

Bradycardia and pacing scenario

Clinical setting

You are called to the PACU to see a patient of 75 yrs old who was about to be discharged to the ward, but has gradually become increasingly bradycardic and hypotensive.

Clinical course

- Initially: reduced level of consciousness. A: clear, B: 14/min, fine basal crackles, C: P 28/min, BP 70/36, CRT > 3 sec, D: responds to pain, E: nil.
- Unresponsive to atropine and/or adrenaline
- Recognise need for pacing, sends for external pacing equipment
- Successful external pacing, P 60/min, BP 110/80
- Refer for expert help

Interventions – key points in bold

Initial approach

- **ABCDE assessment**
- **Oxygen, IV access**
- **Recognise compromising bradycardia as CHB**
- **Atropine 0.5mg IV, increments up to 3mg**
- Considers adrenaline infusion 2-10 mcg/min
- **Requests external pacing equipment**
- **Calls for expert help**
- Attempts percussion pacing while equipment arrives (firm gentle blows lateral to lower left sternal edge, if unsuccessful, move contact point around precordium)

External pacing

- **Switch on machine and connect pads**
- **Remove excess hair from where pads are to be applied with scissors or a razor**
- Ensure that skin is dry
- **Position pads in the A-P position**
 - **Anterior electrode on the left anterior chest, beside the sternum, overlying the V2/V3 ECG electrode position**
 - **Posterior electrode between the lower left scapula and spine, same horizontal level as anterior electrode**
- **Set appropriate pacing rate, usually 60-90/min**
- **Set pacing current to lowest value and turn on pacemaker**
- **Increase current while observing ECG**
- **Increase current until pacing spike followed by QRS complex, typically 50-100mA (electrical capture)**
- **Check to ensure that QRS followed by T wave**
(chest wall artefact “complexes” not followed by T wave)
- **Check for presence of pulse with each complex (mechanical capture)**
- *Consider analgesia /sedation if patient in discomfort*
- *Assess vital signs*
- *Confirm expert help underway*
- *Arrange monitored bed in appropriate HDU* **These last four points not essential**

Comments:

If external pacing, atropine, adrenaline or percussion pacing is neither attempted nor commenced then asystolic arrest supervenes

Equipment;

- Resusci Annie with pacing nipples
- Pacing defibrillator with pad and leads
- Monitor kit (defib etc)
- Cannulae
- Oxygen mask
- Drip set
- Atropine
- Adrenaline