

Paediatric Blood Transfusion

Haemovigilance Department, CHI at Crumlin

Safe Paediatric Transfusion is in our hands
Positive Patient Identification at all stages of transfusion
Weight really Matters
Monitoring of child/infant during transfusion
Think SAFE
Special Requirements, Accurate Weight, Formula/Volume, Ensure correct Rate

BACKGROUND

Blood Transfusion is a complex process, particularly within paediatric practice. There are multiple elements within the blood transfusion chain that require clinical vigilance and care to ensure practice is safe for patients. Clinical staff need prompt access to practical, most relevant information in one place to facilitate their engaging in safe paediatric blood transfusion.

AIM

- To support clinical staff in the practical application of blood transfusion
- Important information presented in a poster style clinical instruction.

METHODS

Through facilitating Blood Transfusion Education for nurses and medical staff, Haemovigilance nurses recognised a need to fill an education gap in clinical transfusion practice.

Table 1: Paediatric Blood Transfusion Poster located in all clinical areas

Paediatric Blood Transfusion

Refer to Massive Transfusion Algorithm for emergencies/trauma

Safe transfusion

- Safe transfusion is the responsibility of all involved in the transfusion chain
- Positive Patient Identification at all stages of transfusion
- Benefits of the transfusion must outweigh risks
- Monitoring of patient during transfusion * particularly important in paediatrics
- WEIGHT MATTERS**
- Think **SAFE**
- Special Requirements **A**ccurate **W**eight **F**ormula/**V**olume **E**nsure **C**orrect **R**ate

Bedside Checklist

- Confirm **Positive Patient Identification** (Check name-band & verbal check)
- Confirm prescription is valid & correct for this patient?
- If **pre-medication is required**, has it been administered?
- Baseline observations completed within 60 minutes of commencing transfusion
- Visual inspection of blood product for leaks/clumps/discoloration/expiry
- Patient ID on name-band must be identical to patient ID on blood product compatibility label
- Unit details on the IBTS label must be identical to unit details on compatibility label
- Is this a compatible blood transfusion? Check **ABO & Rh D**
- Are special requirements met? Irradiated

Giving sets & Blood Filters

Giving set & filter	Blood Administration set (BBraun Infusomat Space Line-Transfusion-200 micron filter)	IV Administration Set (BBraun Infusomat Space Line- IV Standard-15 micron filter)	Paediatric Blood Administration set (BBraun pro set)	Single Burette (Baxter)&Blood Administration Set - 200 micron filter	Mini spike by BBraun (15 micron filter) Used with 50ml Original Perfusor(leuc lock syringe	50 ml Original Perfusor (leuc lock syringe & an Extension set)	Single use Proset Sangofix For emergency /rapid Transfusion
Used	To administer Red Cells, Octaplas, Cryoprecipitate via pump Platelets, Leucocytes No pump	To administer Albumin 5% & 20% via pump	To administer Platelets, Paedipack Red Cells, Octaplas (small volumes) via syringe driver	To administer smaller volume platelets ie < 16 kgs patients infuse via gravity (see table for rate)	To administer small volume Albumin 5% & 20% via syringe driver	To administer Fibrinogen (Riastap) via syringe driver Use filter provided to draw back product	In an emergency for rapid transfusion Red Cells, Octaplas, Platelets

Care of patient receiving transfusion

- Monitor patient closely, Visual Observation & Vital Signs: **15 minutes** post commencing, **hourly**, & at the **end** of transfusion
- Monitor for any adverse event/reaction and manage as per **transfusion reaction guidelines & algorithm**
- Documentation of transfusion episode, volume transfused, outcome for patient, & traceability of each blood product

Blood Group Compatibilities

Patients ABO Blood Group	A	B	AB	O
Can receive Red Cells from	A and O	B and O	ALL	O only
Can receive Plasma from	A and AB	B and AB	AB only	ALL
Should receive Platelets from	A	B	AB	O only

* In an emergency situation/massive transfusion incompatible Platelets can be issued *

* Rh D Positive Patients can receive Rh D Negative Red Cells
Rh D Negative Females should only receive Rh D Negative Red Cells

NB: Immunocompromised patients require irradiated products. In an emergency contact BT Lab on 6571/6254 or out of hours Haematology Medical Scientist on call

RIGHT BLOOD RIGHT PATIENT RIGHT TIME
Version 3, CHI at Crumlin, 2022

RESULTS

The Paediatric Blood Transfusion Poster was distributed to and displayed in all clinical areas from August 2018, and has been received very positively amongst nurses and medical staff since for its practical and relevant information.

FUTURE DIRECTION

- Move away from lengthy transfusion guidelines
- Present information via visual aids, flow charts/ algorithms, digital software.

REFERENCES