

## **Surgery of digestive system**

### **Affection of salivary gland**

Salivary glands: are masses of lobulated acini epithelial tissue.

♦Function : secrete the saliva , which is a mucous and serous fluids transported to the mouth cavity through a special duct originated from the gland and opened in the mouth cavity.

Function of the saliva :

1. Wet and lubricate the food
2. Dissolves some of elements food
3. Keep the mouth moist
4. Enable the animal to taste
5. Digestion of starchy food.

♦ Types: there are two types of salivary glands ( major and minor )

The major salivary gland include :

1. Parotid salivary gland
2. Mandibular salivary gland
3. Sublingual salivary gland

Affection

#### **1. Salivary cyst ( mucoccele ) :**

An collection of saliva in spaces not lined by epithelium tissue either around the duct or salivary gland. It is more common in parotid gland . when the cyst occur in the sublingual called (ranula) .

Ranula : is a large transparent ,circumscribed well defined salivary cyst that occur in sublingual ,lateral to the frenulum on the floor of the mouth due to closure or obstruction of the sublingual salivary gland duct.

Causes:

1. Rupture of the duct of salivary gland due to trauma or inflammation .
2. Obstruction of the duct that result from foreign body or bacteria or calculi or from pressure from lesion in surrounding tissue of the duct.

Clinical signs:

1. Swelling : under the tongue in case of ranula , in submandibular or ventral to the ear in case of parotid salivary cyst.
2. When we applied pressure on the cyst , there is odorless and viscous secretion gray or brownish in color secreted through the opening of the duct inside the mouth cavity .

Diagnosis :

1. Clinical signs
2. X-ray ( contrast radiography)
3. Confirm diagnosis by aspiration from the swelling and examination the content .

Treatment :

1. Surgically : in case of sublingual salivary cyst (ranula) :  
Applying surgical incision through the wall of the cyst which lead to escape of the saliva in the mouth cavity .
2. Destroid the related gland , in case other salivary cyst ,  
by injection of irritant solution through the duct toward the gland it self to destroy the glandular tissue by stimulation of the fibrous tissue formation .

#### ♦ Salivary fistula (wound)

It's abnormal opening in the salivary gland or it's duct which lead to escape of the saliva to outside through small skin opening .

Causes :

1. Trauma
2. Infection
3. Obstruction with foreign body.

Treatment:

1. Fresh wound of the gland :
  - a. Surrounded tissue cleaned and debrided.
  - b. Suturing the capsule of the gland
  - c. Suturing the skin
  - d. The animal kept quiet and fed by nasogastic or stomach tube to avoid stimulation of salivation by eating .
2. Fresh parotid duct wound :

- a. Primary duct closure
- b. Use of polyethylene tube .
- 3. In severe cases : the treatment is surgically by complete excision of the affected gland or by destroyed of the gland by injection of irritant solution .

♦ **Abnormal salivation (ptyalism , sialosis ) :**

Means increase salivation with or without swelling of the salivary gland .

Causes:

- A. Various form of stomatitis
- B. As a consequence of foreign body in the mouth
- C. Local infection
- D. Esophageal choke
- E. May a company to ruminal disorder and impaction of omasum and abomasums.
- F. Direct neural stimulation by certain diseases such as rabies .
- G. Certain drug : morphine

Treatment : by removing the causative agent.

♦ **Neoplasm:**

Salivary gland tumors are uncommon in domestic animals.  
Parotid gland tumor most affected in the dog.

Treatment : complete surgical excision of the gland .

### ♦ Sialadenitis

Is inflammation of salivary gland . uncommon . the causes are either systemic disease infection (staph or sterpt ) or impaction of foreign body in salivary duct .treatment by use of antibiotic and removal of the foreign body .

### ♦ Sialoliths (salivary gland calculi )

It is seen more often in horses than other species , in stensons duct (parotid duct) that usual site . these calculi consist mainly of calcium carbonate which formed around a nidus . the nidus can be provided by a small foreign body entering the duct or by cellular debris resulting from a salivary inflammatory process.

Clinical signs: swelling of regional gland , pain .

Treatment :

- A. Made massage to calculi toward the outside(into the mouth) in case small size calculi and near the end of the duct .
- B. Surgical removal : in cases large calculi or far away from the opening of the duct :
  1. under local anesthesia and tranquilizer or under general anesthesia which is preferable .
  2. made an incision over the swelling along the course of the duct ( take care to avoid blood vessels).
  3. Expose the calculus and remove it
  4. Suture the duct wall with continous cat gut suture .
  5. Suture the fascia if it available to bury the first suture line .
  6. Close the skin with interrupted silk suture

7. Animal kept off fed for several days after operation.











