Case Report

Incidentally Discovered of Hydatid Cysts within the Liver and Diaphragm Post Trauma

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Abstract

Hydatid disease is an endemic disease which can affect any part of the body, the majority of cases originate within the liver and lung, intrathoracic extrapulmonary sites are very rarely affected.

We present a rare case of a 24-year-old caucasian male patient with multilocular hydatid cysts, affecting the liver and diaphragm which we diagnosed accidently, both lesions were successfully managed by surgical excision.

INTRODUCTION

Echinococcosis or hydatid disease, is an endemic parasitic disease caused by tapeworms of the Echinococcus type [1]. Two of the recognised species, E. granulosus and E. multilocularis, are of importance for humans [2].

Both Liver and lung are the most common sites of the disease, but it can also be seen elsewhere in the body, Intrathoracic Extrapulmonary location of the disease is very rare, affecting the mediastinum, pleura, pericardium and chest wall [3]. Diaphragmatic localization is very rare with an incidence of 1%, and most of these are generally associated with liver hydatidosis [4].

CASE REPORT

A 24- year- old male patient admitted to emergency department as a case of falling down from 2 meters height, he presented with left sided chest pain that associated with dyspnea.

On physical examination, he had normal vital signs, there was a scratches and tenderness at the lateral border of right chest wall, that associated with decreased air entry at basal area. All other physical examination were normal, Laboratory tests were within normal limits.

Chest x ray, showed obliteration of right costophrenic angle with suspicion of hemothorax (Figure 1), subsequently abdominal CT scans was performed there was no evidence of hemothorax but instead a 3*4 cm intrathoracic lesion adherent to chest wall and a 5*6 cm lesion in the right lobe of the liver were found (Figure 2).

The Patient was admitted to the surgical ward for observation of his trauma, since hydatid disease is endemic in our country an ELISA test was performed and positive result was obtained, hydatid disease was diagnosed and the patient received albendazole and was discharged for elective surgery.

Surgery Expose of the intrathoracic cyst was performed through the right lateral seventh intercostal space, after dissection and release of adhesion around the cyst it was found that the cyst originated from the muscle of the right hemidiaphragm (Figure 3). the cyst was protected from the surrounding structure by bags soaked with hypertonic saline, both hypertonic saline and polydine were injected inside the cyst. the cyst was opened, a thick yellowish gelatious infected material was evacuated, marsupialization of the cyst wall was done, the diaphragm was incised to approach the lesion in the liver, the cyst injected with hypertonic saline then it was opened and the germinal layer was removed. due to absence of infection the rest of the cyst was left open, the diaphragm was repaired by an interrupted suturing technique.

Histopathology report was consisted with infected hydatid of his traumata. Since hydatid disease is endemic in our country an ELISA test was performed and positive result was obtained, hydatid disease was diagnosed and the patient received albendazole and was discharged for elective surgery.
The patient was discharged receiving albendazole 400 mg PO, on follow up resolution of both lesion was seen on CT (Figure 4).

**DISCUSSION**

Although hydatid cysts are mostly seen in the liver and the lung, they can be located in various tissues. The embryo hexacanth crosses the intestinal wall and, through the portal system, reaches the liver where it forms cysts, since this passage is mandatory in the life cycle of the disease, the liver is the organ most frequently infected by the disease (50-93%) [5].

Extrapulmonary intrathoracic hydatid disease is rare, mostly they are of mediastinal or pleural origin, diaphragmatic involvement is even a more rare, it can be affected by the transportation of the embryo, either intraperitonealy from the liver or intrapleuraly from the lung [6].

Thus in the majority of cases involvement of the diaphragm is associated with lung or liver involvement [7], but in unusual cases only a diaphragmatic cyst occurred without an additional hepatic cyst. This rare localization of the disease can be explained according to the fact that a great part of the liver is without peritoneum. Cysts located in this area are more likely to adhere to the diaphragm [8]. The pleural diaphragm is the most affected by this disease with a percentage ranged between 0.6 and 1.5 of all intrathoracic localizations. 66 reported cases in literature [9]. our case resemble combined hydrated cyst with liver and lung side diaphragmatic involvement.

Hydatid disease diagnosis can be exact performed using clinical, laboratory and radiological findings. US and CT scan are able to localize the site of the cyst, In cases of diaphragmatic hydatid cyst, and due to the anatomical relationship between liver, diaphragm and lungs, it is not always easy to define the cyst of diaphragmatic origin, as in our case we considered the cysts as hepatic and lung origin until surgery.

To make the diagnosis of a Hydatid disease depends on the investigator’s high index of suspicion. It is not rare to discover a cyst during a prophylactic x-ray examination and the plain chest x-ray may give a clue to the diagnosis [10], this case was discovered to have hydrated cyst incidentally during doing and x-ray and CT study to other medical purpose. When a hydatid cyst is diagnosed, treatment should be instituted to prevent complications such as infection or rupture of the cyst to adjacent structures.

Surgery to obtain a complete cure is the treatment of choice for most patients with intrathoracic but extrapulmonary cysts, excision must be done without delay to avoid or relieve compression of surrounding vital structures [11]. This case is treated by right lateral thoracotomy approach with phrinotomy and removal of liver cyst through thoractomy.

**REFERENCES**

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