DEBUNKING COMMON MYTHS ABOUT PERIODONTAL DISEASE

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*In honor of **National Pet Dental Health Month**, Dr. Brook Niemiec, author of our **Practical Dentistry** column, brings you some of the most common myths that veterinarians and pet owners may believe about pet dental disease.*

Myth 1: 80% of dogs and 70% of cats have some form of periodontal disease.

As shocking as these numbers are, they underestimate the true incidence of disease. This is because the study that determined these percentages was based on diagnosis of gingivitis via color change of the gingiva. While erythema of the gingiva is a reliable sign, progressive periodontal disease can occur in the absence of any visual cues, including inflammation. It is now known that increased gingival bleeding on probing occurs prior to visual inflammation (**Figure 1**).[1,2] A current and ongoing study places the incidence at close to 90% at 1 year of age.

Myth 2: Level of calculus is an accurate indicator of level of infection.

Although periodontal disease is typically associated with calculus, it is primarily elicited by plaque and is often seen in the absence of calculus.[3,4] Conversely, widespread supragingival calculus may be present with little to no periodontal disease (**Figure 2**). It is critical to remember that calculus acts as an irritant, but is essentially nonpathogenic. Therefore, the degree of gingival inflammation should be used to judge the need for professional therapy. However, even the degree of gingival inflammation is inadequate for diagnosis, as it often underestimates the severity of periodontal disease (**Figure 3**).

Myth 3: Dry dog food is good for a dog's teeth.

Dry dog foods may decrease the amount of calculus on the teeth, but are minimally effective against periodontal disease.[5] In addition, there are a plethora of products available which tout efficacy for treating periodontal disease, but the vast majority have NO research to back up their claims.[6] The best way to confirm efficacy of a product is to look for the Veterinary Oral Health Council seal of approval. Products with this seal have been evaluated by qualified veterinary dentists and found to be effective. For a list of VOHC-approved products, visit **VOHC.org**.

Myth 4: Bad breath is normal in dogs.

This is such a common misconception that 1/3 of pet parents (28 million owners) believe it to be true.[7] Bad breath is a sure sign of significant oral infection and, while there are other causes, periodontal disease is by far the number 1 cause of halitosis.[8-10] Halitosis is caused by anaerobic bacteria digesting certain amino acids. While gingivitis alone can create some halitosis, significant periodontal infection is almost always present in patients with halitosis.[11]

Figure 1. *Intraoral picture of a maxillary premolar in a dog; note that there is bleeding upon probing but no gingival inflammation. This patient has gingivitis that cannot be diagnosed visually.*

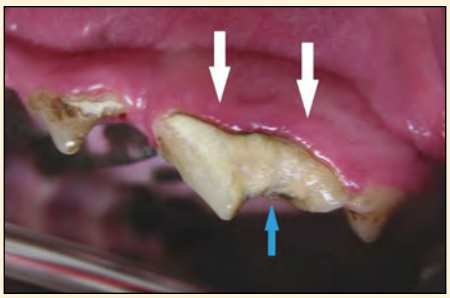

Figure 2. *Intraoral picture of the left maxillary fourth premolar in a dog; note the significant calculus (blue arrow), with no gingival inflammation (white arrows).*

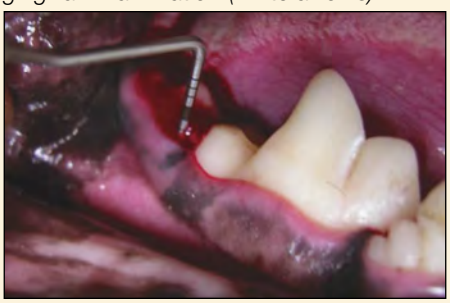

Figure 3. *Intraoral picture of the right mandibular molars of a dog; note the deep periodontal pocket and severe hemorrhage elicited by probing despite the lack of dental calculus and gingival inflammation.*

Myth 5: Only loose teeth need to be extracted.

Actually, any teeth with pockets greater than 6 mm, furcation levels of 2 or 3, or are otherwise diseased CANNOT be effectively treated with closed root planing.[12-16] For the infection to be fully removed, these teeth need to be treated with periodontal flap surgery and open root planing or extraction.[17]

Myth 6: A conscious oral examination is sufficient to diagnose periodontal disease.

While severe oral disease may be diagnosed during an awake examination, the vast majority of patients have hidden periodontal disease. This is due to several factors including:

- The back of the mouth (molars) cannot be examined in most patients.
- The lingual/palatal surfaces cannot be evaluated (**Figure 4**).
- Dark pigmentation can interfere with the diagnosis of gingival inflammation.
- Small breed dogs are very resistant to conscious oral examinations.

The best way to diagnose periodontal disease is by periodontal probing under general anesthesia. The normal sulcal depth in dogs is 0 to 3 mm, and in cats, 0 to 0.5 mm.[18]

- A color-coded probe (Niemiec Periodontal Probe, dentalaireproducts.com) has been developed with various depths marked in different colors.
- An additional diagnostic tool (Orastrip QuickCheck Canine, periodx.com) measures the production of thiols, which are produced by periodontal pathogens. A quick swipe of the maxillary gingival margin will reveal visual evidence of periodontal infection beneath the gingiva, improving pet owner compliance with dental recommendations.

Myth 7: Nonanesthetic "cleanings" are safer and cheaper than traditional dental cleanings.

Nothing could be further from the truth. Nonanesthetic dental (NAD) cleaning carries a high risk for iatrogenic damage. The sharp instruments required for a proper cleaning can lacerate delicate gingival tissues if the patient moves, which is repeatedly seen and reported. Jaw fractures and neck injuries have been seen following restraint for NAD cleanings, and the risk for aspiration pneumonia from the lack of intubation is of high concern.

In contrast, well-performed general anesthesia is very safe. When current standards of multimodal anesthesia are performed with appropriate monitoring, rarely are there complications. One study suggested that mortality risk in healthy dogs was 0.05%.[19] Since these practices had widely varying anesthetic protocols and monitoring, ideal anesthesia protocols and monitoring should improve this number even further.[20]

The issue of cost is also a proposed benefit of NAD cleanings over traditional anesthetized cleanings. However, under closer examination, it is generally more expensive than traditional cleaning. In southern California, the initial NAD procedure can run from $75 to $125, with monthly maintenance of $35 to $65. This means that the first year of care can amount to $460 to $840. In contrast, an annual cleaning in a general practice is typically $400 to $600 and, in my specialty practice, averages $700 before radiographs.

Figure 4. *Intraoral picture of the palatal surface of the right maxillary fourth premolar in a dog; note the significant periodontal inflammation and bone loss despite the lack of gingival inflammation mesial and distal.*

Myth 8: My clients will not pay for a dental procedure.

While every clinic has clients who simply will not pursue quality dental care for their pets due to financial constraints, the vast majority of clients want to take optimal care of their pets. Therefore, if they understand the value of dental procedures, they will be much more likely to comply with treatment recommendations. The best way to convince pet parents of the importance of proper dental care is to educate them about its benefits.[18]

There are numerous sources of client educational tools for the practitioner. There are YouTube videos about periodontal disease that can be viewed by clients at home, in the clinic, or uploaded to a practices' website. I offer client educational videos at **dogbeachvet.com**. In addition, for National Pet Dental Health Month, Greenies (greenies.com) is sending out a free Dental Checkup Day kit to help practitioners promote oral health. The kit contains not only a tremendous amount of educational material but also a free box of OraStrip QuickCheck Canine tests. Kits are available at **vetresources.greenies.com/order-resources.aspx**. ■

Read Dr. Niemiec's new book, **Veterinary Periodontology** *(Wiley Blackwell, 2013), now available through several online sources. The* ***References*** *for this article can be found at* todaysveterinarypractice.com *(Resources).*