

# Anaphylaxis during Anaesthesia

## Differential Diagnosis Card

### Possible Causes & Actions

#### Cardiac Arrest

- Hypoxia
- Hypovolaemia
- Hypo/hyperkalaemia/metabolic disorders
- Hypo/hyperthermia
- Tension pneumothorax (Decompress)
- Tamponade
- Toxins
- Thrombosis: pulmonary or coronary

#### High Airway Pressure/ Airway Compromise

Dyspnoea, wheeze, stridor, difficulty inflating lungs

- Oesophageal intubation → “No Trace = Wrong Place”
- Circuit malfunction → Check using Self Inflating Bag
- Misplaced/kinked Airway device → Check with suction catheter/Consider changing device
- Tension pneumothorax → Decompress
- Exacerbation of Asthma → Treat as per Refractory Management
- Foreign Body → Consider bronchoscopy
- Acid aspiration → Consider bronchoscopy

#### Hypotension

- Hypovolaemia
- Sepsis
- Drug overdose
- Vasodilation by drugs
- Neuraxial blockade
- Embolism: Thrombotic, Air or Amniotic
- Vasovagal

#### Skin and Mucosa

Hives, flushing, erythema, urticaria, swelling head and neck or peripheries

- Direct Histamine Release
- Venous obstruction
- Head down position
- C1-esterase deficiency (Angioedema only)
- Mastocytosis
- Cold induced anaphylaxis

**Absence of tachycardia or cutaneous signs does not exclude anaphylaxis**  
**Anaphylaxis is usually rapid in onset but is occasionally delayed**

#### Mild (Grade 1)

Generalised mucocutaneous signs: Erythema, Urticaria+/- Angioedema

#### Moderate (Grade 2)

Moderate – Multi-organ manifestation may include:

- Hypotension, tachycardia
- Evidence of bronchospasm, cough, difficult ventilation
- Mucocutaneous signs

#### Life Threatening (Grade 3)

Life Threatening and requiring immediate and specific treatment:

- Severe hypotension
- Bradycardia or tachycardia, arrhythmias
- Severe bronchospasm, and/or airway oedema
- Cutaneous signs may be absent, or present only after correction of hypotension

#### Arrest (Grade 4)

Cardiopulmonary Arrest