
STEP-BY-STEP

Excision of Sublingual Granuloma

Corinne Durand, DVM; Mark M. Smith, VMD

Sublingual granulomas, also known as traumatic granulomas, have been included in a descriptive term known as “Gum-Chewer Syndrome”.¹⁻³ The characteristic granulomatous lesion results from self-inflicted, masticatory trauma on the sublingual or buccal mucosa (Fig. 1).¹⁻⁷ The lesions are slow growing and may be diagnosed during a sedated oral examination before the onset of clinical signs. Once traumatized, the tissue becomes inflamed and enlarged, allowing it to become further traumatized during mastication leading to hemorrhage and ulceration. These lesions are common in smaller breeds of dogs and occasionally in cats.^{1,3,6} Chronic, severely hyperplastic, proliferative lesions cause visible signs of oral discomfort including dropping food when eating, pain vocalization, and mouth chattering. The lesions are often bilateral, vary in appearance, and can be mistaken for eosinophilic granuloma, sublingual sialocele, or neoplasia. Surgical resection of the hyperplastic tissue is the recommended treatment, including biopsy of the excised tissue to confirm the diagnosis. Histopathology findings are variable, but common observations include ulceration with necrotic debris and degenerative inflammatory cells with neutrophils and eosinophils dominating. There is also generally abundant fibroplasia with thickened hyperplastic epithelium and edema (Fig. 1). If surgical excision is adequate, it is unlikely that a second surgery would be required later in life.^{1,4} However, selective tooth extraction has been recommended for chronic recurring lesions.⁵ There are multiple surgical techniques for excision of sublingual granuloma. Excision using the over-sew and cut-and-sew techniques are described here step-by-step.⁸

Figure 1

Oral photographs showing the varied clinical appearances of sublingual granuloma: a small, pedunculated, ulcerated sublingual granuloma (A), enlarged hyperplastic sublingual mucosa (B), hemorrhagic, firm, fixed sublingual granuloma (C). A representative histomicrograph shows focal ulceration of the mucosa with neutrophils, lymphocytes, plasma cells, and histiocytes infiltrating the submucosa. There is fibrosis/fibroplasia and neovascularization in the submucosa (D).

Histomicrographic image courtesy of Philippe Labelle, DVM, DACVP. Antech Diagnostics.

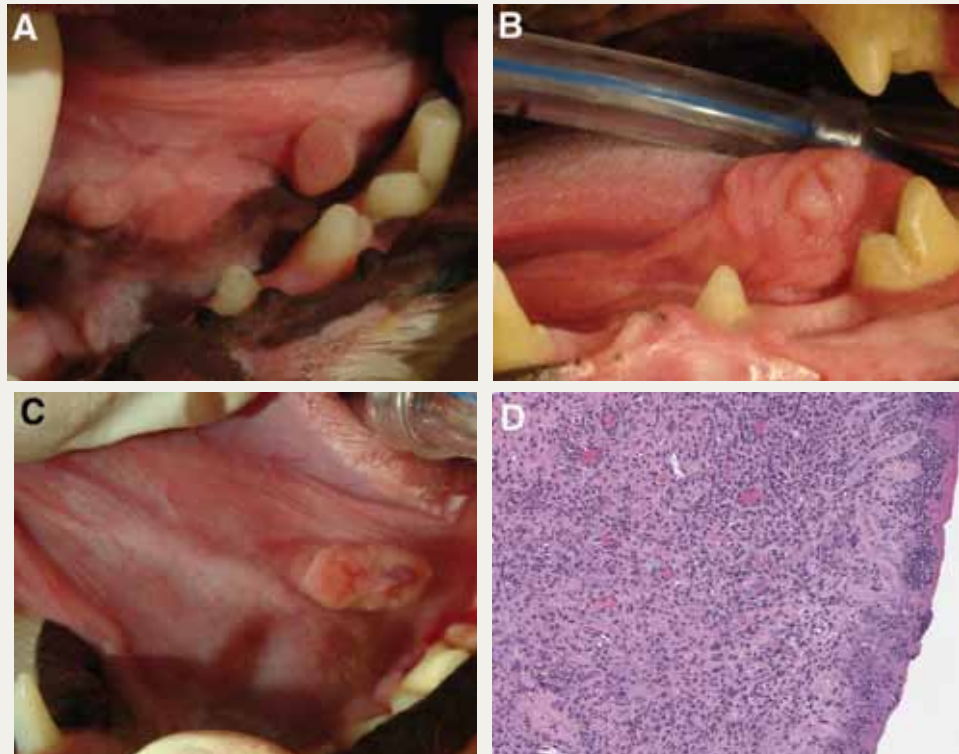


Figure 2

Intraoral photographs showing the over-sew technique for sublingual granuloma excision. Brown-Adson tissue forceps are used to grasp and reveal the extent of the lesion (A). Curved hemostats are used to clamp the lesion at the base of the tongue avoiding vascular structures and salivary ducts (B).

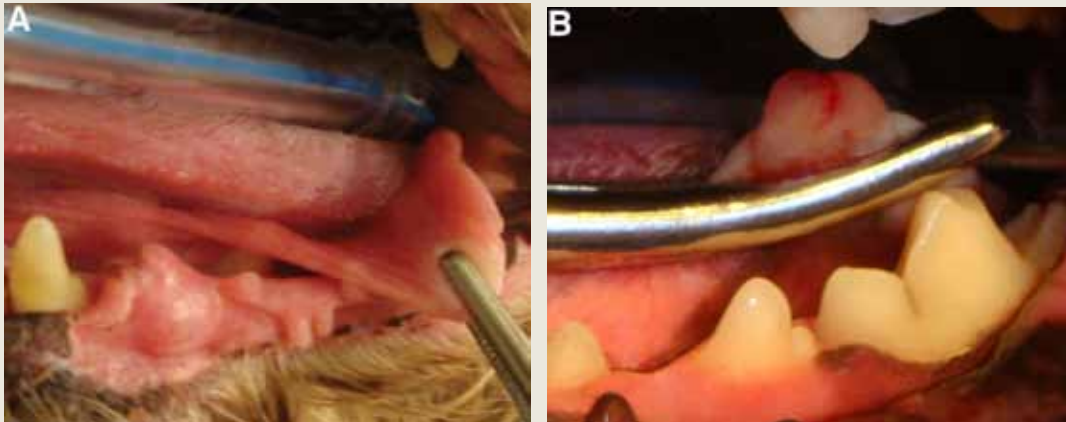


Figure 3

Intraoral photograph showing the over-sew technique for sublingual granuloma excision. A #15 scalpel blade is directed away from the tongue and used to excise the granuloma along the edge of the curved hemostats.



Figure 4

Intraoral photographs showing the over-sew technique for sublingual granuloma excision. The initial surgical knot is placed at the rostral border of the incision just ventral to the hemostat (A). A simple continuous suture pattern is performed over the hemostats and through the sublingual tissue using 4-0 poliglecaprone 25® (B).

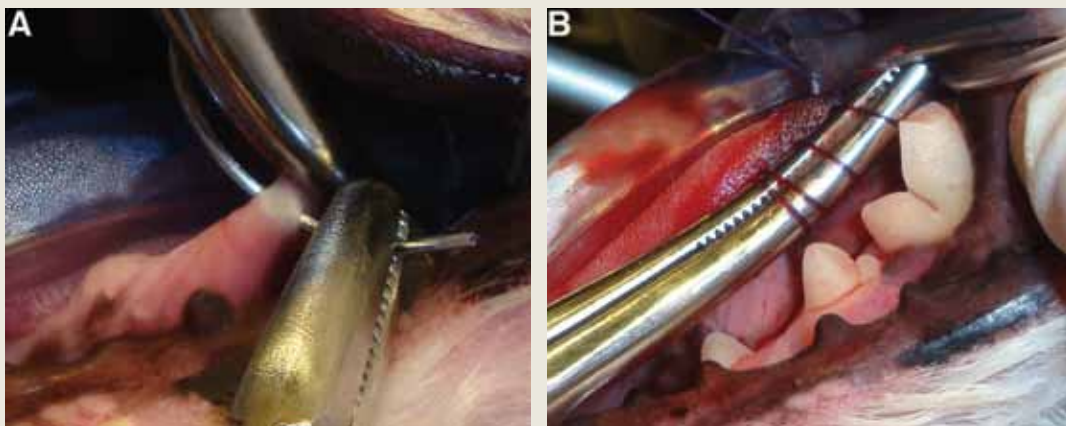


Figure 5

Intraoral photographs showing the over-sew technique for sublingual granuloma excision. The hemostats are gently opened as the suture pattern reaches the caudal end of the hemostats (A) with the hemostats slowly removed from the suture line while simultaneously tightening the suture pattern (B). Once the hemostat is completely removed and the incision line tightened, a final surgeon's knot is placed in the sublingual mucosa at the end of the incision.

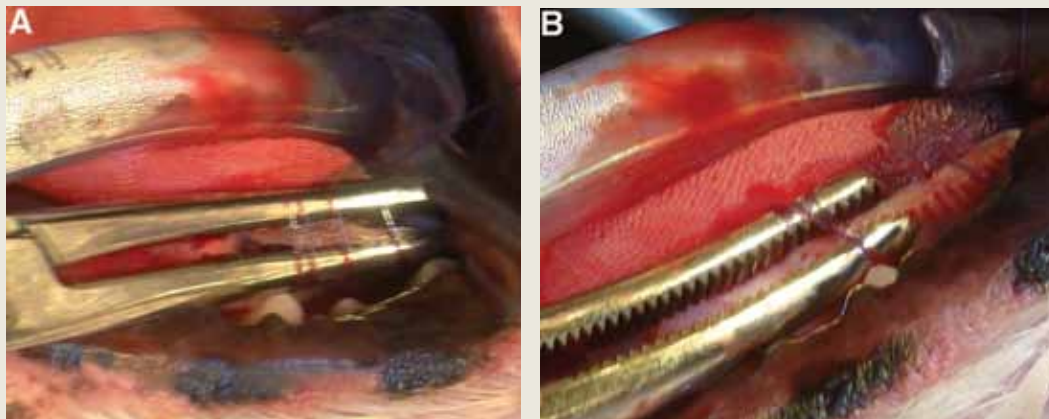


Figure 6

Intraoral photograph after completion of the over-sew technique for sublingual granuloma excision.



Figure 7

Intraoral photographs showing the cut-and-sew technique for sublingual granuloma (A) excision. Small iris scissors are used to incise normal sublingual mucosa rostral to the lesion (B).

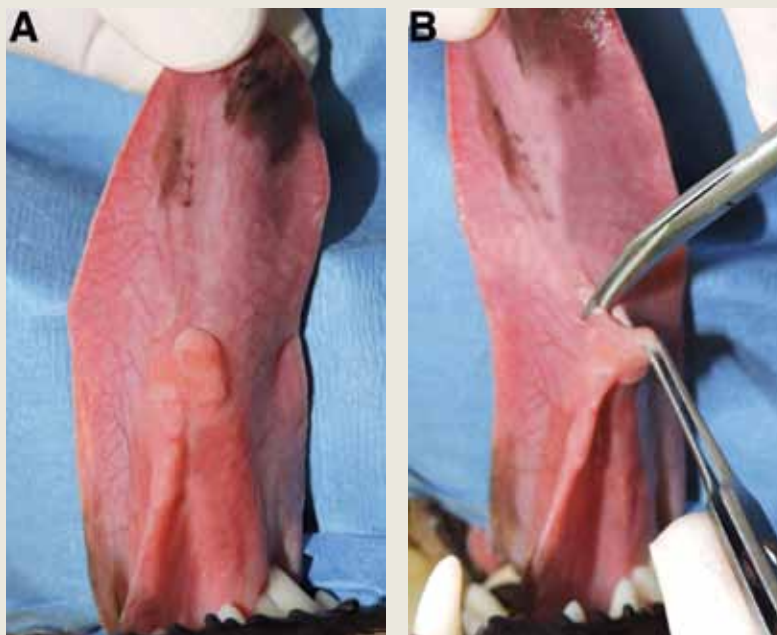


Figure 8

Intraoral photographs showing the cut-and-sew technique for sublingual granuloma excision. The iris scissors are advanced to develop a submucosal dissection plane (A). The iris scissors are withdrawn and used to continue the mucosal incision (B).

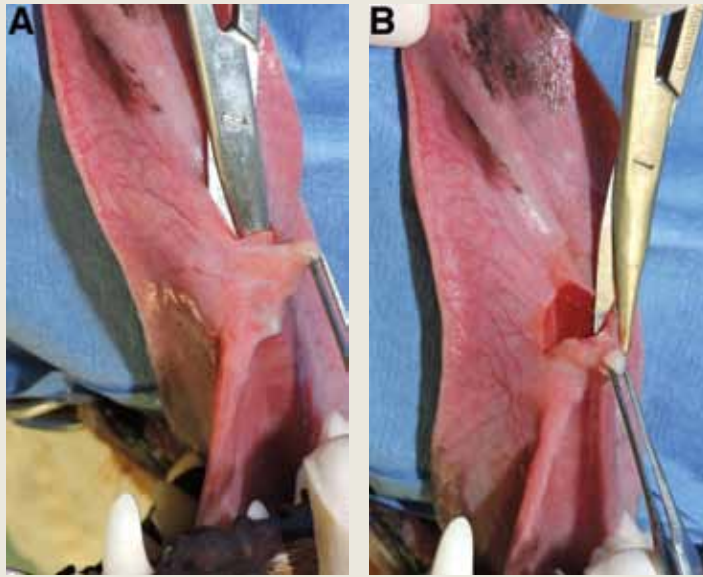


Figure 9

Intraoral photographs showing the cut-and-sew technique for sublingual granuloma excision. After the granuloma is partially resected, the wound is apposed using 4-0 absorbable suture in a simple continuous pattern (A). Radiosurgery may be used for hemostasis if necessary (B).

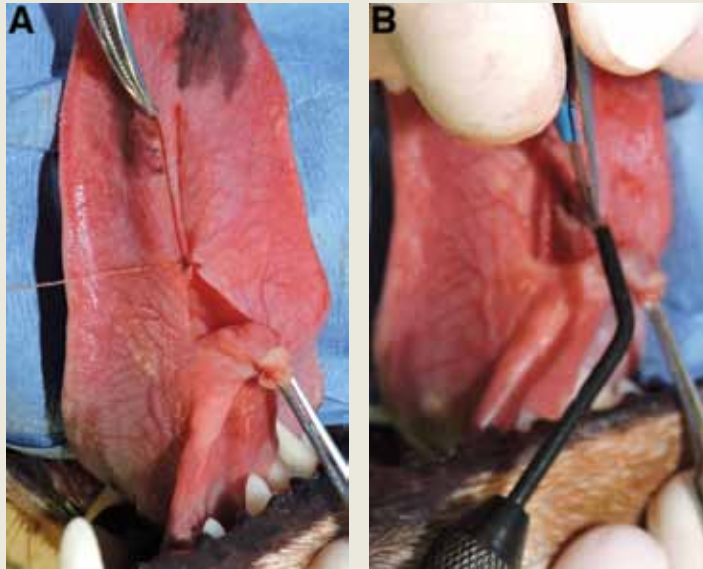


Figure 10

Intraoral photographs showing the cut-and-sew technique for sublingual granuloma excision. As the dissection extends caudally (A), the suture pattern is continued (B).

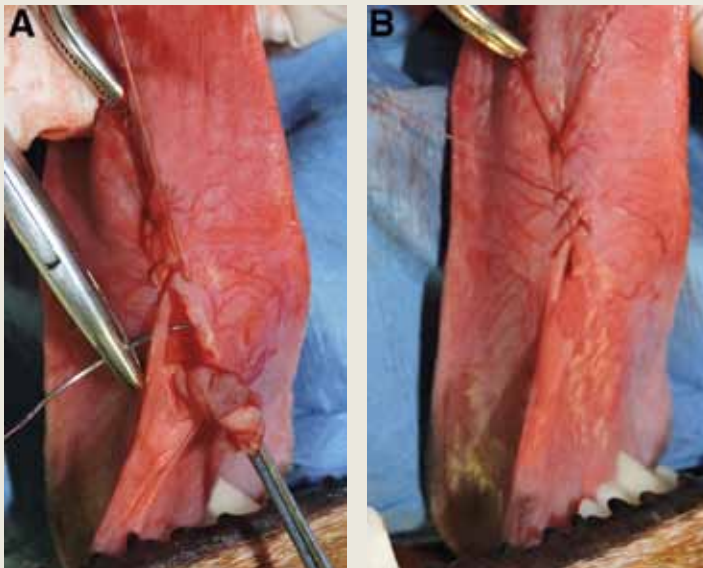
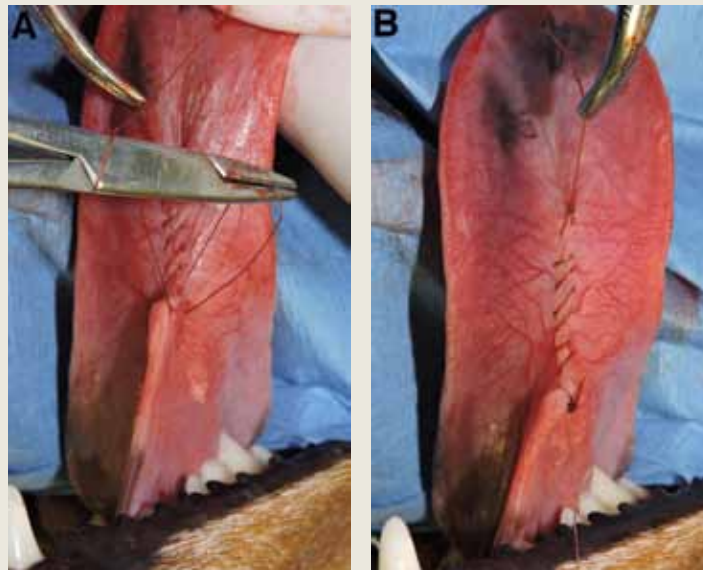


Figure 11

Intraoral photographs showing the cut-and-sew technique for sublingual granuloma excision. The caudal knot is tied (A) to complete the suture pattern (B) following excision of the sublingual granuloma.



^a Monocryl, Ethicon, Johnson & Johnson, Somerville, NJ

Author Information

From the Veterinary Medical Center of Long Island, 75 Sunrise Hwy, West Islip, NY 11795; and, the Center for Veterinary Dentistry and Oral Surgery (Smith), 9041 Gaither Road, Gaithersburg, MD, 20877. Dr. Durand's current address is Metropolitan Veterinary Associates, 2626 Van Buren Ave, Valley Forge, PA 19482. Email: cdurand@metro-vet.com

References

1. Hawkins, B. Jean. "Gum Chewer Syndrome NAVC: How I Treat."
2. Jean Livingston, MS, DVM, FAVD, DAVDC. Personal communication. 2015
3. Hale, F. Introduction to: Traumatic Granulomas, aka Gum-Chewer Syndrome, January 2008 unpublished data.
4. Lommer, MJ. Oral inflammation in small animals. *Vet Clin of North Am Small Anim Prac* 2013; 43: 555-571.
5. Zacher, AM, and Manfra, SM. Oral and maxillofacial surgery in dogs and cats. *Vet Clin of North Am Small Anim Prac* 2013; 43: 609-649.
6. Verstraete, FJM, Lommer MJ, et al. Non-neoplastic Proliferative Oral Lesions. In: *Oral and maxillofacial surgery in dogs and cats*. Philadelphia: Elsevier Saunders, 2012; 413.
7. Vermond, JF, and Koedam, MA. [Eosinophilic granuloma of the oral cavity in a Siberian husky]. *Tijdschrift voor diergeneeskunde* 1989; 114.2: 82-85.
8. Fossum TW. Surgery of the Lower Respiratory System: Lungs and Thoracic Wall. In: *Small animal surgery*. St. Louis: Mosby, 2007; 869.