

hoarseness in children

Definition:-

- **Hoarseness means to have a hoarsed voice.**
- **It a sign and a symptom in many laryngeal diseases . in this lecture we will discuss the causes of hoarseness in children.**

Causes:-

1- congenital:-

a-laryngeal web.

b-laryngeal cyst.

c-upper tracheal stenosis.

d-vallecular cyst.

e-laryngomalacia.

f-Subglottic stenosis.

g-Subglottic hemangioma.

h-vocal cord palsy.

i-laryngotracheal cleft.

2-infections:

a-acute epiglottitis.

b-acute

laryngotracheobronchitis.

c-acute simple laryngitis.

d-diphtheritic laryngitis.

e-herpes zoster of the larynx.

**f-chronic non specific
laryngitis.**

g-TB laryngitis.

h-syphilitic laryngitis.

i-leprosy of the larynx.

3-trauma :-

a-external:

i-blow on the larynx.

ii-cut throate.

iii-gun shot.

b- internal:-

i-inhalation of irritant.

ii-swallow of corrosive.

iii-foreign body.

**4-vocal cord palsy :-for any
reason.**

5-tumours :benign and malignant.

Laryngomalacia:-

- ..The larynx is of an exaggerated infantile type .the epiglottis is long and narrow and folded backward at each lateral edge.**
- ..this convert the epiglottis into an omega shaped incomplete cylinder. The aryepiglottic folds are also approximated .**
- .. the laryngeal inlet is therefore reduced to a cruciate slit the edges of which sucked together by each inspiration.**

Clinical features:-

- .strider is the only symptom and appears at or soon after birth.**
 - Cyanosis is rare.**
 - The voice is unchanged.**
 - Direct laryngoscopy can show the exaggerated infantile type**

of the larynx and the edges of the laryngeal inlet are seen to be drawn in with inspiration.

Diagnosis:-

- **Can be made by careful history and examination.**
- **Inspiratory strider without hoarseness is always suggestive when occurring at or soon after birth. flexible fiberoptic laryngoscopy or direct laryngoscopy can give the diagnosis.**

Treatment:-

- **Reassurance is usually all that is necessary .
tracheostomy may rarely**

have to be performed in very severe cases .

- **it should be avoided whenever possible as it carries a 5-10% mortality.**

Prognosis:-

- **Mostly good, but death in first year of life usually from pneumonia occurs occasionally.**

Subglottic stenosis:-

- **Most cases are acquired from intubation trauma in premature infants. Inspiratory strider is partially relieved by rest and worsened by**

exertion but unaffected by posture.

- **The voice is normal .feeding is difficult because there is little time to spare for swallowing . failure to thrive occur in sever cases.**

Diagnosis:-

- **Direct laryngoscopy is required .**

Treatment:-

- **If the infant fails to thrive a tracheostomy is required.**
- **Growth of the subglottis allows decanulation after some years of tracheostomy in most cases.**

- **There is a 5-10% mortality from both the condition and tracheostomy at home.**
- **The mother should be able to change the tube at home.**

Subglottic haemangioma:-

- **This condition is clinically indistinguishable from subglottic stenosis and the diagnosis and management are the same.**

Laryngotracheal cleft:-

Diagnosis:-

- **Diagnosis is made by barium swallow followed by direct laryngoscopy .**

Treatment:-

- **Clefts of the cricoid at or above the vocal cords are treated conservatively.**
- **Clefts below the vocal cords cause aspiration and require open surgical repair with a preliminary tracheostomy.**

prognosis:-

- **the mortality of cases which aspirate is 50%.**

Laryngeal cyst:-

- Small cyst present with hoarseness or a muffled cry . larger ones cause inspiratory strider .
- Direct laryngoscopy is required to evacuate and uncap a cyst but the diagnosis may be made by a fiberoptic flexible laryngoscope in the clinic.
- Treatment may need to be repeated.

Laryngeal web:-

Aetiology and pathology:-

- The web is due to an arrest in development and consist of a fibrous tissue stroma covered

by epithelium in the anterior half of the epiglottis.

Atresia may be complete , this cause stillbirth and may be overlooked at autopsy.

Clinical features:-

- The symptoms vary with the size of the web.**
- hoarseness is usually present.**
- Inspiratory strider occurs in severe cases.**
- Web can be seen by fiberoptic or direct laryngoscopy.**

Differential diagnosis:-

- **Congenital web must be distinguished from an acquired web due to:-**

1-trauma : accidental or surgical especially after cordectomy.

2-acquired specific infections:- as healed diphtheria.

3-chronic specific infections:-as in TB and syphilis.

Treatment:-

1-no treatment: in mild form . hoarseness is not relieved by surgery and recurrence of thick band may occur.

2-laser excision.

3- tracheostomy.

4-surgical excision.

Vocal cord palsy:-

- **Often overlooked as a cause of inspiratory stridor and hoarseness in a neonate. Even direct laryngoscopy under general anesthesia fails to reveal the condition unless the surgeon watches the cords patiently as the anesthetic wears off and the larynx comes to life.**

Fiberoptic laryngoscopy is the most appropriate technique.

It is caused by damage to the recurrent laryngeal nerve in the neck or chest usually from birth trauma.

Treatment is expectant.