

right ventricle. A large VSD, and URCS. This ASD manifested as an abnormal defect between the coronary sinus and the left atria, thus communicating both atria.

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

P26.03
Ultrasound assessment of the fetal aberrant right subclavian artery (ARSA) in a coronal view

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Objectives: The prenatal detection of the fetal aberrant right subclavian artery (ARSA) can be achieved by transverse, longitudinal and coronal views at the fetal thorax. The objective is to describe the frequency of visualization of fetal ARSA in a coronal view after its detection in the common axial plane.

Methods: A series of 25 fetuses in which ARSA was diagnosed using transverse views was found in a group of pregnant women (between 16–36 weeks of pregnancy) attending our Fetal Medicine Unit for ultrasound examination (Figure 1A). After its detection in a transverse view, fetal ARSA was visualized in the coronal view by sweeping the probe at the level of the fetal thorax in a coronal plane anterior to the spine (Figure 1B). In this plane we were able to see the thoracic descending aorta and the origin of the aberrant vessel in a distal position. Color and Pulsed Doppler was used to define the course of the ARSA and distinguish it from other vessels.

Results: The visualization of ARSA in the coronal view was possible in 25 cases (100%). In this view ARSA shows as a vessel arising from the aorta and following an oblique course towards the right shoulder (Figure 1B). Unlike in the transverse view, where confusing ARSA with the azygos vein is possible, in the coronal view the azygos courses parallel to the right side of the aorta, while ARSA arises from the aorta and follows an oblique course to reach the right arm. Highly sensitive color Doppler with a low-velocity range (10–15 cm/s) helps to define the course of the ARSA and pulsed Doppler is useful to distinguish ARSA from the azygos vein in both transverse and coronal views.

Conclusions: Ultrasound assessment of fetal ARSA in a coronal view was possible in all cases and complemented the prenatal diagnosis of this anomaly in the usual transverse view.

P26.04
Spatio-temporal image correlation with B-flow and HD flow imaging in diagnosis of abnormalities of fetal veins system

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Objectives: The aim of the study was to explore whether the use of STIC with high definition flow (HDF) and B-flow imaging can supply additional information with respect to two-dimensional (2D) gray-scale and color Doppler echocardiography in the prenatal abnormalities of fetal veins system. And to explore the feasibility of displaying fetal venous system using STIC combined with HDF and B-flow.

Methods: STIC cardiac images of 50 normal fetuses and 45 fetuses with abnormalities of fetal veins system were obtained using color Doppler flow image (CDFI), HDF and B-flow technique, respectively. Images collected with B-flow technique were reconstructed using surface mode and images collected with HDF technique were reconstructed using HDF mode and glassy body mode.

Results: STIC volume data sets were achieved using two different imaging modalities in 50 normal and 45 fetuses showed abnormal

connection between veins and the fetal heart, with 48 and 45 qualified volume images, respectively. Seven fetuses showed abnormalities of umbilical venous connection, CDFI displayed 6/7, B-Flow displayed 7/7, HDF displayed 7/7. Twenty fetuses displayed persistent left superior vena cava. CDFI displayed 16/20, B-Flow displayed 19/20, HDF displayed 20/20. Five fetuses displayed abnormalities of inferior vena cava, CDFI displayed 5/5, B-Flow displayed 5/5, HDF displayed 5/5. Ten fetuses displayed anomalous pulmonary venous connection. CDFI displayed 6/10, B-Flow displayed 9/10, HD displayed 8/10.

Conclusions: STIC combined with HDF and B-flow in the fetal veins system can provide more morphologic information.

P26.05
The echocardiographic features in prenatal diagnosis of l-transposition of the great arteries (l-TGA): abnormal heart axis might be a clue?

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Objectives: The aim of this study was to find the most characteristic features of prenatal l-TGA.

Methods: From 11114 fetuses evaluated in our fetal cardiology center, we identified and retrospectively analyzed 10 cases of l-TGA with present four-chamber heart anatomy (0.09%). There were 8× isolated l-TGA and 2 fetuses had complex heart anatomy. Single fetus with l-TGA had an ovarian cyst.

Results: There were low risk pregnancies (9/10) and mean gestational age at the time of diagnosis was 30.2 wks. The reasons for targeted fetal echocardiography was suspicion of congenital heart defect at screening ultrasound in 8 cases and in 2 cases a fetal arrhythmia was major concern. There was situs solitus 8× and 2× situs inversus. Mean gestational age at the time of delivery was 39 wks: 5 vaginal deliveries and 5 cesarean section. The median of Apgar score was 9, mean birth weight: 3045±472 g. All children with an isolated l-TGA and infant with l-TGA and pulmonary atresia are alive. Single neonate who demonstrated a complete heart block at 33rd week of gestation had myocarditis and died at 11th day of life. Neonate with l-TGA and Ebstein's anomaly died at 4th day of life. In fetal echocardiography an abnormal heart axis was visualized in 8 cases. In 7× cases mezoecardia was present (in 4 cases an angle approximate to 0 degree and in 3 cases – 20 degrees on the left). In 1 case dextrocardia was diagnosed. The heart size in isolated l-TGA was normal, mean HA/CA (heart area/chest area) was 0.34 (range, 0.3–0.38). The heart size in the case with Ebstein's anomaly was 0.43. The ventricles inversion and parallel course of the great arteries were registered in all cases. At 31st week of gestation one fetus had premature atrial contractions with atrio-ventricular block and developed complete heart block at 33rd week of gestation.

Conclusions:

1. The most characteristic symptoms of the fetal l-TGA was an abnormal fetal heart axis.
2. l-TGA is one of the most difficult prenatal diagnoses even in fetal cardiac center.

P26.06
Prenatal detection rate of congenital heart defects in a district general hospital

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Objectives: To evaluate the antenatal detection rate of fetal cardiac abnormalities in an unselected population at a DGH and to review the cases that went undetected.