



Managing the Failed Airway

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Objectives

1. Comfortable decontaminating the soiled airway
2. When to consider cricothyrotomy
3. Cricothyrotomy procedure and technique

Main objective is to help you **stay calm** when things don't go as planned and save the failed airway.

Assessing the Difficult Airway

- What Hemodynamic issues/instability might affect my airway management?
-> CRASH
- Is Laryngoscopy possible? -> LEMON
- Can I pre-oxygenate or BVM?
-> MOANS
- Can I use an extraglottic device?
-> RODS
- Can I do a cricothyrotomy? -> CRASH





Case 1: Upper GI bleed

76 yo M, PMH MM, asthma, HCV, BIBA in cardiac arrest.

- CPR in progress
- Being bagged with bloody secretions/hematemesis





Airway Issues

- CPR in progress
- GI bleed
- Blood and secretions in airway

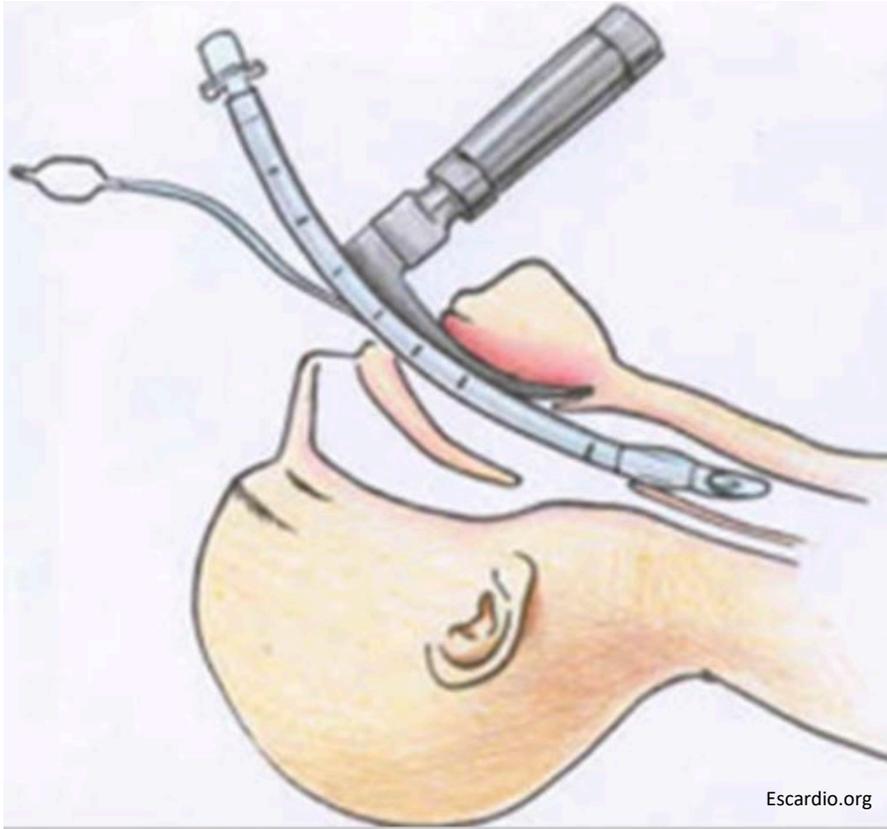


WHAT NEXT???



Attempted VL From Above

- Induction/Paralytic meds
- VL with standard Yankauer catheter





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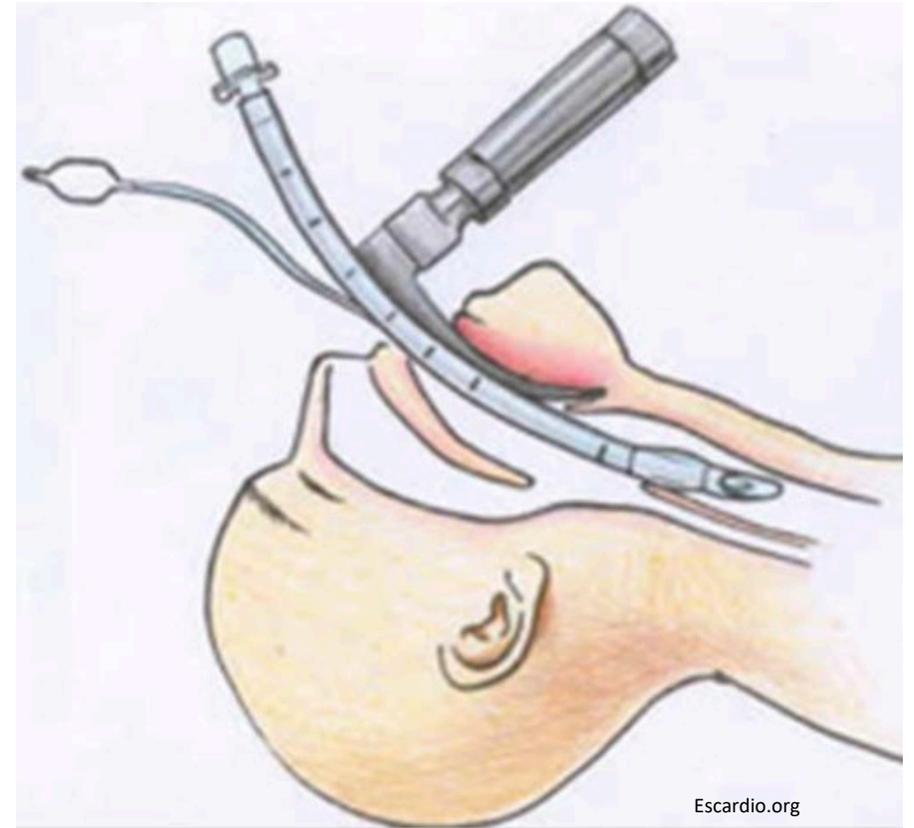


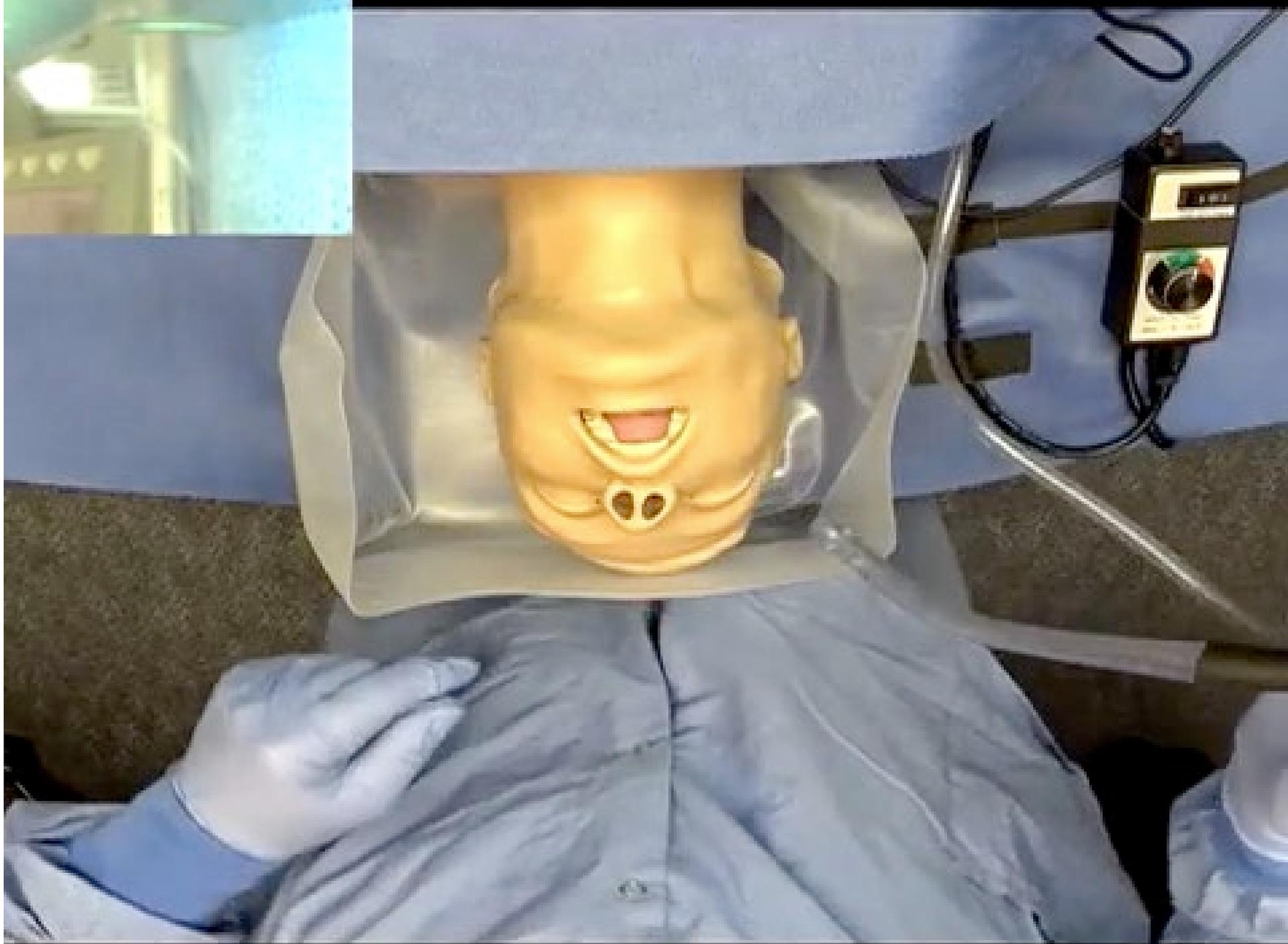
What is our next move?

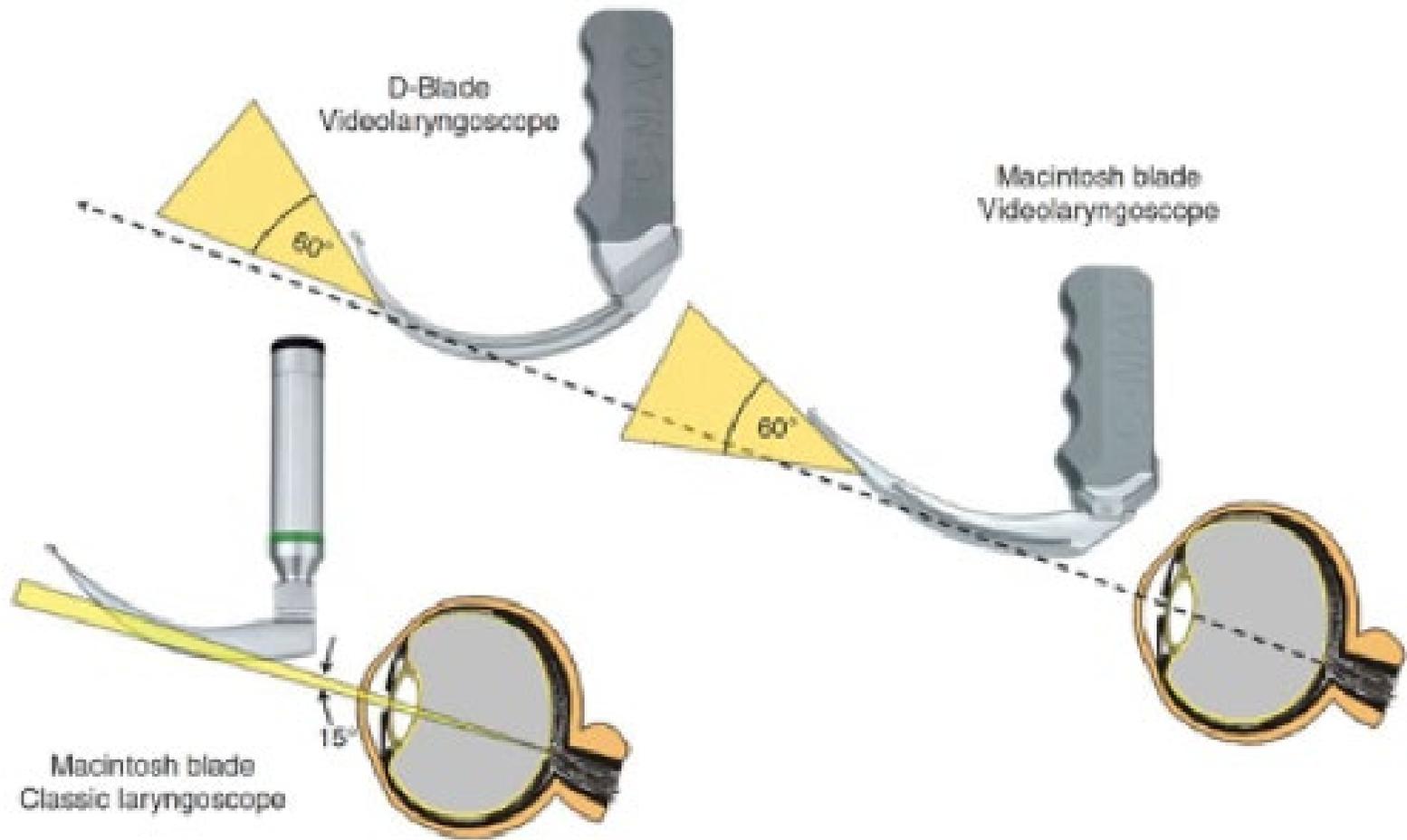
- Third attempt?
 - How are you going to improve visibility?
 - Bougie?
 - More suction?

- Move to cric?

Suction Assisted Laryngoscopy Airway Decontamination (SALAD)









Back to our case

- VL from above successful with SALAD technique
- Cordis placed and MTP given
- Blackmore tube placed- 300ml hematemesis

- Resuscitation lasted over an hour however efforts unsuccessful



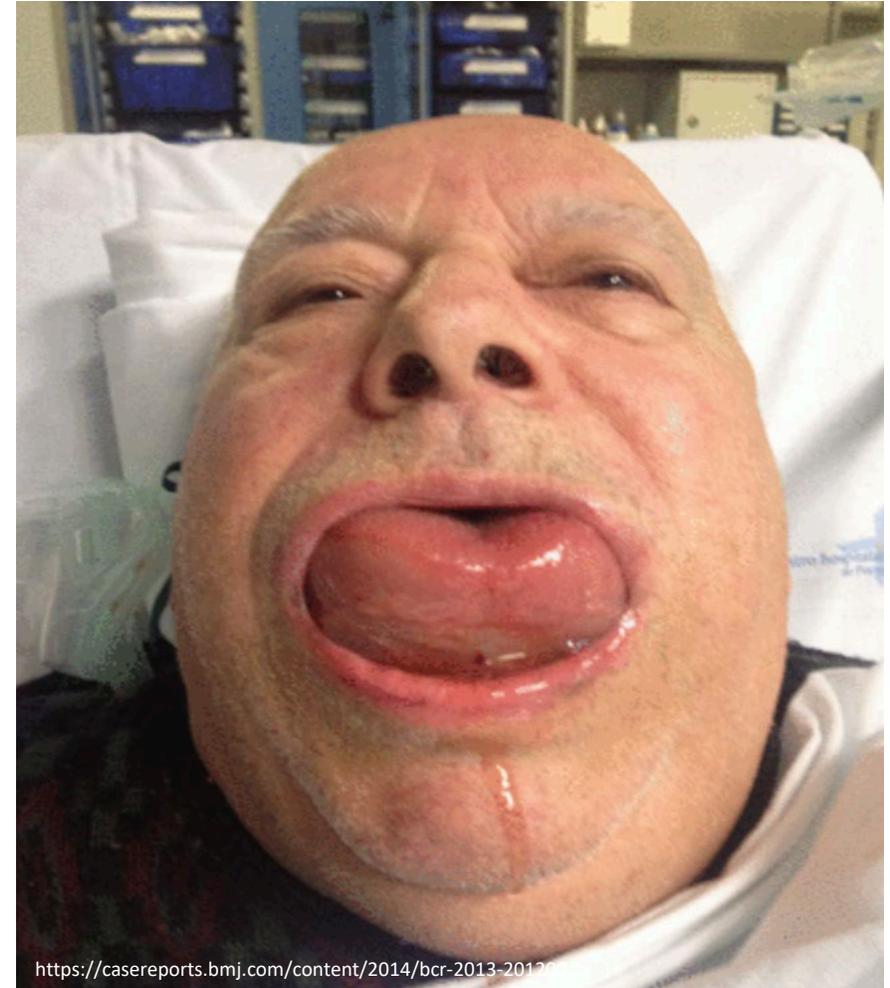
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Case 2: Angioedema vs Anaphylaxis

69 y.o. p/w lip and tongue swelling.

- BP: 160/90
- HR: 110
- RR: 30
- O₂ Sat: 94%
- Temp: AF





Airway Issues

- Significant lip and tongue swelling
- Time
- Upper vs Lower airway involvement
- Anaphylaxis vs angioedema



WHAT NEXT???



Angioedema vs Anaphylaxis

- Round 1: IM Epi, IV steroids, Albuterol
- Round 2: Albuterol, famotidine, IM epi
- “Pt with SOB and c/o difficulty breathing”
- 20 minutes after arrival pt coded

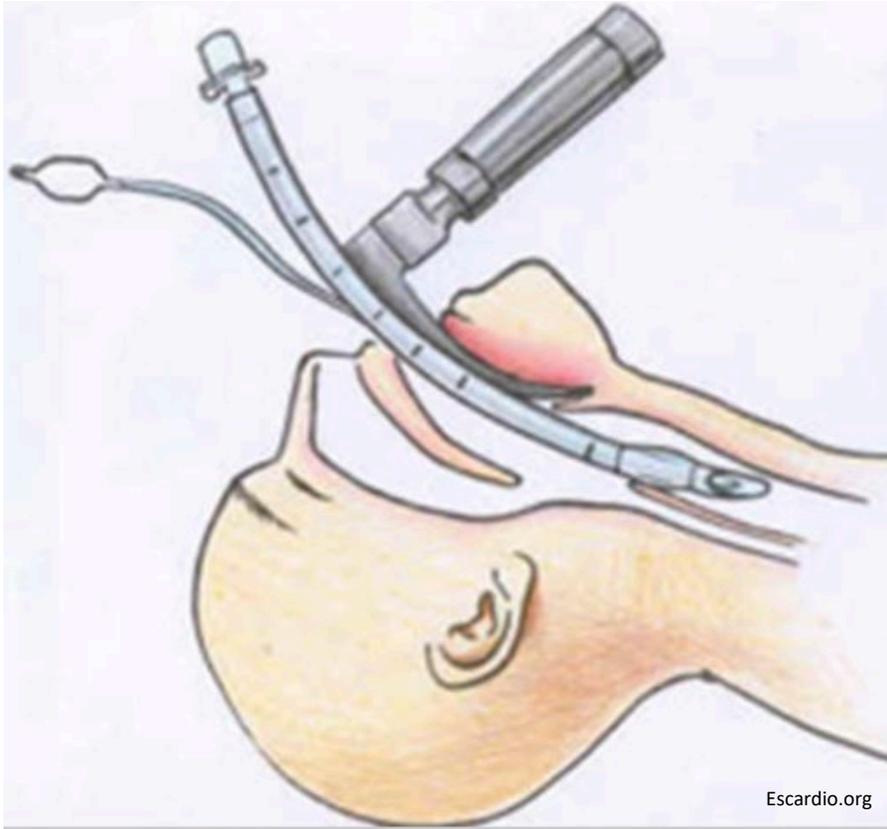




Attempted VL From Above

- Induction/paralytic meds
- VL attempted
 - FAILED

MOVE TO CRIC!!

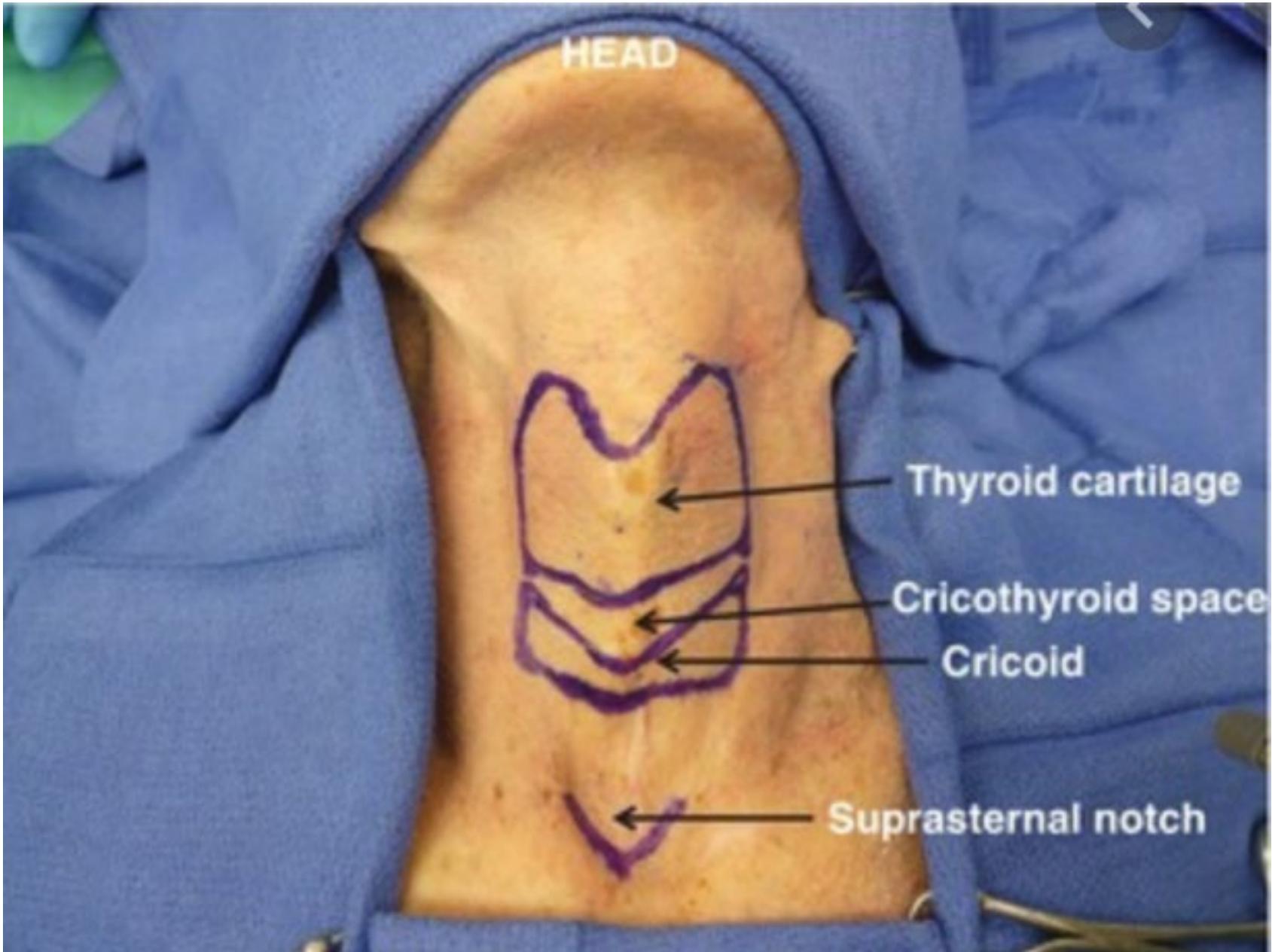




Cricothyroidotomy

- Needle versus surgical technique
- Indications
 - Can't intubate, can't oxygenate/ventilate
- Contraindications
 - Tracheal injury
 - Pediatrics (< 8-10 yo) - do a needle cric



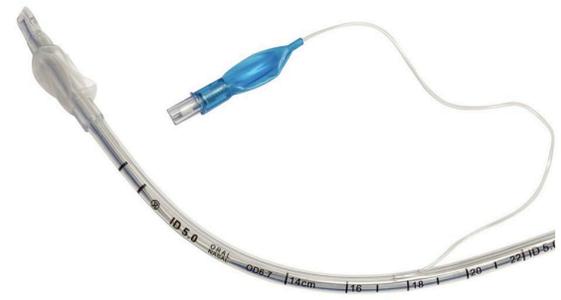
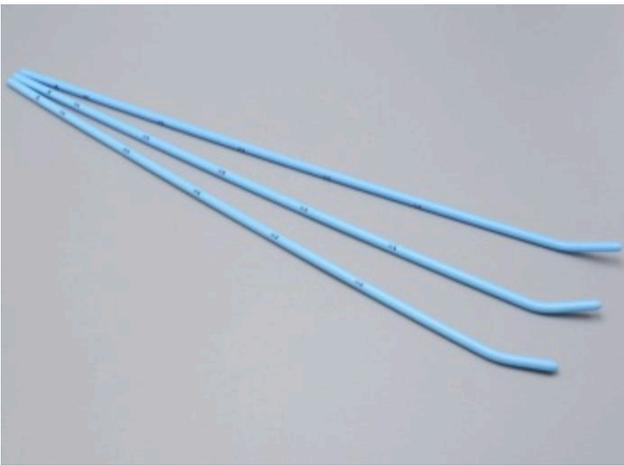






Surgical (incisional) Cricothyroidotomy

- Crash airway
- Assemble equipment
 - Scalpel, bougie, ETT
 - Optional: +/- lidocaine with epi, tracheal hook, trousseau dilator, 6.0 cuffed tracheostomy tube



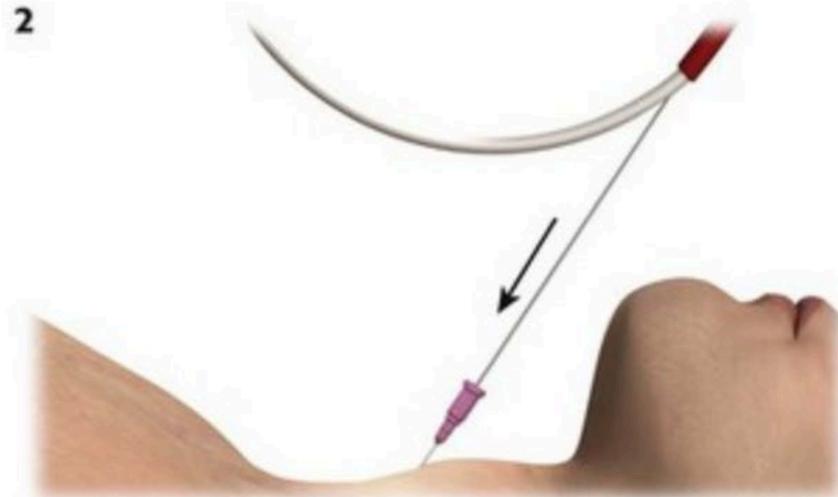




MELKER PERCUTANEOUS CRICOTHYROTOMY



Palpate the cricothyroid membrane and advance the needle at a 45° angle in a caudal direction. Aspirate on the saline-filled syringe as you advance; air bubbles will enter the syringe when the trachea is entered.



Advance the catheter over the needle and then remove the needle. Thread the guidewire through the catheter into the trachea. Once the guidewire is in place, remove the catheter.



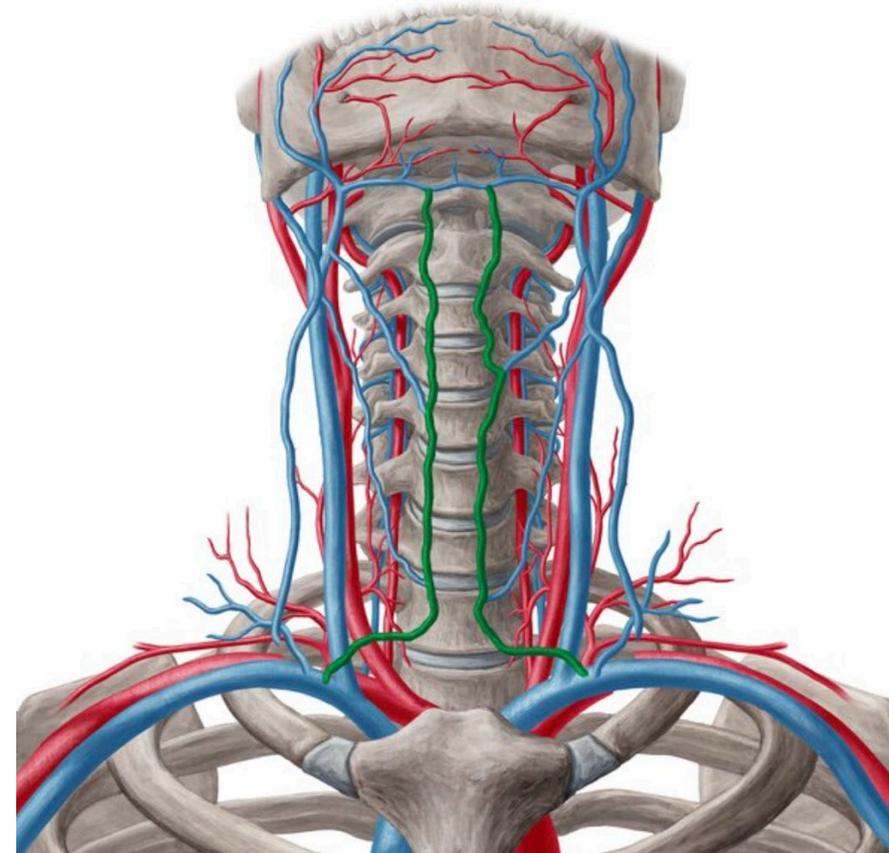
Make a small incision at the point of guidewire entry to facilitate passage of the dilator and airway catheter.



Place the dilator into the airway catheter and thread them over the wire as a unit until it is flush with the skin. Remove the guidewire and dilator, confirm placement, and secure.

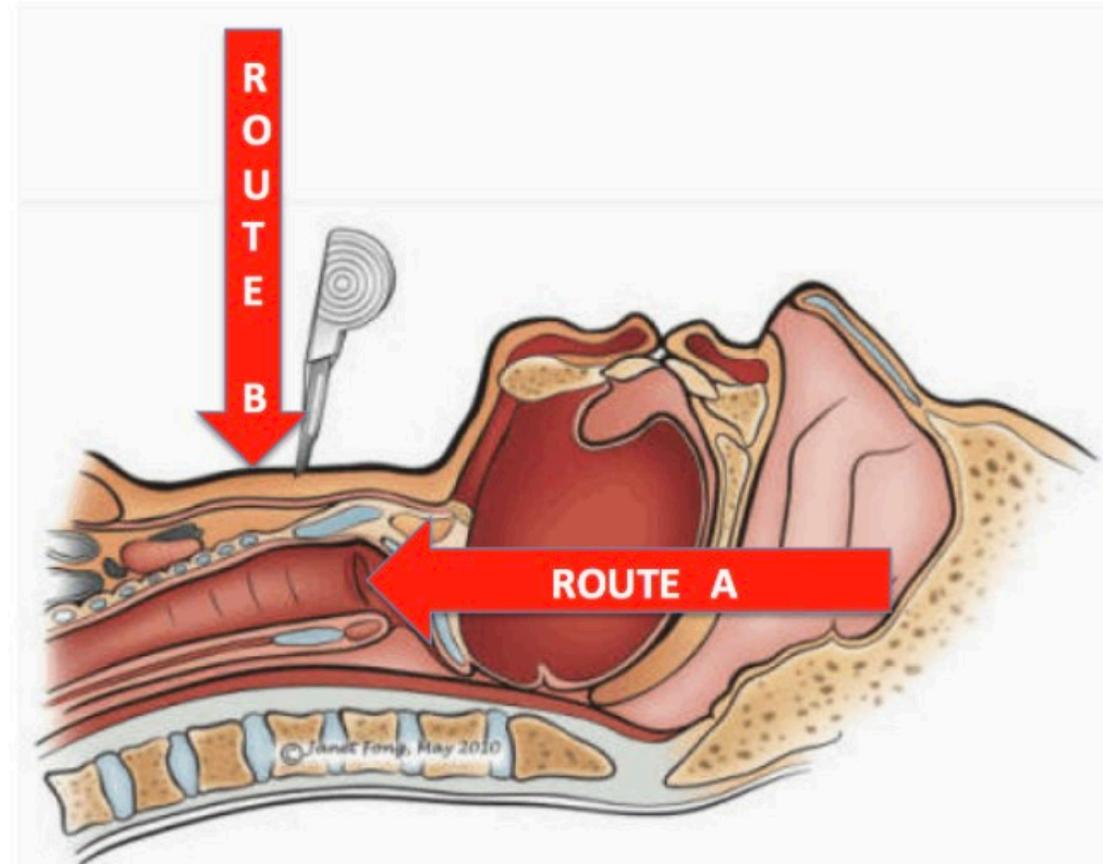
Back to our case

- Attempt by ED at cricothyrotomy unsuccessful
- ENT/Surgery arrive and after multiple other attempts, cric successful.
- Pt achieves ROSC and is sent to ICU
- Noted in OR that initial attempts were too lateral with ligation of superior thyroid artery
- Pt with anoxic brain injury and died



ED Case Review

- Prediction of airway collapse
- Delay in double prep
- Delay in back-up
- Delay in doing cric
- Too many attempts? Tried 4 times with a delay to cric resulting in hypoxic arrest and anoxic brain injury





Conclusion

- SALAD technique to improve view when obstructed
- Blade selection is important in the soiled airway
- Consider cricothyrotomy early- BE PREPARED
- Know your anatomy and stay midline with cric
- Don't be afraid to cut

A tropical beach scene at sunset. The sky is a mix of blue, orange, and yellow, with scattered clouds. The sun is low on the horizon, casting a golden glow over the ocean and the beach. Two palm trees are prominent: one on the left side of the frame, leaning towards the center, and another on the right side. The ocean is a deep blue-green color, and the beach is a light tan. In the distance, two small, dark islands are visible on the horizon. The overall mood is peaceful and serene.

Thank you!

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