

MP3-4

The Impact Of Training And Protocols On The Increased Detection Rate Of Cardiac Anomalies In The Fetus: The Welsh Experience

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Background

Congenital heart disease is a leading cause of congenital-defect related death in childhood with improved antenatal detection of cardiac abnormalities, especially those of the outflow tracts, being key in improving outcomes. Due to wide acceptance that additional views of the heart improve diagnostic accuracy, from 2001 various training programmes were undertaken in Wales culminating in the mandatory inclusion of outflow tracts as part of the fetal anomaly scan in 2010. This study was undertaken to assess detection rates of outflow tract anomalies in each period, and the current status of training requirements.

Method

Retrospective analysis of cases in South Wales from 2001 – 2013 was undertaken via Departmental (n=2958) and national (CARIS - n=5420) databases. A training needs analysis questionnaire was undertaken in 2015 to assess current sonographer fetal echo training requirements.

Results

During 2001-2009 the mean number of outflow tract anomalies detected per year was 14.4 whereas during the period 2010-2013 it was 21.2 ($p=0.008$). The mean referrals per year for these two periods was 196.2 and 208 respectively ($p=0.65$).

The rate of antenatal detection of outflow tract abnormalities during these periods also increased (47% vs 70%, $p=0.0005$). Detection rates peaked in 2011 reaching 80.6% before dipping to 70% and 66% in 2012 and 2013 respectively. 60% (n=41) of sonographers described themselves as very confident at the examination of outflow tracts, however, of these, 77% (n=30) still professed a need for further training updates.

Conclusion

The detection rate of outflow tract anomalies throughout South Wales has improved substantially. A major increase is seen after the initial training program, and continues with the All Wales training programme and subsequent mandatory implementation of outflow tract examination policy. It has, however, shown a decreasing trend since the cessation of training, indicating that successful screening policies must be combined with continuing structured training programs.