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"ASSOCIATION BETWEEN TOTAL SERUM BILIRUBIN LEVEL AND MANIFESTATIONS OF KERNICTERUS "

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Abstract:

Kernicterus (bilirubin induced encephalopathy) is an uncommon disorder with tragic consequences, especially when it affects healthy term and near-term neonates. Appointment of cut off value of total serum bilirubin level that have a safe margin for early prompt treatment, as a result, prevention of kernicterus. In our study, all of icteric neonates that admitted in our center in 1 year were enrolled. From 305 neonates, 25 cases have kernicterus manifestations. These 25 neonates have not any conditions that mimic kernicterus manifestations (such as birth trauma, intra cranial hemorrhage, asphyxia). We divided neonates to 2 major groups: neonates \leq 7 days and $>$ 8 days-old. Also these cases were divided to high-risk and low-risk neonates. In this study, 220 neonates (72.1%) were \leq 7 days and 85 neonates (27.9%) were $>$ 8 days-old. Also 109 neonates (35.7%) were or with risk factors and 196 neonates (64.3%) were or without risk factors. Risk factors were prematurity, acidosis, hemolysis, duration of hyperbilirubinemia, sepsis and respiratory distress. Cutoff value of bilirubin level for neonates \leq 7 days was 25.15 mg/dl and for neonates $>$ 8 days was 22.25 mg/dl that no statistically significant difference was found. Cut off value of bilirubin level for high-risk neonates was 22.35 mg/dl and for low-risk neonates was 27.95 mg/dl that statistically significant difference was found. The lower limit of bilirubin in neonates with kernicterus was 16.5 mg/dl and the upper limit was 44 mg/dl. The high-risk neonates need prompt treatment of hyperbilirubinemia at lower levels of total bilirubin compared with low-risk neonates.

Keywords:

Serum bilirubin . kernicterus manifestation . bilirubin encephalopathy

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