

SUCCINYLCHOLINE (QUELICIN, ANECTINE)

PHARMACOLOGY & MECHANISM OF ACTIONS:

- ❑ Depolarizing neuromuscular blocker
- ❑ Moves from eyes to toes in one minute, lasts 4-6 minutes
- ❑ No effect on consciousness or pain threshold. The patient will be able to hear you, and feel everything if conscious.
- ❑ Succinylcholine is a short acting depolarizing skeletal muscle relaxant. Like acetylcholine, it binds to cholinergic receptors in the motor neuron end plate to cause muscle depolarization (contractions and fasciculations). However, this action is sustained and the initial contraction is followed by paralysis. Onset of action 1 minutes IV and 2-4 minutes IM.
- ❑ Duration 2 minutes and persists for approximately 2-6 minutes
- ❑ Muscle relaxation begins in the eyelids and jaw, and then progresses to the limbs and abdomen, and finally the diaphragm and the intercostal muscles.
- ❑ Succinylcholine is excreted by the kidneys (10%) and is hydrolyzed by plasma cholinesterases (pseudocholinesterase and acetylcholinesterase).
- ❑ This drug may cause prolonged apnea and paralysis in patients with enzyme deficiency of pseudocholinesterase.

INDICATIONS:

- ❑ To achieve temporary paralysis where endotracheal intubation is indicated (in accordance with airway management guidelines).

CONTRAINDICATIONS:

- ❑ Allergy to Succinylcholine
- ❑ Penetrating eye injury
- ❑ History of malignant hyperthermia
- ❑ Hyperkalemia will worsen following the administration of succinylcholine and may precipitate ventricular dysrhythmias, or even cardiac arrest. This is especially true in patients with pre-existing long-term paralysis, crush injury, severe burns > 24 hours old, kidney failure, neuromuscular disease, or skeletal muscle myopathy. Its use is contraindicated if those conditions exist. Consider the use of Vecuronium

ADMINISTRATION:

	ADULT	PEDIATRIC	
PARAMEDIC	<p>RSI</p> <ul style="list-style-type: none"> ❑ 1-1.5 mg/kg IV/IO - 2 mg/kg IM ❑ Max. dose 150 mg 	<p>RSI</p> <ul style="list-style-type: none"> ❑ 2 mg/kg IV/IO - 4 mg/kg IM 	PARAMEDIC

PRECAUTIONS & SIDE EFFECTS:

- ❑ Bradycardia especially with repeated doses of succinylcholine and in pediatric patients under age 5
- ❑ Ventricular dysrhythmias
- ❑ Tachycardia
- ❑ Hypotension/Hypertension
- ❑ Occasional bronchospasm

SUCCINYLCHOLINE (QUELICIN, ANECTINE)

(CONTINUED)

- ❑ Cardiac Arrest
- ❑ Malignant hyperthermia: rare but life-threatening complication that can occur with administration of paralytic agents. It is a hypermetabolic state of skeletal muscles and may initially present as intractable spasm of the jaw muscles which shows up after use of succinylcholine and is not to be confused with more commonly seen trismus that occurs in head-injured patients.

SPECIAL NOTES:

- ❑ Pre-oxygenation prior to RSI is essential; have all equipment, suction unit and alternate airways prepared prior to giving succinylcholine.
- ❑ Succinylcholine has no pain relieving properties. Adequate sedation should be used when succinylcholine is given to a conscious patient. Monitor sedation administration times closely and watch for signs that sedation is wearing off, i.e. signs of patient anxiety.
- ❑ Apply cricoid pressure before and after the paralytic has been administered, and continue the procedure until the patient is intubated and the cuff inflated.
- ❑ Succinylcholine loses potency in liquid form unless it is refrigerated and must be rotated regularly.
- ❑ Once an adequate dose has been administered and paralysis has been achieved, DO NOT administer a second dose. May cause bradycardia with repeated doses or in children under 5 years of age; may be avoided by pre-medicating with atropine sulfate.
- ❑ May very rarely cause ventricular dysrhythmias. These can usually be treated with oxygen and lidocaine.
- ❑ Other cardiovascular effects include tachycardia, hypotension, hypertension and cardiac arrest.
- ❑ Other signs of malignant hyperthermia include: tachycardia, tachypnea, hypercarbia, and hyperthermia.
- ❑ Increased intracranial, intraocular and intragastric pressure especially during the fasciculation phase of paralysis. This may be attenuated by pre-medicating the patient with lidocaine.
- ❑ Histamine release may occur with administration.
- ❑ Pregnancy Category C.