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| 3-12 Cardiac ischaemia v.2 |
| If the patient is unconscious, signs of cardiac ischaemia primarily include:* ST elevation or depression
* T wave flattening or inversion
* Arrhythmias, particularly ventricular
* Other haemodynamic abnormalities (hypo- or hypertension, tachy- or bradycardia)
* New or evolving regional wall motion abnormalities if echocardiography is used

If the patient is conscious, symptoms may include chest pain, breathlessness, dizziness, nausea and vomiting.Have a high index of suspicion in patients with a pre-existing history or risk factors for cardiac ischaemia |

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| Box A: HAEMODYNAMIC INSTABILITY |
| * Cardiac arrest → 2-1
* Hypotension → 2-4
* Hypertension → 2-5
* Bradycardia → 2-6
* Tachycardia → 2-7
 |

 START.

❶ Call for cardiac arrest trolley and 12-lead ECG machine.

❷ Ensure adequate oxygenation and anaesthesia/analgesia.

❸ Treat haemodynamic instability (Box A).

❹ Apply CM5 continuous ECG monitoring (Box B). Obtain a 12-lead ECG as soon as possible.

❺ If ischaemia does not resolve:

* Call for help. Inform theatre team of problem. Stop or rapidly complete the surgery.
* Start glyceryl trinitrate (GTN) (Box C).
* EXTREME CAUTION with GTN if the patient is hypotensive.

❻ Consider invasive arterial blood pressure monitoring.

❼ Treat electrolyte abnormalities particularly potassium, magnesium and calcium.

❽ Treat anaemia aiming for haematocrit >30%.

* CAUTION – beware volume overload especially in heart failure.

**❾** If persistent ST elevation is present, consider need for anticoagulation, anti-platelet therapy and revascularisation in consultation with cardiology and surgical teams.

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| Box B: CM5 ECG CONFIGURATION |
| * Right arm (red) lead over upper right sternum.
* Left arm (yellow) lead 5th intercostal space under left nipple.
* Indifferent (green or black) lead on left shoulder.
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| Box C: GLYCERYL TRINITRATE (GTN) DOSE |
| * Consider sublingual administration.
* i.v.: 1 mg.ml-1 solution – start at 0.1ml.kg-1.hr-1, titrate against response.
* NOT RECOMMENDED IN CHILDREN.
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| Box D: AFTER THE EVENT |
| Admit to critical care environment and consult cardiologyMaintain head up position if practicableObtain serial 12-lead ECGs and cardiac enzymes |

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