Vecuronium Bromide (vecuronium bromide) - Drug Summary

Sun Pharma Global FZE

Related Drug Information ▼

Vecuronium
(vecuronium bromide)

BOXED WARNING

Administer by adequately trained individuals familiar with actions, characteristics, and hazards of drug.

THERAPEUTIC CLASS

Skeletal muscle relaxant (nondepolarizing)

DEA CLASS

RX

ADULT DOSAGE & INDICATIONS

Skeletal Muscle Relaxant

Adjunct to general anesthesia, to facilitate endotracheal intubation and provide muscle relaxation during surgery/mechanical ventilation

Initial: 0.08-0.1mg/kg IV bolus; doses of 0.15mg/kg-0.28mg/kg have been administered during surgery under halothane anesthesia when larger doses are needed with properly maintained ventilation
Maint (During Prolonged Procedures): 0.01-0.015mg/kg within 25-40 min of initial dose. Subsequent maint doses may be administered at intervals ranging from 12-15 min under balanced anesthesia and slightly longer under inhalation agents

Continuous Infusion:
Rate of administration should be adjusted according to patient's twitch response as determined by peripheral nerve stimulation; initiate only after early evidence of spontaneous recovery from bolus dose
Initial: 1mcg/kg/min administered 20-40 min after an intubating dose of 80-100mcg/kg
Titrate: Adjust to maintain 90% suppression of twitch response
Usual: 0.8-1.2 mcg/kg/min

Refer to PI for information regarding individualized infusion rates

PEDIATRIC DOSAGE & INDICATIONS

Skeletal Muscle Relaxant

Adjunct to general anesthesia, to facilitate endotracheal intubation and provide muscle relaxation during surgery/mechanical ventilation

>7 Weeks-<1 Year:
Moderately more sensitive on a mg/kg basis than adults and takes about 1.5X longer to recover

1-10 Years:
May require a slightly higher initial dose and slightly more often supplementation than adults

10-16 Years:
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DOSING CONSIDERATIONS

Dose Reduction
Administration >5 Min After the Start of Inhalation Agent or When Steady State Achieved:
Initial: Reduce dose by approximately 15% (0.06-0.085 mg/kg)

Intubation Using Succinylcholine:
Initial: Reduce dose to 0.04-0.06 mg/kg with inhalation anesthesia and 0.05-0.06 mg/kg with balanced anesthesia

Steady-State Concentrations of Enflurane/Isoflurane:
May be necessary to reduce rate of infusion 25-60%, 45-60 min after intubating dose

Elderly
Start at lower end of dosing range

ADMINISTRATION

IV route

Preparation
Add appropriate infusion sol such as D5 inj, 0.9% NaCl inj, D5 and 0.9% NaCl inj, or Lactated Ringer's inj
Single-Dose: When reconstituted with compatible IV sol not containing an antimicrobial preservative, refrigerate and use within 24 hrs; discard unused portion
Multidose: When reconstituted with bacteriostatic water for inj, use within 5 days; may store reconstituted sol refrigerated/at room temperature
Discard unused portions of infusion sol

Compatibility
Compatible Infusion Sol:
0.9% NaCl inj
D5 inj
Sterile water for inj
D5 in 0.9% NaCl
Lactated Ringer's inj
Use within 24 hrs of mixing with above sol

Compatible with bacteriostatic water for inj (not for use in newborns); use within 5 days of mixing

Do not mix reconstituted sol with alkaline sol (eg, thiopental) in the same syringe or administer simultaneously during IV infusion through the same needle/IV line

HOW SUPPLIED

Inj: 10mg, 20mg

WARNINGS/PRECAUTIONS

Severe anaphylactic reactions reported. Caution in individuals who have had previous anaphylactic reactions to other neuromuscular blocking agents; cross-reactivity reported. Do not administer unless facilities for intubation, artificial respiration, oxygen therapy, and reversal agents are immediately available. May have profound effects in myasthenia gravis or myasthenic (Eaton-Lambert) syndrome; consider using a peripheral nerve stimulator and small test dose to monitor response to administration. Prolongation of neuromuscular blockade may occur in anephric patients; consider lower initial dose. Conditions associated with slower circulation time in cardiovascular disease (CVD), old age, and edematous states may delay onset time; dosage should not be increased. Prolonged recovery time reported with cirrhosis or cholestasis. In intensive care unit (ICU), long-term use may be associated with prolonged paralysis and/or skeletal muscle weakness. Monitor neuromuscular transmission of ICU patients continuously with a nerve stimulator. Severe obesity or neuromuscular disease may pose airway and/or ventilatory problems. May trigger malignant hyperthermia. Electrolyte imbalance and diseases leading to electrolyte imbalance (eg, adrenal cortical insufficiency) may alter neuromuscular blockade; either enhancement or inhibition may occur. Caution in elderly.

ADVERSE REACTIONS

Skeletal muscle weakness, profound and prolonged skeletal muscle paralysis, muscle atrophy.

DRUG INTERACTIONS

Prior administration of succinylcholine may enhance neuromuscular blocking effect and duration of action; delay administration until succinylcholine effects wear off. May have additive effects with other nondepolarizing blockers (eg, pancuronium, d-tubocurarine, metocurine, gallamine). Enhanced neuromuscular blocking action with volatile inhalational anesthetics (eg, enflurane, isoflurane, halothane) and Mg^{2+} salts. Possibility of unexpected prolongation of neuromuscular block with certain antibiotics (eg, aminoglycosides, tetracyclines, bacitracin, polymyxin B, colistin, sodium colistimethate). Quinidine injection during recovery from use of other muscle relaxants suggests that recurrent paralysis may occur.

PREGNANCY AND LACTATION

Category C, caution in nursing.

MECHANISM OF ACTION

Nondepolarizing neuromuscular blocking agent; acts by competing for cholinergic receptors at the motor end-plate.

PHARMACOKINETICS

Distribution: V_d=300-400mL/kg; plasma protein binding (60-80%). **Metabolism:** Liver. **Elimination:** Bile (25-50%); urine (3-35%); $T_{1/2}$=65-75 min.

ASSESSMENT

Assess for history of hypersensitivity/anaphylactic reactions to the drug or other neuromuscular blocking agents, myasthenia gravis or myasthenic syndrome, hepatic/renal impairment, severe obesity, CVD, presence of an edematous state, neuromuscular disease, electrolyte imbalance, diseases which may lead to electrolyte imbalance, pregnancy/nursing status, and for possible drug interactions.

MONITORING

Monitor for signs/symptoms of hypersensitivity/anaphylactic reactions, malignant hyperthermia, prolonged neuromuscular blockade, and other adverse reactions. For patients in the ICU, monitor muscle twitch response with the use of a peripheral nerve stimulator to monitor the degree of neuromuscular blockade.

PATIENT COUNSELING

Inform about risks/benefits of therapy. Inform that severe anaphylactic reactions have been reported. Advise to report any adverse events to healthcare professional.

STORAGE

Prior to Reconstitution: 20-25°C (68-77°F); excursions permitted to 15-30°C (59-86°F). Protect from light. Retain in carton until time of use. After Reconstitution: Single-Dose Use: When reconstituted with compatible IV sol without antimicrobial preservative, refrigerate and use within 24 hrs. Multi-Dose Use: (Not for use in newborns). When reconstituted with bacteriostatic water for inj, use within 5 days. May store at room temperature or refrigerate.

Back to top