



the COVE connection

Dentistry Case Study: Periodontal Surgery

By Colleen Fox, DVM, CSAVP Dentistry



Patient: Doc, a 6-year-old neutered male Dachshund

Referred by: Southampton Veterinary Clinic

History & Presentation: Doc was referred to The COVE's Dentistry service for evaluation and treatment of a fractured right maxillary fourth premolar (108). On conscious examination, 108 had a complicated crown root fracture, which appeared to extend more than 3mm subgingivally. Several maxillary incisors were mobile and had significant gingival recession.

Doc had no other relevant medical history, and the rest of his physical exam was unremarkable.

Because of the large amount of subgingival involvement, 108 was unlikely to be a good candidate for root canal treatment. Doc was scheduled for anesthesia for dental radiographs and extraction of 108 and the diseased incisors. Pre-anesthetic lab work was performed by the pcDVM and was within normal limits.



Doc

(Continued on next page)



Case Study: Periodontal Surgery (continued)

Diagnosis & Treatment: A complete oral exam and full-mouth dental radiographs were performed under general anesthesia. As expected, 108 had 4mm of pocketing at the root fracture site and Stage 4 periodontal disease. In addition, 101, 102, 109, 201, 202, 203, 206, 209, 309, and 410 also had Stage 4 periodontal disease and were extracted. Post-extraction radiographs confirmed complete extraction and all extraction sites were closed.

The left maxillary canine tooth (204) and the right mandibular first molar (409) were found to have Stage 3 periodontal disease based on the depth of periodontal pocketing and radiographic changes. Doc's owner was committed to daily home care and was willing to return for follow-up dental radiographs to attempt to salvage these two strategic teeth, so root planing was performed on 204 and 409.

Oravet® barrier sealant was applied to the dried crowns to deter plaque until home care could be resumed after Doc's extraction sites were rechecked in 10 days.

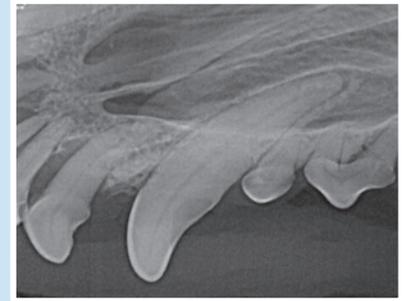
Outcome: The extraction sites were well healed at the recheck exam, so Doc's owner was instructed to resume daily home care. A list of VOHC-approved products was also reviewed with the owner to supplement tooth brushing.

Doc presented a year later for recheck radiographs and an anesthetized oral exam. His owner had been diligent with home care efforts, and no calculus was visible on conscious exam. Mild gingivitis was noted at 409.

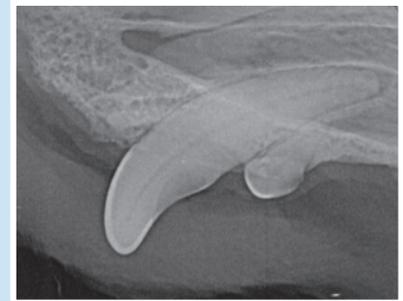
The pocket depths of the previously treated teeth had improved, and they were both now Stage 2 periodontal disease (previously Stage 3). The periodontal pocket of 204 had gone from 4mm to 2mm. The periodontal pocket at 409 went from 5mm to 3mm. Thorough supra- and sub-gingival cleaning and polishing was performed, and closed root planing was repeated on 409. Doc's owner was instructed to continue daily home care and to have routine professional dental cleanings performed at their pcDVM when indicated.

Discussion: Strategic teeth with Stage 2 or Stage 3 periodontal disease (<50% attachment loss on dental radiographs and charting) can be candidates for periodontal therapy. One example of periodontal therapy is root planing, as described for Doc.

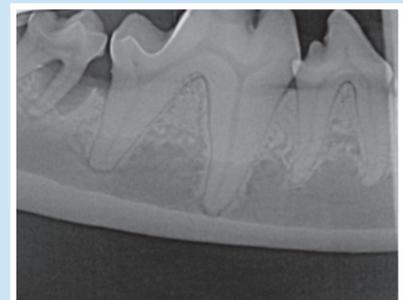
Root planing entails removing the subgingival calculus along with portions of necrotic cementum to leave a smooth and clean root surface. A combination of ultrasonic scaling and subgingival curettage is utilized to remove the granulation tissue, calculus, and plaque from the periodontal pockets. This reduces pocket depth, controls



*Fig. 1:
204 before periodontal therapy*



*Fig. 2:
204 one year following treatment*



*Fig. 3:
409 before periodontal therapy*



*Fig. 4:
409 one year following treatment*

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Case Study Discussion (continued)

infection, and establishes an environment for healing to occur. It is extremely important to note that any pocket larger than 5mm cannot be appropriately cleaned without creating a gingival flap (open root planing). Failure to completely plane the root in the apical portion of the pocket causes an increase in periodontal

pocketing and subsequent periodontitis and bone loss.

Case selection is critical for the success of these treatments. Periodontal surgery is often more time-consuming – and therefore more costly – than extraction, and requires more frequent rechecks as well as diligent home care.

Because of these factors, it requires a patient that is healthy enough for multiple anesthetic events and cooperative enough for home care, an owner who is willing to provide home care and return for follow-up procedures, and a tooth that is important enough to justify the additional time, effort, and cost.

Tech Tip: Probes for Dental Charting

By Taylor Redmond, LVT



Dental charting is an important and necessary part of performing a comprehensive oral health assessment and treatment (COHAT). To perform thorough dental charting, a periodontal probe is required to accurately measure periodontal pockets and gingival recession (attachment loss). Each probe has a specific scale that is measured in millimeters, so knowing which type of probe and scale you are working with is imperative.



Williams Probe



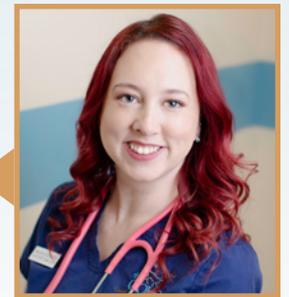
University of North Carolina Probe

Did You Know? Fun Facts About Our Dentistry Team



Colleen Fox, DVM, CSAVP, Dentistry, loves to take dance classes. She is currently taking rumba.

Danielle Martin, LVT, VTS (Dentistry), loves to go hiking with her dogs Bella and Remy.



Did You Know?

Fun Facts About Our Dentistry Team



Taylor Redmond, LVT, loves to eat Chick-Fil-A and wants to be a mermaid.

Kelsey Eure, VA, has the brain of an elephant! She remembers everything.



Hannah Crandol, VA, owns 10 reptiles (8 ball pythons, 1 bearded dragon, and a leopard gecko).

Nicole (Nikki) Ireland, VA, loves to ride motorcycles to explore the states.



News You Can Use

Lunch-and-Learn Opportunities



Great news!

Our Dentistry team's licensed veterinary technicians, including Danielle Martin LVT, VTS (Dentistry), are available to travel to your clinic for Lunch-and-Learn opportunities. We provide training in dental radiography, charting, and nerve blocks. We offer a variety of other CE Lunch-and-Learn topics as well, so if you have a need or request, do not hesitate to ask! Contact us at dmartin@thecovevets.com to discuss setting up one of these great opportunities in your clinic today.

