Due to highly suspected deterioration of placental insufficiency Caesarean section was performed. The male newborn weighed 1450 g (6th percentile). Apgar’s score and umbilical artery ph were normal.

Postnatal echocardiography examination confirmed significant pulmonary stenosis and insufficiency and dilated main pulmonary artery; the arterial duct was patent. Prostaglandin infusion was initiated to maintain additional pulmonary flow. On the 4th postnatal day an unexplained deterioration was detected followed by neonatal death.

This case demonstrated: 1) increasing severity of the cardiac malformation throughout pregnancy 2) the presence of dysplastic pulmonary valve leaflets in APVS (see supplement data), 3) little is known regarding the natural history of this cardiac malformation; coexisting IUGR and prematurity have to be taken in consideration during the prenatal counselling at time of diagnosis.

EP04.32
Left atrial isomerism (LAI) without serious heart defect: first trimester diagnosis and delayed postnatal development of the heart block at the age of 11 months
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Left atrial isomerism (LAI) represents a wide spectrum of fetal situs and cardiac anomalies. Whereas severe forms of LAI are easily detectable even at early stages of pregnancy, diagnosis of mild forms of LAI is challenging. We present a case of first-trimester diagnosis of LAI without complex heart defect, which ended in persistent bradycardia at the age of 11 months postnatally.

The 24-year-old mother presented for routine ultrasound examination at 13 weeks (CRL 73 mm) in her first pregnancy. On the scan middle-positioned stomach and interruption of the inferior vena cava with ayzygos continuation were detected. The views of the heart were normal and the fetus had normal sinus rhythm. NT thickness was 1.8 mm and the mother had low risk chromosomal screening. The findings were suspicious for LAI. After appropriate counselling, the parents opted to continue the pregnancy. At 19 weeks the previous findings were confirmed and persistent right umbilical vein and small VSD were detected. The pregnancy was followed by regular scans and fetal heart rate remained normal sinus. After the birth the diagnosis of LAI was confirmed.

At the time of writing the child is 16 months of age. The child has persistent bradycardia of 70 beats per minute, which manifested at 11 months of infancy and is waiting for pacemaker implantation. Small VSD has tendency for spontaneous closure. Examination of gastrointestinal tract has confirmed middle position of the stomach and has not revealed significant intestinal malrotation. Polysplenia was seen on abdominal scan.

This case provides an evidence that typical for LAI heart block resulting in persistent bradycardia can develop postnatally. This case illustrated feasibility of identification of minor LAI features in the first trimester. Early detection is critical for proper counselling and planning of antenatal and postnatal cardiac follow-up in order to exclude associated heart anomalies and development of the heart block.

EP04.33
Idiopathic intermittent dilated cardiomyopathy: in the fetal and the postnatal periods
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Background: Transient fetal dilated cardiomyopathy (DCM) is associated to maternal chemotherapy treatment and fetal distress.

We report here a case of transient intermittent fetal and neonatal cardiomyopathy unrelated to the above etiologies.

Case description: A 28 y.o. G4P3 with gestational diabetes and chronic hypertension presented at 31 weeks gestation for a routine fetal growth scan. Maternal and fetal echocardiograms obtained at 24 weeks were both normal; however, fetal ultrasound at 31 weeks demonstrated marked cardiac dilation with ventricular wall thickening and globally depressed contractility. No hydrops was noted. The patient reported a viral illness two weeks prior to presentation, and serum Coxsackie B titers were elevated at 1:80. She was admitted to the inpatient service for betamethasone administration and monitoring, and discharged after serial echocardiograms demonstrated stable ventricular dilation with improved contractility. The patient underwent Caesarean delivery at term, with delivery of a vigorous 2860g female infant. Postnatal echocardiogram demonstrated only mild right-sided dilation and mildly decreased systolic function. On the fourth day of life, however, the infant was readmitted to the intensive care unit with heart failure. Labs were notable for NT pro-BNP of 614 and CK of 207, negative Coxsackie titers, and a negative workup for metabolic storage disease. Genetic testing demonstrated two heterozygous variants of uncertain significance in MYH7 and DSG2. The infant’s cardiac status improved and she was subsequently discharged on digoxin and captopril. At 4 months, the infant was developing appropriately.

Conclusion: To our knowledge, this is the first case of fetal DCM with antenatal improvement, followed by exacerbation in the postnatal period, which may be related to MYH7 and DSG2 variants or possible genetic susceptibility to viral cardiomyopathy.

EP04.34
Significance of an abnormal venous return on the prenatal morphology scan
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A 40 y old patient G3P2 with a history of cardiac malformation and palatine cleft in a prior baby (deceased at one year of age) presented for regular follow-up of pregnancy. First-trimester scan did not show any anomalies, mainly a NT=1.75mm at 12 weeks and a normal IT. Cardiac axis is at 52 degrees. Second-trimester biochemical revealed an increased risk of Trisomy 21 (1/116), annioesenthes showed a normal karyotype and the absence of DiGeorges syndrome. Second-trimester scan was normal except for an unusual image at the level of the pulmonary veins entering the atria. The image presented as a vascular confluent posterior to the left atria; venous return to the atria was however well identified. This was confirmed by the cardiopedsiatrician, who failed to find any associated cardiac features. Considering the patient’s history, the patient was delivered in a tertiary care centre with adequate cardiopedyiatric observation of the newborn. Postnatal evolution was remarkably good. Echocardiography confirmed once again the image seen before and checked for normal heart function. Abnormal images of venous return sometimes lead to catastrophic postnatal status and in other cases like the one presented here, this could be considered as a variant of normal.

Supporting information can be found in the online version of this abstract.