MANAGEMENT OF ACUTE SEVERE HYPERKALAEMIA
$K^+ > 6.5$ mmol/L ± ECG CHANGES

CONSIDER SIMULTANEOUS USE + CALL SORT

REMOVE K^+ INTAKE

Stop potassium containing fluids ± drugs
Continuous ECG monitoring

CARDIAC MEMBRANE STABILISATION: Calcium Gluconate 10%

GIVE IF ECG CHANGES OR K^+>6.5 mmol/L
0.5ml/kg (maximum 20mls) over 5-10 mins
OR
Calcium Chloride 10% 0.1ml/kg
NB: Need to dilute if peripheral administration

RE-DISTRIBUTION: Salbutamol

Nebulised - 2.5-5mg
Or IV bolus **4 micrograms/kg**
(max. 250 micrograms) over 5 mins
NB: May be less effective with adrenaline: acts on same β2

RE-DISTRIBUTION: Glucose + Insulin

0.1 units/kg Insulin in **10ml/kg** 10% glucose with 0.9% NaCl over 30mins
(give as a bolus in an ARREST)
Then infusion of **0.05-0.2unit/kg/hr** Insulin
(50 units insulin in 50ml 0.9% NaCl)
+ 5-10mls/kg/hr 10% Glucose with 0.9% NaCl

pH <7.2: 8.4% Sodium Bicarbonate

1ml/kg over 30 minutes (repeat if pH < 7.2)
Give with caution if peripheral access only

Remove K^+ from body: Furosemide

1mg/kg (max 80mg) over 5-10 mins
(may need up to 5mg/kg in chronic renal failure)

Remove K^+ from body: Calcium resonium

Oral/ rectal: 250mg/kg (max 15g) 6 hourly
Takes 4 hours for full effect

REFRACTORY HYPERKALAEMIA + ECG CHANGES OR UNTREATED CAUSE

CALL SORT
REMOVAL OF K^+: CVVHDF

ECG FEATURES

- Tall peaked T waves
- Flattened/absent P waves
- Prolonged PR
- Wide QRS complex
- Bradycardia/VT/VF

CAUSES

TRANS-CELLULAR SHIFT
Acidaemia

INCREASED INTAKE
K^+ supplements/K^+ containing fluids

CELL DAMAGE
Malignant hyperthermia/rhabdomyolysis/ tumour lysis syndrome/burns/haemolysis
Likely to need CVVHDF in rapid cell breakdown states

REDUCED RENAL EXCRETION
Renal failure/hypoaldosteronism/ Addison's/CAH/Pseudo-hypoaldosteronism (e.g. after UTI)

SPURIOUS
Haemolysed sample

CONTRAINDICATED FLUIDS/DRUGS

- K^+ supplements
- K^+ sparing diuretics
- ACE inhibitors
- NSAIDs
- Plasmalyte-148
- Suxamethonium
  (causes a 0.5mmol increase in K^+)

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