[III-JCKP3-06] Evaluation of Referral Indications for Fetal Echocardiography, Prenatal Diagnosis, and Outcomes

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Objective This study evaluates referral indications for fetal echocardiography (FE) in a tertiary centre in Singapore, analyses which were significantly associated with detection of congenital heart disease (CHD), and generates trends between referral indications, diagnoses and fetal outcomes.

Method This was a retrospective, single-centre study reviewing medical records of 181 women over a 2-year period from July 2014 to June 2016.

Results The mean gestational age at first FE was 23±4 weeks. 156 out of 181 fetuses were diagnosed with CHD. The most common referral indications were abnormal cardiac ultrasound (104, 93% confirmed CHD) - most commonly ventricular septal defect (44, 28%), pulmonary stenosis (21, 13%) and Fallot’s tetralogy (16, 10%), abnormal cardiac rhythms (63% confirmed CHD) and intracardiac echogenic foci (71% confirmed CHD). 32 (18%) pregnancies were terminated, with the most common diagnoses being atrioventricular septal defect (10, 31%), double outlet right ventricle (4, 12.5%) and Fallot’s tetralogy (4, 12.5%). Out of 129 delivered fetuses, 112 were followed up and 87 (78%) had concordant prenatal and postnatal diagnoses. 23 (26%) had cyanotic CHD. 30 underwent surgery (21 corrective, 9 palliative) after which 22 (73%) survived. Of 104 fetuses referred for abnormal cardiac views, 33 (32%) died. 96 (86%) out of all fetuses followed-up survived.

Conclusion Abnormal cardiac views on second-trimester ultrasound were significantly associated with postnatal diagnosis of CHD and mortality. Early detection via FE and subsequent intervention improves survival.