

PLACENTAL TRANSFUSION STRATEGIES IN PRETERM INFANTS < 1000 G BW: META-ANALYSIS OF SHORT AND LONG TERM OUTCOMES

D. Batra¹, S. Ghavam², H. Kirpalani², J. Mercer³, K. Amir⁴, S. Hosono⁵, H. Rabe⁶

¹Neonatology, Croydon University Hospital NHS Trust, Croydon, UK, ²Neonatology, Children's Hospital of Philadelphia, Philadelphia, PA, ³College of Nursing, University of Rhode Island, Kingston, RI, USA, ⁴Neonatology, Bnai-Zion Medical Center, Haifa, Israel, ⁵Paediatrics and Child Health, Nihon University School of Medicine, Tokyo, Japan, ⁶Neonatology, Brighton and Sussex University Hospitals NHS Trust, Brighton, UK

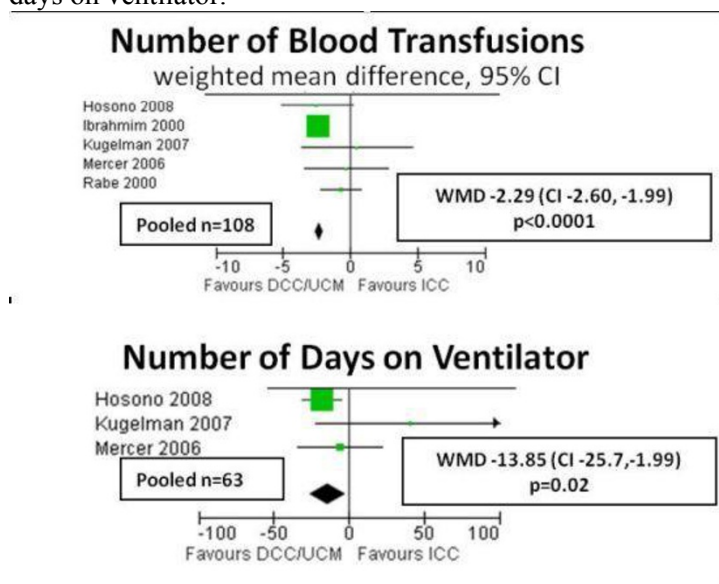
Background: Delayed umbilical cord clamping (DCC) or umbilical cord milking (UCM) in ELBW neonates reduces the number of blood transfusions. DCC is now a common practice in term infants, but the outcomes of preterm infants below 1000g subjected to DCC or UCM are unclear.

Objective: A meta-analysis of short and long term outcomes of infants < 30weeks GA and < 1000g BW randomised to either DCC or UCM as compared to immediate cord clamping (ICC).

Methods: Two independent investigators searched the literature for trials that randomised preterm infants < 1000g BW to either experimental(DCC or UCM) or control(ICC) groups. Primary outcome was 24 month Neurodevelopmental Impairment(NDI) using standardised outcomes; secondary outcomes included transfusions. Additional information was requested of authors. Data was summarised by RevMan5 as weighted mean difference(WMD) and 95%CI.

Results: Searches yielded 15 studies, 6 were included, describing 108 infants. Data on NDI was limited and could not be pooled. One study (Mercer) recorded Bayley at 7 months for 27 infants(WMD MDI -4.40; CI -18.02, +9.22; p=NS). Another study (Hosono) found no significant differences in disability rates(UCM 19% vs ICC 27%; p=NS) at 24months using a Japanese scale.

Short term benefits of DCC/UCM included better mean BP on admission(WMD -4.9;CI -5.58,-4.22) and hemoglobin(WMD 3.71;CI 3.94, 3.47). Other benefits included reduced number of blood transfusions and days on ventilator.



[Short-term outcomes]

Conclusions: Only one study reports 24 month NDI, and no pooling is possible. Short term benefits of DCC include rise in hemoglobin, decreased number of transfusions and shorter days on ventilator.