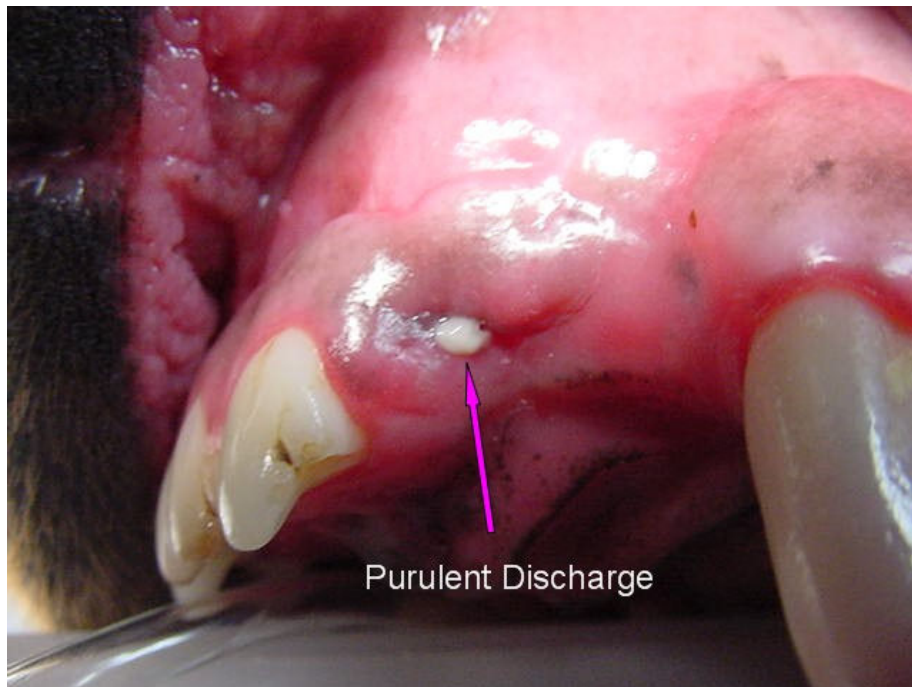


## **CASE OF THE MONTH**

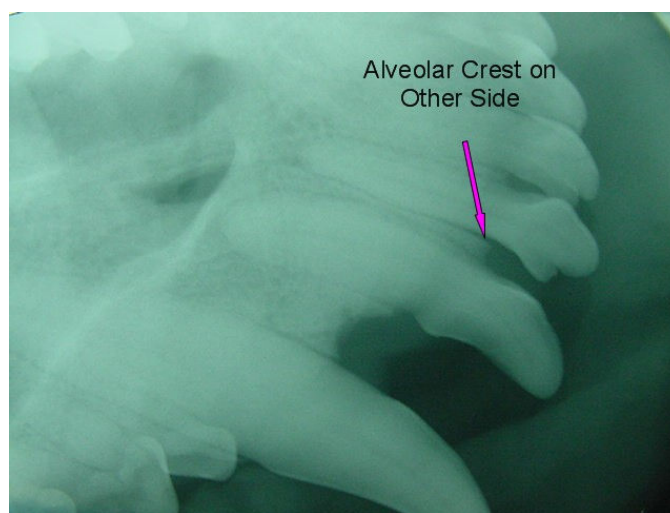
### **(August 2007)**

#### **Signalment and History:**

A four year old neutered male Rottweiler was presented for evaluation and treatment of an infected sinus tract in the area between the left maxillary second incisor and the left maxillary canine. The patient had suffered a fracture of the third incisor three months previously and this tooth had been extracted at another veterinary hospital. The owner noticed a purulent discharge in the area of the extraction site one week before presentation to our hospital. The opening of this tract was at the level of what would have been the gingival margin, had a tooth been present.



**Procedures:** The patient was placed under general anesthesia and an intraoral radiograph was taken of the extraction site of the third incisor which was also the location of the fistulous tract. No evidence of root fragments or any bony sequestra were seen. This radiograph showed atrophy of the alveolar ridge at the extraction site, possibly a result of the absence of the incisor. This atrophy was quite evident when compared to the radiograph of the contralateral side. An area of vertical bone loss greater than 50 % of the root length could also be seen on the distal proximal surface of the root of the second incisor.

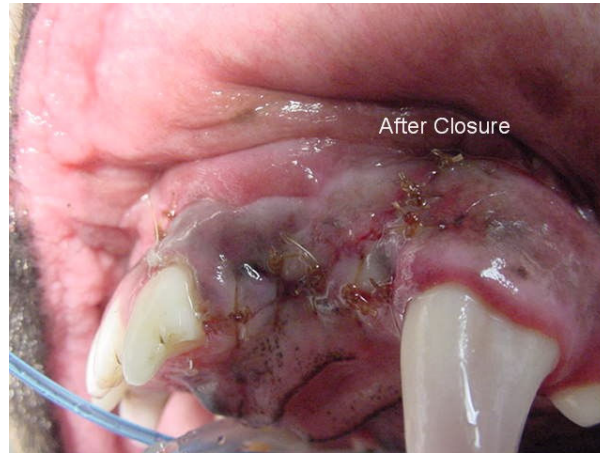


A subsequent radiograph was taken with a gutta percha point placed into the fistulous tract in order to determine the extent and origin of the tract. The tip of the gutta percha could be seen lying adjacent to the distal proximal surface of the root of the second incisor.

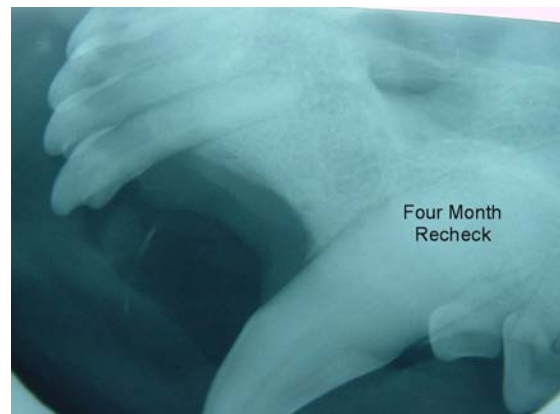


A full thickness mucoperiosteal flap was created for exposure of the distal aspect of the second incisor. The root surface was found to be covered with subgingival calculus and a small area of vertical bone loss could be seen adjacent to the root. A curette was used to remove the calculus and perform root planing. The purpose of the root planing is to remove the calculus, bacteria, and endotoxin in the superficial cementum and smooth the root surface. Removing these deleterious agents and smoothing the root surface will enhance reattachment of the soft tissue wall of the periodontal pocket. A curette was then used to perform curettage of the soft tissue side of the pocket in order to remove necrotic tissue, exudate, and invasive bacteria from the soft tissues. This procedure will also enhance the reattachment process. The periosteum on the under side of the flap was gently dissected to enhance elasticity of the flap and allow closure without tension.

After closure a perioceutic gel containing doxycycline was placed in the periodontal pocket on the distal aspect of the second incisor.



Four months later the patient returned for a follow-up recheck under general anesthesia. The fistulous tract had healed completely. An intraoral radiograph was taken and compared to the one taken four months previously. The alveolar crest appeared to be filling in and the bone loss appeared to be less than 50% of the root length.



**Discussion:** This patient initially presented with a history of a fistulous tract at the site of a previous extraction. My first thought regarding a tentative diagnosis was that a root fragment had been left behind and developed an abscess which resulted in the fistulous tract. The intraoral radiograph proved this assumption to be wrong. Further investigation also showed that the origin of the fistulous tract was located on a neighboring tooth. It is not unusual in the case of a periodontal abscess for the opening of the tract to be located next to a certain tooth or interdental space while the source of the infection is associated with a different tooth. The use of the radiopaque gutta percha in the fistulous tract was instrumental in locating the true origin of the infection. The periodontal abscess in this case was caused by the calculus on the root of the second incisor which became trapped under the gingiva and resulted in the tortuous fistulous tract.

A periosteal gel was used in this case for two reasons. First, doxycycline is an effective antibiotic against spirochetes and motile rods that are often involved in periodontitis. Secondly, doxycycline possesses an anticollegenase activity which helps prevent destruction of periodontal connective tissue and leads to improvement in attachment loss.

**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