Images in Cardiology

Giant right atrium in a foetus

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A B S T R A C T

Giant right atrium is a rarely reported condition, especially in intrauterine life. It may be mistaken with pericardial effusion and Ebstein’s anomaly, which are more common causes of right atrial enlargement.

We present a case of prenatal diagnosis of giant right atrium detected at 29 weeks of gestation by fetal echocardiography.

1. Introduction

The right atrial (RA) enlargement is a cardiac malformation of unknown etiology, rarely found in medical literature, especially at fetal echocardiography. Due to its rare occurrence, it can be easily mistaken with other conditions that lead to RA enlargement, such as Ebstein’s anomaly of tricuspid valve or pericardial effusion. Besides, due to its silent intrauterine course, the diagnosis is usually delayed until adulthood. We present a case of prenatal diagnosis of giant right atrium detected at 29 weeks of gestational age by fetal echocardiography.

2. Case report

A 26-year-old third gravida, with 29 weeks of pregnancy was referred to our institute for fetal echocardiography. She had no significant family history. Fetal echocardiogram revealed aneurysmally dilated atrial chamber. The first impression was of single atrium or Ebstein’s anomaly or pericardial effusion. Further careful assessment of the heart revealed, a normal positioned tricuspid valve (not demonstrating Ebstein’s typical valvular caudal implantation), with mild tricuspid regurgitation. The dilated RA extended cranially to the superior vena cava and ascending aorta and, caudally, to the apex of heart, bordering the right ventricle. A small compressed left atrium was noted. Pulmonary outflow tract was seen but was smaller in size (Figs 1–3). Thus a diagnosis of giant RA with mild tricuspid regurgitation was concluded based on echocardiographic findings.

3. Discussion

Giant RA have been reported at childhood, adult age and, very rarely in intrauterine life. Giant RA is a rare
condition of unknown etiology; whether it is congenital or acquired is controversial. In-utero and familial cases have been reported. Bailey first reported the condition in 1955.

In asymptomatic individuals, this cardiac anomaly usually becomes apparent as cardiomegaly on a routine chest radiograph. Various conditions can mimic this pathology on a chest radiograph like, Ebstein’s anomaly, pericardial effusion, pericardial cysts, and tumors. Accurate diagnosis is necessary for proper medical and surgical management. Here lies the importance of recognizing the wide anatomic spectrum of Ebstein’s anomaly and differentiating it from other causes of RA enlargement. Massive dilatation of the RA is usually associated with tricuspid annular dilatation and tricuspid regurgitation. In our patient, there was mild tricuspid regurgitation. Patients with arrhythmias have been treated successfully with excision of the RA, but the arrhythmias may recur after surgical/cryoablation. Some patients are managed surgically and others nonsurgically. To avoid further complications like thrombo embolism and arrhythmias, a right reduction atrioplasty and repair of any other associated anomalies is recommended. Fetal echocardiography plays an important role in diagnosis of severe and rare congenital cardiopathies. So if we come across an enlarged atrium during routine obstetric scan, it must be subjected to a detail fetal echocardiography.
Conflicts of interest

All authors have none to declare.

REFERENCES