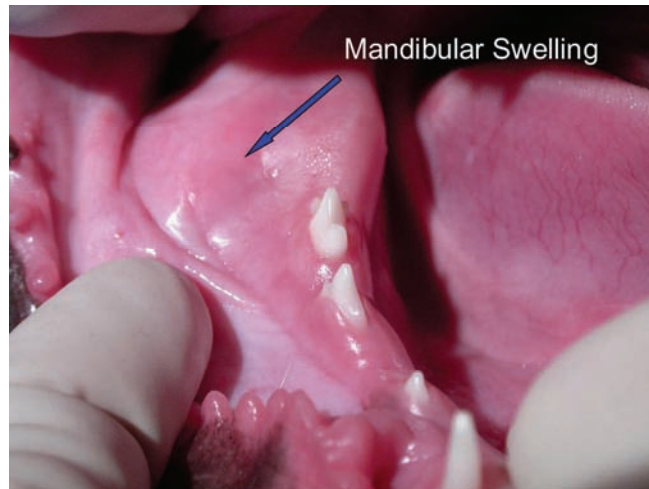


## **CASE OF THE MONTH (July 2010)**

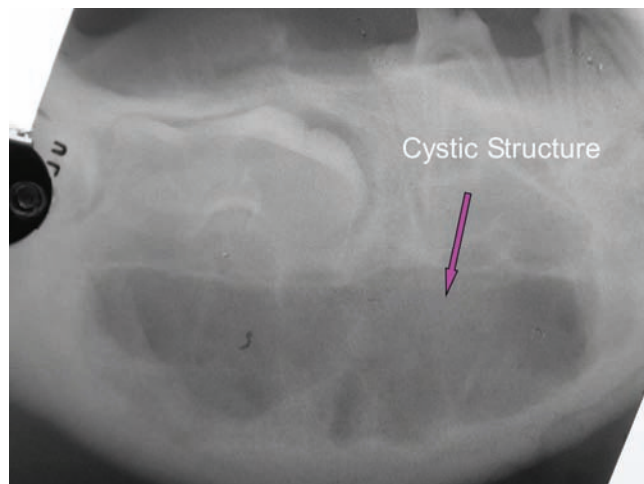
**Signalment and History:** An eleven week old intact male American Bulldog was referred for evaluation and treatment of a large firm swelling on the ventral aspect of the right mandible. The firm swelling extended to the lingual surface of the mandible and a soft, fluctuant area was located on the buccal surface.



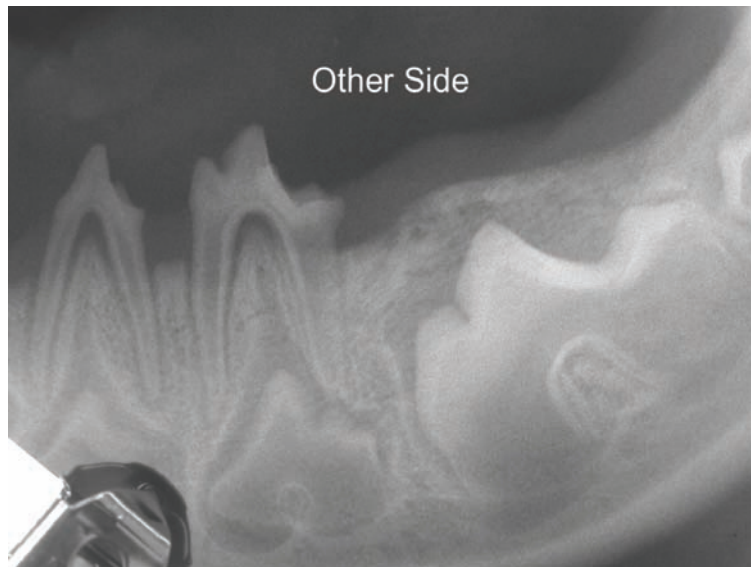
**Procedures:** The patient was placed under general anesthesia for a thorough examination and intraoral radiographs. The extent of the swelling was soon apparent.



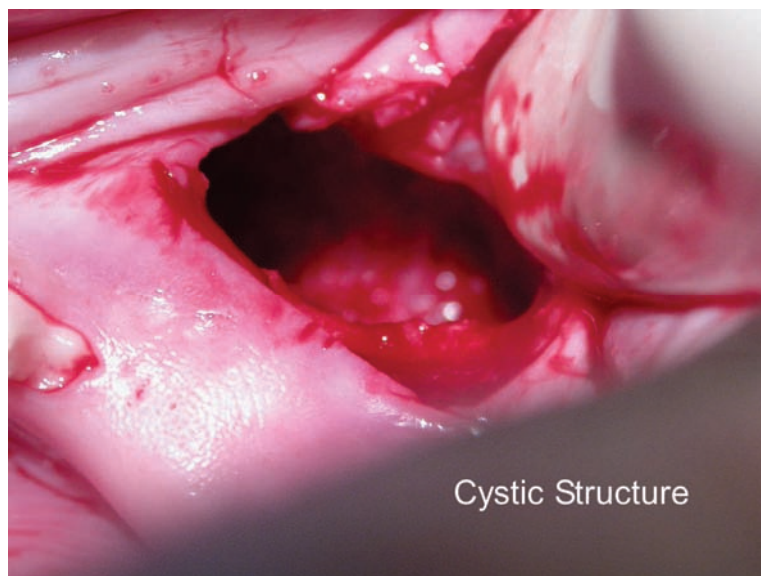
Intraoral radiographs revealed a large cystic structure located beneath the developing permanent tooth buds of the 4th premolar and 1st molar.



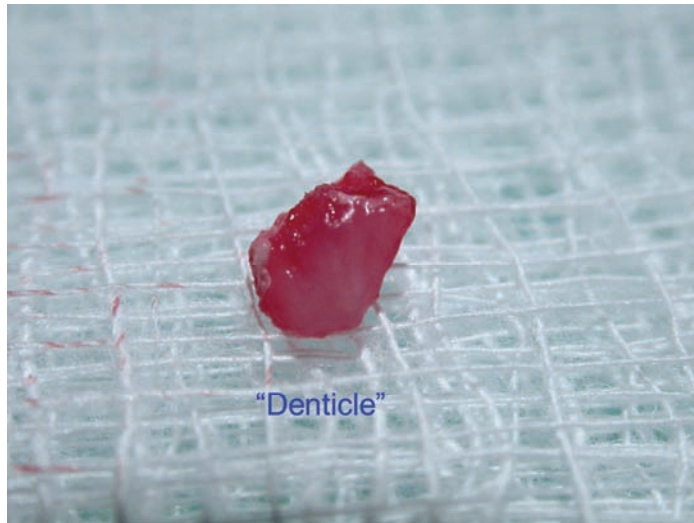
We exposed an image of the other mandible for comparison.



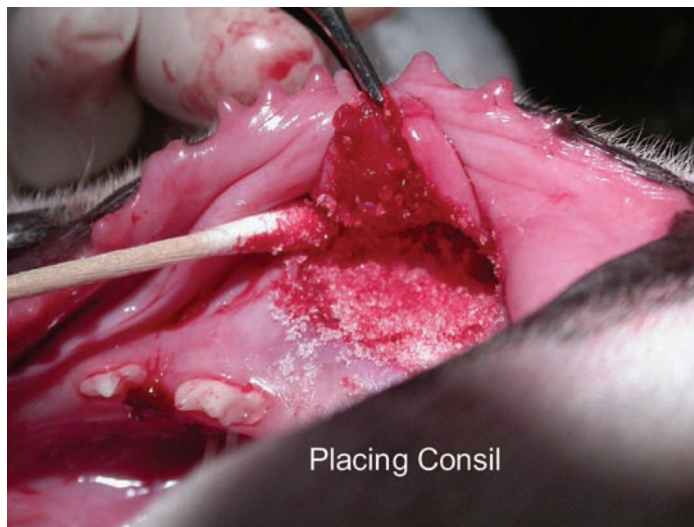
We elected to surgically explore the cystic structure and made an incision on the buccal surface of the left mandible. The size of the cystic cavity was quite impressive.

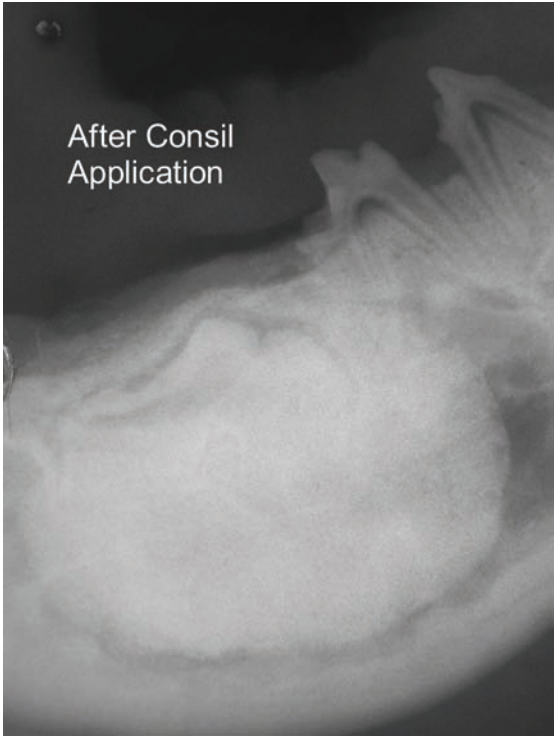


We immediately encountered an outflow of serosanguinous and milky fluid. Upon curetting the walls of the cavity we found a number of small, very hard structures termed “denticles” (literally—small teeth).



A tissue sample was taken for histopathological analysis, the large defect was filled with Consil, an osseoconductive product, and the incision was closed with 4-0 Monocryl.





**Discussion:** Our patient experienced an uneventful recovery. At the one month post-op exam, the mandibular swelling had significantly reduced in size, although it was not completely resolved.

The histopathological report gave a diagnosis of “odontogenic pseudocyst with enamel matrix formation.” The pathologist was not aware of any cases exactly like this one in either the veterinary or human literature.

The term “odontogenic” refers to the fact that this anomaly originated during the developmental stage of tooth formation. The pathologist used the term “pseudocyst” to differentiate from a true cyst due to the absence of a distinct epithelial lining on the inside of the cavity. The enamel matrix was associated with one of the “denticles” that we submitted and testifies to the abnormal ameloblastic process that was occurring in this individual.

There is a plethora of tumors and cysts of odontogenic origin in the veterinary literature. They are generally categorized by the cell types found in their tissues, either epithelial, mesenchymal, or mixed, the latter being a combination of both cell types.

Of these classifications, this case most closely resembles a mixed tumor, the compound odontoma, due to the presence of the denticles and enamel matrix. Most of the reported cases of compound odontoma in the literature have shown a greater abundance of the denticles than seen in this case. Most of the reported cases have also occurred in older patients, usually 5-12 months of age. Since this patient was much younger, perhaps the age was a factor in the pathological presentation. At any rate, this patient did not read the textbook.

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