

IM Ketamine

Intro

IM ketamine is an alternative to IV sedation. It allows for sedation without an IV and has a low respiratory side effect profile. The disadvantage is that it takes longer to recover (60-120min), can not be easily titrated, and occasionally results in an emergence reaction of agitation.

Contra-indications

- Any patients with psychiatric history, severe anxiety or agitation. This increases the likelihood of emergence reaction.
- Ketamine is traditionally contra-indicated in situations where raised intra-cranial or intra-ocular pressure may be harmful or poorly tolerated.

Complications

- Vomiting: can occasionally occur as the patient wakes up. This can be treated with typical anti nausea medications if necessary. (usually occurs during emergence)
- Increased salivation: Rarely affects airway or breathing.
- Emergence reaction: occurs when the patient is waking up and can involve anxiety, agitation, psychosis, and hallucinations. Emergence reaction is significantly less common in children. The following have been shown to decrease emergence reaction:
 - patients are assured that the medication was safe and would provide complete analgesia during the procedure.
 - Patients are told that the anesthetic medication would allow them to dream about a topic of their choice
 - Patients are instructed to concentrate on that pleasant thought/dream during induction of anesthesia.
 - Patients are encouraged to share their thoughts and feelings before undergoing ketamine sedation.
 - Room lighting and noise stimuli are minimized as the patient wakes up and familiar friends or family at bedside.

Dosing

4 mg/kg IM

This is effective within 2 to 5 minutes, results in effective sedation lasting 15-30 minutes and a repeat IM dose (2-4 mg/kg) can be given after 10 to 15 minutes if the initial effect is inadequate

Airways and Respiration

Ketamine is an IM sedation of choice because it is so well tolerated in regards to airway and respiration.

- maintenance of airway reflexes
- risk of laryngospasm — rare (~0.4%)

Respiratory effects

- no suppression of respiratory drive
- bronchodilation