عنوان مقاله:

Assessment of Umbilical Cord Nucleated Red Blood Cell Count in Discharged and Dead Very Low Birth Weight Infants

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خلاصه مقاله:

Background: Predictive value of the umbilical nucleated red blood cells (NRBCs) at birth for neonatal outcomes has been assessed. Hence, the present study was conducted to compare NRBC between discharged and dead neonates.Methods: This cross-sectional study was performed on preterm newborns with a birth weight of < 1,500 g admitted to the Neonatal Intensive Care Unit of Ghaem Hospital, Mashhad, Iran, within 2012-2018. The subjects were divided into two groups of discharged and dead. Data collection tool was a researcher-made questionnaire containing three sections, namely maternal demographic information, neonatal data, and blood tests (measuring white blood cell [WBC], absolute NRBC, NRBC/100 WBC and blood gas). The collected data were analyzed in SPSS software (version 20), using t-test, Chi-square test, receiver operating characteristic curve, and regression models.Results: A total of 205 neonates, including 136 discharged neonates (66.03%) and 69 dead neonates (33.7%), were examined in the present study. The results demonstrated a significant difference between the two groups in terms of the first minute Apgar score (P=0.023), fifth minute Apgar score (P=0.010), gestational age (P=0.000), birth weight (P=0.000), WBC (P=0.020), absolute NRBC (P=0.004), NRBC percentage (P=0.001), duration of mechanical ventilation (P=0.029), duration of oxygen therapy (P=0.012).Moreover, mechanical ventilation (P=0.036), type of oxygen therapy (P=0.000), NRBC percentage (P=0.001), and absolute NRBC count (P=0.001) showed a statistically significant relationship with neonatal survival rate.Conclusion: As the findings indicated, mechanical ventilation, type of oxygen therapy, absolute NRBC count, and NRBC percentage can be used as markers for predicting neonatal mortality rate.

کلمات کلیدی:

death, Discharged, Neonates, NRBC, Prediction

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