Evidence-Based Clinical Pathway: Ketamine PSA

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Primary Sources: Thomas, SH. Sedation in the ED (oudem.org/intranet/lectures.cfm). Green S, Krauss B. Clinical practice guideline for ED ketamine dissociative sedation in children. *Ann Emerg Med* 2004;44:460-71. Godwin S, et al. ACEP Clinical Policy: Procedural sedation and analgesia in the ED. *Ann Emerg Med* 2005; 45: 177-196. Sener S et al. Ketamine with and without midazolam for ED sedation in adults: A randomized controlled trial. *Ann Emerg Med* 2011;57:109

***ASA Classification:**

ASA Class I – No organic, physiological, biochemical or psychiatric disturbance. The pathologic process for which the operation is to be performed is localized and is not a systemic disturbance.
ASA Class II – Mild to moderate systemic disturbance caused either by the condition to be treated or by other pathophysiologic processes.
ASA Class III – Severe systemic disturbance or disease from whatever cause, even though it may not be possible to define degree of disability with finality.
ASA Class IV – Indicative of the patient with a severe systemic disorder already life-threatening, not always correctable by the operative procedure.
ASA Class V – The moribund patient who has little chance of survival but is submitted to operation in desperation.

****Ketamine contraindications (*Note*: Evidence for both strong and relative contraindications is non-definitive):**

- Age < 3 months
- Active psychosis

Relative:

- Age 3 to 12 months
- Hx of airway instability or tracheal surgery/stenosis
- Procedures involving posterior pharyngeal stimulation
- Active pulmonary or upper airway infection or disease
- Ischemic cardiac disease or CHF
- Head injury or CNS mass or hydrocephalus (inc. ICP)
- Glaucoma or acute globe injury
- History of seizures or psychosis
- Porphyria or thyroid disease

*****Pre-sedation Checklist:**

- Obtain parental/patient paperwork/consent
- Perform H/P and airway assessment
- No routine lab work necessary
- Establish EtCO2 (not required) and pulse oximeter (recommended) monitoring
- Cardiac monitoring if patient has cardiac history
- Note: Monitoring can (and often should) be connected to uncooperative pediatric patients only *after* PSA medication begins to take effect
- Airway cart should be available – supplemental O. Supplemental oxygen should be available but is not required.
- An EM Attending must supervise PSA

******Adjuncts (may be added to ketamine syringe)**

- **Atropine** 0.01 mg/kg IV or IM (max 0.3 mg) *OR* **Glycopyrrolate** 5 mcg/kg IV or IM (max 250 mcg); either is acceptable as antisialogogue
- **Midazolam** 0.1 mg/kg IV or IM reduces emergence reaction in adults; may also reduce post-PSA vomiting