

ABSTRACT

Title: Comparison of two targets of serum bilirubin concentration for phototherapy discontinuation in neonatal jaundice.

Abstract

Aim: To compare the occurrence of significant rebound hyperbilirubinemia between two groups of neonates with jaundice, when phototherapy was stopped at serum bilirubin 1-2.9 mg/dl and ≥ 3 mg/dl below American Academy of Paediatrics (AAP) treatment threshold.

Methodology: An Open labelled randomised controlled trial was conducted in a teaching hospital. Neonates with ≥ 35 weeks gestation, birth weight > 1800 grams with jaundice requiring phototherapy as per AAP guidelines, in first 7 days of life were included. Neonates planned for exchange transfusion at admission were excluded. Computer generated random numbers were kept in serially numbered opaque sealed envelope. After recruitment, the envelope was opened and babies were assigned into groups accordingly. Phototherapy was stopped at serum bilirubin 1-2.9mg/dl in group A and ≥ 3 mg/dl in group B. After stopping phototherapy serum bilirubin was measured at about 6 and 24 hours.

Results: We recruited 99 babies in each group and after excluding the lost to follow up, 83 babies in group A and 77 in group B who completed the study were taken for analysis. 2 babies in each group required re-initiation of phototherapy, but not statistically significant ($p= 0.661$). The mean duration of phototherapy was significantly less in group A (14.9 hours) when compared to group B (19.5 hours)

($p=0.000$). The duration of hospitalization was not significantly different between groups ($p=0.695$).

Conclusion: We found that the occurrence of significant rebound hyperbilirubinemia was not significantly different between two groups, when phototherapy was stopped at 1-2.9mg/dl and ≥ 3 mg/dl below AAP treatment threshold.