Echogenic Focus in Fetal Heart; Is it still a dilemma?

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Objectives: The significance of fetal intracardiac echogenic foci (IEF) still remains uncertain. The aim of our study was to investigate the clinicopathologic significance of IEF by detailed fetal echocardiography (DFE).

Methods: We performed 760 DFE (including 2D, M – Mode, Doppler and Tissue Doppler imaging - heart size, ventricular diameters and ratios, ventricular wall thicknesses, pulmonary and aortic diameters; peak velocities, mitral and tricuspid E/A ratios; left ventricular fractional shortening and myocardial performance indexes-) during 18 and 34 weeks gestational aged pregnant between January 2013 and November 2014. Fetal heart structures and ventricular functions (using both conventional and doppler techniques) were evaluated. A questionaire were taken from the patients including general health and obstetric history.

Results: The number of fetuses have single IEF in left ventricle were 206; right ventricle 72 and in both ventricle were 48. The overall incidence was 42% in our study. When compared fetuses without IEF, only the multipars showed significant difference (n=161, 49.3%, p<0.05). No significant differences were found in fetal cardiac dimensions , Doppler indices and left ventricular fractional shortening and myocardial performance indexes of both ventricles of fetuses who have IEF in left, right or both ventricle when compared with fetuses without IEF. Congenital cardiac malformations and chromosomal anomalies like trisomy 21 were same (p>0.05 for all).

Conclusions: Isolated IEF in fetal heart; even multiple and in both ventricles has no association between fetal cardiac structural and functional abnormality and thus no need for further evaluation for this benign situation.