Objectives: Abnormal pulmonary venous drainage is often a missed entity in early gestation as the subtle findings which gives a clue to the diagnosis of this entity becomes more evident in late gestation. The objective of the study is to compare the ultrasound markers evident at mid gestation (16-19 weeks) with those that are seen in late gestation (22-28 weeks) in the diagnosis of anomalous pulmonary venous connection.

Methods: Four ultrasound markers namely cardiac chamber asymmetry (CS), increased space behind left atrium and spine (IS), the rounded contour (RC) of left atrium and abnormal confluent pulmonary vein (ACPV) behind left atrium were evaluated retrospectively in 16 cases of anomalous pulmonary venous drainage. Five cases diagnosed in midgestation and eleven cases diagnosed in late gestation were evaluated. Mid gestation cases included one with scimitar syndrome, 2 with supracardiac type and 2 with infradiaphragmatic type of TAPVC. Late gestation cases included 5 of the supracardiac type, four of the infradiaphragmatic type, one intracardiac type and one PAPVC.

Results: In mid gestation ACPV and RC of left atrium was seen in 4/5 cases, none had CS and IS was seen in 3/5 cases. Dextroposition of fetal heart and small right pulmonary artery was the only finding in Scimitar syndrome in midgestation. The scimitar vein was identified in late gestation only. ACPV was seen in 10/11 cases diagnosed in late gestation. CS was seen in 9/11 cases, IS was seen in 7/11 cases and RC of left atrium was noted in 9/11 cases.

Conclusion: The most consistent finding seen at both mid and late gestation is the abnormal confluent pulmonary vein behind left atrium. This sign is the only presenting feature in PAPVC. Cardiac chamber asymmetry becomes evident only in later gestation. Understanding the varied presentation of these subtle markers in mid and late gestation would aid in diagnosis of anomalous pulmonary venous connection.

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