

RX

Drug Name: Succinylcholine Chloride

Trade Name: Anectine

Class:

- Depolarizing neuromuscular blocker.

Mechanism of Action:

Inhibits transmission of nerve impulses by binding with cholinergic receptor sites, antagonizing action of acetylcholine. Initial binding causes muscle fasciculation's and progresses to total paralysis, including the diaphragm. Muscle relaxation begins in the eyelids & jaw, progresses to the limbs, the abdomen, & finally the diaphragm & intercostals. Succinylcholine has absolutely no effect on consciousness

Indications:

- Facilitation of ET Intubation

Contraindications:

- Hypersensitivity
- History of malignant hyperthermia
- History of skeletal muscle myopathy (rhabdomyolysis)
- Penetrating eye injuries

Precautions:

- Pregnancy (C)
- Cardiac disease
- Dehydration
- Respiratory disease
- Neuromuscular disease (*prolonged effects, i.e. myasthenia gravis*)
- Severe burns (*potential for cardiac arrest & ventricular arrhythmias, usually not an acute concern*)
- Crush Injuries (*potential for cardiac arrest & ventricular arrhythmias, usually not an acute concern*)
- Must be ready to intubate as soon given, use cricoid pressure to secure airway from gastric regurgitation
- Narrow-angle glaucoma
- Elderly

Available Forms:

- 20 mg/ml in 10 ml vials (200 mg)

Dosage:

Adults:

- IV, IM, IO: 1-2 mg/kg rapid push, repeat once if needed

Pediatrics:

- IV, IM, IO: 1-2 mg/kg rapid push, repeat once if needed
- INFANTS: IV, IM, IO 2 mg/kg

Onset:

- IV—30-60 seconds
- IM—2-3 minutes

Duration:

- IV—3-5 minutes
- IM—10-30 minutes

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Side Effects:

- Sinus arrest
- Dysrhythmias
- Hypotension
- Increased intraocular pressure
- Prolonged apnea
- Hyperkalemia (*36 hours post crush trauma/ burns*). Bradycardias (*May eventually get tachycardia & hypertension as an asphyxia response*)
- Bronchospasm
- Vomiting/Aspiration
- Malignant Hyperthermia

Interactions:

- Theophylline users may end up with dysrhythmias
- Incompatible with barbiturates, chlorpromazine, nafcillin, alkaline solutions
- Effects enhanced by Lidocaine, Procainamide, beta blockers, magnesium sulfate, other neuromuscular blockers

PEARLS:

- **Physician preference is that Succinylcholine be used as a second line induction agent, if Etomidate does not work, or if Etomidate is contraindicated**
- **Succinylcholine has no effect on consciousness or pain...sedate your patients**
- **Cricoid pressure should be continuously applied until intubation is complete & the tube cuff inflated**
- The use of Succinylcholine should be part of a systematic approach to a difficult airway, and as such, not performed until all equipment, personnel, medications and safeguards are in place
- Succinylcholine should not be used unless the medic is prepared to perform a number of rescue airway techniques, **up to and including a surgical airway**.
- Children are not as sensitive as adults and may require higher dosages (2 mg/kg)
- NOTE: In both adults and children the incidence of bradycardia is higher following a second dose of Succinylcholine. Pretreatment with anticholinergic agents (atropine) may reduce the occurrence of brady arrhythmias.
- WARNING: There have been several reports of cardiac arrest following administration of Succinylcholine to apparently healthy children and adolescent patients who were subsequently found to have undiagnosed myopathies. In most cases, patients experienced acute rhabdomyolysis with hyperkalemia and cardiac arrest. Because children and adolescent patients are more likely than adults to have undiagnosed myopathies, a nondepolarizing neuromuscular blocking agent should be used for routine elective surgery in these patients. Except when used for emergency tracheal intubation or in instances where immediate securing of the airway is necessary, Succinylcholine is contraindicated in children and adolescent patients
- If repeated intubation attempts fail, you can usually ventilate the patient until spontaneous ventilations return (while maintaining cricoid pressure)
- Our first priority remains airway and this is a wonderful tool to manage airways if used appropriately. It is by no means benign. In its use, you must weigh the risk versus the benefits. Use anatomical assessment to estimate the chance of success and weigh that against the need of an airway