TIMING AND MODE OF DELIVERY IN PRENATALLY DIAGNOSED CRITICAL CONGENITAL HEART DISEASE: AN ANALYSIS OF PRACTICES WITHIN THE UNIVERSITY OF CALIFORNIA FETAL CONSORTIUM

Poster Contributions
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Background: Prenatal diagnosis of congenital heart disease (CHD) is associated with decreased operative morbidity and mortality. However, prenatal diagnosis of CHD has also been associated with lower birth weights and lower gestational age at birth, which may influence long-term survival and neurodevelopmental outcomes. We sought to describe delivery practices in five University of California medical centers that perform prenatal diagnosis of CHD requiring neonatal intervention, and to correlate delivery practices with pre- and post- surgical outcomes.

Methods: The University of California Fetal Consortium (UCfC) campuses were surveyed on data regarding deliveries and outcomes for prenatally diagnosed neonates (<28 days) undergoing cardiac surgery between January 2011-2013. Data collected included gestational age (GA) at diagnosis of CHD, planned and actual delivery mode, planned and actual delivery GA, birth weight and postnatal data.

Results: A total of 178 patients were prenatally diagnosed with critical CHD. Of those, 130 were ductal-dependent and 20 required an additional immediate intervention after birth for extreme instability after separation from placental circulation. Mean birth weight for the entire cohort was 2.85 +/- 0.65 kg. Planned GA at delivery was a mean of 38.9 +/- 1.1 weeks and actual GA at delivery was 37.6 +/- 2.2 weeks. Mean GA at birth for infants alive at 30 days was 37.8 +/- 2.1 weeks and 36.5 +/- 2.6 weeks for those not alive at 30 days. Although the planned mode of delivery was induction of labor or natural in 70% of mothers and cesarean section in 30%, the majority of mothers delivered via cesarean (52%).

Conclusion: Current practices demonstrate that fetuses with critical CHD are delivered at a slightly earlier GA than planned and are delivered via cesarean more often than not. Cesarean delivery rates are higher as compared to the general population in California (33%). In addition, the mean gestational age at delivery for infants alive at 30 days was slightly later than for those not alive at 30 days. Further studies to assess the impact of current delivery practices on long-term outcomes are warranted to establish optimal delivery guidelines for fetuses with CHD.