

## **Is persistent left superior vena cava a benign finding in fetus? Analysis of 27 cases from a fetal cardiology centre**

Sajnach-Menke M, Respondek-Liberska M

Department for Diagnoses and Prevention of Fetal Malformations, Medical University of Lodz & Head of Fetal Cardiology Department, Polish Mother's Memorial Hospital, Research Institute, Lodz, Poland

### **Objective**

The aim of the study was to evaluate the prevalence of associated cardiac and extracardiac anomalies in fetuses with persistent left superior vena cava (PLSVC).

### **Methods**

The data analysis was done at the Prenatal Cardiology Department at Polish Mother's Memorial Hospital, Research Center in Lodz, Poland. Twenty seven fetuses were retrieved from the database between 2015 and 2018.

### **Results**

Mean gestational age at the time of detection of PLSVC was  $29.5 \pm 3.9$  SD weeks and mean gestational age of the last fetal ultrasound before the delivery was  $33 \pm 3.6$  SD weeks. There were 11 male (41%) and 16 female (59%) fetuses. Isolated PLSVC was diagnosed in 7 fetuses (26%). In 20 cases (74%) PLSVC was associated with 53 other cardiac anomalies (structural or functional). Structural anomalies included: aortic valve and aortic arch anomalies diagnosed in 10 cases (19% of total cardiac diagnoses), VSD in 3 fetuses (6%), complete AVSD in 3 fetuses (6%), TOF and DORV Fallot type in 3 cases (6%), heterotaxy (left isomerism) occurred in one case (2%), one fetus had single ventricle anatomy (2%), right sided aortic arch was diagnosed in 3 cases (6%). Functional anomalies included: pericardial effusion in 5 fetuses (9%), cardiomegaly in 5 cases (9%), ventricle hypertrophy in 4 cases (7%) and ventricle disproportion in 4 cases (7%). Four out of 7 fetuses with an isolated PLSVC (47%) and 12 out of 20 fetuses with PLSVC and accompanied cardiac anomalies (60%) had a variety of extracardiac malformations.

### **Conclusion**

PLSVC is not always a benign finding during fetal life but may coexist with significant cardiac and extracardiac conditions. In our study aortic valve and aortic arch defects represented approximately 20% of associated cardiac abnormalities, so in cases with PLSVC detected in midgestation, meticulous fetal ultrasound and echocardiography should be performed also in third trimester to complete prenatal evaluation.