DIAGNOSTIC CHALLENGE

Triangular radiolucent lesion of the mandible

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THE CHALLENGE

In December 2014, a 62-year-old man sought care from his general dentist for a bulge on the lingual side of teeth nos. 21 and 22, which the patient could feel with his tongue. Although the specific duration of the lesion was unknown, the patient had been undergoing routine periodontal maintenance for 3 to 4 months during which only bite-wing radiographs were obtained, and clinical expansion was not noted during prior examinations. Periapical and panoramic radiographs of the area obtained in December 2014 revealed a well-defined radiolucent lesion between the apexes of the mandibular left canine and first premolar—teeth nos. 21 and 22 (Figures 1 and 2). Clinical examination revealed a bulge that was soft and compressible involving the buccal and lingual area of teeth nos. 21 and 22; endodontic testing indicated that the teeth were vital, and the teeth were not mobile. The patient did not report pain.

A biopsy specimen was submitted for histopathologic analysis, which revealed cystic spaces lined by a thin, keratinized stratified squamous epithelium lacking an inflammatory infiltrate (Figure 3). Higher magnification revealed that the cystic lining was characterized by a palisading basal cell layer with a corrugated, parakeratinized surface and a relatively smooth epithelial–connective tissue interface (Figure 4).

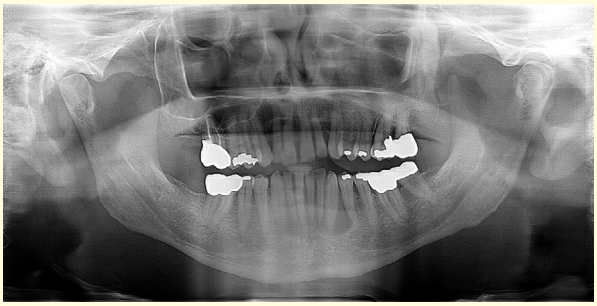

Figure 1. Panoramic radiograph showing a well-defined area of radiolucency at the apexes of the mandibular left canine and first premolar.

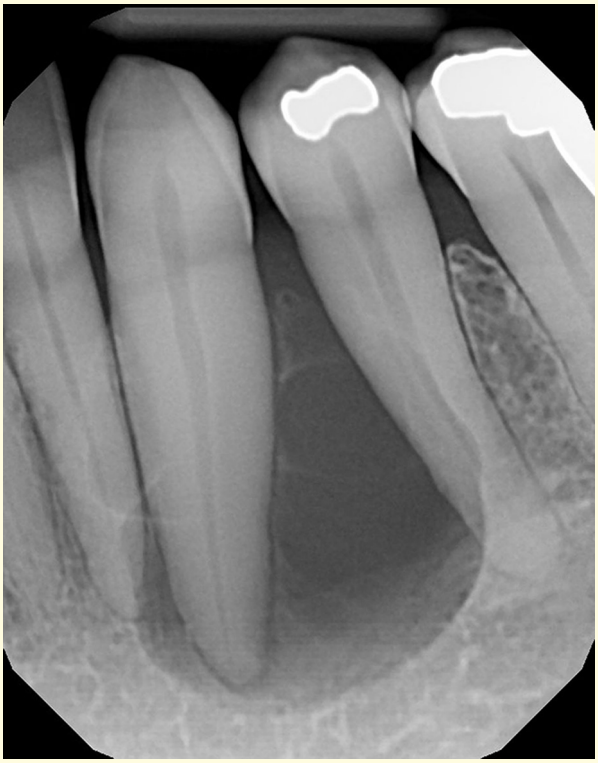

Figure 2. Periapical radiograph depicting a well-defined area of radiolucency between the mandibular left canine and first premolar. The darker area of radiolucency within is suggestive of lingual erosion.

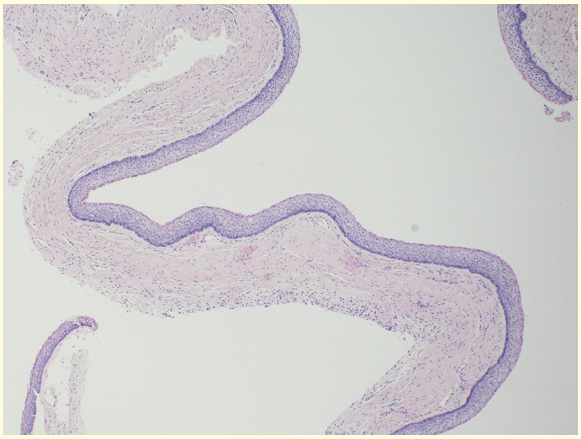

Figure 3. Cystic lining is characterized by a regular, uniform thickness of 5 to 8 cells and a lack of inflammation in the cyst wall (×40 magnification, hematoxylin and eosin stain).

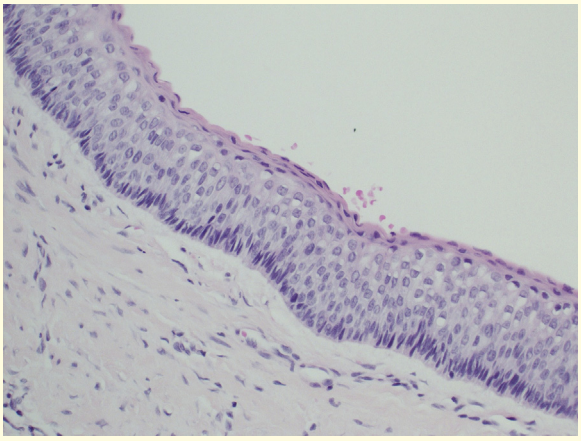

Figure 4. Cystic lining characterized by a palisading basal cell layer and a corrugated, parakeratinized surface. Note the relatively smooth epithelial–connective tissue interface (×200 magnification, hematoxylin and eosin stain).

CAN YOU MAKE THE DIAGNOSIS?

A. squamous odontogenic tumor
B. lateral periodontal cyst
C. odontogenic keratocyst
D. ameloblastoma