Massive haemorrhage protocol (MHP)

MHP activation criteria
Actively bleeding and any of:
• 4 units RBC in < 4 hours plus haemodynamic instability
• Estimated blood loss of > 2.5 L
• Clinical or laboratory signs of coagulopathy
OR in lower resource settings as per local protocol

Lead clinician activates MHP
• Notify usual/nearest laboratory/blood bank
• Identify time frame for product delivery
• Inform lab if using ROTEM® or TEG®
• Contact haematologist/request other assistance
• Contact RSQ 1300 799 127 early (as relevant to service) and plan definitive care

Bleeding controlled?

Haematologist advice
• Repeat blood products in response to results

Yes

MHP PACK 1
• RBC 4 units
• Fibrinogen concentrate or cryoprecipitate to maintain fibrinogen > 2.5 g/L
• FFP 2 units

MHP PACK 2
• RBC 4 units
• Fibrinogen concentrate or cryoprecipitate to maintain fibrinogen > 2.5 g/L
• FFP 2 units
• Platelets 1 adult dose
• If ionised calcium < 1.1 mmol/L, give 10% calcium gluconate 10 mL IV

Follow local protocols
• POC pathology if available (e.g. i-STAT, Hemocue)
• Give as available:
  1. RBC (2 units O negative or group specific)
  2. Fibrinogen concentrate IV @ 70 mg/kg body weight
  3. Platelets 1 adult dose
  4. FFP 2 units
  5. Crystalloids (up to 1–2 L)
  6. Colloids (< 1.5 L)

No

MHP resources limited?

Yes

Follow local protocols
• POC pathology if available (e.g. i-STAT, Hemocue)
• Give as available:
  1. RBC (2 units O negative or group specific)
  2. Fibrinogen concentrate IV @ 70 mg/kg body weight
  3. Platelets 1 adult dose
  4. FFP 2 units
  5. Crystalloids (up to 1–2 L)
  6. Colloids (< 1.5 L)

No

Communication
• Notify lab if additional products required
• Specialist involvement ASAP
• Check special situations (e.g. warfarin)
• Notify lab when MHP ceased
• Keep partner/family informed of situation

Medical Officers (call senior asap) | LAB | Theatre
--- | --- | ---


APPT: activated partial thromboplastin time, ASAP: as soon as possible, FBC: full blood count, FFP: fresh frozen plasma, INR: international normalised ratio, IV: intravenous, MHP: massive haemorrhage protocol, POC: point of care, PPH: postpartum haemorrhage, PT: prothrombin time, RBC: red blood cells, ROTEM®/TEG®: types of blood clotting analysers, <: less than, >: greater than