5) Chronic Laryngitis - Dr. Hiwa

**Definition:** Is a chronic inflammation of the mucosa of the larynx.

**Etiology**

Follows repeated acute attacks but usually it arise insidiously due to:

- Faulty use of voice.
- Infection of teeth, tonsil, sinus, and lower respiratory tract infection.
- Excessive alcohol consumption or smoking.
- Dust or irritant fumes.

**Clinical classification:**

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**Chronic Nonspecific laryngitis**

1. **Simple chronic laryngitis**

- **Pathology:**
  - Hyperaemia of vocal cord.
  - Edema.
  - Myositis occurs in the intrinsic muscles.
  - Excessive secretion due to hyper activity of the mucous gland.
  - Hyperaemic and edematous stage often passes to a hypertrophic one and rarely to an atrophic one.

- **Clinical Features:**
  - Hoarseness (intermittent then persistent).
  - Cough (slightly dry).
  - Sore throat (very common).

- **Laryngeal appearance (Three types):**
  1. Hyperaemic.
  2. Hypertrophic.
  3. Edematous.

- In all types the larynx is always affected bilaterally & symmetrically.

- **Treatment:**
  - Vocal rest
  - Elimination of irritating factors such as dust and smoking.
  - Systemic antibiotics.
  - Carbocisteine (a mucolytic) when secretion are thick.
  - Stripping of the vocal cords is performed endoscopically in persistent cases.
2. Hyperkeratois of the larynx (leukoplakia)

- **Definition:** A localized form of epithelial hyperplasia characterized by leukoplakic raised patches on the vocal cord.
- **Pathology:** There is hyperplastic change in the epithelium, together with extension of the papillae into the cornium; and basement membrane remains intact.
- **Clinical features:**
  - Hoarseness (gradual onset).
  - Examination: there is a white raised patch on one or both vocal cords the anterior and middle thirds are usually involved. Mobility of cords is not impaired.
- **Treatment:**
  - Infection in the mouth, throat and nose treated.
  - Stripping of the cords can sometimes be done through a direct laryngoscope but recurrence is usual
  - Constant supervision is essential to detect early malignant change demanding radical removal or radiotherapy.
  - Biopsy is mandatory in suspicious cases and may require repetition.

3. Pachydermia Laryngis:

- **Definition:** A form of chronic hypertrophic laryngitis affecting the epithelium and subepithelium of the posterior part of the larynx.
- **Etiology:**
  - A rare condition more common in men.
  - The cause usually unknown but aggravating factors includes excessive alcohol and tobacco.
- **Pathology:**
  - Hypertrophy occur both in the epithelium and subepithelial connective tissue. An inflammatory reaction may be seen. Neoplastic changes does not occur.
- **Clinical features:**
  1. Hoarseness
  2. Sore throat
  3. Granular or papilliferous appearance which occur in posterior sites and is bilateral and symmetrical
- **Treatment:**
  - Similar to that for simple chronic laryngitis. surgical removal and diathermy of the masses give little relief and are inadvisable.

4. Contact Granuloma:

- Unilateral.
- Situated medially or superiorly on the vocal process of the arytenoid cartilage.
- Confused with contact ulcer.
- The granuloma has a typical polypoid appearance which is a local reaction to trauma.
- Granulation tissue can develop if the perichondrium is damaged either vocal trauma or through trauma from an endotracheal tube.
- Slight hoarseness, with history of previous surgery or usage of excessive voice.
- Treated by simple removal by microlaryngoscopy but local recurrence are common.
5. Atrophic Laryngitis:

- Uncommon. Usually associated with atrophic rhinitis and pharyngitis.
- **Aggravating factors:** dusty atmosphere, industry fumes, and chronic infection of the paranasal sinuses.
- Hoarseness and sore throat both of which are improved temporarily by hawking and coughing up the crust.
- Sometimes dyspnea.
- **On examination:** the mucosa will be dry and atrophic, crusts different sizes lie over the mucosa which may be excoriated when they are removed.
- **Treatment:**
  1. Treatment of infection anywhere
  2. Change of atmospheric conditions
  3. Removal of crust will give some local relief.
     - This is aided by:
       - Inhalation of menthol
       - Carbocisteine by mouth.
       - Hormones (results are uncertain)
       - Laryngeal spray e.g. Benadryl, or 0.5% solutions of sodium bicarbonate.

Chronic Specific Laryngitis

**Tuberculous Laryngitis:**

*Acute miliary tuberculosis of larynx:*

- The laryngeal lesion are accompanied by lesion in the pharynx.
- Tubercles appear on the swollen mucosa of the epiglottis and arytenoids, these break down and form greyish ulcer.
- Severe pain is usually present.
- Treatment is that of general infection.

*Chronic tuberculosis of the larynx (laryngeal phthisis):*

- **Etiology**
  - It is almost always secondary to the pulmonary lesion. It may be:
    - Sputogenic.
    - Or hematogenic
    - Or carried by lymph stream.
- **Pathology:**
  - With sputogenic type of infection the tubercle bacillus can infect the intact laryngeal mucosa, the submucosal layer become infected and small round cell infiltration occur.
  - One or more surface nodules soon appear which caseate and leads to ulceration and later on there will be formation of granulation tissue and cellular swellings which is called pseudo-edema.
- **Clinical features:**
  - Weakness of voice with periods of aphonia.
  - Hoarseness
  - Cough is a prominent symptom.
  - Pain on swallowing if the laryngeal inlet is involved.
  - Referred otalgia is common.
  - Dyspnea rare.
  - Localized tenderness is rare unless perichondritis is present.
Laryngoscopic appearance:
1. Slight impairment of adduction.
2. Marked injection of one vocal cord may involve the whole of the cord or the posterior part of it.
3. Ulceration of the edge of the cord (mouse-nibbled)
4. Granulation in the interarytenoid region or on the vocal process of the arytenoid cartilage.
5. Edema of the mucosa of the ventricle.
6. Pseudo-edema of the epiglottis and arytenoids (turban larynx) of a pale sausage-like appearance, with occasional small bluish superficial ulcers.
7. Vocal cord paralysis may occur from apical pulmonary disease, this affect the right side more commonly than the left.

Diagnosis:
1. CXR must always be taken when there are persistant laryngeal symptoms to exclude TB of lungs.
2. Sputum will usually contain tubercle bacilli.
3. Biopsy when any doubt exist. The lesions most often confused with TB laryngitis are Carcinoma, ulcerative type of syphilis, lupus, pachydermia and chronic simple laryngitis.

Treatment: is that of primary lung TB.

Lupus of the larynx:

- Rare and secondary to diseases in the nose and pharynx.
- Young females are more commonly affected.
- The epiglottis is involved first, then the aryepiglottic fold. The vocal cords may be involved much later.
- Reddish granulation tissue are seen on a pale mucosa, area of ulceration and scarring coexist.
- Asymptomatic and discovered on routine examination of the larynx. There may be dyspnea and hoarseness which are late symptoms.
- Prognosis is good.

Treatment:
1. Antituberculous chemotherapy.
2. Calciferol (vit. D2)150,000 i.u daily for 3-6 months, 2 pints of milk per day should be taken with calciferol.
3. Tracheostomy in cases with marked stenosis.