International Journal of Innovative Research in Medical Science (IJIRMS)
Volume 09, Issue 01, January 2024,
https://doi.org/10.23958/ijirms/vol09-i01/1804

Case Report

Pericardial Hydatidosis Revealed by Tamponade, A Case Report

M. Abdelbaki *[1], Dr N. Khellafi [2]

[1]E.P.H. Laghouat, Faculty of Medicine, Amar Tellidji University, Algeria.
[2]Laghouat mixed hospital, Faculty of Medicine, Amar Tellidji University, Algeria.

*Corresponding Author: Mourad Abdelbaki; *m.abdelbaki@lagh-univ.dz*

Received 16 December 2023; Accepted 12 January 2024; Published 18 January 2024

Abstract

Hydatidosis or hydatid cyst is a Cosmopolitan Zoonosis, due to accidental tissue development in humans of the Taenia Echinococcus granulosus larva, an adult parasite of the small intestine of dogs.
Very widespread in Mediterranean countries, where it is generally maintained through a domestic cycle involving dogs and sheep. Algeria is a country with high endemicity, and parasitosis constitutes a major health problem.
Pericardial localization without cardiac involvement is extremely rare.
We report the observation of isolated intrapericardial hydatidosis revealed by tamponade.

Short Summary of Case

Mr. A.A 60 years-old man, with no medical history, admitted for tamponade assessment. Cardiovascular examination showed a decrease heart sound associated with signs of right-side heart failure. The electrocardiogram shows the micro voltage. The Chest radiograph shows cardiomegaly [1]. Transthoracic echocardiography confirms the presence of a large pericardial effusion with signs of tamponade and also the presence of multiple vesicular formations within the pericardium, giving a grape-like appearance highly suggestive of intrapericardial hydatidosis.

Suggestive of intrapericardial hydatidosis (**Figure 1**). Given signs of tamponade and the presence of these cystic formations, emergency surgical drainage was performed to remove the 1.2 L of squinty fluid removed.

The biological work-up showed that a count showed a white blood cell count of 5430 without hypereosinophilia, a CRP of 45 mg / L and negative hydatid serology. The Cytological examination of the drainage fluid showed a low cellularity of neutrophilic polynuclear cells with the absence of germs. the positive diagnosis was made by an anatomopathological study, which confirmed the hydatid origin of the fluid. a thoracic and abdominal extension study was negative.

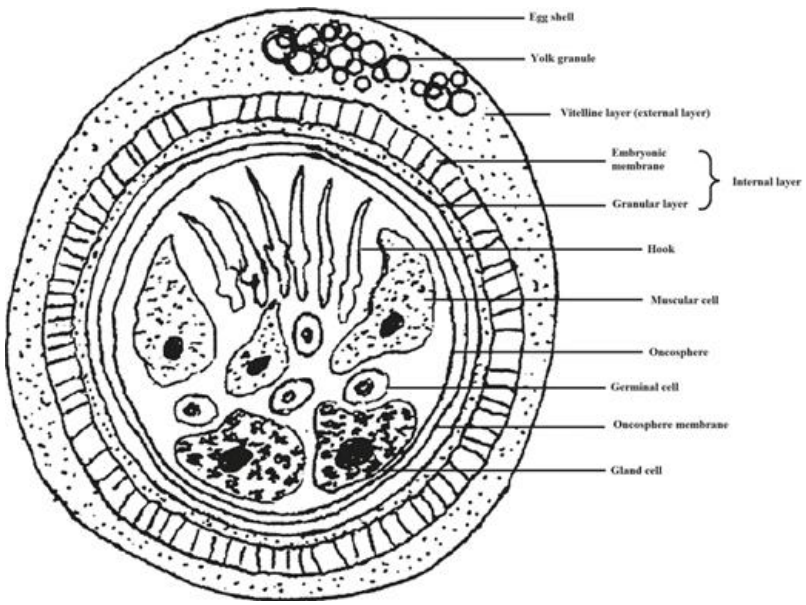

Fig. 1: An egg of Echinococcus granulosus

Discussion

Hydatidosis occurs all over the world, but sheep-farming countries are the most affected.

Cardiac hydatid cyst involvement is very rare and represents 0.5 to 2% of hydatic disease [2]. Cardiac hydatidosis is isolated in two thirds of cases, and in one third is associated with a pulmonary or hepatic location. It is basically located in the left ventricle (60% of cases), right ventricle (10%), pericardium (7%), pulmonary artery (6%), left atrium (6%), and interventricular septum (4%) [3].

The pericardial involvement of hydatid cysts can may be caused by systemic circulation, which results from the fissuring of hydatid cysts from the liver or lung, transdiaphragmatic dissemination or lymphatic circulation [4-7].

The symptoms of pericardial hydatid cysts are generally due to external pressure exerted by the increase in the size of the hydatid hydatid cyst in the myocardium, or rupture of the hydatid cyst in the pericardial cavity, leading to acute sero-fibrinous or purulent sero-fibrinous or purulent effusion that may progress to tamponade or constriction and the formation of secondary cysts.

The clinical presentation ranges from clinical latency or minor symptoms to cardiogenic shock and sudden death [8].

The symptoms of simple pericardial hydatid cysts include chest pain due to pericardial fibrosis and / or coronary vessel compression and dyspnea [4-7,9].

In our case, the presentation was as a cardiac tamponade secondary to acute intrapericardial rupture of the hydatid cyst.

Hydatid cysts can be detected by trans thoracic echocardiography, allowing one to specify the number, size and topography of cystic fluid masses.

CT scan can complement ultrasound examination. It is considered as a better imaging technique to reveal small calcifications, which may be a helpful imaging finding in the diagnosis of a hydatid cyst [9].

The relationship of hydatid cysts with surrounding structures can be seen by magnetic resonance imaging [4-6,9].

Surgery is of paramount importance due to of the risk of rupture of the hydatid cyst. It consists of the excision of cysts and pericardial drainage if present [8]. Medical treatment with albendazole or mebendazole is recommended to reduce the risk of recurrence [10].

In our case, surgical drainage allowed to remove cysts and whitish membranes. Parasitological examination of the membranes confirmed the diagnosis of intrapericardial hydatid cysts.

Avoiding the spread of eggs by the dog. This means avoiding close contact with dogs, not accepting licking, etc.

Conclusions

Intrapericardial hydatidosis is another etiology of tamponade that should not be overlooked despite its rarity,as it is endemic in North African countries.

The probability of cystic echinococcosis (CE) infection can be reduced by avoiding close contact with dogs. Careful washing of fresh produce can also reduce the probability of infection. The life cycle of the parasite can be disrupted by preventing dogs from consuming the viscera infected sheep, which generally occurs in settings where dogs reside in close proximity to areas where sheep are slaughtered [11].

Conflict of Interest

There was no conflict of interest.

Data Availability

Data would be available upon reasonable request

References

[1] Karadede et al. Coronary narrowing secondary to compression by pericardial hydatid cyst Int J Cardiol (2008)

[2] Kosecik M, Karaoglanoglu M, Yamak B (2006) Pericardial hydatid cyst presenting with cardiac tamponade. Can J Cardiol 22(2). https://doi.org/10.1016/S0828-282X(06)70254-9

[3] Dursun M, Terzibasioglu E, Yilmaz R, Cekreziet B, Olgar S, Nisli K et al (2008) Cardiac hydatid disease: CT and MRI findings. Am J Roentgenol. 190:226-232. https://doi.org/10.2214/AJR.07.2035

[4] El Boussaadani B, Regragui H, Bouhdadi H, et al. Primary cardiac hydatid cyst presenting with massive pericardial effusion: a case report. Egypt Heart J. 2020;72(1):51.

[5] Col C, Col M, Lafci H, et al. Unusual localizations of hydatid disease. Acta Med Austriaca. 2003;30(2):61-4.

[6] Thameur H, Abdelmoula S, Chenik S, et al. Cardio pericardial hydatid cysts. World J Surg. 2001;25(1):58-67. Return to ref 4 in article.

[7] Bogdanovic A, Radojkovic M, Tomasevic RJ, et al. Presentation of pericardial hydatid cyst as acute cardiac tamponade. Asian J Surg. 2017;40(2):175-7.

[8] Primary cardiac hydatid cyst presenting with massive pericardial effusion: a case report. Badre El Boussaadani, Hind Regragui, Hanae Bouhdadi, Hicham Wazaren, Intissar Ajhoun, Mohamed Laaroussi & Mohammed Cherti. The Egyptian Heart Journal volume 72, Article number: 51 (2020)

[9] A rare and challenging case of intrapericardial hydatidosis, Fatmir Caushi, Emira Hysa, Ilir Skenduli, Lutfi Lisha, Alban Hatibi, Loreta Bica, Silvana Bala & Francesco Rulli, Journal of Cardiothoracic Surgery volume 18, article number: 336 (2023).

[10] Yaman ND, Sirlak M (2017) Cardiac hydatid cysts- review of recent literature. J Vet Med Res 4(8):1102.