

Conference Abstract

DAY 1 15th September 2023 (Friday)

ORAL 2

3.30-5.00 pm

Scientific Session 4

A Cross Sectional Study to Correlate Placental and Fetal Liver Morphometry in 2nd and 3rd Trimester Ultrasound Findings**Sapna.D, Vasudha Kulkarni**

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Background: The global prevalence of Low Birth Weight (LBW) is 14.6% accounting for 25 million LBW infants born every year. More than 50% of LBW infants born in India are attributed to Intrauterine Growth Retardation (IUGR). Liver is the severely affected organ in IUGR fetus. Evaluating placental dimensions and grading is of importance as it has an association with the growth of fetal liver. Limited consummate nomograms have been computed by making an inter-relational study between placental morphometry and fetal liver dimensions.

Aim: The purpose of the study was to identify whether association between placental morphometry and fetal liver dimensions be used as an application in evaluation of fetal growth in cases of intrauterine growth restriction.

Methods: A prospective observational study was done on 70 normal ultrasonographic findings at 2nd and 3rd trimester primigravida and multigravida pregnancies. Placental thickness, position of placenta, cord attachment, placental grading (cotyledons), fetal liver dimensions. The normal morphology and the variations observed were recorded.

Result: The mean values of variables with Standard deviation were computed for gestational age from 15 weeks-40 weeks. Multiple linear regression analysis was applied to establish relationship between gestational age, liver length and placental morphometry. Predictive values for 5th, 50th, 90th percentile ranges of placental thickness, placental grading and fetal liver length were constructed. P values less than 0.05 was considered as statistically significant.

Conclusion: The placental thickness less than 25 mm in the third trimester indicated IUGR. Placental thickness greater than 45 mm was associated with maternal comorbidities like diabetes, hypertension or fetal anomalies such as hydrops fetalis. Anterior placenta was associated with a greater risk of pregnancy-induced hypertension, gestational diabetes mellitus and placental abruption, while posterior placenta had a significant association with preterm labour. Placentas that were less than 29 mm thick at 32 weeks and 31 mm thick at 36 weeks were related to higher morbidity.

Key Words: Fetal Liver length, Placental Thickness, Intrauterine Growth Retardation.