

# POCKET INTENSIVIST: PHYSIOLOGICALLY DIFFICULT AIRWAY

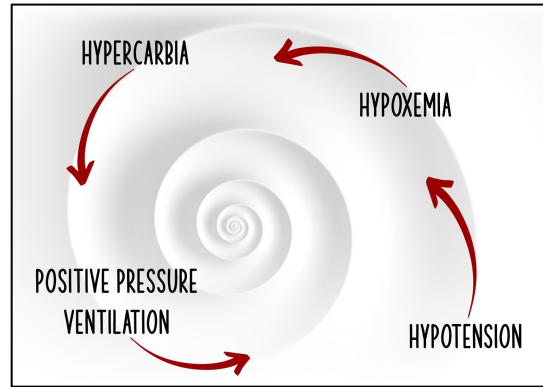
## STEP #0: WILL INTUBATION FIX THE PROBLEM?

Dyspnea isn't always a lung problem. Major drivers of subjective dyspnea are:

1. Poor air movement
2. Hypercapnia
3. Metabolic Acidosis
4. Shock

Intubation doesn't fix **metabolic acidosis or shock**, and can in fact precipitate a vicious cycle that results in rapid hemodynamic deterioration. It doesn't make sense to intubate a patient **FOR** shock or metabolic acidosis...

But sometimes you must intubate a patient **WITH** shock or metabolic acidosis.



## CONSIDERATIONS FOR PULLING THE TRIGGER TO INTUBATE

- 1) Work of breathing, especially accessory muscle use
- 2) Timeline to reverse underlying cause of metabolic acidosis or shock
- 3) Trajectory of both work of breathing and improvement of underlying cause

ABG with appropriate respiratory compensation in acute metabolic acidosis:

CO<sub>2</sub> = Last two digits of pH (eg: 7.24 / 24 / 80 / 10)

BiPAP can buy time to treat underlying problem and/or prepare for intubation

## GENERAL APPROACH TO INTUBATION

- 1) **Rapid** intubation with whatever modality (VL, DL, bougie, etc) you are **most comfortable** with
- 2) Prepare for hypotension: Place A-line if possible, pressors running, push-dose pressors ready
- 3) Ketamine 1-2 mg/kg IV probably induction agent of choice in most patients

## STRATEGIES FOR SPECIFIC UNDERLING PATHOLOGIES

Shock: Hypovolemia, Sepsis, Bleeding

- LOTS of fluids and/or blood | Norepi | PPV not helpful (start at PEEP 5)

Shock: Left-sided heart failure

- Fluids NOT helpful | Norepi (vs Epi) | PPV helpful (start at PEEP 8-10)

Shock: Tension pneumothorax, Cardiac tamponade

- LOTS of fluids and/or blood | Norepi | PPV disastrous (GENTLE with bagging & PEEP 5)
- Decompress **FIRST** if at all possible, if not then prepare to decompress immediately after

Shock: Pulmonary hypertension and RV failure

- Fluids **HARMFUL** | Epi (vs Norepi) | Balance minimizing PPV with optimizing O<sub>2</sub> & CO<sub>2</sub>
- Consider inhaled pulmonary vasodilator going through HFNC during intubation

Metabolic Acidosis

- Minimize apnea time: BiPAP bridge, bag between attempts
- Fluids generally helpful | Norepi | High minute ventilation (Vt 8-10cc/kg, RR 24-28, Ti 0.7)