## Cryoprecipitate Transfusion - Guideline for practice

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Cryoprecipitate Transfusion- Guideline for practice

Background

Fresh Frozen Plasma (FFP) for adult use is produced from voluntary blood donations collected in the UK. FFP for use in paediatrics is collected from non UK donors, to reduce the risk of transmission of variant CJD. The plasma is then treated with Methylene Blue, to reduce the risk of transmission of pathogens.

Cryoprecipitate is the cryoglobulin fraction of plasma obtained by thawing a single donation of FFP at 4 +/- 2 °C. It is rich in Factor VIII, von Willebrand factor and Fibrinogen. The indications for its use are limited but are primarily to provide fibrinogen to prevent bleeding due to coagulopathy. The risks of transmitting infection are similar to those of other standard UK blood components. Of particular concern are allergic reactions and anaphylaxis, transfusion –related lung injury and haemolysis from transfused antibodies to blood group antigens especially A and B.

Purpose of the document

The purpose of this document is to give guidance to clinical staff who may be involved in the requesting, prescription or administration of Cryoprecipitate in Peterborough and Stamford Hospitals NHS Foundation Trust.

Content

1. Indications for use of cryoprecipitate

1.1 Acute Disseminated Intravascular Coagulation (DIC) in the presence of haemorrhage and a fibrinogen level of <1g/l.

1.2 Advanced liver disease, to correct bleeding or as surgical prophylaxis before surgery, when the fibrinogen level is < 1g/dl.

1.3 Bleeding associated with thrombolytic therapy causing hypofibrinogenaemia.

1.4 Hypofibrinogenaemia (fibrinogen <1g/l) secondary to massive transfusion.

1.5 Renal failure or liver failure associated with abnormal bleeding where DDAVP is contraindicated or ineffective

2 Dose and Group

2.1 Cryoprecipitate is issued in pre pooled packs -1 pack is equivalent to 5 single donor units (approx 50-100mls).

2.2 Adult dosage is approximately 5-10 single donor units (or 1-2 pools). Cryoprecipitate should be prescribed as individual units/packs/or bags NOT as a quantity in millilitres. The recommended paediatric dose is 5-10ml/kg (usual max 10 units- approx 300 mls)
2.3 Patients born after 1\textsuperscript{st} January 1996, and all patients under 16 years old should only receive pathogen reduced cryoprecipitate, this is Methylene blue treated FFP from non-UK donors.

2.4 Group compatible Cryoprecipitate should be used where possible. Cryoprecipitate which is not of the same ABO group should only be used if it contains no high-titre anti A or anti B.

2.5 RhD (D) positive Cryoprecipitate may be given to RhD (D) negative females of child bearing potential. Anti D prophylaxis is not required.

2.6 The prescription should ideally be made on the dedicated blood product prescription chart. In paediatrics, the prescription must indicate the number of mls/kg weight, in adults, the number of units to be administered.

2. Administration

2.1 Cryoprecipitate should be administered through a 170-200\textmu m filter (a standard blood giving set). A filter is required for the giving of cryoprecipitate via a syringe for neonatal transfusion.

2.2 The cryoprecipitate pack should be visually inspected for pack integrity and discolouration prior to transfusion. Check that packs do not appear grainy or more cloudy than usual. If in doubt, DO NOT TRANSFUSE and contact the transfusion laboratory for advice.

2.3 All patients receiving cryoprecipitate must wear a trust ID band. The patient’s identity must be checked by 2 members of staff prior to commencement of the transfusion. The details on the tag attached to the pack must be checked against the details on the patients ID band. In addition, the patient should be asked to confirm their name and date of birth, if they are able to do so.

2.4 Cryoprecipitate takes approximately 20- 30 minutes to thaw and for maximum efficacy should be administered as soon as possible after thawing. Start the transfusion as soon as the pack is received from the laboratory. Cryoprecipitate is stored at room temperature when thawed and must be used within 4 hours of thawing- there will be a note to this effect on the compatibility form issued with the pack. Cryoprecipitate must never be refrigerated, as this will cause re-precipitation.

2.5 In adults each pack should be given over 20-30 minutes, though more rapid infusion may be required in major bleeding. In paediatrics, the recommended rate of transfusion is 10-20ml/kg/hr.

2.6 Inform the patient of possible complications of transfusion, and the importance of reporting any adverse effects. A number of reactions may follow cryoprecipitate transfusions. They are the same as those which can occur after the transfusion of red cell concentrates including:-

- Febrile Reactions
- Urticarial Reactions
- Anaphylactic Reactions
- Reaction to a bacterially contaminated unit.
Follow the same baseline, 15 minute and post transfusion observation checks as for red cell transfusions.
If a reaction is suspected, STOP THE TRANSFUSION, and inform medical staff and the transfusion laboratory immediately. An adverse event and transfusion reaction form must be completed.

References


British Committee for Standards in Haematology 2007 Amendment to the Guidelines for the use of fresh-frozen plasma, cryoprecipitate and cryosupernatant Available;-
