

Investigating the Relationship between Serum Bilirubin Levels in the First Week of Life with Season of Birth

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Abstract:

Introduction: Hyperbilirubinemia is a physiological phenomenon; however, it can be influenced by many factors, such as the season of birth. **Methodology:** This analytical cross-sectional study was conducted in Jahrom University of Medical Sciences during 2016-2017. Using simple random sampling, 100 infants were selected in each season. The inclusion criteria included: surviving within the first 24 hours of birth, lack of any kind of congenital abnormalities, avoiding the use of specific drugs (mothers) that may raise neonates' bilirubin levels, no history of hepatic disorders (mothers), gestational age between 38-42 weeks, absence of Rh and blood type incompatibility, absence of G6PD deficiency, normal birth weight (2500-3400 g), maternal age between 18-35 years, normal Apgar scores at 1 and 5 minutes and completion of all patients' records. Using capillary technique, the serum bilirubin levels in the first week were taken and the bilirubin levels were calculated. Data were analyzed in SPSS 16. **Results:** 49.5% of the infants were female. The mean gestational age was 38.28 (1.416) weeks. The mean bilirubin level at the time of birth was 10.61 (3.24). The highest bilirubin level was observed in winter 10.86 (3.23). Based on the Spearman's test, there was no statistical significant relationship between season of birth and bilirubin levels in the first week of life (Sig. = 0.951; $r = -0.003$). However, the stepwise multivariate linear regression test showed that only type of delivery and gestational age (3.7% and 5.2%, respectively) predicted the changes in the serum bilirubin levels in the first week of life (Beta= - 0.213; Beta= -0.123). **Conclusion:** There was no significant relationship between season of birth and serum bilirubin levels in the first week of life; however, the contradictions observed in various studies highlights the need to conduct further research in this area. [ABSTRACT FROM AUTHOR]