

OMD Podcast Ketamine for Airway Management: The and the Ugly

Summary Points:

- The Scope of Discussion
- Why Ketamine is Great
- The Lies You Have Heard About Ketamine
- Why We Use Ketamine
- Realistic Expectations for Ketamine
- Ways to Deploy Ketamine in DAA
- Hypotension After Ketamine
- How This Applies In the Field
- How Does This Change Ketamine



• Scope of the Discussion

- Use of ketamine for Drug Assisted Airway (DAA) Management
- NOT going to talk about:
 - Ketamine in excited delirium/behavioral emergencies
 - Ketamine pain dose (not in protocol)

• Why Ketamine Is Great

- Has both sedative/dissociative and analgesic properties
 - Makes you sleep and makes the pain go away (we have used brain on vacation analogy)
- Causes release of adrenaline/epinephrine from adrenal glands which can cause tachycardia and increase in blood pressure EXCEPT in certain situations
- Ketamine is thought of a sedation medication that is “Hemodynamically neutral” meaning it does not severely impact the blood pressure when administered SOMETIMES



• The Lies You Have Heard About Ketamine

- Ketamine is NOT (always) hemodynamically neutral
 - Chronic illness
 - Severe acute illness (sepsis, PE, MI)
 - Rapid Push
 - In the setting of other medications (especially benzos)
- In severely ill patients, do NOT count on the positive side-effects of ketamine on BP/HR
- BP will likely not go up and may go DOWN with ketamine

• Why Do We Use Ketamine Then?

- Has a chance of being hemodynamically neutral when compared to alternative sedatives (midazolam/propofol/etomidate)
- May preserve:

- Protective airway mechanisms (gag reflex retained)
- Respiratory drive
- All said it is a tool that is best used in specific situations, and is the least deleterious of available sedation agents

- **Realistic Expectations with Ketamine**

- It may or may not improve and could actually WORSEN your hemodynamics
 - Approach each use with this in mind and be prepared for the worst
- It will likely cause increased airway secretions
 - Suction is even more important in DAA
- Can cause laryngospasm
 - Can usually be broken with positive pressure or paralytics when available
- Watch second doses:
 - Higher doses come with higher risk of hypotension

- **Ways to Deploy Ketamine for Drug Assisted Airway (DAA) Management**

- DAA is intended to allow you minimize challenges when managing an airway by providing sedation and relaxation
- DAA also does NOT mean the patient only gets an ETT
 - Can facilitate a quick King if goals can't be met

- **Ketamine and Delayed Sequence Intubation (DSI)**

- DSI is intended to allow preoxygenation/airway placement in an agitated patient who is not adequately oxygenating and ventilating spontaneously
 - NOT ALL airways need Ketamine
 - Allows you to calm the patient to allow safe and controlled airway management
- Sets you up to properly manage an airway with preoxygenation, proper kit dump and calm collected action
 - May be a king, may be an ETT, may even be facilitated BVM use

- **Hypotension After Ketamine**

- Once you push Ketamine, you are COMMITTED to the Airway
 - May mean ETT or king
- If patients become Hypotensive AFTER ketamine is given, take the airway while simultaneously treating the hypotension
 - Consider having IVF and push-dose pressors ready prior to giving
- If BP or SPO2 drops suddenly, consider quick King and work the vitals in tandem

- **How Does This Change Ketamine**

- Assess your patient prior to administration
 - Consider Shock Index
 - Vitals and what was necessary to get there
 - Did it require a bolus and pressors to meet goals or no intervention?
 - The more you needed to do the higher the risk

- Is this a patient that can tolerate Ketamine?
- There will be times where you are stuck with a poor candidate with no other options
 - Prepare for the known side-effects by prepping PDP and IVF
 - Be ready to transition to quick King instead of ETT
- Ketamine less likely to be helpful in unresponsive GCS3 patients
 - May be helpful if muscle tone is hindering airway management
 - If completely unconscious and loose, ketamine unlikely to help and may cause complications

SUMMARY IN BRIEF

- Ketamine can cause hypotension
- DAA is not necessary in all airway management cases
- Prepare for hypotension prior to ketamine administration
 - If patient becomes hypotensive after initiation of DAA, manage airway and hypotension in tandem (complete your tube/quick king)