

Hyperkalemia

Medical Emergency

- excessive leakage of potassium from cells
- excessive tourniquet time
- fist clenching during phlebotomy
- delay processing of blood specimen
- during or after blood is drawn
- hemolysis during venipuncture

Pseudohyperkalemia

- malaise
- palpitations
- muscle weakness
- mild hyperventilation
- when metabolic acidosis is its cause
- cardiac arrhythmia
- sudden death.
- complications

Symptoms

Differential diagnosis

Diagnosis

- "potassium level" needs to be repeated
- the elevation can be due to hemolysis
- normal is 3.5 to 5 mEq/L
- renal function tests
- glucose test
- creatinine kinase and cortisol test
- Calculating the trans-tubular potassium gradient
- since its suggestive of RF
- renal ultrasound
- (EKG/ECG)

Ineffective elimination

- Renal insufficiency
- Medication
 - ACE inhibitors
 - angiotensin receptor blockers
 - Potassium-sparing diuretics
 - NSAIDs
 - calcineurin inhibitor
 - antibiotic trimethoprim
 - pentamidine
- Mineralocorticoid deficiency or resistance
 - Addison's disease
 - Aldosterone deficiency
 - congenital adrenal hyperplasia
 - Type IV renal tubular acidosis
- Gordon's syndrome
- familial hypertension with hyperkalemia

Excessive release from cells

- Rhabdomyolysis
- burns
- any cause of rapid tissue necrosis
- tumor lysis syndrome
- Massive blood transfusion
- massive hemolysis
- acidosis
- low insulin levels
- beta-blocker therapy
- digoxin overdose
- succinylcholine

Excessive intake

- Intoxication with salt-substitute
- potassium-containing dietary supplements
- potassium chloride (KCl)

Lethal injection

- sodium thiopental
- unconscious
- pancuronium bromide
- RS collapse
- Potassium chloride