydatid Cyst - A Case Report

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Abstract

Hydatidosis is a zoonotic affection humans are affected accidentally. The organs most often affected are the liver and lung, cardiac involvement is very rare represents 0.5 - 2% of all hydatid cases.

Surgical excision under CPB (cardiopulmonary bypass) is the treatment of choice for cardiac hydatid cyst. Be prepared for unforeseeable intraoperative complications.

We report the case of an 8 year-old child, who had a history of hepatic splenic and mesenteric hydatidosis. Presented to the surgical emergency for chest pain and dry cough, the patient recovered after excision of the pericardial hydatid cyst. he is doing well after 1years of follow-up without recurrence.

Keywords: *Hepatic; Pericardial Hydatid Cyst; CPB (Cardiopulmonary Bypass)*

Introduction

The geographical distribution is explained by the breeding of the sheep, all the countries of the Mediterranean basin (Algeria, Tunisia) are affected, also Australia and certain countries of south America. The liver and lung is the most often affected, we discuss The aim of this article is highlights the rarity of the intra pericardial localization of the hydatid cyst and the diagnostic procedure.

We report the case of 8 year old boy with who presents an intrapericardial hydatid cyst which was diagnosed intraoperatively, his surgical history being an intervention for hepatic, splenic, and mesenteric hydatid cyst.

Case Report

An 8 year old boy with poor socioeconomic status already operated 2 years ago for an hepatic, splenic and mesenteric location of an hydatid cyst presented to the Emergency Department with a history of left-sided chest pain and dry cough, His pulse was regular and heart sounds were normal with no murmur.

Chest X-ray (Figure 1A) shows an increase in the cardiac index and an opacity next to the lower left arch.

Computerized tomogram (CT) of the abdomen and thorax showed a 10 cm by 6 cm oval cyst in left lobe of liver (Figure 1C) and the pulmonary location of an uncomplicated hydatid cyst located on the lingula pericardial, with ipsilateral atelectasis (LV) (Figure 1B), cysts however the cerebral scan was normal (Figure 1D).

The Hydatid serology was strongly positive till dilution 1/2560.

Diagnosis of pulmonary cyst was made and the patient was referred for surgery.

The surgical approach was left postero-lateral thoracotomy, under general anesthesia. we found regular parenchyma of a left lung and a cystic formation attached to the heart over the left ventricle and partly over the right and mobile with its beats it has a salient dome, the surrounding area was isolated with large swabs soaked with hypertonic serum.

Puncture bringing back a clear liquid, we proceeded to its aspiration, collapse of the cyst confirming the intra pericardial location, hypertonic serum was injected in the cyst several times and the parasitic membrane was removed and pericardial closure on mediastinal drainage.

The postoperative evolution was simple, patient discharged on day 6 with anti-parasitic treatment (albendazole).

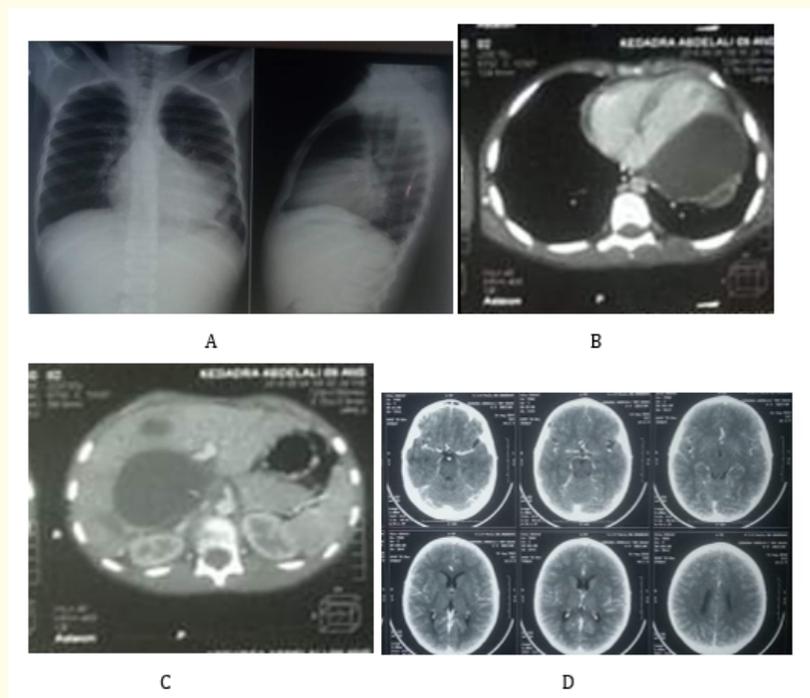


Figure 1: A)-Chest X-ray showing and increased cardiothoracic ratio (B) Shows the cyst in the left lobe of liver. (C) Shows the transverse section of the CT showing the elliptical pericardial hydatid cyst over the left ventricle (D) normal cerebral scan.



Figure 2A: Pericardial cyst being incised after injection of hypertonic cyst into the pericardial cystic cavity. Clear fluid under pressure being sucked out.

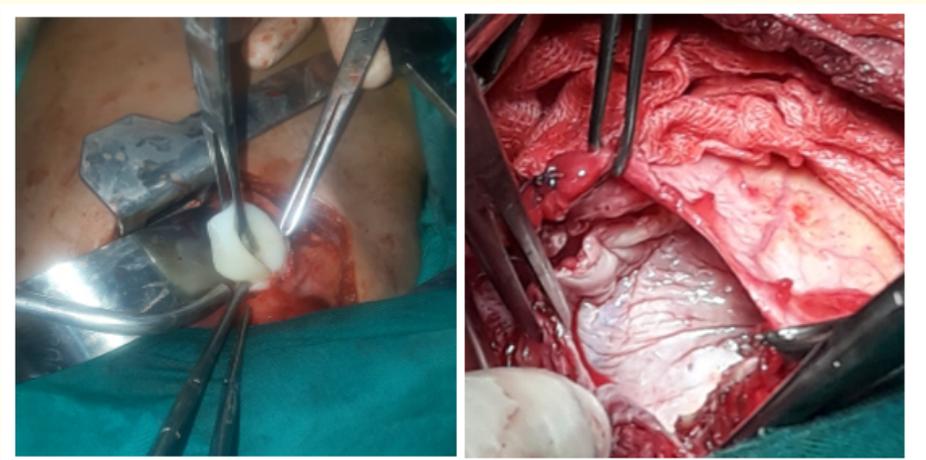


Figure 2B: Extraction of parasitic membrane.

Discussion

Hydatidosis is an anthrozoosis caused by the development in humans the larval form of dog taenia “*Echinococcus granulosus*”.

It’s endemic in Algeria and other countries of the Mediterranean basin and South America, poses a real public health problem due to the severity of its complications.

Man is an accidental host, plays the role of intermediate host without being able to transmit the disease in turn “parasite dead end”.

The localization of the hydatid cyst can be done in all the viscera but the liver and the lung represent 80% of the affected organs, Cardiac involvement is rare, represent 0.5 - 2% of all hydatid cases.

Pericardial hydatid cyst occurs mostly in multifocal form but the solitary form is rare.

The hexacanth embryo penetrates into the coronary arteries and arrive at the heart wall where he developed, several years are necessary for development of the cyst.

The cardiac hydatid cyst may remain silent and without symptoms or discovered as a result of a complication. In our case the patient did not present a cardiac symptoms.

Over the years the cardiac hydatid cyst reaches a large volume, which favors its passage most often towards the epicardial surface, in this case the cyst reaches the pericardial space, or rarely towards the endocardial surface with risk of rupture in the intracavitary.

In the present patient, the hydatid cyst was located inside the pericardial cavity without myocardial involvement.

The pericardial hydatid cyst can produce a pressure on the heart or on the vessels causing cardiac ischemia also on the cardiac conduction fibers causing atrial fibrillation or sudden death.

In our case the patient does not present an symptoms of cardiac compression on the other hand he develops a dry cough and a feeling of intermittent discomfort in the left chest.

Mitsi and associates reported a case of women found dead, at autopsy, the HC was found at the left ventricular [4]. Another one case was reported in the literature died waiting for operation [2]. This lost confirmed the serious nature of this entity.

The echocardiography is the method of investigation of choice for any cardiac pathology, in our case, the echocardiography was not used as a means of diagnosis, we used the chest CT scan which revealed a pulmonary hydatid cyst.

The patient was sent to the operating room for a possible pulmonary hydatid cyst and the diagnosis was made during the operation [1,3,5].

Conclusion

In endemic areas, and in patients with hydatid cyst pathology must undergo a systemic exploration for other rare localities such as the heart and the brain, an echocardiography is essential as part of a preoperative assessment in patients with increased cardiac index, even in the absence of cardiac symptoms.

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