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Resuscitation & Crisis

Shock

- Hypovolaemic - fluids, blood, stop bleeding
- Distributive - fluids, adrenaline or other vasopressors
- Cardiogenic -
  - normalise cardiovascular parameters
  - Consider anti-thrombotics
  - Consider intubation if appropriate
  - Monitoring especially post op
- Obstructive - Rx underlying cause

Severe Hypoxia

- generic causes:
  - ischaemia/stagnant hypoxia = local restriction of flow of well oxygenated blood
    - eg cerebral, IHD, intrauterine
  - hypoxaemic hypoxia =
    - ie low pp of O2 in blood
    - causes widespread:
      - ↓FiO2
      - hypoventilation
      - diffusion limitation
      - shunt
      - V/Q mismatch
  - histotoxic hypoxia = O2 reaching cells, but they are unable to utilise it eg cyanide, or alcohol
  - hypeamic hypoxia=
    - O2 pp normal but total O2 content reduced due to failure of Hb O2 loading
    - eg CO posioning, metHb
- Anaesthetic Causes:
  - Gas mixture:
    - Incorrect flowmeter settings
    - Second gas effect - NO (especially on extubation)
    - O2 failure
    - Machine error
  - Failure to ventilate:
    - Vent depression or narcosis
    - Inadequate IPPV
    - Disconnection
    - Misplaced ETT - oesophageal/endobronchial
    - Airway obstruction - patient to machine
    - ↑airway resistance eg bronchospasm/laryngospasm
    - ↓FRC - Ptx, ↑intra-abdominal pressure, morbid obesity
  - Shunt:
    - Atelectasis
    - Airway secretions
    - ↓hypoxic pulmonary VC
    - Heart failure & APO
    - Gastric aspiration

    - Pre-existing pathology - VSD/ASD
  - Poor o2 delivery in body:
    - Systemic hypoperfusion - hypovolaemia/sepsis
    - Embolus
    - Regional problems - Raynauds/vascular problems
  - ↑O2 demand -
    - Sepsis
    - Malignant hyperthermia
- Rx:
  - 100% O2
  - Check FiO2
  - Expose pt & check for central cyanosis
  - Check vent bilaterally
  - Hand ventilate on simple system - 4 large breaths for recruitment
  - Secure airway
  - Endotracheal suction
  - Initially remove PEEP (consider brief disconnection of circuit) then trial more
  - Adrenaline if losing pulses