

## Organisation of perinatal care for fetuses with congenital heart disease

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**Objectives:** Perinatal care is important for children with prenatal diagnosis of congenital heart disease (CHD). Close co-operation between obstetrician and fetal cardiologist is needed, as typical obstetric monitoring (CTG) is not always diagnostic. Obstetric and neonatal care and the rate of prenatal diagnosis were evaluated for newborns born with CHD at a tertiary institution.

**Methods:** A retrospective review of patients born with CHD. Fetal echocardiography results, perinatal care and obstetric outcome was evaluated.

**Results:** 569 neonates with CHD were delivered between January 2006 and December 2014. 95% were diagnosed prenatally. 30 ventricular septal defects (VSD), 1 tetralogy of Fallot (TOF) and 1 common arterial trunk were missed prenatally. The most common CHD were: VSD 14% (93/569), TOF 10% (56/569), TGA 9% (50/569), AVSD 8% (46/569), HLHS 8% (43/569). Extracardiac abnormalities were diagnosed in 8% (48/569). Rhythm disturbances were observed in 5% (31/569). 267 (47%) fetuses were karyotyping, 103 (18%) cases of genetic disorders were found with the most common Down Syndrome diagnosed in 8% (45/569). There were 8 (1,4%) intrauterine deaths after 22 weeks of pregnancy. There were 79 (14%) fetuses with intrauterine growth restriction. Preterm birth occurred in 39 (7%). 63% (355/569) were delivered vaginally, 22% (127/569) by urgent vaginal or cesarean section, 15% (85/569) by elective cesarean section. There was not electronic continuous monitoring during labor in 4% (21/569) lethally ill fetuses during vaginal deliveries. Perinatal palliative care was introduced for those families during pregnancy and perinatal period. Abnormal intrapartum fetal heart rate patterns according to the SOCG guidelines were observed in 143 (25%) during the first stage of labor. In 53 (9%) newborns Apgar score was less than 7 at 5 minutes, and in 39 (7%) umbilical cord blood pH values were lower or equal to 7.20. All other were born in good general condition.

**Conclusions:** The spectrum of congenital heart defects diagnosed in our institution is wide as patients are admitted from the whole country due to prenatal diagnosis. Majority were diagnosed prenatally what unable optimal perinatal care. There was not difference in neonatal conditions while delivered vaginally or planned CC, what proved that CHD is not an indication for CC. Isolated CHD did not change the result of intrapartum monitoring.