**Single Umbilical Artery: An Important Marker for Prenatal Suspicion and Detection of Fetal Cardiac Anomalies**


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**Objective:** To determine the frequency of associations between the single umbilical artery (SUA) and congenital heart disease in two tertiary centers.

**Methods:** The fetuses diagnosed with SUA at mid-trimester detailed ultrasound examination between May 2001 and March 2014 were included in the study. Colour Doppler was used to visualize the umbilical arteries adjacent to the fetal bladder and in a section of the free loop of cord.

**Results:** A total of 265 fetuses with SUA were identified. Complete data were available in 197/265 pregnancies (74.3%). The mean maternal age was 29 years and the average gestational age at diagnosis was 23 weeks. A cardiac anomaly was detected in 58 of these fetuses (29.0%): 34.3% in center-1, and 18.3% in center-2. Detected cardiac abnormalities include 19 ventricular septal defect (14 perimembranous, five muscular), eight tetralogy of Fallot (TOF), seven complete atrioventricular septal defect, five hypoplastic left heart syndromes, five double outlet right ventricle, three coarctation of the aorta, three hypoplastic right heart syndrome, two dextrocardia, and one for each of the following: absent pulmonary valve, aorta-pulmonary window, left atrial isomerism, double aortic arch, aortic stenosis and transposition of the great arteries. The only chromosomal abnormality was trisomy 18 that was detected in eight cases. Among eight twin pregnancies with SUA, only two had cardiac anomaly, both exhibited TOF. Termination of pregnancies was performed in seven cases, and intrauterine death occurred in five cases.

**Conclusions:** Our study confirms that the frequency of cardiac anomalies is very high in fetuses with SUA. Albeit the incidence is variable from one center to the other, there is a pressing need to consider the finding of SUA among the main referral indications for a detailed fetal echocardiography.