OP-001 Fetal branching anomalies of the aortic arch and vascular rings: an experience of a single Italian reference center

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Objective: The aim of this study is to analyze concordance between fetal and neonatal diagnosis of branching anomalies of the aortic arch and vascular rings and their clinical outcome in a single Italian reference center.

Methods: We conducted a retrospective study from January 2021 to December 2023.The prenatal diagnosis was confirmed by postnatal echocardiogram and in cases of suspected vascular rings with a computed tomography (CT).

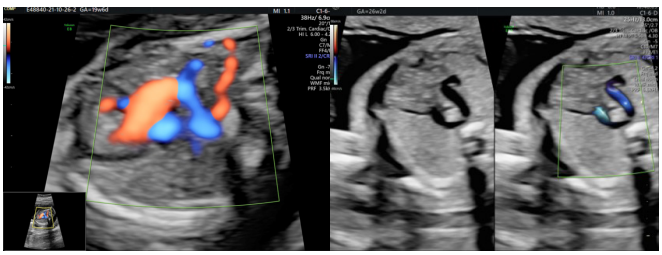

Fig 1. and 2.

Results: 4711 fetal echocardiography were performed and branching anomalies of the aortic arch or vascular rings were suspected in 103 cases. 62 cases were an incomplete vascular ring aberrant right subclavian artery (ARSA); 1 case was associated with prenatal diagnosis of Tetralogy of Fallot (ToF); 16 cases were isolated right aortic arch (RAA) and 25 were RAA with aberrant left subclavian artery (ALSA) of which 1 case was associated with ToF and persistent left superior vena cava (PLSVC). Only 12 amniocenteses were performed, 75% results with normal karyotype and 25% with chromosomal/genetic abnormalities. In postnatal series, concordance between prenatal diagnoses was 75% for RAA, and 100% for RAA + ALSA. In postnatal, 2 cases of prenatal diagnosis of RAA were associated with ALSA and 2 cases with double aortic arch, but in 1 of these, a CT with conclusive diagnosis of RAA + ALSA was performed.

Conclusion: In our series, the most common anomaly was isolated ARSA without cases of dysphagia lusoria in newborns. Our genetic evaluation is suboptimal. In the absence of major congenital heart disease association or karyotype anomalies counseling should be reassuring to parents.

Keywords: Vascular rings, fetal echocardiography, prenatal diagnosis, congenital heart disease

OP-002 Excessive prenatal supplementation of ıodine and fetal goiter; report of managment conservatively of fetal goiter: a case report

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Objective: Iodine is an essential mineral for the synthesis of thyroid hormones, so its deficiency can lead to serious problems. Therefore, routine iodine supplementation is recommended for pregnant women by World Health Organization .

Fetal thyroid disorder is uncommon, and typically arises in the context of a managed maternal thyroid condition. Antithyroid therapy in mothers contributes to 10–15% of cases of congenital hypothyroidism in fetuses.

The excessive iodine ingestion above daily intake limits during the pregnancy is a well-known mechanism among the known causes of fetal goiter. The occurrence of fetal goiter in babies of euthyroid mothers is quite rare.

Fetal goiter, due to the maternal and fetal complications it causes, affects long-term morbidity and mortality. Among these complications are polyhydramnios, intrauterine growth restriction (IUGR), preterm birth, labor dystocia, hypoxia and brain damage resulting from airway obstruction caused by this mass.

Methods: At 24 weeks pregnant, a 27-year-old primigravida was referred for a routine second trimester ultrasound evaluation despite not having a relevant family history or any personal thyroid or autoimmune illness. which showed cervical hyperextension and a high vascularized, bilobed, and symmetric mass in the anterior region of the fetal neck measuring 2.6 cm cranio-caudal × 1.5 cm transverse >%95 SD, suggesting fetal goiter. No signs of polyhydramnios, and no other fetal anomalies were found. Overall, these findings stated fetal goiter.

The patient seemed to be clinically euthyroid and denied having ever had thyroid problems. Thyroid function tests performed on the mother's serum were also normal.