



Lecture title: ESOPHAGEAL OBSTRUCTION (CHOKE)

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Summary: ESOPHAGEAL OBSTRUCTION (CHOKE)

✚ Esophageal obstruction can be **acute or chronic** is characterized clinically by:

- ✍ inability to swallow.
- ✍ regurgitation of feed and water.
- ✍ continuous drooling of saliva.
- ✍ chronic tympany in ruminants.
- ✍ Normal ruminal contraction.

✚ **In acute cases**; the animal suddenly stops eating and shows anxiety and restlessness, there are forceful attempts to swallow and regurgitate, salivation, coughing, and continuous chewing movements.

✚ If obstruction is complete, bloating occurs rapidly.

✚ systolic murmur audibles on auscultation of the heart in sever bloat specially in frothy bloat.

✚ Horses with choke commonly regurgitate a mixture of saliva, feed, and water through the nostrils (**nasal reflex**) because of the anatomic characteristics of the equine soft palate.

✚ **ETIOLOGY**

✍ **Obstruction can be intraluminal** that caused by ingestion of materials that are large in size and that then become lodged in the esophagus, e.g. (turnips, onions, potatoes, peaches, apples, oranges, and similar objects).

✍ trichobezoar can cause esophageal obstruction cattle.

✍ **extraluminal caused by pressure on the esophagus by surrounding organs or tissues, Such as:**

♥ Enlarged lymph nodes in the mediastinum (tuberculosis, neoplasia, *Rhodococcus equi*, *Corynebacterium* spp., malignant form of strangles, and secondary to pleurisy).

♥ Cervical or mediastinal abscess.

✍ **Esophageal paralysis** can lead to obstruction and these circumstances caused by congenital or acquired abnormalities of the esophagus, and though it may be possible to pass a stomach tube through the esophagus into the stomach or rumen and caused by traumatic nerve damage.



- ♥ **Diverticulum** (diverticulum is a sac of mucosa protruding through a defect in the muscular layer of the esophagus due to excessive intraluminal pressure from impacted feed, and external trauma) has been recorded in horses and in cattle.

Other Causes of Obstruction:

- ♥ Carcinoma of stomach causing obstruction of cardia.
- ♥ Squamous cell carcinoma of the esophagus of a horse.
- ♥ Esophageal hernia in cattle.
- ♥ Traumatic rupture of the esophagus from an external injury.
- ♥ In megaesophagus (**Dilation**), the esophagus is dysfunctional, dilated, and filled with saliva, feed, and water. This results in regurgitation and can lead to aspiration pneumonia.
- ♥ It can be congenital or secondary to other lesions and has been associated with gastric ulceration in foals.
- ♥ The ingestion of large quantities of grain or pelleted feed in horse can cause obstruction over a long portion of the esophagus.

Complications Following Esophageal Obstruction:

- The risk of complications increases proportionate to the duration of obstruction, that most common in the horse and include **esophagitis, mucosal ulceration, esophageal perforation and aspiration pneumonia.**
- Mild cases of esophagitis heal spontaneously.
- Esophageal perforation can occur and is characterized by **diffuse cellulitis** of the peri esophageal tissues, often with **subcutaneous emphysema, and a fistula** can develop.



CLINICAL PATHOLOGY

- Laboratory tests are not used in diagnosis, although **radiographic examination** is helpful to outline the site of stenosis, diverticulum, or dilatation, even in animals as large as the horse, **Radiologic examination after a barium swallow** is a practicable procedure if the obstruction is in the cervical esophagus.
- Viewing of the internal lumen of the esophagus with a **fiber optic endoscope** has completely revolutionized the diagnosis of esophageal malfunction.
- Biopsy samples of lesions and tumor masses** can be taken using the endoscope.
- Electromyography** has been used to localize the area of paralysis of the esophagus in a cow with functional megaesophagus.



TREATMENT



1- Sedation:

In acute obstruction, if there is marked anxiety and distress, the animal should be sedated before proceeding with specific treatment. Administration of a sedative can **also help to relax the esophageal spasm** and may allow passage of the impacted material, for sedation of affected animal and induce esophageal relaxation. **In the horse, one of the following sedative drugs is recommended:**

- Acepromazine 0.05 mg/kg BW intravenously
- Xylazine 0.5 to 1.0 mg/kg BW intravenously

2- Pass a stomach tube and allow object to move into stomach.

3- Manual removal through oral cavity in cattle.

4- General anesthesia in the horse.

5- Esophageal lavage in the horse.

6- Surgical removal of foreign bodies.

7- Repeated siphonage in chronic cases.

8- Cervical esophagostomy alimentation.

9- Antimicrobial administration (when accompanied with aspiration pneumonia).

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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.