Prenatal diagnosis of aortopulmonary window and its perinatal outcomes: a single-center experience

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Objects
To assess the prenatal diagnosis of aortopulmonary window (APW) and its perinatal outcomes

Method
This was a retrospective study of fetuses prenatally diagnosed as APW between 2014 and 2017 at Asan medical center. Fetal echocardiography was performed, and postnatal echocardiography was used to confirmed the prenatal diagnosis. Perinatal outcomes were evaluated by reviewing the medical records.

Results
A total of nine patients were referred to our center because of abnormal three-vessel view, who were suspected as either transposition of the great arteries (3 cases), tetralogy of Fallot (2 cases), APW (1 case), or other fetal congenital heart diseases (3 cases). Their median gestational age (GA) at referral was 22.6 weeks (range, 19.2-34.1 weeks), and the median GA at delivery was 38.0 weeks (range, 36.4-40.3 weeks).

Six were postnatally confirmed as APW and all but one were combined with other cardiac defects such as ventricular septal defect, atrial septal defect, persistent left superior vena cava, tetralogy of Fallot, and interrupted aortic arch. Other three were not APW; Transposition of the great arteries (2 cases), dextrocardia (1 case). All APW patients underwent APW repair surgery within two weeks after birth and remained in good health until now. One patient had a chromosomal abnormality of 22q11.2 microdeletion.

Conclusion
Although rare, APW can be diagnosed prenatally, usually at the level of 3VV. Prenatal diagnosis and postnatal surgical treatment can improve the prognosis of APW patients. To the best of our knowledge, this is the first case of APW associated with 22q11.2 microdeletion.