**REBEL Cast April 2015 – Show Notes**

**The Crashing Asthmatic**

Acute severe asthma is defined as severe asthma unresponsive to repeated courses of beta-agonist therapy or subcutaneous epinephrine. It is a medical emergency that requires immediate recognition and treatment. Recently, Anand Swaminathan (Twitter: [@EMSwami](https://twitter.com/EMSwami)) gave a lecture to the residents at the University of Texas Health Science Center at San Antonio (UTHSCSA) February 2015.

**Summary of Heroic Medical Measures**

1. Focus on breathing, circulation, airway, not airway, breathing, circulation.
2. Pre-oxygenate your patient with high flow nasal cannulat at 20 – 30 LPM
3. IM Epinephrine 0.3 – 0.5mg of 1:1000
4. Non-Invasive Positive Pressure Ventilation (NIPPV)
5. Corticosteroids
6. IV Magnesium Sulfate 2g x3 during 1st hour
7. IVF 30cc/kg
8. Sub-Dissociative Ketamine (0.1 mg/kg bolus followed by IV infusion of 0.5mg/kg/hr for 3 hours)
9. Delayed Sequence Intubation: Procedural sedation to help facilitate pre-oxygenation
10. IV epinephrine 1:10,000 concentration

**Summary of Intubation**

1. Nasal Oxygen During Efforts Securing A Tube (NO DESAT)
2. Induction Agent: Ketamine 1 – 2mg/kg IV
3. Paralytic Agent: Rocuronium 1.2mg/kg IV

**Summary of Ventilation Management**

1. Permissive Hypercapnia
   * RR 6 – 8 breaths/min
   * Tidal Volume 6cc/kg of IDEAL BODY WEIGHT
   * Peak Flow 90 – 120 L/min
2. Keep Plateau Pressure < 30mmHg
3. Paralyze for Ventilator Asynchrony
4. Hemodynamic Instability:
   * Consider Inhalational Anesthetics by anesthesiology
   * Consider V-V ECMO if available
5. DOPES mnemonic
   * Displacement of tube
   * Obstruction of tube
   * Pneumothorax
   * Equipment Failure
   * Stacked Breaths