



Cast 34 – Trauma

You are the ED Consultant taking a pre-arrival trauma notification in a rural ED with no surgical services for a 70-year-old female pedestrian hit by a car. The paramedics have performed a bilateral needle thoracostomy for a suspected pneumothorax and the patient has a suspected femur fracture.

(a). List six (6) key actions and/or equipment/drug preparations you will make before the arrival of this trauma patient (6 marks)

- Code Blue / Trauma / Disaster Code and Allocate Roles According to skill set
- Notify Radiology for priority access to Imaging and Radiographer.
- Notify / Stand-by Pathology – Urgent Request for O-Neg/Pos Blood
- Prepare for a definitive Airway and adjuncts (size 7.5 ETT, LMA, Guedels, Bougie)
- Prepare for definitive bilateral Chest tubes with operator ready
- Prepare Pelvic Binder, Long Leg Splint, Trauma Tourniquet
- Prepare for IV access (RIC line, large bore access, IO)
- Prepare Medications – TXA 1gm, Analgesia (Fentanyl)
- Assemble US machine with capable operator to assess for reversible causes.

(b). The patient arrives intubated, with single peripheral 20G cannula, cervical collar, an open femoral fracture and the following vital signs

O2 Sats = 90% on FiO2 = 100, BP = 70/40, HR = 140.

Please list the 6 resuscitation points or actions in order and give 1 justification for each point. (6 marks)

N o	Procedure	Justification
1	Bilateral finger + tube thoracostomy	Definitive chest tube needed to improve ventilation as patient is intubated
2	2 Large bore access	For administration of blood/fluid/medication
3	Tranexamic Acid 1gm	Anti-fibrinolytic agent reduces haemorrhage
4	Transfuse Blood Products - PRBC + Platelet + FFP in 1:1:1	Haemostatic resuscitation to prevent coagulopathy
5	Apply Pelvic Binder	To prevent further blood loss from a potential pelvic fracture
6	Apply Trauma Tourniquet	To prevent further blood loss from open wound and associated vascular injury
7	Apply Splint for fractured femur	To stabilise and reduce fracture preventing further blood loss



(c). Massive transfusion protocol (MTP) is commenced. List six (6) Haematological and/or Biochemical Resuscitative end points in an MTP. (6 marks)

Parameters	Values to aim for
Temperature	>35 °C
Acid-base status	pH >7.2, base excess <-6, lactate <4 mmol/L
Ionised calcium (Ca)	>1.1 mmol/L
Haemoglobin (Hb)	This should not be used alone as transfusion trigger; and, should be interpreted in context with haemodynamic status, organ & tissue perfusion.
Platelet (Plt)	$\geq 50 \times 10^9 /L$ ($>100 \times 10^9$ if head injury/ intracranial haemorrhage)
PT/APTT	$\leq 1.5x$ of normal
Fibrinogen	≥ 1.0 g/L

BONUS POTENTIAL QUESTION

(d). Fill the table with the modes of transport which can be chosen with 2 pros, and 2 cons for each. (9 marks)

Mode	Pros	Cons
Road Ambulance	Quicker to arrange	Slower at longer distances
	No complications regarding altitude	Need road access
Fixed Wing Aircraft	Can be used for long distances >200km retrieval	Needs landing strip
	Can be pressurised	Slower to arrange
Helicopter	Flexible landing (closer to hospital, reaches inaccessible areas)	Weather dependent, limited to 200km
	Faster to mobilise than fixed wing	Not pressurised