EP12.14 The value of AO/SVC ratio in the 3-V view and Y sign appearance in the descending aorta coronary view in predicting fetus coarctation of aorta

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Objectives
To explore the value of AO/SVC ratio in three-vessel view and Y sign appearance in descending aorta coronary view for the prenatal diagnosis of fetus CoA.

Methods
21 cases of which prenatal ultrasound suspected aortic arch narrow or stenosis were followed up (except for complex deformities). Two groups (abnormal group and normal group) were divided according to postnatal examinations. Compared the differences of the performances and parameters between the two groups by related measurement parameters, including first diagnostic gestational age (GA), the proportion of left and right ventricular in four chambers view (LV/RV), pulmonary artery/aortic ratio (PA/AO) and AO/SVC ratio in 3-V view, the “Y” sign be imaged and inner diameter of the aortic isthmus in descending aorta coronary view.

Results
10 cases were abnormal, 6 cases confirmed CoA postnataly, 4 cases selected induction of labor, 11 cases were normal in aortic arch; GAs first diagnosed were 25.4±3.47 weeks in CoA group and 29.27±3.07 weeks in normal group (P<0.05); 8 cases (8/10) in CoA group when D_{AO} ≤ D_{SVC} while 1 case (1/11) in normal group, (P<0.05); in the descending aorta coronary view, Y sign can be imaged in 2 cases (2/8) in CoA group and 10 cases (10/11) in normal group (P<0.05), the D_{AI} > 1.5mm in normal group and < 1.5mm in CoA fetuses; PA/AO were 1.81±0.45 in CoA group and 1.55±0.25 in normal groups, (P>0.05)

Conclusion: In our study, the prenatal diagnostic accuracy of CoA by echocardiography was less than 50% according to the dominant right heart, arrowed inner diameter of aortic artery and distortional aortic arch. The accuracy of prenatal diagnosis for CoA might be improved when the first diagnosed GA in 2nd trimester, \( D_{AO} \leq D_{SVC} \) in 3-VT view, Y sign appeared difficulty or \( D_{AI} < 1.5mm \) in the descending aorta coronary view.