

Sepsis

- Life-threatening organ dysfunction caused by a dysregulated host response to infection

Questions to be asked when dealing with sepsis:

1. Is the patient acutely unwell or is there any clinical concern?
2. Does the total NEWS (National Early Warning Score) score **5 or more**?
3. Is there a single NEWS score indicator of 3?

If any of the above questions were yes → then ask yourself, *could this be an infection?* If yes → look for **RED FLAGS**

- Systolic blood pressure <90 (or >40 mmHg fall from baseline)
- Heart rate >130 bpm
- O₂ saturation <91% (<88% in COPD)
- RR >25 bpm
- Responds only to voice or pain/unresponsive
- Lactate >2.0 mmol
- Urine output <0.5 ml/kg/h for ≥2h

Rigors: episodes of shaking or exaggerated shivering, caused mainly by:

1. Bacteremia (seen in biliary sepsis or pyelonephritis)
2. Malaria

If 1 or more RED FLAGS present → complete the **SEPSIS SIX** within 60 minutes

SEPSIS SIX → Take 3, Give 3

Take 3

- Blood cultures
- FBC, U&E, clotting, lactate
- Start monitoring urine output

Give 3

- High flow O₂
- IV fluids
- IV antibiotics

Septic shock

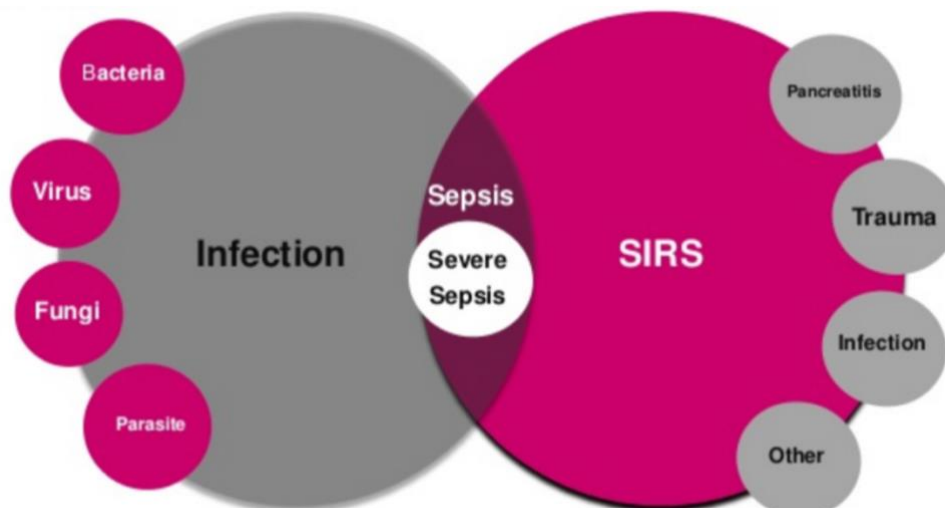
1. Low BP **unresponsive to IV fluids**
2. Requires **Vasopressors** to maintain a mean arterial pressure ≥65 mmHg
3. Serum lactate ≥2

Severe sepsis

- Sepsis + organ hypoperfusion (hypoxemia, oliguria, lactic acidosis or altered cerebral function)

How's organ dysfunction identified?

- At the bedside, organ dysfunction is identified by an increase in the SOFA score of 2 or more
 1. RR ≥22
 2. Altered mentation
 3. Systolic blood pressure ≤100 mmHg



Sepsis vs SIRS

Sepsis	SIRS - Systemic inflammatory response syndrome
<p>Sepsis is defined as a life-threatening organ dysfunction caused by a dysregulated host response to infection</p> <p>Septic shock is defined as:</p> <ul style="list-style-type: none"> Persistently low blood pressure which has failed to respond to the administration of intravenous fluids <p>Evaluation for 'Red Flag' sepsis</p> <ul style="list-style-type: none"> Systolic blood pressure < 90 mmHg (or >40 mm Hg fall from baseline) Heart rate >130 beats/minute Oxygen saturations < 91% (< 88% in COPD) Respiratory rate >25 breaths/minute Responds only to voice or pain/unresponsive Lactate >2.0 mmol Urine output < 0.5 ml/kg/hr for ≥ 2 hours <p>Sepsis Six → Take 3, Give 3</p> <p>Take 3</p> <ul style="list-style-type: none"> Blood cultures FBC, urea and electrolytes, clotting, lactate Start monitoring urine output <p>Give 3</p> <ul style="list-style-type: none"> High flow oxygen Intravenous fluid challenge Intravenous antibiotics 	<p>SIRS may occur as a result of an infection (bacterial, viral or fungal) or in response to a non-infective inflammatory cause, for example burns or pancreatitis</p> <p>Requires 2 of the following:</p> <ul style="list-style-type: none"> Body temperature less than 36°C or greater than 38.3°C Heart rate greater than 90 beats/minute Respiratory rate greater than 20 breaths/minute Blood glucose > 7.7mmol/L in the absence of known diabetes White cell count less than 4 or greater than 12

Acute upper GI bleeding

Blatchford score

- For the initial assessment, to determine who are at “low risk” and candidates for outpatient management:
 - Urea <5-6 mmol/L
 - Hemoglobin >130 g/L (men) or >120 g/L (women)
 - Systolic blood pressure ≥110 mmHg
 - Pulse <100 bpm
 - Absence of melena, syncope, cardiac failure or liver disease

Rockall score

- Assessment for admission and early endoscopy
 - Age ≥60 years (all patients >70 years should be admitted)
 - Witnessed hematemesis or hematochezia (suspected continued bleeding)
 - Hemodynamic disturbance (systolic blood pressure <100 mmHg, pulse ≥100 bpm)
 - Liver disease or known varices
 - Other significant comorbidity (cardiac disease, malignancy) should also lower the threshold for admission

Management for upper GI bleeding

- 1st → **IV fluid + Terlipressin** (ADH analogue)
- 2nd → **Endoscopy + band ligation** (in most patients who are unstable or with persistent bleeding)
- TIPS should be considered if bleeding from esophageal varices isn't controlled by band ligation
- *Always remember, upper GI bleeds are referred to the medical team not surgeons*
- *PPIs (omeprazole) should NOT be used prior to endoscopy*

Post GIT bleeding due to Mallory-Weiss \$

If patient is *stable*

- **Discharge with advice**
- Repeat FBC
- Observe his vitals

If hemodynamically *unstable*

- **Resuscitation** (maintain airway, high flow O₂, IV fluid)
- **Endoscopy** immediately after resuscitation

Indications for Fresh frozen plasma (FFP)

- Replacement of isolated factor deficiency
- Platelet count <50 x10⁹/L
- Reversal of warfarin effect
- Patient has clotting disorder (e.g. due to liver disease)
- Prolonged INR

Emergency

- Massive blood transfusion (>1 blood volume within several hours)
- Treatment of TTP

Hypovolemic shock

Early changes

- Hypovolemia → **stretch receptors** in the atria and **baroreceptors** in the aorta become activated → **vasomotor center** triggers efferent output → increase in **catecholamine** → arteriolar constriction,

	Stage 1	Stage 2	Stage 3	Stage 4
Blood loss	10-15%	15-30%	30-40%	Over 40%
Blood pressure	Normal	Postural hypotension	Hypotension	Marked hypotension
Heart rate	Normal	Slight tachycardia (> 100 bpm)	Tachycardia (> 120 bpm)	Extreme tachycardia (>140 bpm)
Respiratory rate	Normal	Increased (> 20)	Tachypnoea (> 30)	Extreme tachypnoea
Mental status	Normal	Slight anxiety, restless	Altered, confused	Decreased consciousness, lethargy, or coma
Urine output	Normal	20-30 mL/hour	Less than 20 mL/hour	No urine output

venoconstriction, tachycardia

Late changes

- Reduced GFR → secretion of **Aldosterone** and **ADH** → salt and water reabsorption → thirst center becomes triggered

Look for the **heart rate** and memorize the blood loss %

Stage 4: over 40% blood loss, 140bpm, marked hypotension

Stage 3: over 30% blood loss, >120bpm, hypotension

Stage 2: 15-30% blood loss, >100bpm, postural hypotension

Stage 1: normal

Stage 1-2 → IV fluids

Stage 3-4 → Blood transfusion, you might need to give IV fluid initially until the bloods arrive to prevent shock

Anaphylaxis features

- The speed of onset and severity vary with the nature and amount of the stimulus, but the onset is usually in minutes/hours

Respiratory

- Swelling of lips, tongue, pharynx, and epiglottis → may lead to complete upper airway occlusion
- Lower airway involvement is similar to acute severe asthma e.g. dyspnea, wheeze, chest tightness, hypoxia, and hypercapnia

Skin

- Pruritus, erythema, urticaria, and angio-edema (swelling of the deeper layers of the skin)

Cardiovascular

- Peripheral vasodilation and increased vascular permeability → plasma leakage from the circulation → hypotension, and shock

Management

1. ABC
2. High-flow O₂
3. Lay patient flat
4. **Adrenaline (epinephrine) IM**, in the anterolateral aspect of the middle third of the thigh

Emergency

- <6 years → .15ml 1 in 1,000
- 6-12 years → .3ml 1 in 1,000
- >12 years → .5ml 1 in 1,000

5. Hydrocortisone and chlorpheniramine (antihistamine)

Signs and symptoms of smoke inhalation injury

- Persistent cough
- Stridor
- Wheezing
- Black sputum (excessive exposure to soot)
- Use of accessory muscles of respiration
- Blistering or edema of the oropharynx
- Hypoxia or hypercapnia

Management

- Summon the anesthetic for intubation
- If airway is obstructed → Cricothyroidotomy

Choking and foreign body airway obstruction (FBAO) in infants

- In a seated position, support the infant in a head-downwards, prone position to let gravity aid removal of the foreign body
- Perform five sharp blows with the heel of the hand to the middle of the back (between the shoulder blades)
- After five unsuccessful back blows, use chest thrusts: turn the infant into a supine position and deliver five chest thrusts. These are similar to chest compressions for CPR, but sharper in nature and delivered at a slower rate
- If respiratory distress → anesthetic removes the foreign body with Magill's forceps under direct laryngoscopy

<1y/o → *Back blows then chest thrusts*

>1y/o → *Heimlich maneuver*

Carbon dioxide poisoning

- Tasteless and odorless gas, may occur from car exhausts, fires, faulty gas heaters or painting products

Early features

- Headache malaise
- Nausea and vomiting

Severe toxicity

- "Pink" skin and mucosa
- Hyperpyrexia
- Arrhythmia
- Coma with hyperventilation

Investigation

- **Carboxyhemoglobin level (COHb)**

Management

- **Clear** the airway
- Maintain **ventilation with high concentration of O₂**
- For a conscious patient → use a **tight-fitting mask with an O₂ reservoir**, but if unconscious → **intubate and provide IPPV on 100% O₂**

Indications for hyperbaric oxygen therapy (HBOT) -- **NOPE**

- COHb level >20%
- Loss of consciousness
- Neurological signs other than headache
- Myocardial ischemia/arrhythmia diagnosed by ECG
- The patient is pregnant

Tricyclic antidepressant (TCA) overdose (Amitriptyline)

Features [3Cs → *Convulsions, Coma, Cardiotoxicity*]

- Dilated pupil
- Dry mouth, Dry flushed skin
- Dry urethra: Urinary retention
- Drowsiness and altered mental state leading to coma
- Decreased blood pressure

ECG monitoring is essential → **Sinus tachycardia** and signs of **hyperkalemia**

Broad complex tachycardia can occur which are life threatening

ABGs → **Metabolic acidosis**

Management

- ABCDE protocol
- If within 1h of ingestion and >4 mg/kg → **activated charcoal**
- **IV fluid** as bolus
- **Sodium bicarbonate**, if prolonged QRS >120ms or hypotension unresponsive to fluids (even if not acidotic)

Tricyclic antidepressant overdose →

Unilateral space occupying lesions such as tumors, hematomas or abscesses →

Opiate (heroin) overdose or a cerebrovascular accident affecting the brainstem →

Paracetamol overdose → *Liver toxicity*

Features

- Initially → Nausea, vomiting, pallor
- After 24h → Hepatic enzymes rise
- After 48h → Jaundice, an enlarged, tender liver
- Hypoglycemia, hypotension, encephalopathy, coagulopathy, coma may also occur

Management

- <24 tablets (>150mg), serum paracetamol is normal and no hepatic risk factors) → Refer to **psychiatry**
- >24 tablets or unknown amount / within 8h of ingesting → Admit to **medical ward** and measure paracetamol level every 4h post-ingestion (calculated from the time of ingestion not the hospital visit)
- >8h or staged overdose, doubt over the time, increased plasma paracetamol (above the line on the nomogram) → **N-acetylcysteine**

<1h → **Charcoal**

1-4 → **Delay blood sample until 4h**

>4h → **Do serum PCM levels and give NAC if indicated**

>8h → **NAC immediately**

150mg

PLABverse - plabverse@yahoo.com



post-ingestion



24 tablets =

Emergency

Alcohol consumption reduces the effect, chronic alcohol drinking worsens the condition

Criteria for liver transplantation (paracetamol liver failure)

- Arterial **pH <7.3**, 24h after ingestion OR all of the following:
 - PT >100s
 - Creatinine >300
 - Grade III or IV encephalopathy

Aspirin overdose

- Toxic to the brain → **Encephalopathy**
- Toxic to the brainstem → **Hyperventilation**
- **Metabolic acidosis** later on

Common drugs cause metabolic acidosis [I₂A₂ MD]

- Metformin
- Alcohol
- Isoniazid
- Iron
- Aspirin
- Digoxin

ACEIs and NSAIDs → Metabolic alkalosis

Benzodiazepine, organophosphates (active ingredient in insecticides) → Respiratory acidosis

Benzodiazepines over dose → [CRASH]

- **C**-Cognitive problems
- **R**-Respiratory depression → *life threatening*
- **A**-Anterograde amnesia → *loss of ability to create new memory*
- **S**-Sedation
- **H**-Hypotension

Heroin overdose → flu-like symptoms (e.g. runny nose, muscle aches), agitation, sweating and sleep disturbance

CT scan after a head injury

For adults who have sustained a head injury and have any of the following → perform **CT head with 1h** of the risk factor being identified:

- **GCS <13** on initial assessment in the emergency department
- **GCS <15** at 2h after the injury on assessment in the emergency department
- Suspected **open or depressed skull fracture**
- Any sign of **basal skull fracture** (hemotympanum, panda eyes, CSF leakage from ear or nose, Battle's sign → can take several days to appear)
- **Post-traumatic seizure**
- **Focal neurological deficit**
- **>1 episode of vomiting**

For adults with any of the following who have experienced some loss of consciousness or amnesia since the injury → perform **CT head within 8h** of the head injury

- **Age 65** years or older
- Any **history of bleeding or clotting disorders**
- A patient on **warfarin**

Emergency

- **Dangerous mechanism of injury** (a pedestrian struck by a motor vehicle, an occupant ejected from a motor vehicle or a fall from height >1m or 5 stairs)
- **>30 minutes retrograde amnesia** of events immediately before the head injury

Management for stabbed injury in the RUQ with shock features and suspected liver injury

1. IV fluids
2. Call the surgeons
3. Cross match for packed RBCs
4. CT abdomen
5. Laparotomy

Indications for FAST

- BAT (blunt abdominal trauma)
- Stable penetrating injuries
- Assessment of intraperitoneal free fluid (2ry to perforation/hemorrhage due to trauma)

Renal trauma

Features

- Severe loin or back pain
- Hypotension
- Macroscopic hematuria → due to tearing of blood vessels at the renal pedicle or rupture of the ureter at the pelvi-ureteric junction

Investigations

- Most initial diagnostic tool → Urgent abdominal CT
- If CT is not available → IVU

Patients should be hemodynamically stable before performing CT

Parkland formula

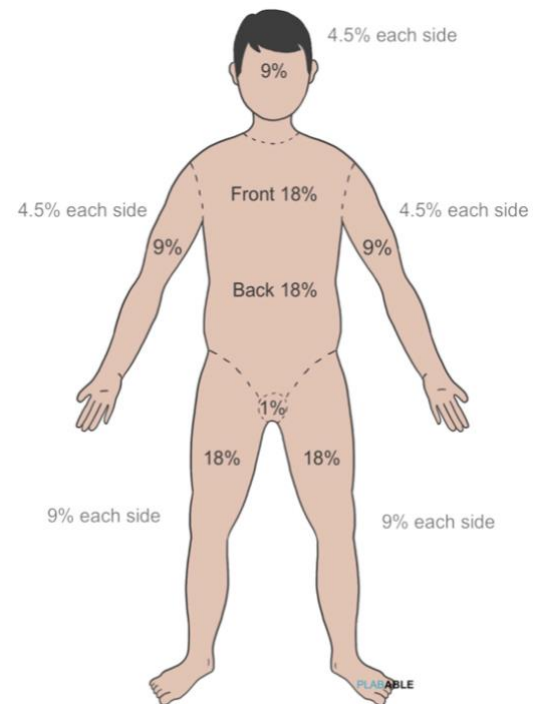
- Used to count the fluids required after burns, this is calculated from the time of burn
- *Fluid requirements = Body area burned (%) x Wt. (kg) x 4mL* (use Hartmann's)
- Give ½ of total requirement in 1st 8h, then give 2nd half over the next 16h

Types of burns or scalds (due to hot water/steam)

Superficial (epidermal) burns

- Red and painful but don't blister
- Managed with → *wound dressing, bandage and discharge*

Partial thickness burn



Wallace Rule of 9's



Superficial burn

Emergency

- Ranges from blistering to deep dermal burn
- The appearance is shiny and sensation is intact
- Capillary refill blanches

Full thickness burn

- Has a leathery or waxy appearance
- May be white, brown or black in color
- There are no blisters
- Sensation is lost so they don't feel any pain
- There's no capillary refill

Management

1. **Analgesia**
2. **IV fluid** if burn >15% in adults, >10% in children (*disregard superficial burn*)
3. Referring to a **specialized burn service**
 - >3% of total body surface partial thickness burn
 - Burns involving the face, hands, feet, genitalia, perineum or major joints
 - All deep dermal and full thickness burns
 - All burns associated with electrical shock or chemical burns
 - All burns associated with no-accidental injury
 - All burns with inhalation injury

Blisters should be left intact to reduce the risk of infection however large blisters (>1cm) can be de-roofed or aspirated under aseptic techniques

A significant percentage of burns are due to child abuse; if the story doesn't match or there's a delay in presenting → contact child protection and refer to the specialized burn service

You may check tetanus status and give tetanus toxoid if required



Partial thickness burns

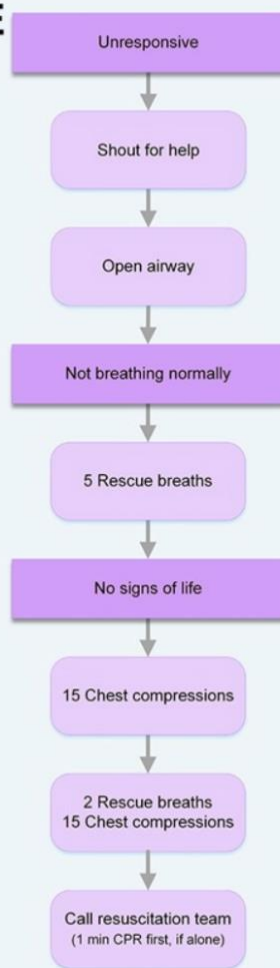


Full thickness burns

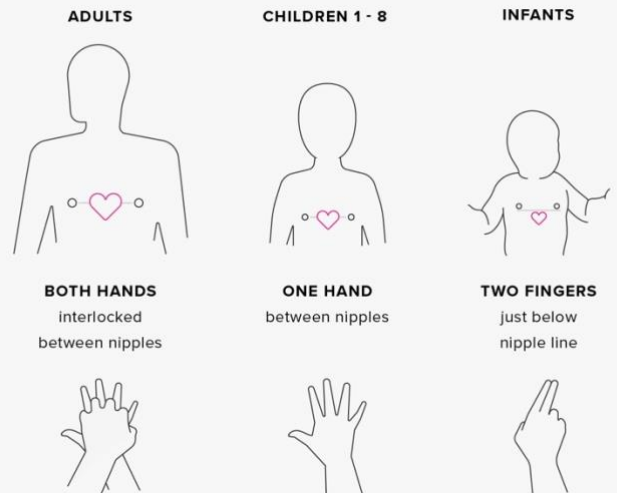
Emergency

CPR

PLABABLE



hand placement & position



chest compressions



30 compressions at
100 - 120 compressions **per minute**
allow chest to recoil between compressions
Immediately follow with **rescue breaths**

<1 y/o, blow air through the nose and mouth
>1 y/o, nose pinched

For cardiac arrest → CAB (Compressions, Airway, Breathing)
For any non-cardiac arrest → ABC

Flail chest

- A flail chest occurs as a result of **a trauma to the chest**, leading to **at least 3 ribs** becoming fractured or broken, close together, with pieces of bone detaching from the chest wall
- These segments of bone start to move independently of the chest wall and in the opposite direction because of lung pressure. The result is a **“paradoxical respiration”**

Causes

- Fall (for example, off a bicycle or a horse)
- Blunt trauma to the chest
- Car accident

Diagnosis

- **Paradoxical respiration + shortness of breath + chest pain** in a patient who has just had **blunt chest trauma** raises the suspicion of a flail chest
- Diagnosis is usually clinical with the help of **chest X-ray** → *rib fractures*

Management

1. High flow oxygen
2. Analgesia → paracetamol / NSAIDs / Opiates / **intercostal block** / thoracic epidural (up to T4) + splinting of injury
3. If worsening fatigue and RR → Intubation / mechanical ventilation

Diaphragmatic rupture (diaphragmatic injury or tear)

- It is usually secondary to **blunt trauma** due to a car accident where the seat belt compression causes **a burst injury** directed to the diaphragm
- The pressure within the abdomen raises so quickly with a sudden blow to the abdomen causing a burst in the diaphragm. It is commonly on the left side

Features

- Chest and abdominal **pain**
- **Respiratory distress**
- **Diminished breath sounds** on the side of the rupture
- **Bowel sounds** may be heard in the chest

Investigation

- **Chest X-ray** to diagnose diaphragmatic rupture is actually quite unreliable and has low sensitivity and low specificity. However, there are specific signs detectable on X-ray which should raise suspicion:
 - **Raised left hemi diaphragm**
 - **Air fluid levels** in the chest may also be seen
 - **A nasogastric tube is seen curled** into the chest → **Pathognomonic** but rare
- **Thoracoabdominal CT** scan is usually diagnostic



Hemothorax

- Blood accumulates in the pleural cavity

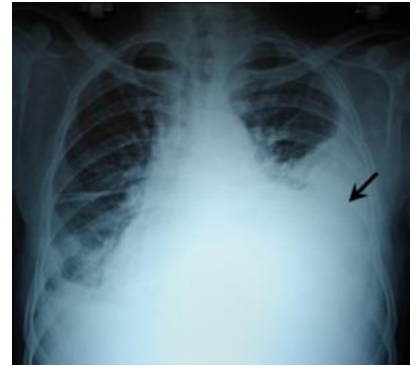
Features

Similar to that seen in traumatic pneumothorax, except the following:

- **Dullness** to percussion over the affected lung
- Signs and symptoms of **hypovolemia** if massive hemothorax

Investigations

- **Chest X-ray** → increased shadowing on a supine X-ray, with no visible fluid level



Treatment

- **Oxygen**
- Insert **2 large venous cannula** and send blood for cross matching
- **Evacuation** of blood may be necessary to prevent development of empyema; thus, **chest tube** is needed and is often placed low. Usually the lung will expand and the bleeding will stop after a chest tube is inserted
- Surgery to stop the bleeding is seldom required. The lung is the usual the source of bleeding

Homogenous opacity = white = fluid or gas = Hemothorax or pleural effusion

In blunt trauma → could be both hemopneumothorax

Hemothorax	Pneumothorax
<ul style="list-style-type: none"> • Usually sharp trauma (stabbing) • Dullness to percussion • JVP not raised • CXR → Homogenous opacity 	<ul style="list-style-type: none"> • Usually blunt trauma • Hyperresonance over the affected lung • Raised JVP • CXR → Hyperlucency

Toxic shock syndrome

- Caused by **Staphylococcus aureus** typically manifests in otherwise healthy individuals with high fever, accompanied by **low blood pressure**, **malaise** and **confusion**, which can rapidly progress to stupor, coma, and **multiple organ failure**
- The **characteristic rash** → often seen early in the course of illness, resembles a sunburn, and can involve any region of the body, including the lips, mouth, eyes, palms and soles
- In patients who survive the initial phase of the infection, the **rash desquamates**, or peels off
- **High WBC** and **low platelets** (platelet count < 100,000 / mm³)

Features

- **Fever** > 38.9 °C
- **Hypotension**: Systolic blood pressure < 90 mmHg
- **Diffuse macular erythroderma**
- **Desquamation** (especially of the palms and soles) 1–2 weeks after onset

Involvement of three or more organ systems

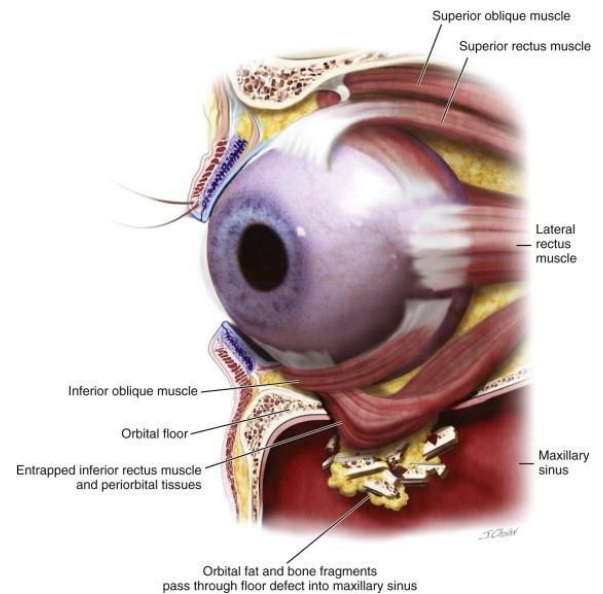
- Gastrointestinal (vomiting, diarrhea)
- Muscular: severe myalgia or creatine phosphokinase level elevation
- Mucous membrane hyperemia
- Kidney failure
- Liver inflammation

Orbital blowout fracture

- Most common bone affected in an → **Maxilla (orbital floor)**
- Followed by → **Ethmoid (medial wall)**

Signs of maxilla (orbital floor) fracture

- Periorbital ecchymosis
- Enophthalmos
- Diplopia, as inferior rectus is trapped preventing the eye from going up → **Upward gaze** whenever the patient try to look up

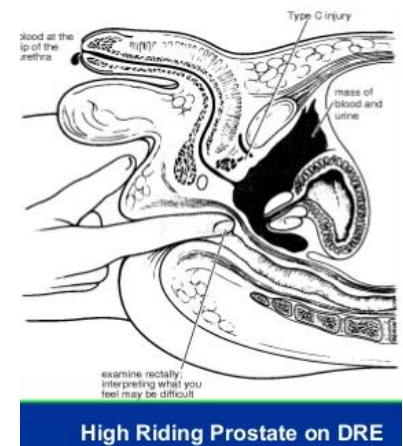


Hereditary angioedema (C1 esterase inhibitor deficiency)

- Rare genetic causing episodes of angioedema which includes life-threatening laryngeal edema
- **Positive family history**
- Onset from childhood of episodes of **angioedema** affecting the larynx
- Abdominal pain and vomiting
- Confirmed by → **Low levels of C1-esterase inhibitor** and **complement studies** during the acute episode
- Treated by → **C1-INH (C1-esterase inhibitor) concentrate**

Urethral injuries

- Often associated with **pelvic fractures + perineal bruising + blood at the external urethra**
- Rectal examination → **High-riding prostate** or **inability to palpate the prostate** imply urethral injury
- **Retrograde urethrogram** might be used to assess urethral injury
- **Suprapubic catheterization** is needed to empty the bladder



Compartment syndrome [5Ps]

- Often occurs after a traumatic injury such as a car crash
- Causes severe high blood pressure in the compartment which results in insufficient blood supply to muscles and nerves
- If left untreated, it might lead to permanent muscle and nerve damage and can result in the loss of function of the limb
- Managed by → **Fasciotomy**

Features

- Pain
- Pallor
- Paresthesia (feeling of numbness)
- Pulselessness
- Paralysis

- *Acute limb ischemia is similar to Compartment \$ except it develops **gradually** in the latter*

Notes

- In mixed acidosis, HCO_3 is given when $\rightarrow \text{pH} < 7$ and $\text{HCO}_3 < 10 \text{ mmol/L}$
- Commonest cause of mixed respiratory and metabolic acidosis \rightarrow **Cardiac arrest**, patient is retaining carbon dioxide as he's not breathing and his kidneys aren't perfusing due to low cardiac output, managed by \rightarrow **Increase ventilation**
- Sharp/aching pain, aggravated by movement such as deep inspiration, coughing or sneezing + tenderness on the side of the sternum \rightarrow **Costochondritis**
- Costochondritis + swelling over the affected joints of the anterior chest wall \rightarrow **Tietze's**
- Autonomic nervous system responsible for "fight or flight" and VC of bl. Vessels \rightarrow **Sympathetic**
- Autonomic nervous system responsible for "rest and digest" and VD of bl. Vessels \rightarrow **Parasympathetic**
- A professional doing CPR for adults, compression with rescue breaths \rightarrow **30:2**
- A professional doing CPR for children, compression with rescue breaths \rightarrow **15:2**
- A layman doing CPR \rightarrow **30:2**
- Pressing depth in an infant should be \rightarrow **4cm**, Aim for rate \rightarrow **100/min**
- Mydriasis + nystagmus + tachycardia + hypotension \rightarrow **Carbamazepine toxicity**
- Nausea, vomiting, diarrhea, abdominal pain, headache, dizziness, confusion, delirium, vision disturbance (blurred or yellow vision) + cardiac abnormalities (VT, VF, heart block) \rightarrow **Digoxin toxicity**
- Bradycardia, hypotension, hypothermia, hypoglycemia (especially in children) \rightarrow **Propranolol toxicity**
- Hypotension, fever, frequent urination, muscle cramps and twitching \rightarrow **Thiazide toxicity**
- Bleeding occurs at the time of surgery or immediately after an injury or an operation \rightarrow **1st hemorrhage** \rightarrow **Replace blood**, if severe \rightarrow **return to theatre for adequate hemostasis**
- Bleeding within the first 24h following trauma/surgery, usually caused by slipping of ligatures, dislodgement of clots, patient warming up after surgery causing vasodilation, on top of normalization of blood pressure \rightarrow **Reactionary hemorrhage** \rightarrow **Replace blood** and **explore the wound**
- Caused by necrosis of an area of blood vessel, related to previous repair and is often precipitated by wound infection, it occurs 1-2 weeks post-op \rightarrow **2nd hemorrhage** \rightarrow **Admission** and **IV antibiotics**
- Main concern in fracture femur \rightarrow **Blood loss into compartment**, so initial action after ABCD \rightarrow **Thomas's splint**
- RTA, trauma to left side of the chest + abdominal distension + falling blood pressure + rising pulse + abdominal tenderness and diminished bowel sounds \rightarrow **Splenic fracture**, initially \rightarrow **X-ray abdomen (loss of left psoas shadow)**, confirmed by \rightarrow **CT abdomen**
- Initial investigation for abdominal trauma in hemodynamically stable patient \rightarrow **CT**
- Initial investigation for abdominal trauma in hemodynamically unstable patient \rightarrow **FAST**
- FAST in splenic fracture \rightarrow **Free peritoneal fluids** \rightarrow **Immediate laparotomy**
- Stable patient with upper GI bleeding after excessive alcohol ingestion \rightarrow **Mallory-Weiss tear** \rightarrow **Endoscopy**
- An alcoholic seeking help to quit but lacks social support \rightarrow **Refer to social services**
- If there's any medical concerns \rightarrow **Admit**
- Crackles at the lung could be due to \rightarrow **Pulmonary edema** or **infection**
- Most common site for tearing in traumatic aortic rupture \rightarrow **Proximal descending aorta**
- Calf swelling with a positive Homan's sign (pain with ankle dorsiflexion) \rightarrow **DVT** or **Popliteal cyst ruptures**
- **Popliteal cyst ruptures** \rightarrow usually starts behind the knee (popliteal fossa)
- To differentiate between DVT and popliteal cyst rupture \rightarrow **US**
- Asymptomatic swelling behind the knee that may cause discomfort \rightarrow **Baker's cyst**
- History of popping sound around the ankle with pain and decreased plantar flexion \rightarrow **Achilles Tendon rupture**
- DNR allows to withhold CPR not treatment