

Hyperkalaemia

Set-up:	
Lines/access:	Single peripheral cannula, left radial arterial line
Infusions:	None
Airway:	Own
Ventilator:	Present in bedspace but switched off
Other:	ECG consistent with hyperkalaemia ABG consistent with hyperkalaemia

Clinical Setting

- I: You are the HDU registrar called to assist the HDU resident
- S: He/she is concerned about new admission, a 66-year-old man with ESRF who has just undergone a fistula revision, 1 PVC and radial arterial line in situ
- B: ESRF secondary to diabetes, recent cellulitis and fistula fail, usually on ACEi
- A: Drowsy, responds to pain
- R: Called you for assistance

Potential Clinical Course:

- Initially A gurgling, B RR 32, SpO₂ 89% on RA, coarse crackles bilaterally, C HR 100, BP 95/40, CRT 5 sec, D responds to pain, E fistula has a weak thrill
- Abnormal ECG consistent with hyperkalaemia
- Patient collapses into pulseless VT
- Progresses down ALS algorithm
- Continues until relevant reversible causes considered
- Blood gas if requested - K⁺ 7.4 (venous or arterial)
- ECG from admission to unit consistent with hyperkalaemia, consider calcium chloride
- VT reverts to SR after defibrillation
- Inadequate respiratory effort
- Declares need for intubation and ventilation

Info Sheet For Faculty:

- Initial Settings (only visible once monitor attached):
 - RR 32
 - O₂ Sats 89% on air
 - Coarse crackles bilaterally to lung fields
 - HR 100bpm – tall tented T waves on monitor
 - BP 95/54

- Progress to pulseless VT

- Successful DC cardioversion only after administration of calcium chloride

- Post DC Cardioversion:
 - No respiratory effort
 - O₂ Sats 85% on 100% via BVM
 - BP 145/88
 - HR 118bpm SR
 - Coarse crackles throughout lung fields

Faculty Roles:

Bedside Nurse:

- You are a CNS
- You have just received the patient from theatre recovery with little handover, except the preadmission letter and anaesthetic chart
- You haven't yet had time to attach the monitor – you are setting up a Hudson mask and oxygen tubing as routine
- Do not attach any monitoring unless asked to do so – instead task yourself with documentation/looking for other equipment

HDU Resident:

- You have just started your HDU term
- You know that the patient is 66 years old, has had an operation on a fistula, and is normally on dialysis – you note he is a “little drowsy” but you're sure that it's probably an effect of the anaesthetic as he has been to theatre
- You take direction very well, but offer little

HILLO: 5, 7