

To find the association between the Cerebroplacental ratio and adverse perinatal outcome

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Assessment of impedance to blood flow in the fetal Umbilical artery (UA) and middle cerebral artery (MCA) with Doppler ultrasonography is commonly integrated with routine antenatal management in surveillance of fetuses at high risk. Although high UA Pulsatility index (PI) and low MCA PI, themselves are predictors of adverse perinatal outcome, combining these two parameters calculating the Cerebroplacental ratio (CPR) further improves the predictive value. The CPR is emerging as an important predictor of adverse perinatal outcome in modern obstetric practice and it's predictive value in assessing fetal well-being has been shown not only in small for gestation age fetuses but also in fetuses that are appropriate for gestational.

This was a prospective cohort study conducted at Obstetrics ward of Professorial unit of Rajarata University Anuradhapura, Sri Lanka. 354 singleton pregnancies at 37-41 weeks gestation were included for the study. A detailed ultrasound scanning with Doppler evaluation performed within 1 week from delivery. Fetal UA PI and MCA PI were measured and CPR was calculated. Fetuses were followed up for intrapartum adverse outcome categorized as NNU admission, perinatal death, fetal distress, Apgar score < 7 at 5 min and any adverse outcome. Descriptive statistics and the statistical applications for diagnostic test accuracy were used for data analysis. Receiver-operator characteristic curve were plotted to analyze the predictability of CPR for each category.

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