THE JOURNAL OF OBSTETRICS AND GYNECOLOGY OF INDIA

The Journal of Obstetrics and Gynecology of India (September–October 2013) 63(5):342–343
DOI 10.1007/s13224-012-0182-4

CASE REPORT

Fetal Bradyarrythmia: Are We Missing Something?

Sapre Shilpa · Yadav Chandrajeet · Patel Viral · Chandwaskar Nootan

Received: 9 April 2011 / Accepted: 23 April 2012 / Published online: 3 October 2012

Introduction

Cardiac rhabdomyoma is the most commonest [1] cardiac tumor detected in intrauterine life as well as in early infancy. It constitutes about 70–80 % of all cardiac tumors reported in various clinical series and to 40 % in all autopsy series. It is actually a hamartoma of developing myocytes [2]. Majority of these rhabdomyomas have a benign course and regress spontaneously, however, the clinical presentation depends upon the number and location of this tumor.

We report a case of a fetal rhabdomyoma detected in an antenatal patient whose non-stress test was showing fetal bradyarrhythmias.

Sapre S. (✉), Assistant Professor ·
Patel V., Senior Resident · Chandwaskar N., Professor
Department of Obstetrics and Gynecology, Sri Aurobindo Institute of Medical Sciences, Indore-Ujjain highway, Sanwer Road, Indore, MP, India
e-mail: shpimple@yahoo.com

Sapre S., Assistant Professor
404-A Adarsh Multi Doctor's Qrt, SAIMS Campus, Sanwer Road, Indore, MP, India

Yadav C., Assistant Professor
Department of Radiology, Sri Aurobindo Institute of Medical Sciences, Indore-Ujjain Highway, Sanwer Road, Indore, MP, India

Case Report

A 30-year-old G3P2L2 woman with 36-week gestation was referred to SAIMS, Indore from periphery for management of threatened preterm.

The present and past obstetric and medical history of the patient was unremarkable. In this pregnancy, an ultrasound was done at 18 weeks, which revealed no abnormality.

Previous studies have shown the best time for detection of cardiac anomalies is 22–24 weeks [3].

On admission, all the routine investigations were done which were normal; however, the non-stress test revealed irregularly irregular fetal heart rate pattern with a baseline fetal heart rate being 110/min. Hence, a repeat NST was done which also revealed bradyarrhythmia; thus, based on suspicion of some fetal structural cardiac anomaly, a detailed obstetric scan and fetal echocardiography were done , which were suggestive of rhabdomyoma presenting as multiple masses of varying sizes in left and right ventricle and a single mass in right atrium. A pediatrician consultation was sought involving the counselling of the patient and her relatives. At 38 weeks, she had a spontaneous normal vaginal delivery of a male infant weighing 2.8 kg with an APGAR score of 9 at 5 min. NST done at 38 weeks showed sinus rhythm; however, the postnatal echocardiography revealed the same antenatal findings of rhabdomyoma (Fig. 1).

Neonate was followed for 6 months of age and evaluated for tuberous sclerosis. There was the presence of hamartomas in the brain on MRI. Maternal examination revealed no features of tuberous sclerosis.

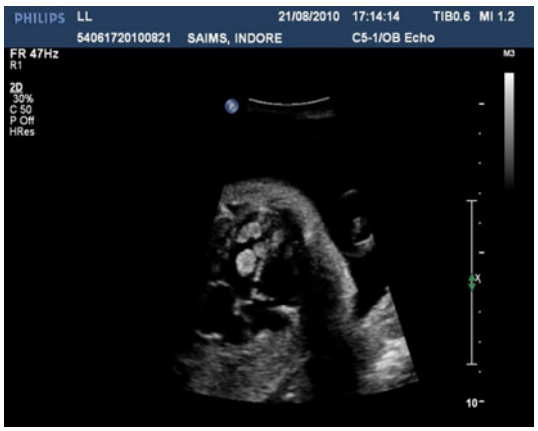

Fig. 1 Fetal echocardiography showing multiple ventricular rhabdomyomas

Discussion

Cardiac rhabdomyoma was first described by Von Recklinghausen in a still-born in 1862. Cardiac rhabdomyomas can occur sporadically in association with congenital heart malformations or in combination with certain genetic disorders most common being tuberous sclerosis. They mostly arise from ventricular myocardium, but may be found in the atria, and epicardium as well. The location, size, and the number of rhabdomyomas determine the presentation in utero or in infancy. Manifestations occur due to valve or chamber obstruction, arrhythmia, or cardiac failure. Arrhythmias include supraventricular tachycardia, ventricular tachy, or bradyarrhythmia. Intrauterine cardiac arrhythmias have been frequently detected during routine fetal heart monitoring and an association with structural congenital heart which has been reported [4]. Arrhythmias resolve with regression of rhabdomyomas. Rhabdomyomas can be diagnosed by fetal echocardiography or antenatal ultrasound as well-circumscribed homogenous hyperechoic masses involving mostly the ventricles and regress spontaneously against fibromas that are solitary, located inside the ventricular wall and never regress in infancy [5].

Conservative management is the rule as the natural history of rhabdomyomas is spontaneous regression. Surgical treatment is rarely needed in those with severe blood flow obstruction or life-threatening rhythm disorder [6].

This case is reported with an aim to emphasize the importance of interpretation of rhythm disorder on NST which in our case led to diagnosis of cardiac rhabdomyoma on ultrasound and fetal echo.

References

1. Issacs H Jr. Fetal & neonatal cardiac tumor. Paediatr Cardiol. 2004;25(3):252–73.
2. Uzun O, Wilson DG, Vujanic GM, et al. Cardiac tumors in children. Orphanet J Dis. 2007;2:11.
3. Chao AS, Chao A, Wang TH, et al. Outcome of antenatally diagnosed cardiac rhabdomyoma. Case series and a meta-analysis. Ultrasound Obstet Gynecol. 2008;31:289–95.
4. Gupta N, Singh N, Sarangi S, et al. Fetal cardiac rhabdomyoma with maternal tuberous sclerosis complicating pregnancy. Arch Gynecol Obstet. 2008;278(2):169–70.
5. Geipel A, Krapp M, Germer U, et al. Perinatal diagnosis of cardiac tumors. Ultrasound Obstet Gynecol. 2001;17(1):17–21.
6. Pipitone S, Mongiovi M, Grillo R, et al. Cardiac rhabdomyoma in intrauterine life: clinical features and natural history. A case series and review of published reports. Ital Heart J. 2002;3(1):48–52.