**Alert**
Intubation, suction and ventilation equipment MUST be ready prior to administration of suxamethonium. A medical officer/nurse practitioner (preferably two personnel) experienced in advanced neonatal airway management techniques should be present when the medication is being administered. Risk of cardiac arrest from hyperkalemic rhabdomyolysis.

**Indication**
Elective endotracheal intubation.

**Action**
Short-acting, depolarising neuromuscular blocker. It acts as an acetylcholine antagonist at nicotinic acetylcholine receptors at neuromuscular junctions, resulting in persistent depolarisation of the motor end plate.

**Drug Type**
Neuromuscular blocking agent (depolarising)

**Trade Name**
Suxamethonium Chloride Injection BP

**Presentation**
100 mg/2 ml ampoule.

**Dosage/Interval**
- **IV (preferred):** 2 mg/kg (up to 3 mg/kg)
- **IM (only if IV is not accessible):** 3–4 mg/kg
  
  \(a\) (onset of action can be delayed up to 3 minutes and duration of action is up to 15 minutes)

**Route**
IV, IM

**Maximum Dose**
- **IV:** 3 mg/kg/dose
- **IM:** 4 mg/kg/dose

**Preparation/Dilution**
- **IV:** Draw up 1 mL (50 mg of suxamethonium) and add 9 mL sodium chloride 0.9% to make final volume 10 mL with a concentration of 5 mg/mL.
- **IM:** Administer undiluted.

**Administration**
- **IV:** Rapid injection at proximal cannula site.
- **IM:** Administer in anterior thigh muscle.

**Monitoring**
Continuous cardiorespiratory monitoring. Monitor temperature, blood pressure, oxygenation and assisted ventilator status.

**Contraindications**
- Hyperkalaemia
- Family history of malignant hyperthermia
- Skeletal muscle myopathy
- Hypersensitivity to suxamethonium

**Precautions**
- **Anaphylaxis:** Severe anaphylactic reactions (some life-threatening and fatal) have been reported. Cross-sensitivity with other neuromuscular-blocking agents may occur; use extreme caution in patients with previous anaphylactic reactions.
- **Bradycardia:** Risk of bradycardia may be increased with second dose and may occur more often in children. Occurrence may be reduced by pre-treating with anticholinergic agents (e.g. atropine).
- **May Increase intracocular pressure (IOP).**
- **May cause a transient increase in intracranial pressure.**
- **May increase intragastric pressure, which could result in regurgitation and possible aspiration of stomach contents.**
- **Malignant hyperthermia:** Use may be associated with acute onset of malignant hyperthermia; risk may be increased with concomitant administration of volatile anaesthetics.
- **May increase vagal tone.**

**Drug Interactions**
- May enhance the effect of other agents with neuromuscular-blocking properties: acetylcholinesterase inhibitors; magnesium, quinidine, quinine, vancomycin, cyclophosphamide monohydrate, ciclosporin, esmolol, lincomamide, loop diuretics.
- **Aminoglycosides:** May enhance the respiratory depressant effect of aminoglycosides.
- **Opioid analgesics:** Suxamethonium may enhance the bradycardic effect of opioid analgesics.
- **Cardiac glycosides:** May enhance the arrhythmogenic effect of cardiac glycosides.
**Adverse Reactions**

Bradycardia is common in neonates and children, especially after a second dose of suxamethonium. May be prevented by administration of atropine prior to administration of suxamethonium.

Hyperkalaemia

Prolonged paralysis in infants with deficiency of pseudocholinesterase.

Hypersensitivity reactions

Malignant hyperthermia

Management of suxamethonium overdose and/or toxicity is supportive.

**Compatibility**

Dextrose 5%, dextrose 10%, sodium chloride 0.9%, dextrose 5% in sodium chloride 0.9%, dextrose 5% in sodium chloride 0.45%, sodium chloride 0.45%.

Y-site administration: Potassium chloride, propofol, Vitamin B complex with C.

**Incompatibility**

Y-site administration: Aminoacid solution, lipid emulsion, heparin, alkaline solutions with pH > 8.5.

**Stability**

Storage
Refrigeration at 2°C to 8°C. DO NOT FREEZE.

**Special Comments**

Poorly absorbed from gastrointestinal tract – must be given IM or IV.

Rapidly and completely hydrolysed by hepatic and plasma pseudocholinesterase.

Very rapid onset (30–60 seconds) and short duration of action (3–5 minutes) with IV administration. Continuous administration over a prolonged period of time may result in irreversible blockade (phase II block).

Should not be used without additional sedation.

**Evidence summary**

As per NMF Consensus Group. Refer to reference manual or electronic version.

**References**

As per NMF Consensus Group. Refer to reference manual or electronic version.