Survival predictors of preterm neonates - Single center experience

Verica Misanovic

Clinical Center University of Sarajevo, Bosnia and Herzegovina

Introduction: Adequate prenatal and postnatal care for preterm neonates not only affects the survival rate, but also the occurrence of chronic diseases, and in the future also affects the quality of life of that child.

Aim: To examine the influence of independent predictors (weeks of gestation, body weight, sex) on the outcome of the disease and to analyze the influence of the applied ventilatory mode on the outcome of treatment.

Material and methods: The study included neonates (n = 248) born prematurely who were treated in the neonatal intensive care unit for a period of one year due to immaturity-related difficulties.

Results: The mean age of male neonates (n = 119) at birth was 31.13 ± 3.3 weeks of gestation (WG), and females (n = 129) 31.59 ± 3.2 WG. Weeks of gestation have a statistically significant effect on survival (p = 0.0001), for each more week of gestation, the chances of survival increase by 21%. There was no significant difference between birth weight and sex (p = 0.289), and the birth weight of the neonates had a statistically significant effect on survival (p = 0.0001). For every 10 grams of body weight, in our sample, the chance of survival increases by 2%. Ventilation mode showed a statistically significant effect on neonatal survival (p < 0.05), and intubation mode was used as an indicator. If neonates are switched from non-invasive to invasive ventilation mode, the chance of survival in our sample is reduced by 88%.

Conclusion: Weeks of gestation, birth weight, and the use of a noninvasive mode of ventilation are predictors of a positive outcome for preterm neonates.