University of Mosul
Lecture No.: 8
College of Veterinary Medicine
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Unit of Scientific Affairs
Website:

Lecture title: Pharyngeal Paralysis

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Summary: Pharyngeal Paralysis

Pharyngeal paralysis is manifested by inability to swallow and an absence of signs of pain and respiratory obstruction.

ETIOLOGY

Pharyngeal paralysis occurs sporadically, caused by *peripheral nerve injury*, and in some *encephalitis with central lesions*.

♥ **PERIPHERAL NERVE INJURY**

- Guttural pouch infections in horses
- Traumatic injury to the throat region.

♥ **SECONDARY TO SPECIFIC DISEASES**

- Rabies and other causes of encephalitis
- Botulism
- African horse sickness
- As an idiopathic disease in neonatal foals.

PATHOGENESIS

- ♥ peripheral nerve injury, and in some cases of encephalitis with central lesions that the main causes of pharyngeal paralysis and lead to inability to swallow and regurgitation are these signs consider major manifestations of the disease.
- ♥ There may be an associated laryngeal paralysis, accompanied by "roaring". The condition known as ***"cud-dropping"*** in cattle might be a partial pharyngeal paralysis because there is difficulty in controlling the regurgitated bolus, which is often dropped from the mouth.
- ♥ In these circumstances, **aspiration pneumonia is likely to develop**.

CLINICAL FINDINGS

- ♥ The animal is usually hungry but, on prehension of food or water; attempts at swallowing are followed by dropping of the food from the mouth, coughing, and the expulsion of food or regurgitation through the nostrils.
- ♥ Salivation occurs constantly and swallowing cannot be stimulated by external compression of the pharynx.

- ♥ The swallowing reflex is a complex one controlled by a number of nerves and the signs can be expected to vary greatly depending on which nerves are involved and to what degree.
- ♥ There is rapid loss of condition and dehydration.
- ♥ Clinical signs of the primary disease may be evident but, in cases of primary pharyngeal paralysis, there is no systemic reaction.
- ♥ ***Pneumonia may follow aspiration*** of food material into the lungs and produces loud gurgling sounds on auscultation.
- ♥ ***In cud-dropping in cattle***, the animals are normal except that regurgitated boluses are dropped from the mouth, usually in the form of flattened disks of fibrous food material.
- ♥ Affected animals may lose weight but the condition is usually transient, lasting for only a few days. On the other hand, complete pharyngeal paralysis is usually permanent and fatal.

NECROPSY FINDINGS

If the primary lesion is physical, it can be detected on gross examination.

DIFFERENTIAL DIAGNOSIS

- ✍ In all species, often the first clinical impression is the presence of a **foreign body in the mouth or pharynx**, and this can only be determined by physical examination.
- ✍ Pharyngeal paralysis is a typical sign in **rabies and botulism**, but there are other clinical findings that suggest the presence of these diseases.
- ✍ Absence of pain and **respiratory obstruction** are usually sufficient evidence to eliminate the possibility of pharyngitis or pharyngeal obstruction.
- ✍ Endoscopic examination of the guttural pouch is a useful diagnostic aid in the horse.

TREATMENT

1. Treatment is supportive in most cases in addition to management of any inciting disease, such as guttural pouch infection.
2. Feeding by nasogastric tube allows for recovery of the ability to swallow in most (>90%) affected animals in 7 to 10 days if the nerve damage is not sever.
3. Nerve tonic in these cases is necessary.

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ESOPHAGITIS

Inflammation of the esophagus is accompanied initially by clinical findings of spasm and obstruction, pain on swallowing and palpation, and regurgitation of blood-stained slimy material.

ETIOLOGY

- Primary esophagitis caused by the ingestion of chemical or physical irritants is usually accompanied by stomatitis and pharyngitis.
- Laceration of the mucosa by a foreign body or complications of nasogastric intubation can occur (especially larger diameter nasogastric tubes or stomach tube that cause traumatic injury).
- Death of *Hypoderma lineatum* larvae in the submucosa of the esophagus of cattle can cause acute local inflammation and subsequent gangrene.

PATHOGENESIS

Inflammation of the esophagus combined with local edema and swelling results in a functional obstruction and difficulty in swallowing and may interfere with rumination and may lead to bloat in case of complete obstruction.

CLINICAL FINDINGS

- In the acute esophagitis, there is ***s****alivation* and ***a****ttempts to swallow which cause severe pain*, particularly in horses.
- In some cases, ***a****ttempts at swallowing are followed by regurgitation and coughing, pain, retching activities*, and ***v****igorous contractions of the cervical and abdominal muscles*.
- If the esophagitis is in the cervical region, ***p****alpation in the jugular furrow causes pain and edematous tissues around the esophagus can be palpable*.
- In specific diseases such as mucosal disease and bovine malignant catarrhal, there are no obvious clinical findings of esophagitis, **because** the lesions are mainly erosive.
- Endoscopy of the esophagus will usually reveal the location and severity of the lesion.

CLINICAL PATHOLOGY

- In severe esophagitis of traumatic origin, a marked neutrophilia can occur, this suggests an active inflammation.

✍ Endoscopical examination is very nessesary to show inflammatory reaction of esophageal lining.

NECROPSY FINDINGS

- Pathologicl findings are restricted to the various specific diseases in which esophagitis occur.
- In traumatic lesions or those caused by irritant substances, there is gross edema, inflammation and, in some cases, perforation.

DIFFERENTIAL DIAGNOSIS

- Esophagitis must be differentiated from **pharyngitis**, in which attempted swallowing is not as marked and coughing is more likely to occur.
- Palpation can also help to localize the lesion; however, **pharyngitis and esophagitis usually occur together.**

TREATMENT

- ***Feed should be stopped for 2 to 3 days and fluid and electrolyte therapy can be necessary for several days.***
- ***Parenteral antimicrobials*** are indicated, especially if laceration or perforation has occurred.
- Reintroduction to feed should be monitored carefully and all feed should be moistened to avoid the possible accumulation of dry feed in the esophagus (use easy and moist food).

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References: Constable PD, Hinchcliff KW, Done SH, et al. (2017). Veterinary Medicine: A Textbook of the Diseases of Cattle, Horses, Sheep, Pigs, and Goats. 11th ed. Elsevier, St. Louis, Missouri, USA.