Obstetric and neonatal outcomes in fetal growth restricted fetuses according to management: retrospective monocentric cohort study

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Objectives

Evaluation of obstetric and neonatal outcomes in fetal growth restricted (FGR) fetuses according to management (expectancy vs. induction of labour (IOL)) and fetal Dopplers.

Methods

Retrospective cohort study of FGR fetuses (EFW<10th centile) admitted to Modena Policlinico (Italy) in 2016-2018 with prenatal ultrasound (USS). Fetal Dopplers, obstetric and neonatal outcomes were retrieved from clinical records. "Composite neonatal morbidity" was defined by ≥1 among: Apgar<7 at 5’, umbilical artery (UA) pH ≤7.15, base excess<10, need for resuscitation/intubation/ventilation.

Dopplers were defined pathological in case of UA PI>95th c.le, UA absent/reversed diastolic flow (AREDF), Middle Cerebral Artery (MCA) PI<5th c.le and cerebro-placental ratio (CPR)<1 or <5th c.le.

Results

We included 208 FGR fetuses with mean gestational age at USS of 35.5±3 w and at delivery of 37.1±3.5w. Table 1 shows that all fetal Dopplers were associated with an increased risk of operative delivery (ventouse/urgent caesarean section (CS)) compared to vaginal delivery/elective CS; only UA Doppler was associated with composite neonatal morbidity. Excluding elective CS (n=18), no difference was found in operative deliveries (30.3±41.7%, p=0.09) and composite neonatal morbidity (17.1±19.8%, p=0.69) according to management (IOL vs. expectancy).

Conclusion

All fetal Dopplers and CPR were associated with mode of delivery while only UA Doppler was associated with neonatal morbidity.