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Case Report

Infant Cardiac Rhabdomyoma: About a Case

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ABSTRACT

Child's heart tumors are extremely rare. We report a case of cardiac rhabdomyoma in a 3 month old infant. The patient was asymptomatic. The diagnosis was made on transthoracic echocardiography which showed two large tumors in the left ventricle. As the patient was asymptomatic, no treatment was undertaken. Rhabdomyoma is the most common primary heart tumor in children. Its clinical expression is variable. Ultrasound is the first choice for diagnosis. The prognosis is generally good.

Keywords: Rhabdomyoma; Cardiac; Infant; Asymptomatic

INTRODUCTION

Cardiac tumors in children are extremely rare (0.027 to 0.17%) [1]. They are most often benign and primitive [2]. It is the most common heart tumor in children. Clinical manifestations, as with all other types of tumors, are variable and depend on its location, they can result in breath, arrhythmia or heart failure. The tumor can also be perfectly undetectable clinically and be discovered at the occasion of a systematic ultrasound, especially in the fetus [3]. Few published works have been devoted to cardiac rhabdomyoma due to their rarity, this is the case in Senegal.

CASE REPORT

65-day-old infant was admitted for maternal heart disease suspicion on the mother's 6th month of pregnancy and was asymptomatic.

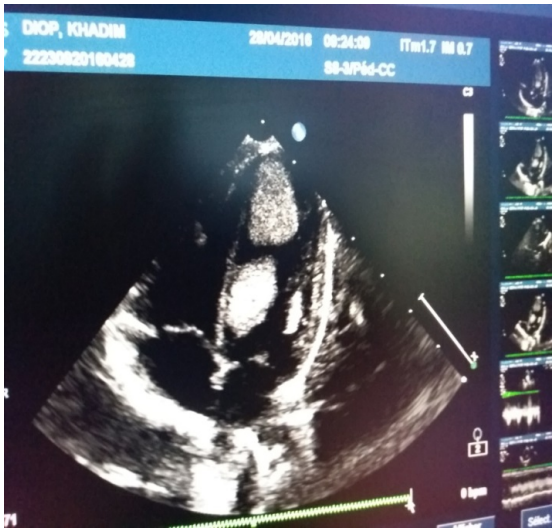

Figure 1: Iconography-Transthoracic echocardiography apical section of the 4 cavities showing 2 large left intra ventricular tumors, one of which is located at the septo-apical wall and the other adjacent to the infero-septo-basal wall. Two small tumors, one connected to the infero-latero-basal wall of the left ventricle by a pedicle and the other located at the apex of the RV.

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The child was born from a full term pregnancy which went smoothly. The delivery was vaginal. He is the 5th in a uterine sibling of 5 children. The other 4 children are said to be in good health. There is no family consanguinity, no family faults. The vaccination schedule was up to date. The examination found a general state preserved, well colored mucous membranes. He weighed 4 kg, 400 and was 53 cm tall. The heart rate was at 100 beats/min, the O_2 saturation at 99%. Cardiac auscultation was normal. The pulses were normal. Echocardiography (Figure 1) showed two large tumors in the left ventricle, one located at the septo-apical wall and the other adjacent to the infero-septo-basal wall. They are hyperechoic, oval, smooth and well circumscribed. Two small tumors with the same characteristics, one connected to the infero-latero-basal wall of the left ventricle by a pedicle and the other located at the apex of the right ventricle. The ventricular outlets were free. The pericardium was dry.

At the end of the clinical and paraclinical examination, the diagnosis of infant cardiac rhabdomyoma was accepted.

DISCUSSION

We report a case of cardiac rhabdomyoma in a 3 month old infant in Senegal.

Cardiac rhabdomyoma is the most common primary heart tumor. It is associated with Bourneville's tuberous sclerosis in 50 to 80% of cases [4]. Our case is an illustration of this literature as shown in Figure 1. Two small tumors, one connected to the infero-latero-basal wall of the left ventricle by a pedicle and the other one sitting at the apex of the right ventricle. The clinical manifestations are variable and depend on the size and location of the tumor. Rhabdomyomas can be asymptomatic. They can sometimes cause heart failure in the neonatal period or, later, an obstructive problem, valve dysfunction, rhythm disturbances, namely Wolff-Parkinson-White syndrome, and thromboembolic stroke [5,6]. Our patient showed no clinical signs.

On ultrasound, rhabdomyomas are round, homogeneous, hyperechoic, intramural or intracavitary tumors, sometimes multiple, mainly located in the ventricles [7,8]. Our images are consistent with this theory. Our subject presented on ultrasound two large tumors in the left ventricle, one is located at the septo-apical wall and the other adjoining the infero-septo-basal wall which were hyperechoic, oval, smooth and well circumscribed (Figure 1). Histologically, rhabdomyomas belong to the class of hamartomas, that is, tissues normally present at the site of the tumor that has grown excessively. Rhabdomyomatous cells are large round or polygonal cells containing abundant vacuoles of glycogen [3]. Certain cells have fine filaments connecting the nucleus to the membrane, giving them the typical so-called "spider cell" appearance. The histological study was not performed in our patient.

Rhabdomyomas have the characteristic of having a biphasic evolution: they grow in the fetus up to 32 weeks of gestation, and then tend to regress gradually during the first year of life. The mechanisms of this regression, still incomplete, involve phenomena of necrosis, apoptosis and myxoid degeneration [3].

The management of asymptomatic rhabdomyomas consists of regular monitoring. Surgical excision is only indicated in the case of an obstructive tumor involving a hemodynamic risk, or in the event of rebellious arrhythmia. The cardiac tumors found in our subject were not obstructive. Rhabdomyomas generally have a good prognosis because they have the potential for spontaneous regression. In association with Bourneville's tuberous sclerosis, the prognosis depends mainly on the involvement of other organs, in particular neurological [8].

CONCLUSION

Rhabdomyoma is the most common primary heart tumor in children. Its clinical expression is variable. Ultrasound is the first choice for diagnosis. Treatment is surgical when this rhabdomyoma is obstructive. The prognosis is generally good.

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