

# DIGESTIVE SYSTEM

## Tongue

The tongue is the most versatile organ in the oral cavity. It is responsible for food prehension, water lapping, sucking, mastication, tasting, swallowing, thermoregulation, and vocalization. Most of these functions require precise motor control, which is why the tongue consists almost entirely of skeletal muscle.

The tongue consists of a root, which anchor it to the oropharynx; a body, which extends rostral to the root and is attached to the floor of the oral cavity via the frenulum; and the apex, which is rostral and unattached to the frenulum.

Adjacent to each side of the frenulum is a raised area of mucosa running longitudinally called the *sublingual fold*. The mandibular and sublingual ducts course under the mucosal folds and open at the caruncle. The root of the tongue consists of a set of three paired extrinsic muscles: the styloglossus, hyoglossus, and genioglossus all these muscles are controlled by the hypoglossal nerves.

The lingual artery and the lingual vein are response to the blood supply of the tongue.

### Clinical Signs and Diagnostics

General clinical signs of oral disease include dysphagia, inappetence, weight loss, pain, halitosis, and oral hemorrhage.

## DISORDERS OF THE TONGUE

### Congenital Disorders

Tongue malformations such as macroglossia, microglossia, and tongue deviations are rare in dogs and cats.

**Ankyloglossia** is a congenital disorder in which the lingual frenulum is abnormally short and thickened, restricting movement. Affected dogs have difficulty suckling, licking, swallowing, and vocalizing, and difficulty eating.

The treatment of these cases by (frenulopasty)

## **Infectious Disorders**

The tongue is a rare site for infection, probably because of its rich blood supply, ability to avoid penetrating injury, tough dorsal surface, and continual contact with saliva, which has antibacterial properties.

## **Trauma**

Penetrating trauma to the mouth from foreign objects is sometimes seen in dogs that chew on or carry sticks.

The most common injury resulting in multiple lacerations and traumatic amputation of the entire tongue body.

Burns from electrical cords are sometimes seen in young dogs and cats and often involve the hard palate and gingiva.

Lacerations should be debrided and lavage. Normal tongue conformation is maintained by accurate apposition of deep muscular tissue and then epithelium with fine, rapidly absorbable, synthetic monofilament suture (3-0 to 4-0).

## **Neoplasia**

The most common malignant oral tumors in dogs are malignant melanoma and squamous cell carcinoma followed by fibrosarcoma.

The treatment of the neoplasia is remove the tumor mass by (Glossectomy).

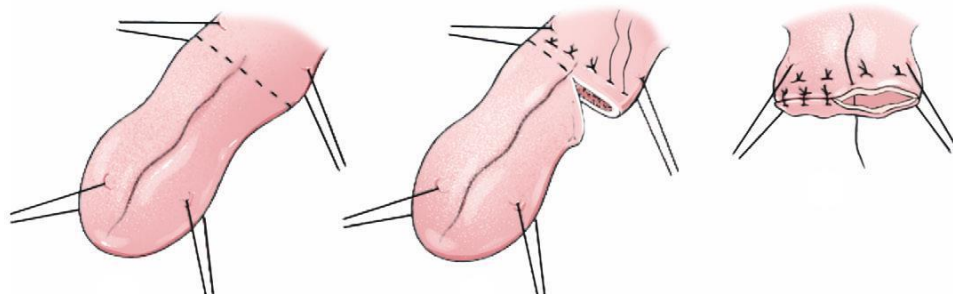
## Glossectomy

Hemostasis must be considered before any type of surgery on the tongue. Sharp excision with a blade will usually result in a surgical field fill by blood.

Care must be made not to create an excessive amount of tissue damage.

Mattress sutures outside surgical margins before incision will compress the tissue, reducing blood loss during surgery on the tongue.

After resection, the mucosal edges are suture with fine, monofilament, rapidly absorbable suture in a simple continuous or interrupted pattern.



Glossectomy. **A**, Stay sutures are placed in the tongue to facilitate retraction and exposure. **B**, Interrupted mattress sutures are preplaced across the tongue for hemostasis before transection. **C**, Mucosal edges are apposed with an interrupted or continuous pattern.

## DISORDERS OF THE TONSILS

### Tonsillar Inflammation

Any an inflammatory response upper respiratory infectious diseases, can result in enlarged and everted tonsils.

Primary tonsillitis, a condition affecting dogs younger than 1 year of age, can cause persistent cough, fever, depression, and anorexia.

Affected tonsils are bright red, friable, and may or may not be enlarged. Antimicrobial therapy and analgesics are recommended, and inflammation usually subsides with such treatment.

Tonsillectomy is reserved for dogs with recurring episodes of primary tonsillitis.

## **Tonsillar Neoplasia**

Squamous cell carcinoma is the predominant tumor of canine palatine tonsils. Unlike other oral squamous cell carcinoma, tonsillar squamous cell carcinoma metastasizes early in the disease.

## **Tonsillectomy**

Tonsillectomy is indicated for the diagnosis and treatment of tonsillar masses.

The tonsil is grasped with an Allis tissue forceps or curved mosquito forceps and pulled out of its crypt.

The base of the tonsil is transected with a scalpel blade or sharp scissors; hemostasis is subsequently achieved with digital pressure or electrocautery. Transection and hemostasis can be achieved simultaneously with an electrocautery unit set on a low level or with a laser.

Large tumors of the tonsil may require ligation of the base with 2-0 or 3-0 suture.

After the tonsil has been removed, crypt mucosa is apposed with 3-0 or 4-0 rapidly absorbable suture in a simple continuous or simple interrupted pattern.

Intraoperative and postoperative complications are rare and include hemorrhage, pharyngeal swelling secondary to tissue trauma, and postoperative aspiration of blood or fluid.

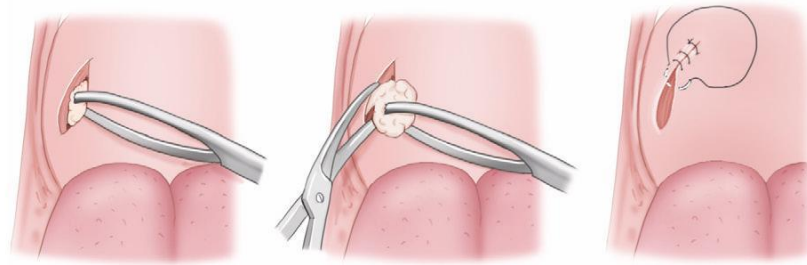


Illustration showing grasping (**A**), retraction, and transection (**B**) of the palatine tonsil. Hemostasis can be achieved with digital pressure, electrocautery, ligation, or placing a clamp across the base before transecting across the crushed tissue. The mucosa is sutured closed (**C**).