Agenesis of the Ductus venosus: Prenatal diagnosis, Perinatal outcomes and Systematic review


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Aim
To describe the prenatal diagnosis and perinatal outcomes in fetuses with agenesis of the ductus venosus (ADV) including shunting type, morphological and chromosome-associated pathology, and perinatal outcome. And performed systematic review of the literature.

Methods
Retrospective descriptive study of all cases with prenatal diagnosis of ADV, occurring between 2011 and 2018 in three different tertiary care hospitals. We reviewed patient data of all ADV cases. Prenatal diagnosis, intrahepatic or extrahepatic shunting type, aneuploidy association and perinatal outcomes are described. Systematic Review was performed.

Results
Thirty-six cases of ADV were diagnosed during the study period. Mean maternal age was 34 years and mean gestational age at diagnosis was 17 weeks. ADV was diagnosed at 11-14 screening in seventeen patients (47%), twelve of whom presented with increased nuchal translucency. Nineteen (53%) were diagnosed at the second-trimester ultrasound, sixteen of whom had a major abnormality associated.

Systematic review: a total of 285 cases of ADV coming from ten publications (n=249) and our data (n=36), were analyzed.

Conclusion
ADV is a rare condition and is associated with aneuploidies, especially Turner Syndrome. It is highly associated with major abnormalities, especially cardiac malformations and it is associated with poor perinatal outcomes (especially extrahepatic). Systematic review, including our series, showed 283 cases with similar perinatal outcomes.