

DISEASES OF RESPIRATORY SYSTEM

DISEASES OF TRACHEA

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A-Tracheal Collapse

Definition:

- It is the collapse and **flattening** of the trachea that usually occurs in **Toy** and other breeds of dogs and is characterized by chronic dry cough (**goose honk cough**) and easily tired dogs.
Mostly occur in fat dogs

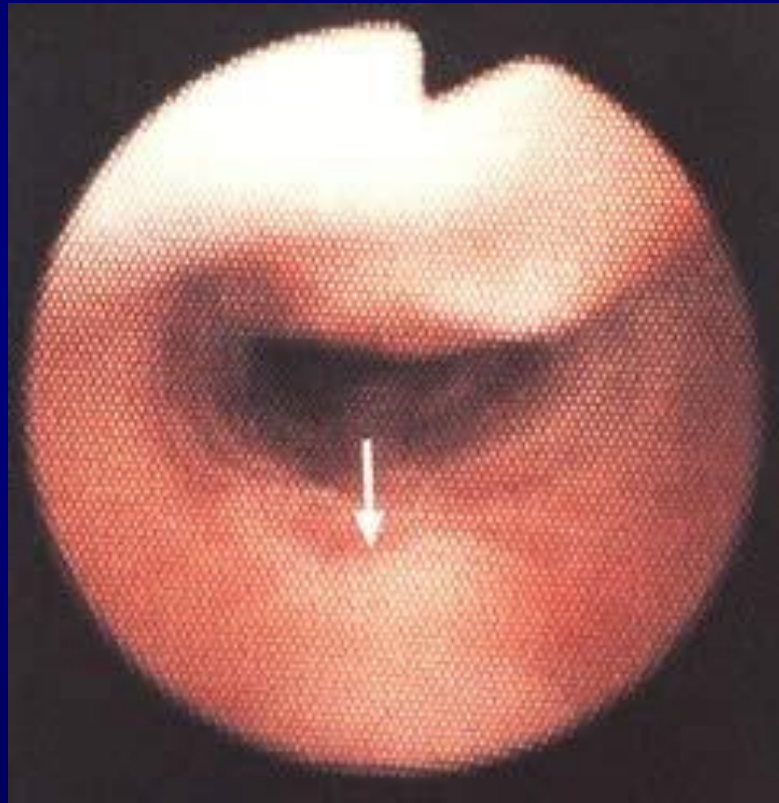
Causes

1. neurological deficiency of tracheal muscles leading to their weakness (deficient innervation of the trachealis dorsalis muscle)
2. changes in the organic matter of the tracheal cartilage- degeneration of cartilage
3. nutritional disorders
4. small airway diseases
5. genetic defects involving failure of chondrogenesis

Pathogenesis

- Collapse typically occurs in a dorsoventral direction.
- Cartilage rings are weakened and become flattened, causing stretch of the dorsal tracheal membrane and prolapse into the lumen leading to its narrowing.

Collapse in a dorsoventral position



Clinical symptoms

1. chronic dry cough (honk goose)
2. the patient dog is easily tired and loss its weight
3. exercise intolerance, heat intolerance
4. Many dogs are unable to sleep comfortably due to the difficult breathing
5. cyanosis of the mucous membrane (bluish discoloration)
6. respiratory distresses depend upon the degree of collapse
7. Physical exam:
 1. palpation of cervical trachea may reveal flatness or flaccidness
 2. loud bronchial sounds on auscultation of trachea
8. Radiographic exam: may show the collapse and confirm diagnosis

Diagnosis

1. Based upon the clinical symptoms, physical exam, and radiograph
2. Diagnosis is best made by visible inspection of the airway by bronchoscopy that also allows collection of airway samples.

Treatment

It depends on

- 1. Restriction of activity.**
2. Low dose of sedation by promazine or phenobarbitons.
3. Antitussive and bronchodilators codeins 5mg every 6-8 hours orally.
4. Glucocorticoids therapy as:
 1. Corticotropine (ACTH) 1.5m/kg body weight I.M. daily.
 2. Deoxycorticosterone acetate (DOCA) 2mg /day I.M.
5. Oxygen therapy: At the onset of respiratory distress or dyspnea (many dogs will have a normal life with this treatment).

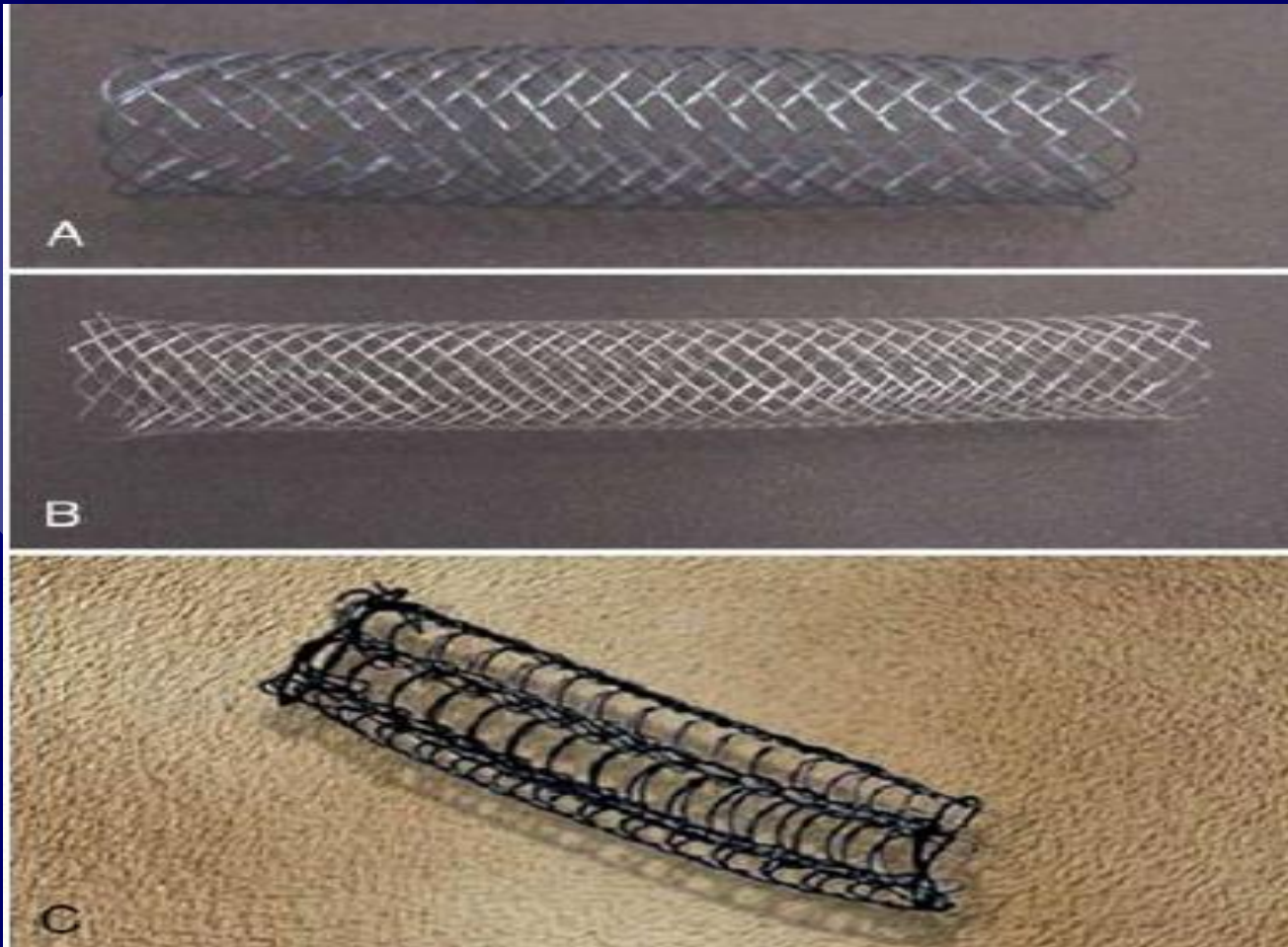
Surgical interference

- Recommended only if the medical treatment fails
- Surgical placement of prosthetic rings is a viable treatment option for dogs with unrelenting signs of dyspnea and cough associated with cervical tracheal collapse.
- External polypropylene rings or spirals inserted around the outside of the trachea or internal support using internal devices.

External tracheal ring to treat tracheal collapse



Internal tracheal rings



Examples of some patent Antitussive drugs

- **Codipront** syrup
- **Bromosyrup** ((bromofor + codeine + Tr.Aconite + cherry laural water + glycerine + syrup tolu).).
- **Tussivan** syrup ((Ephedrine + phenylepinephrine Hcl + chlorpheneramine maleate + codeine phosphate)).
- **Tussilar** syrup.
- **Toclase** syrup ((carbetopentane chloride)).

Example of some patent bronchodilator drugs:

- **Ephidrine** tablets (ephedrine Hcl)
 - Dogs: 5-15 mg Po.
 - Cats: 2-5 mg po.
- **Ephidrine** Hcl amp.
- **Isoprine** tables ((isoprenalin))
- **Prenasma** tablets ((isoprenalin)).
- **Avipect** syrup.
- **Isilin** syrup ((Ammonium chloride + Diphenhydramine Hcl + Sodium citrate + chloroform + menthol)).



Questions