



## Isolated Pericardial Hydatid Cyst Treated Surgically: Case Report and Review of the Literature

Ben Jmaà Hèla<sup>1\*</sup>, Mhiri Fatma<sup>1</sup>, Dammak Aiman<sup>1</sup>, Ben Jmaà Tarak<sup>2</sup>, Bouassida Abir<sup>1</sup>, Elleuch Nizar<sup>1</sup>, Masmoudi Sayda<sup>1</sup>, Ben Jmaà Mounir<sup>2</sup> and Frikha Imed<sup>1</sup>

<sup>1</sup>Department of Cardiovascular and Thoracic Surgery, Habib Bourguiba Hospital, Tunisia

<sup>2</sup>Department of Infectious Diseases, Hedi Chaker Hospital, Tunisia

### Abstract

Cardiac hydatid cyst is rare. Isolated hydatid pericardial involvement without involvement of heart or other organs are extremely rare. Its clinical presentation is variable and it can have life threatening complications.

We present a case of an isolated pericardial hydatid cyst, in a female patient, presented with chest pain and removed surgically.

**Keywords:** Hydatid disease; Pericardium; Computed tomography; Thoracotomy; Excision

### Introduction

Cardiac hydatidosis is caused by the larval stage of *Echinococcus granulosus*. The most common site of cardiac involvement is the left ventricle (60%), followed by right ventricle (15%), interventricular septum (9%), left atrium (8%), and right atrium (4%) [1]. We report a case of an isolated non-complicated pericardial hydatid cyst, presented with chest pain in a young female patient, and treated surgically.

### Case Presentation

A 65-year-old woman, with no past-medical history, was admitted to the emergency department for chest pain.

Heart and lung auscultation were without anomalies. Electrocardiograph revealed a sinus rhythm, without myocardial ischemic signs. Chest X-ray showed an opacity measuring 5 cm of diameter, whose external limit confused with the heart limit (Figure 1). Transthoracic two-dimensional echocardiography demonstrated a large cystic mass near the ventricle apex with size of 37 mm × 28 mm, without compression of cardiac cavities and without pericardial effusion. Thoracic and abdominal magnetic resonance imaging confirmed a pericardial cystic mass of the left cardiophrenic angle (Figures 2), without abdominal cystic location.

So, left posterolateral thoracotomy and total excision of pericardial cyst with partial pericardiectomy were done.

Macroscopic intraoperative examination revealed a cystic formation, calcified, measuring 5 cm of diameter, near the heart apex. Histological and parasitological examination of the operative specimen confirmed the hydatid nature of the cyst. The postoperative course was favorable, and the patient received a medical therapy with albendazole.

### Discussion

*Echinococcosis* or hydatidosis is a widely known zoonosis caused by *Echinococcus granulosus*. Humans are accidental hosts of this parasite after ingestion of the parasite eggs or scolex. It mainly involves liver (65%) and lungs (25%) with rare cardiac involvement even in endemic areas [1]. Cardiac involvement is mainly seen in the left ventricle. Pericardial involvement is seen in only 2% to 10% of total cardiac hydatid cases [2]. Salati et al. [3] found that in 18 year period, isolated cysts in pericardium is only 11 (1.4%) of 783 cases of cardiothoracic hydatid cysts. The patient may be asymptomatic for a long period or may present with atypical chest pain, precordialgia, angina mimicking coronary syndromes, dyspnea, cough, fever or weakness [4]. Clinical symptoms depend on the size, location, number of cysts and presence of any complications [5]. Chest radiograph may shows cardiomegaly with and without deformation of the cardiac shadow, determines

### OPEN ACCESS

#### \*Correspondence:

Ben Jmaà Hèla, Department of Cardiovascular and Thoracic Surgery, Habib Bourguiba Hospital, Sfax, 3029, Tunisia, Tel: 002696704740; E-mail: helabenjemaa2015@gmail.com

Received Date: 16 Jan 2020

Accepted Date: 07 Feb 2020

Published Date: 11 Feb 2020

#### Citation:

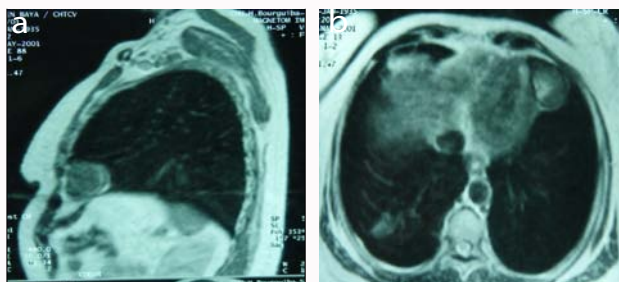
Hèla BJ, Fatma M, Aiman D, Jmaà Tarak B, Abir B, Nizar E, et al. Isolated Pericardial Hydatid Cyst Treated Surgically: Case Report and Review of the Literature. *Ann Clin Case Rep.* 2020; 5: 1799.

ISSN: 2474-1655

Copyright © 2020 Ben Jmaà Hèla. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.



**Figure 1:** Hydric mediastinal opacity with external limit confused with the heart limit (arrow).



**Figure 2:** Magnetic resonance imaging showing pericardial cystic mass (arrow).

arcuate calcifications, and may reveal any associated pulmonary localization [6]. There is no characteristic ECG finding of a hydatid cyst, but nonspecific repolarization changes, atrioventricular and intraventricular block, and complex premature ventricular contractions may be observed [7]. Hydatid serological testing sometimes contributes to diagnosis.

The main diagnostic tools are echocardiography, computed tomography scan, and magnetic resonance imaging.

Echocardiography may show pericardial effusion and precise the size, location, and characteristics of the cyst. It may help to distinguish solid tumors such as myxomas or fibromas from watery tumors and intracavitary thromboses [8].

Pericardial hydatid cysts can be complicated by cardiac tamponade, anaphylaxis by systemic rupture into the blood stream, acute pericarditis due to cyst rupture into pericardial cavity which can lead to formation of secondary cysts, or may end up causing pulmonary embolism if the cyst ruptures in to right ventricular cavity, and even sudden death [9,10].

The recommended management once diagnosis established is surgical excision of the cyst because of the possibility of these severe complications, even in asymptomatic patients [11,12].

## Conclusion

Pericardial hydatidosis without cardiac involvement is extremely rare, whose diagnosis is difficult because of the absence of specific clinical signs. Early diagnosis and treatment of this disease is of great importance in order to avoid the frequent fatal complications. Imaging is the gold standard for the diagnosis especially CT, MRI, and echocardiography. Surgical resection is the treatment of choice in the management of this disease even if the patients are asymptomatic.

## References

1. Yaliniz H, Tokcan A, Salih OK, Ulus T. Surgical treatment of cardiac hydatid disease: A report of 7 cases. *Tex Heart Inst J.* 2006;33(3):333-9.
2. Vural M, Sayin B, Pasaoglu L, Koparal S, Elverici E, Dede D. Isolated pericardial hydatid cyst in an asymptomatic patient: Are mark on its radiologic diagnosis. *Clin Imaging.* 2007;31(1):37-9.
3. Salati SA, Dar AM, Bhat MA, Ahangar AG. Isolated hydatid pericardialcyst. *J Surg Pak.* 2008;13:167-9.
4. Neuville M, Grisoli D, Nicoud A, Jacquier A, Lagier JC, Collart F, et al. Cardiac hydatidosis. *Am J Trop Med Hyg.* 2010;83(1):102-3.
5. Uysalel A, Aral A, Atalay S, Akalin H. Cardiac echinococcosis with multivisceral involvement. *Pediatr Cardiol.* 1996;17(4):268-70.
6. Ben-Ismaïl M, Fourati M, Bousnina A, Zouari F, Lacronique J. Hydatid cyst of the heart. Apropos of 9 cases. *Arch Mal Coeur Vaiss.* 1977;70(2):119-27.
7. Molavipour A, Javan H, Moghaddam AA, Dastani M, Abbasi M, Ghahramani S. Combined medical and surgical treatment of intracardiac hydatid cysts in 11 patients. *J Card Surg.* 2010;25(2):143-6.
8. Sakarya ME, Etlik O, Sakarya N, Ozen S, Temizoz O, Evirgen O, et al. MR findings in cardiac hydatid cyst. *Clin Imaging.* 2002;26(3):170-2.
9. Demircan A, Keles A, Kahveci FO, Tulmac M, Ozsarac M. Cardiac tamponade via a fistula to the pericardium from a hydatid cyst: Case report and review of the literature. *J Emerg Med.* 2010;38(5):582-6.
10. Gürlek A, Dagalp Z, Ozyurda U. Case of multiple- pericardial hydatid cysts. *Int J Cardiol.* 1992;36(3):366-8.
11. Abdelmoula S, Thameur H, Chenik S, Bey M, Ziadi M, Mestiri T, et al. Cardiopericardial hydatid cysts. *World J Surg.* 2001;25(1):58-67.
12. Onursal E, Elmaci TT, Tireli E, Dindar A, Atilgan D, Ozcan M. Surgical treatment of cardiac echinococcosis: Report of eight cases. *Surg Today.* 2001;31(4):325-30.