Objectives
To investigate the clinical value of fetal echocardiography in prenatal diagnosis, pathological classification and postnatal follow-up of abnormal origin of pulmonary artery from ascending aorta (AOPA).

Methods
From 2014 to 2018, 18 cases of AOPA diagnosed by echocardiography in 43966 fetuses from Shaanxi Fetal Congenital Heart Disease Diagnostic Center were retrospectively analyzed. The echo-cardiographic features, pathological and anatomical classification, genetic characteristics and follow-up results of postnatal echocardiography were summarized.

Results
Abnormal origin of pulmonary artery branches could be demonstrated by AOPA color Doppler imaging in 18 cases, including 10 cases (55.6%) of RPA abnormalities originated from ascending aorta, 6 cases (60%) of distal pulmonary artery abnormalities, 4 cases (40%) of proximal pulmonary artery abnormalities, and 8 cases (44.4%) of left pulmonary artery abnormalities originated from ascending aorta, 7 cases (87.5%) of distal pulmonary artery abnormalities, 1 case (12.5%) of proximal pulmonary artery abnormalities; AOPA was often associated with right ventricular double outlet, pulmonary stenosis and other intracardiac malformations, Berry syndrome in 1 case, without extracardiac malformations; amniocentesis karyotype analysis and gene chip detection in 5 cases showed normal results; 4 cases were born, 3 died, and one of right pulmonary artery progressive atresia after AORPA birth. There were 10 cases of termination of pregnancies (4 autopsy) and 4 cases loss of follow-up.

Conclusion
This group of samples showed a higher incidence of AOLPA and distal type in fetal AOPA, with differences in postnatal data, which was associated with complicated intracardiac malfor-mation. AOPA has no obvious family genetic history, and the main risk after birth is from pulmonary infection. Echocardiography is of great value in prenatal diagnosis, follow-up observation and treatment planning of AOPA.