


Section: Drug Reference
Subject: KETAMINE
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Ketamine

1. CLASSIFICATION
 - a. Anesthetic
2. ACTIONS/DESCRIPTIONS
 - a. NMDA and HCN1 receptor antagonist
 - b. Also has incompletely understood effects on cholinergic, aminergic, and opioid receptors
 - c. Produces a state of dissociative anesthesia
 - i. Hypnosis leading to sedation and unconsciousness
 - ii. Intense analgesia
 - iii. Increased sympathetic activity
 - iv. Has little to no effect on laryngeal reflexes, muscle tone or respiratory drive
3. INDICATIONS
 - a. Rapid Sequence Induction in both adults and children
 - b. Behavioral Emergencies in which benzodiazepines have been ineffective or are otherwise not indicated
4. RELATIVE CONTRAINDICATIONS
 - a. Known hypersensitivity
 - b. Should not be used in patients younger than three months of age
 - c. Increased intraocular pressure, so use with caution in patients with glaucoma or acute globe injury.
 - d. Current research suggests ketamine may be helpful and not harmful in head injury situations.
5. SIDE EFFECTS
 - a. Hypertension
 - b. Tachycardia
 - c. Hypersalivation
 - d. Nausea and vomiting (Around 8% of peds, and 4% of adults; responds to ondansetron)
 - e. Apnea or laryngospasm (rarely, but possible; around 0.8% of cases)
6. DURATION OF ACTION
 - a. Onset: Within 30 seconds of IV administration
 - i. 3-4 minutes if given IM
 - b. Duration: 10-15 minutes
 - i. 12-25 minutes if given IM
7. DOSAGE
 - a. 1 – 2 mg/kg IV/IM, depending on protocol
8. SPECIAL CONSIDERATIONS
 - a. Give over 60 seconds to minimize pressor response to IV administration during RSI
 - b. Verbal and tactile stimulation should be kept to a minimum during recovery to reduce emergence reactions