

Hyperkalaemia in primary care

DEPARTMENT OF CLINICAL BIOCHEMISTRY



Severn Pathology

Version 10

Page 1 of 2

Qpulse reference: BS/CB/DCB/PROTOCOLS/40

Authoriser: Paul Thomas

Serum potassium normal range is 3.5-5.3 mmol/L

Severity of hyperkalaemia	Retesting interval and immediate actions			ECG changes
	Clinically well (no AKI)	Unexpected result	Clinically unwell or AKI	
MILD 5.5 - 5.9 mmol/L	Repeat within 14 days	Repeat within 3 days	Consider if hospital referral is indicated	Likely none but not excluded
	Assess for cause (drugs, diet) and address in community			
MODERATE 6.0 - 6.4 mmol/L	Repeat within 1 working day	Repeat within 24 hours	Refer to hospital	Tall tented T waves, prolonged PR interval
	Assess for cause (drugs, diet) and address in community or hospital			
SEVERE ≥ 6.5 mmol/L	Refer to hospital for immediate assessment and treatment Assess for cause and address during hospital admission			Broadening QRS complex. As K+ goes to >7 peri-arrest arrhythmia possible

Differential Diagnosis

- Pseudohyperkalaemia (e.g. haemolysis, leukocytosis, thrombocytosis, transport delay, EDTA contamination)
- Drugs (see page 2)
- Intra-renal (AKI, CKD, aldosterone deficiency, interstitial nephritis)
- Cellular redistribution (e.g. DKA, rhabdomyolysis, tumour lysis syndrome)
- Excess intake/K+ containing laxatives

Initial investigations

- ECG essential in all those with K+ >6.0mmol/L to help assess severity
- Ensure full U&E done to assess change in renal function
- CK in those with suspected rhabdo
- Full blood count to rule out haematological disorders
- Repeat K+ as per above
- Cortisol if suspect Addison's (High K, low Na)
- Paired Li-Hep & serum U&E if repeated mild hyper-K without known cause

Initial management

- Assess severity - use above table using combination of ECG findings, degree of elevation and likelihood of pseudo causes
- Assess trend – rapidly rising K+ with concurrent change in renal function will need more urgent action
- Review medications as this can exacerbate any K+ rises (see page 2)
- Take appropriate action – any severe rise in K+ **not** thought to be a pseudo cause requires urgent action and is a medical emergency
- If mild hyperkalaemia – ensure appropriate retesting, assess diet and fluid status
- If considering admission for management Mon-Fri 0800-1830 use Integrated urgent care professional line for advice/to refer (01172449283)

Hyperkalaemia in primary care

DEPARTMENT OF CLINICAL BIOCHEMISTRY

Qpulse reference: BS/CB/DCB/PROTOCOLS/40

Authoriser: Paul Thomas

Drugs to review

ACE inhibitors

ARBs

Calcium channel blockers

NSAIDs

Trimethoprim

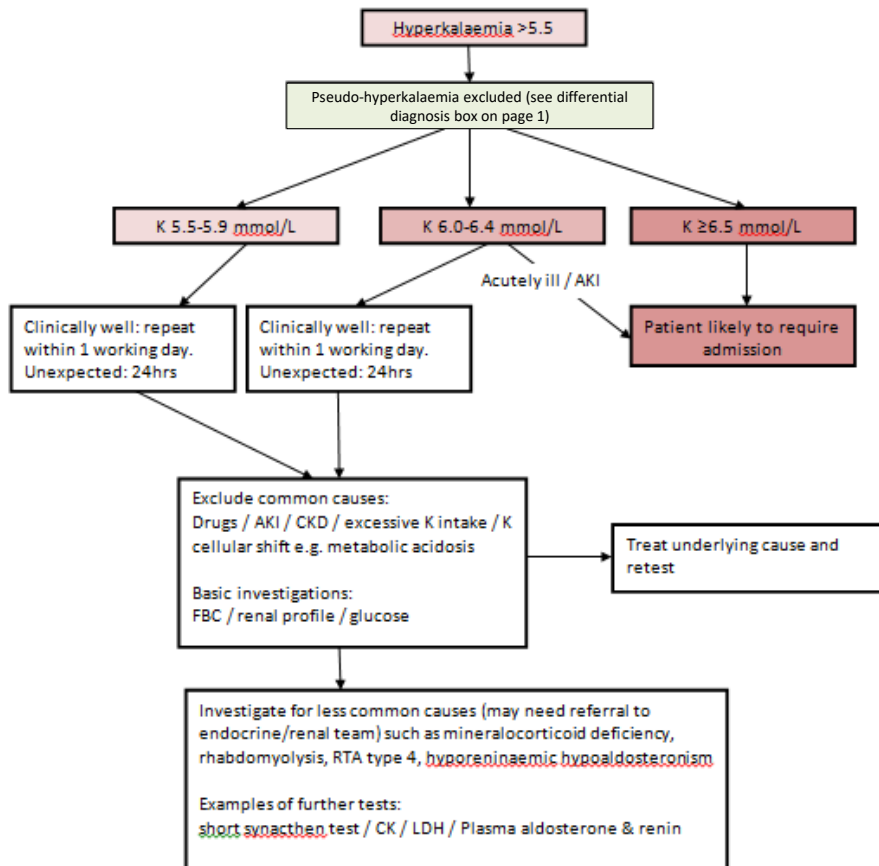
Heparin

Beta-blockers

K⁺ sparing diuretics
(spironolactone, amiloride)

Digoxin

Decision algorithm



References

- Renal Association Guidelines 2020, <https://ukkidney.org/sites/renal.org/files/RENAL%20ASSOCIATION%20HYPERKALAEMIA%20GUIDELINE%202020.pdf>
- Pathogenesis, diagnosis and management of Hyperkalaemia, Lehnhardt and Kemper. 2010
- CREST Guideline for treatment of hyperkalaemia in adults. 2005.
- Best practice in primary care; review. Smellie. J Clinical Pathology. 2007
- A primary care approach to Na & K imbalance 2011. Kyle . BPAC
- Patient Safety Alert – Resources to support safe and timely management of hyperkalaemia, NHS Improvement, NHS/PSA/RE/2018/006; 2018
- Clinical Practice Guidelines – Treatment of acute hyperkalaemia in adults. The Renal Association 2020