学 位 論 文 の 要 旨

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主論文の題名

Fetal Biometric Assessment and Infant Developmental Prognosis of the Tadalafil Treatment for Fetal Growth Restriction

主論文の要旨

Purpose:

Tadalafil is expected to treat fetal growth restriction (FGR). This study aimed to evaluate the fetal biometric growth pattern of fetuses with FGR treated with tadalafil by ultrasonographic assessment.

Methods:

Fifty fetuses diagnosed with FGR and treated by tadalafil and ten controls who received conventional treatment. Fetal biparietal diameter, head circumference (HC), abdominal circumference, femur length, and estimated fetal weight at the start, two weeks and four weeks of treatment were mainly assessed by ultrasound examination. The Kyoto Scale of Psychological Development (KSPD) was used to assess the developmental prognosis on tadalafil-treated children at 1.5 years of corrected age (CA) and 3 years old.

Results:

The Z-score of HC was significantly increased at 4 weeks of treatment ($p = 0.005$), and the umbilical artery resistance index was significantly decreased ($p = 0.049$), while no significant difference was observed in the control group. The number of cases with an abnormal score on the KSPD was 19% for P-M, 8% for C-A, 19% for L-S, and 11% for total area at 1.5 years CA. At 3 years old, the respective scores were 16%, 21%, 16%, and 16%.

Conclusion:

Tadalafil treatment for FGR may maintain fetal HC growth and infants' neuro-developmental prognosis.