HOARSENESS

***IS IT SERIOUS* ?**

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HOARSENESS : IS IT SERIOUS?

- Hoarseness is a symptom of dysfunction of the vocal folds!
- It is a very common symptom
- It affects most of us somewhere throughout our lives

DISORDERS OF VOICE PRODUCTION

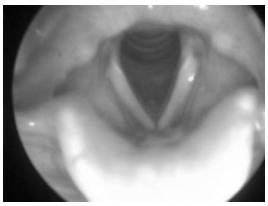
- Pulmonary disorders - Lungs
- Hoarseness - Laryngeal
- Articulation disorders - Oral
- Resonance disorders - Oropharyngeal, Nasal

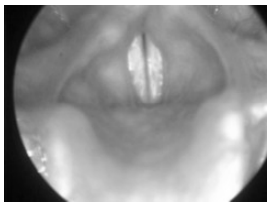
LISTENING TO YOUR PATIENT

- Is there a weak or damped voice?
- Is the voice barely perceptible?
- Are the lungs or pulmonary tree restricted in movement?
- Does the patient have difficulty in articulating words?
- Is the voice hyper/hypo-nasal?
- Are the sounds muffled?
- Are the words dysarthric?

ETIOLOGY OF HOARSENESS

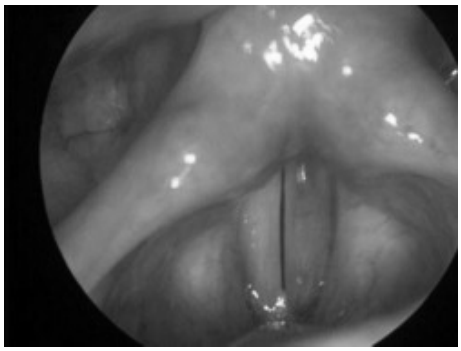
- The most common cause of hoarseness in my practice is NOT malignancy, yet ...
- All adults who use tobacco and have persistent hoarseness of greater than 3 weeks duration have a malignancy until proven otherwise!





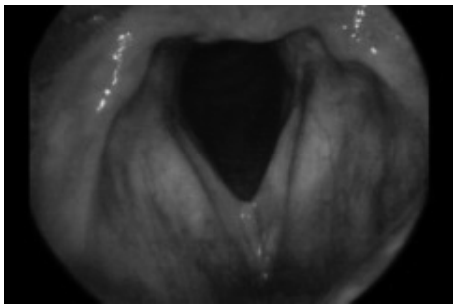
ETIOLOGY OF HOARSENESS

- Congenital causes
- Inflammatory causes
- Tumors
- Trauma
- Neurologic disorders
- Psychogenic disorders
- Other causes



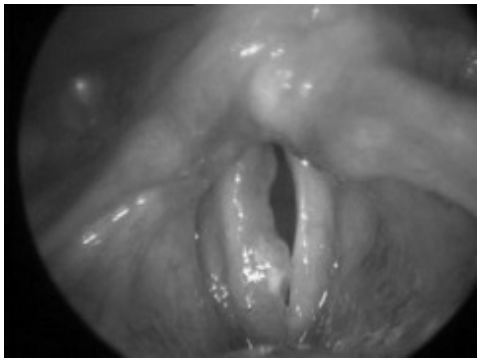
CONGENITAL CAUSES

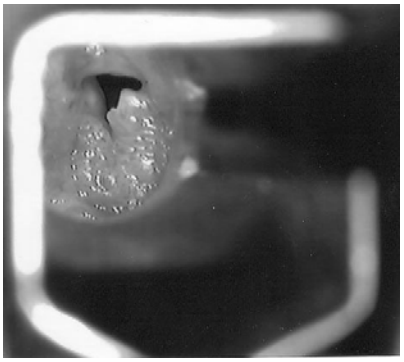
- Congenital glottic webs
- Cysts
- Laryngomalacia
- Cri du chat

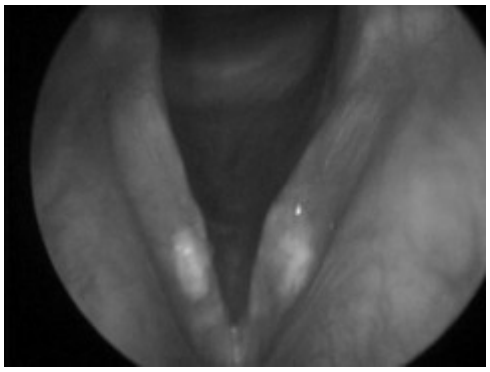


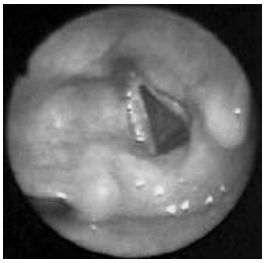
TUMORS

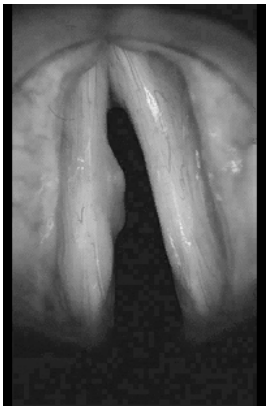
- Benign
  - Laryngeal papilloma
  - Hemangioma
- Malignant
  - Squamous cell carcinoma
  - Thyroid carcinoma
  - Others

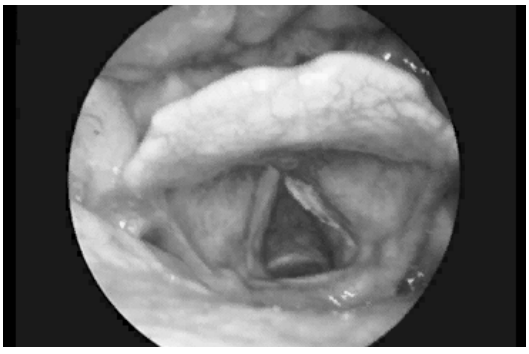


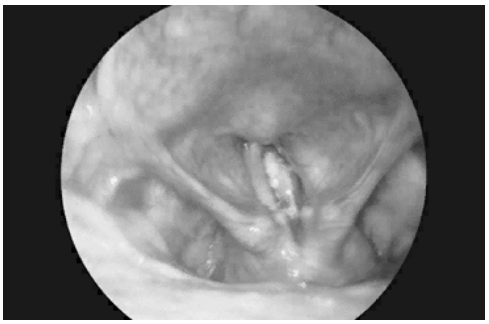


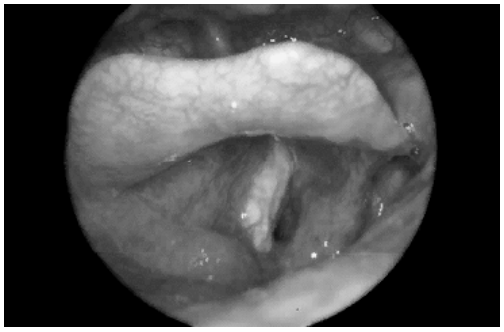


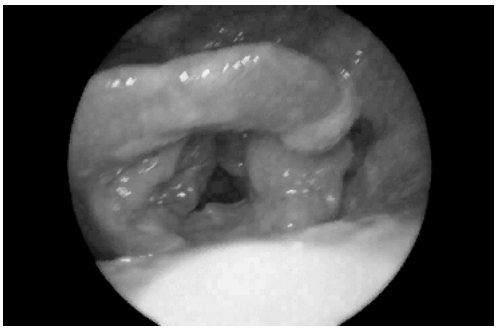






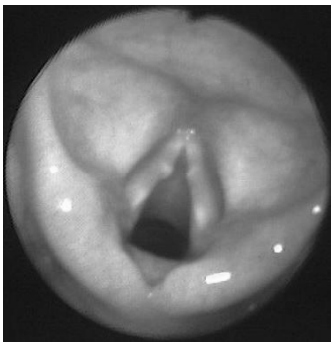


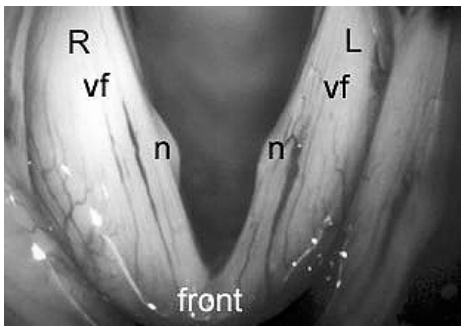


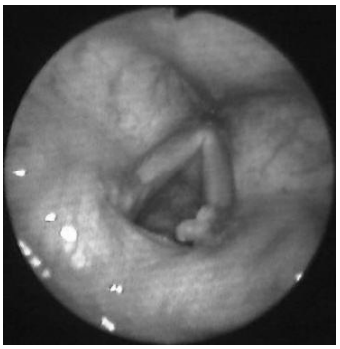


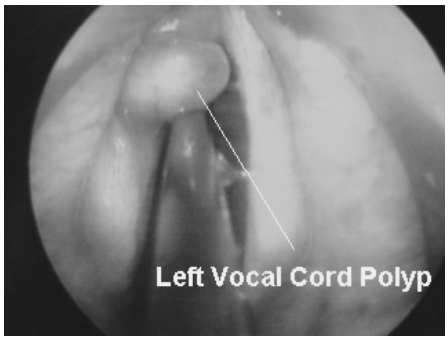
TRAUMA

- Vocal abuse
- External trauma
  - Choking
  - Neck trauma (MVA, fisticuffs)









NEUROLOGIC DISORDERS

- Spasmodic dysphonia
- Benign essential tremor
- Vocal cord paralysis
- Myasthenia gravis
- Muscular dystrophy
- CVA
- ALS
- Functional dysphonia/aphonia

VOCAL CORD PARALYSIS

- Iatrogenic (neck, chest surgery)
- Thyroid malignancy
- Thoracic lesions
- Skull base tumors
- CV anomalies
- Laryngeal intubation/trauma
- CNS anomalies
- Idiopathic

PSYCHOGENIC VOICE DISORDERS

- Emotional Stress - (musculoskeletal tension)
  - Voice Disorders w/o 2° Laryngeal Pathology
  - Voice Disorders w/ 2° Laryngeal Pathology
    - *or* Vocal nodule
    - *or* Contact ulcer
- Psychoneurosis
  - Conversion Reaction
  - Mutism
  - Aphonia
  - Dysphonia
- Psychosexual Conflict
- Iatrogenic

OTHER DISORDERS

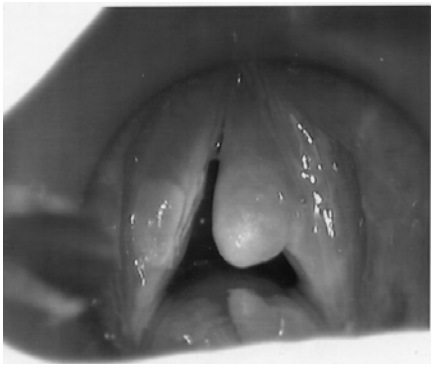
- Hypothyroidism
- Hormonal disorders
- Rheumatoid arthritis
- SLE
- Polychondritis
- Amyloidosis

INFLAMMATORY CAUSES

- Smoking
- Foreign bodies
- Allergic angioneurotic edema
- Acute laryngitis (URI)
- Chronic laryngitis
- Laryngopharyngeal reflux
- Contact ulcers, vocal nodules & polyps
- Dysphonia plicae ventricularis
- Granulomatous diseases of the larynx

CHRONIC LARYNGITIS

- Smoking
- Vocal abuse
- Poor vocal technique
- Laryngopharyngeal reflux



WORKUP OF PERSISTENT HOARSENESS

- LISTEN to the voice
- Nasal exam (signs of allergy, sinus)
- Oral exam (PND, palate & tongue mobility)
- LOOK at the vocal folds
- Neck exam (muscle tension, masses, tracheal deviation, thyroid enlargement)

ONSET OF HOARSENESS

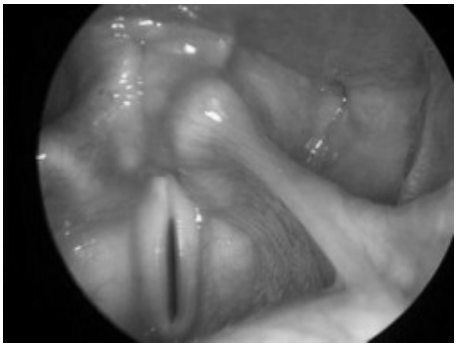
- Acute
- Chronic, intermittent
- Chronic, progressive

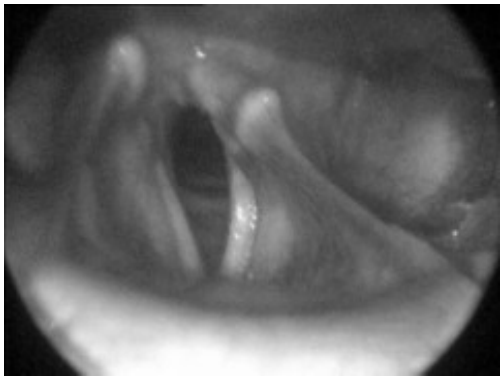
ACUTE ONSET OF HOARSENESS

- URI
- Vocal abuse
  - Inflammation
  - Hemorrhage

CHRONIC, PROGRESSIVE SYMPTOMS

- Tumors
- Vocal nodules
- Vocal polyps
- Spasmodic dysphonia
- Functional dysphonia
- Aging changes





CHRONIC, RECURRING SYMPTOMS

- Neurologic disorders
- Tumors
- Laryngopharyngeal reflux
- Postnasal discharge (PND)

REFLUX :
Pathophysiology

Normal Defensive Factors	Normal Aggressive Factors
LES tone	Gastrin
Anatomic factors	Pepsin
Esophageal clearing	Bile acids
Mucosal resistance	Pancreatic enzymes
Gastric emptying	Gastric acid
Volume of gastric material	

REFLUX:
Pathophysiology – Critical Factors

- LES tone
- Frequency and duration of transient LES relaxations
- Acidity of the gastric contents
- Amount of time acid is in the esophagus/pharynx/larynx

RELAXATION OF THE LES

Drugs

- Calcium channel blockers
- Anticholinergic agents
- Narcotics
- Estrogens
- Nitrates

Foods

- Caffeine
- Fatty foods
- Chocolate
- Peppermint
- Alcohol

Others

- Smoking

MUCOSAL INJURY & pH

- pH < 4.0 correlates highly with severity of mucosal injury
- pH > 4.0 correlates with leveling off of symptoms
- pH < 4.0 results in reduced ability for mucosa to heal +/or repair itself

GASTROESOPHAGEAL REFLUX: Symptoms

Nighttime, supine symptoms are most common:

- Dyspepsia or indigestion - Most common symptom
- Heartburn
- Dysphagia
- Chest pain

GASTROESOPHAGEAL REFLUX : Epidemiology

- Heartburn present in 11% of people daily
- Symptoms present in 1/3 of population every 3 days
- 2/3 of people experience dyspepsia at some point in their lives
- Prevalence of GERD-related symptoms increases with age

LARYNGOPHARYNGAL REFLUX: Symptoms

Daytime, upright symptoms are most common:

- Hoarseness - most common symptom
- Globus pharyngeus
- Frequent throat clearing
- Chronic cough
- Dysphagia
- Frequent sore throats
- Paroxysmal laryngospasm
- Prolonged vocal warm-up
- Asthma
- 80% do not have dyspepsia !

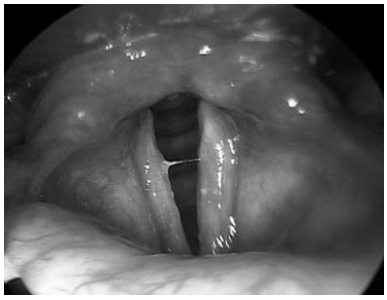
LARYNGOPHARYNGAL REFLUX : Epidemiology

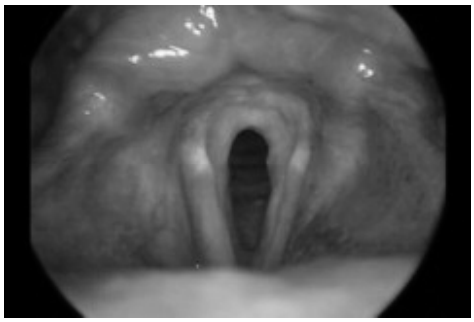
- Incidence of 4 - 10% of patients presenting to ORL practice
- Incidence of 1% of patients presenting to primary care practice
- 2/3 of patients with laryngeal & voice disorders have GERD as primary cause or significant cofactor

Koufman, 1996

LARYNGOPHARYNGAL REFLUX: Laryngeal Examination

- Mild to moderate vocal fold edema (reflux laryngitis)
- Laryngeal granulomas & contact ulcerations
- Vocal nodules
- Paroxysmal laryngospasm
- Hyperplasia of the interarytenoid space
- Erythema of the posterior larynx or pharynx
- Larygeal/subglottic stenosis





LARYNGOPHARYNGAL REFLUX: Evaluation

- Videostroboscopy
- Barium esophagram
  - Motility & peristalsis problems
  - Tumors, diverticula, strictures
  - Esophagitis
  - Spontaneous reflux
  - Hiatal hernia
  - LES integrity
- 24 hr ambulatory pH monitoring of esophagus & pharynx
- Acid suppressive therapy

CHRONIC LARYNGITIS & LPR

- 182/233 consecutive patients with chronic laryngitis ⟶ LPR
- Symptoms of persistent sore throat, PND w/ throat clearing, hoarseness, cough w/o pulmonary disease
- 96% of patients experienced relief of symptoms w/ treatment preventing reflux of gastric acid

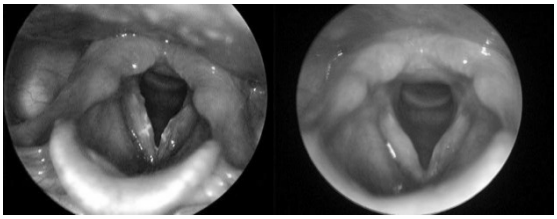
Hanson et al, Ann Otol Laryngol 104; 1995

TREATMENT OF LARYNGOPHARYNGEAL REFLUX

- Lifestyle modifications
  - Dietary restrictions
  - Avoid late night snacks or meals
  - Tobacco use cessation
  - Reduction of alcohol intake
- Elevation of head of bed
- Medical therapy

OUTCOMES OF TREATMENT FOR LPR

- Outstanding results by those who recognize LPR and treat it effectively
- Need to educate other physicians and patients about LPR
- Must develop better methods to document causality of GER-related laryngeal disease



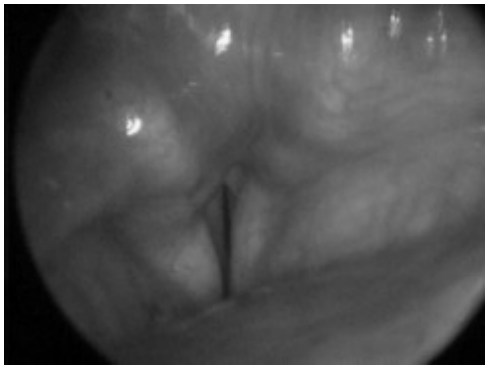
GOOD VOCAL CARE

- Humidification
- Warm mist vaporization
- Mucolytic agents
- Treatment of allergies
- Treatment of reflux laryngitis
- Cessation of smoking and tobacco use
- Avoidance of vocal abuse such as yelling, screaming, and whispering
- Often, a course of vocal rest may be worthwhile

SPEECH THERAPY

Useful for :

- Functional disorders
- Inflammatory disorders
- Neurologic disorders
- Pre-surgical evaluation



REFERRAL TO OTOLARYNGOLOGIST

- Abnormal finding on physical exam
- Normal laryngeal exam with persistent hoarseness
- Inability to visualize the vocal folds or larynx

WHAT CAN WE DO?

- Mirror exam
- Flexible fiberoptic exam
- Videostroboscopy*
- Recommend a Neurology referral
- Early, quick feedback on YOUR patient

A smoker with persistent hoarseness of greater than 3 weeks duration has a malignancy until proven otherwise.

HOARSENESS
***IS IT SERIOUS*?**

IT CERTAINLY CAN BE!