

First Trimester Vaginal Bleeding as a Predictor of Preterm Birth: A Case-Control Study in Islamabad

Leenah Ghazi¹, Zaiba Sher², Mussarat Ashraf², Mussart Sultana³, Sadaf Zahra⁴, Farah Rasheed⁵

ABSTRACT

Objective: To assess the relationship between early pregnancy bleeding and preterm birth in a tertiary hospital setting.

Study design: Retrospective case–control study

Place and duration: Department of Obstetrics & Gynecology, Pakistan Atomic Energy Commission (PAEC) General Hospital, Islamabad, between January 1, 2023 and July 31, 2023.

Methodology: Data from 103 singleton pregnancies were analyzed, including 50 spontaneous preterm cases and 53 term controls. Only pregnancies with complete records and first-trimester ultrasound confirmation were included. Statistical analysis was performed in SPSS v.26 after verifying data normality using the Shapiro–Wilk test. Group comparisons were made using chi-square and t-tests with effect sizes (Cramer’s V, Cohen’s d) reported.

Results: First-trimester bleeding occurred in 36% of preterm cases and 11.3% of controls ($p = 0.003$). Mean gestational age and birth weight were significantly lower in cases (34 weeks; 2110 g) than controls (38 weeks; 2964 g), both $p < 0.001$. NICU admission and low APGAR (< 7 at 5 min) were also more common among cases (38% vs 9.4% and 24% vs 5.7%, respectively).

Conclusion: First-trimester vaginal bleeding is a significant indicator of preterm birth, low birth weight, and neonatal morbidity. Early identification and closer surveillance may improve perinatal outcomes in high-risk pregnancies.

Keywords: First-trimester bleeding, Preterm birth, Subchorionic Hematoma, Neonatal outcome, Retrospective study.

How to Cite This:

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