Cardiac rhabdomyoma: an antenatal illustration

Anil Kumar Shukla, ¹ Ajit Kumar Reddy, ² Asha Latha, ³ Annitha Elavarasi Jayamohan ¹

¹Department of Radiology, Kempegowda Institute of Medical Sciences, Bangalore, Karnataka, India ²Department of Radiology, Mahatma Gandhi Medical College & Research Institute, Puducherry, India ³Department of Obstetrics, Ayur Sanjeevini, Bangalore,

Correspondence toDr Ajit Kumar Reddy, drajitreddy@gmail.com

Karnataka, India

Accepted 26 February 2015

DESCRIPTION

A 22-year-old primiparous woman was referred for a routine antenatal fetal scan. During the scan multiple intracardiac echogenic tumours were detected at 24 weeks gestation. A smaller mass was visible in the left ventricle while a larger one was seen in the right atrium (figure 1).

Subsequent antenatal MRI showed considerably enlarged well-defined masses isointense to the adjoining myocardium in T1-weighted (T1W) and hyperintense in T2W images (figure 2).

The rest of the pregnancy remained uneventful and the delivery was normal. Postnatal echocardiography confirmed the above findings. Marginal reduction in the tumour size was seen at the age of 3 years.

Antenatal cardiac rhabdomyoma, though rare, is the most common cardiac tumour of benign nature known to occur in infancy and childhood.¹ It was

TV CRA

Figure 1 Antenatal ultrasonographic transverse view at the level of the cardia showing echogenic foci within the right atrium (RA) and the left ventricle (LV).

first reported in 1982 by DeVore. It is most frequently seen in antenatal sonography and to a lesser extent on MRI. Multiple rhabdomyomas are almost always associated with tuberous sclerosis (100%) whereas the solitary tumours in 50% of cases.

About 90% of cases are detected antenatally at around 20 weeks of gestation.

In about 90% of detected cases, they are multiple and intraventricular in location.² Atrial involvement is considered to be relatively uncommon and is about 30%.

Small masses remain clinically asymptomatic while the larger ones are prone to cause outflow tract obstruction and refractory arrhythmias.

Histologically, they are hamartomatous in nature and known to be self-limiting without postnatal proliferation. Subtypes include embryonal, botryoid, alveolar or pleomorphic.

Surgical intervention is reserved for cases with outflow tract obstruction and refractory arrhythmias. Some tumours usually undergo complete spontaneous regression by 6 years of age.³

Learning points

- ► Antenatal ultrasound and MRI are modalities of choice.
- Most common benign cardiac tumours of a hamartomatous nature are known to occur in infancy and childhood.
- ► The majority of cases do not require surgical intervention as they disappear in a few years. However, periodic workup for tuberous sclerosis is essential.

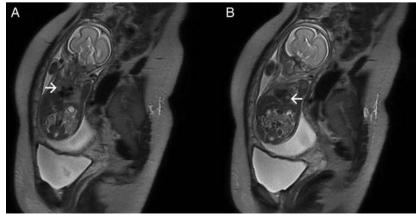


Figure 2 T2-weighted sagittal section showing the fetus in coronal view with hyperintense foci in right atrium (arrow; A) and left ventricle (arrow; B).



To cite: Shukla AK, Reddy AK, Latha A, et al. BMJ Case Rep Published online: [please include Day Month Year] doi:10.1136/ bcr-2014-209256

Images in...

Contributors AKS proposed the work, and acquired and analysed the data; AKR and AEJ drafted the work; and AL collaborated in conceiving and drafting the work. All authors approve the work.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCES

- 1 Chao A, Chao A, Wang T, et al. Outcome of antenatally diagnosed cardiac rhabdomyoma: case series and a meta-analysis. Ultrasound Obstet Gynecol 2008;31:289–95.
- 2 Uzun O, McGawley G, Wharton GA. Multiple cardiac rhabdomyomas: tuberous sclerosis or not? *Heart* 1997;77:388.
- 3 Dimario F, Diana D, Leopold H, et al. Evolution of cardiac rhabdomyoma in tuberous sclerosis complex. Clin Pediatr (Phila) 1996;35:615–19.

Copyright 2015 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit http://group.bmj.com/group/rights-licensing/permissions.

BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Become a Fellow of BMJ Case Reports today and you can:

- ► Submit as many cases as you like
- ► Enjoy fast sympathetic peer review and rapid publication of accepted articles
- ► Access all the published articles
- ▶ Re-use any of the published material for personal use and teaching without further permission

For information on Institutional Fellowships contact consortiasales@bmjgroup.com

Visit casereports.bmj.com for more articles like this and to become a Fellow