

Adult Major Haemorrhage Protocol (MHP)

Activation Number

2222

Allocate Roles:

- Team Leader
- Communicator
- Runner/Transporter
- Sample Taker
- Scribe

Major Haemorrhage

- Blood loss $\geq 150\text{ml/min}$
- $\geq 50\%$ blood loss in < 3 hours
- ≥ 4 units red cell transfusion in ≤ 4 hours or ≥ 10 units in 24 hours
- Loss of one whole blood volume in < 24 hours
- Clinical shock

Activate Major Haemorrhage Pathway

Stop the bleeding

Haemorrhage Control

- Direct pressure / tourniquet if appropriate
- Stabilise fractures
- Surgical intervention – consider damage control surgery
- Interventional radiology (if available)
- Endoscopic techniques
- Obstetric techniques

Haemostatic Drugs

- Tranexamic acid 1g bolus followed by 1g over 8 hrs
- Vit K and Prothrombin complex concentrate for warfarinised patients
- Other haemostatic agents: discuss with Haematology Medical Staff

Cell salvage if available and appropriate

*Alerts Major Haemorrhage Team

- Porter Supervisor
- Haematology Medical Staff (Monday - Friday 8am - 5pm)
- Anaesthetic Registrar
- Emergency Response Team
- Medical, Surgical, Obstetric, Paediatric, Emergency Department Registrar (response as appropriate to clinical area)

Call for help: 2222 Alert Major Haemorrhage Team

- State:
- Major Haemorrhage
 - Hospital
 - Clinical area

Resuscitate: Airway Breathing Circulation

Continuous Cardiac Monitoring

Call Blood Transfusion Laboratory 14259 Ayr* 27411 Crosshouse

*Ayr lab staffed 9.00am-11.00pm Monday-Friday, 9.00am-12.00pm Saturday
Outside these hours contact Crosshouse lab

Monitor Risks

- Aim for ;
- $\text{Ca}^{2+} > 1 \text{ mmol/l}$ (Consider 10 ml Calcium chloride 10% over 10 mins)
 - Prevent Hypothermia (Temp $> 36^\circ\text{C}$)
Use fluid warming device +/- forced air warming blanket
 - $\text{pH} > 7.35$ (on ABG)
 - Monitor for hyperkalaemia

Obtain following blood samples and send urgently to lab:
Crossmatch, FBC, Coag, U&E, Ca^{2+} , +/-ABG and
Order

**Red cells* 4-6 units
+/- FFP up to 4 units**

(*Emergency O negative Red cells, group specific, fully Crossmatched depending on urgency)

Give blood components

Reassess

Aims for therapy

**Hb 80-100g/l
Platelets $> 75 \times 10^9/\text{l}$
PT $< 16\text{s}$
APTT $< 40\text{s}$
Fibrinogen $> 1\text{g/l}$**

Liaise with On Call Haematology Medical Staff re additional blood component support with Red cells, FFP, Cryoprecipitate, Platelets

Stand down

- Call 2222
- Inform lab
- Return unused components
- Complete documentation including audit proforma