POLYCYTHAEMIA
Supporting information

This guideline has been prepared with reference to the following guidelines:

British Committee for Standards in Haematology et al. Guidelines on transfusion for fetuses, neonates and older children. Br J Haematol. 2016;175:784-828

http://onlinelibrary.wiley.com/doi/10.1111/bjh.14233/full

Partial exchange transfusion slightly increases the risk of necrotising enterocolitis (NEC)?
A systematic review of 6 studies (Dempsey, 2006) found no evidence of long term benefit from partial exchange transfusion, but an increased risk of necrotising enterocolitis (RR 8.68; 95% CI 1.06 – 71.1).
A Cochrane systematic review of 4 studies (Ozek, 2010) concluded that: "There are no proven clinically significant short or long-term benefits of PET in polycythemic newborn infants who are clinically well or who have minor symptoms related to hyperviscosity. PET may lead to an increase in the risk of NEC."

Dempsey EM, Barrington K. Short and long term outcomes following partial exchange transfusion in the polycythaemic newborn: a systematic review. Arch Dis Child Fetal Neonatal Ed 2006;91:F2-6
http://fn.bmj.com/content/91/1/F2.long

Özek E, Soll R, Schimmel MS. Partial exchange transfusion to prevent neurodevelopmental disability in infants with polycythemia. Cochrane Database of Systematic Reviews 2010, Issue 1. Art. No.: CD005089
http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD005089.pub2/full

Evidence Level: I

Sodium chloride 0.9% is the optimal dilutional fluid for exchange transfusion?
A systematic review of 6 studies in a total of 235 neonates (de Waal, 2006) found no clinically significant difference in effectiveness between plasma, 5% albumin, crystalloid solutions and sodium chloride 0.9%. As it is cheap, easily available, and carries no risk of transfusion-associated infection, the authors concluded that sodium chloride 0.9% was the best fluid to use for exchange transfusion.

de Waal KA, Baerts W, Offringa M. Systematic review of the optimal fluid for dilutional exchange transfusion in neonatal polycythaemia. Arch Dis Child Fetal Neonatal Ed 2006;91:F7-F10
http://fn.bmj.com/content/91/1/F7.long

Evidence Level: II

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