

**Assessment of cardiovascular profile score in fetuses with agenesis of ductus venosus, without structural heart defect.**

*Michalczyk A.(1), Wloch A. (2), Cnota W.(2), Czuba B. (2)  
Department of Congenital Heart Diseases and Pediatric Cardiology, Silesian Center for Heart Diseases in Zabrze, Poland(1); Department of Obstetrics and Gynecology in Ruda Slaska, Medical University of Silesia, Ruda Slaska, Poland(2)*

**Introduction**

The agenesis of ductus venosus (ADV) is a rare abnormality, which is divided into two types, intrahepatic and extrahepatic. That may cause functional abnormalities in the circulatory system. The ADV is associated with the higher risk of the heart defects, chromosomal anomalies and congestive heart failure.

**Methods**

Forty four fetuses with the diagnosis of ADV were analyzed retrospectively in referral center between April 2016 and December 2018.

Nineteen of them with anatomically normal heart (19/44 - 43%) were included to the final analysis. ADV has been divided into intrahepatic and extrahepatic type and analyzed separately.

Cardiovascular profile score (CVPS) was assessed in all group and diameter of the shunt (portosystemic) was assessed in group with extrahepatic type of ADV.

**Results**

Extrahepatic type of ADV was recognized in 4/19 (21%) cases and all of them presented functional changes in cardiovascular system.

In 3/4 cases (75%) occurred cardiomegaly, 2/4 (50%) moderate tricuspid regurgitation, in 1/4 (25%) fetal hydrops and in 1/4 (25%) extension of inferior vena cava. Average CVPS was 8 points. Shunt was wide in all cases of extrahepatic ADV.

Intrahepatic type of ADV was found in 15/19 cases (79%) and 9 (47%) of them presented mild tricuspid regurgitation. Average CVPS was 10 points.

**Conclusions**

Agenesis of ductus venosus with no structural heart defect occurred more frequently in intrahepatic type than in extrahepatic.

All fetuses with extrahepatic ADV type presented functional changes in circulatory system in opposite to those with intrahepatic type where, CVPS was 10 points.

The most common functional abnormality in group of extrahepatic type ADV was cardiomegaly.