

**Maternal and Fetal Outcomes in Cyanotic Congenital Heart Disease: a Multicentric Study of 55 Pregnancies**

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**Background:** Many cyanotic congenital heart diseases (CHD) are deemed unsuitable for radical repair but are compatible with survival. Previous studies suggest that cyanotic CHD are of great maternal and fetal risk to pregnancy, but information on management of these pregnant women is lacking. The purpose of this study was to determine maternal and fetal outcomes in patients with cyanotic CHD.

**Methods:** This multicentric retrospective study included pregnant women with cyanotic CHD followed in 10 French specialized centers from 1992-2015. Patients with pulmonary hypertension were excluded. All pregnancies were reviewed. We observed maternal, obstetrical and neonatal outcomes.

**Results:** Twenty four patients (27±6 years old) had 55 pregnancies. There were 10 miscarriages (19%), 40 complete pregnancies (≥20 week gestation (WG)), 4 abortions and 1 ectopic pregnancy. All pregnancies were singleton. Severe cardiac events occurred in 6 (11%) pregnancies. There was no maternal death. Cardiac complications were arrhythmia (n=3), heart failure (n=3) and stroke attack (n=1). Six patients experienced deep hypoxia during the peri-partum period. No infectious endocarditis occurred. Half of cardiovascular events occurred in patients with single ventricle, and were more frequent in older patients (33 vs 27 y.o., p=0.03).

Obstetric complications occurred in 20%. Small for gestational age was diagnosed in 33%. The mean birth weight was 1868 ± 641g at a mean gestational age of 34±3WG, and 76% of newborns were premature. Neonatal death occurred in 4/40 live births. No CHD was diagnosed in the offspring.

**Conclusion:** Women with cyanotic CHD can go through pregnancy with a low risk to themselves during pregnancy and postpartum period. However, cyanotic CHD is associated with a high incidence of fetal and neonatal complications, with high rates of premature births, small gestational for age neonates and neonatal death. Close fetal monitoring and management in referral centers are required in this complex cardiac condition.