

Introduction

Left atrial appendage aneurysm (LAAA) is a rare cardiac anomaly that involves severe dilatation of the left atrial appendage with mitral stenosis predisposing the foetus to complications. We would like to report the case of a left atrial dilatation with left atrium appendage aneurysm diagnosed in the third trimester.

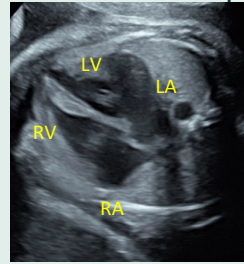


Fig. 1: 4 chamber of heart : normal right atrium (RA)The left atrium(LA) is enlarged

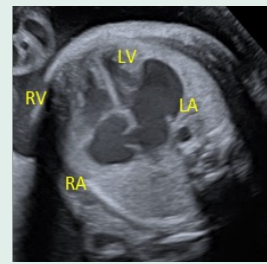


Fig. 2: 4 chamber of heart : bulbous enlargement of the left atrium(LA)

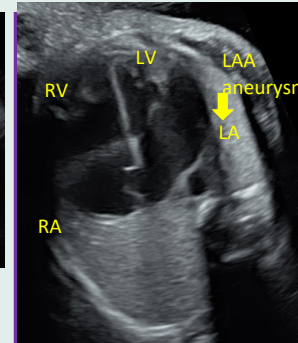


Fig. 5: 4 chamber of heart shows bulbous enlargement of the left atrium with LAA

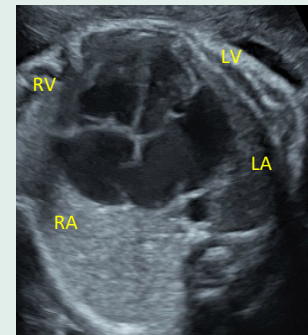


Fig. 6: 4 chamber of heart shows mitral valve stenosis



Fig. 3: Regurgitation at mitral valve

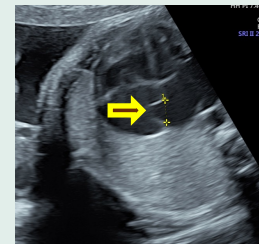


Fig. 4: Atrial septal defect

Fetal echocardiogram showed the following :

- (i) **Left atrium enlargement**
- (ii) **Severe mitral regurgitation**
- (iii) **Left atrial appendage aneurysm**
- (iv) **Dysplastic mitral valve.**
- (v) **Mitral stenosis. Normal biventricular fetal cardiac function.**

A 3.4kg male infant was born by caesarean delivery at 38 weeks gestation. Infant was intubated and admitted to NICU. Postnatal ultrasound confirmed the above findings and atrial septal defect (ASD) of 5 mm.

Discussion and Conclusion:

LAAA is a rare cardiac anomaly caused by congenital dysplasia of the pectinate muscle or by an acquired pathological condition of the mitral valve or cardiac muscle. In the index case, the 20 weeks fetal anomaly screening scan noted normal cardiac structures. At the 31 weeks scan, abnormal structures had developed in the heart. Colour Doppler revealed high velocity flow with aliasing at the mitral valve, suggesting mitral stenosis. The foramen ovale appeared to measure 1 cm probably as a sequel of the atrial septal defect.

The index case is an example of fetal cardiac anomaly presenting in advanced gestation. In our department, a screening scan for fetal anomalies is performed at 20 weeks. If the pregnancy is uneventful, a growth scan is next performed in the third trimester. For the index case the anomaly was detected prenatally albeit at an advanced gestation, facilitating urgent referrals and appropriate site of birth and perinatal management with NICU support.

Case Report

Mdm P a 31 year old Malay female, gravida 3 parity 2 with seronegative myasthenia gravis with ocular involvement in her second pregnancy.

For the current pregnancy, she declined aneuploidy screening. Fetal anomaly screening scan at 20⁺⁵ weeks showed normal biometry with no structural anomaly. At 24⁺⁴ weeks she was admitted for threatened preterm labour and chest discomfort. Investigations indicated subclinical hyperthyroidism. At 31 weeks gestation, fetal growth scan demonstrated an abnormal four chamber view with the following findings: (i) cardiomegaly; (ii) Bulbous enlargement of the left atrium; (iii) The root of the LVOT appeared smaller, measuring 4mm; (iv) Foramen ovale appeared enlarged, measuring 1cm; (v) The flap of foramen ovale was noted in the left atrium; (iv) Pulmonary veins were noted in normal location; (iv) Colour Doppler detected high velocity flow at mitral valve. **Inference from the ultrasound features included the following anomalies : (i) Left atrium appendage aneurysm (LAA); (ii) Atrial septal Defect; (iii) Mitral valve stenosis.** Patient was referred to pediatric cardiologist for fetal echocardiogram