 Clients often ask if dogs can get cavities. The answer is yes, although the etiology is not the same as in people. The pathology, however, is similar and so is the treatment. The carious lesion will need to be debrided and restored. Without proper debridement, the tooth will continue to decay. If the decay has reached the dental pulp, root canal therapy can be performed to save the tooth (Fig. 1). Centered from the distal portion of the tooth is similar to that of the human molar. The anatomy of the distal portion is often found in teeth that are prepared for restoration. Once healthy tissue is prepared for restoration, the tooth can be restored. A follow-up radiograph shows no signs of complication (Fig. 5). Some days may be more prone to caries as well (Figs. 3 and 4). Follow-up for carious lesions is important over time. Preventing decay means careful monitoring of other similar issues in dentistry and head & neck surgery.

SUMMER NEWSLETTER

Strengthening Teeth and Removing Invasive Tumors!

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SURGERY: Your Gut Feeling Is Probably Correct!

There is an old saying that “if you hear hoof beats, it is probably a horse, not a zebra!” As a professor, it was a commonly used phrase to get students back on track with a more reasonable differential diagnosis list. Seasoned clinicians generally have a pretty short differential diagnosis list that almost always includes the problem. Finally, that differential diagnosis list even becomes more clear when the clinical signs and history correspond to what “you’re thinking”.

The dog shown here had a 2-year history of bilateral cervical neck masses. The original fine needle aspirate indicated reactive lymph nodes with abnormal cells possibly corresponding to what “you’re thinking”.

The dog presented with lymphoproliferopathy of the mandibular lymph nodes bilaterally (Fig. 1). There was no physical examination evidence of generalized peripheral lymphadenopathy. Based on the previous fine needle aspirate result, a presumptive diagnosis of lymphoma was made. The surgical plan was to perform excisional biopsy of the palpable lymph nodes realizing that there can be 4-6 mandibular lymph nodes on each side of the neck. Basically, the owner wanted the masses “gone”.

The surgical plan was to perform a midline incision and move all 3 palpable mandibular lymph nodes by digitally displacing them into the incision for removal. Based on the vascular structures in the area and the chronicity of the problem likely resulting in neovascularization, an adequate incision was made to provide appropriate visualization. Hemostasis was achieved using electrocautery and hemoclips (Figs. 2-3). The biopsy result was lymphoma and the patient is doing well 3-months postoperatively while on a chemotherapeutic protocol.

DENTISTRY: Metal Mouth- Strengthening Critical Teeth!

When humans have root canals, a crown is always placed because the tooth has been weakened from the procedure. Root canal in dogs does not require the removal of extensive tooth structure, so a crown is not always needed. Crowns are available to be placed in dogs and will make the tooth as strong as possible. Dogs have such a strong bite force that metal crowns are generally used to withstand the pressure. We must often place crowns in dogs that use their mouth for their job, such as police dogs. Clients with performance dogs also prefer to have crowns placed to protect their teeth. Many of these working and performance dogs have extreme ball drive and are often very hard chewers. Regardless of breed or work function, dogs that are kept in cages periodically may grind their teeth on the cage bars causing wear on the distal aspect of the canine teeth. The excessive wear weakens the tooth similar to notching a tree. The tooth is prone to fracture at the wear area (Fig. 1). Crowns can prevent excessive wear in these cases. However, crowns do not have to be reserved for working dogs. Any of the strategic teeth (canines, maxillary premolars, and first mandibular molars) can be strengthened with the placement of a crown (Fig. 2). The procedure for crown fabrication is similar to the procedure in humans. While the dog is under anesthesia, we prepare the tooth for a crown, and then take dental impressions to send to the laboratory (Figs. 3 and 4). A stone model is made and the metal crown is fabricated to the exact specifications of the model (Fig. 5). The patient returns approximately one week later to have the crown cemented in place. In addition to strengthening the tooth, they look great (Fig. 6)! Care for a dental crown involves routine annual dental prophylaxis and dental radiographs if indicated. Home care is important to prevent tartar accumulation on the crown. In summary, crowns strengthen teeth to resist fracture and strengthen fractured teeth to fully restore their function.

SURGERY: With The Right Owner, You Can Do Anything!

Owners are always concerned about the results of oncologic surgery, especially of the face and head regions since these areas are so prominent and affect their visual perception of their pet. Most times, successful resective surgeries such as caudal maxillectomy and rostral mandibular resection are performed with minimal cosmetic consequences. However, rostral, cutaneous, malignant maxillary neoplasms require aggressive surgery to be effective. The surgical tenants of tumor-free margins with 1 to 2 cm margins dictates resection of the rostral muzzle resulting in what is commonly termed a “Miss Piggy” or “Phantom of the Opera” surgery.

Complete rostral maxillectomy is indicated for malignant neoplasms of the rostral muzzle. The most common etiology is squamous cell carcinoma (SCC), especially in cats. This procedure may result in a cure since margins are often excellent warranting a relatively positive prognosis, again, especially for SCC.

Complete rostral maxillectomy (including cutaneous structures) is an on bloc, resective procedure that requires excellent hemorrhage control and plastic and reconstructive surgery techniques. Having an owner that can accept the cosmetic result is the key to performing this surgery. The owner must be able to realize, from a medical and philosophical standpoint, that their pet will die from cancer, but the pet doesn’t care about how it looks! In this case, the owner had that exact philosophy and consented to the surgery.

The dog shown here had a nerve sheath sarcoma of the rostral muzzle involving the lip, nasal planum, and nose (Fig. 1). The procedure may result in a cure since margins are often excellent warranting a relatively positive prognosis, again, especially for SCC.

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