



## Service Priorities and Programmes Electronic Presentations

**Convention ID:** 825

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### **Prenatal diagnosis of congenital heart disease to reduce prevalence and improve neonatal morbidity**

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#### **Keywords:**

Congenital heart disease

Prenatal diagnosis

Counseling

Birth outcomes

Neonatal morbidity

#### **Introduction**

Congenital heart disease (CHD) is the commonest birth defect occurring at around 1 in 120. Severe form of CHD is associated with morbidity or even mortality. Therefore, it is important to make prenatal diagnosis to facilitate management, counseling, preparation of childbirth.

#### **Objectives**

To evaluate the impact of prenatal diagnosis of CHD on birth and early neonatal outcomes.

#### **Methodology**

Prenatal detection of CHD was achieved by targeted ultrasound scans because of positive family history, routine morphology scans or referrals. Fetal echocardiogram by 2D, 3D and 4D ultrasound was performed as appropriate. Karyotyping and exclusion of other associated anomalies were done. Assessment and joint counseling with paediatric cardiologist was arranged. Option of termination of pregnancy is offered in case of severe CHD. Delivery is scheduled and planned if there is risk of fetal compromise or when monitoring deemed difficult. Prenatal diagnosis can also facilitate resuscitation after delivery. Cases with prenatal diagnosis of CHD made for the period from July 2010 till February 2013 were identified. Measurements including scheduled delivery, cesarean delivery rate, rate of delivery before 39 weeks and need of preoperative intubation are compared with the latest experience from the literatures.

#### **Result**

Results: A case series of 49 prenatally diagnosed CHD was followed for their outcomes. These include 6 tetralogy of Fallot (TOF), 4 ductal-dependent conditions, 8 septal defects, 4 fetal arrhythmias, etc. 14 (29%) of them underwent termination of pregnancy while 5 (10%) pregnancies are ongoing. Data from 3 cases were not

available due to default, delivery in private and miscarriage. For the remaining 27 cases, 12 (44%) had a scheduled delivery. 9 (33.3%) cases were delivered by Caesarean section. 20 (74%) are delivered before 39 weeks of gestation. There is need for invasive respiratory support in 9 cases (33%). Our data are largely comparable with those from the latest evidence in the literature showing more scheduled delivery with no increase in Caesarean section, more likely to delivery before 39 weeks and less respiratory support required at birth. Conclusions: In collaboration with paediatric cardiologist, CHD was managed by our maternal and fetal medicine team resulting in reduction of prevalence of CHD at birth, better counseling and facilitating neonatal resuscitation.