

## **CORRELATION OF USS PLACENTAL PARAMETERS TO ACTUAL MEASUREMENTS AND ITS RELATIONSHIP WITH FETOMATERNAL HAEMORRHAGE**

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### **ABSTRACT**

**PURPOSE:** Fetomaternal haemorrhage takes place across the placenta in normal pregnancies without identifiable risk factors and as well as when there are obstetric interventions or trauma related complications of pregnancy. This loss of fetal blood into maternal circulation would stimulate antibody production in the Rh D Negative pregnant woman, who is carrying a Rh D positive baby and can lead to dire consequences in subsequent pregnancies.

This study is to evaluate whether placental parameters (weight, volume, thickness and grade) measurements at term using ultrasonography and direct measurements after delivery, are true predictors of fetomaternal haemorrhage in parturients.

**METHODS:** In all consenting parturients, baseline bio-data, maternal blood group, Rh D status were recorded. Obstetric ultrasound was done at 36 - 38 weeks for booked parturients and in labour, for unbooked parturients, to assess the placental parameters and grade. Maternal blood sample and cord blood were taken at delivery. Maternal blood sample was tested for fetal blood cells using Kleihauer - Betke test. The FMH was calculated using Mollison's formula. Baby blood group and Rhesus status was determined from the cord blood. The placentae of these parturients were collected and its weight and volume were measured. Data generated were analyzed with Statistical Package for Social Scientists (SPSS) version 17 software. Level of statistical significance was set at  $p < 0.05$ .

**RESULTS:** A total of 600 parturients were studied, of which, 208 parturients (34.7%) had demonstrable fetomaternal haemorrhage. Large FMH were noted in 8 (1.4%) out of the 208 parturients with demonstrable FMH. None of the placental parameters [placental weight ( $p = 0.893$ ); placental volume ( $p = 0.666$ ); placental thickness ( $p = 0.361$ ); and placental grade ( $p = 0.585$ )] showed any significant association with fetomaternal haemorrhage. **CONCLUSION:** Placental parameters did not prove to be predictive of FMH. There is need for further multi-centre and multi-racial studies with larger sample size to further explore other likely determinants and risk factors of FMH and the role(s) of the placenta in this regard.

**KEYWORDS:** Fetomaternal Haemorrhage, Kleihauer-Betke Test, Parturients, Placental Parameters