Prenatal balloon angioplasty of pulmonary valve in a fetus with critical pulmonary stenosis and hypoplastic right ventricle

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Objective
Fetal cardiac surgery at 24 week's gestation because of cardiomegaly for the first time in Iran.

Methods
Fetal echocardiography findings before fetal surgery were mild Tricuspid regurgitation (TR), dilated right atrium (RA), hypertrophy of right ventricle, PS=12mmHg and Cardio/thorax ratio =35%. Under guide of sonography in operatory room a mixed cocktail of atropine, fentanyl and pancuronium was injected into muscle of the fetus for immobilization. Then, in the sagittal right ventricular out flow tract view a needle gauge 20 was entered just behind pulmonary valve and then Ryogin ballon (3. 5 x 15mm) was inflated 3 times up to 16 mm Hg.

Results
After balloon angioplasty fetal echocardiography showed PS=18, mild PI, moderate TR, No pericardial effusion, and Cardio/thorax=45%. The fetus followed until 38 week gestational age and delivered by normal vaginal delivery.

Conclusion
Percutaneous balloon angioplasty of pulmonary valve can improve right ventricular cavity and right heart failure in fetus with critical pulmonary stenosis and hypoplastic right ventricle.