

- **Name of the study:** The association between abnormal Cerebroplacental ratio Index at term pregnancy with later Neurodevelopmental outcome
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- **Type of research:** research
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Abstract

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Objectives

The cerebroplacental ratio (CPR), which is the ratio of the pulsatility indices (PI) of the middle cerebral artery (MCA) to the umbilical artery (UA), is regarded as an indicator of placental insufficiency. A lower CPR at term pregnancies suggests a higher risk for adverse neonatal outcomes. This study focused on the relationship between abnormal CPR at term and the neurodevelopmental outcomes in children aged 3-5.

Methods

The study was initially designed to include 60 patients with abnormal Dopplers parameters out of a group of 664 women whose fetal Doppler parameters were examined at 37th weeks of gestation from 2017 to 2022. This preliminary study included 24 patients whose children reached the age for testing (3-5 years) and a control group of 36 women. Data were collected using ABAS questionnaires, life events questionnaires, and the AIDQ demographic questionnaire. Recruitment was done through personal invitations via email, SMS, or phone calls, and interviews were conducted via video chats, lasting about an hour

Results

The preliminary findings indicate no significant differences in functioning levels between the two groups, except for differences in birth weights. The ABAS index did not find any significant neurodevelopmental differences

Discussion

Despite current medical literature examining the significance of the CPR index as a potential predictor in the proper management of high-risk pregnancies and developmental outcomes, we found no evidence supporting this in terms of parent-reported neurological functioning at the age of 3-5 years

Our study emphasizes the need for continued evaluation and further research to validate those findings

Keywords

cerebroplacental ratio; neurodevelopmental outcome; prenatal diagnosis; fetal growth restriction.

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