Hypokalaemia (General Wards) - Summary Clinical Guideline

Reference No: CG-T/2023/169

Introduction

This guideline applies to the management of hypokalaemia in adult patients on general wards. It does not apply to:

- renal or critical care area patients: see appropriate protocols
- as a reversible cause of cardiac arrest: manage as per ALS course materials
- diabetic ketoacidosis or hyperosmolar hyperglycaemic state: follow diabetes guidelines
- For children please see guideline available on Koha (Intravenous fluids paediatric clinical guideline reference: CH CLIN G44/Jul 21/v009)

Aim and purpose

To provide guidance for safe, effective potassium replacement within the general medical or surgical ward environment.

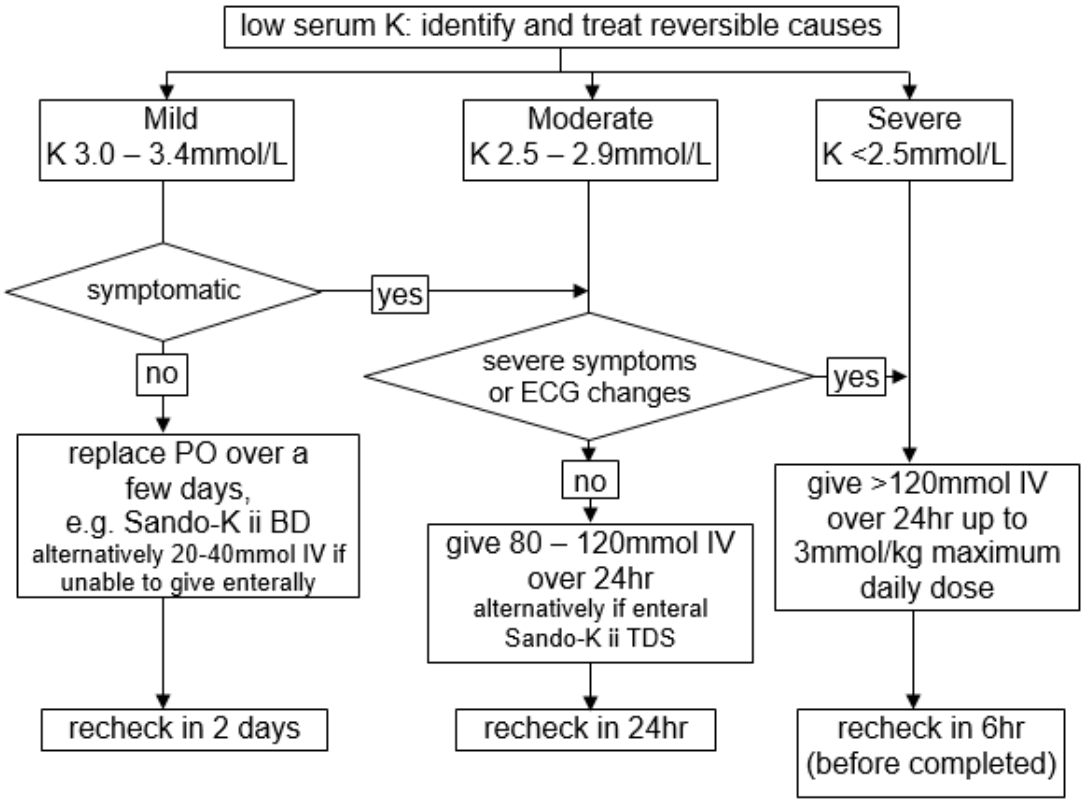
Classification of hypokalaemia:

Serum potassium concentration	**Potential symptoms**
3.0-3.4 mmol/L **mild**	Usually no symptoms, *arrhythmias
2.5-2.9 mmol/L **moderate**	Generalised weakness, lassitude and constipation, *arrhythmias
2.0-2.4 mmol/L **severe**	Muscle weakness and necrosis, myocardial infarction *arrhythmias
Less than 2.0 mmol/L **emergency**	Paralysis and impairment of respiratory function, *arrhythmias
* In patients with ischaemic heart disease, heart failure, or left ventricular hypertrophy, even mild hypokalaemia increases the likelihood of arrhythmias.	

Hypokalaemia will also exacerbate digoxin toxicity.

Treatment of hypokalaemia

Although this document offers guidance, the dose of potassium to treat hypokalaemia should be determined on an individual patient basis. Chronic hypokalaemia indicates a profound deficit in total body potassium and replacement may take several days. Failure to correct hypokalaemia despite appropriate treatment may be due to underlying hypomagnesaemia. **All patients with hypokalaemia should have a magnesium level checked.**



The **maximum daily dose of potassium for replacement is 3mmol/kg** unless significant renal impairment – use approximately half usual dose and seek renal **In the presence of hypomagnesaemia, magnesium should ordinarily be replaced first in order to aid distribution of potassium replacement.**

The **maximum rate of infusion** in a general ward environment is **10mmol/hr**. This can be increased to 20mmol/hr provided continuous cardiac monitoring is in place. Higher rates are associated with significant risk of cardiac arrhythmia and arrest. **Potassium should be given via an infusion pump to ensure a safe rate.**

The usual **maximum concentration** for peripheral IV administration is **40mmol/L**.

For further information see full guideline.