

### Sublingual "Gum-Chewer" Lesions in a Maltese Dog

An 11-year-old spayed female Maltese dog with Cushing's disease and halitosis was presented for complete dental prophylaxis. Sublingual "gum-chewer" lesions are important and painful; these lesions are found incidentally during dental prophylaxis.

**History.** The pet was diagnosed with Cushing's disease several years before and was being treated holistically to the owners' satisfaction. However, they were concerned about the halitosis. The patient's teeth had never been cleaned. They did not report any concern about pain.

**Examination.** During questioning, the owners agreed that the dog had become less interested in treats but was still eating and had not lost weight. Physical examination revealed nothing remarkable for a Cushing's patient. The abdomen was pendulous, and alkaline phosphatase level was 798 IU/L. Other blood values were within normal limits.

Oral examination revealed that all six lower incisors were missing, probably from periodontal disease, and all four canine teeth and the four upper incisors were nearly worn to the gingiva. The dog had obviously played aggressively with chew toys in the past. Plaque had accumulated heavily between the lower fourth premolar and lower molars bilaterally; in addition, these teeth were slightly overcrowded, which eliminates the tooth's self-cleaning mechanism. See the box for patient characteristics that should raise suspicion for gum-chewer lesions.



Photos courtesy Dr. Judi B. Leake

Proliferative tissue under the tongue found during dental prophylaxis

#### Typical Characteristics of Patients at Risk for Gum-Chewer Lesions

- Small, active dogs
- Brachycephalic breeds
- Aggressive players, especially with chew toys
- High-strung, nervous, or panting dogs
- Good watch dogs (i.e., those with a propensity toward excessive barking)

#### ASK YOURSELF ...

Aside from monitoring Cushing's disease, which of the following is the optimal long-term therapy for this patient?

- Encourage owners to find a "doggie breath treat" the dog will eat.
- Use "pulse antibiotic therapy" to avoid anesthetizing a geriatric dog with a chronic disorder.
- Place patient on broad-spectrum antibiotics and schedule dental prophylaxis, dental radiographs, treatment of periodontal pockets, extractions if needed, and excision of gum-chewer lesions. Include pain management if warranted, depending on the therapy.
- Explain to owners that bad breath is common in older dogs and that the dog's lack of interest in treats is probably a side effect of old age.

continues

## INSIGHTS FROM CLINICAL CASES . TREATMENT

### Correct Answer: C

**Periodontal disease is common.** Up to 85% of all small animals older than 2 years of age have some form of periodontal disease. If left untreated, periodontal disease leads to chronic low-grade infection and can be exacerbated by comorbid conditions. Halitosis can strain the human–animal bond.

In this case, oral examination under anesthesia confirmed grade II periodontal disease. Only one tooth was found to have slight gingival and osseous recession, which was treated with root planing. The teeth were thoroughly cleaned and polished and the mouth rinsed with 0.12% chlorhexidine solution.

**The area under the tongue had extremely large areas of proliferative tissue, which could be “draped” over the lower cheek teeth. This is the typical appearance of sublingual gum-chewer lesions.** These lesions are caused by unintentional self-inflicted trauma during such activities as barking, panting, eating, and playing with chew toys. Sublingual gum-chewer lesions are seldom diagnosed in an awake patient. They are usually bilateral, and histopathologic evaluation usually reveals chronic granulation tissue and salivary gland duct tissue. Gum-chewer lesions can also occur along the inside of the cheeks (bite plane) or under the lip in brachycephalic dogs.

A carbon dioxide laser was used to carefully resect the large lesions, bilaterally, from the lower second molar teeth to the lower first premolar teeth. Bupivacaine, a long-acting local anesthetic, was applied topically. The incision was closed with 6-0 braided absorbable suture with a PS6 needle in a simple continuous pattern. Sutures were placed loosely to enable the tongue to move freely.



After excision (2) and with sutures in place (3)



The patient had been preanesthetized with morphine, and the laser excision was painless. Postoperative pain usually occurs because sutures restrict tongue movement. In this case, pain was managed with off-label oral bupivacaine, which is light-sensitive, at 0.02 mg/kg sublingually every 8 hours for 4 days.

If the surgery involves traditional surgical as opposed to laser excision, the owner should be given a 2-week supply of hydrocodone liquid to administer to the patient at a dose of 0.22 mg/kg bid to tid.

**There is only one treatment for gum-chewer lesions of any type: excision.** In this case, thorough cleaning and polishing revealed periodontal disease that was manageable, contingent on institution of home care and repeated dental prophylaxis on an as-needed basis. In this case bilateral sublin-

gual gum-chewer lesions were found in the course of treating periodontal disease. ■

See Aids & Resources, back page, for references, further reading, and contacts.

### **Tx** ... at a glance

- Preanesthetize with morphine
- Excise lesions either surgically or by laser
- Apply topical bupivacaine to the tissue
- Close incision with 6-0 braided, absorbable suture in loose pattern to enable free movement of tongue
- Manage postoperative pain as appropriate to type of surgery (see text)

### TAKE-HOME MESSAGE

If proliferative soft tissue is found in a location where unintentional biting could occur, the tissue probably is being bitten. Gum-chewer lesions are painful and can cause some patients to stop eating, or to become “fear biters” or at least head-shy. Because the animal cannot communicate, I believe that these lesions, even when found incidentally, should be removed. After removal, owners typically report an improved attitude and increased playfulness.