

CASE OF THE MONTH (May 2011)

Signalment and History: An eight year old spayed female Border Collie Mix was referred with the complaint of oral pain, primarily evident when rubbing the face after eating. This patient had multiple fractured teeth with pulp exposure.

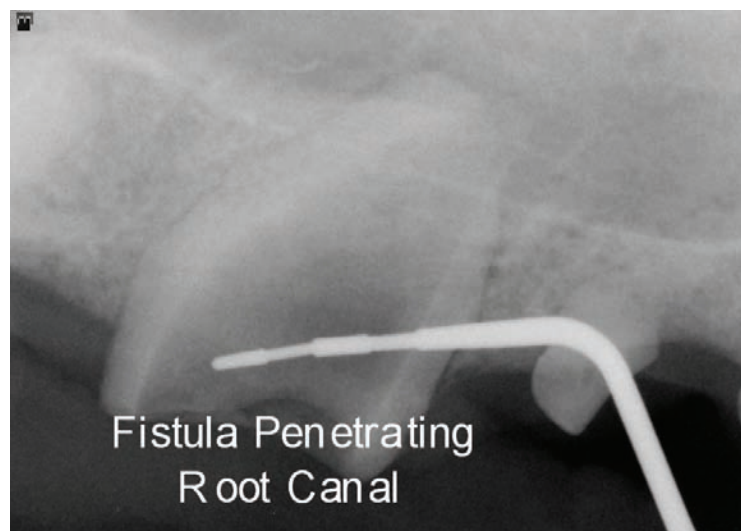
Procedures: The patient was placed under general anesthesia for a complete oral examination and intraoral radiographs. The left maxillary canine tooth had been fractured nearly flush with the gingival margin, revealing a wide open root canal packed with debris.



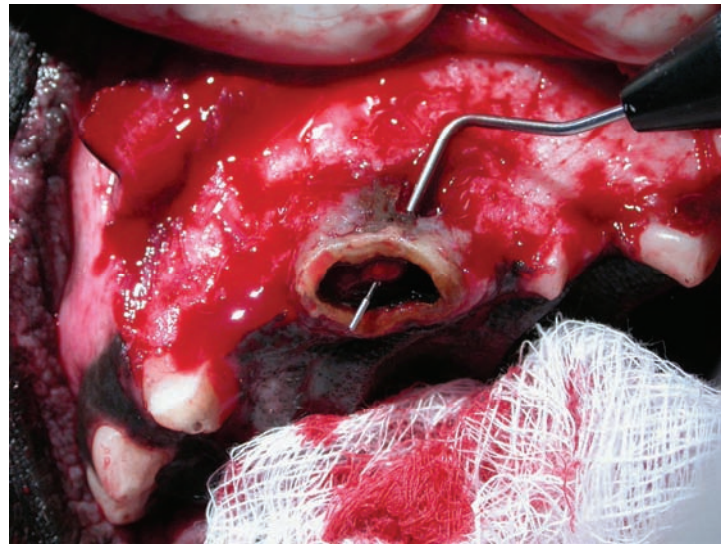
A fistulous tract was found above the canine tooth and a probe demonstrated a communication with the root canal.



An intraoral radiograph documented this relationship.



Due to the extensive damage, necrosis, and fistula formation, it was obvious that this tooth needed extraction. The left 3rd incisor and 2nd premolar were also fractured with pulp exposure and we elected to extract them as well. All three teeth were surgically extracted through the exposure of a single, full thickness, mucoperiosteal flap.



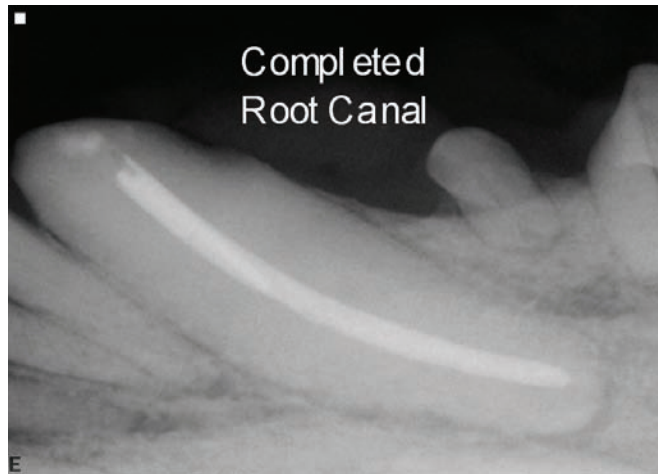
The flap was closed with 4-0 Monocryl in a simple interrupted pattern.



The left mandibular canine had suffered abrasion over a long period of time, resulting in a pulp exposure.



Due to the structural importance of this tooth, the owner desired to save it. Radiographic evaluation confirmed that it was a good candidate, and root canal therapy was performed.



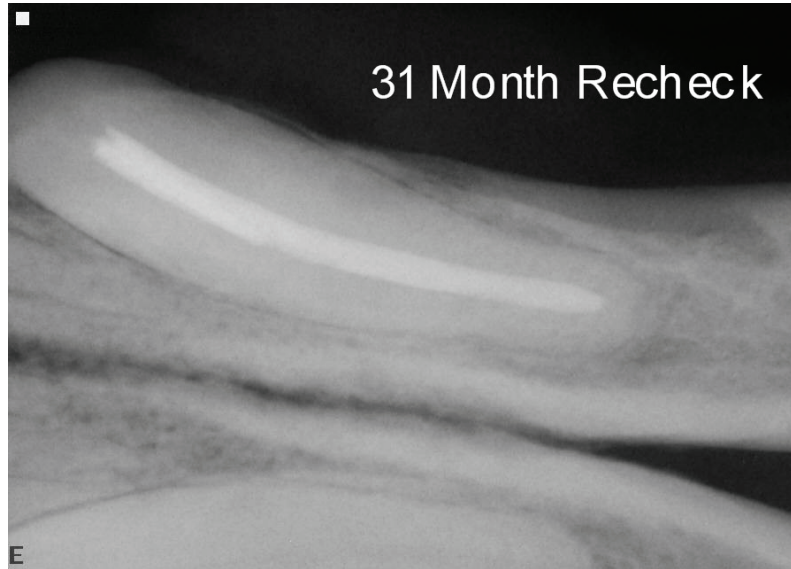
Discussion: This patient had been adopted by the owner four months prior to visiting our hospital. The patient was eight years old, and came prepackaged with an abundance of oral pathology. The most obvious example was the fractured left maxillary canine tooth. We determined from the large root canal and the thin dentinal walls that the traumatic event that fractured and killed this tooth had occurred when the patient was approximately 10-12 months of age. For a complete discussion of tooth development and age determination, please see the May 2010 Case of the Month in the archives at Nevadaveterinarydentistry.com.

When extracting a canine tooth, our normal procedure is to place Consil, an osseoconductive product, into the empty alveolus. This product consists of ceramic beads coated with hydroxyapatite, the mineral that bones and teeth are made of. The blood supply carries osteoblasts, bone forming cells, into the extraction site. These cells attach to the beads and begin creating bone tissue. Over a period of 4-6 months the ceramic beads are replaced with real bone, thus maintaining the normal shape and strength of the jaw.

In this case the extensive infectious process surrounding this tooth had penetrated the alveolar bone, creating a communication with the nasal cavity, or an oronasal fistula. Without the alveolar bone in place, the Consil would readily migrate into the nasal cavity and is therefore contraindicated.

The majority of pulp exposures we see are due to a sudden fracture of the tooth. Chronic abrasion from chewing on hard objects, however, may also result in a pulp exposure. It is important to check all worn teeth with an explorer for pulp exposure, and also check them radiographically. Any tooth with pulp exposure or endodontic infection must be extracted or have root canal therapy.

This patient presented again two and a half years later and a radiograph confirmed that the root canal procedure had been successful.



COMMUNITY ANIMAL HOSPITAL

John A. Koehm, D.V.M., F.A.V.D.

Fellow of the Academy of Veterinary Dentistry

4871 Summit Ridge Drive

Reno, NV 89523

(775)-746-0333

Nevadaveterinarydentistry.com