

Introduction

Learning Objective

To illustrate a stepwise awake-to-sedated nasal fiberoptic intubation strategy in a patient with submandibular abscess and trismus, preserving spontaneous ventilation and avoiding airway compromise.

Background

- Deep neck infections can cause severe distortion of airway anatomy.
- Trismus and swelling increase difficulty of both mask ventilation and direct laryngoscopy.
- Flexible fiberoptic nasal intubation remains the gold standard in such cases.

Case Description

- **84-year-old** man with dementia + large (6 × 3 × 5 cm) **submandibular abscess**.
- **Airway exam:** Mallampati III, <2 cm mouth opening, oropharyngeal narrowing, tracheal deviation.
- **Plan:** Awake nasal FOI per ASA Difficult Airway Algorithm.
- **Issue:** Patient agitation from dementia → transitioned to **sedated FOI** while preserving spontaneous breathing.
- **Outcome:** Successful 7.0 mm nasal ETT placement; procedure uneventful; awake extubation.

Intraoperative Management

- Topicalization included nebulized/atomized 4% lidocaine, oxymetazoline, and lidocaine jelly; the left naris was chosen.
- Sedation with dexmedetomidine, ketamine, and low-dose propofol preserved spontaneous respirations.
- A flexible bronchoscope guided a 7.0 mm nasal ETT into the trachea. Incision and drainage yielded ~60 mL of purulent material.

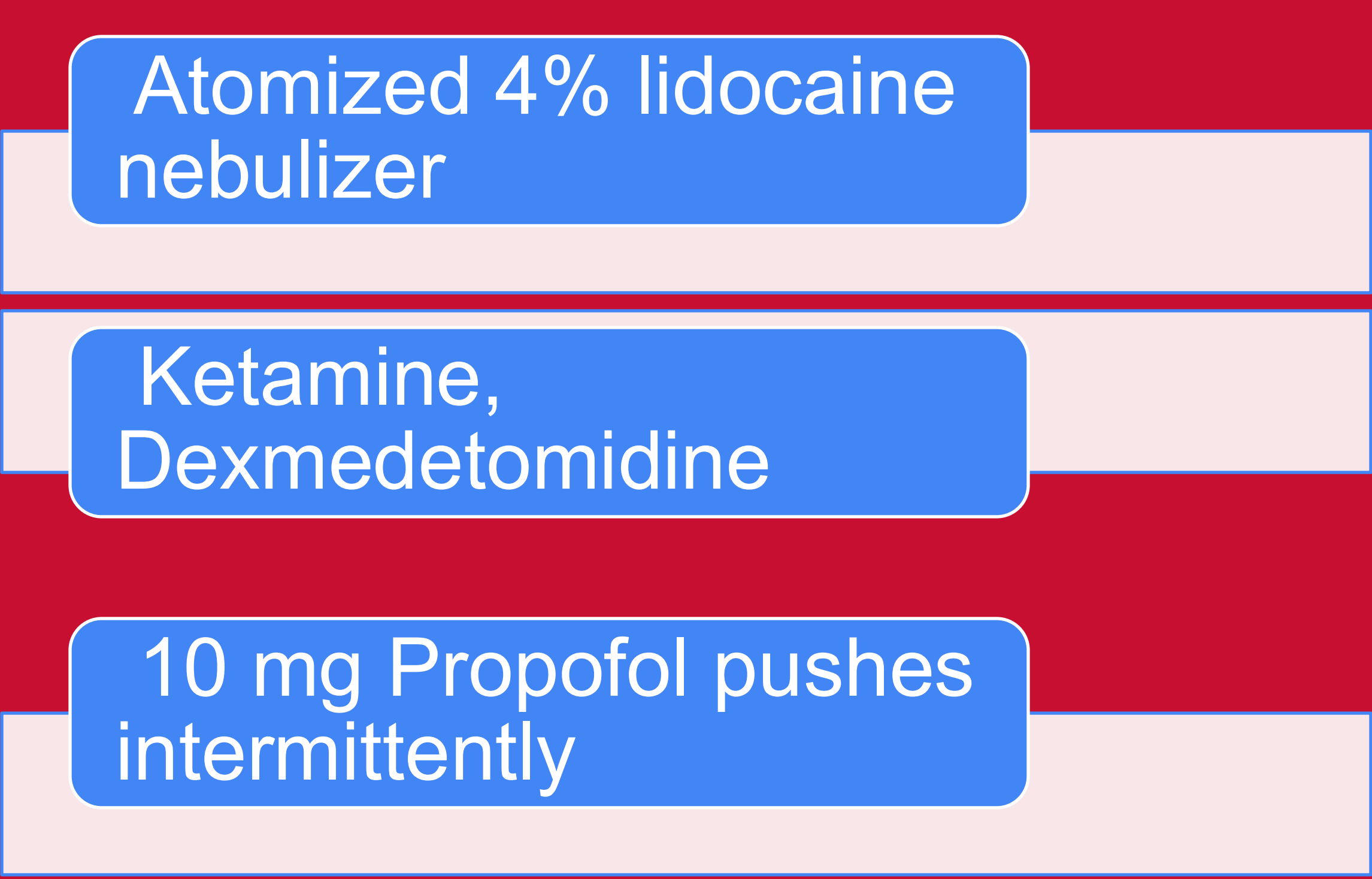
Threading the Needle: Sedated Nasal Fiberoptic Intubation in a Geriatric Patient With Trismus and Deep Neck Abscess

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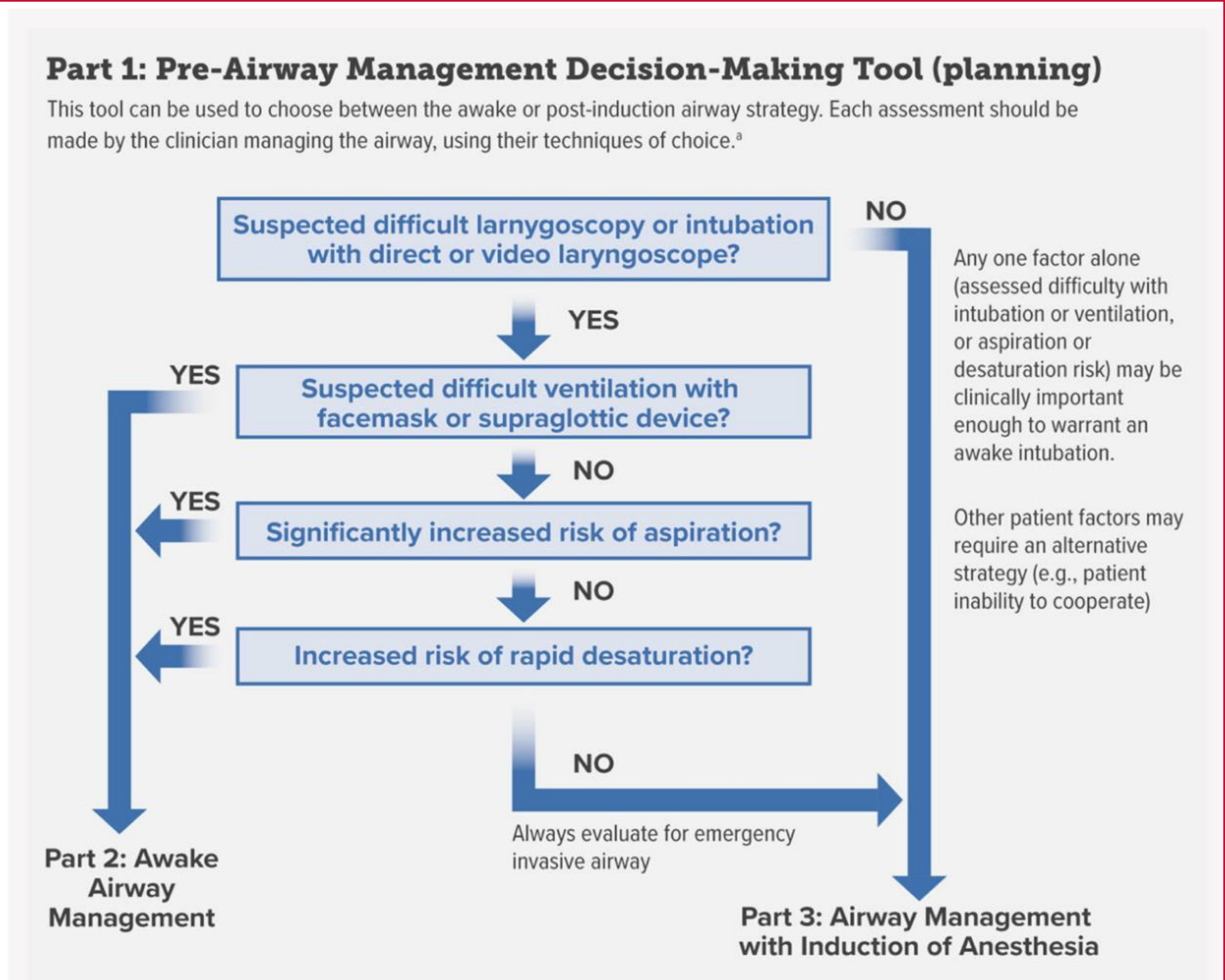
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Sagittal CT demonstrating severe trismus with restricted oral aperture



Stepwise airway management strategy emphasizing preservation of spontaneous ventilation



ASA Difficult Airway Algorithm:

Limited mouth opening raised concern for difficult mask ventilation and supraglottic airway placement, guiding the decision to pursue an awake airway approach.



Postoperative Management

Ensured patient had:

- Robust spontaneous tidal volumes
- Intact airway reflexes
- Stable hemodynamics
- **Awake extubation** to avoid collapse in distorted airway

Continued treatment: **IV antibiotics**, surgical follow-up
Close monitoring given risk of edema-related re-obstruction after deep neck infections

Discussion

Deep neck infections with trismus create **complex, high-risk airways**.
Why nasal FOI?

- Oral route not feasible (<2 cm opening)
- Nasal trajectory more aligned with glottic inlet in distorted oropharynx

Why sedated rather than awake FOI?

- Awake attempt limited by agitation from dementia
- Sedation regimen preserved ventilation while reducing struggling

Case highlights:

- Importance of adaptable airway strategy
- Multimodal topicalization
- Team coordination with ENT
- Preparedness for surgical airway if needed

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