



Early Exchange Transfusion or Elective Small Volume ('Top-up') Transfusions in a Preterm Newborn with Isoimmune Hemolysis?

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To the Editor: The cesarean birth of a male newborn at 33⁺² wk gestation (2315 g, 50th–90th centile) occurred for intrauterine anemia. The Rh-negative second gravida mother was adequately covered with anti-D in both the pregnancies. Aberrant fetal middle cerebral artery dopplers and rising maternal antierythrocyte antibody titers necessitated termination of pregnancy for unavailability of fetal interventions. The hemodynamically stable newborn had anemia (cord levels hb 9 mg/dL) with bilirubin levels on a higher centile (5.7 mg/dL). An advocacy for double volume exchange transfusion (DVET) is prudent for the dual problems in the early perinatal period, as it removes antibody-coated RBCs and enhances hematocrit [1]. However, intravenous immunoglobulin and prompt initiation of intensive phototherapy in exposed neonates have witnessed a global decline in DVET for the adverse hemodynamic events associated with this invasive procedure [2, 3]. Exchange transfusions are reserved for critical hyperbilirubinemia or neonates with acute encephalopathy.

A global consensus on preterm hyperbilirubinemia with anemia is lacking. Now, with the lower threshold for packed cell transfusions in place, a clinical equipoise in “preterm newborns” has evolved for an alternative strategy to DVET [4]. This preterm infant received early intensive phototherapy and intravenous immunoglobulins 1 g/kg. The bilirubin levels remained suppressed in the first 72 h of birth (<7 mg/dL), but the progressive anemia required “top-up” transfusions (20 mL/kg) twice in the first few weeks of birth. This sequential management of anemia and jaundice avoided

DVET. The rebound bilirubin was treated by intensive phototherapy (day 6, 13.5 mg/dL; day 11, 16.6 mg/dL). The infant was seen to be good at health till 6 mo of age. With a higher burden of neonatal hyperbilirubinemia in low-resource settings and diversity of facility care, avoidance of exchange transfusion can be attempted in selected hemodynamically stable preterm newborns who are anemic.

Declarations

Conflict of Interest None.

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