

Hyperkalaemia - Summary Clinical Guideline

Reference No:CG-T/2023/060

Patient Information Required in Order to Treat

- Serum potassium (normal range is 3.5 – 5.3 mmol/L)
- Serum bicarbonate (normal range 23 to 26 mmol/L)
- Presence of any symptoms e.g. muscle aches/ weakness
- ECG changes. If K⁺ is > 6 mmol/L ensure the patient has an ECG checked or is on a monitor
- Investigation of possible causes – a thorough medical history, including review of medications, fluids prescribed and urine output. A history of renal disease will often reveal the cause of the hyperkalaemia.

Consider possible causes of hyperkalaemia and whether these are correctable:

- Medications (see below) including digoxin overdose
- History of renal disease (acute/chronic renal failure, renal tubular acidosis)
- Dehydration
- Acidosis (including diabetic ketoacidosis)
- Mineralocorticoid deficiency
- Diet
- Urinary tract obstruction e.g. bladder distension/prostate hypertrophy
- Consider the possibility of pseudohyperkalaemia (e.g. with a haemolysed sample, or in the presence of polycythaemia, thrombocythaemia, or leukaemia), a repeat serum potassium (in a lithium-heparin) should be ordered urgently if hyperkalaemia is an unexpected or isolated finding, and there are no ECG signs of hyperkalaemia.

Institute interventions aimed at correctable causes of hyperkalaemia:

- Discontinue potassium supplements including potassium-containing iv fluids, potassium-sparing diuretics (e.g. spironolactone, amiloride, co-amilofruse), ACE inhibitors / angiotensin-II receptor antagonists, NSAIDs, trimethoprim
- Discontinue beta-blockers and digoxin (measure levels)
- Rehydrate if fluid depleted
- Correct acidosis (consider the use of sodium bicarbonate, refer to full guideline for details)
- Catheterise if urinary retention is proven or suspected
- Seek dietetic advice

Consult with renal physician before proceeding:

- in all patients with K⁺ ≥ 7
- patients with K⁺ > 6.5 with ECG changes or with underlying renal impairment

Specific Guidance for nursing staff can be found in the appendix to the main guideline.

Treatment Algorithm Emergency Management of Hyperkalaemia ($K^+ \geq 5.5$ mmol/L)

