

Hyperkalaemia

Definitions

- Mild : K^+ 5.5 – 5.9 mmol/L → start at step 5
- Moderate : K^+ 6.0 – 6.4 mmol/L → start at Step 2 (or step 1 if ecg changes present)
- Severe : $K^+ \geq 6.5$ mmol/L → start at Step 1

Investigations

- 12 lead ECG (+ continuous cardiac monitoring if $K^+ \geq 6.5$ mmol/L, or an acutely unwell patient)
 - Changes include: Peaked T-waves, Widened QRS, sine wave, flattened P-waves, prolonged PR interval, VT, VF and Asystole
- Bloods (U&E, VBG, FBC; CK if rhabdomyolysis is suspected)
- Review drug chart
 - ACE-I, ARB, Potassium-sparing diuretics, Trimethoprim/Seprin, NSAIDs, Potassium supplements

Management (adults only)

Step 1 – Protect the Heart

- iv Calcium
 - 30 ml 10% calcium gluconate or 10ml 10% calcium chloride

Step 2 - Move K into cells

- iv Insulin + Dextrose
 - 50 ml of 50% dextrose plus 10 units of Actrapid Insulin, over 15 minutes
 - Then 50 ml/hr of 10% Dextrose for 5 hours, if blood glucose ≤ 7.0 mmol/L prior to treatment
- Consider nebulised Salbutamol 10 – 20 mg

Step 3 - Remove K from the body

- Treat Acute Kidney Injury
- Sodium Zirconium Cyclosilicate (Lokelma™)
 - 10 g po TDS for up to 72 hours
- Renal replacement therapy
 - likely to be required for refractory or severe hyperkalaemia in AKI or CKD

Bleeps:	
Renal SpR	8031
ITU SpR	8413 (RSCH) 6010 (PRH)

Step 4 - Monitor response to therapy

- Close and regular watch on blood glucose and K
(recommended frequency of monitoring – glucose by near-patient testing, potassium by VBG)

Glucose	Baseline	15 mins	30 mins	1 hour	90 mins	2 hours	3 hours	4 hours	6 hours	8 hours	12 hours
	Potassium	Baseline			1 hour		2 hours		4 hours	6 hours	

Step 5 - Act to treat underlying cause and prevent recurrence

- Look for causes
- Adjust medications – hold or reduce causative agents
- Consider Sodium Zirconium Cyclosilicate (Lokelma™) or Patiromer calcium (Veltassa™) for patients with Heart failure or CKD 3b-5 *and* who cannot control K to less than 6.0 mmol/L without stopping Renin-Angiotensin-Aldosterone-System inhibitors
 - starting dose for Lokelma is 5 g once daily
 - starting dose for Veltassa is 8.4 g once daily
- Dietician input for patients with CKD

Full national guideline available [here](#)

Guidance information

Lead Author : Alex Harrison

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Comments of contributions, contact uhsussex.microguide@nhs.net