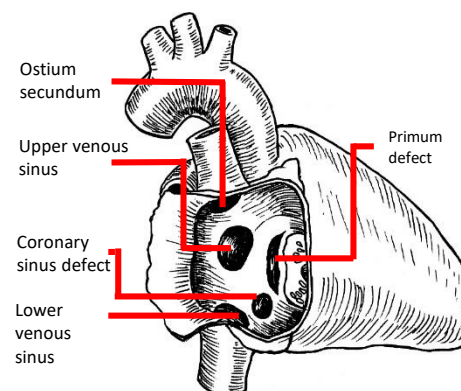


ABSTRACT

BG: Atrial septal defects (ASD) are the most commonly recognised cardiac abnormalities detected in adulthood. Unrepaired atrial septal defects are associated with an increased risk of arrhythmias, stroke/thromboembolic events, pre-eclampsia, fetal mortality and babies that are small for gestational age. **Methods:** I herein report a case presentation of previously undiagnosed maternal atrial septal defect in a 30 year old lady who was G3 P2 and presented at 35+4/40 with SOB, tachycardia with chest tightness. **Results:** On investigation she was shown to have signs of right heart strain on ECG. A subsequent CTPA was negative for PE. Echocardiogram revealed a dilated right ventricle with signs of pulmonary hypertension. Diagnosis of atrial septal defect was confirmed via bubble contrast echocardiography. **Conclusion:** Changing maternal physiology in pregnancy can reveal previously undetected congenital heart anomalies. While unrepaired ASD is normally well tolerated in pregnancy it can have associated mortality and morbidity if not managed appropriately.

CASE DESCRIPTION

- 30yr old, G3P2, 34+5
- Patient admitted with 1/7 Hx of abdominal pain Rx as threatened labour
- OE: Abdo – SNT, Os closed, no PV discharge, Actim partus –ve, bloods grossly normal
- 12 hrs after admission she developed chest pain, tachycardia and SOB
- ECG showed signs of right heart strain – T wave inversion in L III + AVF with a prominent S wave in L I
- CTPA was –ve for PE but showed a dilated Rt pulmonary trunk: Rt 35mm > Lt 30mm and thin atrial septum
- Cardiology diagnosed atrial septal defect via bubble contrast echocardiogram
- Patient transferred to tertiary centre for management of remaining pregnancy



Atrial septal defects

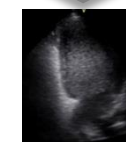
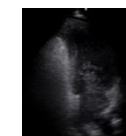
- Atrial septal defects are congenital heart defects characterized by a lack of interatrial septal tissue
- Atrial septal defects have the potential to cause Rt heart volume overload, atrial arrhythmia or pulmonary arterial hypertension
- Small defects have the potential to close spontaneously
- Large defects can cause hemodynamic and clinical sequelae that requires surgical intervention

Maternal atrial septal defect

- Pregnant women with ASD are normally asymptomatic but chronic Rt to Lt shunt can cause Rt ventricular overload
- Pregnant women with unrepaired atrial septal defect have a greater risk of pre-eclampsia, fetal mortality and babies who are small for gestational age at birth
- Modified WHO classification of maternal cardiovascular risk – Small increase of mortality morbidity
- RCOG Guidelines divide management into preconception, Antepartum, Intrapartum and Postpartum

What is bubble contrast echocardiography?

- Used to identify holes in the heart- atrial septal defects, patent foramen ovale etc.
- Normal Saline is shaken between 2 syringes. This creates tiny bubbles that are injected into a vein.
- These are shown as a hyper-echoic “white cloud” passing through the Rt atria and Rt ventricle
- In anomaly bubbles are seen to pass into from the Rt atria into the Lt atria



Conclusion

While normally well tolerated, unrepaired ASD in pregnancy is associated with a small increase to mortality and morbidity if not managed appropriately.

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