

ORIGINAL PAPER

**Analysis of the Relationship between Serum Bilirubin Levels
and Frequency of Urination and Stooling in Infants in the First Week
of Life**

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Abstract

Background: There is risk of developing bilirubin encephalopathy (kernicterus) in cases in which early diagnosis and treatment of high bilirubin levels are not available. The follow-up and treatment of neonatal indirect hyperbilirubinemia are, therefore, important.

Aim: This study was conducted to evaluate the relationship between serum bilirubin levels and the frequency of urination and stooling in infants admitted to an outpatient neonatology department to determine the exact/cut off frequency of urination and stooling that will enable the prediction of high/critical serum bilirubin levels.

Methods: The study was carried out with the parents of 70 infants who were admitted to the outpatient Neonatology Department. Determination of the urination and stooling frequency of the infants included in this study was based on the number of changed urine wet diapers and the number of stooling in the last 24 hours before admission. The capillary bilirubin level measured at first routine control was recorded as the serum total bilirubin level.

Results: A statistically significant negative linear correlation was found between capillary serum bilirubin levels and the number of stoolings and number of changed urine wet diapers in the last 24 hours. A stooling number of ≤ 7 predicted being in the $\geq 50\%$ risk group in terms of neonatal jaundice with 91.5% sensitivity, while ≤ 7 changed urine wet diapers in the last 24 hours also had 91.5% sensitivity.

Conclusions: This study will enable parents and health care providers to be aware of the exact frequency of urination and stooling that predicts high bilirubin levels. This simple observation will also make it possible to guide parents and health care providers about the critical serum bilirubin level for a risk of significant jaundice and related complications before high bilirubin levels develop dangerously.

Keywords: Hyperbilirubinemia, infant, serum capillary bilirubin, stooling, urination