

10. OTHER MEDICATIONS WHICH MAY MINIMISE BLEEDING

Desmopressin

Desmopressin (DDAVP) stimulates a rise in endogenous Factor VIII and von Willebrand's Factor (vWF). It has been used to minimise intraoperative bleeding (PBM Pillar 2).

Key messages

- Apart from mild haemophilia or von Willebrand's disease, the routine use of desmopressin is not supported.

Clinical implications

- In adult patients undergoing surgery in which substantial blood loss is anticipated, the routine use of desmopressin is not supported, due to uncertainty about the risk of stroke and mortality (PO-PP16).¹

Background

Desmopressin is a synthetic analogue of the antidiuretic hormone arginine vasopressin that produces a transient increase in factor VIII and von Willebrand factor in plasma. This therapy has been used for the treatment of mild haemophilia and von Willebrand disease (type 1), but clinical experience has expanded its use to other potential indications. However, the evidence for the efficacy of desmopressin in reducing blood loss is weak and the increased risk of cardiovascular complications should be considered.² In adult patients undergoing surgery in which substantial blood loss (blood loss of a volume great enough to induce anaemia that would require therapy) is anticipated, the routine use of desmopressin is not supported, due to uncertainty about the risk of stroke and mortality (PO-PP16).²

rFVIIa

Recombinant Factor VIIa (rFVIIa) is a manufactured form of activated Factor VIIa, a central protein in the initiation of coagulation.

Key messages

- The use of rFVIIa is generally reserved for life threatening haemorrhage where conventional measures have failed.
- rFVIIa is indicated for the control of bleeding and surgical prophylaxis in patients:
 - ♦ with inhibitors to coagulation Factors VIII or IX;
 - ♦ with congenital FVII deficiency;
 - ♦ with Glanzmann's Thrombasthenia, who have antibodies to GPIIb-IIIa and/or HLA, and with past or present refractoriness to platelet transfusions.³

Clinical implications

The routine use of rFVIIa in trauma patients with critical bleeding requiring massive transfusion is not supported.

rFVIIa may have a role in controlling massive bleeding when conventional measures have failed.

The routine or prophylactic use of rFVIIa in perioperative patients is not supported.

Background

The routine use of rFVIIa in trauma patients with critical bleeding requiring massive transfusion is not recommended because of its lack of effect on mortality and variable effect on morbidity (CBMT-R2).⁴

A massive transfusion protocol (MTP) should include advice on the administration of rFVIIa when conventional measures – including surgical or interventional radiological haemostasis and component therapy – have failed to control critical bleeding (CBMT-PP8, PO-PP20).³ Note that rFVIIa is not licensed for this use. Its use should only be considered in exceptional circumstances where survival is considered a credible outcome (see Template MTP example).

An initial rFVIIa dose of 90 µg/kg is reasonable in massive transfusion (CBMT-PP9).³

The routine therapeutic use of rFVIIa is not recommended because concerns remain about its safety profile, particularly thrombotic adverse events (PO-R22).¹

References

1. National Blood authority, Patient Blood Management Guidelines: Module 2 Perioperative. Australia, 2012.
2. Bisbe E, Molto L. Pillar 2: Minimising bleeding and blood loss. Best Practice & Research Clinical Anaesthesiology. 2013;27:99-110.
3. [NovoSeven® RT Product Information](#): Novo Nordisk Pharmaceuticals Pty Ltd NSW, Date of most recent amendment 4 January 2012
4. National Blood Authority. [Patient Blood Management Guidelines: Module 1 Critical Bleeding Massive Transfusion](#). Australia, 2011.