

LARYNGEAL DISEASES

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Manifestations of laryngeal affection

- **A raw dry cough** originated from the larynx and throat, which usually occurs during days and night. The cough occurs in fits and may be interrupted with few swallowing attempts.
- **Stridor** (an inspiratory or expiratory wheeze) due to a sort of obstruction. It may be heard with normal breath or only with exertion. This stridor is soft in mild obstruction but has a high tone wheeze in severe obstruction.
- **The change in voice** is seldom to occur and indicates severe laryngeal affection especially vocal cords.

- In cats, the **purring** becomes **unpleasant** and is interrupted by swallowing movements.
- **Painful swallowing** is apparent because of the irritation to the pharynx.
- **Dyspnea** occurs at intervals (spasms).

A-Laryngeal malformation

- Congenital laryngeal malformation occurs in both dogs and cats and may be seen at any part of the larynx.
- This malformation may be
 - A-1-stenosis,
 - A-2-inadequate development of laryngeal cartilage, and
 - A-3-laryngeal collapse

A-1-Laryngeal Stenosis

- Laryngeal stenosis means **narrowing** of the laryngeal lumen due to congenital defect.
- It results in stridor and dyspnea
- Can be detected easily with laryngoscope
- In young dogs and cats, spontaneous recovery is expected at maturity.
- In adults, the correction needs surgical interference

A-2-Inadequate development of laryngeal cartilage

- Commonly seen in Brachycephalic dogs such as English Bulldog and Pekingese breed
- It is associated with varying degree of obstruction.



B- Inflammation of larynx (Laryngitis)

Definition

- It is an acute inflammation of the laryngeal mucosa characterized by **raw dry cough**, which could easily be induced by palpation of the larynx followed by **short swallowing movement**.

Etiology

1. Canine infection tracheobronchitis (kennel cough)
2. Bacterial and viral infection in dogs that result in inflammation of laryngeal, tracheal, or bronchial mucosa.
3. May occur after a day of continuous barking and panting.
4. Viral tracheitis and calicivirus in cats.
5. After inhalation of burning gas in dogs and cats.
6. After intubation for anesthesia in dogs and cats

Clinical signs

1. Signs are restricted to raw dry cough with interrupted swallowing movements.
2. By laryngoscopic examination, profuse local edema and laryngospasm may be visualized.
3. Excitement and anxiety manifested by resistance to examination.

Treatment

- Complete rest and avoiding excitement.
- Expectorant (biselvon).
- Syrup containing ephedrine.
- Antibiotics are indicated only if animal encounters a fever.

C- Oedema of laryngeal mucosa

- It is oedematous swelling of the mucosa and submucosa characterized by acute inspiratory and expiratory stridorous breathing and respiratory distress.

Treatment

- Mainly intubation and tracheotomy to relieve the respiratory distress.
- Administration of sedatives to keep the animal calm.
- IV injection of corticosteroids.

C- Laryngeal abscess

Etiology

- A rare disease that occur secondary to penetration of the larynx by a needle, fish bone or stick

Symptoms

- Are those of obstructive laryngeal disease

Treatment

- The abscess should be opened and drained under general anesthesia.
- Care should be taken to avoid aspiration of exudates into the trachea.
- Antibiotic course should be given based upon sensitivity test

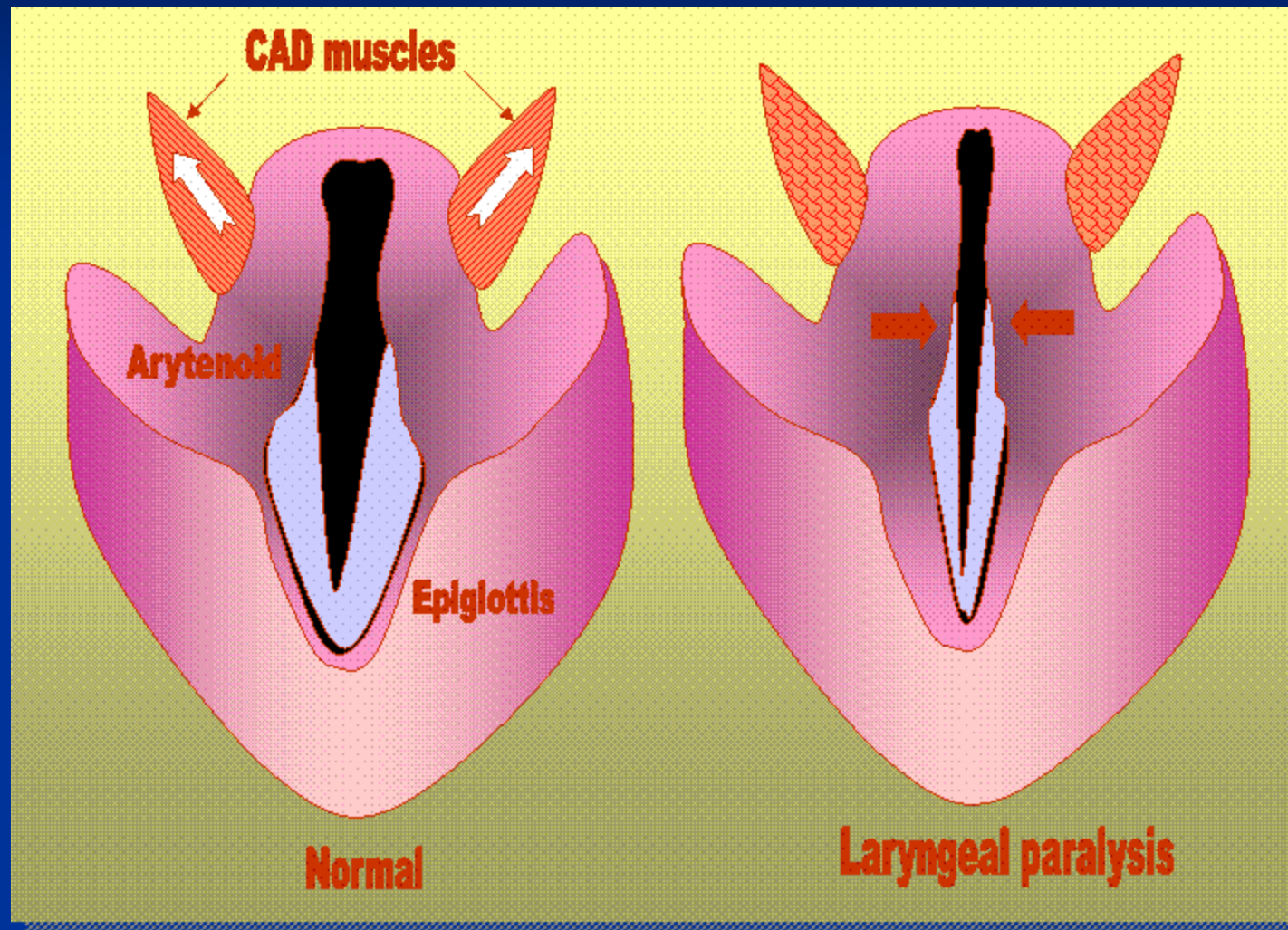
D- Laryngeal paralysis

Definition

- It is the failure of the arytenoids cartilage to abduct during inspiration creating an upper airway obstruction. It may be partial or complete loss of function.

Etiology

1. *Neurologic*: due to trauma or neoplasia of the neck or to both the recurrent laryngeal nerves that innervates the arytenoids cartilage.
2. *Muscular disease*: in association with polymyositis or generalized muscular disease (myasthenia gravis).
3. *Ankylosis* of the cricoarytenoid muscle.
4. *Congenital* laryngeal paralysis appears to be inherited in young dogs of several breeds (such as Dalmatian and afghan Hound) due to an autosomal dominant gene.



Pathophysiology

- Paralysis of the dorsal cricoarytenoid muscles prevents the abduction of the arytenoids and the vocal folds during inspiration. This results in narrowing the size of the glottic lumen and increasing airflow resistance.
- This narrowing of the glottic lumen causes an increase in airflow velocity.
- Increased airway velocity helps to re-open the glottic lumen during inspiration. This opening/closing cycle in the larynx causes the vocal folds to oscillate which produces the characteristic `roaring` or wheeze known as stridor.

Clinical signs

1. Respiratory distress due to narrowing of the airway at the arytenoid cartilage.
2. Stridor or change in barking voice.
3. Cyanosis particularly after exercise or excitement.
4. Laryngeal edema or inflammation may occur as a secondary disease.

Diagnosis:

- Clinical signs
- History of trauma
- Laryngoscopy for definitive diagnosis:
arytenoids cartilages and focal cords remain
closed during inspiration.

Treatment

- Glucocorticoid such as prednisone 0.5mg/kg every 12 h to reduce secondary inflammation and edema.
- Surgical enlargement of the airway is the treatment of choice to maintain adequate opening for the flow of air.

Questions

Posters of the Fourth Grade (Pet Animal Medicine)

Student Group	Student numbers	Poster title
1	1-20	Respiratory diseases of Pet Animal
2	21-40	Digestive Diseases of Pet Animal
3	41-60	Skin Diseases of Pet Animals
4	61-80	Cardiovascular Diseases of Pet Animals
5	81-100	Urinary Diseases of Pet Animals
6	101-120	Disorders of Pancreas and thyroid gland in Pet Animals
7	121-140	Disorders of adrenal gland and pituitary gland in Pet Animals
8	140 -	Diseases of nervous system of Pet Animals

Important Guidelines for Posters

- The dimensions of the posters should be 100 cm x 80 cm
- Poster should include the following
 - Name of the disease
 - Photos of clinical signs
 - Methods of treatment
- At the end of the poster, you should mention
 - The name of the students in the group in one line
 - Under supervision of:
- Prof. Dr. Hussam El-Attar
- Dr. Yassein Abd AL-Roaf
- Dr. Mohamed Ghanem