

A rare case of cor triatriatum sinistrum in pregnancy and literature review

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Objective:

Cor triatriatum sinistrum (CTS) is a rare cardiac malformation in which a perforated fibromuscular membrane divides the left atrium into two chambers. It accounts for 0.1% of congenital cardiac malformations (1). CTS is normally diagnosed and corrected in childhood due to severity of the nature of the cardiac malformation (2).

When diagnosed in adults, CTS is typically a variant with relatively unrestricted communication in the intra-atrial membrane and is an incidental finding. Often, the first presentation is in pregnancy or shortly after pregnancy.

We had gained consent from the patient to publish her case report.

Case report:

The patient is a 37-year-old woman with her second pregnancy. She was diagnosed with CTS and cardiac arrhythmia 2 years after her first pregnancy (that was delivered via vaginal birth). She mainly had symptoms of palpitation and mild shortness of breath. She was on Propanolol 80 mg twice a day to control her symptoms. She was high risk for venous thromboembolism and had been on prophylactic low molecular weight heparin since 8 weeks.

She had maintained follow up with the congenital heart disease specialist and the obstetric cardiac team at the tertiary centre. She had a normal echocardiogram and ECG at 12 weeks. She was then managed at her local district hospital with the congenital heart disease specialist's input and support according to her wish. She also had a fetal echocardiogram at a tertiary maternal fetal centre at 22 weeks that was normal. She had regular ultrasound scans in the third trimester. At 31 weeks, her ultrasound scans revealed reduced liquor volume and raised umbilical artery pulse index with dropping of estimated fetal growth below the 10th centile. She was closely monitored with twice weekly ultrasound scans. She tried to reduce her evening Propanolol dose 40 mg but she became symptomatic on the lower dose. After a long discussion about mode of delivery with the patient, she opted for an elective lower segment caesarean section at 36 weeks and 1 day due to static growth on the ultrasound scan. The caesarean section was uneventful and her male infant did not require special care admission.

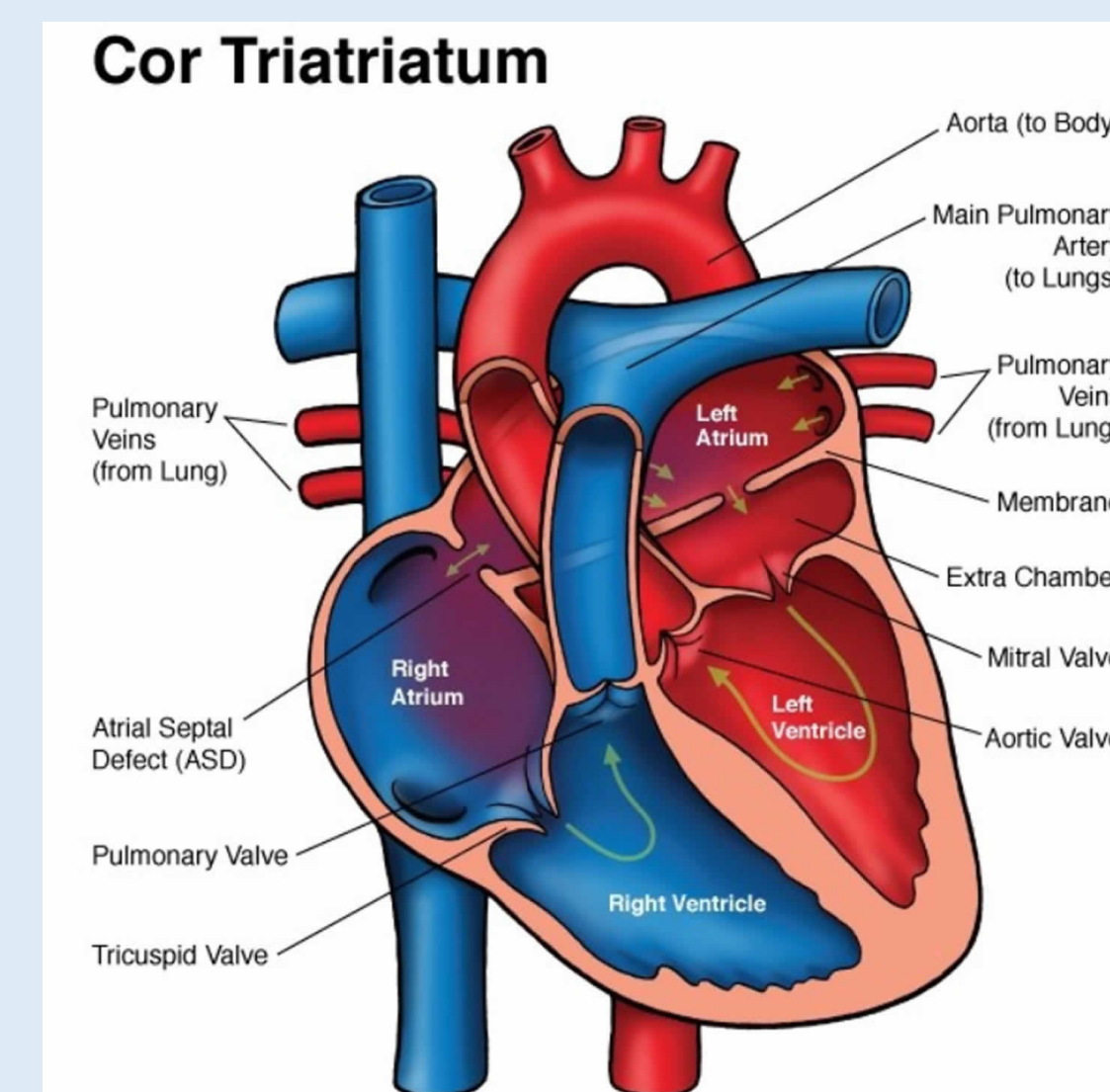


Illustration of isolated form of cor triatriatum sinistrum. Left atrium is divided with interatrial membrane into proximal chamber and distal chamber, and the blood flow occurs via a single opening in the membrane.

Discussion:

There have been 14 reported cases of CTS (1,3,4). Altogether, three asymptomatic women had CTS diagnosed through evaluation of a heart murmur, and 11 were asymptomatic before pregnancy and became symptomatic during pregnancy when the diagnosis was established. As with our patient, isolated CTS malformation was reported in 12 of the published cases, but two had CTS associated with small atrial septal defects. No report of a pregnant woman with CTS associated with other major cardiac defects. While our patient's pregnancy was uneventful other than growth restriction, the clinical picture of CTS can convert asymptomatic patient to symptomatic. This is because late pregnancy is associated with increased intravascular volume and heart rate with increased cardiovascular demand. This is demonstrated in some of the patients in the literature developing severe symptoms in the third trimester and postpartum period. Depending on the patient's cardiovascular status, vaginal birth is not contraindicated.

Conclusion:

Good communication between the multi-disciplinary team of cardiologist, obstetrician and anaesthetist is vital to maintain the health of these women and their babies.

References:

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