

RX

DRUG NAME: Ketamine Hydrochloride

TRADE NAME: Ketamine, Ketanest, Ketaset, Ketalar

REVISED: May 1, 2012

Class:

- Dissociative anesthetic
- NMDA receptor antagonist

Mechanism of Action: Exact mechanism unknown.

Ketamine acts on cortex and limbic receptors, producing dissociative analgesia and sedation. Higher doses act on the Mu opioid receptor.

Indications:

- For use in medication assisted intubation in conjunction with a paralytic

Relative Contraindications:

- Most contraindications are related to the release of catecholamines increasing hypertension and tachycardia.
 - Hypertensive Crisis
 - Under the influence of methamphetamine or other similar drug
- Acute globe injury or glaucoma
 - Increased intraocular pressure
- When significant elevations in BP might prove harmful:
 - Aortic dissection
 - Acute Myocardial Infarction, angina
 - Intracranial hemorrhage
- Schizophrenia
 - Increases psychosis
- **Consider use of versed in above contraindications**

Dosage:

Adults/Peds:

- 2mg/kg slow IV push one minute prior to paralytic administration

Onset:

- 45-60 seconds
- Wait to give paralytic until onset of action

Duration:

- 5-15 minutes IV

Side Effects:

- | | | |
|----------------------|--------------------------|--------------------------|
| • Vivid Dreams | • Dysphoria | • Arrhythmias |
| • Hallucinations | • Hypersalivation | • CNS Depression |
| • Delirium | • N/V | • Respiratory Depression |
| • Recovery Agitation | • Anaphylaxis | |
| • Tachycardia | • Reemergence phenomenon | |
| • Hypertension | | |

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Protocol

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Interactions:

Additive/Potential Effects:

- Any medication that stimulates catecholamine release will result in hypertension, tachycardia and arrhythmias
- Benzodiazepines increase respiratory and CNS depression
- Opiates will increase respiratory and CNS depression
- Sedative hypnotics will increase respiratory and CNS depression

Physician PEARLS:

- **Because of the dissociative state many patients sedated with ketamine do not close their eyes**
- **Ketamine is the only anesthetic producing analgesia, hypnosis and amnesic effects**
- **In usual doses, protective airway reflexes, spontaneous respirations and cardiopulmonary functions are maintained**
- **Ketamine lacks the progressive dose-response relationship**
- **Ketamine produces a dose-related increase of heart rate and blood pressure which makes Ketamine the preferred induction agent for hypotensive patients**
- **Ketamine has demonstrated beta-adrenergic and vagolytic properties, which includes beta-2 stimulation making Ketamine the ideal induction agent for people with reactive airway disease/asthma.**
- **Ketamine increases salivary and bronchial mucous gland secretion through stimulation of cholinergic receptors, however it does not require Atropine for pretreatment**
- **Try to provide a calm, quiet atmosphere**
- **A single dose of Ketamine should last 5-15 minutes**
- **Rapid administration of Ketamine will cause apnea**
- **Reemergence phenomenon is a known entity. Consider benzodiazepines for continued sedation**
- **Pregnancy Category has not been established**