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AUDIT OF NEONATAL BLOOD TRANSFUSIONS**N. Maddock¹**, A. Basu¹, C. Dewhurst¹, C. Dundas²*¹Neonatal Intensive Care Unit, ²Blood Transfusion Audit Nurse, Salford Royal Foundation Trust, Salford, UK*

Introduction: Blood transfusions are very common on a neonatal unit. Patients often need a large number of blood transfusions but each may be as little as 8mls. To reduce donor exposure and wastage of blood each standard unit is split into 6 parts or a Pedipack which may be all or partly allocated to 1 infant.

Our guideline was developed in 2007 and a prospective audit showed good compliance with no unnecessary donor exposure, but wastage due to inappropriate allocation of a full pedipack.

Aims: This was a retrospective re-audit of all babies who had received a blood transfusion to ensure continued compliance with the protocol and to monitor donor exposure and the wastage of blood units.

Results: Babies received between 1 and 17 blood transfusions. For babies ≤ 28 weeks gestation who did not receive pedipacks as per protocol they were exposed to up to 6 unnecessary donors. For babies > 28 weeks 15% were allocated an inappropriate full pedipack resulting in wastage.

Conclusions: There was very poor adherence to the protocol resulting in unnecessary exposure to multiple donors and excessive wastage. This was felt to be due to poor compliance with the guideline, poor communication between the neonatal unit and blood bank staff and an increase in the need for blood transfusions resulting in a lack of availability of full pedipacks.

Recommendations:

To provide teaching sessions for all staff.

To improve communication between the neonatal unit and blood transfusion.

To re-audit to ensure that improvements have occurred.

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MOST RELIABLE INDICES IN DIFFERENTIATION BETWEEN THALASSEMIA TRAIT AND IRON DEFICIENCY ANEMIA**L. Mihai¹**, C. Frecus¹, A. Balasa¹, C.M. Mihai¹, V. Cuzic¹, T. Hangan²*¹Pediatric, ²Faculty of Medicine, Ovidius University, Constanta, Romania*

The authors present a study in 268 children (154 diagnosed with thalassemia trait and 112 diagnosed with iron deficiency anemia), ranged from 6 month to 18 years, in Pediatric Department, Clinical County Hospital Constanta. We studied hematological parameters: hemoglobin concentration, red cell count, red blood cell indices: mean corpuscular hemoglobin (HEM), mean corpuscular volume (VEM), mean corpuscular hemoglobin concentration (CHEM), red cell distribution width (RDW), hemoglobin electrophoresis.

Different mathematical formulas were applied in order to differentiate between thalassemia trait and iron deficiency anemia. We established the specificity and sensibility of these formulas using Youden's criteria.

The best indexes that showed the distinction between iron deficiency anemia and minor thalassemia (as Youden criteria) were Mentzer and Ehsani indexes (Youden index=95.11), followed by England index (Youden index=93.23), Shein-Lal index (Youden index=82.70) and Srivastava index (Youden index=81.95).

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HEALTHY INFANTS OF THROMBOCYTOPENIC MOTHERS ARE AT HIGHER RISK TO DEVELOP THROMBOCYTOPENIA AFTER BIRTH IF MATERNAL PLATELET COUNT IS LOWER**B. Barzilay^{1,2}**, M. Dvir¹, R. Keidar¹, D. Batash¹, E. Heyman¹*¹NICU, Assaf Harofeh Medical Center, Zerifin,**²Pediatrics, Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel*

Introduction: Newborns with thrombocytopenia have a higher incidence of bleeding disorders including IVH, which may increase their risk for mortality and morbidity. In order to identify this high risk population among healthy normal term newborn we obtained a CBC from all the newborn to thrombocytopenic mothers. We divided the infants