Sedation

• An 8 year old patient must have a fracture reduction on the right arm. Which of the following is going to provide an appropriate sedation and analgesia during the procedure:

  a) Midazolam
  b) Chlortal hydrate
  c) Ketamine
  d) Fentanyl
Sedation

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Sedation

• From the mentioned agents, Ketamine is the only one providing both analgesia and sedation with amnesia at moderate doses.
• Midazolam provides sedation, amnesia and anxiolytic effect without analgesia.
• Chloral hydrate is only a sedative agent. Safe in younger than 3 years. Unpredictable onset and duration.
• Fentanyl is a potent opioid analgesic. Not anxiolytic, but may be combined with midazolam. May produce chest wall stiffness.
Procedural Sedation

You are taking care of a patient that needs laceration repair. You have decided to provide sedation using Ketamine.

Which of the following is an absolute contraindication to use it:

a) Porphyria
b) Minor oral pharyngeal procedures
c) Head trauma
d) Schizophrenia
e) Asthma
Procedural Sedation

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Ketamine

• Potent analgesia, sedation and amnesia maintaining cardiovascular stability and preserving spontaneous respirations and protective airway reflexes.

• Initially patient experiences a trance, eyes opened but unresponsive, normal or slight enhanced muscle tone, total amnesia and substantial or total analgesia, mild increase of heart rate and blood pressure; nystagmus common.
Ketamine

• Once threshold reached; additional doses do not enhance or deepen sedation.

• IV: 1.5 – 2.0 mg/kg over 30 – 60 seconds to avoid respiratory depression
  Clinical onset 1 minute
  Typical duration 5 – 10 minutes
  Typical time from dose to discharge 50 – 110 minutes
  May repeat 0.5 - 1.0 mg/kg if initial sedation inadequate or longer procedure
Ketamine

• IM: 4 – 5 mg/kg.
  Clinical onset 5 minutes
  Typical duration 20 – 30 minutes
  Typical time from dose to discharge 60 – 140 minutes
  May repeat full or half dose if inadequate sedation after 5 – 10 min
Ketamine

Adverse effects: Emesis 8%
  Recovery agitation mild 6%
  Transient apnea or resp depression 0.8%
  Transient laryngospasm 0.3%

• Absolute Contraindications:
  - Younger than 3 month of age.
  - Schizophrenia.
Ketamine

• Relative Contraindications:
  - Major oral procedures (Endoscopy)
  - Airway instability, tracheal surgery or tracheal stenosis
  - Active pulmonary disease, including Asthma or URI
  - Suspected cardiovascular disease (Increased sympathomimetic properties)
  - CNS abnormalities or hydrocephalus (Increased ICP)
  - Glaucoma or acute ocular injury
  - Porphyria, thyroid disease or medication
References


