

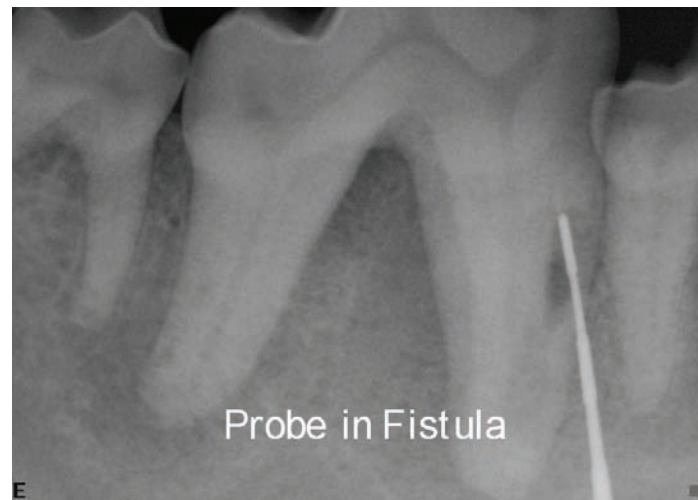
## CASE OF THE MONTH (October 2011)

**Signalment and History:** An eleven year old neutered male Australian Shepherd was presented for a dental prophylaxis. The patient displayed heavy calculus and moderate gingivitis during the preliminary exam while the patient was awake.

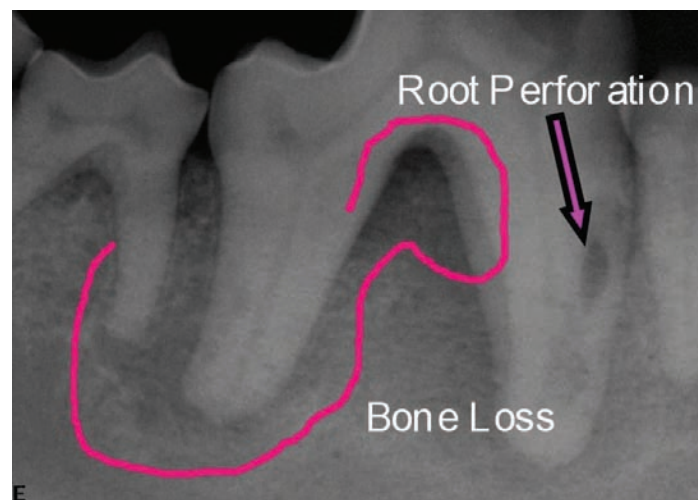
**Procedures:** The patient was placed under general anesthesia for a complete oral examination, charting, and prophylaxis. A periodontal probe was used to identify a fistulous tract located at the mucogingival line near the mesial root of the right maxillary 1st molar (409).



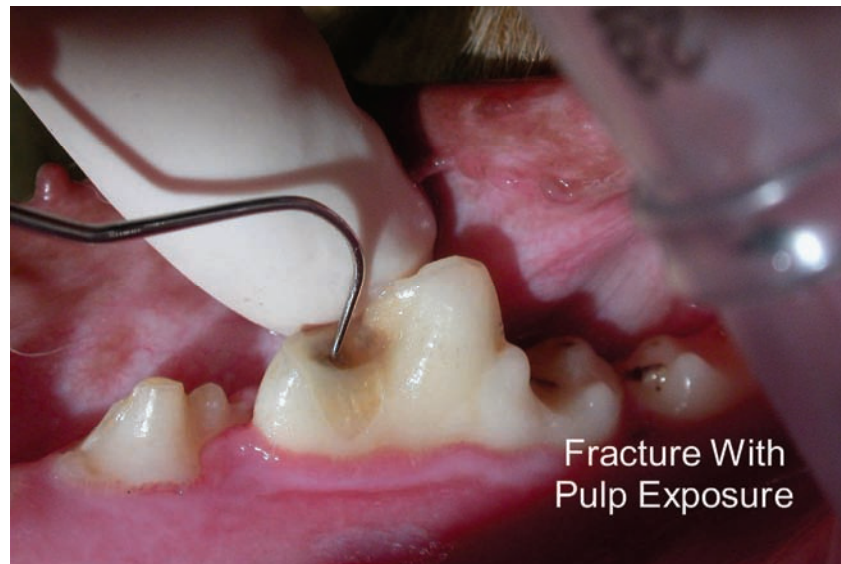
A radiograph was taken with the probe in place, illustrating that the fistula originated at the mesial root of tooth 409. A radiolucency could be seen near the end of the probe.



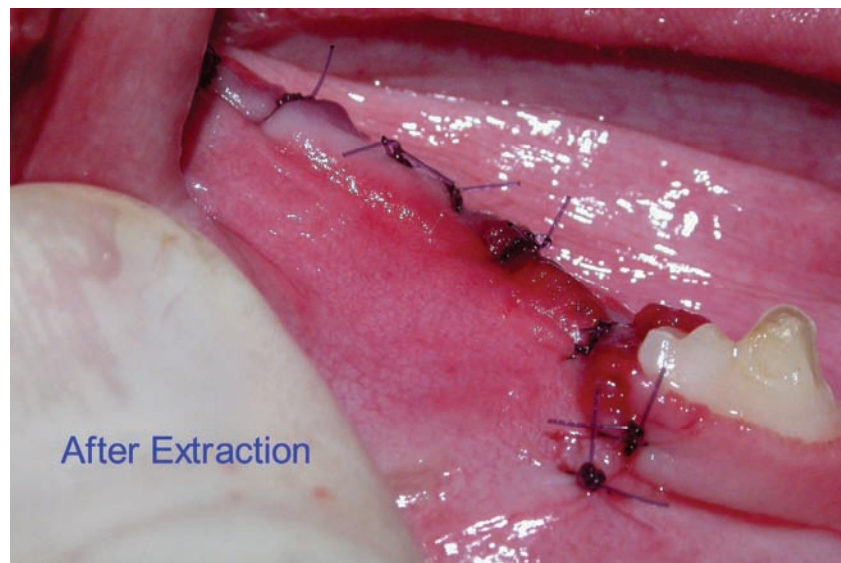
Another radiograph revealed this radiolucency more clearly and also illustrated extensive bone loss associated with the furcation and distal root of 409 as well as the mesial root of the second molar (410).



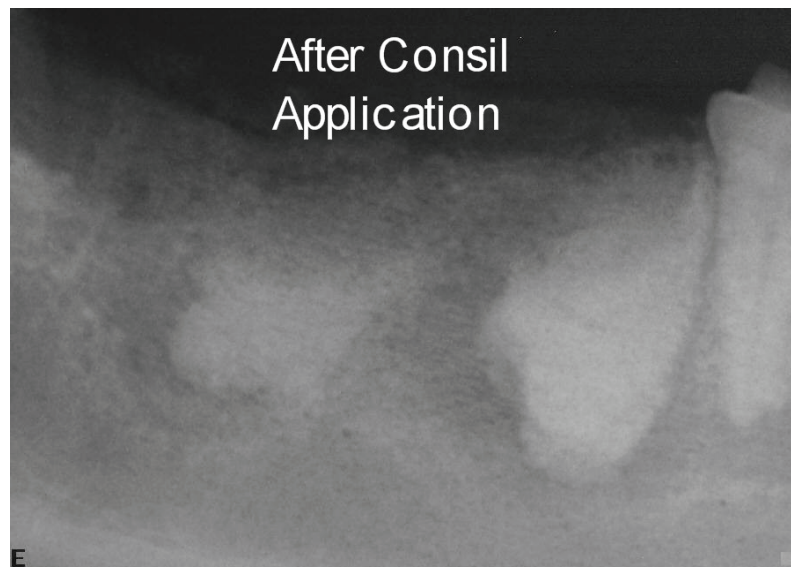
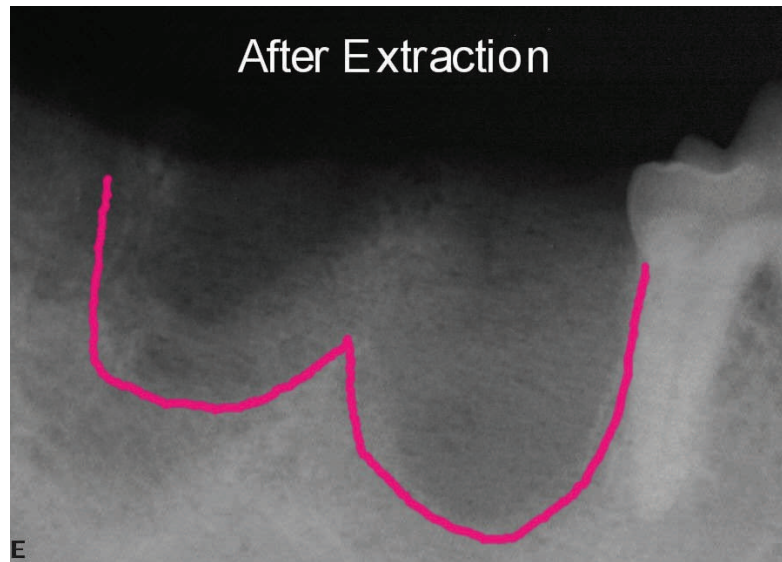
Closer examination of 409 revealed a crown fracture with direct pulp exposure on the lingual surface of the mesial cusp. The location of this fracture made it undetectable while the patient was awake.



The extensive periodontal bone loss in this case precluded root canal therapy, so we surgically extracted both 409 and 410.



Extraction of the mandibular 1st molar leaves a large void which can weaken the mandible, so we filled both alveoli with Consil, an osseoconductive product, to help maintain alveolar ridge integrity and the strength of the mandible.



The perforation of the mesial root of 409 could be clearly seen on the extracted root.



**Discussion:** Although extensive oral pathology was not noted during the initial examination while this patient was awake, it certainly existed. This underscores the necessity of placing all of our patients under general anesthesia for a thorough examination. Significant pathology can be easily missed without it.

The pathology of tooth 409 is categorized as a Class I endo-perio lesion. This lesion falls into this classification because the infection involving this tooth originated in the endodontic system, through the direct pulp exposure caused by the crown fracture. This infection then progressed through the endodontic system, causing internal resorption and root perforation. The infection then exited the endodontic system through the root perforation and the apex, invading the periodontal bone and causing severe bone loss.

Any time we have a direct pulp exposure we have two choices for treatment. Root canal therapy or extraction. In this case the severe periodontal involvement and root perforation precluded root canal therapy , so extraction was the only option.

**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](http://Nevadaveterinarydentistry.com)