HealthCare

Management of Dysphonia

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Faculty Disclosure

- No financial disclosures

Educational Need/Practice Gap

Gap = Difference between current practice and optimal practice relevant to the educational need

Need = The issue/problem that underlies the practice gap

Objectives

Understand	Understand the physical exam that is performed for evaluation of the voice
Ask	Ask a focused history related to voice disorders
Explain	Explain to patients the management of vocal fold lesions
Screen	Screen patients who are at high risk for laryngeal carcinoma

Expected Outcome

- What is the desired change/result in practice resulting from this educational intervention?
  - Prompt referral to laryngology for voice changes >4 weeks
  - Focused history related voice changes

History- What I Ask

- Duration of symptoms
- Since onset- is the voice better, the same, or worse
- When was the last normal voice?
- Circumstances of onset?
- Associated with a URI?
- How do you characterize your voice?
- Prior treatment?
- Aggravating factors?
- Alleviating factors?
- Vocal fatigue?
- Vocal pain?
- Do you run out of air/breath when talking?
- Pulmonary history/inhaler use?

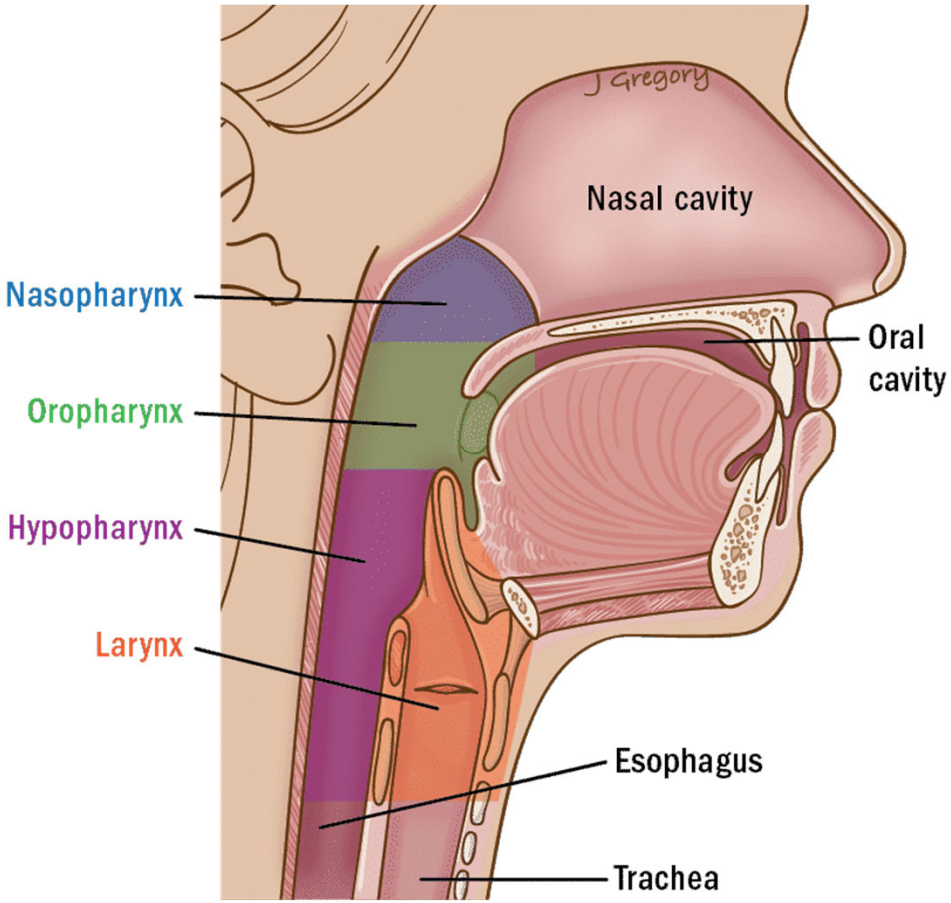
Laryngoscopy

- Any patient with >4 weeks of dysphonia should have a laryngoscopy

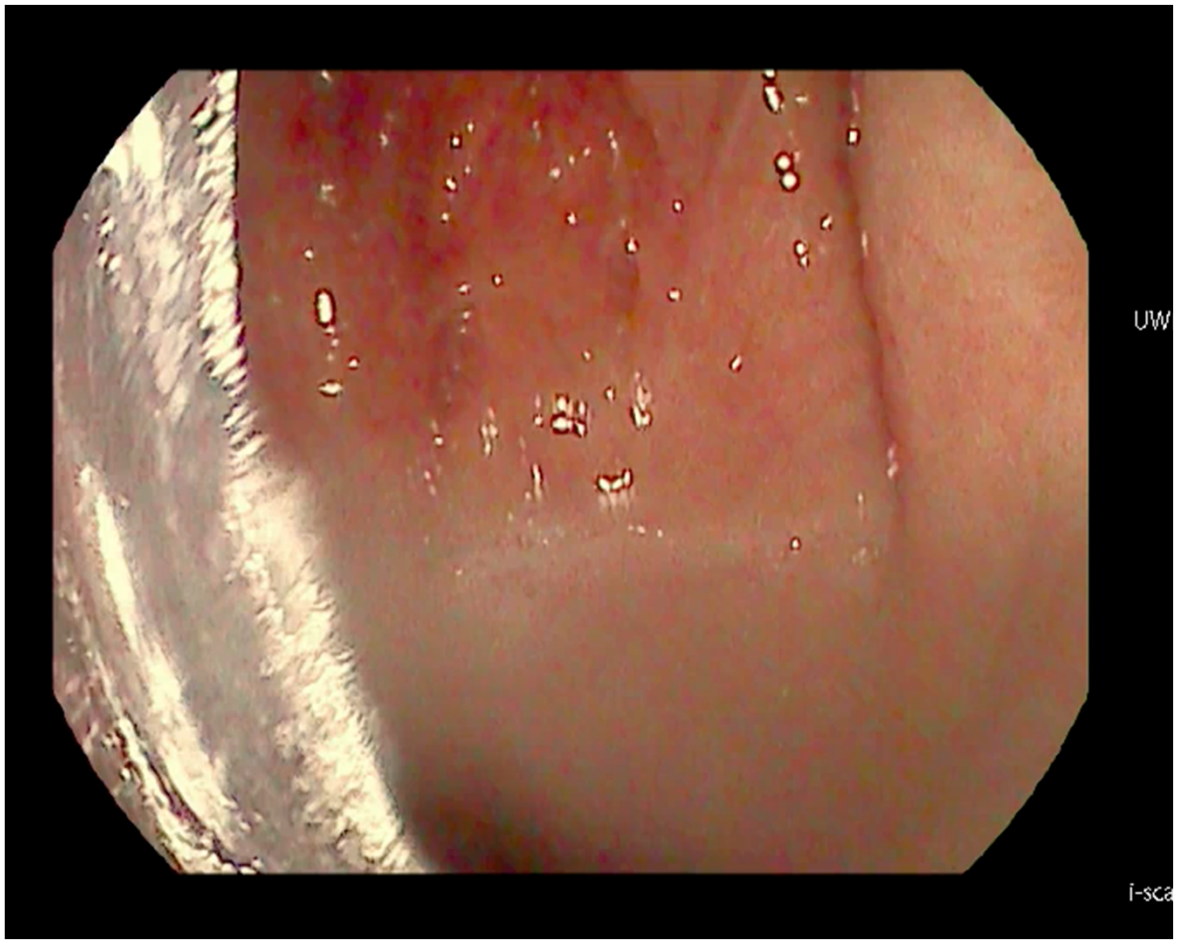
Table 4. Summary of Evidence-Based Statements.

Statement	Action	Strength
1. Identification of abnormal voice	Clinicians should identify dysphonia in a patient with altered voice quality, pitch, loudness, or vocal effort that impairs communication or reduces QOL.	Recommendation
2. Identifying underlying cause of dysphonia	Clinicians should assess the patient with dysphonia by history and physical examination for underlying causes of dysphonia and factors that modify management.	Recommendation
3. Escalation of care	Clinicians should assess the patient with dysphonia by history and physical examination to identify factors where expedited laryngeal evaluation is indicated. These include but are not limited to recent surgical procedures involving the head, neck, or chest; recent endotracheal intubation; presence of concomitant neck mass; respiratory distress or stridor; history of tobacco abuse; and whether the patient is a professional voice user.	Strong recommendation
4a. Laryngoscopy and dysphonia	Clinicians may perform diagnostic laryngoscopy at any time in a patient with dysphonia.	Option
4b. Need for laryngoscopy in persistent dysphonia	Clinicians should perform laryngoscopy, or refer to a clinician who can perform laryngoscopy, when dysphonia fails to resolve or improve within 4 weeks or irrespective of duration if a serious underlying cause is suspected.	Recommendation
5. Imaging	Clinicians should *not* obtain computed tomography (CT) or magnetic resonance imaging (MRI) for patients with a primary voice complaint prior to visualization of the larynx.	Recommendation against
6. Antireflux medication and dysphonia	Clinicians should *not* prescribe antireflux medications to treat isolated dysphonia based on symptoms alone attributed to suspected gastroesophageal reflux disease (GERD) or laryngopharyngeal reflux (LPR), without visualization of the larynx.	Recommendation against

Flexible Laryngoscopy



Flexible Laryngoscopy



Direct Laryngoscopy

- https://www.youtube.com/watch?v=S2lnltRWt7Y

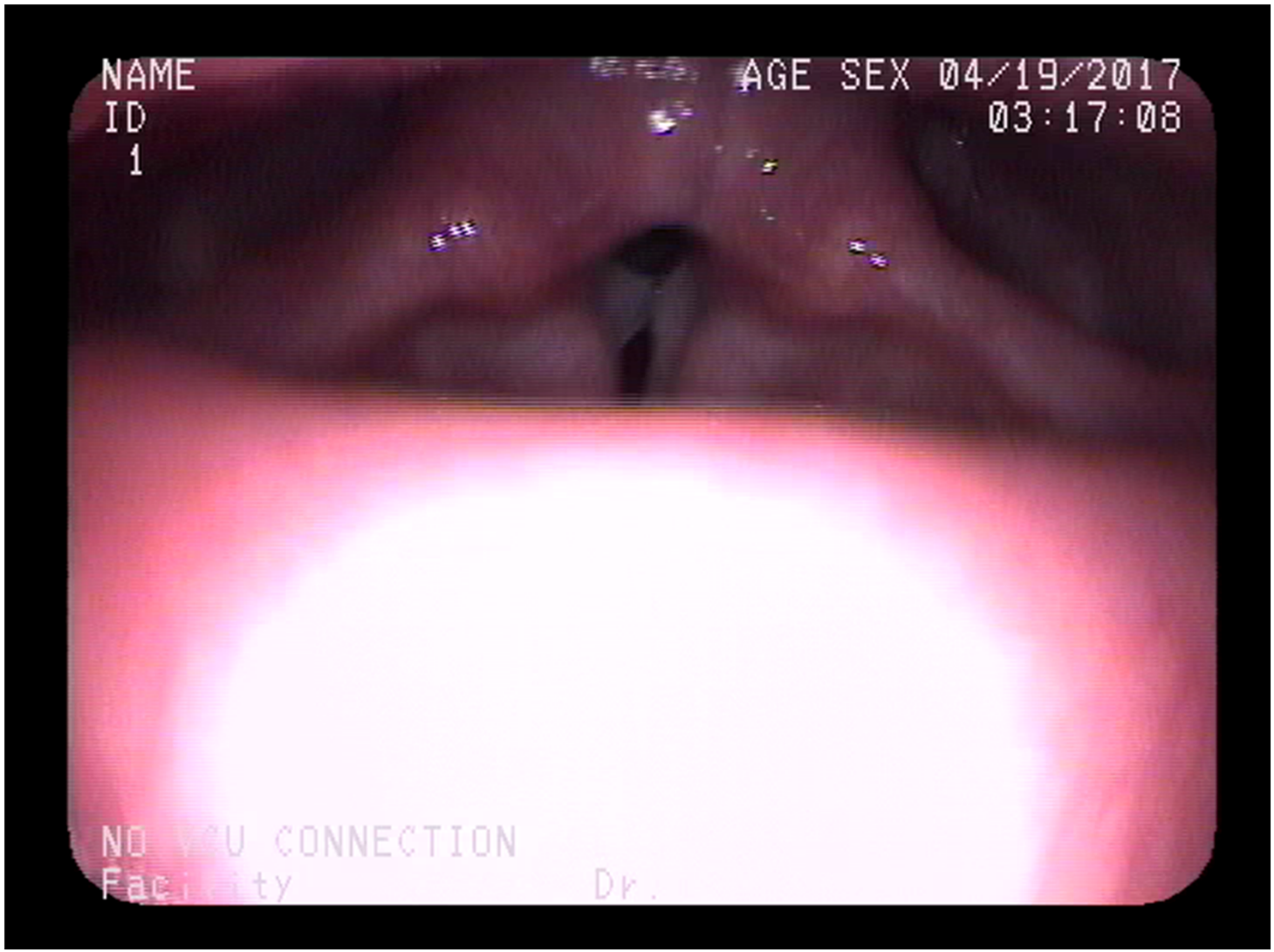
Vocal Fold Pathologies

Presbylarynges, vocal fold paralysis, benign vocal fold lesions, leukoplakia, muscle tension dysphonia

Presbylarynges

Presbylarynges

- Age related atrophy of the vocal folds
- Results in glottic insufficiency
  - The vocal folds do not touch completely
    - Resulting in either a breathy voice or a strained voice
      - Breathy from the air escape
      - Strain if there is supraglottic hyperfunctioning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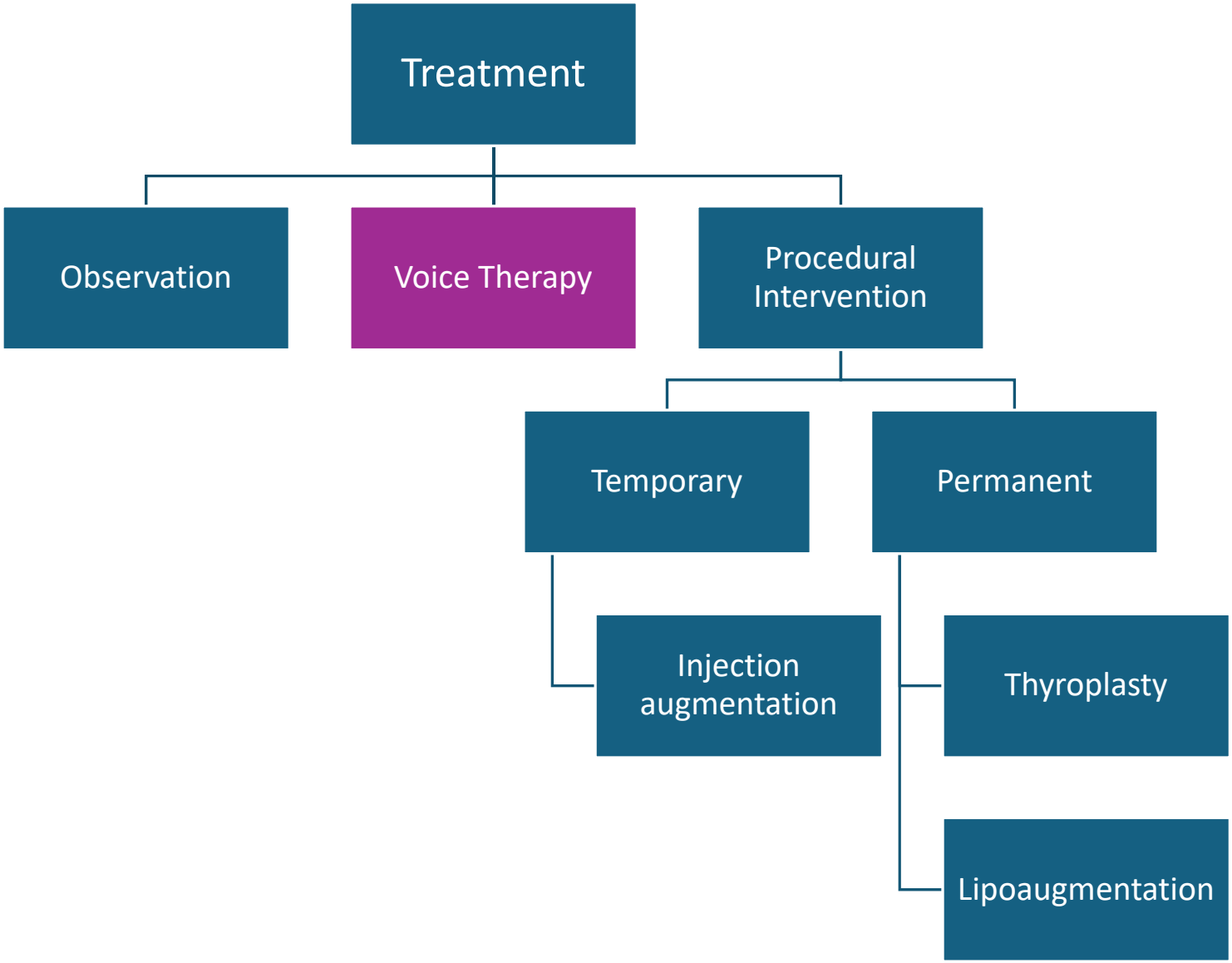
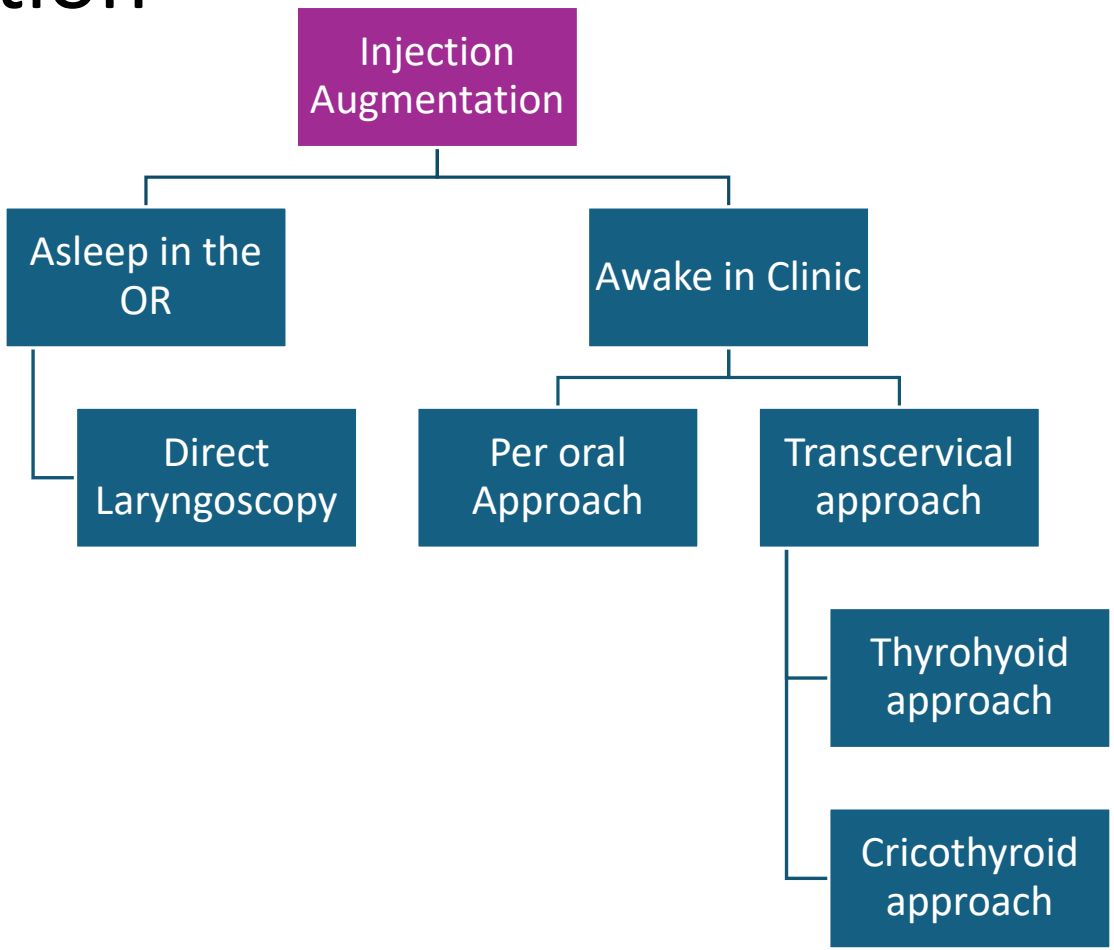
Parts of the History for Presbylarynges

- Better in the morning, but voice feels tired by the end of the day
- Vocal fatigue
- Vocal strain
- Run out of air when talking

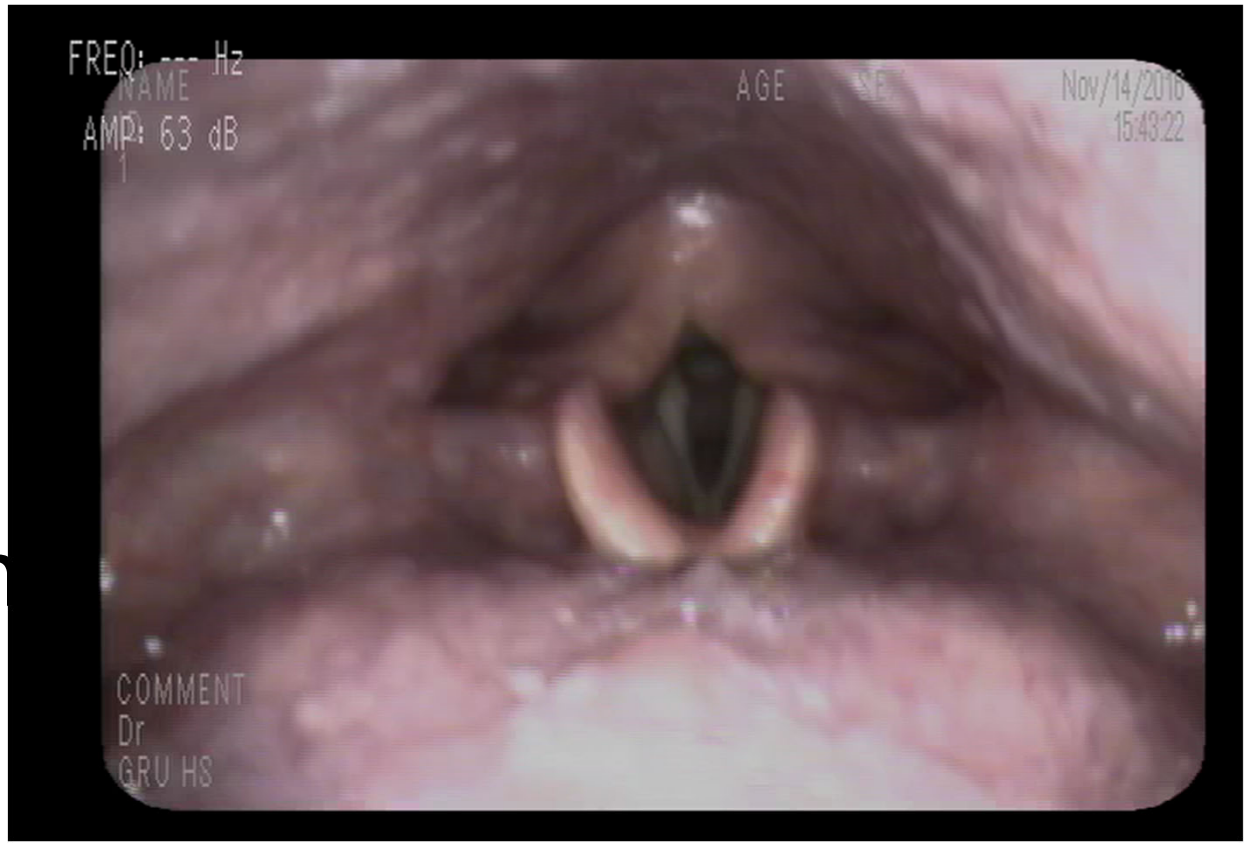

Treatment
Observation
Voice Therapy
Procedural Intervention
Temporary
Permanent
Injection augmentation
Thyroplasty
Lipoaugmentation

Injection Augmentation

- Placement of a **temporary** material within the vocal fold to move it to the midline so that the vocal folds can touch.

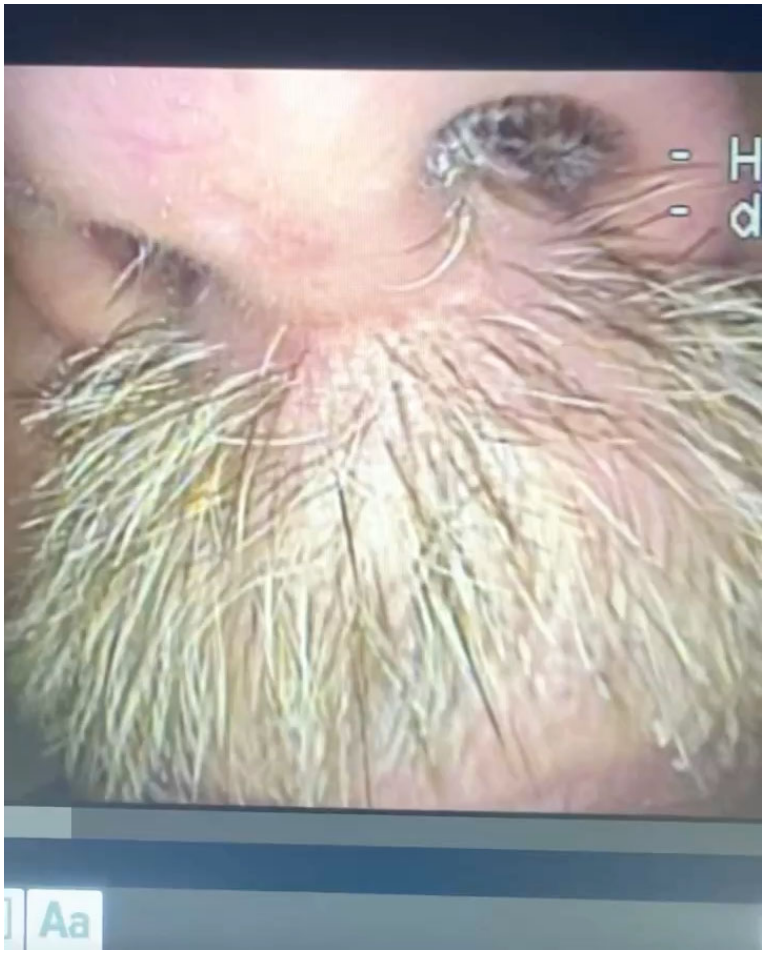


Injection Augmentation



Vocal Fold Paralysis

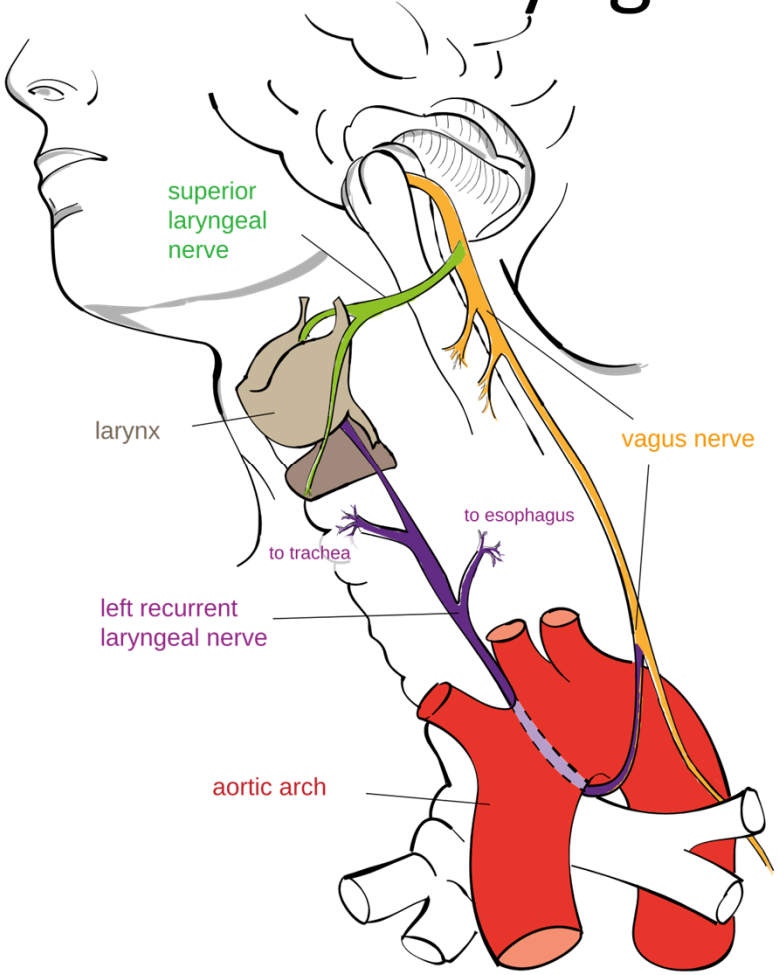
Vocal Fold Paralysis

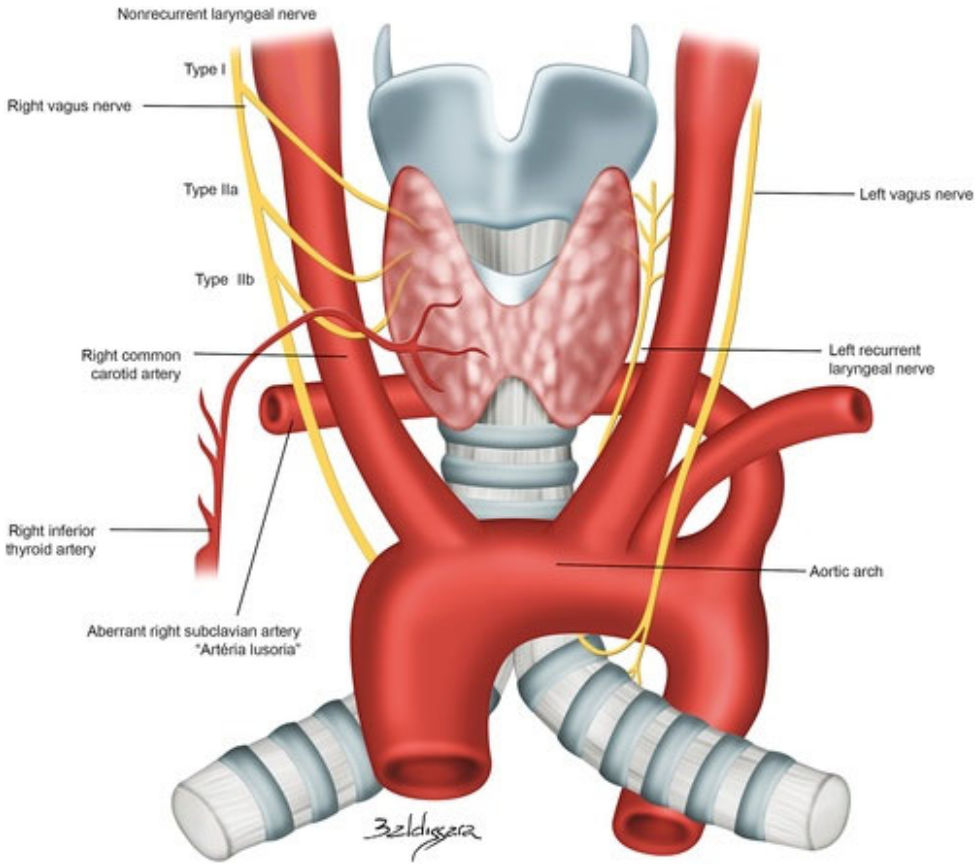


Causes of Vocal Fold Paralysis

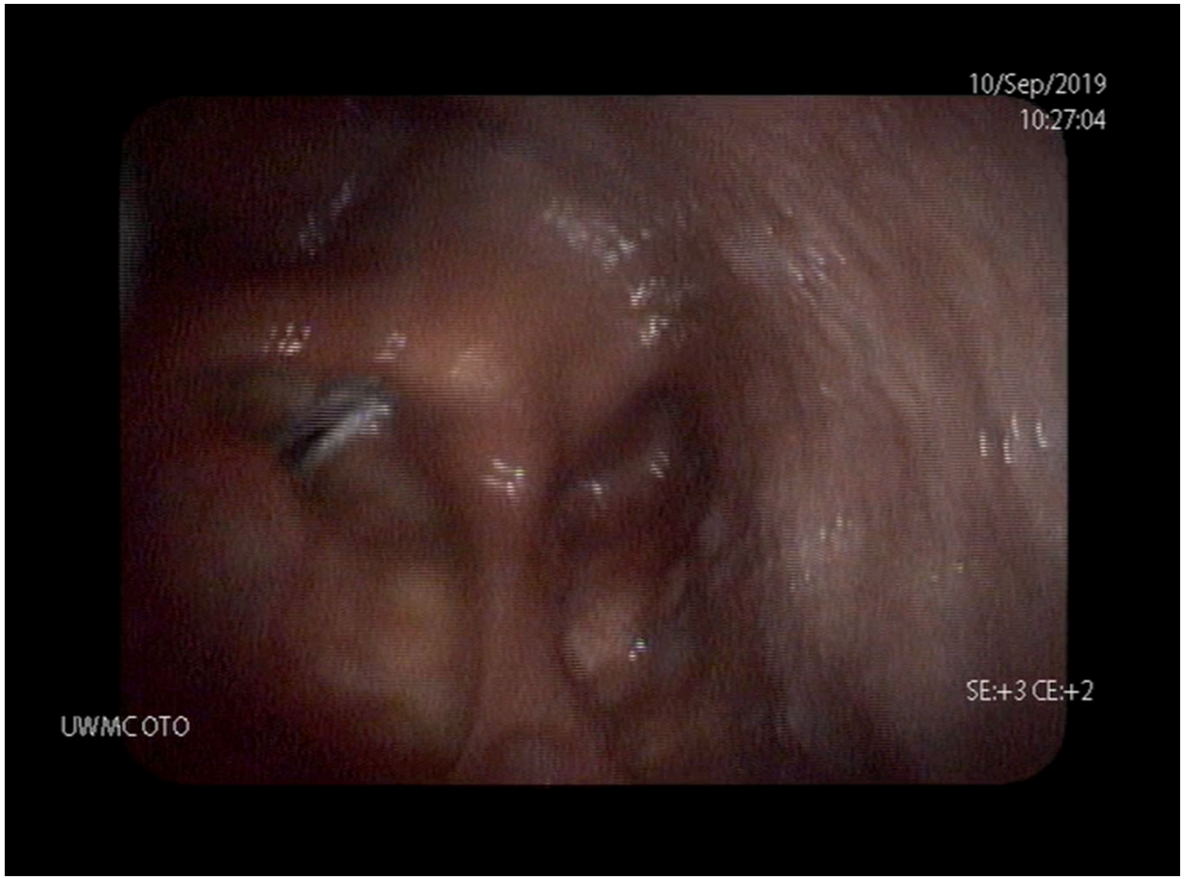
- Injury/damage to the recurrent laryngeal nerve (RLN)
  - Post surgical
    - Thyroidectomy
    - ACDF
- Mass along the course of the recurrent laryngeal nerve
- Idiopathic
  - If no recent surgery to explain the paralysis, MUST get imaging to determine **why** there is paralysis
    - If no mass seen on imaging → idiopathic paralysis

Recurrent Laryngeal Nerve (branch of CN X)

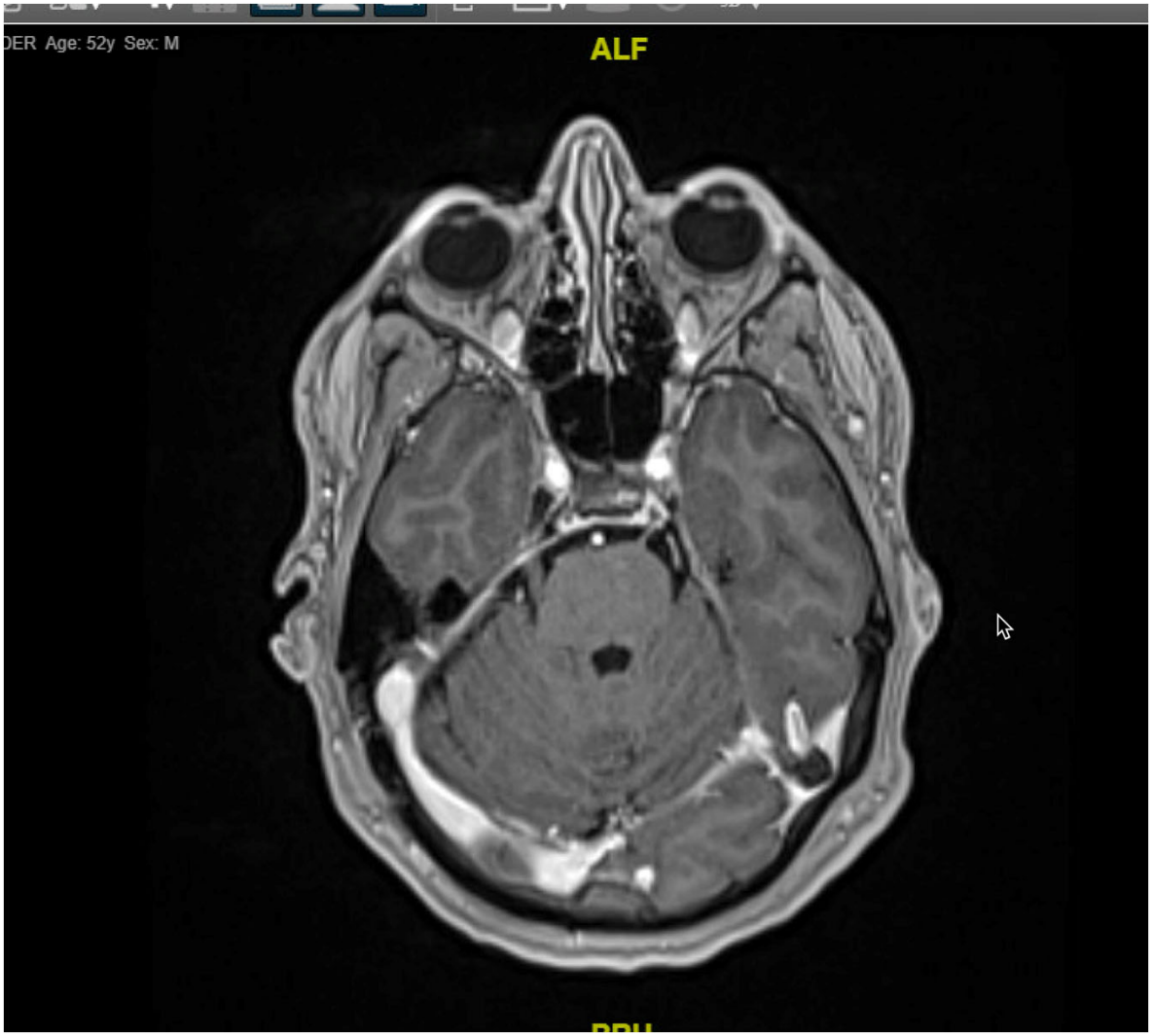




Initial Visit-
10 months
of dysphonia

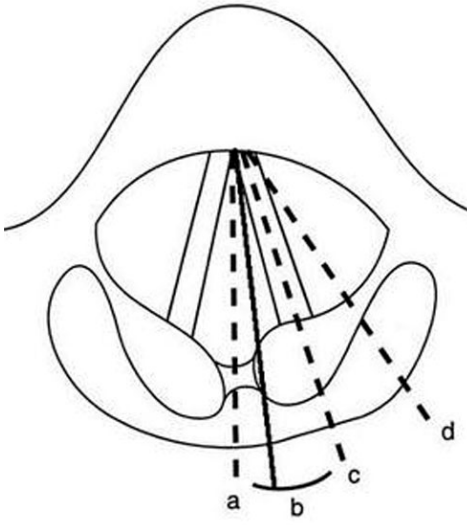


MRI



What Does Vocal Fold Paralysis Sound Like?

- Variable depending on the position of the paralyzed vocal fold
  - More air escape between the vocal folds, the weaker the voice

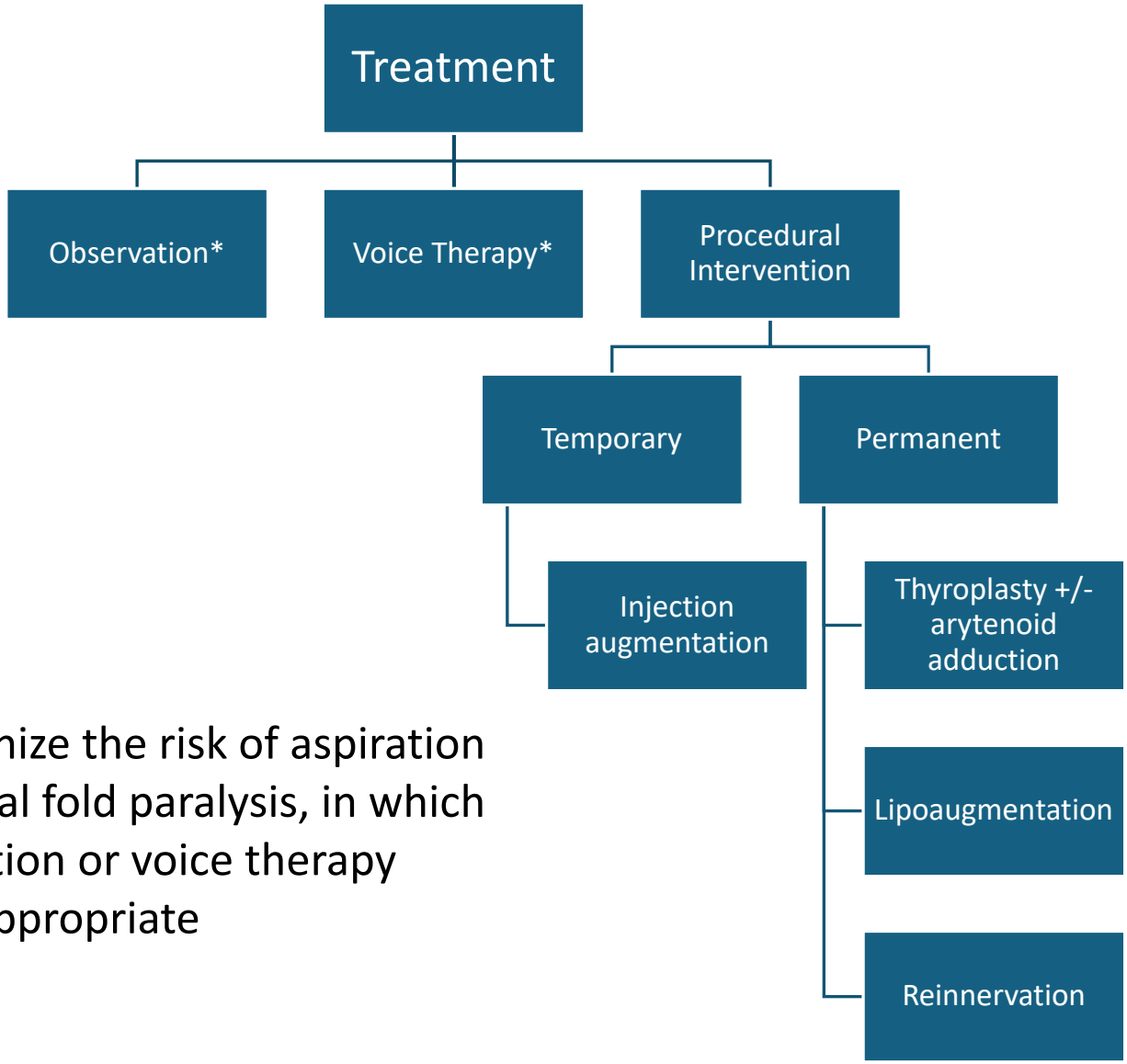


a-Median.
b-Paramedian.
c-Cadaveric.
d-Adduction.

Position of the paralyzed cord

Parts of the History of Vocal Fold Paralysis

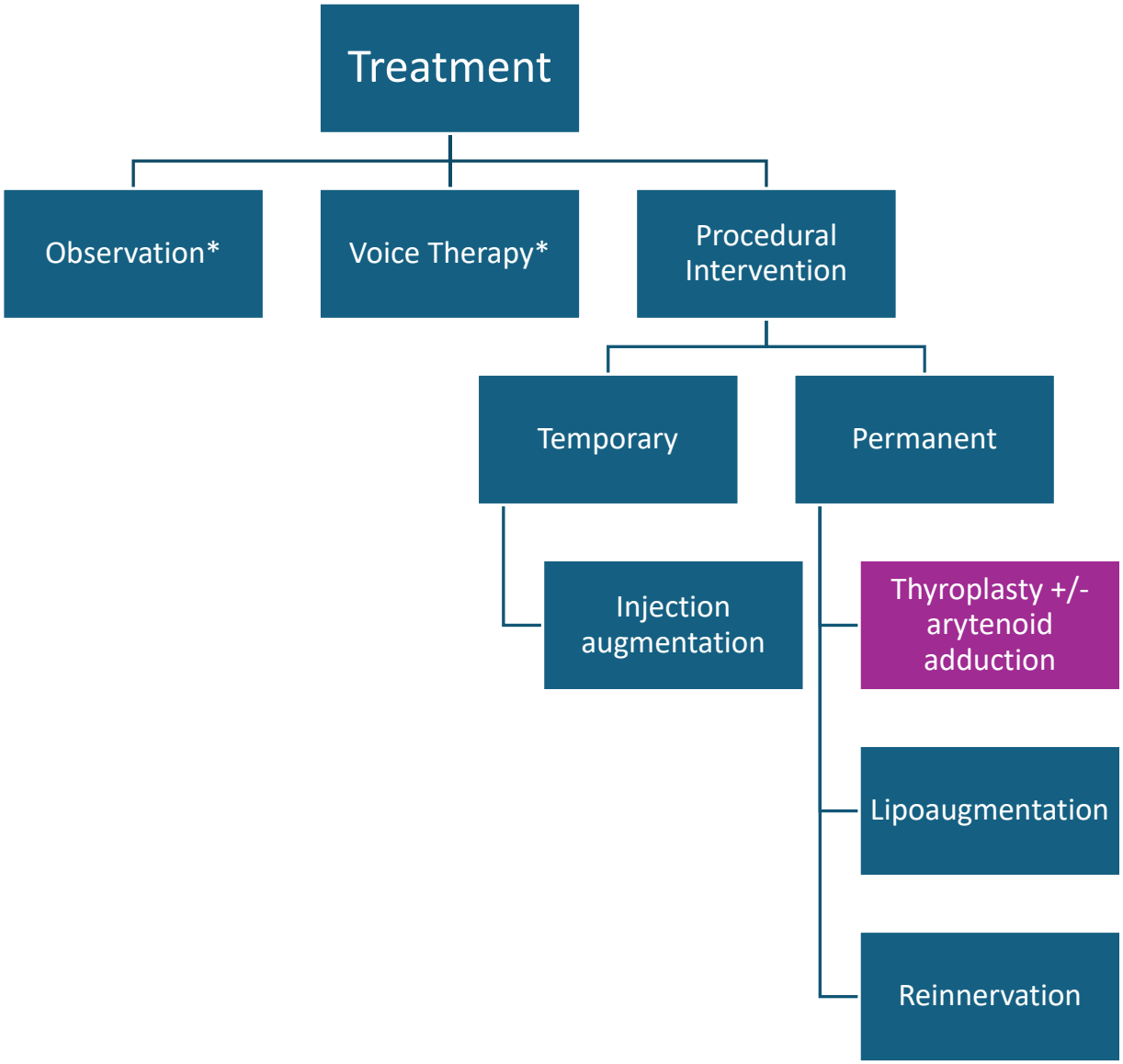
- Weak cough
- Nothing makes it better
- Run out of air when talking
- Sudden onset- “I woke up one morning and my voice was like this”
- Can’t get loud



* Must recognize the risk of aspiration PNA with vocal fold paralysis, in which case observation or voice therapy may not be appropriate

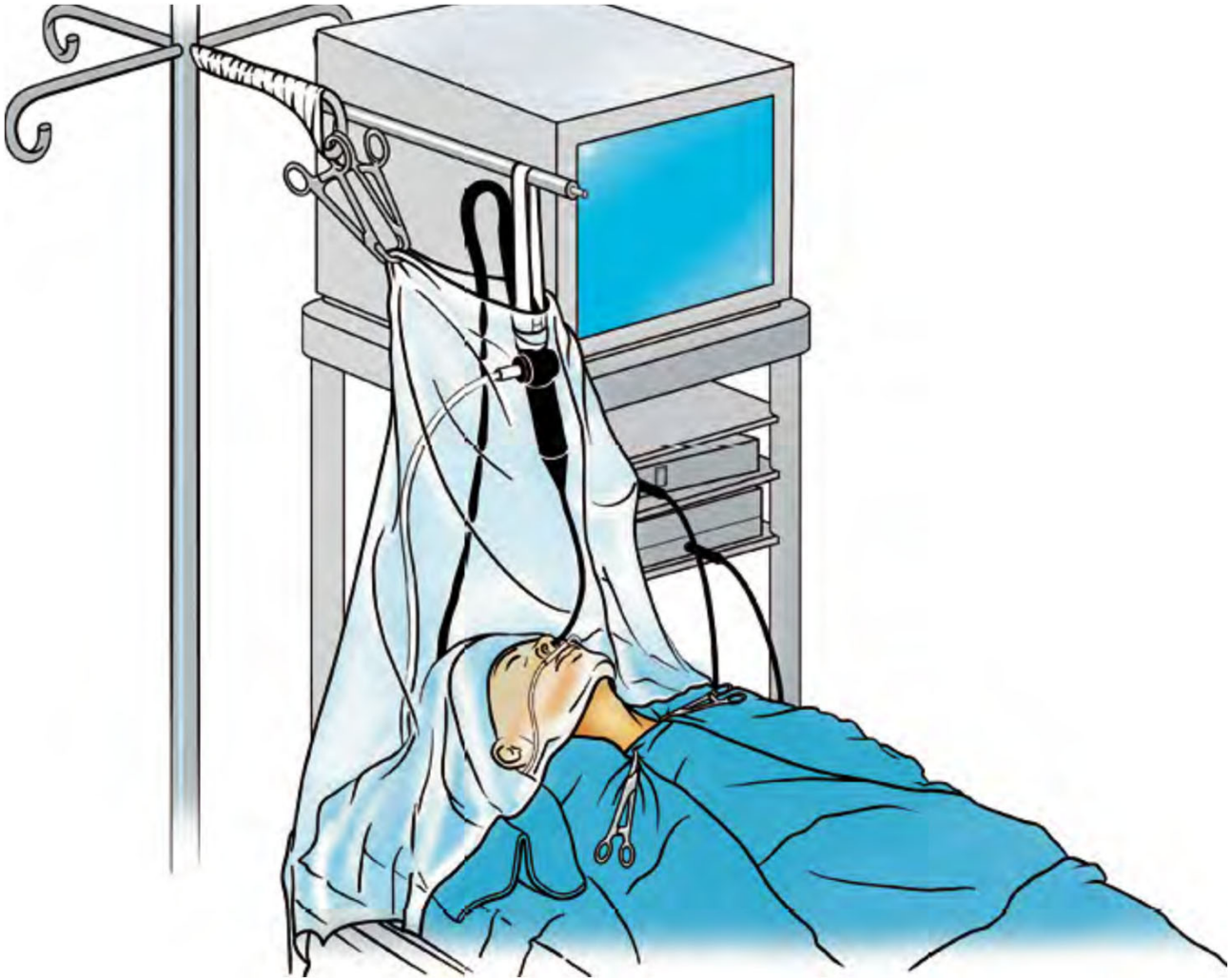
Aspiration PNA and Vocal Fold Paralysis

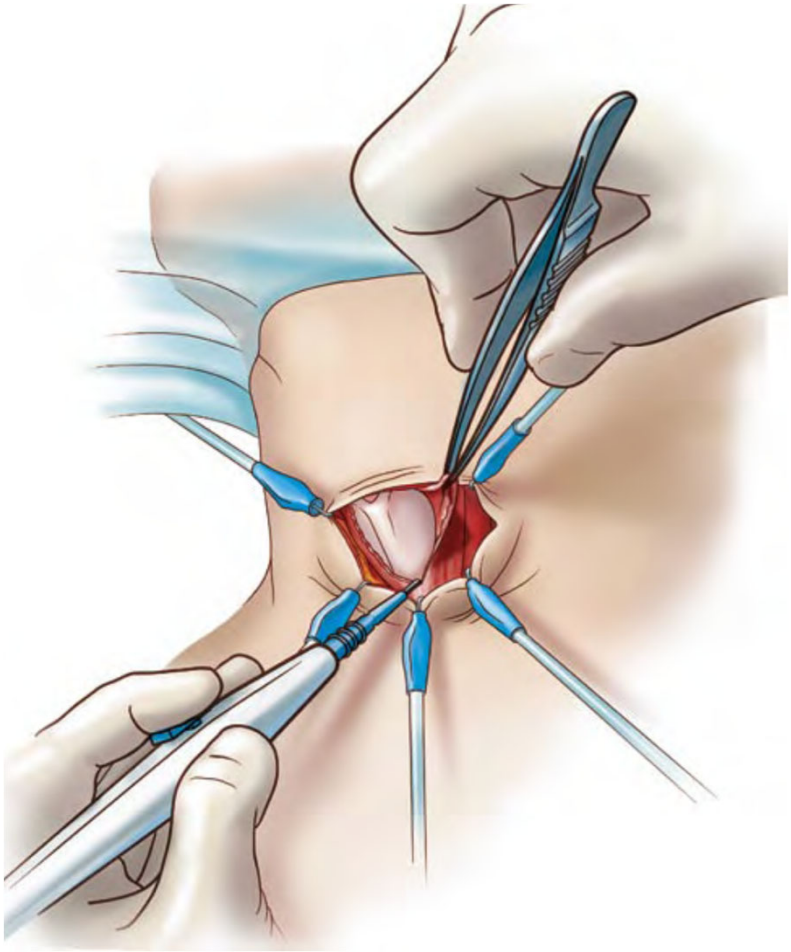
- How do we determine if this is happening?
  - Primary care office- *Do you cough when swallowing?*
    - If they say no, it does not mean they are not aspirating, it *might* just mean that they do not feel it
  - ENT office- FEES
    - https://www.youtube.com/watch?v=9O76ue_dsgs&t=112s

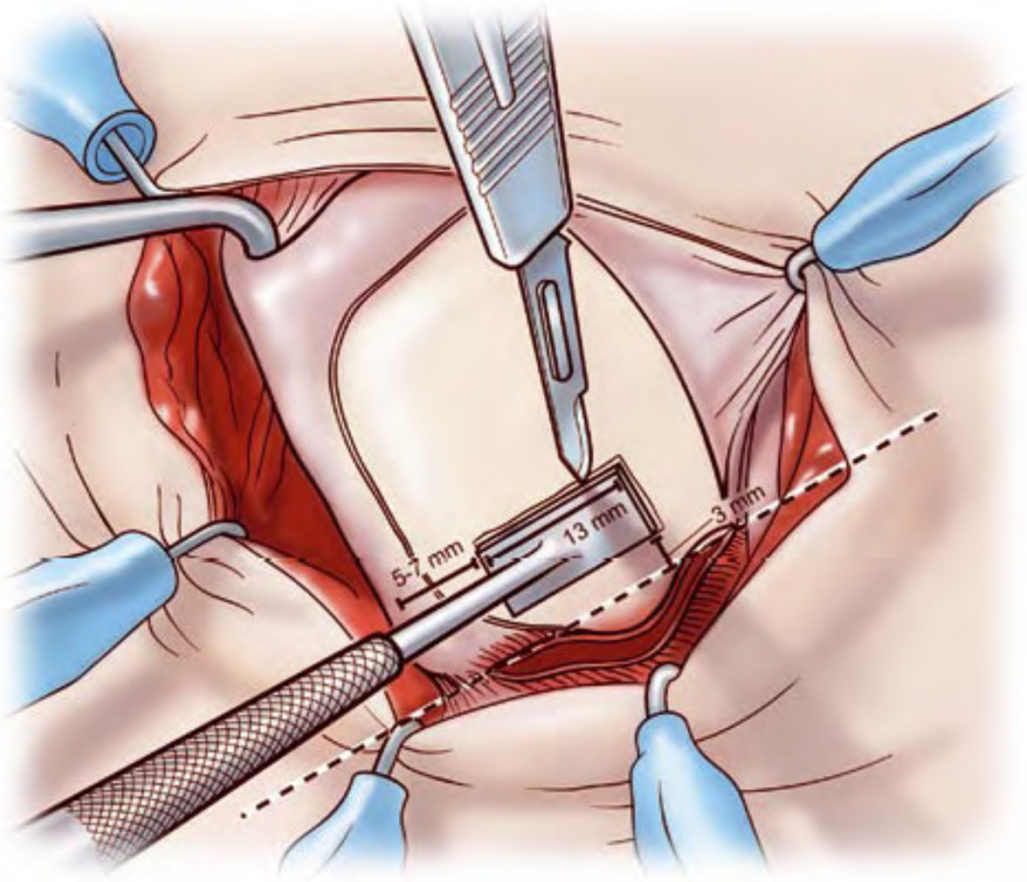

Treatment
Observation*
Voice Therapy*
Procedural Intervention
Temporary
Permanent
Injection augmentation
Thyroplasty +/- arytenoid adduction
Lipoaugmentation
Reinnervation

Thyroplasty

- Utilizing silastic blocks or Gore-tex to medialize the vocal fold exteriorly
- Permanent
- Sometimes accompanied with arytenoid adduction for posterior gaps, height mismatch, or large gaps



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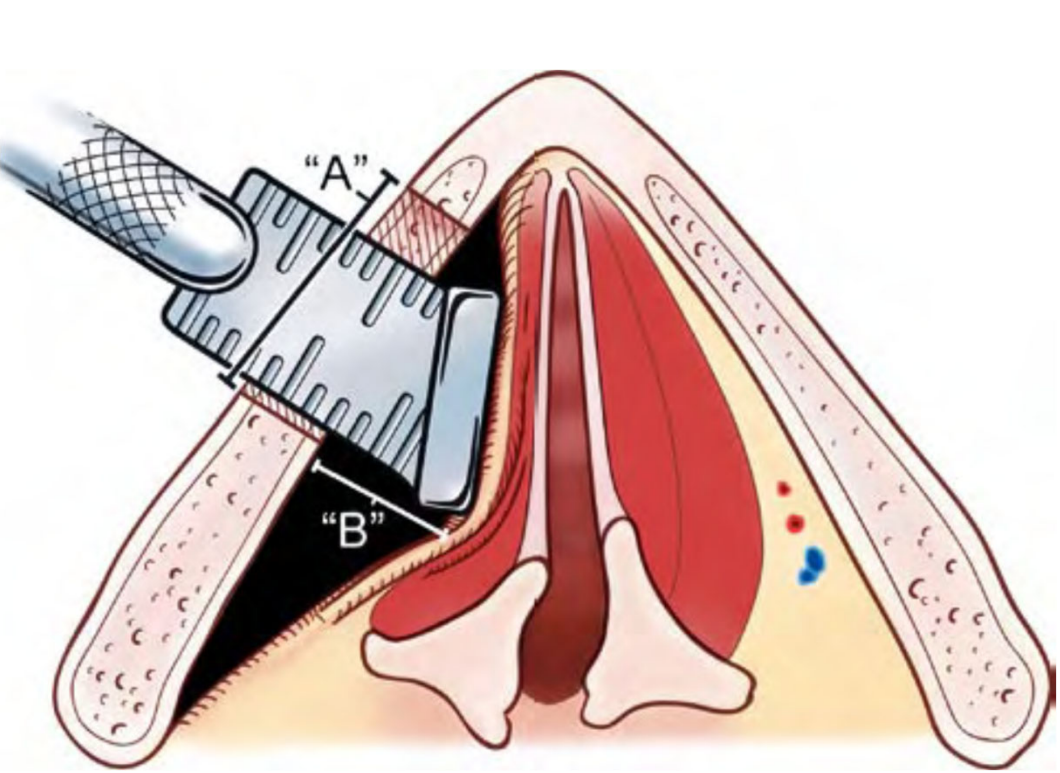
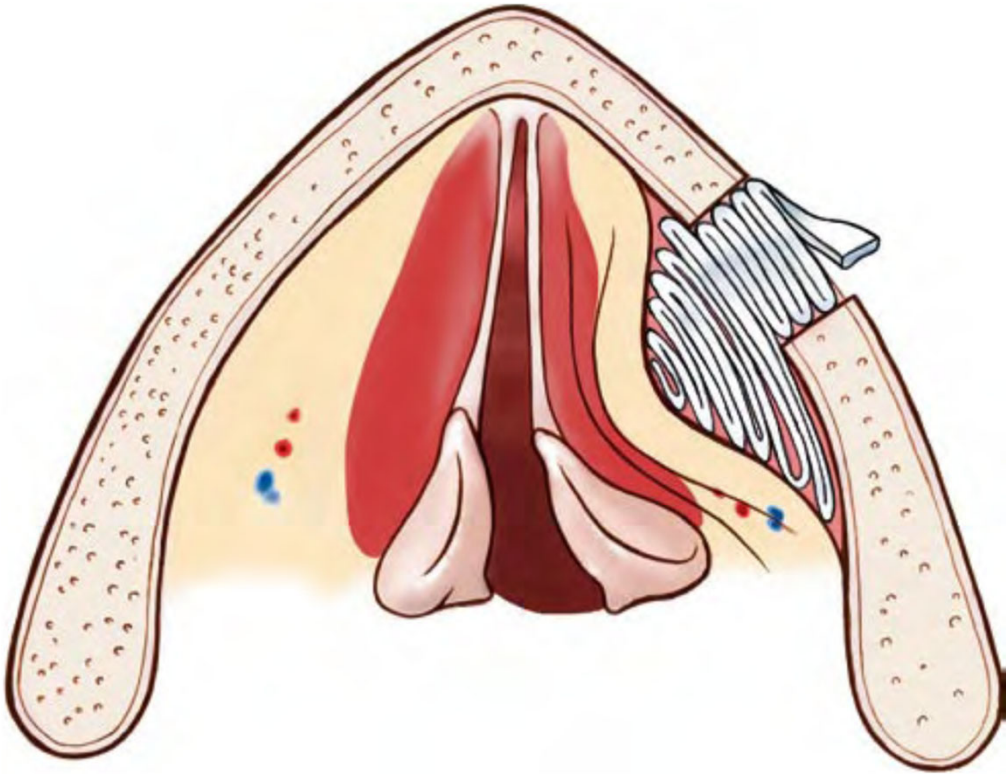
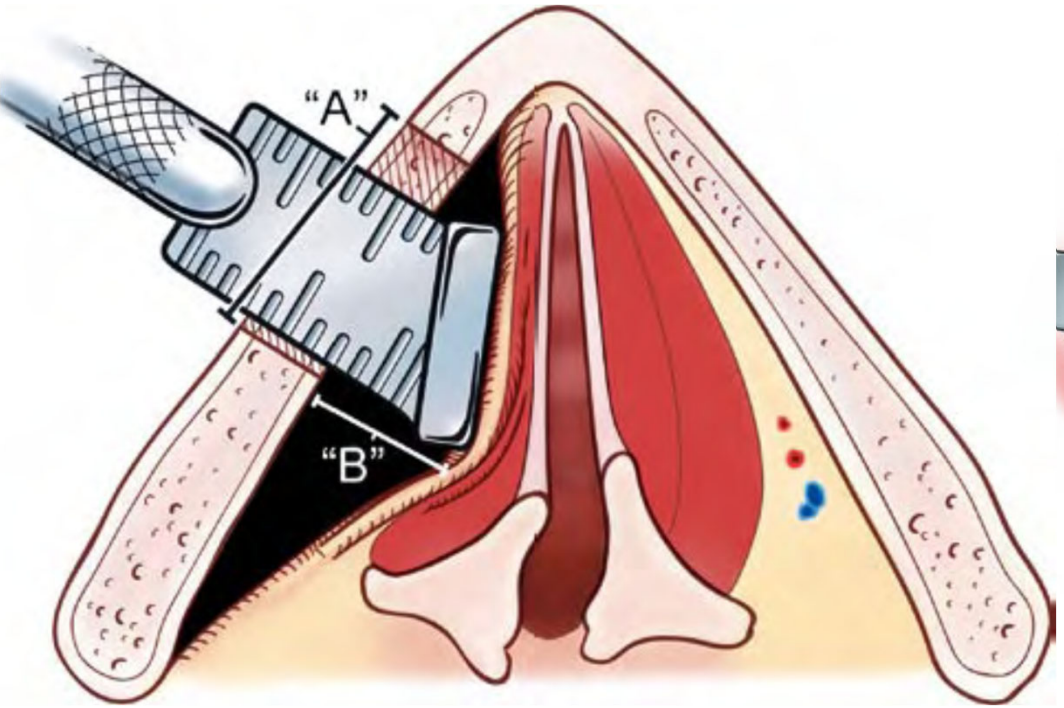
13 mm
3 mm


"A"
"B"

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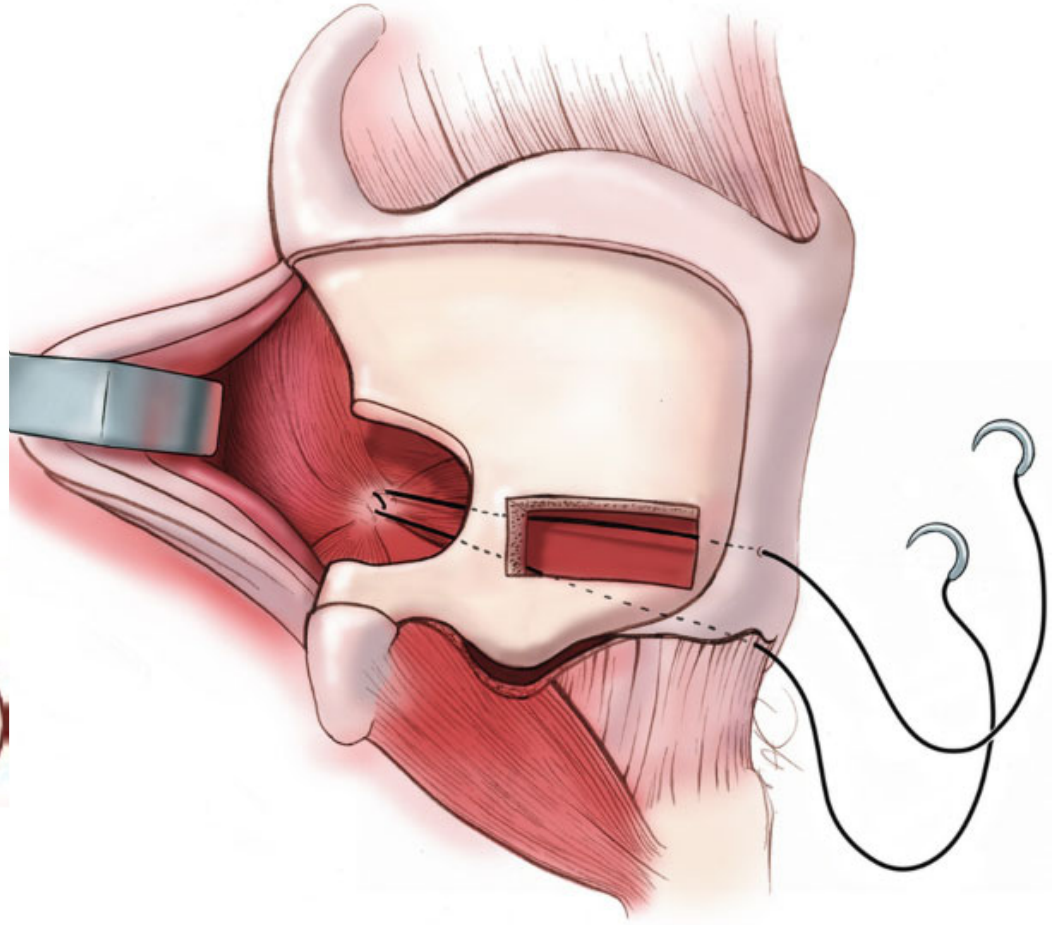
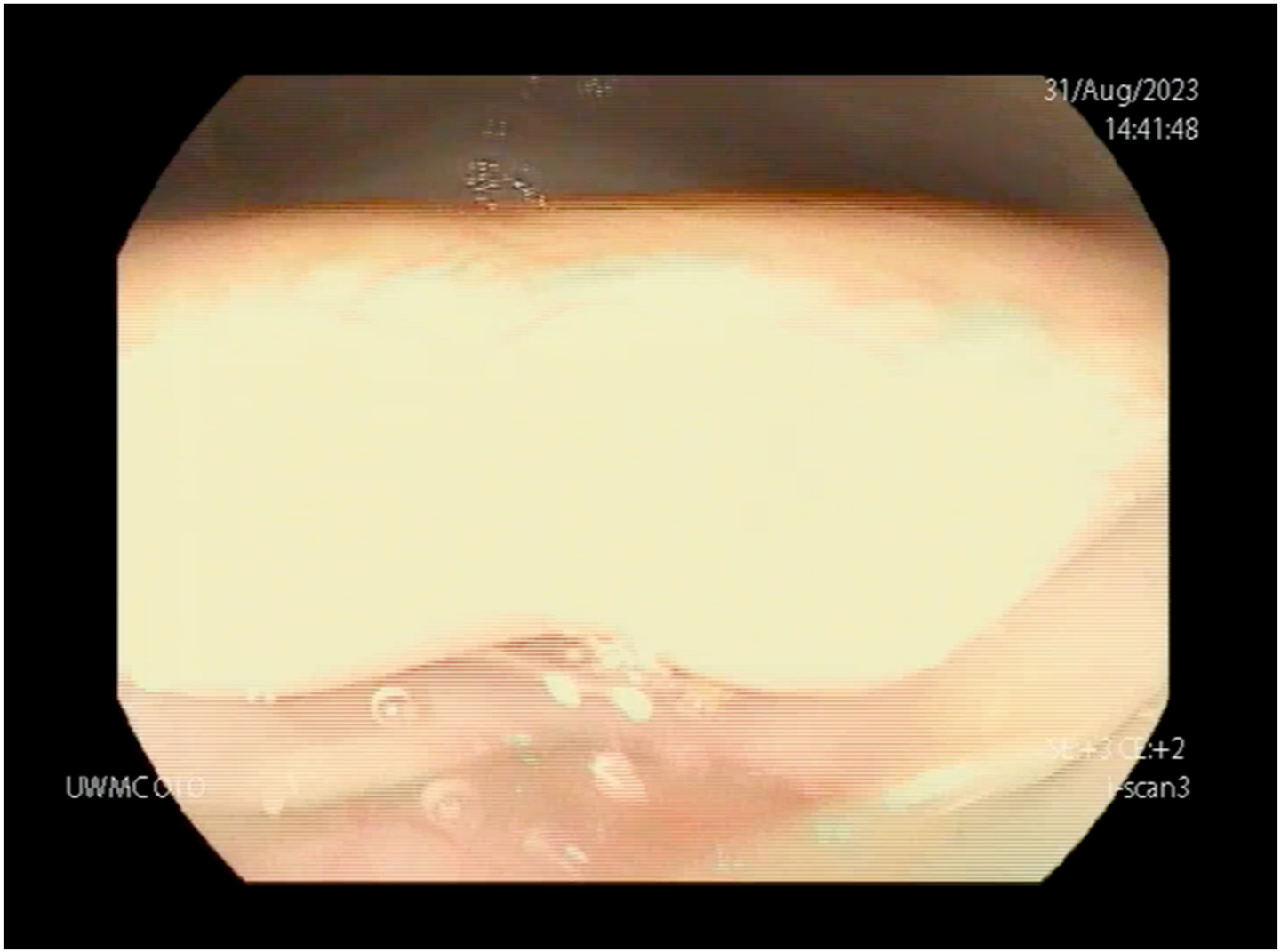


Vocal Fold Lesion

Cysts, nodules, polyps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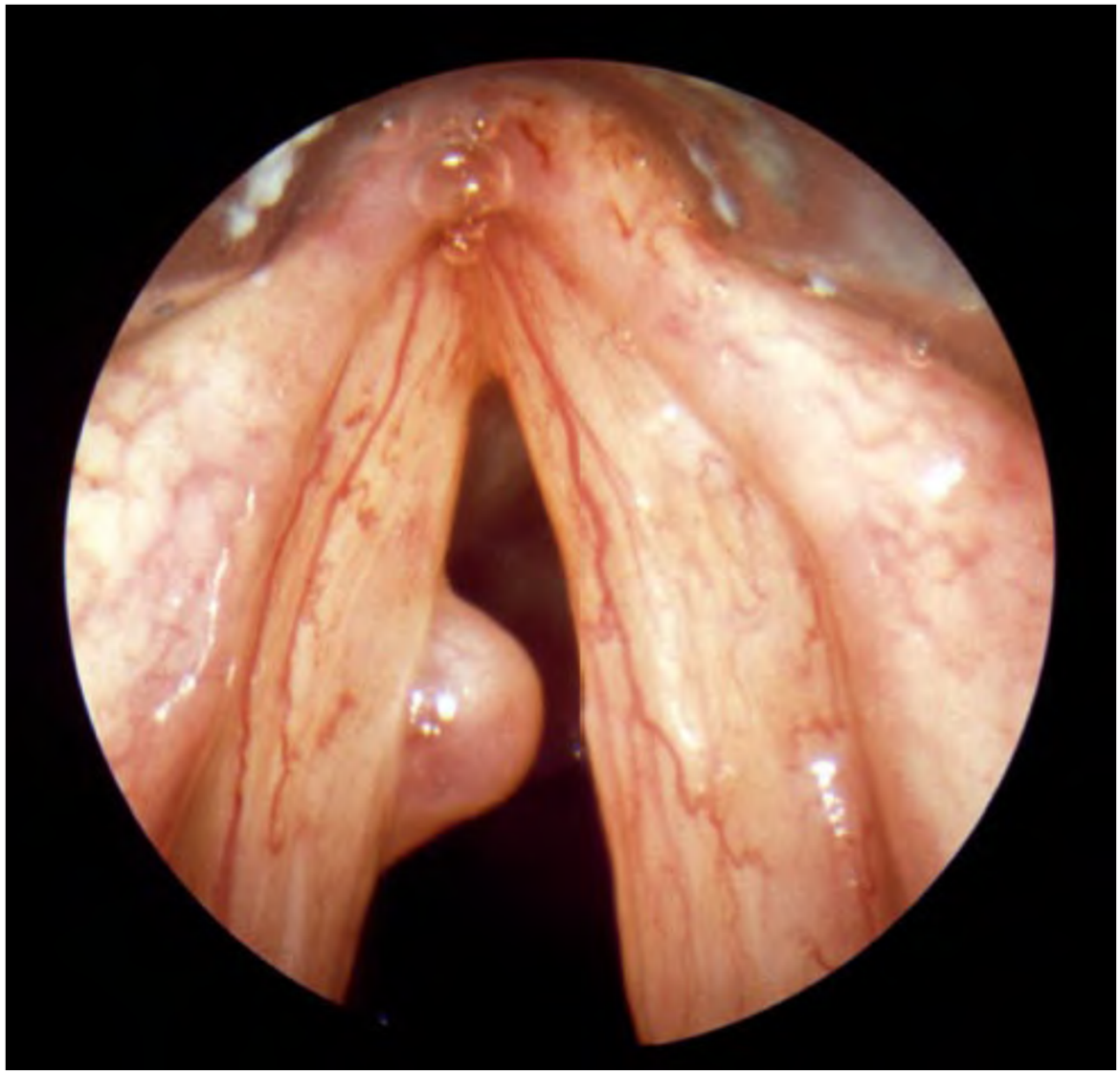
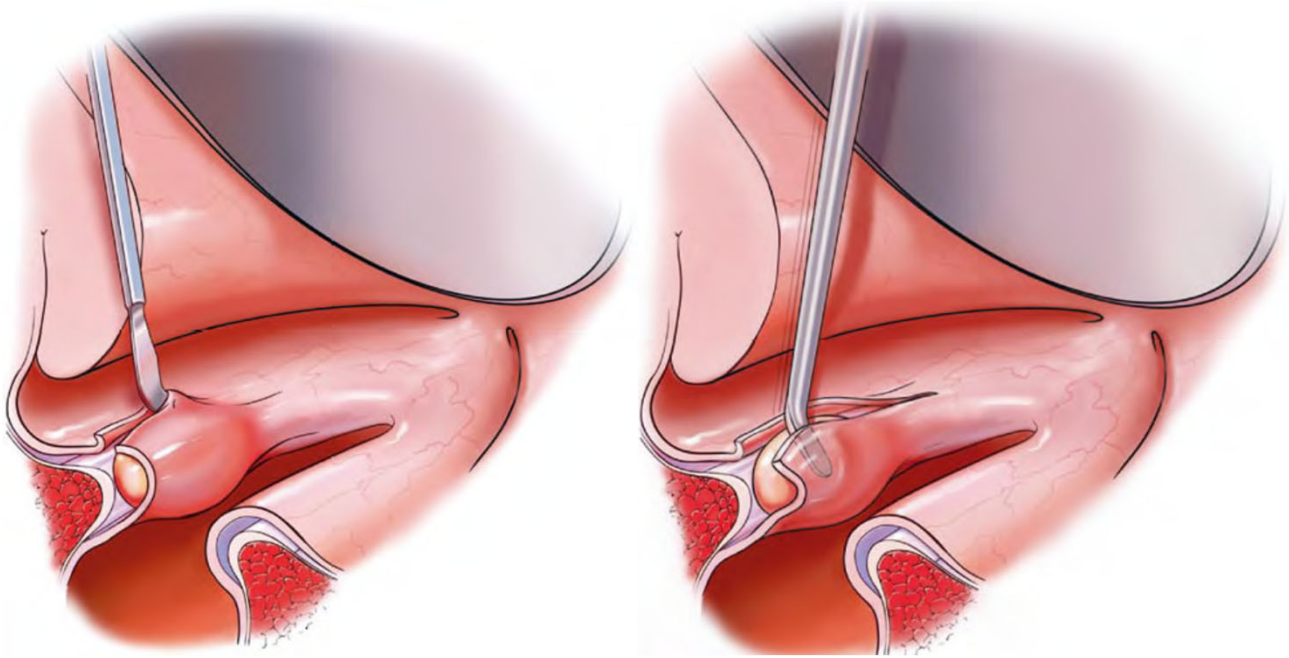


Microflap



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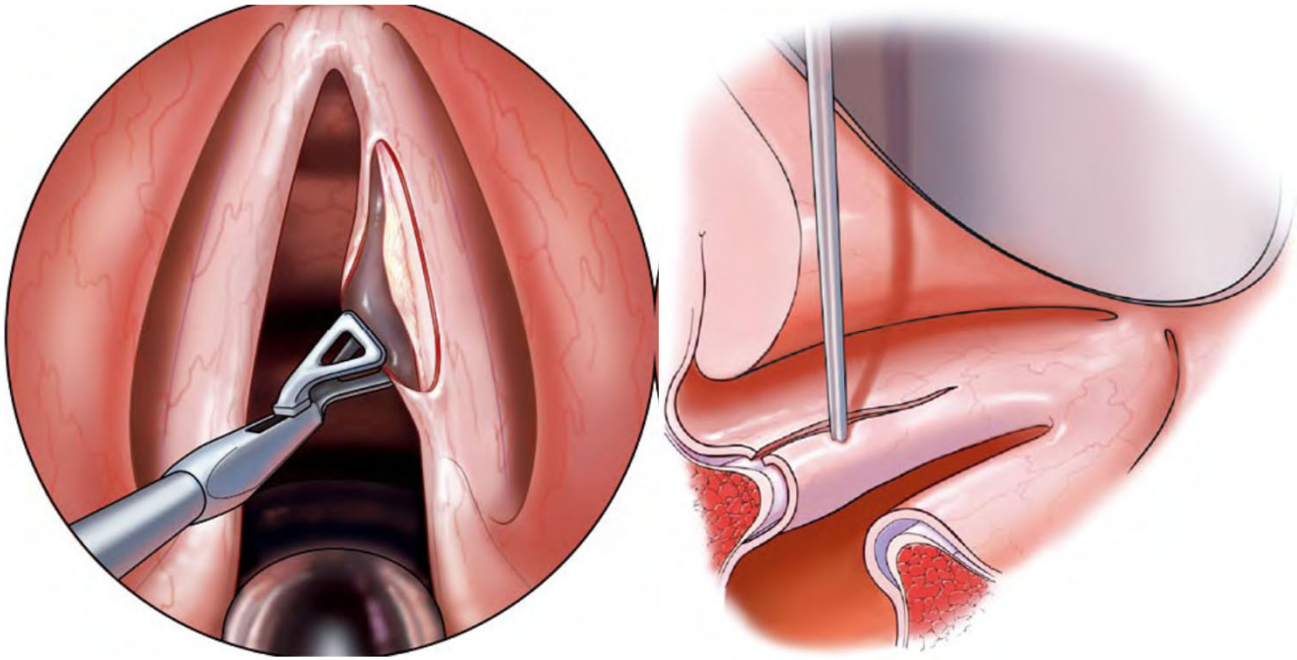
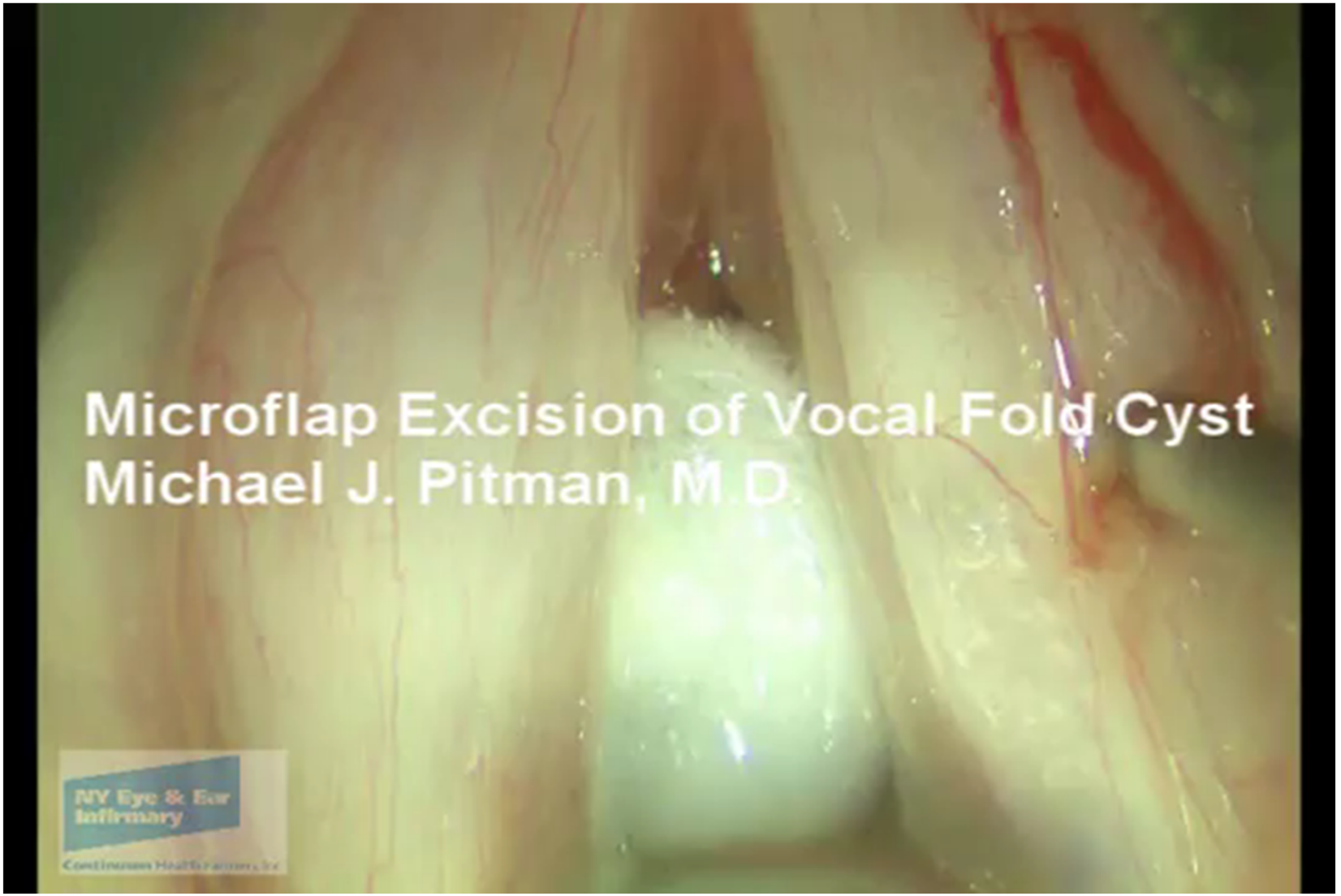


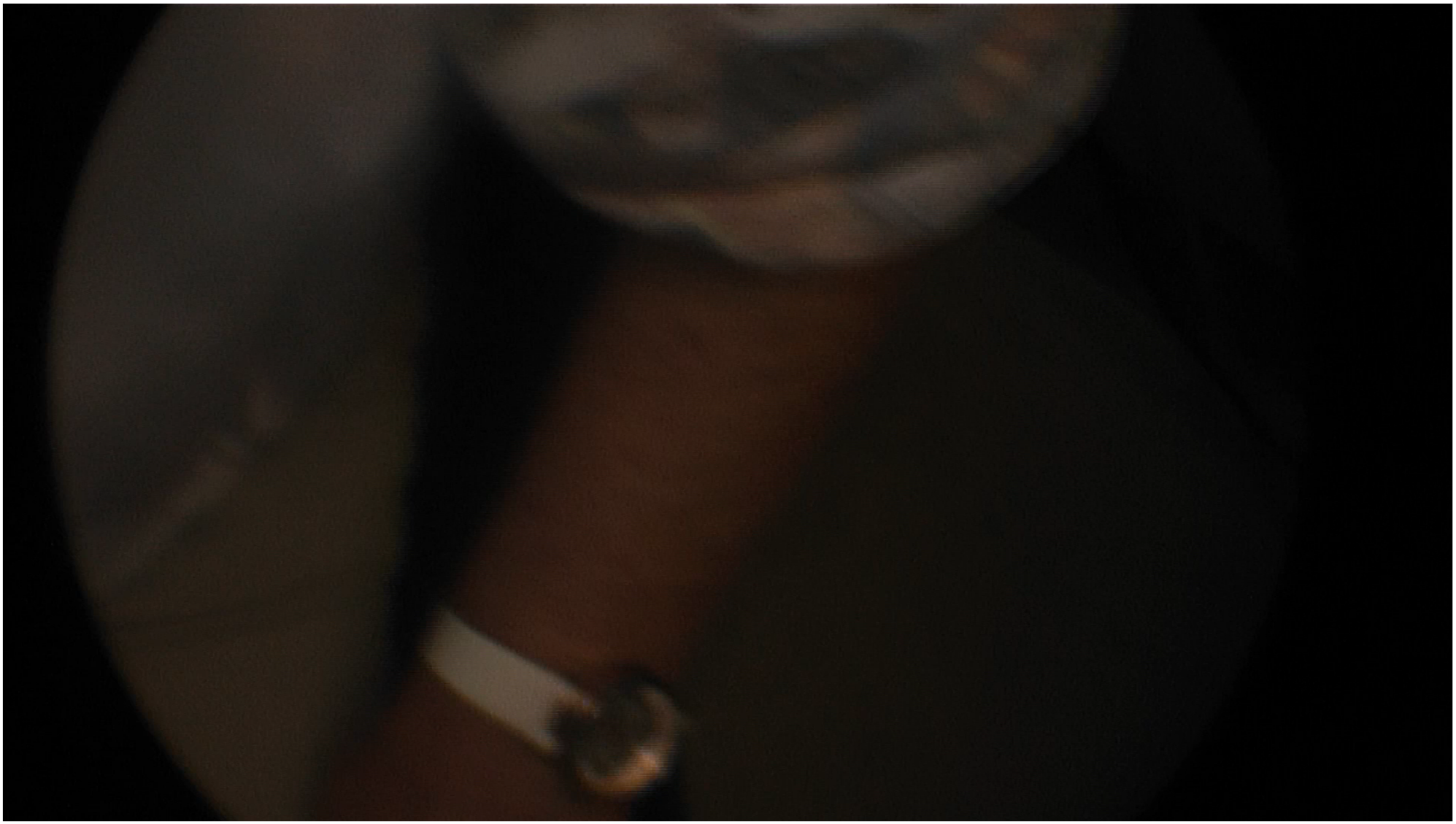

Microflap Excision of Vocal Fold Cyst
Michael J. Pitman, M.D.
NY Eye & Ear Infirmary

Parts of the History for Vocal Fold Lesion

- HIGHLY VARIABLE

Reinke’s Edema

(polypoid corditis)



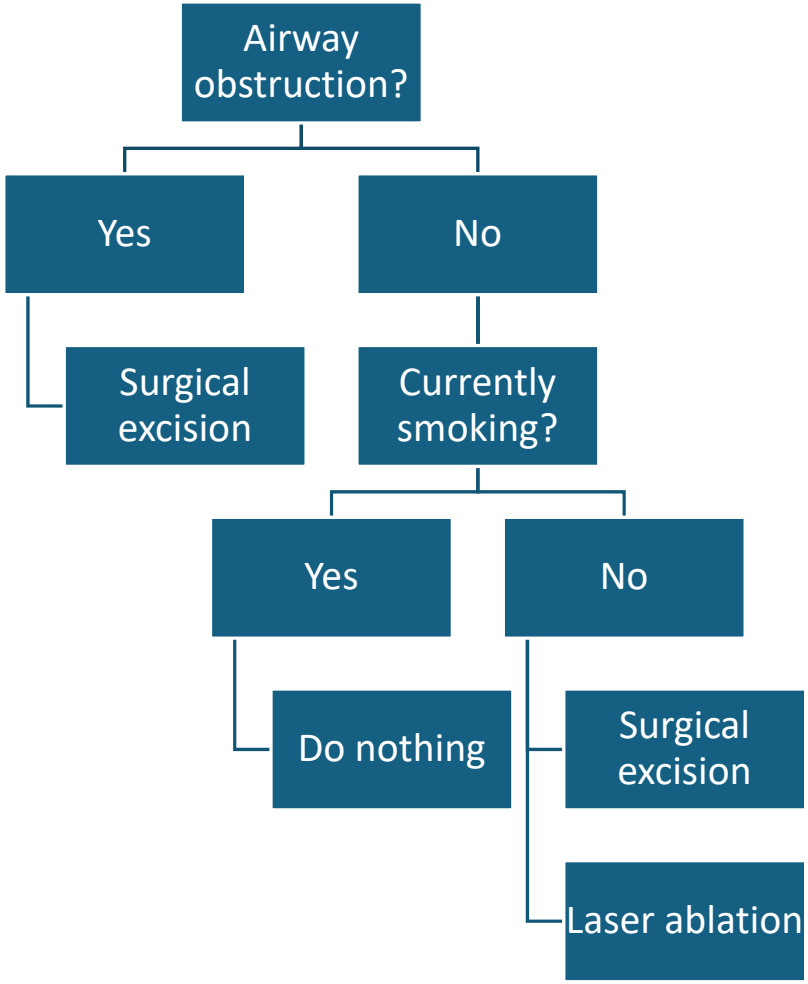
Reinke's Edema

- Accumulation of gelatinous fluid in the superficial aspect of the vocal fold
- The vocal folds become heavier → decreased pitch and increased effort to speak
- Almost exclusively in smokers
- Seen predominantly in females
  - Is this because men with deeper voices do not present?
- Protective against SCCa

Parts of the History for Reinke's Edema

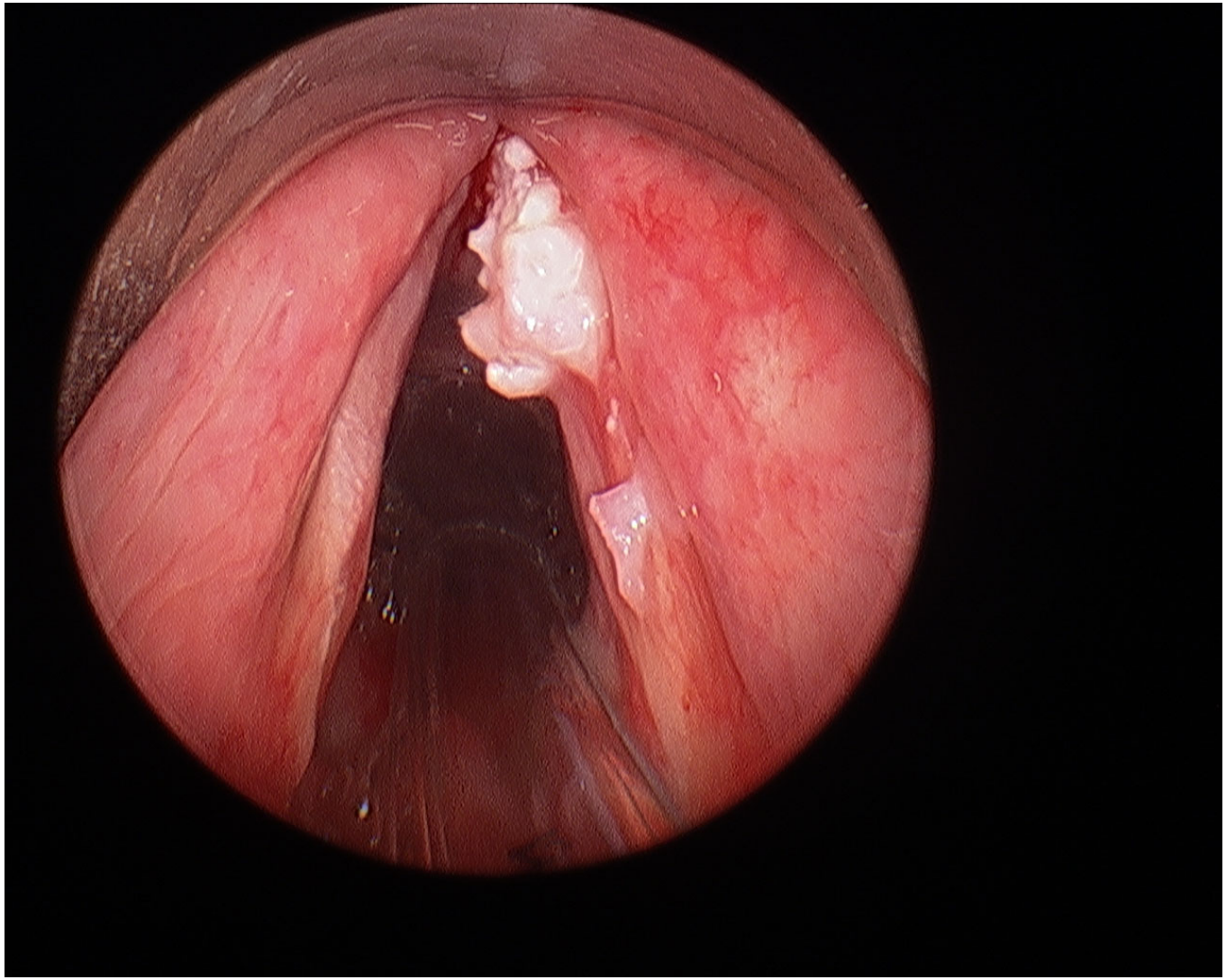
- "I sound like a man"
- Current or previous smoker
- Talking takes effort

Treatment


Airway obstruction?
Yes
No
Surgical excision
Currently smoking?
Yes
No
Do nothing
Surgical excision
Laser ablation

Leukoplakia

White Patch

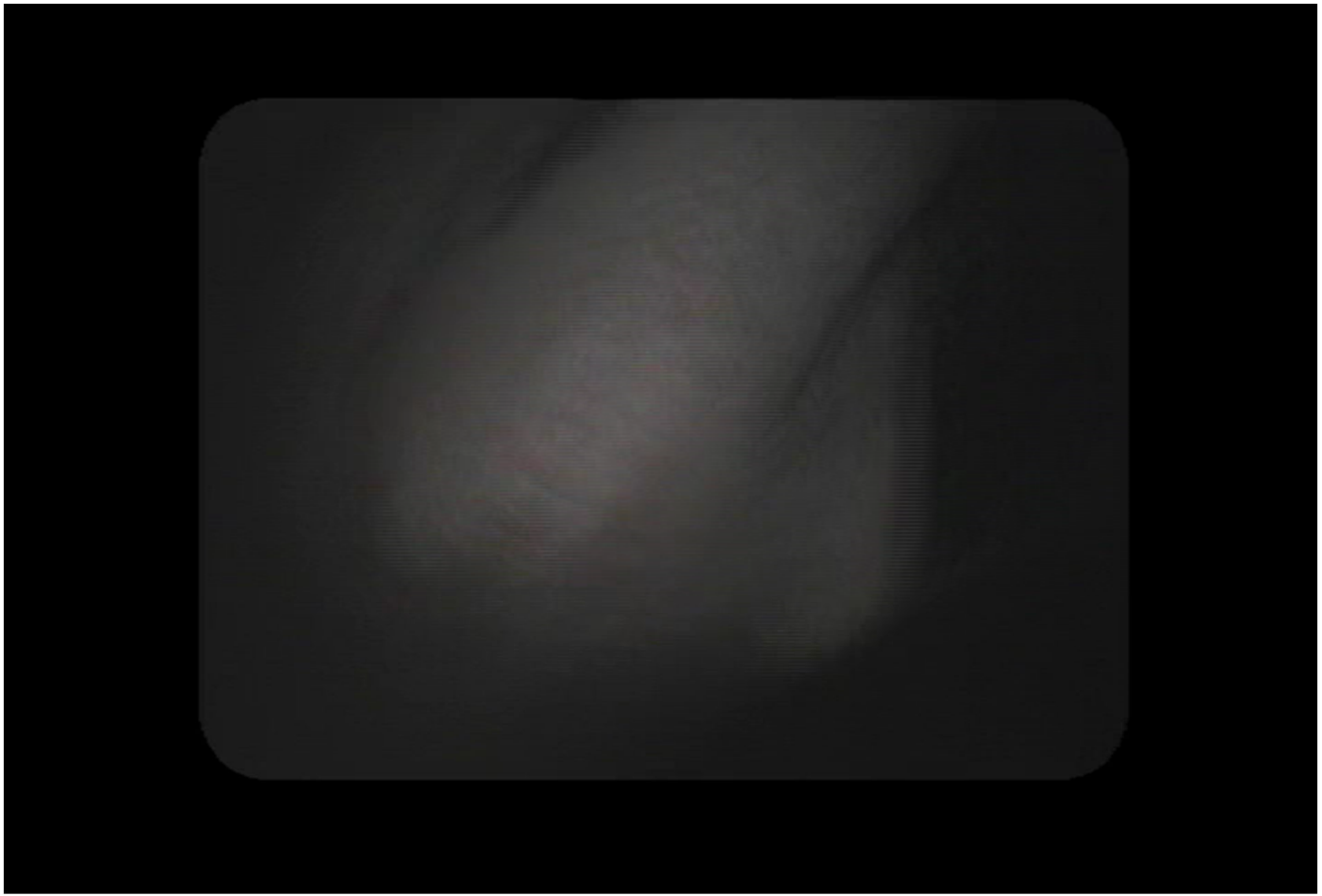


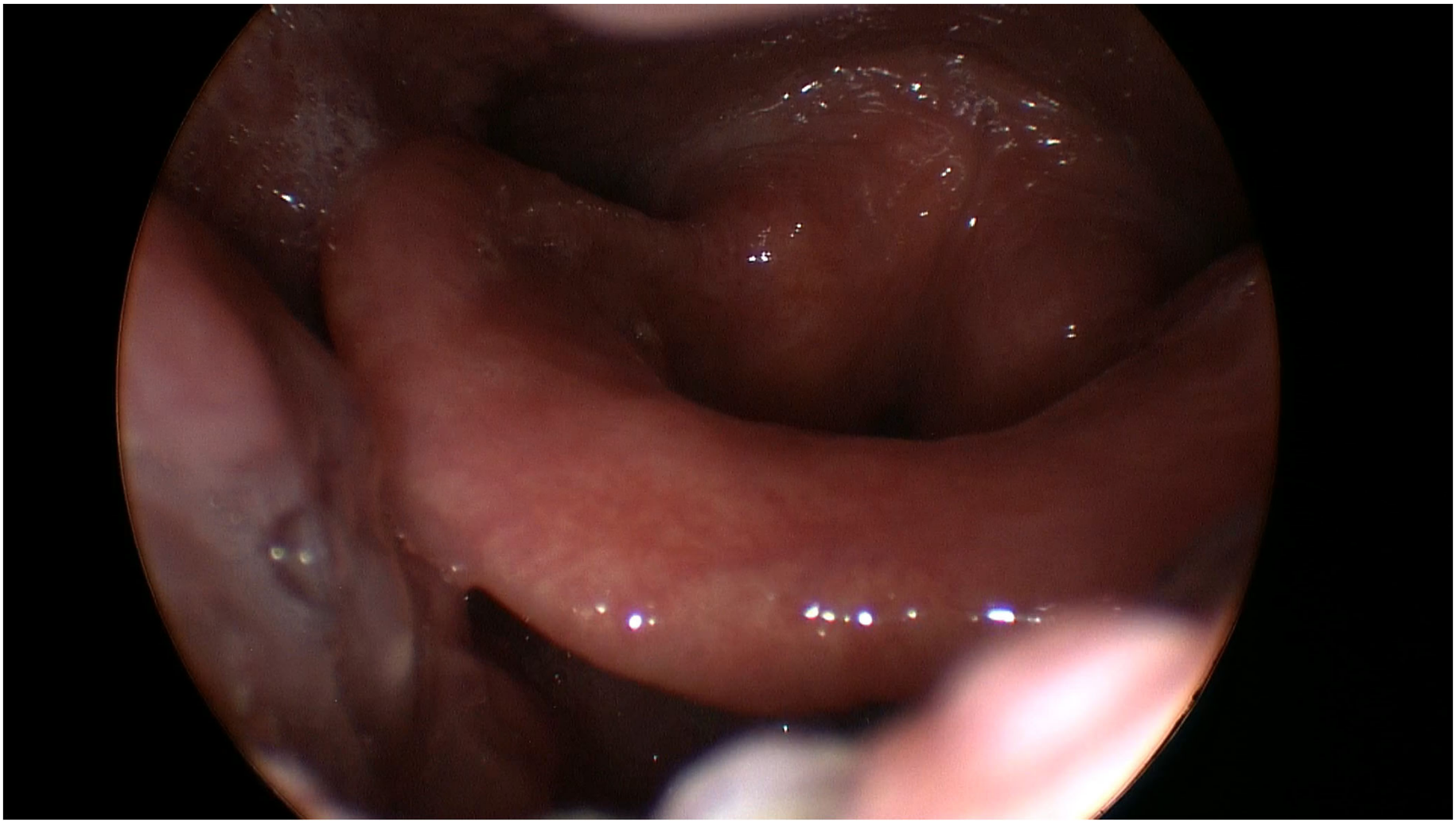
Leukoplakia

- Fungal laryngitis
- Hyperkeratosis
- Mild dysplasia
- Moderate dysplasia
- High-grade dysplasia
- Carcinoma in-situ
- Squamous cell carcinoma
- Others (<5% of laryngeal malignancy)

Parts of the History for Leukoplakia

- *Highly variable based on the underlying pathology

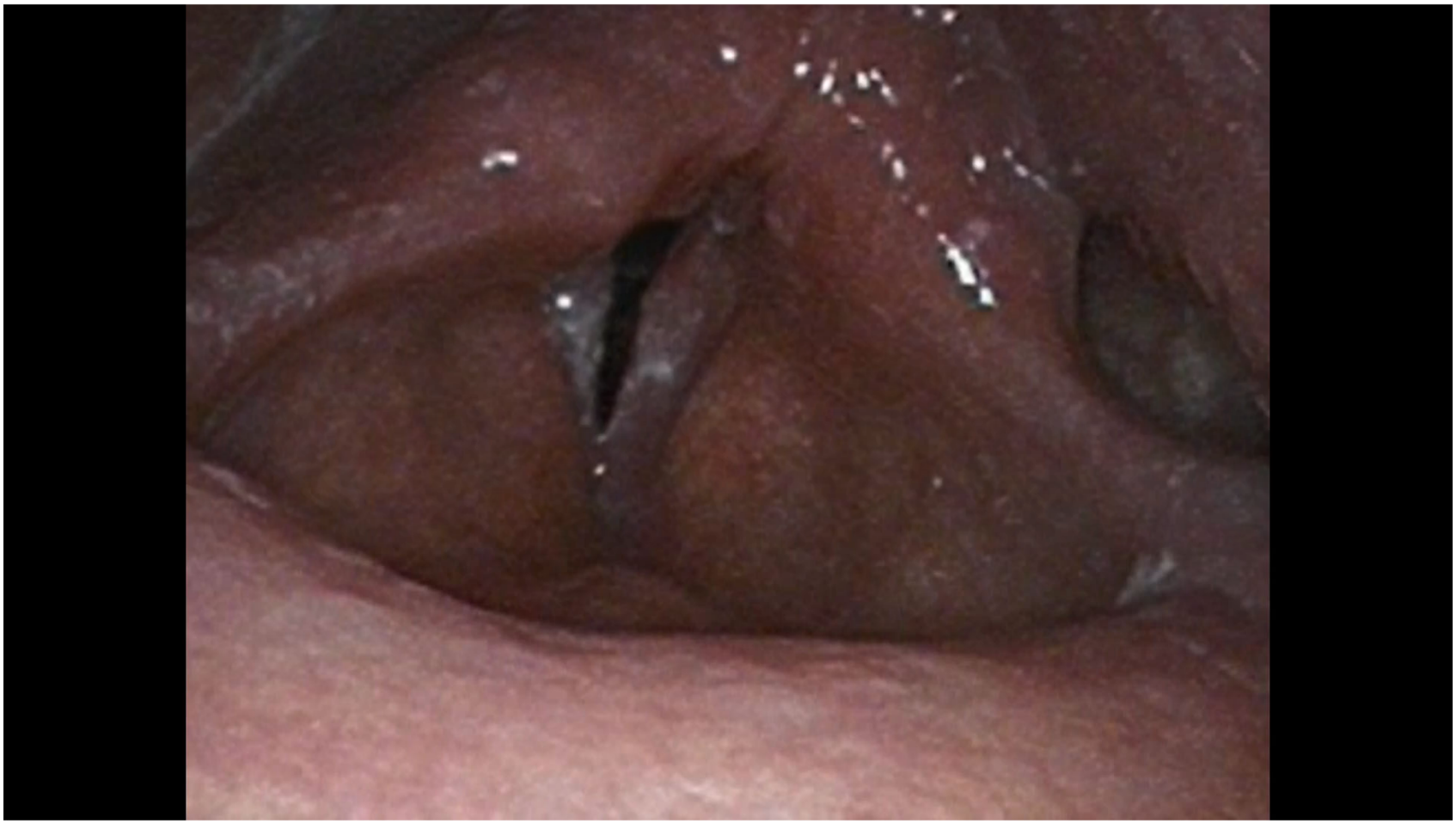




Concern for Cancer?

- Cervical lymphadenopathy
- Ear pain
- Vocal fold paralysis
- Heavy smoker

Fungal Laryngitis



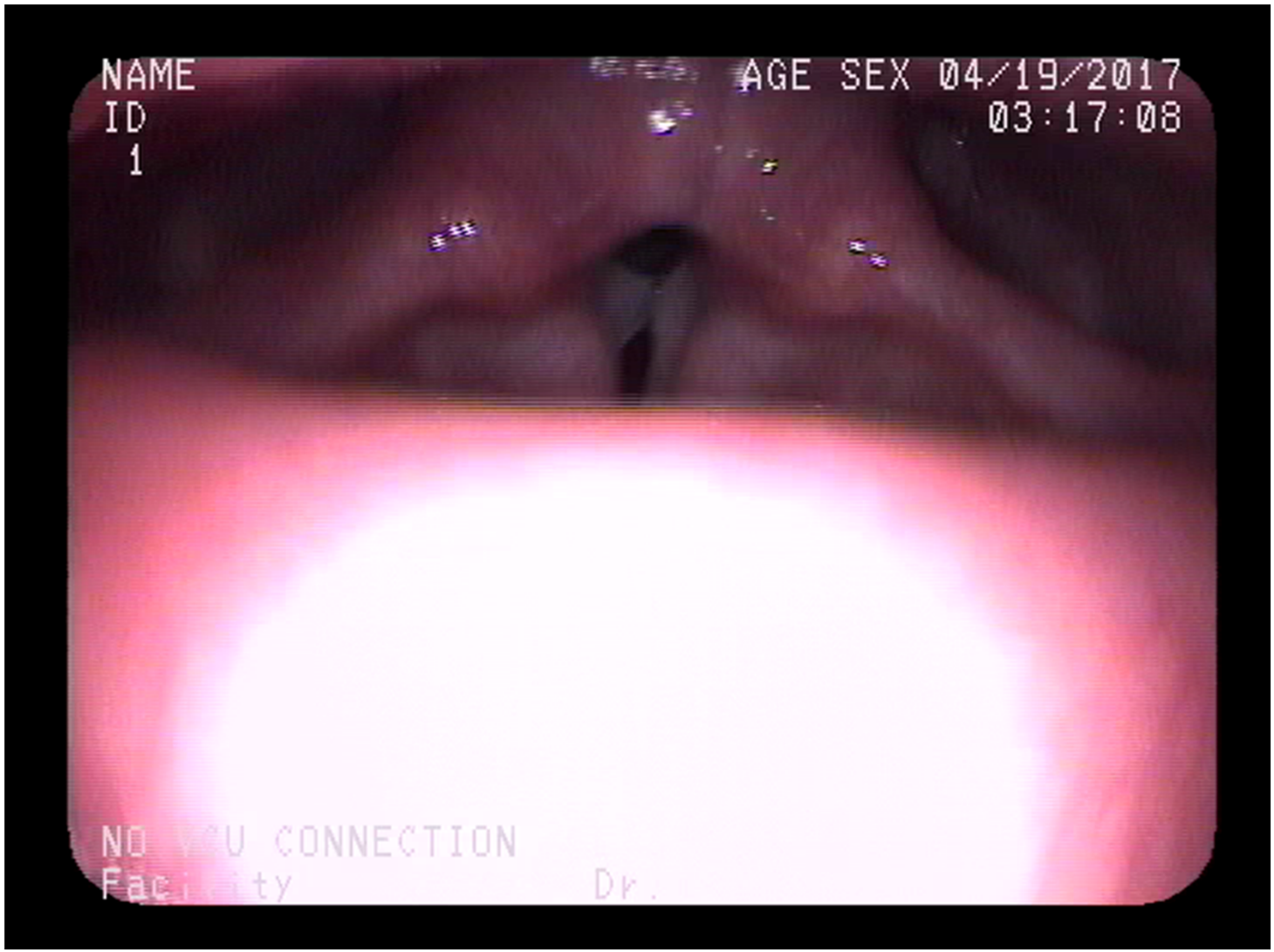
Treatment

- Diflucan (200mg once followed by 100mg for 14-21 days)
- If there is any concern for cancer/dysplasia, patient needs repeat scope

Muscle Tension Dysphonia

Parts of the History for Presbylarynges

- Vocal fatigue
- Vocal strain
- Rough voice
- Typically seen in middle age females with a history of anxiety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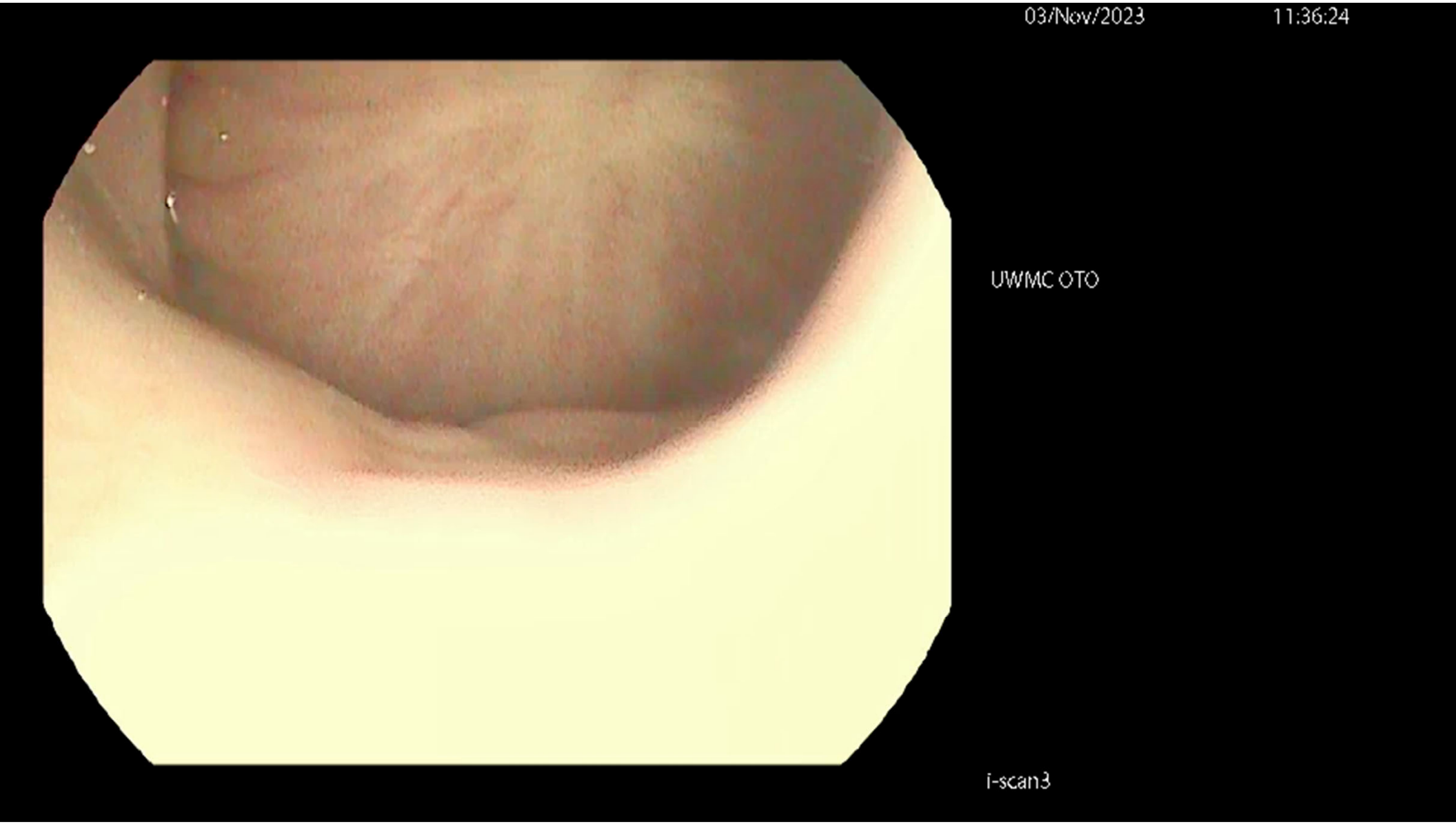
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Treatment

- Primary MTD
  - Voice therapy
- Secondary MTD
  - injection augmentation

Questions?