

MASSIVE TRANSFUSION PROTOCOL (MTP)

TRANSFUSION MEDICINE DEPARTMENT
HOSPITAL TENGKU AMPUAN AFZAN, KUANTAN



CRITERIA FOR ACTIVATION OF MTP

- Blood loss rate >150ml/min.
- 50% Total Blood Volume replaced over 3hrs.
- Transfused >4 pints PC within 1hr.
- Haemodynamically unstable, +/- anticipated or ongoing bleeding.
- Severe thoracic, abdominal, pelvic, or multiple long bone trauma.
- Major obstetric, gastrointestinal or surgical bleeding.



ACTIVATE MTP

1st CYCLE



2 x 4mls EDTA tubes + 4 GXM forms
(2forms for PC & 2forms for components)

Non-obstetric case : -

- Safe O (packed cells) 2 - 4 pints maximum (if required), OR 4 pints emergency crossmatched blood (immediate spin)
- 4 units FFP

Obstetric case : -

- Safe O (packed cells) 2 - 4 pints maximum (if required), OR 4 pints emergency crossmatched blood (immediate spin)
- 4 units FFP
- 4 units platelets
- 6 units cryoprecipitate.

2nd CYCLE



1 x 4mls EDTA tube + 2 GXM forms
(1form for PC & 1form for components)

Once 1st cycle components are collected from the laboratory

- A further 4 pints of PC, 4 units FFP will be prepared and made available for issues.

At this stage you should consider : -

- 4 - 6 units of platelets
 - 6 - 10 units of cryoprecipitate
- } upon request



1 x 4mls EDTA tube + 2 GXM forms
(1form for PC & 1form for components)

SUBSEQUENTLY CONTINUE THE SAME(UNTIL DEACTIVATE)

The lab will continue to prepare 4 PC, 4 FFP, 6 Cryo upon request.

INFORMATION ON AVAILABILITY OF BLOOD FOR COLLECTION

Blood products	Time
Safe O blood	Immediate
Emergency crossmatch	30 minutes
Full Crossmatched blood	1 hour
Fresh Frozen Plasma	30 minutes to thaw
Cryoprecipitate	30 minutes to thaw
Platelets	Immediate if blood group is known
Red cells convert from GSH	- Routine 1 hour - Emergency 30 minutes

AIM

Haemoglobin	10 g/dL
Haematocrit	0.30
Platelet count	$\geq 75 \times 10^9/L$
Prothrombin Time (PT)	<1.5 x control
Partial Thromboplastin Time (APTT)	<1.5 x control
Fibrinogen	>1.5gm/L

ROLE OF CLINICIAN

Give the following information -

- Once MTP activated - **MO incharge inform MO Blood Bank on-call.**
 - Patient's identification (name & IC) and location.
 - Cause of bleeding, patient's condition, blood group (if known).
 - How urgently (in minute) blood is needed at the bedside.
- Write "MTP" on request form.
- **Nominate Blood Coordinator** : Name and contact details of person activating protocol for ongoing communication is needed at the bedside (MO/Specialist).
- Any changes in primary team, **must** passover to the next blood coordinator.
- To deactivate when indicated (to inform Blood Bank MO/Lab).

ROLE OF TRANSFUSION DEPARTMENT

MO blood bank on-call

- Notify Specialist on-call.
- MO on-call will alert Transfusion Medicine Lab / Blood Bank.
- To update patient's status from time-to-time.

Blood bank staff

- Prepare & Issue blood / blood component as requested.
- Consider blood resources.
- Inform MO blood bank on-call if having any problem.