

ACUTE HYPERKALEMIA MANAGEMENT GUIDELINE

Stop K+ intake

Diagnosis - Lab Potassium

5.5 – 6.0mmol – mild

6.0 – 6.5mmol – moderate >6.5 - severe

- Full monitoring (SpO₂/ ECG/ BP) – 12 lead ECG
- URGENT IV access - obtain blood venous U&E/ FBC clotting/blood gas /glucose/iCa⁺²
- Maintain strict input output fluid balance chart

Initial Considerations

- Causes - high K⁺ intake, high production or low excretion
- Check fluids being infused & enteral intake
- Omit drugs that can cause hyperkalaemia: ACEI, Angiotensin II blockers, K sparing diuretics and β blockers
- Senior /Specialist Renal physician/NECTAR support
- Consider nil by mouth – may need GA & central venous access

Stabilise myocardium

10% Calcium Gluconate - 0.5ml/kg iv over 5 minutes, max 20ml, give undiluted peripheral IV or IO

- Give if ECG changes (tall T waves, loss of P or wide QRS) or K⁺ is significantly raised/rising or in cardiac arrest
- Onset of action within minutes. Duration of action ≈1 hour, repeat within 5-10 min as necessary

Shift K+ into cells

Nebulised Salbutamol - 2.5mg <2 year or 5mg ≥2 years, repeat hourly as necessary

- Onset of action: within 30 minutes, max effect at 60-90 minutes

Sodium Bicarbonate(1ml=1mmol) 1-2mmol/kg over 30min - dilute 1:10 in 5% dextrose, give peripheral IV or IO

- Consider if acidotic - can be given peripherally with caution at above dilution
- Onset of action: 30-60 minutes and continue to work for several hours

Shift K+ into cells

Dextrose + Insulin (run simultaneously for 20min and stop)

Peripheral access: 10% Dextrose 5 – 10ml/kg over 10-20min Central access: 20% Dextrose 2.5 – 5ml/kg over 10-20min

Make up a syringe of 50 Units Actrapid in 50ml 0.9% NaCl & commence infusion at 0.05-0.1ml/kg/hr for 10-20min

Maintain blood glucose >5mmol/L

- Begins to work in 20-30mins - Insulin drives potassium into cells and glucose prevents hypoglycaemia.
- Must measure blood sugar frequently (15 mins after commencing or increase in dose)

Remove K+ from body

Furosemide 2mg/kg iv (max dose 80mg) over 5-10min

- Ensure patient is intravascularly well filled – if not 10ml/kg fluid bolus should be considered initially

Calcium Resonium

By rectum: 250mg/kg (max 15g) 6 hourly, repeat if expelled within 30 minutes.

By mouth: 250mg/kg (max 15g) 6 hourly

- Limited role for oral route as it is unpalatable
- Takes 4 hours for full effect.

Dialysis – Will need early transfer to GNCH, especially the oligo/anuric patients.