Outcome and chromosomal abnormalities in fetuses with isolated persistent left superior vena cava

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Objective
Persistence of the left superior vena cava (PLSVC) is a systemic venous return variant found in 0.3–0.5% of the general population. When prenatally diagnosed, it is commonly associated with additional cardiac and extracardiac anomalies and therefore with higher risk of chromosomal abnormalities. However, the clinical significance of isolated PLSVC (where no additional cardiac or extracardiac anomalies are present) is still controversial. The aim of this study was to describe the outcome of prenatally diagnosed isolated PLSVC and its association with chromosomal abnormalities and perinatal outcomes in a Mexican population.

Methods
We conducted a retrospective cohort study of consecutive fetuses with PLSVC in our fetal echocardiography unit from March 2012 to March 2015. PLSVC was diagnosed based on the presence of an additional vessel identified to the left of the pulmonary artery in the 3-vessel and trachea view of the heart. All cases underwent karyotyping and genetic counseling by either prenatal invasive procedure, or postnatally.

Results
47 patients with PLSVC were identified in the study period. Overall, 14 cases (29.8%) presented with no additional cardiac or extracardiac anomalies and were identified at a mean gestational age (GA) of 24.4 (17.3–35.0) weeks. Within this group, no chromosomal abnormalities were identified before or after birth; GA at delivery was 39.5 (38.1–40.5) weeks with a birthweight of 3366±367g and no perinatal complications reported.

Conclusion
Prenatal diagnosis of isolated PLSVC is associated with a good prognosis and perinatal outcome.