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A 10-year study of planned delivery of fetuses with prenatally diagnosed congenital heart disease in a single institution

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Objectives: To describe the aims and rationale for planned delivery in a tertiary referral centre for fetuses with prenatal diagnosis of congenital heart disease.

Methods and results: 2130 consecutive fetuses with congenital heart disease diagnosed from January 2002 to December 2011 were included: 1258 (59%) in-born neonates whose delivery was planned in our institution, 799 (38%) terminations of pregnancy, and 73 (3%) foetal deaths. For in-born, planned delivery was classified as 'certainly warranted' for 899 (71%) for the following reasons: need for Rashkind atrioseptotomy in 344 cases, risk of aortic coarctation in 272 cases, ductal patency needed for pulmonary flow in 107 cases, ductal patency needed for systemic flow in 93 cases, need for an immediate intervention in 83 cases. For the remaining 359 in-born, planned delivery was classified as 'potentially warranted' for the following reasons: potential need for ductal patency for pulmonary flow in 156 cases, for systemic flow in 35 cases (3%), incomplete congenital heart disease diagnosis in 94 cases, need to monitor neonatal tolerance of the defect in 51 cases. In these 359 in-born at risk, rationale for planned delivery was reviewed after birth. A posteriori, in-born delivery was not necessary for 249 in-born (20%) in whom no intervention was needed during the first week, and confirmed to be necessary for 110 in-born (9%) -32 in whom diagnosis was different with a direct influence on management and with 78 who needed an intervention during the first week. The median follow up was 3 years and 318 days. The initial announced therapeutic program was achieved at last news for 95,5% of in-born neonates (after excluding death).

Conclusions: Our study demonstrates that only a fifth of foetal congenital heart diseases delivered in a tertiary reference centre appears to be unnecessary. Conversely, a third of in-born with only potential post-natal risk of cardiac complication were appropriately delivered in our institution, as they needed immediate care in an expert centre.