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A prospective study on neonates with severe hyperbilirubinemia in a neonatal unit of North India

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In order to determine the profile, incidence of acute bilirubin encephalopathy (ABE), risk factors of ABE and outcome of neonates with severe hyperbilirubinemia (a serum bilirubin >20 mg% in first 72 h of life or >25 mg% later), a cohort study was done on 64 neonates (>35 weeks gestation). The primary objective was to find outcome (mortality and development of bilirubin encephalopathy-both acute and chronic), secondary objective was to find risk factors for the development of ABE. Neonates were treated with phototherapy and exchange transfusion as required (AAP2004). Neonates were followed at 1, 3 and 6 months for chronic bilirubin encephalopathy (CBE). Out of the 64 neonates enrolled, causes of jaundice were ABO incompatibility in 41.6%, Rh incompatibility in 25%, cephalhematoma in 3.3% and unknown in 26.6%. Of the 64 neonates, 28 (44%) had ABE on admission itself. Four of these left against medical advice. Of 60 neonates left, 5 (8.3%) expired. A total of 17 (89.5%) neonates of ABE group and 25% of all neonates developed CBE on follow-up. A lower weight on admission (2254.68 ± 417 g vs. 2481.75 ± 369 g; $p=0.0195$), ABO/Rh incompatibility (odds ratio 4.00; 95% CI: 1.13–14, $p=0.030$), a positive Coomb's test (odds ratio 5.7; 95% CI: 1.53–21.4, $p=0.0096$), culture-proven sepsis (odds ratio 16; 95% CI: 0.82–312, $p=0.067$), normal vaginal delivery (odds ratio 5.5; 95% CI: 1.1–27.4, $p=0.037$) were significant risk factors for development of ABE. Nearly half of the neonates admitted in a tertiary care NICU with severe hyperbilirubinemia had features of ABE on admission. The risk was more if they had had a lower weight on admission, sepsis, blood group incompatibility with positive Coomb's test and born vaginally.

Biography

Shalini Tripathi has completed her MD Pediatrics from King George's Medical University, India and Senior Residency in Neonatology from the same institute. She is Assistant Professor in Department of Pediatrics, KGMU, working as a Consultant in Neonatal Intensive Care Unit. She has published more than 15 papers in reputed journals and is also serving as Reviewer of the same.

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