Trauma, multiple casualties

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Polytrauma
Multisystem trauma

Terminology:

- Injury = the result of harmful event that arieses from the release of specific forms of energy.
- “polytrauma” = Multisystem trauma = injury of two or more systems, one or the combination imperil vital signs.

Trauma deaths

First peak

- Within minutes of injury
- Due to major neurological or vascular injury
- Medical treatment can rarely improve outcome

Second peak

- Occurs during the 'golden hour'
- Due to intracranial haematoma, major thoracic or abdominal injury
- Primary focus of intervention for the Advanced Trauma Life Support (ATLS) methodology

Third peak

- Occurs after days or weeks
- Due to sepsis and multiple organ failure

Assessment of the injured patient

- Primary survey and resuscitation
  - A = Airway and cervical spine
  - B = Breathing
  - C = Circulation and haemorrhage control
  - D = Dysfunction of the central nervous system
  - E = Exposure
- Secondary survey
- Definitive treatment

- Call for help ER 155

Airway and cervical spine

- Always assume that patient has cervical spine injury
- If patient can talk then he is able to maintain own airway
- If airway compromised initially attempt a chin lift and clear airway of foreign bodies
- Intubate or cricothyroidotomy
- Give 100% Oxygen

Breathing

- Check position of trachea, respiratory rate and air entry
- If clinical evidence of tension pneumothorax will need immediate relief
- Place venous cannula through second intercostal space in the mid-clavicular line
- If open chest wound seal with occlusive dressing

Circulation and haemorrhage control

- Assess pulse, capillary return time and state of neck veins
- Identify exsanguinating haemorrhage and apply direct pressure
- Place two large calibre intravenous cannulas **Give intravenous fluids (c**rystalloid or colloid)
- Attach patient to ECG monitor

Dysfunction

Assess level of consciousness using AVPU method

A = alert

V = responding to voice

P = responding to pain

U = unresponsive

Assess pupil size, equality and responsiveness

Exposure

- Avoid hypothermia

Fully undress patients

Avoid hypothermia

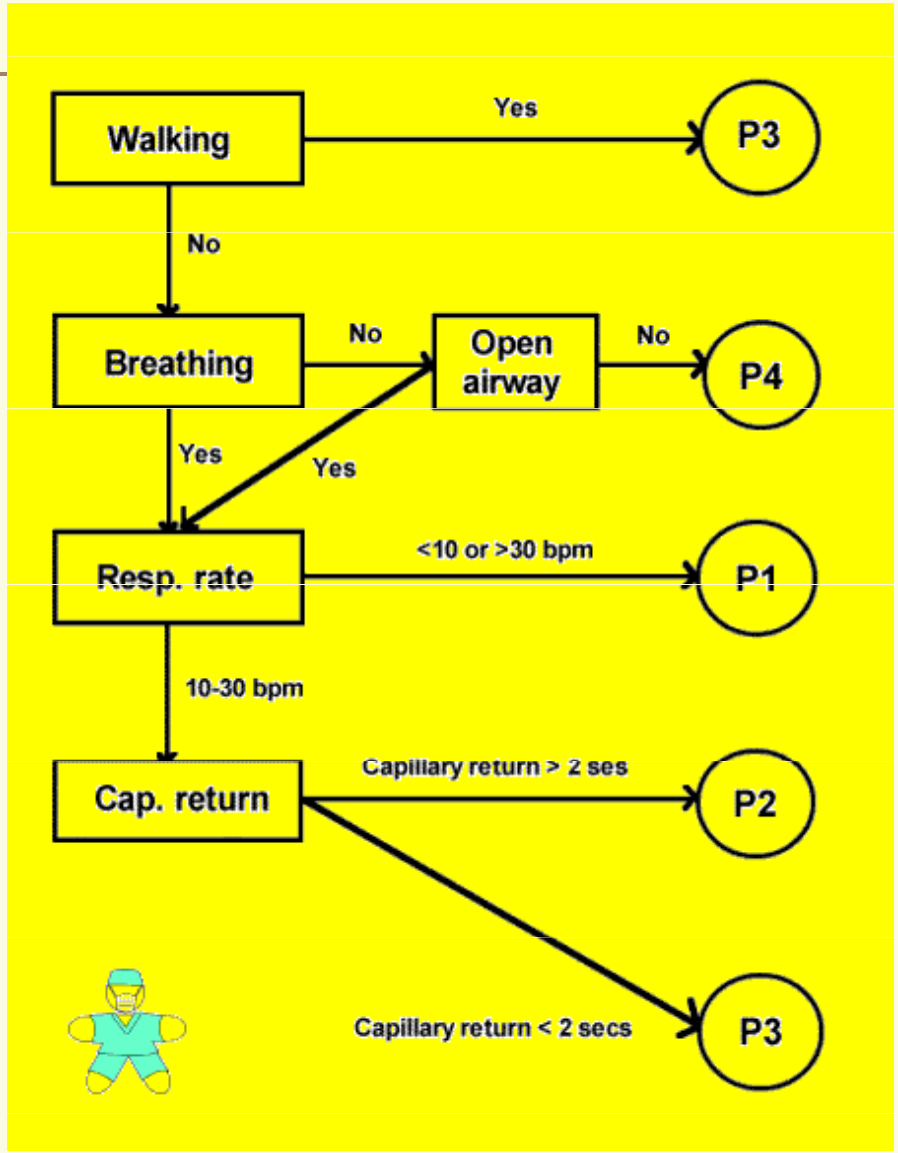
Multiple casualties

- **several causalties at the same time**.

1. **Alarm ER services**
2. **Assess the scene** - without puting your safety at risk.
3. **Triage**
   'do the most for the most'

Triage

- Ability to walk
- Airway
- Respiratory rate
- Pulse rate or capillary return



Triage categories				
Cat	**Definition**	**Colour**	**Treatment**	**Example**
P1	Life-threatening	Red	Immediate	Tension pneumothorax
P2	Urgent	Yellow	Urgent	Fractured femur
P3	Minor	Green	Delayed	Sprained ankle
P4	Dead	White		

Road accidents

- fall from a bicycle …. major incident with many causalties.
- serious risks to safety - traffic

1. Make the area safe

- protect yourself, the causalty and other road users.
  - Park your car safely, turn lights on, set hazard lights flashing.
  - Do not across a bussy motorway to reach other side
  - Set others to warn other comming drivers
  - Set up warning triangles or lights 200 metres in each direction.
- Swich off ignition of any damaged vehicle.
- Is anyone smoking?

2. Check **all** caulsalties

- quick assess
- no moving
- apply life-saving treatment

3. Treat

- in the position found
- first life-threatening or potentialy serious injuries

4. search all area

- Shocked victims

How to move unconscious casualty

- **do not move** the casualty unless it is absolutely necessary
- assume **neck injury** until proved otherwise
  - support head and neck with your hands, so he can breathe freely
    Apply a collar, if possible
  - There should be only 1 axis (head, neck, thorax) no moving to sides, no flexion, no extension.
  - with other 3-4 people
    1 support head (he is directing others), other one shoulders and chest, other one hips and abdomen, last one - legs.