Drugs in the Trauma Patient N’at

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Overview

- Rapid sequence intubation (RSI)
- Analagosedation in trauma
- Tranexamic Acid (TXA)

7 Steps of RSI

- Pretreatment-LOAD
  - Both not typically given!!!
  - Lidocaine
    - Prevention of increase in intracranial pressure (ICP)
  - Atropine
    - Prevention of vagal response (bradycardia)

Induction Sedatives

- Etomidate
  - Quick onset (10-15 secs) and minimal hemodynamic effects
  - Dosing = 0.3 mg/kg
  - Trick to preparing: Take the dose and divide by “2” to get how many mLs you have to draw up

Sedatives

ETOMIDATE
KETAMINE
PROPOFOL
**Induction-Sedatives**

- **Propofol**
  - Hypnotic like effects on GABA
  - Dosing 1.5-2 mg/kg
  - Monitoring
    - Hypotension
    - Bradycardia

- **Ketamine**
  - NMDA antagonist
  - Dosing 1.5-2 mg/kg
  - Monitoring
    - Increases blood pressure
    - Emergence reaction
  - Concentrations

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**Ketamine & Increased Intracranial Pressure?**

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**Paralytics**

**Succinylcholine**

- Quick onset and offset
- Dosing 1.5 mg/kg
  - Typically 100-200 mg
- 20 mg/mL

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**Depolarizing Agents**

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Succinylcholine

- Adverse effects
  - Hyperkalemia
  - Fasciculations

- Who do we avoid its use in?
  - Patients with known/suspected hyperkalemia (dialysis, rhabdo)
  - Burn/trauma patients after 24 hours of incident

Non-Depolarizing Agents

- Rocuronium
  - Dosing = 1-1.2 mg/kg
  - 10 mg/mL
  - Onset ~60 seconds & duration ~45 minutes
  - Does not cause fasciculations or worry about hyperkalemia

REMEMBER...

...Always give sedatives BEFORE paralytics...

Next Comes Intubation

Clinical Scenario

- A 43 year old male comes in for severe COPD exacerbation and requires RSI. His weight was estimated as 80kg and he does not have any other PMH or allergies

- He was given etomidate 24mg and rocuronium 80mg and successful intubation was achieved
Clinical Scenario

- 15 mins after the RSI meds were given, the patient’s BP increases to 180/130 and HR is 160. His initial vitals were 130/70 and HR of 80.

- What is wrong?

Post Intubation Analgosedation

Analgesia-Opioids

- Fentanyl
- Hydromorphone

Monitoring
  - Pain/sedation level
  - Hypotension

Post-Intubation Sedatives

- Propofol
  - Typical sedative of choice
  - IV continuous infusion at 15-50 mcg/kg/min

Monitoring
  - Sedation level
  - Hypotension
  - Bradycardia

Ketamine

- Can be used in the hypotensive or respiratory failure patient
- IV continuous infusion 1-2+ mg/kg/hour

Monitoring
  - Sedation level
  - Hypertension
  - Emergence reactions

Benzodiazepines

- Midazolam
  - Can be given as intermittent bolus or infusion
  - 1-5 mg/hour IV infusion

- Lorazepam
  - Can be given as intermittent bolus
  - We do not typically give as a continuous infusion (but you can)
Post-Intubation Sedatives

- Bolus dosing vs. continuous infusion

**TXA**

- Inhibits fibrinolysis (breakdown of clots)
- Dosing
  - Loading dose: 1000mg over 10 minutes
  - Maintenance dose: 1000mg over 8 hours
- More effective if given early on
- Administration

**TXA**

- Adverse effects
  - Hypotension with rapid administration
  - CNS: Giddiness
  - Thrombosis (<1%)
  - Allergic reactions (<1%)

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