DRUG AND POISON INFORMATION CENTRE

Detail drug information on Suxamethonium chloride

Response:

Class: Musculoskeletal agent, Neuromuscular blocker

Mechanism of action:

Succinylcholine chloride, an ultra-short acting depolarizing skeletal muscle relaxant, mimics acetylcholine as it binds with the cholinergic receptors on the motor end plate, thus producing a Phase I block as manifested by fasciculations. It may exhibit a nondepolarizing block (Phase II) when its concentration and duration are increased.

Pharmacokinetics:

Distribution:

Succinylcholine primarily distributes to extracellular fluid spaces, with 80% of the drug undergoing hydrolysis before reaching the neuromuscular end-plate

Metabolism Sites and Kinetics:

1) BLOOD, rapid

a) Succinylcholine is rapidly hydrolyzed in the plasma by pseudocholinesterase. Only 20% of the administered dose reaches the neuromuscular end-plate.

Excretion:
Kidney
1) Renal Excretion (%)
a) 10%

Dosing:

- A 5- to 10-mg test dose may be used to determine sensitivity of patient and individual recovery time.
- In patients homozygous for the atypical plasma cholinesterase gene, a test dose of 5 to 10 mg may be administered to evaluate sensitivity, or neuromuscular blockade may be produced by a slow IV infusion of 1 mg/mL

- Treat apnea or prolonged muscle paralysis with controlled respiration

Adverse effects:

- **Musculoskeletal:**
  Myalgia (16% to 100%)
- **Ophthalmic:**
  Raised intraocular pressure**.**

USES:

Induction of neuromuscular blockade, Adjunct to general anesthesia, to facilitate endotracheal intubation, and to provide skeletal muscle relaxation during surgery or mechanical ventilation

Contraindications:

- Hypersensitivity to succinylcholine
- Malignant hyperthermia.
- Skeletal muscle myopathies

Drug interactions:

- Concurrent use of ST JOHN'S WORT and ANESTHETICS may result in an increased risk of cardiovascular collapse and/or delayed emergence from anesthesia.
- Concurrent use of SUCCINYLCHOLINE and PANCURONIUM may result in pancuronium toxicity (respiratory depression, apnea
- Concurrent use of SUCCINYLCHOLINE and PROMAZINE may result in a prolongation of neuromuscular blockade.

Monitoring parameters:

- facilitation of tracheal intubation and skeletal muscle relaxation during surgery or mechanical ventilation is indicative of efficacy (as adjunct to general anesthesia)
- temperature and expired carbon dioxide; continuously, for early recognition of malignant hyperthermia
- electrocardiogram of pediatric patients for peaked T-waves, an early sign of potential cardiac arrest secondary to acute rhabdomyolysis with hyperkalemia
- neuromuscular function with a peripheral nerve stimulator when administered as an IV infusion.