



CLINICAL GUIDELINE

Hyperkalaemia Management

Scope (Staff):	Nursing and Medical Staff
Scope (Area):	NICU KEMH, NICU PCH, NETS WA

This document should be read in conjunction with this [DISCLAIMER](#)

Definition

Serum potassium (K^+) > 6.5 mmol/L (in a free flowing venous or arterial sample).

Background

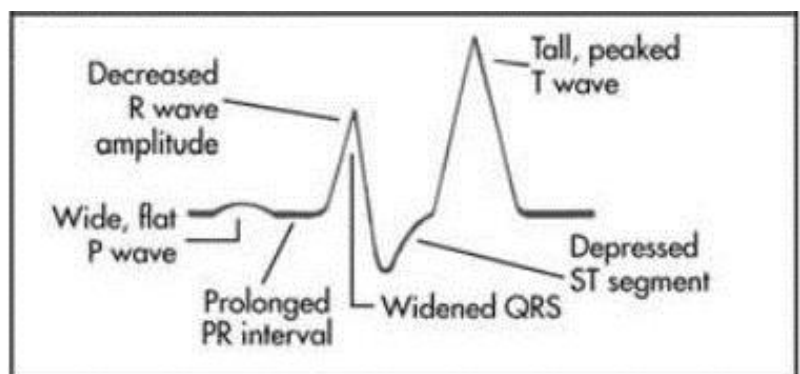
- HyperK⁺ (especially when K^+ > 7 mmol/L, or with ECG changes) is a medical emergency due to the concentration-dependent effect on cardiac myocyte membrane potentials, resulting in life threatening arrhythmias. Hence, treatment must be prompt.
- Cardiac toxicity is enhanced by hypocalcaemia, hyponatremia or acidosis, and patients with these abnormalities may experience complications at lower potassium levels.

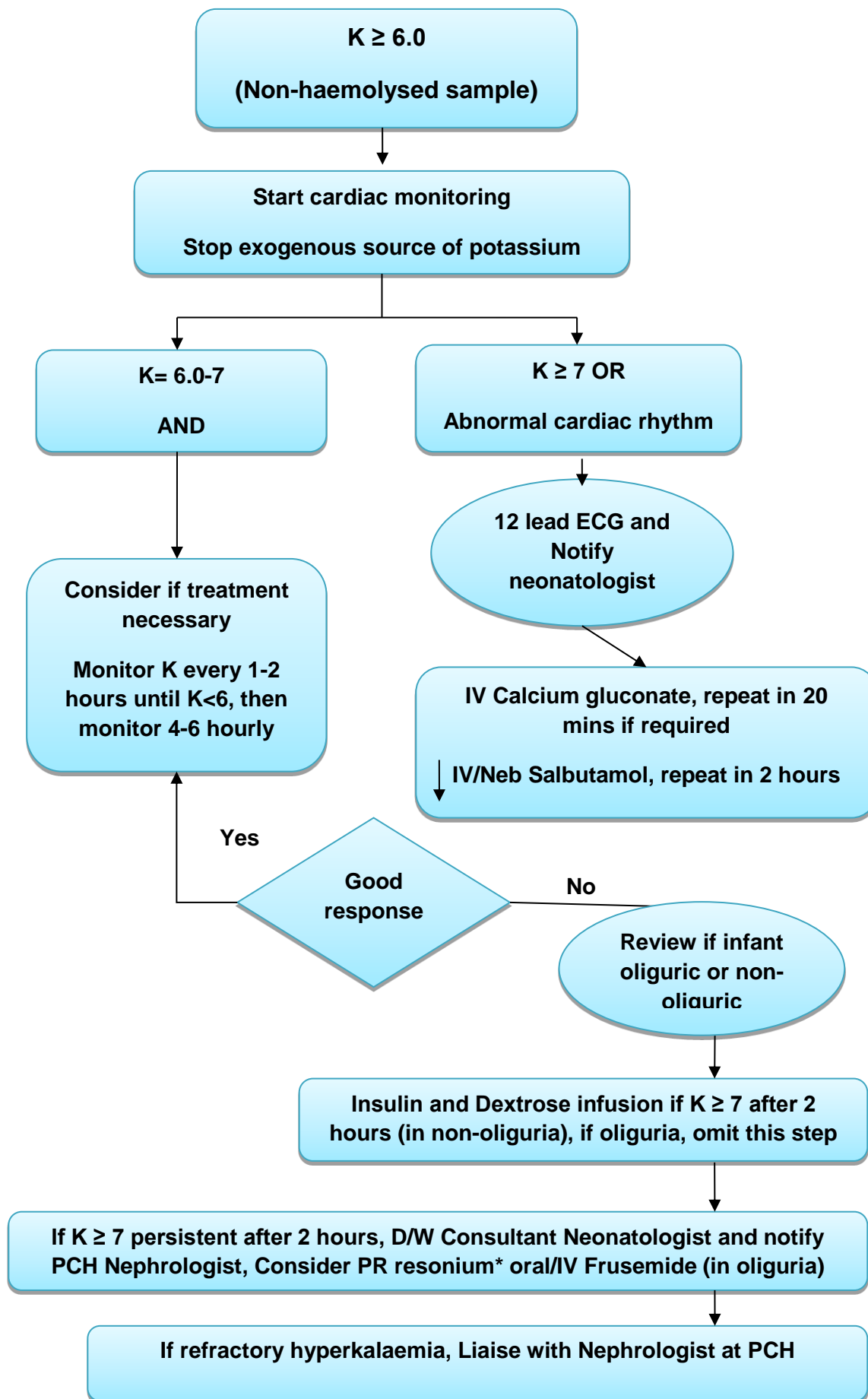
Clinical Manifestations

- Most babies are asymptomatic and hyperkalaemia is noted on the routine monitoring of levels.
- Cardiac conduction disturbance, resulting in wide complex tachycardia, ventricular fibrillation and circulatory failure.

Assessment

- If K^+ > 6.5 mmol/L in capillary blood sampling then baby should have the levels checked by free flowing venous sampling or arterial sampling. If K^+ > 6.5 mmol/l in venous or arterial sampling, baby should have cardiac monitoring.
- 12 lead ECG should be performed if K^+ > 7 mmol/L or if evidence of cardiac arrhythmia on monitoring.
- Other investigations to look for cause of hyperkalaemia.
- ECG changes (as below).






References and related external legislation, policies, and guidelines

1. Vemgal P, Ohlsson A. Interventions for non-oliguric hyperkalaemia in preterm neonates. *Cochrane Database Syst Rev* 2012;(5):CD005257.
2. Zhou H, Satlin LM. Renal potassium handling in healthy and sick newborns.
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3. Masilamani K, van der Voort J. The management of acute hyperkalaemia in neonates and children. *Arch Dis Child* 2012; 97:376.
4. Mahoney BA, Smith WA, Lo DS, et al. Emergency interventions for hyperkalaemia. *Cochrane Database Syst Rev* 2005; CD003235.
5. Vemgal P, Ohlsson A. Interventions for non-oliguric hyperkalaemia in preterm neonates. *Cochrane database Syst Rev.* 2012;5:CD005257
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7. <http://kidshealthwa.com/guidelines/hyperkalaemia/>
8. http://www.rch.org.au/clinicalguide/guideline_index/Hyperkalaemia/
9. <http://www.slhd.nsw.gov.au/rpa/neonatal%5Ccontent/pdf/guidelines/hyperk.pdf>
10. <http://www.adhb.govt.nz/newborn/Guidelines/Nutrition/hyperkalaemia.htm>
11. <https://www.networks.nhs.uk/nhs-networks/staffordshire-shropshire-and-black-country-newborn/documents/Hyperkalaemia%20%20-%20evidence.pdf>
12. <http://www.uptodate.com/contents/management-of-hyperkalemia-in-children>

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