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Maternal risk factors associated with retinopathy of prematurity among patients in East Avenue Medical Center from 2010 to 2015

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Objectives: This study aims to determine the maternal risk factors associated with the development of retinopathy of prematurity (ROP).

Design: A retrospective cohort study.

Setting: The study was done in a tertiary government hospital.

Patients: This study included admitted premature neonates in neonatal intensive care unit (NICU), who underwent ROP screening. All patients with congenital abnormality of the eyes were excluded in the study.

Methodology: List of admitted premature patients who underwent ROP screening was collected within the study period. Demographic data was collected from the patient's medical records.

Statistical Analysis: Descriptive statistics were presented for categorical outcome measures. Wilcoxon rank-sum test was used to compare two averages. Chi-square test, Yates' chi-square test and Fisher's exact test were used to compare proportions. Univariate and multivariate regression analyses were used to estimate crude and adjusted odds-ratios, corresponding 95% CI and based on $p\text{-value} \leq 0.05$ indicates statistical significance.

Result: This study showed 57% cases of ROP, majority with Stage 1 (66%), mostly female infants (53.4%; $p < 0.001$), mildly asphyxiated (51.2%, $p = 0.290$; 77.2%, $p = 0.117$) and were small for gestational age (57.3%; $p < 0.001$). On the average, these infants underwent one day of either invasive or non-invasive mechanical ventilation, two days with FiO_2 of > 0.5 liters per minute, had two blood transfusions, and with shorter hospital stay (17 vs. 26 days; $p < 0.001$). The average age of mothers who delivered infants with ROP was 26 years old, multipara (59.2%), and underwent normal spontaneous delivery (67%). About half reported adequate prenatal check-ups (53.8%), and diagnosed with urinary tract infection (40.1%).

Conclusion: Data showed that mothers with urinary tract infection and preeclampsia are more likely to deliver infants with retinopathy of prematurity thus significant maternal risk factors of ROP.

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