Redistribution of Placental Blood Benefits Preterm Babies

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Background

Delayed cord clamping facilitates improved placenta-fetal transfusion and its benefits include,1,2,3
1. Less need for blood transfusions in preterm infants
2. Better superior vena cava flows
3. Less intraventricular haemorrhages
4. Improved long term development
5. Increased iron stores in the first year of life in term infants

Research Projects

- Randomised controlled trial showed that milking of the cord 4 times towards the baby is as effective as delayed cord clamping in improving placenta-fetal transfusion.4
- Parent interviews were conducted to find out their perceptions of antenatal consent and involvement in randomised controlled trials. Parents reported the experiences to be very positive and cited altruistic reasons predominately for their involvement in research. 5,6
- Infants enrolled in the original trial were followed up at 2 years and 3.5 years. We found no adverse effects in children who had cord milking compared to those who had delayed cord clamping.7
- Milking of the cord appears as effective as delayed cord clamping in facilitating placenta-fetal transfusion.

On Going Research

Leading on from this research further qualitative projects, as part of a NIHR project, grant have explored the care of preterm infants in more depth. Parent interviews has lead to the development of a questionnaire that is now used routinely internationally to help in the care of parents and their preterm infants.8,12

Funding

- BSUH R&D: Randomised controlled trial on milking of the cord versus slight delay in cord clamping time of preterm infants and parents perception of informed consent before preterm delivery. (£ 20,000)
- NIHR-RPB (Rabe, Amess, McFerran, Ayers, Horst, Rowe) What is the neurodevelopmental outcome of preterm infants at 2 years of age, who received placenta-fetal transfusion at delivery? (£ 49,849)
- NIHR-Programme Grant (Duley on behalf of multi-centre UK Consortium) Improving quality of care and outcome at very preterm birth (£ 1.8 million, Rabe, Co-WP leader)

Impact

Cochrane reviews have produced mixed results that have lead to delayed cord clamping being recommended as a part of routine care in all babies and now forms a core part of 1,2,11,14

- International Liaison Committee on Resuscitation Guidelines
- American Academy of Pediatrics Recommendations
- WHO Guidelines 2014
- NICE UK Guidelines 2014
- RCOG UK Guidelines 2015
- “Action Plan to improve Maternal and Newborn Health”. WHO and UNICEF in May 2014

References

care. 2011; 117:205-211