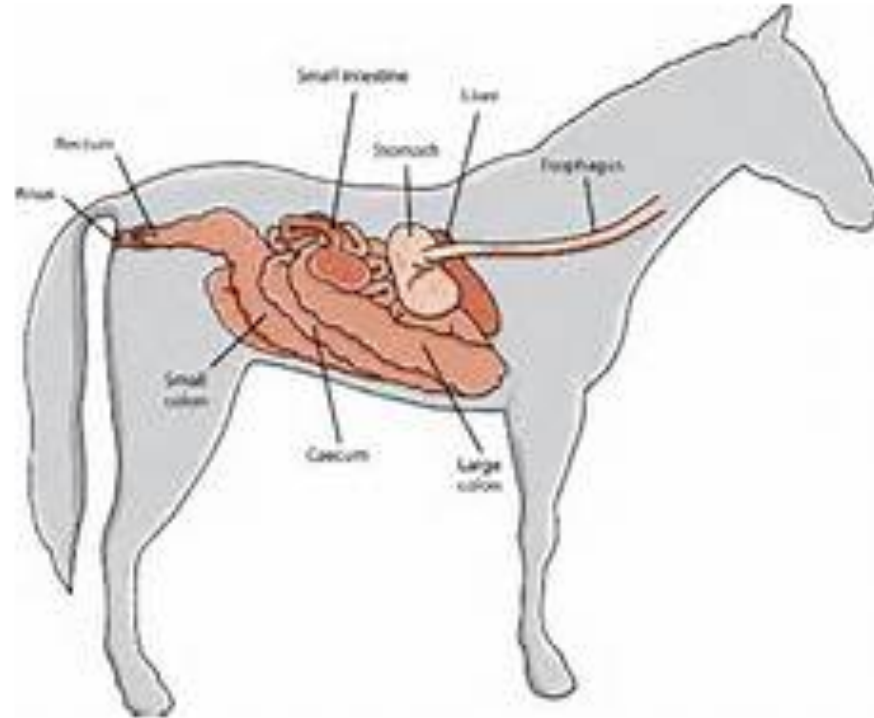


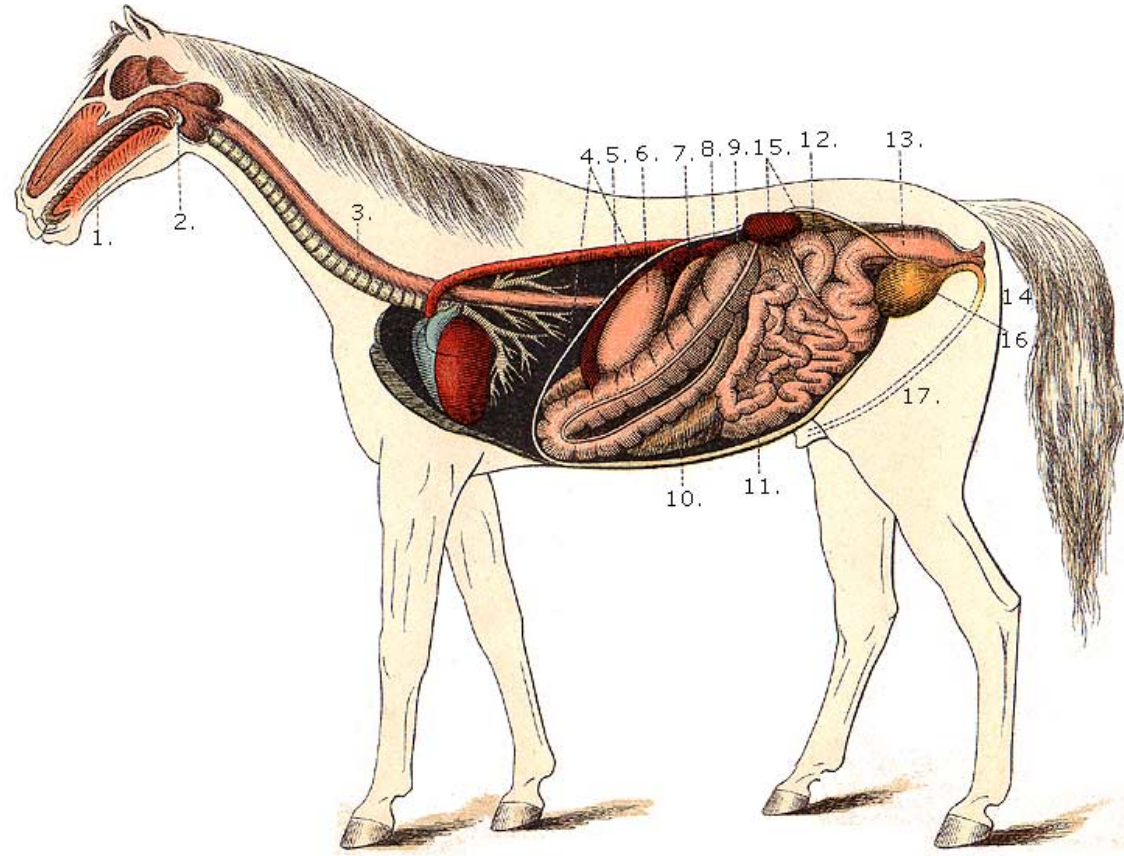
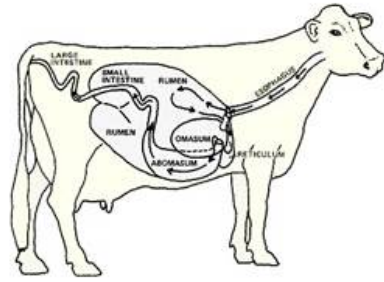
Diseases of the esophagus



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- Esophagus is wide and its wall is thin so it is capable to be dilated.
- Its mucous membrane is less sensitive to irritants and also less exposed to their action during their rapid passage through it (so primary esophagitis is less occur).



Diseases of the esophagus includes:

- (1) Esophagitis
- (2) Obstruction (Choke).
- (3) Paralysis.
- (4) Dilatation.
- (5) Stenosis

Esophagitis

Definition

It is an inflammation of the esophagus accompanied by pain on swallowing & palpation as well as regurgitation of blood stained slimy material.

Causes:

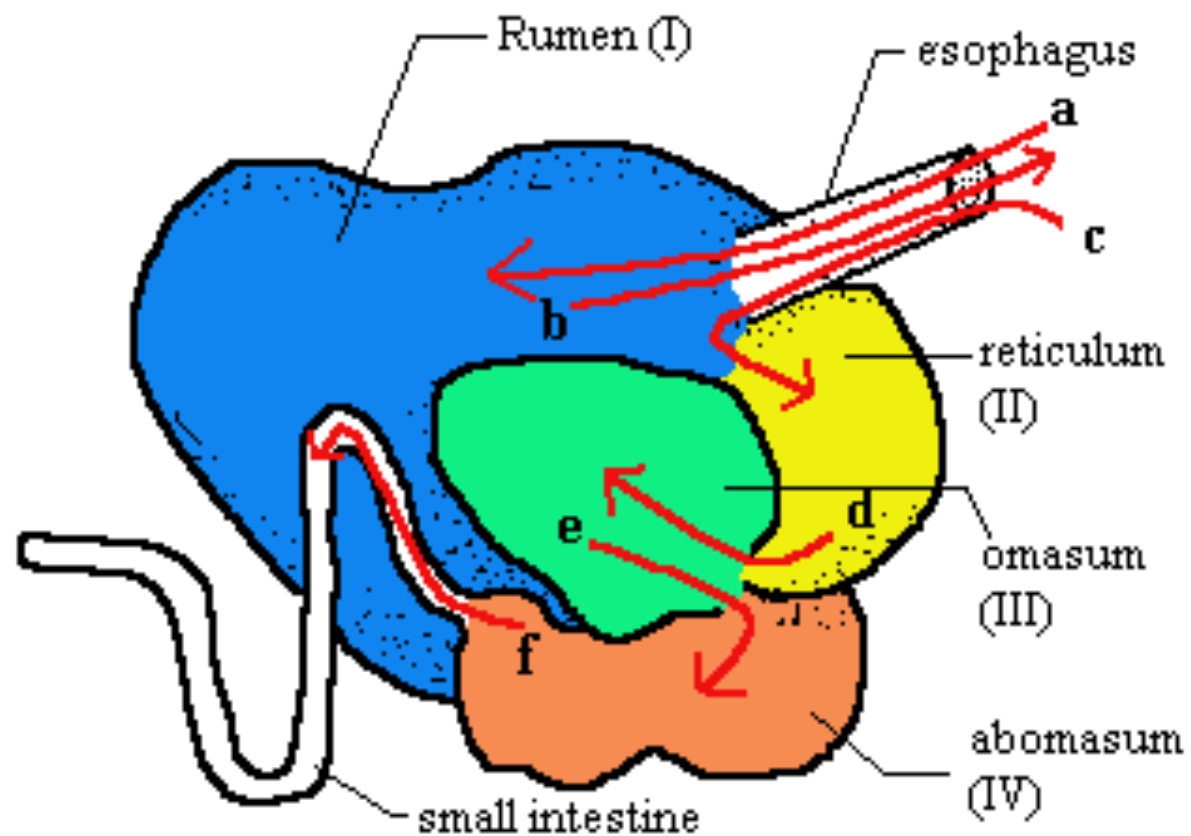
- (1) The same as stomatitis, pharyngitis (thermal, chemical, mechanical influences).
- (2) Un skillful introduction of stomach tube causing laceration of mucosa.
- (3) Inflammation or even gangrene of esophageal submucosa by hypoderma lineata larvae (live or dead) in cattle.
- (4) Secondary to pharyngitis or gastritis specially in FMD, Cattle plague, etc.

Clinical findings:

(1) Difficulty in swallowing, manifested by movements of head from side to side with stretching and bending of the head & the animal usually refuse food due to dysphagia.

(2) Excessive salivation, sometimes coughing & regurgitation (contain much mucus & fresh blood) if the animal tried to eat.

(3) If the esophagitis is in the cervical region, palpation of the jugular furrow or swallowing of food causes severe pain.



Esophagus and intestine of an artiodactyl ruminant. Food is (a) ingested and fermented in the rumen. Larger particles are (b) regurgitated, remasticated and (c) reingested. Sufficiently fine particles are (d) drawn from the reticulum and processed successively in the omasum and (e) abomasum before (f) passing through the small intestine.

(4) In extensive inflammation, there is a discharge of mucoïd or blood stained saliva from the mouth to the nose.

(5) Vigorous contraction of cervical & abdominal muscles.

(6) Perforation of the thoracic esophagus may lead to fatal pleurisy.

(7) In recovered cases, chronic esophageal stenosis (due to connective tissue formation) & distension above the stenosis may occur.

Course & complication:

(1) Cases of simple catarrhal subside in one or two weeks.

(2) More severe inflammation may lead to suppuration of the surrounding tissues with abscess formation, which may extend to the thoracic cavity.

(3) Inflammatory swelling in the jugular region or even esophageal fistula due to local cervical cellulitis.

(4) SC emphysema or even fatal pleurisy due to perforation of thoracic esophagus.

Diagnosis:

- (1) Local palpation to localize the lesion.
- (2) Pharyngitis and esophagitis usually occur together.
- (3) Complete obstruction of esophagus in cattle causes bloat.

Treatment:

(1) Remove the cause.

(1) Food should be withheld for 2 to 3 days and animal should be fed IV by injection of glucose or dextrose 5-10 %.

(3) Cold water or milk with astringent fluids (0.5-1.0% tannic acid) in dog.

(4) Narcotic drugs if dysphagia is present to reduce pain as Morphine sulphate 60-90 mg SC for horses, 15mg for dogs or Atropine sulphate, (16-32 mg SC for large animal or 0.4- 3.0 mg for pit animal) repeated every 6 - 8 hrs till recovery.

(5) Antibiotic

Obstruction of the esophagus (Choke)

Definition:

It is a sudden closure of esophageal tract by food masses or foreign bodies and manifested clinically by inability to swallow, regurgitation of food and water & bloat formation in ruminants. It may be acute or chronic; cervical or thoracic; partial or complete.



Causes:

(1) Internal obstruction: It is usually caused by impacted masses of food: Dogs: swallowing their food directly without proper mastication, feeding on bones (vertebrae) or large pieces of ligaments.

Horses: Feeding on dry materials such as bran with little or no water causes column of bran.



Cattle: swallowing without previous thorough mastication. Many kinds of foreign bodies may be close esophageal tract such as cobs of maize, upper part of can sugar, potato and cabbage, also fruits of apple or orange.

(2) Foreign bodies like stone, piece of metal, wood, glass, etc may be accidental.

(3) Obstruction of cardia due to carcinoma of stomach.

(4) External pressure due to enlargement of mediastinal lymph nodes by TB, tumors, abscess or Actinobacillosis.

(5) Defect in esophageal wall (chronic obstruction) due to:

1) Esophagitis followed by fibrous tissue formation & stenosis.

2) Continuous spasm in cases of hypomagnesemia or tetanus.

3) Paralysis.

Pathogenesis:

- The esophagus transport food from mouth to the stomach.
- The gases formed from fermentation of ingesta in rumen eructate to outside through the esophagus, so that esophageal obstruction will hinder the passage of food and drink to the stomach as well as accumulation of gases inside the rumen.
- There are three sites of obstruction:
 - (1) Behind pharynx (oropharynx).
 - (2) (2) Cervical.
 - (3) Thoracic part of esophagus.

Symptoms of acute choke in cattle

(1) Obstruction is usually in oropharynx or at the thoracic inlet.

(2) Sudden stop of eating, forceful attempts to swallow & regurgitation of food.

(3) Anxiety, restlessness, salivation, coughing, dyspnea, grunting, dullness & depression.

(4) Extension of head & neck with protrusion of tongue.

(5) Signs may disappear within few hours due to relaxation of the initial esophageal spasm and may accompany by onward passage of the obstruction.

(6) Bloat occurs rapidly in complete obstruction.

(7) Impossible passage of stomach tube.

(8) Persistent obstruction causes pressure necrosis and perforation or subsequent stenosis due to fibrous tissue construction.

Symptoms of acute choke in horses:

- (1) Obstruction is often in **terminal thoracic part** of esophagus so it cannot see or palpated.
- (2) Symptoms are more severe with severe violent colic & forceful attempts to swallow.
- (3) Sudden stop of eating, profuse salivation, regurgitation of food & saliva through the nostril.
- (4) Head is drawn down & the neck is arched.



Symptoms of acute choke in dog & cat:

- (1) Distress, dysphagia, salivation, vomiting through nostril.
- (2) Foul breath.
- (3) Mouth held high and pawing in the mouth.
- (4) Feeling of mass on cervical part by digital pressures.

NB: Death occurs in all species due to drenching pneumonia or dehydration.

Symptoms of chronic choke:

- (1) Absence of acute signs.
- (2) Chronic bloat is the early signs in cattle. Exaggerated rumen movement for some weeks then atony occurs after prolonged distension.
- (3) Swallowed material may pass slowly through the stenotic area or accumulates (cause dilatation of esophagus and swelling at the base of neck)& then regurgitated.
- (4) When paralysis of the esophagus occurs, the regurgitation does not occur but the esophagus fills, & over flows & saliva drools from the mouth & nostrils.

Treatment:

(1) Analgesic drug to sedate animal & relax spasm by using IM or SC 5% largactil 0.5 to 2.2 mg for large animal, 0.5 to 1.0 mg for small animal or by using SC or IM 16-32 mg atropine sulphate for large animal, 0.4 - 0.8 mg for small animal, to relax esophageal spasm.

(2) Oral use of liquid paraffin to lubricate esophageal tract.

(3) Removal of causative object which depends on site, nature of choke, duration of affection & esophageal wall condition.

- 1) Choke in oropharyngeal part can be removed by hand.
- 2) Choke in anterior part of esophagus removed by hand in horses & cattle. The head is stretched forward & the mouth kept open by a mouth gag or by drawing out of the tongue & holding it to one side with the hand.

Introduce closed fingers along the hard palate into the pharynx then open the fingers, hold the foreign body and get rid of it.

- 3) In small animal, remove the foreign body through mouth by esophageal forceps.
- 4) Solid mass can be pushed towards stomach or rumen by stomach tube or probang.

5) In horse, introduce warm water or saline by stomach tube through the nostril to penetrate the bran column, the horse will be discomfort, lower its head & neck down so some bran come down into stomach & other part go out through stomach tube.

Repeat the process (pumped off or syphoned off) several times to get rid of obstruction.

(4) Trocarisation or antifoaming to relief bloat in ruminants.

(5) If all the measures fail, surgical interference must be done.

NB: Keep animal head low to avoid aspiration.

Paralysis of the esophagus

It is usually occur in association with paralysis of the pharynx.

Clinical findings:

(1) Gradual accumulation of food in the esophagus which gives rise to a sausage shaped swelling in the left jugular depression.

(2) When the esophagus is- quite full, swallowing becomes impossible and regurgitation of food takes place due to the failure of the peristaltic action.

Treatment:

- (1) Impacted masses of food may be pushed into the stomach.
- (2) Succulent or liquid food is recommended.
- (3) Nerve tonics (Strychnine, B complex).
- (4) If no response slaughter the animal.

Dilatation of the esophagus

It is a rare condition but occurs in horse, manifested by persistent pathological condition with enlargement of esophagus lumen either uniformly or at one circumscribed part of the wall. It may be secondary to stenosis of the esophagus resulting in paralysis at any part of the muscular wall.

Clinical findings:

- (1) The animal begins to feed and attempts to swallow with lowered head and spasmodic contractions of the neck muscle.
- (2) Regurgitation of food, which is undigested, decomposed and covered by mucous & with presence of fetid odour from the mouth.
- (3) In dogs, retention of the food causes vomiting an ulceration which may result in formation of fistula.
- (4) Decreases of the swelling on pressure which is present in jugular furrow.

Treatment:

Is surgically by resection.

Stenosis of esophagus

The common causes are:

- (1) External pressure from enlarged mediastinal lymph node in cases of TB or tumors.
- (2) Fibrous tissue formation in esophageal wall after esophagitis.
- (3) Chronic spasm of esophageal wall muscle in cases of hypomagnesemia or tetanus.

Symptoms:

- (1) Animal feeds greedily with no difficulty in mastication or deglutition.
- (2) Later on, straining in swallowing & chronic tympany in ruminant.
- (3) In TB, normal mastication, swallowing, defecation with other signs.

Treatment:

Treat the real cause.

Prognosis:

It is unfavourable.