

191.3 PROTOCOL FOR OVER-ANTICOAGULATION WITH WARFARIN

High INR, patient not bleeding

- If INR ≥ 5 , omit warfarin for 1 - 2 days.
- If INR ≥ 8 , give **1 to 5 mg vitamin k** (phytomenadione – Konakion MM Paediatric® - unlicensed) by mouth.
- Occasional patients with INR ≥ 8 and a very high risk of thrombosis may be more safely managed without vitamin K - **seek senior advice**.

Restart warfarin, if still required, once INR < 5 .

Consider cause of raised INR and adjust maintenance dose.

Non-major bleeding

1 to 3 mg vitamin k (phytomenadione) by IV bolus (1 to 5 mg vitamin k by mouth may be more appropriate in the community or in some inpatients).

- Consider cause of bleeding (especially if INR in therapeutic range).
- See note above regarding patients at very high thrombotic risk.

For oral cavity bleeding consider tranexamic acid 250 mg/5 ml mouthwash (unlicensed) – 5 to 10 ml 8 hourly.

Major/life-threatening haemorrhage (e.g. CNS/major GI)

- Discuss with consultant haematologist.
- **5 mg vitamin k (phytomenadione) IV** immediately (prior to INR result).
- **Prothrombin complex concentrate** (Octaplex)
 Dose: 25 units/kg rounded to nearest 500 unit vial
 i.e. 3 bottles (1500 units) for patients approximately 60 kg
 4 bottles (2000 units) for patients approximately 70 kg
 5 bottles (2500 units) for patients of 80 kg or more
 FFP is a less effective alternative.
- See [Appendix 1](#) for advice and reconstitution of Octaplex. Note the product SPC advises a maximum administration rate of 3 ml/min. However long-standing clinical practice and published evidence² shows that a rate of up to 10 ml/min is safe. In the context of serious haemorrhage *any* delay in the administration of Octaplex increases the risk of morbidity and death, and is unacceptable.

References

1. BCSH Guidelines on oral anticoagulation with warfarin – fourth edition, BJH 2011
http://www.bcsghguidelines.com/documents/warfarin_4th_ed.pdf
2. Kanaka KA, Szlam F, J Thromb Haemost 2010; 8: 2589-91

See also:

[Guideline 192 Guideline for the use of Fresh Frozen Plasma](#)

[Guideline 222 Injectables Policy and Guide \(Adults\)](#)

[Guideline 331 Perioperative Management of the Anticoagulated Patient](#)

Title of Guideline	Protocol for Over-anticoagulation with Warfarin
Guideline Number	191
Version	3
Effective Date	February 2012
Review Date	February 2014
Approvals:	
Clinical Guidelines Subgroup	9 th February 2012
Author/s	Haematology Consultants
SDU(s)/Department(s) responsible for updating the guideline	Haematology Pharmacy
Uploaded to Intranet	24 th February 2012
Buckinghamshire Healthcare NHS Trust	

Appendix 1 Reconstitution and Administration of Octaplex

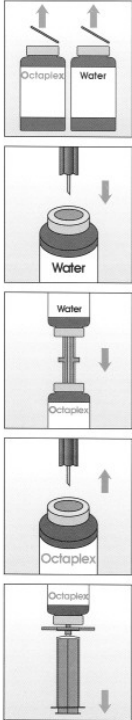
Reconstitution

octaplex® (500IU coagulation factor IX per vial, powder and solvent for injection, Human Prothrombin Complex)

Instructions for Reconstitution

1. Warm the solvent (Water for Injection) and the powder (Octaplex) in the closed vials up to room temperature. Remove the caps from the powder vial and the water vial and clean the rubber stoppers with an alcohol swab.
2. Remove the protective cover from the short end of the double-ended needle. Then perforate the centre of the water vial rubber stopper with the vertically held needle.
3. Remove the protective cover from the other, long end of the double-ended needle. Hold the water vial upside-down above the upright powder vial and quickly perforate the centre of the powder vial rubber stopper with the needle. The vacuum inside the powder vial draws in the water.
4. Remove the double-ended needle with the empty water vial from the powder vial, then slowly rotate the powder vial until the powder is completely dissolved. Octaplex dissolves quickly at room temperature to a colourless to slightly blue solution.
5. Remove the cap of the filter needle and attach a 20ml syringe. Turn the vial with the attached syringe upside-down and draw up the solution into the syringe.

Please refer to Pack Insert and Summary of Product Characteristics for further information



Administration

For the first 20 ml syringe:

- Give the first 5 ml over 5 minutes.
- Give the next 5 ml over 3 minutes.
- Give the next 10 ml over 3 minutes.
- Give subsequent syringes of 20 ml over 3 minutes each.

This means that a 2000 IU dose (4 syringes of 20 ml each = 80 ml) will take 20 minutes to administer.

NB. Immediate reactions to Octaplex are very rare. Measurement of pulse every 5 minutes is advised but remember that a raised pulse rate is more likely to be due to bleeding than a reaction to the Octaplex.