Quelicin (succinylcholine chloride) - Drug Summary

Hospira Inc.

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Anectine
(succinylcholine chloride)

BOXED WARNING

Rare reports of acute rhabdomyolysis w/ hyperkalemia followed by ventricular dysrhythmias, cardiac arrest, and death in healthy pediatric patients w/ undiagnosed skeletal muscle myopathy; most frequently Duchenne's muscular dystrophy. Often presented w/ peaked T-waves and sudden cardiac arrest w/in min after administration to healthy-appearing pediatric patients (most frequently ≤8 yrs of age) and adolescents. Treatment of hyperkalemia should be instituted; administer IV Ca^{2+}, bicarbonate, and glucose w/ insulin, w/ hyperventilation. Appropriate treatment should be instituted when signs of malignant hyperthermia are present. Reserve use in pediatric patients for emergency intubation where securing airway is necessary (eg, laryngospasm, difficult airway, full stomach, or for IM use when suitable vein is inaccessible).

COMMON BRAND NAMES

Quelicin, Anectine

THERAPEUTIC CLASS

Skeletal muscle relaxant (depolarizing)

DEA CLASS

RX

ADULT DOSAGE & INDICATIONS

Adjunct to General Anesthesia

Facilitates tracheal intubation and provides skeletal muscle relaxation during surgery or mechanical ventilation

IV:
Short Surgical Procedure:
Average Dose: 0.6mg/kg
Optimum Dose: 0.3-1.1mg/kg

Very large doses may result in more prolonged blockade; a 5-10mg test dose may be used to determine the sensitivity of the patient and the individual recovery time

Long Surgical Procedure:
The dose administered depends upon the duration of the surgical procedure and the need for muscle relaxation

Average Rate: 2.5-4.3mg/min

Sol containing 1-2mg/mL have commonly been used for continuous infusion; 1mg/mL preferable due to ease of control of the rate of administration and, hence, of relaxation and may be administered at a rate of 0.5-10mg/min (0.5-10mL/min) to obtain the required amount of relaxation

Intermittent IV inj may also be used for long procedures; 0.3-1.1mg/kg may be given initially, followed, at appropriate intervals, by 0.04-0.07mg/kg

IM:
May be given when a suitable vein is inaccessible
Up to 3-4mg/kg may be given, but no more than 150mg total dose should be administered IM

PEDIATRIC DOSAGE & INDICATIONS

Adjunct to General Anesthesia

Facilitates tracheal intubation and provides skeletal muscle relaxation during surgery or mechanical ventilation

IV:
Emergency Tracheal Intubation/Immediate Securing of Airway:
Infants and Small Children: 2mg/kg
Older Children and Adolescents: 1mg/kg

IM:
May be given when a suitable vein is inaccessible
Up to 3-4mg/kg may be given, but no more than 150mg total dose should be administered IM

ADMINISTRATION

IV/IM route

Compatibility and Admixtures
Do not mix w/ alkaline sol having a pH >8.5 (eg, barbiturate sol)
Stable for 24 hrs after dilution to a final concentration of 1-2mg/mL in D5 inj or 0.9% NaCl inj
Admixtures should be prepared for single patient use only; discard unused portion of diluted sol

HOW SUPPLIED

Inj: 20mg/mL; (Quelicin) 20mg/mL, 100mg/mL

CONTRAINDICATIONS

Personal or familial history of malignant hyperthermia, skeletal muscle myopathies, acute phase of injury following major burns, multiple trauma, extensive skeletal muscle denervation, upper motor neuron injury.

WARNINGS/PRECAUTIONS

Should only be used by those skilled in the management of artificial respiration and only when facilities are instantly available. To avoid distress, do not administer before unconsciousness has been induced except in emergency situations. Life-threatening and fatal anaphylactic reactions reported; caution w/ previous anaphylactic reactions to other neuromuscular blocking agents. Caution when used in patients known or suspected homozygous for the atypical plasma cholinesterase gene. Caution in patients suffering from electrolyte abnormalities and those who may have massive digitalis toxicity; may induce cardiac arrhythmias or cardiac arrest. Caution w/ chronic abdominal infection, subarachnoid hemorrhage, conditions causing degeneration of central and peripheral nervous system, fractures, muscle spasms, reduced plasma cholinesterase activity, or acute phase of injury. D/C if skin mottling, rising temperature, and coagulopathies occur. Higher incidence of bradycardia progressing to asystole w/ 2nd dose; pretreatment w/ anticholinergic agents (eg, atropine) may reduce bradyarrhythmias. May increase intraocular, intracranial, or intragastric pressure. Avoid w/ narrow-angle glaucoma or penetrating eye injury unless potential benefit outweighs potential risk. W/ prolonged therapy, Phase I block will progress to Phase II block associated w/ prolonged respiratory paralysis and weakness. Hypokalemia or hypocalcemia may prolong neuromuscular blockade. (Quelicin) Caution in elderly.

ADVERSE REACTIONS

Respiratory depression, apnea, cardiac arrest, malignant hyperthermia, arrhythmia, bradycardia, tachycardia, HTN, hypotension, hyperkalemia, increased IOP, muscle fasciculation, jaw rigidity, postoperative muscle pains.

DRUG INTERACTIONS

Enhanced effects w/ promazine, oxytocin, certain non-penicillin antibiotics, quinidine, β-blockers, procainamide, lidocaine, trimethaphan, lithium carbonate, Mg^{2+} salts, quinine, aprotinin, chloroquine, diethylether, isoflurane, desflurane, metoclopramide, terbutaline, and drugs that reduce plasma cholinesterase activity (eg, chronically administered oral contraceptives, glucocorticoids, certain MAOIs) or inhibit plasma cholinesterase (eg, organophosphate insecticides, echothiophate, certain antineoplastic drugs). Increased risk of malignant hyperthermia w/ volatile anesthetics. Consider synergistic or antagonistic effect w/ other neuromuscular blocking agents.

PREGNANCY AND LACTATION

Category C, caution in nursing.

MECHANISM OF ACTION

Depolarizing skeletal muscle relaxant; combines w/ cholinergic receptors of motor end plate to produce depolarization, and subsequent neuromuscular transmission inhibition.

PHARMACOKINETICS

Distribution: Crosses the placenta. **Metabolism:** Rapid; via plasma cholinesterases through hydrolysis to succinylmonocholine and to succinic acid and choline. **Elimination:** Urine (10% unchanged).

ASSESSMENT

Assess for drug hypersensitivity, familial or personal history of malignant hyperthermia, skeletal muscle myopathy, extensive denervation of skeletal muscle or upper motor neuron injury, acute phase of injury following major burns, multiple trauma, electrolyte abnormalities, patients known to be or suspected of being homozygous/heterozygous for the atypical plasma cholinesterases gene, Duchenne's muscular dystrophy, digitalis toxicity, chronic abdominal infection, subarachnoid hemorrhage, degeneration of central and peripheral nervous system, narrow-angle glaucoma or penetrating eye injury, fracture or muscle spasm, hypokalemia/hypocalcemia, concomitant use of drugs or conditions that may reduced plasma cholinesterase activity, previous anaphylactic reactions to other neuromuscular blocking agents, pregnancy/nursing status, and possible drug interactions.

MONITORING

Monitor for signs/symptoms of malignant hyperthermia, acute rhabdomyolysis, hyperkalemia, ventricular dysrhythmias, bradycardia, cardiac arrest, prolonged respiratory muscle paralysis or weakness, increased intragastric pressure, IOP, increased intracranial pressure, anaphylactic reactions, and other adverse reactions. Monitor ECG changes, neuromuscular function, temperature, expired CO_2.

PATIENT COUNSELING

Inform that therapy is to be administered only by those skilled in management of artificial respiration and only when facilities are immediately available to provide artificial intubation and adequate ventilation for patients.

STORAGE

2-8°C (36-46°F). Stable for up to 14 days at room temperature.

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