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Case Report

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Surgery of polycystic cardiac disease: A case report

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Abstract

Introduction: Cardiac localization of hydatid disease is rare (<3%) even in endemic countries. Affection characterized by a long functional tolerance and a large clinical and paraclinical polymorphism. Serious cardiac hydatidosis because of the risk of rupture requiring urgent surgery. The diagnosis is based on serology and echocardiography. The aim of this work is to show a case with polycystic cardiac disease and to shed light on the severity of this condition.

Methods: We report the observation of a 49-year-old woman with a history of unoperated hepatic hydatid cyst presenting with cardiac polycystosis. Preoperatively: NYHA stage II dyspnea. Chest x-ray: CTI at 0.65. ECG: Negative T wave in D I, II, III, V4, V5, V6. Echocardiography: Multiple pericardial cysts all bypassing the heart, one of which is the largest multilobed LV peri and another compressing the LA, another compressing the RA without signs of poor tolerance. Thoracic CT: Cardiopericardial polydatidosis. Intraoperative exploration: multiple cysts, which are developed at the expense of the heart, located at the level: roof of the LA; free wall of the RV; of the IV septum LA and the LV. Gesture: puncture; aspiration of cysts; removal of daughter vesicles and sterilization of residual cavities with hypertonic saline.

Results: The postoperative consequences were simple.

Conclusion: The simultaneous presence of several hydatid cysts in the heart is not uncommon, but cardiac localization is rare; serious and can constitute a real surgical emergency, hence the importance of prevention.

Keywords: Hydatid cyst of the heart; Polycystosis; Surgery; Extracorporeal Circulation; Prevention

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Introduction

Cardiac localization of hydatid disease is rare (<3%) even in endemic countries [1]. Affection characterized by a long functional tolerance and a large clinical and paraclinical polymorphism [2]. Serious cardiac hydatidosis because of the

risk of rupture requiring urgent surgery. The diagnosis is based on serology and echocardiography [2-3]. Computed tomography (CT) and magnetic resonance imaging (MRI) are the other diagnostic tools. The treatment of cardiac hydatid cysts is surgery [3-4]. The aim of this work is to show a

case with polycystic cardiac disease and to shed light on the severity of this affection.

Case report

We report the observation of a 49-year-old woman with a history of unoperated hepatic hydatid cyst presenting with polycystic cardiac disease discovered incidentally during echocardiography due to exertional dyspnea. Functionally, the patient had dyspnea stage II of NYHA. Chest x-ray showed a cardiothoracic index at 0.65 with deformities of the heart contours. ECG was registered in regular sinus rhythm with negative T wave in D I, II, III, V4, V5, V6. Echocardiography showed multiple pericardial cysts all bypassing the heart with the largest multilobed left ventricular (LV) peri-ventricular (LV) and another compressing the left atrium (LA), another compressing the right atrium (RA) (Figure 1) without signs of poor tolerance with left ventricular dysfunction with EF: 45%.



Figure 1: Transthoracic echocardiographic image of polycystic heart disease.

Thoracic computed tomography (CT) showed cardio-pericardial polyhydatidosis with 10 cysts of different ages and sizes (Figure 2).



Figure 2: CT image of polycystic heart disease.

Hydatid serology was positive. The patient was operated on under cardiopulmonary bypass. The hypertonic saline serum sponges were placed into the pericardial cavity to prevent contamination. Intraoperative exploration showed multiple cysts which are developed at the expense of the heart, located at the level: roof of the left atrium (LA); free wall of the right ventricle (RV); of the interventricular septum and the left ventricle (LV). (Figure 3,4). Gesture consisted of puncture and aspiration of cysts contents; ablation of vesicles and germinal membranes, sterilization of the residual cavities with 30% hypertonic saline serum and finally padding of each residual cavity. (Figure 3,4)



Figure 3: The operation view, puncture of a hydatid cyst of the RV.

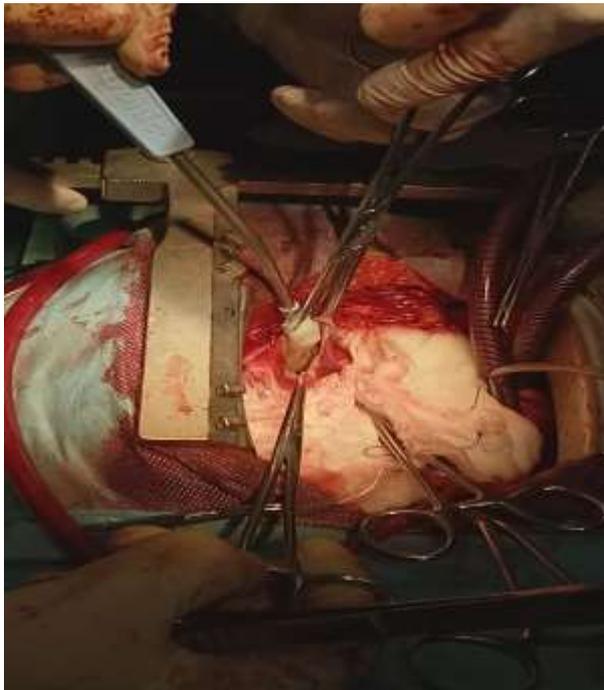


Figure 4: The operation view, evacuation of hydatid cyst contents from the RV.

After the operation, there was no problem in the intensive care unit. The patient was discharged at the first postoperative week. The patient is

still on albendazole treatment at the rate of 01 tablet/ day for a year. The immediate and distant postoperative suites were favorable.

Discussion

In addition to the risk of rupture of these cardiac cysts there are other complications such as the compression of neighboring structures such as the coronary arteries as is the case with our patient who presents with repolarization disorders; dysfunction of the two ventricles linked to the development of cysts in the full myocardium, as is the case with our patient who presents with left ventricular dysfunction [5]. Putting the patient on medical treatment based on Albendazol for a year is necessary in order to avoid the recurrence of hydatid disease, especially since the patient has not yet operated there for her hepatic hydatid cyst and she is still staying in an endemic area of hydatid disease [4].

Conclusion

The simultaneous presence of several hydatid cysts in the heart is not uncommon, but it is serious. Echocardiography is the test of choice for the detection of cardiac hydatid cyst. The indication for surgery is definite in all cases of a heart cyst because the spontaneous development is fatal. The real treatment for parasitic disease is echinococcosis control based on preventive measures that aim to interrupt the life cycle within hosts, health education and legislation.

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