Maternal and foetal outcomes in pregnancies from women with congenital heart disease (ACHD)

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Objective. Pregnancies in adult congenital heart defects (ACHD-ESC guidelines) are susceptible of cardiovascular and obstetrical complications. Cardiac dysfunction may compromise utero-placental flow and contribute to impair obstetrical and neonatal outcome. The aim of this study was to evaluate maternal and neonatal outcomes in ACHD according to mWHO classes.

Materials and Methods. This is a retrospective study of pregnancies in ACHD followed at ASST Papa Giovanni XXIII, Bergamo from 2016 to 2023. Data on cardiac, maternal, obstetrical and neonatal outcomes were collected and categorized according to mWHO class. Neonatal and maternal outcomes were analysed by Fisher test. A P-value < 0.05 was considered statistically significant.

Results. 49 pregnancies were included. Mean maternal age at delivery was 30 (19-43). 7 (14.3%), 12 (24.5%), 19 (38.8%) and 11 (22.4%) women were included in I, II, II-III and III mWHO classes, respectively. A-V septal defects (7; 14.3%), tetralogy of Fallot (9; 18.4%), and moderate aortic stenosis (7; 14.3%) were the most represented. Mean gestational age at delivery was 37+6 weeks (30-41). 49% underwent caesarean section (CS), 58% of these for cardiac indication. 16.3% were complicated by FGR. 6 patients showed a clinical worsening after delivery (12.5%), 2 requiring admission to intensive care unit. There were no maternal deaths. Comparing outcomes according to mWHO classes, class III pregnancies showed a significantly higher risk of iatrogenic preterm birth ($p = 0.02$), elective CS ($p = 0.07$), hypertensive complications ($p = 0.05$) and neonatal respiratory distress ($p = 0.03$) when compared to other classes.

Conclusions. Pregnancy complications in women with CHD are frequent, particularly in higher mWHO classes. In ACHD, pregnancy should be accurately planned and a multidisciplinary counselling should be offered.