EMERGENCY MANAGEMENT OF HYPOKALAEMIA IN ADULTS

Check Potassium (K⁺)

Serum K⁺ ≤ 3.0 mmol/l

URGENT ECG

CHECK Mg²⁺

No Symptoms
ECG may show:
- U waves
- T wave flattening
- ST segment changes

Replace K⁺
1 Potassium chloride IV 10 mmol/hr
2 Increase dietary K⁺

Give Mg²⁺
2 Magnesium Sulphate IV 5ml 50% [10 mmol] over 30min

Monitor K⁺
Re-check K⁺
(after every 40 mmol if normal renal function or after every 20 mmol if severe renal impairment)

Consider cause of hypokalaemia and address all precipitating factors

Life threatening hypokalaemia
Associated with:
- Arrhythmias
  - VT most common
- Digoxin toxicity
  - ± unstable cardiac rhythm

Cardiac Arrest
VT, VF, PEA, ASYSTOLE

Commence ALS
Defibrillate if appropriate
Give Adrenaline
Treat hypokalaemia

1 Potassium chloride IV 20 mmol over 2-3 min
(repeat until K⁺ > 4.0 mmol/l)

2 Magnesium Sulphate IV 5ml 50% [10 mmol] over 1-2 min

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Target K⁺ 4.0 – 4.5

1 Potassium Chloride – standard concentration is 20 mmol K⁺ [1.5g] in 500ml 0.9% Saline. Higher concentration may be given in life-threatening circumstances – 20 mmol K⁺ [1.5g] in 100ml 0.9% Saline but seek specialist advice.

2 Magnesium Sulphate – repletion of magnesium will allow more rapid correction of hypokalaemia.

3 Diet – particularly important in patients with renal failure and advice from a renal dietician is valuable.

Oliguria – urine output < 400ml/day. Caution advised in potassium replacement in oliguric patients.

Dialysis Patients – PD patients are susceptible to hypokalaemia. Review dialysis prescription in HD patients.