

## Digestive System

The digestive system is a coiled, muscular tube stretching from the mouth to the anus. Several specialized compartments occur along this length: mouth, pharynx, esophagus, stomach, small intestine, large intestine, and anus. The accessory organ which associated with digestive system salivary glands,, liver, and pancreas. The function of the digestive system: Secretion, digestion, absorption and movement. Diagnosis of abnormalities of digestive system:

1. abdominal palpation.
2. oral examination .
3. rectal palpation .
4. percussion and auscultation.
5. radiography and endoscopy.
6. In addition to that sampling and analysis of saliva, stomach content, feces, abdominal fluid may yield information of importance in differential diagnosis also hematological examination for complete blood count and chemical component is used in differential diagnosis.

**Oral cavity:** Although few diseases affect the oral cavity and esophagus. The most common oral cavity abnormality that affects production is dental disease. To perform a complete oral examination, the clinician should physically restrain or sedate the animal and place an oral speculum or gag in the mouth to enhance the visualization of the oral cavity.

**Mouth:** Is the first portion of the alimentary canal that receives food and begins digestion by mechanically breaking up the solid food particles into smaller pieces and mixing them with Saliva. . The mouth was bounded laterally by the cheeks, dorsally by the hard palate, ventrally by the body of the mandible and the mylohyoid muscles, caudally by the soft palate.

**Affection of oral cavity:** General clinical signs of oral diseases: ptyalism, reluctance to eat, weight loss, dysphagia and oral hemorrhage. A variety of aerobic and anaerobic bacteria present. Dilute povidone- iodine solution or 2% chlorhexidine irrigation can be used.

1. **Abscesses** of the oral cavity associated with actinobacillosis or actinomycosis infection, appropriate medical therapy can be undertaken after bacteriological examination to confirm diagnosis.

2. **Traumatic lesion:** The mouth may be wounded by the penetration of sharp or pointed bodies entering through the cheeks or sharp teeth lacerating the cheeks and lips or by fragment of bone in fracture of the jaw also may be foreign bodies taken in food such as nails, needles, pins. These wounds are only serious when an important vessel or nerve was involved. Ordinary wounds of the mouth heal rapidly. It is only necessary to clean them after feeding. A foreign body must be removed, **debridement, antiseptic**. When fracture of mandible, reduction and immobilization of the fracture was achieved by the use of transverse pins, bone plate or combination of both with wiring and external fixation. In cattle: Foreign bodies lodged in the oral cavity or pharynx is common problems.

Clinical signs:

- a. Salivation and drooling.
- b. The animal will try to eat but will not be able.
- c. If the foreign body has been present for some time, the animal will be very thin.      **Treatment:** Removal of foreign body by manually or surgical operation depends on the type of foreign body encountered .

3. **Neoplasm:** Usually pedunculated may results in intermittent blockage of the oral or nasal pharynx. Epulis was located primary tumor with a malignant tendency generally on the gum adjacent to the upper or lower incisors which displaces the lip with its increasing size and tend to be recognized at an early stage. A tumor of the floor of the mouth may involve the under surface of the tongue, the lower jaw bone, and other tissues of the area. A small lesion detected early can be controlled in most cases by excision of the growth and radiation therapy.

**Treatment:**

- a. Excised by wire snare (Pedunculated) .
- b. Surgical resection .
- c. Cryotherapy.

**Lips:** The lips mark the transition from mucous membrane to skin, which covers most of the body. In cattle thick and relatively stiff, but the middle of the upper lip form the smooth muzzle on which the clear fluid secreting nasolabial glands open. In sheep is thin and mobile.

**1-Hare lip:** This is a cleft in the upper lip which often runs into the nostril, may be unilateral or bilateral and is often associated with cleft palate. Cleft of the lower lip is rare and usually occurs on the midline. The defect may also involve the palate alone, affecting the hard or soft components of the palate, or both. Hare lip may be due to incidental or genetic origin. It occurs in all species and appears to be most common in calves.

**Treatment:** The edges of the cleft are excised and the incision sutured.

**2. Trauma:** Wounding of the lips is fairly frequent after car accident, contact with sharp protruding objects, and attack by dogs. Because of the excellent blood supply, healing is usually rapid. In sever laceration or loss of substance, plastic surgery is called for to preserve the function of the lips. Repair requires careful surgical apposition of the lip margins. Mucosa and skin layers are sutured separately.

**3. Avulsion** of the lower lip from the gingival margin: in sever laceration, reconstructive surgery is indicated this can be problematical because of the high muscular content and movement in the lips and tongue. Careful attention should be paid to normal principle of wound cleaning and debridement. Tension should be tied on the skin surface rather than over the mucous membrane.

**4.Retraction of the lips:** Sometimes as the results of injury and consequent development of much fibrous tissue between the lip and the gum, cicatrice contraction retracts the lip and prevents it's meeting with the other one. This may be remedied by making an incision between the gum and the lip.

**5. Tumor:** papilloma or warts are common on the lips of the horse and are less frequently seen on those of cattle. The tumors form in clusters and are various dimensions. They cause salivation and usually an offensive smell from the mouth.

Treatment: Excision.

**Cheeks:** The cheeks form the sides of the mouth, they are continuous in front with the lips and are attached to the alveolar borders of the bones of the jaw.

1. **Tumor** : occasionally occur and may present special management problems because of oral fistulation associated with the lesion itself as a result of therapy. Treatment: cryosurgery.

2. **Wound**: penetrating wound of cheeks or loss of substance from the edge of the lips.

Treatment: Repair under general anesthesia, the wound edge is excised and a horizontal incision was made above and below the hole, somewhat larger than the diameter of the wound. The hole is closed with deep interrupted silk sutures. The horizontal incisions are sutured.

**Hard palate:** The osseous base of the hard palate is formed by the pre – maxilla , maxilla and palatine bones , and its borders are the alveolar arches.

**Cleft hard palate:** Cleft in roof of the mouth may be congenital, but the hereditary basis of the anomaly is less well defined.

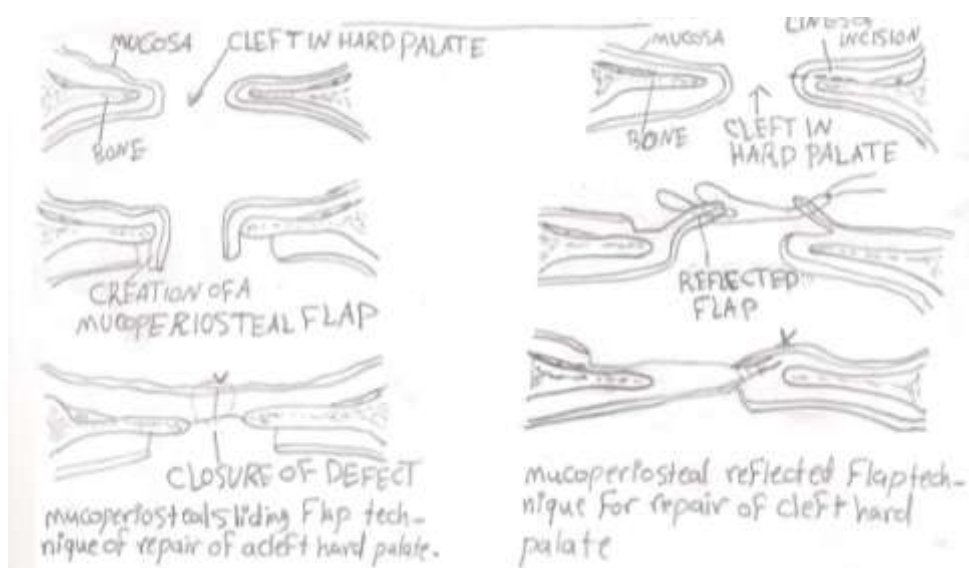
Clinical signs:

1. Dysphasia with reflex of milk or food material through the nostril.
2. Direct visual or by endoscope.
3. Aspiration pneumonia.

Treatment: The hard palate can be approached through :

1. Mandibular symphysiotomy.
2. Oral approach.
3. Pharyngotomy (limited exposure).

Small caudal defects of hard palate can be repaired using a mucoperiosteal sliding flap technique. Large cleft of the hard palate may be best repaired by the mucoperiosteal reflected flap technique. In case mandibular symphysiotomy closure of oral mucosa prior to fixation of mandibular symphysiotomy (the mandibular symphysis has been closed using wire and Steinmann pins) the lip replaced and all muscle layer closed, finally closure the skin.



**Soft palate:** Musculomembranous fold that separate the cavity of the mouth from that of the pharynx. Mandibular – symphysiotomy approach was used. However surgical exposure of the caudal soft palate is still poor with this approach and the supplemental use of a midline pharyngotomy. The repair of a cleft soft palate involves excision of the mucosal edge surrounding the cleft following by a two or three layer closure. Possible complication of mandibular symphysiotomy includes infection and drainage as well as osteomyelitis and loosening of the symphysiotomy site.

