

EP05.81. DIAGNOSTIC AND MANAGEMENT OF FETAL EXTRALOBAR PULMONARY SEQUESTRATION: CASE REPORT

Ricardo López Rubio^a, Pedro Abel Beltrán Peñaloza^b, César Guadalupe González Espinoza^c, Carmen Elena Chávez Gaxiola^d

Introduction

Bronchopulmonary sequestration (BPS) is a rare congenital lung malformation consisting of non-functional lung tissue without communication to the tracheobronchial tree and supplied by an anomalous systemic artery. It accounts for about 0.15–6.4% of congenital pulmonary malformations, with an estimated prevalence of 1 in 1,000 pregnancies.

BPS is classified into two forms: intralobar, which shares the pleura with the normal lung and is usually diagnosed later in life, and extralobar, which has its own pleural covering and is often detected prenatally or in the neonatal period. The subdiaphragmatic extralobar variant is particularly uncommon, typically located in the left infradiaphragmatic region, and may be mistaken for other fetal abdominal masses.

Prenatal ultrasound and fetal MRI are essential tools for the early diagnosis and precise assessment of bronchopulmonary sequestration. They facilitate proper counseling and allow for planning of postnatal care.

Clinical case

A 30-year-old female patient, G2 A1, underwent an anatomical ultrasound at 23 weeks of gestation. The scan revealed a male fetus, with a 10 x 10 mm hyperechoic solid mass in the left subdiaphragmatic region, located within the abdominal cavity. The lesion exhibited vascular flow, supplied by a single afferent artery originating from the abdominal aorta. No signs of ascites or hydrothorax were observed during the examination. These findings suggested a diagnosis of subdiaphragmatic extralobar bronchopulmonary sequestration.

A fetal MRI was performed at 29 weeks, which confirmed the initial suspicion. Delivery was carried out via cesarean section at 40 weeks, without any adverse events. As of this report, the patient continues follow-up and management under pediatric pulmonology care.

Conclusion

This case emphasizes the value of prenatal imaging in identifying subdiaphragmatic extralobar bronchopulmonary sequestration. Anatomical ultrasound and fetal MRI enabled precise diagnosis, guided prenatal counseling, and helped plan postnatal care. Despite the anomaly, the pregnancy and delivery were uneventful, and ongoing pediatric pulmonology follow-up is essential to ensure favorable long-term outcomes.

References



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Figure 1. Axial ultrasound image of a fetus at 24 weeks' gestation showing a hyperechoic mass consistent with subdiaphragmatic extralobar bronchopulmonary sequestration

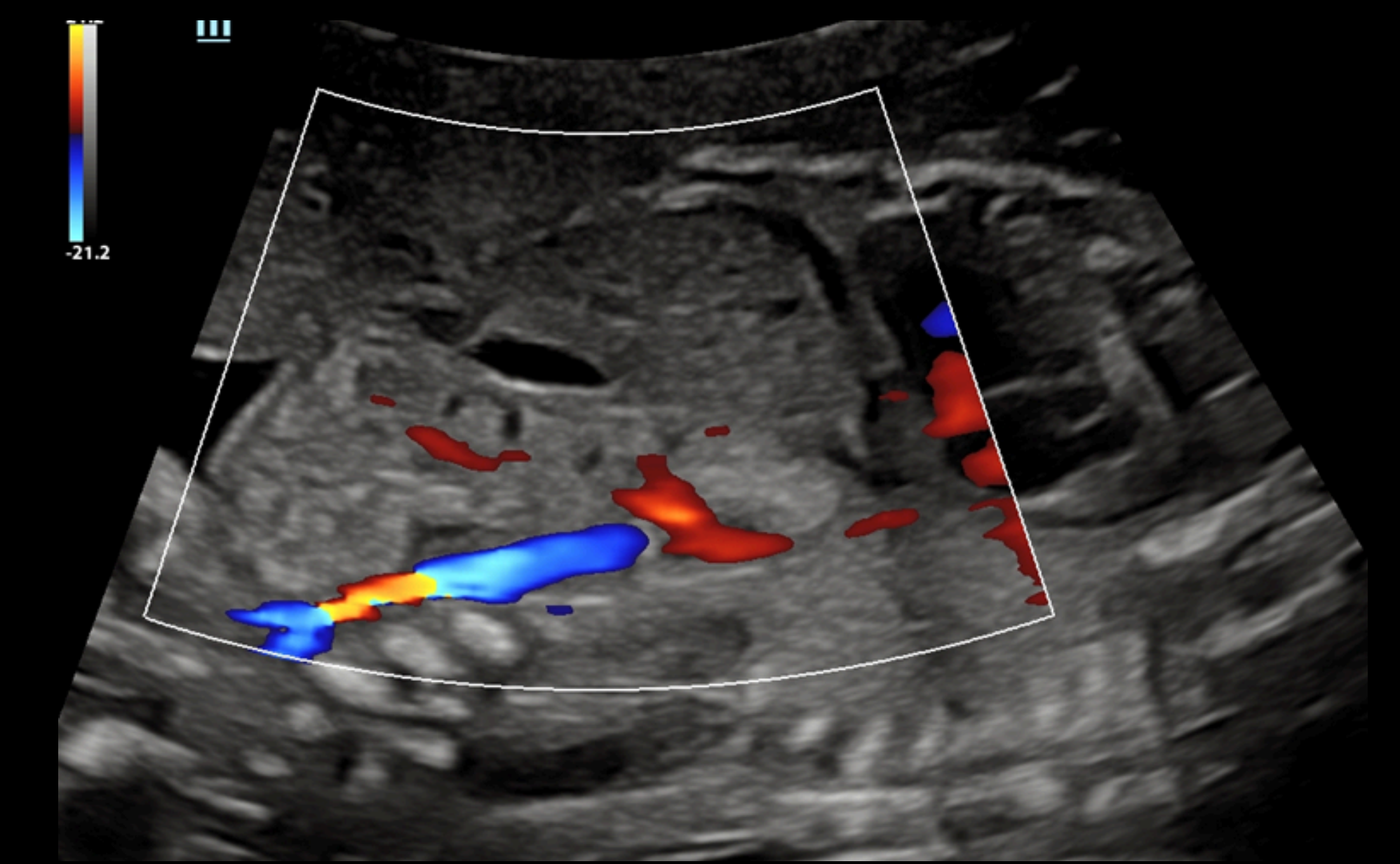


Figure 2. Coronal ultrasound image with color Doppler showing a systemic feeding vessel supplying the subdiaphragmatic extralobar bronchopulmonary sequestration.

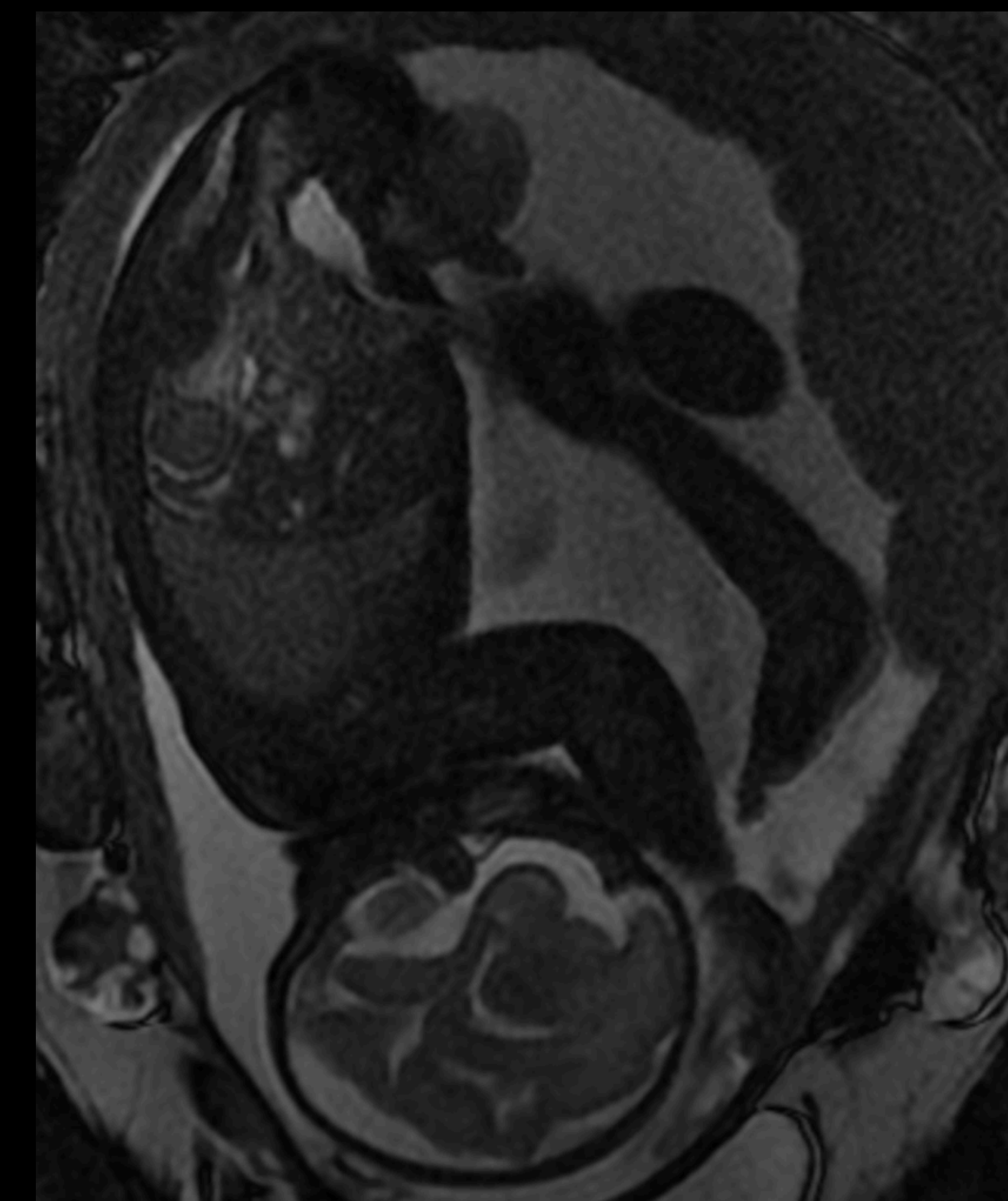


Figure 3. Fetal MRI (coronal view) demonstrating a subdiaphragmatic solid lesion consistent with extralobar bronchopulmonary sequestration.