

**To evaluate cerebroplacental ratio in Intrauterine growth retardation by Umbilical Artery & Middle Cerebral Artery doppler.**

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Material and Methods: 100 singleton pregnancies beyond 28 weeks of gestation complicated by Intrauterine growth restriction were prospectively examined with Doppler ultrasound of uterine arteries, umbilical artery and middle cerebral artery.

Results: Seventy one patients of the hundred included in the study population had at least one adverse outcome, Adverse outcome criteria included perinatal deaths, emergency caesarean section for fetal distress, 5 min APGAR score of less than 7, admission to NICU for complications of low birth weight. There were 2 perinatal deaths, 6 stillbirths and 92 live births. Of the 6 stillbirths, four had absent diastolic flow and two had reversal of diastolic flow. The mortality in cases of reversal and absent end diastolic flow was 100% and 40% respectively, indicating grave prognosis. Of 92 live births, 63 neonates were admitted to NICU. Rests of the 29 live births were uneventful.

Conclusion: PI ratio of MCA/Umb A is the most sensitive index in predicting perinatal outcome (81.9%). Presence of absent or reversal of diastolic flow in umbilical artery is an ominous sign since it carries a grave prognosis and high mortality. The sensitivity of the Doppler studies can be significantly increased by studying multiple vessels. Hence we conclude that best results are obtained when Cerebroplacental ratio was used to predict adverse outcome in intrauterine growth retardation. This may be helpful in

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