

Transfusion Management of Major Haemorrhage (Adult)



Activation Telephone Number
LIH, Oban Dial:2222
Emergency O -ve Re Cell
Location:
Theatre Blood Fridge, 4 units
Estimated time to receive blood:

- O -ve: immediate
- Full X-match 50 mins (plus travelling time for BMS)

Continuously monitor patient:

- SaO₂, BP, HR, ECG, RR
- Monitor signs of shock : urine output, conscious level, capillary return, cool peripheries
- Document vital signs

Resuscitation tips:

- Give high flow O₂ by mask
- 2 x wide bore cannulae
- User rapid flow infuser
- Consider invasive monitoring
- Use blood rather than clear fluid & permit moderate hypotension (systolic BP 80 to 90 mmHg)

Prevent Hypothermia

- Monitor temperature
- Warm all fluids
- Use warm blankets/forced air warming blankets

Prevent Hypocalcaemia

Consider 10ml Calcium Chloride 10% over 10 mins

Targets for Therapy:

| | |
|------------|--------------------------|
| Hb | 70 to 90g/l |
| Platelets | >50 x 10 ⁹ /l |
| PT ratio | <1.5 |
| APTT ratio | <1.5 |
| Fibrinogen | >1g/l |
| Ca 2+ | >1 mmol/l |
| Temp | >36° C |
| pH | >7.35 on ABG |

monitor for hyperkalaemia

IDENTIFY PATIENT HAS MAJOR HAEMORRHAGE

Ongoing severe blood loss eg 150 ml/min
 Senior clinical opinion of severe blood loss
 Clinically shocked patient with ongoing blood loss

ACTIVATE MAJOR HAEMORRHAGE PROTOCOL : CALL 2222

CALL FOR ADDITIONAL SUPPORT AND ALLOCATE ROLES:

- **Lead clinician takes overall responsibility**
- **Communication: phones lab, duty haematologist, other specialities, etc**
- **Resuscitation: ABC**
- **Haemorrhage control**
- **Documentation: blood loss, products given & obs**
- **Sample taking**

RESUSCITATE
 Airway
 Breathing
 Circulation

CONTROL HAEMORRHAGE

Direct pressure
 Tourniquet
 Stabilise fractures
 Surgical / Radiological interventions

Take bloods:
 x-match, FBC, Coag, fibrinogen, U&E, Ca²⁺, NPT:ABG
 Retrieve **O-ve from theatre fridge** (if blood needed immediately)
Request blood and products eg:

4 units RBC *4 units RBC + 4 units FFP usual, more or less can be ordered depending on clinical circumstances*
4 units FFP

HAEMOSTATIC DRUGS

Tranexamic acid:
 1g bolus then 1g over 8 hours (NOT for GI haemorrhage)

Patients on **Warfarin**: Vitamin K Prothrombin Complex Concentrate (Prothromplex TOTAL)

Patients on **Riveroxaban** or **Apixaban** :
 Andexanet Alfa*

*Small stocks of these drugs are kept in A & E. Advice on their use, and on managements of patients on other anticoagulants should be sought from duty haematologist

If bleeding due to oesophageal varices, consider Terlipressin

See full text for details

GIVE BLOOD PRODUCTS

REASSESS

Repeat bloods: FBC, Coag, fibrinogen, U&E, Ca²⁺, NPT: ABGs

Order more blood and products eg:

4 units RBC *more or less can be ordered depending on clinical circumstances*
4 units FFP
Platelets if *<75 x 10⁹/l (NB not kept on site)*
2 pools CRYOPRECIPITATE if Fibrinogen <1g/l (2g/l in obstetric haemorrhage)

GIVE BLOOD PRODUCTS

When second pack administered, repeat bloods
 FBC, coag, fibrinogen, U&E, Ca²⁺, NPT: ABGs
 If blood loss continuing further blood component requirement with duty haematologist, senior clinical team and BMS

STAND DOWN

Inform lab
 Return unused components
 Complete documentation
 Consider thromboprophylaxis when patient is stable

Continue cycle of clinical and laboratory monitoring and administration of goal-directed blood component therapy until bleeding stops