

Laryngitis

acute or chronic, infectious or noninfectious, localized or systemic inflammatory condition of the larynx.

clinical presentation of laryngitis depends on

1. its cause
2. the amount of tissue edema
3. the region of the larynx primarily involved
4. the patient's age.

Difference between adult and child larynx

1. Anatomical factors

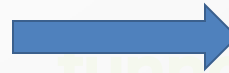
soft laryngeal cartilages

small lumen

submucosa

loose

shape



tunnel

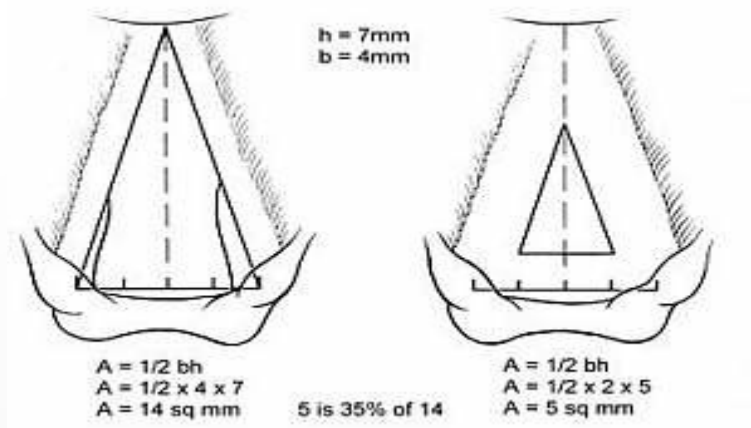
supply, e.g. lymphatics is more abundant

So minimal edema cause marked obstruction

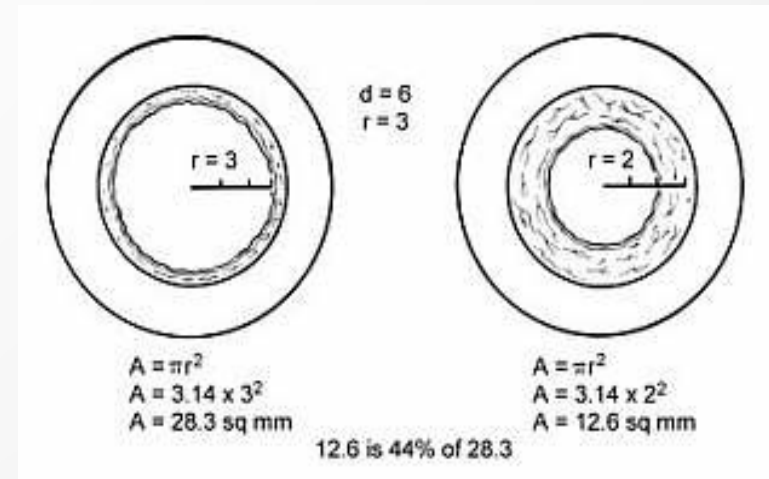
2. Immature immune system

3. Immature nervous regulation = spasm

Why laryngitis is critical in infants?



The triangular aperture of the normal infant larynx is approximately 7 x 4 mm, an area of 14 mm^2 . When intubation or an upper respiratory tract infection causes 1 mm of edema, the cross-sectional area is reduced to 5 mm^2 , only 35% of normal.



The normal newborn subglottic larynx has a diameter of 5 to 7 mm and a cross-sectional area of approximately 28.3 mm^2 . Only 1 mm of edema reduces the area to 12.6 mm^2 , 44% of normal.

ACUTE LARYNGITIS

A. Acute non specific laryngitis

Acute inflammation and catarrhal inflammation of laryngeal m.m.

Aetiology:

Following URTI

- Viral (influenza, Rhinovirus)

- secondary infected with bacteria (Strept.Pneumonia, strept., staph.).

Predisposing factors

- Voice abuse
- Smoking
- Post nasal discharge as in sinusitis
- Dust and fumes

Symptoms

General:

Fever (occasionally), headache, malaise, and fatigue –

Local

Hoarseness Discomfort and pain on phonation

Dry cough and later yellow sputum "2ry infection"

Stridor and dyspnea., in infants and children

sign

Diffuse symmetrical congestion and oedema

Treatment

- 1- Humidification steam tincture benzoini
- 4- Systemic antibiotics 5- Mucolytics

In children:

1. Hospitalization, oxygen
2. Steroids to ~ oedema
3. Careful observation of respiratory obstruction
4. if severe distress -* tracheostomy or intubation

B. Acute Epiglottitis

- Etiology: (type B) most common
- Causes: Strept. pneumoniae, S. aureus ; hemolytic streptococci, and Klebsiella pneumoniae

Incidence: More in infants and children > adults

Symptoms

- General: High fever (may exceeds 40° c), malaise, headache, and anorexia –
- Local: - Severe odynophagia, dripping of saliva
- Muffled voice (hot potato)
- Rapidly progressive stridor which may occur suddenly

• Epiglottitis (Laryngoscopy)

• Swollen epiglottis

• Epiglottitis appears as red swollen mass on inspection of

• Laryngeal oedema and congestion

• Enlarged UDCLN

INV. Lat. X ray neck  swollen epiglottis (thumb print sign)

Treatment

1. Hospitalization, emergency situation
2. Maintenance of airway by intubation or tracheostomy.
3. Drugs: Parental antibiotics, steroids
4. humidified O₂

(C) Acute Laryngo Tracheobronchitis (croup)

Acute inflammation of respiratory infection spreading to entire respiratory system.

CAUSATIVE ORG.

- Parainfluenza virus type 1 (most common)
- Parainfluenza type 2 , RSV, Influenza virus type A & B

Clinical Picture

Age 6 months to three years

History of URTI

Hoarsness

Inspiratory or biphasic stridor

Investigations

PXR neck & chest Steeple sign (subglottic narrowing)

Fever & malaise

barking cough



Treatment

- Patients who are mild need humidified O₂ and nebulized saline
- Humidification (important)
- Sedation C.I because of the risk of resp. depression
- Nebulized epinephrine (↓ mucosal oedema).its effect lasts only for 2 hours
- Steroids (locally and systemic)
- Intubation or tracheostomy in sever cases that do not respond to medical treatment

Chronic laryngitis

ACH: NON SPECIFIC



- 1) Repeated attacks of acute laryngitis
- 2) Faulty use of voice
- 3) Cigarette smoking (actively or passively)
- 4) Dusty environment
- 5) Industrial exposure to irritants and fumes
- 6) Excessive alcohol intake.
- 7) Chronic sinus disease.
- 8) Chronic gastro- oesophageal reflux.

Symptoms:

1. Hoarseness of voice.
2. Frequent desire to clear the throat.
3. Dry, irritating cough
4. Chronic sore throat.

• Vocal cords are bilaterally and symmetrically thick and covered with copious mucus on its surfaces.

• Vocal cords are oedematous type (Reinke's Oedema) present with thick and polypoidally swollen vocal cords.

Treatment:

Elimination of irritating factors.

Voice rest.

Medical treatment in the form of antibiotics, mucolytic agents, proper hydration and short course of steroids.

Moist warm climate.

Steam inhalation.

- Vocal cord stripping is performed endoscopically by microlaryngeal instruments or CO₂ laser in resistant and oedematous cases.

Reflux-Associated Laryngitis

- reflux-associated laryngitis is considered as a frequently unrecognized cause of chronic laryngeal symptoms and pathology.

● laryngeal findings

- arytenoid edema, erythema, pachydermia, and pseudosulcus vocalis
- chronic reflux oesophagitis

● treatment

- proton pump inhibitors

H 2 blockers

- Behavioral modification to decrease the symptoms associated with reflux completing the last meal two hours prior to bedtime, limiting caffeine intake, and modifying the diet to foods that do not stimulate acid secretion.

- surgical management such as Nissen fundoplication can be pursued