Cardiac rhabdomyoma: an antenatal illustration

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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 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]

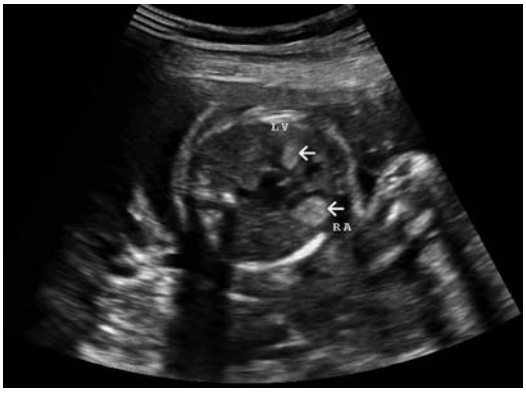

Figure 1 Antenatal ultrasonographic transverse view at the level of the cardia showing echogenic foci within the right atrium (RA) and the left ventricle (LV).

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.

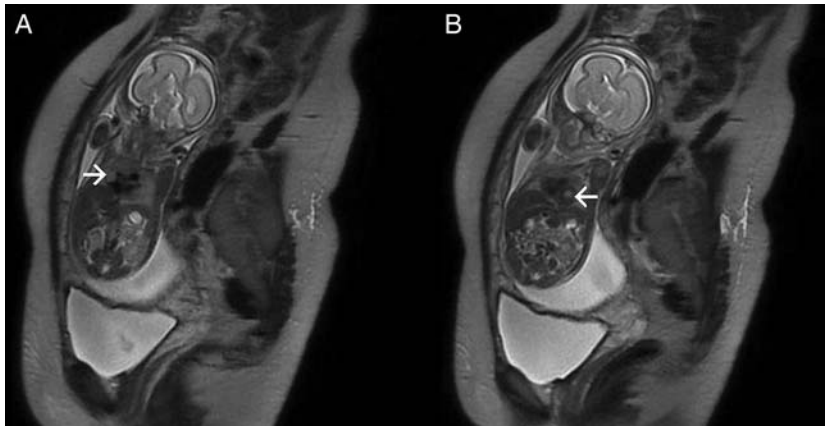

Figure 2 T2-weighted sagittal section showing the fetus in coronal view with hyperintense foci in right atrium (arrow; A) and left ventricle (arrow; B).

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Competing interests None.

Patient consent Obtained.

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