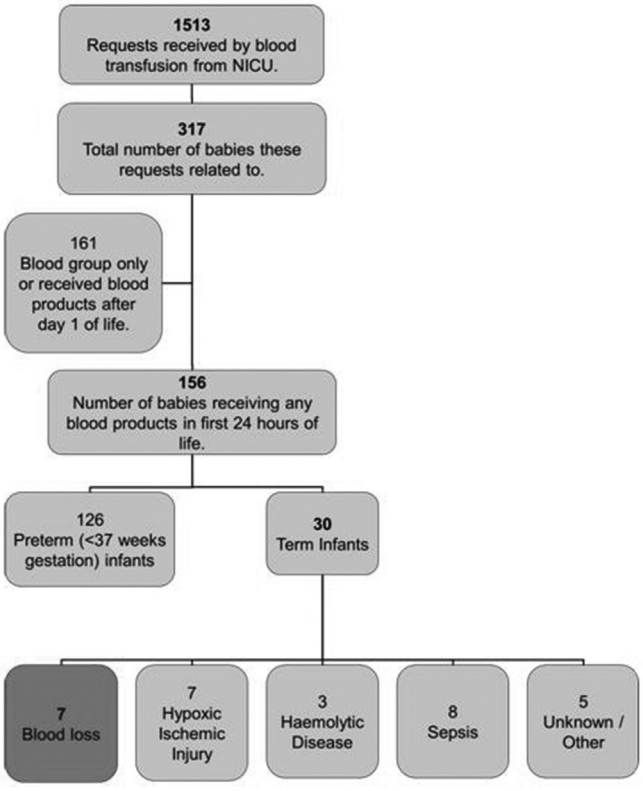
Aims Clear guidelines exist for the management of major haemorrhage in adults. These include a strong emphasis on early transfusion of Fresh Frozen Plasma (FFP) in conjunction with Packed Red Cells (PRC) in order to avoid/treat possible accompanying coagulopathy. Current practice within the local neonatal population is to await clotting profiles and administer FFP if coagulation is found to be abnormal. This practice may lead to a significant delay in treatment. The aim of this service evaulation was to identify whether term neonates with major haemorrhage around the time of delivery required support with coagulation factors. This may support the use of prophylactic FFP alongside RBC transfusion prior to results becoming available helping to stabilise the infant sooner.

Methods Data was requested from our local blood transfusion laboratory for all requests for blood products made for patients on the neonatal unit between April 2011 to December 2013. Further details regarding antenatal and neonatal course were then taken from the Badger database on all babies that were identified to have received blood products on their date of birth or following day. Babies born at less than 37 weeks were excluded.

Results We identified 7 term babies with a clear history of major perinatal blood loss. 5/7 (71%) required transfusion of FFP in addition to PRC on the basis of abnormal clotting profile. All babies receiving FFP needed extensive resuscitation at birth followed by intensive care support, whereas the 2 babies that were not transfused were clinically stable. One of the babies not receiving FFP did not have their clotting profile checked. All babies received Vitamin K post delivery as standard.

Conclusion Term infants with a clear history of perinatal blood loss who are compromised at delivery and require packed red cell transfusion should be considered for early transfusion of FFP without awaiting coagulation profiles.



Abstract G121(P) Figure 1 Participant flow diagram

G122(P) MELATONIN AND IMMUNE CELL RESPONSES IN NEONATAL ENCEPHALOPATHY

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Introduction Infection and inflammation can be antecedents of Neonatal Encephalopathy (NE) and increase the risk of neurological sequelae. Melatonin is a potent immunomodulator and antioxidant (1) and may alter the systemic inflammatory response in NE (2).

Aim To investigate the *in vitro* effect of melatoninon whole blood reactive oxygen intermediates (ROI), CD11b and Toll-like receptor (TLR)-4 in neutrophils and monocytes from infants with NE receiving therapeutic hypothermia (TH) versus healthy neonatal controls in the first week of life.

Methods Infants with NE were recruited and their demographics details, grade of NE, MRI results, outcome and placental histology were recorded. Whole blood was taken on Day 1,3 and 7 of life (NE group) and day 1(Controls) and flow cytometry used to assess TLR4, CD11b and ROI in both monocytes and neutrophils in the presence of Lipopolysaccharide (LPS) and/or melatonin. Ethics was received from ethics committee at National Maternity Hospital.

Results LPS–induced ROI production was significantly increased in both neutrophils and monocytes ($p = 0.03$) in NE versus controls ($n = 6$) on day 1 of life. On day 7 of life, following TH, LPS-induced CD11b upregulation was significantly decreased by melatonin *in vitro* in neonates with NE ($n = 7$). There was no difference in TLR4 expression in NE and controls.

Conclusion Melatonin decreases the production of CD11b in neutrophils, which is a marker of neutrophil activation and migration and may ameliorate the augmented systemic inflammatory response seen in infants with NE.

G123(P) SURVEY OF DELIVERY ROOM PRACTICE: RESUSCITATION OF EXTREME PRETERM INFANTS

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Aims There are Nuffield Guidelines in place to aid clinicians in their decision-making in the resuscitation of extreme preterm infants. This remains an area where there is varied practice nationally and internationally, and decisions are often case dependant. We sought to survey a cohort of Consultant Paediatricians involved in neonatal resuscitation on their approach to the resuscitation of extreme preterm infants, to assess current attitudes to practice.

Methods A questionnaire was designed using an online survey programme, modelled on the Nuffield guidance for resuscitation of extreme preterm infants. This was distributed to a group of Consultants via email and results were collated using the online programme.

Results 45 of 68 (66%) Consultants completed the survey. 26% of responders were from level 3 neonatal intensive care units (NICU), 62% from level 2 units and 12% from level 1 units.