WARNING: Paralysing Agent

VECURONIUM

Read in conjunction with Disclaimer

HIGH RISK Medication

Inadvertent use in patients without the availability of medical staff skilled in airway support can lead to respiratory arrest, permanent harm, or death.

Formulary: Highly Restricted Requires neonatologist approval **before** commencing.	
Presentation	**Vial:** 10 mg powder for reconstitution.
Classification	Non-depolarising neuromuscular blocking agent.
Indication	• Skeletal muscle relaxation or paralysis in mechanically ventilated infants and infants that are difficult to ventilate. • Moderately-severe to severe respiratory distress requiring increased ventilator settings.
Special Considerations	• **Renal or hepatic impairment:** Use cautiously, prolonged duration of action has been observed. • **Acidosis, dehydration, electrolyte imbalance:** May enhance effects of neuromuscular blocking agents. • **Therapeutic hypothermia:** May increase the effect/duration of neuromuscular blockade. Reduce dose and monitor neuromuscular blockade. • **Myasthenia gravis, myasthenia syndrome and other neuromuscular diseases:** Vecuronium effect may be potentiated. Extreme caution should be exercised, and very small doses may be required.
Monitoring	Continuous monitoring of heart rate, blood pressure, assisted ventilation status and neuromuscular function.
Compatibility	**Fluids:** Glucose 5%, Sodium chloride 0.9%. **Y-site:** *Giving other medications via Y-site with neuromuscular blockers is not recommended.* Amiodarone, cefazolin, dexmedetomidine, fentanyl, fluconazole, gentamicin, heparin sodium, hydrocortisone sodium succinate, linezolid, midazolam, milrinone, morphine sulfate, trimethoprim-sulfamethoxazole, vancomycin.
Incompatibility	**Y-site:** Aciclovir, cefepime, cefotaxime, furosemide, ganciclovir, piperacillin-tazobactam. ***This list is not exhaustive, contact pharmacy for more information.***
Interactions	**Aminoglycosides, lincosamides, magnesium sulfate, general anaesthetics, suxamethonium, piperacillin, corticosteroids, diuretics:** May increase and/or prolong neuromuscular blockade. **Phenytoin:** May decrease neuromuscular blockade. **Opioids:** Decreased heart rate and blood pressure has been observed when used with opioids.
Adverse Effects	**Rare:** Bronchospasm, oedema, flushing, anaphylactic reactions, tachycardia, hypotension, hypersensitivity reaction (including erythema, hypotension, tachycardia, urticaria, pruritus).

Storage & Stability	**Vial:** Store at room temperature, below 25°C. Protect from light.
Comments	• Use in conjunction with lubricating eye drops during paralysis. • **Antidote:** Most of the effects of vecuronium can be reversed by neostigmine with atropine.

INTERMITTENT IV PUSH

Presentation	**Vial:** 10 mg powder for reconstitution. ***Available from PCS (PCH only):*** *1 mg/mL IV push.*
Dosage	**Intermittent IV push:** 30 to 150 microg/kg/dose. *Usual starting dose: 100 microg/kg/dose.* • Dose may be repeated at intervals of 1 to 2 hours as needed for paralysis. • Adjust dose as needed based on duration of paralysis.
Preparation	**Intermittent IV push**: 1 mg/mL • Add 10 mL of water for injection to the vecuronium vial. *Concentration equal to* **1 mg/mL = 1000 microg/mL**
Administration	**IV push:** • Rapid IV Injection over 5 to 10 seconds. • Onset of action: 1 to 2 minutes.

CONTINUOUS IV INFUSION

Presentation	**Vial:** 10 mg powder for reconstitution. ***Available from CIVAS (KEMH) and PCS (PCH):*** *continuous infusion.*
Dosage	**Continuous infusion:** 1 to 1.5 microg/kg/minute. *Usual starting dose: 1 microg/kg/minute.* • Adjust dose until desired neuromuscular blockade is achieved. • Doses ranging from 0.5 to 3 microg/kg/minute have been reported.
Preparation	**Continuous infusion:** **Step 1 Reconstitution:** • Add 10 mL of water for injection to the vecuronium vial. *Concentration:* **1 mg/mL** **Step 2 Dilution:** • Draw up 3 mg (3 mL) per kilogram of baby's weight and make up to a final volume of 50 mL with a compatible fluid. • *Note:* May need multiple vials based on baby's weight. *Concentration now equal to* **1 microg/kg/min = 1 mL/hour.**
Administration	**IV infusion:** • Infuse at the prescribed rate via syringe driver pump.

Related Policies, Procedures, and Guidelines

HDWA Mandatory Policies:

MP 0131/20: WA High Risk Medication Policy

Clinical Practice Guidelines:

CAHS Neonatology – Intubation

Pharmaceutical and Medicines Management Guidelines:

CAHS Neonatology – Medication Administration Guideline
High Risk Medicines

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Document history

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