

EP08.93 Prenatal Detection of Cardiac Anomalies

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Objectives

To assess the efficacy of prenatal congenital heart disease (CHD) detection and to determine predictive factors of prenatal CHD detection during the initial anatomy scan.

Methods

- Retrospective cohort of babies born between December 2020 – December 2024 at a single tertiary centre.
- CHDs identified by ICD-10 codes and verified with paediatric echocardiogram within 30 days of life. Detection at anatomy scan, follow-up scan, paediatric cardiology, and neonatal echo were compared.
- Lesions that commonly progress during pregnancy were included. Excluded: PFO, PDA, ASD, bicuspid aortic valve. Descriptive and comparative statistics were performed.

Study Design

Setting: Single tertiary centre

Period: December 2020 – December 2024

Design: Retrospective cohort study

Exclusions: PFO, PDA, ASD, bicuspid aortic valve

Results

196/10,921 (1.8%) babies with CHD were identified.

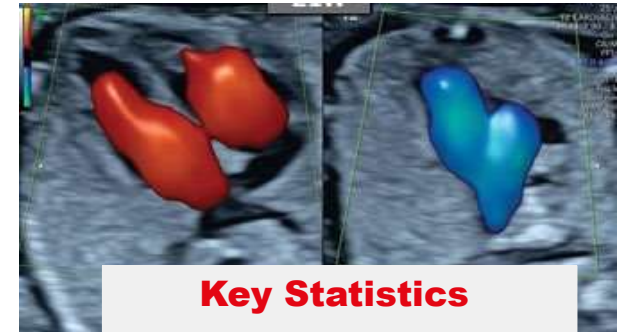
Fetal position, maternal age and BMI were not significant predictors.

Detection rates by lesion type:

- Major structural malformations: 83.5%
- VSDs: 56.2%
- Valve abnormalities: 30.2%
- Myocardial hypertrophy: 37.5%
- An abnormal cardiac view at initial anatomy scan and referral to paediatric cardiology were significantly associated with prenatal CHD detection.
- Maternal BMI, fetal position and isolated defects were not factors in missed defects.
- Poor acoustic windows and delivery prior to a scheduled follow-up scan limited detection in missed cases.

Conclusions

- Overall CHD detection rate was high, with rates varying by lesion type.
- VSDs and valve abnormalities were more difficult to detect.
- Attention to the heart at the third trimester growth scan (32–36 weeks) may help identify cases of progressive cardiac malformations not present at the anatomy scan.
- Each perinatal unit should perform similar studies to determine the effectiveness of cardiac screening to improve effectiveness of local screening protocols.



Key Statistics

10,921

Total births reviewed

196 (1.8%)

Babies with CHD identified

83.5%

Major structural malformations detected