

Prenatal diagnostic accuracy of bronchopulmonary sequestration using color Doppler ultrasound: discrepancy between centers



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Objectives:

To compare the diagnostic accuracy of color Doppler ultrasound in identifying the systemic feeding artery in fetuses with lung lesions between low- and high-volume centers.

Methods:

This was a retrospective study of fetuses with lung masses presenting with systemic arterial blood supply in a single national referral fetal surgery center between 2012 and 2025. The diagnostic accuracy of color Doppler ultrasound for identifying the origin of the systemic feeding artery was compared between referring (low-volume) centers and the fetal surgery (high-volume) center.

Conclusions:

In low-volume centers, identification of the systemic feeding artery in fetal lung lesions is frequently inaccurate, particularly in hybrid lesions, which may lead to misclassification at initial

Results:

A total of 113 fetal lung masses with systemic feeding artery were evaluated at a median gestational age of 24+3 weeks+days. Lesions were in the left lung in 88 (77.9%) cases, pleural effusion and hydrops were observed in 36 (31.9%) and 15 (13.3%) cases, respectively. Bronchopulmonary sequestration (BPS) was confirmed in 77 (68.1%) cases, while 36 (31.9%) were classified as hybrid lesions.

At diagnosis in low-volume centers, the systemic feeding artery was not identified in 43/77 (55.8%) of BPS cases, and in 32/36 (88.9%) of hybrid lung lesions. Congenital cystic adenomatoid malformation (CCAM) was the initial diagnosis in 5/77 (6.5%) of BPS cases and in 20/36 (55.6%) of hybrid lesions.

