

Pharyngitis

Pharyngitis is inflammation of the pharynx and is characterized clinically by coughing, painful swallowing, and a variable appetite. Regurgitation through the nostrils and drooling of saliva may occur in severe cases.

ETIOLOGY

A-Pharyngitis in farm animals is usually traumatic.

B- Infectious pharyngitis is often part of a syndrome with other more obvious signs.

1-Physical Causes

1- **Injury while giving oral treatment with balling or drenching gun or following endotracheal intubation.**

2-The administration of **intraruminal anthelmintic to calves under** a minimum BW have also been associated with pharyngeal and esophageal perforation

3- Improper administration of a reticular magnet, resulting in a retropharyngeal abscess.

4- **Accidental administration or ingestion of irritant or hot or cold substances**

5-Foreign bodies, including grass and cereal awns, wire, bones, and gelatin capsules lodged in the pharynx

2- Infectious Causes

Cattle

1- Oral necrobacillosis and

2-actinobacillosis as a granuloma rather than the more usual lymphadenitis

3- Infectious bovine rhinotracheitis

4- Pharyngeal phlegmon or intermandibular cellulitis(necrosis of the wall of the pharynx and peripharyngeal tissues without actually causing pharyngitis)

F. necrophorum is a common isolate from the lesions.

Horses

1-As part of strangles or anthrax

- Viral infections of the upper respiratory tract, including:

2- **equine herpesvirus-1,**

3-Hoppengarten cough,

4-parainfluenza virus,

5- adenovirus, rhinovirus,

6- viral arteritis, and

7-influenza-1A/E1 and 1A/ E2, cause pharyngitis.

8- Chronic follicular pharyngitis with hyperplasia of lymphoid tissue in pharyngeal mucosa giving it a granular, nodular appearance with whitish tips on the lymphoid follicles.

PATHOGENESIS

Inflammation of the pharynx is attended by painful swallowing and disinclination to eat.

-If the **swelling of the mucosa and wall is severe,** there may be **virtual obstruction of the pharynx.** This is especially so if the **retropharyngeal lymph node is enlarged,**

-In balling-gun–induced trauma of feedlot cattle treated for respiratory disease perforations of the pharynx and esophagus may occur with the development of **periesophageal diverticulations with accumulations of ruminal ingesta and cellulitis.**

- Improper administration of **a magnet to a mature cow can result in a retropharyngeal abscess.**

- Pharyngeal lymphoid hyperplasia in horses can be graded into four grades (I–IV) of severity based on the **size of the lymphoid follicles and their distribution over the pharyngeal wall.**

CLINICAL FINDINGS

- 1-The animal may refuse to eat or drink or it may swallow reluctantly and with evident pain.
 - 2- Opening of the jaws to examine the mouth is resented and manual compression of the throat from the exterior causes paroxysmal coughing.
 - 3- There may be a mucopurulent nasal discharge, sometimes containing blood, spontaneous cough and, in severe cases, regurgitation of fluid and food through the nostrils.
 - 4- Oral medication in such cases may be impossible. Affected animals often stand with the head extended, drool saliva, and make frequent tentative jaw movements.
 - 5-If the local swelling is severe, there may be obstruction of respiration and visible swelling of the throat.
 - 6-The retropharyngeal and parotid lymph nodes are commonly enlarged.
- In “pharyngeal phlegmon” in cattle there is an acute onset with high fever (41–41.5°C [106–107°F]), rapid heart rate, profound depression,
- and severe swelling of the soft tissues within and posterior to the mandible to the point where dyspnea is pronounced.
- Death usually occurs 36 to 48 hours after the first signs of illness.

In traumatic pharyngitis in cattle:

-visual examination of the pharynx through the oral cavity reveals **hyperemia, lymphoid hyperplasia, and erosions covered by diphtheritic membranes.**

- Pharyngeal lacerations are visible, and palpation of these reveals the presence of accumulated ruminal ingesta in diverticula on either side of the glottis.
- External palpation of the most proximal aspect of the neck reveals firm swellings, which represent the diverticula containing rumen contents.
- **A retropharyngeal abscess secondary to an improperly administered magnet can result in marked diffuse painful swelling of the cranial cervical region.**

Diagnosis

- Ultrasonographic examination** of the swelling may reveal the magnet within the abscess.
- **Palpation of the pharynx** may be performed in cattle with the use of a gag if a foreign body is suspected,
- and **endoscopic examination** through the nasal cavity is possible in the horse.
- Most acute cases recover in several days but chronic cases may persist for many weeks, especially if there is ulceration, a persistent foreign body, or abscess formation.**
- Pharyngeal lymphoid hyperplasia is the most commonly recognized abnormality of the upper respiratory tract of the horse.
- The disorder is characterized by chronic hyperplasia of lymphoid tissue in the pharynx of young horses evident as multiple, often coalescing, raised nodules in the pharynx.
- if secondary bacterial infection is present a purulent exudate is seen on the pharyngeal mucosa and in the nostrils.

CLINICAL PATHOLOGY

- Nasal discharge or swabs taken from accompanying oral lesions may assist in the identification of the causative agent.

-*Moraxella spp. and Streptococcus zooepidemicus* can be isolated in large numbers from horses with lymphoid follicular hyperplasia grades III and IV.

NECROPSY FINDINGS

-Deaths are rare in primary pharyngitis and necropsy examinations are usually undertaken only in those animals dying of specific diseases.

- In pharyngeal phlegmon there is edema, hemorrhage, and abscessation of the affected area, and on incision of the area a foul-smelling liquid and some gas usually escapes.

DIFFERENTIAL DIAGNOSIS

• Pharyngitis is manifested by an acute onset and local pain.

1- **pharyngeal paralysis**, the onset is usually slow.

2- **Acute obstruction by a foreign body** can occur rapidly and cause severe distress and continuous, expulsive coughing, but there are no systemic signs.

• Endoscopic examination of the pharyngeal mucous membranes is often diagnostic.

TREATMENT

RX

The primary disease must be treated, usually parenterally, by the use of antimicrobials.

- - Pharyngeal phlegmon in cattle is frequently fatal and early, **intensive antimicrobial treatment is indicated.**
- Systemic antimicrobials and anti-inflammatories
- Topical application of anti-inflammatories

- Bacterial pharyngitis should be treated with systemic antimicrobials based on results of microbial culture and sensitivity testing.
- Abscesses should be drained and lavaged when appropriate.
- Viral-induced pharyngitis should be managed with antimicrobials to prevent secondary bacterial infections.
- Animals affected with either bacterial or viral pharyngitis should be treated with NSAIDs.
- Pharyngitis secondary to foreign bodies should be resolved with removal of the offending object and effective surgical drainage accompanied by excision of necrotic tissue.
- Race horses affected by pharyngeal lymphoid hyperplasia can be treated with topical and systemic anti-inflammatory agents such as flunixin meglumine, phenylbutazone, or dexamethasone.
- A commonly used topical anti-inflammatory treatment includes prednisolone, dimethyl sulfoxide, glycerin, and nitrofurazone.
- Large pharyngeal masses can also be treated with contact diode laser photoablation.
- يمكن أيضًا علاج الكتل البلعومية الكبيرة باستخدام الاستئصال الضوئي بالليزر ذي الصمام الثنائي.
- Animals that cannot maintain their own hydration because of severe mucosal ulceration may require nutritional and electrolyte supplementation either intravenously or by extraoral tube feeding.