11 FRESH BLOOD COMPONENTS

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11.2 PAEDIATRIC RBC

DESCRIPTION

As 11.1 Packed RBC's, but provided in sets of 4 units from one single donor for neonatal transfusion.

These units are normally Group O, CMV negative and leucoreduced. The primary aim of these products is to reduce the number of donor exposures.

- *35-day expiry*
- *>21 days left to expiry at time allocated to a patient.*
- *Volume 50-100mL, Hct 0.50-0.75, haemolysis at expiry <0.8%.*

STORAGE

Red cells may be stored up to 35 days at 2-6^{o}C with appropriate additive. They must be stored in a designated, monitored, blood fridge. Do not store in ward fridge.

ORDERING

In-date Group & Hold (G&H) sample required for compatibility testing. ABO and Rh D compatibility required.

DOSE AND ADMINISTRATION

As per neonatal protocols, standard dosage for red cells:

Children 10 - 20mL/Kg (4mL/Kg will raise the Hb by approximately 10g/L)

ADMINISTRATION

- Commence infusion within 30 minutes of removing from controlled 2- 6^{o}C storage.
- Transfusion duration is generally 2 hours though RBC may be given faster in acute bleeding situations or more slowly if the patient's condition dictates
- Peripheral intravenous access should be sufficient to maintain an adequate rate for the transfusion without risk of haemolysis. 18-20 Gauge is recommended for adults and 22-24 Gauge or larger is recommended for paediatric patients.

- Red cells may be administered by Gravity **or** Plum A+ Pump using an approved blood administration set with a 170-200 micron filter designed to remove large aggregates formed during storage.
- Sets should be used and primed according to the manufacturer's instructions.
- The PLUM A+ line B or secondary infusion line contains a 200 micron filter which is appropriate for use with fresh blood products.
- For neonates and infants, special paediatric giving sets or screen filters for administration by syringe may be used provided they incorporate a 170-200 micron filter.
- As for all fresh blood products - Transfusion must be COMPLETE within 4 hours.

PATIENT MONITORING

Severe reactions are most likely to occur within the first 15 minutes and patients MUST be closely observed during this period. It is preferable that the patient be located in an area where they can be closely observed by clinical staff throughout the transfusion.

Take observations as for all fresh blood products

- Baseline TPR and BP
- TPR and BP at 15 minutes and then hourly until completion.
- TPR and BP on completion.

Patients must be monitored and any suspected problem must be dealt with quickly and efficiently. If you suspect a transfusion reaction:

- **STOP** the transfusion
- Inform Medical Officer
- CODE BLUE if necessary
- Inform the Blood Bank
- Check Patient ID, labels and blood packs for discrepancies
- Monitor vital signs every 15 minutes until stable.
- **Refer to Section 10 The Management and Reporting of Adverse Events**

DOCUMENTATION

A record should be kept in the patient's history of the following

- The date of infusion
- Patients observations and general condition during the infusion
- Amount given
- The bag sticker should be placed on the Transfusion Medicine Record sheet KEMH MR735 and the start and stop times and checking signatures should be completed in the relevant boxes.

FOR FULL INFORMATION ON ADMINISTRATION, PATIENT MONITORING AND DOCUMENTATION PLEASE SEE SECTION 7, SECTION 8 AND SECTION 9