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Case Report

Cardiac Hydatid Cyst of the Interventricular Septum Complicated by 03rd Degree Atrioventricular Block in a Pregnant Woman: 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 hydatitosis because of the risk of rupture requiring semi-urgent surgery. The diagnosis is based on serology and echocardiography. The aim of this work is to show a case of cardiac hydatid cyst involving the interventricular septum complicated by AVB in a pregnant woman.

Case Report: We report the observation of a 38-year-old patient, pregnant at the 32nd week of amenorrhea, thyroidectomy 04 years ago but without any particular pathological history, nor notion of hydatid contagion and who has presented for 02 months of bradycardia in a feverish context. Chest x-ray: normal-sized heart. ECG: 3rd degree atrioventricular block. Hydatid serology is positive. Echocardiography: cystic mass, measuring 3.2/2.4 cm in large diameter at the level of the upper part of the slightly hyperechoic interventricular septum with a thick wall void of echo near the conduction pathways. Chest MRI showed an aspect suggestive of hydatid heart disease. Abdominal echography: unremarkable apart from an active pregnancy. Intraoperative exploration: hydatid cyst involving the upper part of the interventricular septum with protruding dome at the level of the right atrium in tricuspid septal juxta annular. Gesture: removal of the membrane and daughter vesicles, sterilization of the pericardial cavity and the residual cystic cavity and finally resection of part of the peri cyst and padding of the residual cavity.

Results: The postoperative course was relatively simple. She received a permanent pacemaker implantation.

Conclusion: Certain rhythm and conduction disturbances can appear and be sometimes inaugural in the interventricular septal locations of hydatid heart disease. Lipothymic or syncopal discomfort may be the mode of revelation of hydatid heart disease.

Keywords: *Hydatid Cyst of the Heart; Pregnancy; AVB; Surgery; Cardiopulmonary Bypass; Prevention*

Introduction

Cardiac localization of hydatid disease is rare (< 3%) even in endemic countries [1]. Affection characterized by a long functional tolerance and a great clinical and paraclinical polymorphism. Severe cardiac hydatitosis because of the risk of rupture requiring semi-urgent surgery. Diagnosis is based on serology and echocardiography [2,3].

Aim of the Study

The aim of this work is to show a case of cardiac hydatid cyst involving the interventricular septum (IVS) complicated by atrioventricular block (AVB) in a pregnant woman.

Observation

We report the observation of a 38-year-old patient, pregnant at the 32nd week of amenorrhea, thyroidectomy 04 years ago but without particular pathological history, no notion of hydatid contagion and who presents for 02 months of bradycardia in a febrile context.

Chest X-ray showed a normal sized heart.

ECG showed Third-degree atrioventricular block.

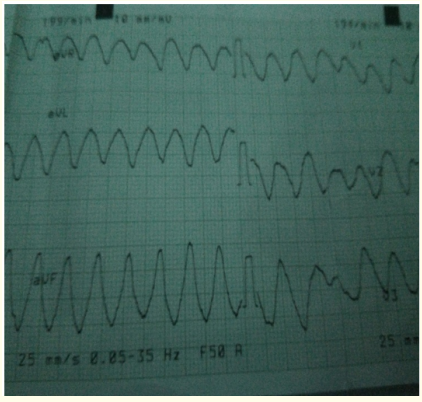

Figure 1: *Electrical tracing with ventricular tachycardia.*

Echocardiography showed a cystic mass, measuring 3.2 by 2.4 cm in diameter at the level of the upper part of the slightly hyperechoic thick-walled interventricular septum void of echo near the conduction tract (Figure 2).

Figure 2: *Echocardiographic image showing an integral mass at the base of the interventricular septum.*

Thoracic MRI showed an aspect suggestive of cardiac hydatid disease at the interventricular septum level (Figure 3).

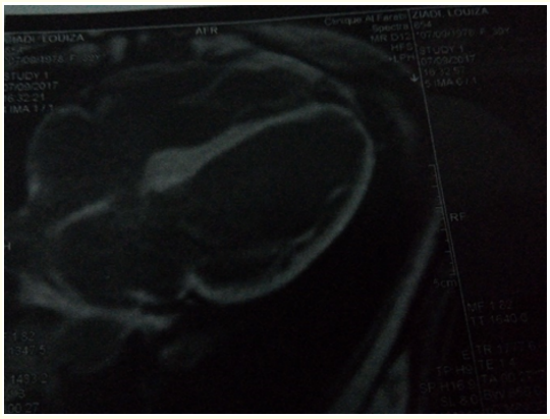

Figure 3: *Thoracic MRI showing a hydatid cyst of the interventricular septum with multivesicular content.*

Abdominal ultrasound was unremarkable apart from an ongoing pregnancy.

Hydatid serology was positive.

The patient underwent emergency surgery under cardiopulmonary bypass after 01-month postpartum following 03 cardiac arrests recovered on severe bradycardia controlled after by electrostimulation by a temporary stimulation probe by jugular vein.

Intraoperative exploration showed a hydatid cyst affecting the upper part of the interventricular septum (IVS) with a protruding dome at the level of the right atrium in juxta tricuspid septal annular (Figure 4).

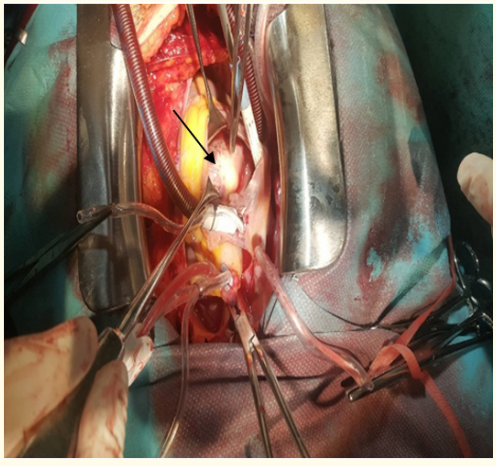

Figure 4: *Intraoperative image of the IVS hydatid cyst.*

The gesture was an ablation of the membrane and the daughter vesicles, sterilization by hypertonic saline at 30% of the pericardial cavity and the residual cystic cavity and finally resection of part of the pericyst and padding of the residual cavity (Figure 5).

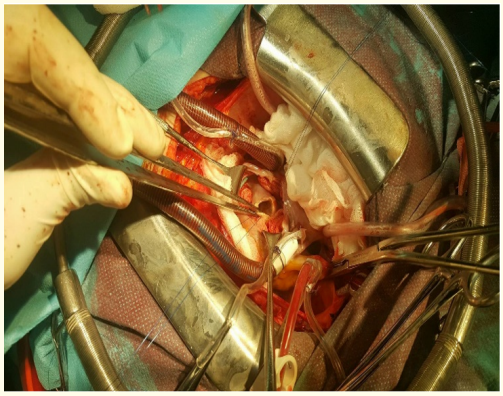

Figure 5: *Intraoperative image with flattening and evacuation of the contents of the cyst.*

Results

- Ventilation time was 24 hours.
- Stay in intensive care unit was 48 hours.
- Postoperative length of stay was 12 days.
- The postoperative course was relatively simple. She benefited from the implantation of a permanent pacemaker with the patient being put on albendazole at the rate of 01 tablet per day for one year.
- The anatomopathological study came back in favor of a cardiac hydatid cyst.
- Control echocardiograms performed on the 1st, 3rd, 6th, 9th month and at one year did not show any cardiac recurrences.

Discussions

In addition to the risk of rupture of cardiac hydatid cysts, the interventricular septal location of the cyst can cause conductive disorders by compression or invasion that can lead to sudden death by cardiac arrest [4,5] and be a mode of revelation of this pathology as this is the case with our observation.

In the present case and in order to avoid X-rays in this pregnant woman, thoracic MRI provided interesting information on this intracardiac hydatid cyst [6]. The patient was operated on urgently [7] following her recovered cardiac arrest since she refused the intervention in surgery settled when the diagnosis was made at the end of her pregnancy [8]. Given the persistence of symptomatic atrioventricular block postoperatively; she had a permanent pacemaker implanted [4]. She was put on medical treatment based on albendazole for a year to prevent the recurrence of her hydatid disease.

Conclusion

Certain arrhythmias and conduction disorders may appear and sometimes be inaugural in the interventricular septal localizations of cardiac hydatid disease. Lipothymic or syncopal discomfort can be the mode of revelation of cardiac hydatid disease. The real treatment of the parasitic disease is the fight against echinococcosis based on preventive measures that aim to interrupt the biological cycle inside the hosts, on health education and on legislation.

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