

Agreement between prenatal and postnatal diagnosis of cardiovascular abnormalities

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Objective

The main goal was to evaluate the agreement between the prenatal and postnatal diagnosis of congenital cardiovascular defects (CHD). Secondary goals were to evaluate the agreement in correlation with gestational age, type of CHD, fetal weight percentile and the gender of the fetus. Also, comparison of diagnostic capabilities between obstetricians and cardiologists, hospitals and the community.

Methods

A retrospective cohort of 105 patients who applied to genetic counselling between the years 2011-2017 due to suspected CHD. Data was extracted from patients' electronic medical charts. The results of the prenatal diagnosis were compared to the results of the postnatal diagnosis, whether it was a routine ultrasound (US) scan for fetal anomalies or echocardiogram.

Results

High-full agreement between prenatal and postnatal diagnosis of CHD was observed in 71.4% of cases. Agreement was higher in US exams performed at later weeks of pregnancy. Even so, relatively severe CHD had significant agreement in early weeks of pregnancy. There was a correlation between the agreement and fetal weight percentile. No such correlation was found with the gender of the fetus. Also, no difference was found in the comparison of diagnostic capabilities between obstetricians and cardiologists, hospitals and the community.

Conclusion

Generally, a high agreement was found between prenatal and postnatal diagnosis. Diagnosis made in advanced gestational weeks had higher degree of agreement. Some types of CHD remain difficult to diagnose or rule-out prenatally, especially if the fetus is relatively small.