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Implementation: To be determined by each Service

Change Notification UK National Blood Services No. 7 - 2009

Remanufacture of exchange transfusion units to SAGM red cells after up to 6 days storage

Applies to the Guidelines for the Blood Transfusion Services in the United Kingdom – 7th Edition 2005

Section 8.21 Red Cells for Exchange Transfusion, Leucocyte Depleted

This change allows remanufacture of this product to a standard SAGM Red Cells in Additive Solution, Leucocyte Depleted (as described at Section 8.6) after up to 6 days after donation. The resultant Red Cells in Additive Solution, Leucocyte Depleted has been validated up to an overall shelf-life of 42 days from donation although, in line with other red cells products of this type, current UK practice is to assign a shelf life of 35 days from donation.

This change allows donations set aside for exchange transfusion and not used within the short 5-day shelf life to be remanufactured to standard product, rather than being wasted. Details of the remanufacture process are available from the Brentwood and Cardiff Blood Centres.

For information the report on which this change is based (JPAC 08-79) concludes: *“Although re-manufactured units contained slightly less haemoglobin per unit than reference units produced using standard processing, the re-manufacture step only resulted in a loss of approximately 1.5 gHb. Haemolysis was greater in re-manufactured units than reference units, although all units had < 0.8 % haemolysis at day 42. However, the removal of supernatant during the re-manufacture step reduced the amount of supernatant potassium and so re-manufactured units contained significantly lower levels of potassium than reference units. Finally, ATP levels in re-manufactured units declined during storage as expected and were comparable to reference units at day 35 and 42. Importantly, 70 % of units had ATP values above 2.3 µmol/gHb (minimum 2.1 µmol/gHb) suggesting acceptable red cell recovery in vivo (Heaton, 1992).”*

Add the following to the “Technical information” sections of 8.21 and 8.6.

Section 8.21 Red Cells for Exchange Transfusion, Leucocyte Depleted

Technical information

- If not required for exchange transfusion, the component may be remanufactured into 8.6, Red Cells in Additive Solution, Leucocyte Depleted up to 6 days after donation, with a shelf life of up to 42 days in total.

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Section 8.6 Red Cells in Additive Solution, Leucocyte Depleted

Technical information

- May be produced by remanufacture of 8.21, Red Cells for Exchange Transfusion, Leucocyte Depleted, up to 6 days after donation.

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