TRANSFUSION PRACTICE OF PACKED RED BLOOD CELLS TO LOW BIRTH WEIGHT PRETERM NEONATES IN A LEVEL-3 NEONATAL UNIT

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Background: 65% of low-birth-weight (LBW) infants admitted to the neonatal intensive care unit (NICU) receive multiple transfusions mainly of packed red blood cells (PRBCs), supposedly steered by evidence-based guidelines. In addition to the absolute haemoglobin (Hb) level, transfusion depends on such factors as oxygen requirements, ventilation, and erythrocyte regenerative activity.

Aim: Audit transfusion practice of PRBCs to infants with birth weight of ≤ 1500 grams in the Homerton Hospital NICU.

Method: Retrospective analysis of the transfusion practice of RBCs in infants with birth weight of ≤ 1500 grams.

Results: The higher incidence of transfusion events was in the 27-to-30 weeks' group. Transfusions were given to 47% of babies on mechanical ventilation, 22.5% on nCPAP, 12.5% self-ventilating in O₂ (SVIO₂), and 18% in air. The median values of Hb were higher in the MV group (128 [practice] vs 120 [guidelines] g/l), versus 103, 94, and 79 g/l in each of the other groups respectively. The median FiO₂ trigger for transfusing babies on MV was 30%, but 27% for those on nCPAP, and 35% for those who are spontaneously breathing in O₂. 43% of babies were transfused beyond the neonatal period, followed by those transfused during the first week (18%). Numbers of transfusions per baby ranged from one in ~29%, to > 11 in ~10% of patients.

Conclusions: We are still transfusing at higher Hb, ventilator support, and FiO₂ thresholds stated by the guidelines. Clinical approach taking "symptoms" and reticulocyte count into consideration is not usually followed when deciding for PRBCs transfusions.