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Pericardial Localization of Hydatid Cyst: A Case Report

Abdourahman Waberi[1*], William Aloumba[1], Aicha Merzem[1], Hasna Belgadir[1], Omar Amriss[1], Nadia Moussali[1], Naima Elbenna[1]

[1]Radiology Department, 20 August 1953 Hospital, CHU Ibn Rochd of Casablanca, Morocco

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***Corresponding author:** Abdourahman Waberi
Radiology Department, 20 August 1953 Hospital, CHU Ibn Rochd of Casablanca, Morocco

Abstract **Case Report**

Pericardial localization of hydatid cysts is rare, with a negative hydatid serology in almost half of the cases. It usually occurs in association with mediastinal or peritoneal involvement. Medical imaging remains an important diagnostic element. We report an observation of pericardial involvement associated with mediastinal and peritoneal involvement.
Keywords: hydatid cysts, peritoneal involvement, Pericardial hydatidosis.

INTRODUCTION

Pericardial hydatidosis is rare, even in countries where it is endemic. It represents 0.2 to 2% of hydatidosis cases [1]. It can affect all ages, and the symptoms are non-specific. Usually, it is associated with other affected organs, such as the liver and the lung. We report an observation of pericardial involvement associated with mediastinal and peritoneal involvement.

PATIENT AND OBSERVATION

We report the case of a 30-year-old man followed for peritoneal hydatidosis. He was referred to our radiology department of the 20 August 1953 hospital of the CHU Ibn Rochd of Casablanca (Morocco) for a thoracoabdominal CT scan.

Compartmentalized, thin-walled, non-enhanced pericardial cystic formations were noted on the thoracic level. The most voluminous one is located in the posterior pericardium. Another formation of the same characteristic is present in the anterior mediastinum, communicating with the right dorsal segmental branch (Figures 1 and 2).

On the abdominal level, there is a bulky interhepatorenal cystic formation with a thin wall and no detectable enhancement (figure 3).

Considering the context of peritoneal hydatidosis, the diagnosis of pericardial hydatidosis associated with mediastinal hydatidosis complicated by a fistula with the right dorsal segmental branch was retained.

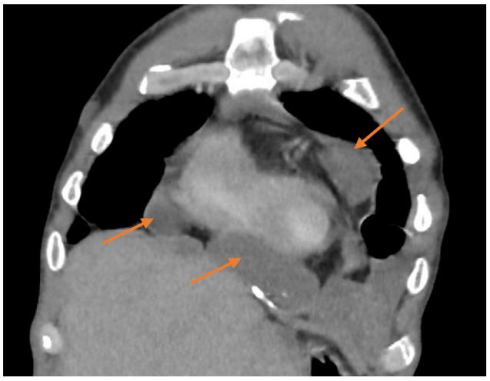

Figure 1: CT sagittal section showing pericardial cystic formations, one of which is the site of peripheral calcifications

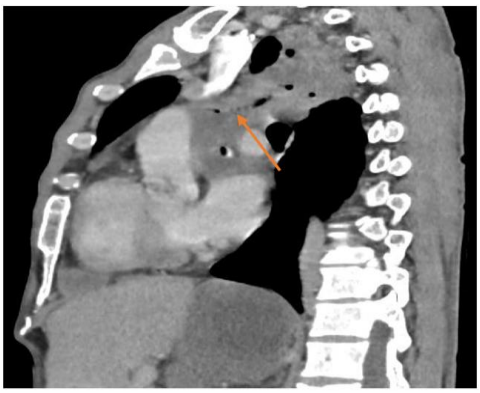

Figure 2: Anterior mediastinal cystic mass communicating with the right dorsal branch

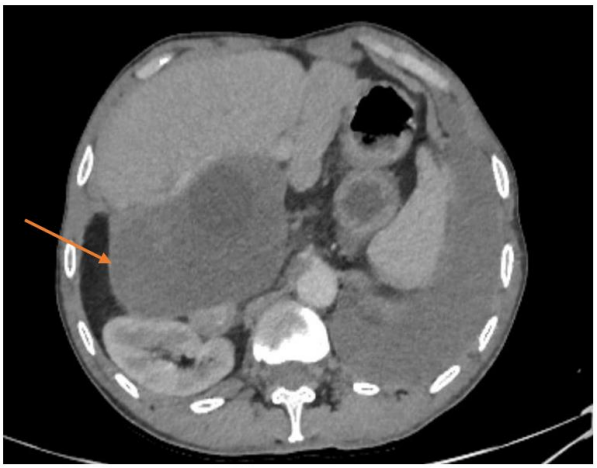

Figure 3: CT axial section: interhepatorenal cystic mass

DISCUSSION

Hydatidosis is a zoonosis due to the accidental development in humans of the larval form of a dog taenia: *Echinococcus granulosus.*

It is a cosmopolitan parasitosis prevalent in Mediterranean countries and constitutes a significant public health problem.

Cardiac involvement in hydatidosis is rare, representing 0.2 to 2% of cases [1]. In 2/3 of points (as in our patient's case), it is associated with pulmonary, hepatic, or mediastinal involvement [2].

The larvae of *E. granulosus* reach the heart through the suprahepatic veins and then through the vena cava. They then get the lung, the second filter after the liver. The larvae that escape these filters arrive at the left atrium and invade the myocardium through the coronary arteries. In more than 50% of cases, the parasite is found in the left ventricle in 10 to 20% of patients in the interventricular septum. Involvement of the right ventricle and pericardium constitutes 5-15% [3].

Hydatid serology is positive in only half of the cases [4]. The diagnosis is based on imaging.

Chest radiography is not specific. CT and MRI are necessary to confirm the diagnosis and to clarify its relationship [5], as in the case of our patient, who presented a communication with the right dorsal branch.

On CT, the hydatid cyst presents as a thin-walled unilocular cystic density formation that is not enhanced after injection.

MRI shows a fluid signal formation (hypointense on the T1-weighted sequence and hyperintense on the T2-weighted sequence) without enhancement after gadolinium injection.

The treatment of pericardial hydatid cysts is based on surgery with complete removal of the cyst while avoiding complications that can be fatal.

CONCLUSION

Pericardial localization of hydatid cysts is very rare. Often the clinical and biological findings need to be more specific. Medical imaging remains an important diagnostic element.

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