

SIALOCELE (SALIVARY MUCOCELE)

Sialocele is defined as the accumulation of saliva in the tissue due to leakage from a salivary gland or salivary duct. This condition is rare and occurs in less than 5/1,000 dogs. The condition is most common in young dogs, 2-4 years of age. It occurs more commonly in German Shepherds and Miniature Poodles.

It is not known why this condition occurs, however, trauma damaging the salivary glands/ducts has been proposed as a possible mechanism. This may explain why it is more common in younger dogs.

There are four different types of sialoceles, which are classified based on the gland from which the saliva originates (Figure 1).

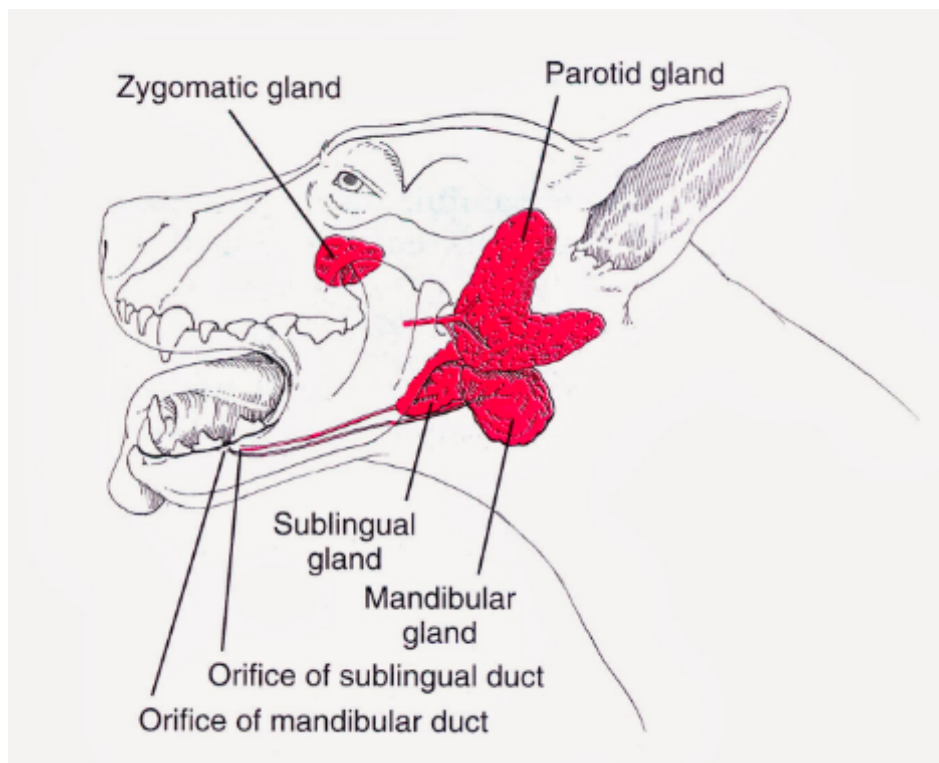


Figure 1. Figure demonstrating the four salivary glands from which a sialocele can be formed. Photo courtesy of Saunders Manual of Small Animal Practice (3rd ed). St. Louis. Elsevier, 2006, pp 632-635

Symptoms and Diagnosis

The sialocele most commonly presents as a soft, fluid-filled, painless swelling in the oral cavity, neck or rarely near the eye. The sialocele can be painful initially due to an

inflammatory response. The most common clinical signs depend on the location of the sialocele.

Cervical Sialocele: This is a very common type of sialocele. The swelling occurs under the jaw or along the upper neck region (Figures 2 and 3). Generally, there are no other clinical signs associated with sialoceles in this location.

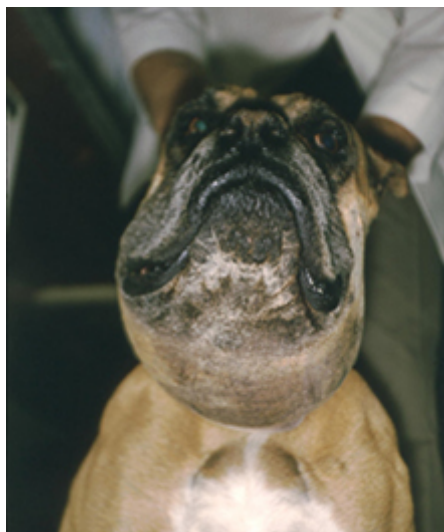


Figure 2. Cervical Sialocele. Photo courtesy of ACVS www.acvs.org/small-animal/salivary-mucocele



Figure 3. Cervical Sialocele. Photo courtesy of Dr. Joanne Franks, Dallas Veterinary Surgical Center

Sublingual Sialocele (ranula): This is another very common type of sialocele. Occurs on the floor of the mouth alongside or under the tongue (Figure 4). Clinical signs associated with this type of sialocele include reluctance to eat, abnormal eating/chewing and the presence of blood-tinged saliva due to the trauma caused by chewing or eating.



Figure 4. Sublingual Sialocele. Photo courtesy of ACVS www.acvs.org/small-animal/salivary-mucocele

Pharyngeal Sialocele: This is an uncommon type of sialocele. The swelling occurs within the pharynx (throat) and can cause difficulty swallowing or trouble breathing.

Zygomatic Sialocele: This is a very rare type of sialocele. Animals typically present due to a visible swelling near the eye.

The diagnosis of a sialocele is based on clinical signs, history and the results of fine needle aspiration of the swelling. Aspiration of a sialocele results in a stringy, blood-tinged fluid (Figure 5). This fluid generally does not contain bacteria or large numbers of white blood cells unless there has been infection of the salivary gland or an abscess has formed.

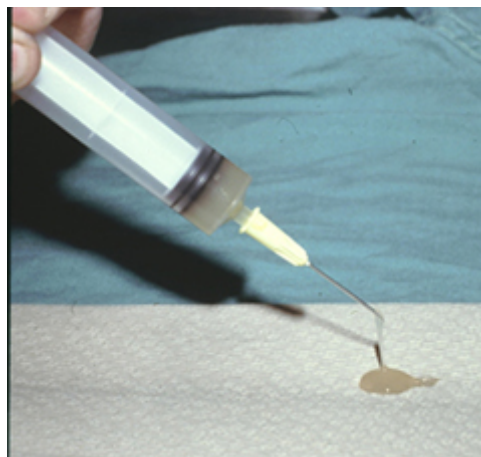


Figure 5. Aspiration of a sialocele. Photo courtesy of ACVS www.acvs.org/small-animal/salivary-mucocele

Treatment:

The only definitive treatment for a sialocele is the surgical removal of the affected salivary glands.

Aspiration (removal of fluid with a needle) to drain the sialocele can resolve the problem temporarily. However, the sialocele frequently recurs and repeated drainage leads to an increased risk of infection.

Surgery

Removal of salivary glands requires a skilled surgeon and is a delicate procedure due to the large vessels and many important nerves that are in the area the glands.

Mandibular and Sublingual Sialadenectomy:

The mandibular and sublingual salivary glands are excised together because the sublingual salivary gland is intimately associated with the mandibular salivary gland. The skin over the mandibular and sublingual salivary gland is incised. Nerves, arteries and veins are dissected and ligated as needed. The salivary glands are dissected carefully and then removed (Figure 6).

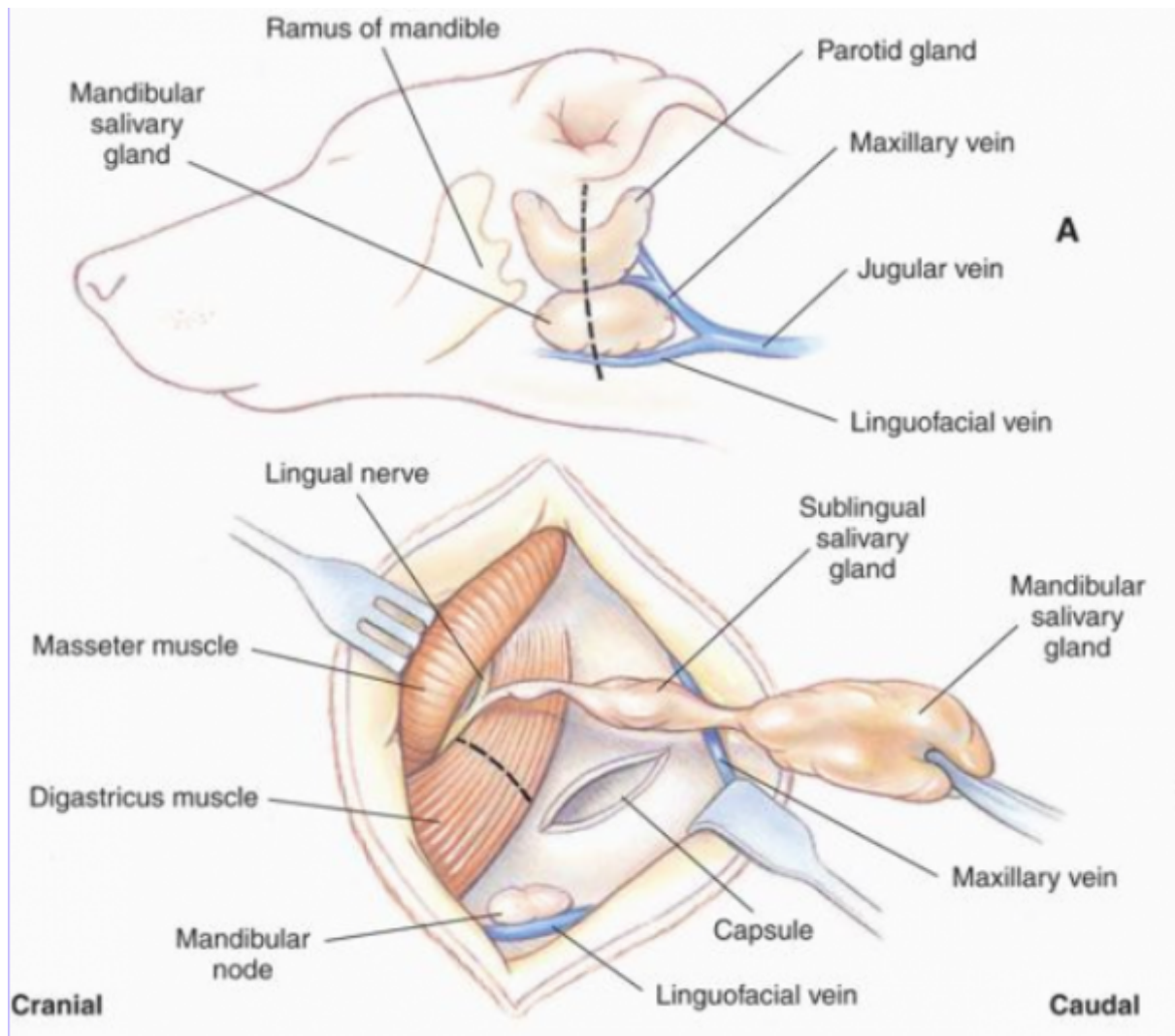
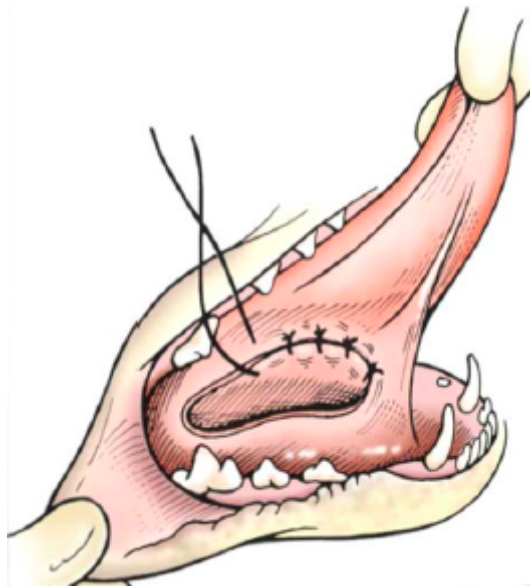


Figure 6. Mandibular and Sublingual Sialadenectomy. Photo courtesy of Fossum: *Small Animal Surgery 3rd edition* Copyright © 2007 by Mosby, Inc., an affiliate of Elsevier Inc.

Marsupialization:

Marsupialization, which allows drainage into the oral cavity, can also be used to treat sublingual sialoceles. A full thickness, elliptical incision is made in the mucocele wall. The granulation tissue within the sublingual sialocele is sutured to the sublingual oral mucosa to encourage drainage (Figure 7).



**Figure 7. Marsupialization of Sublingual Salivary Mucocele. Photo courtesy of Fossum: Small Animal Surgery 3rd edition
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Pharyngeal sialoceles can be treated with marsupialization. However, it is recommended that pharyngeal sialoceles be treated with resection due to the serious risks associated with upper airway obstruction and inability to swallow.

Zygomatic Sialadenectomy:

Zygomatic sialoceles can be effectively treated with removal of the zygomatic salivary gland. The skin over the zygomatic arch is incised. The zygomatic arch is partially removed to expose the gland. The gland is carefully removed with blunt dissection. The zygomatic arch is then replaced using suture and holes drilled into the bone. The overlying subcutaneous tissues and skin is closed

Potential Complications

The potential for nerve damage and hemorrhage (bleeding) during surgery does exist, however, postoperative complications are uncommon when an experienced surgeon performs the procedure.

If salivary gland tissue is left behind there is a possibility that the sialocele is can recur. Infection is rare but can occur. A seroma (fluid pocketing) can develop in the area of the sialocele but these are usually self limiting and resolve without additional treatment.

Postoperative Care

Typically, animals stay one night in the hospital for monitoring during their recovery. It is imperative that for 2 weeks after surgery your pet wears an e-collar at all times to prevent self-trauma and damage to the surgical repair via scratching. Two to three weeks of exercise restriction is typically recommended to allow the incision to heal. If a drain is left in the surgical site, your pet will experience drainage for several days. The drain is typically removed in 2-3 days. Pain medication, anti-inflammatories, and antibiotics are prescribed at the surgeon's discretion. Depending on the suture material used, follow-up may be required for suture removal.

Prognosis

Prognosis is excellent after drainage of a mucocele and removal of the affected salivary glands. Most animals only require one surgery to make a complete recovery however occasionally a second surgery is needed.

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