

Dentigerous cyst

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Figure 1. A unilocular radiolucency around tooth #32 (arrow) shows a crown-root junction of the cyst in this orthopantomograph.

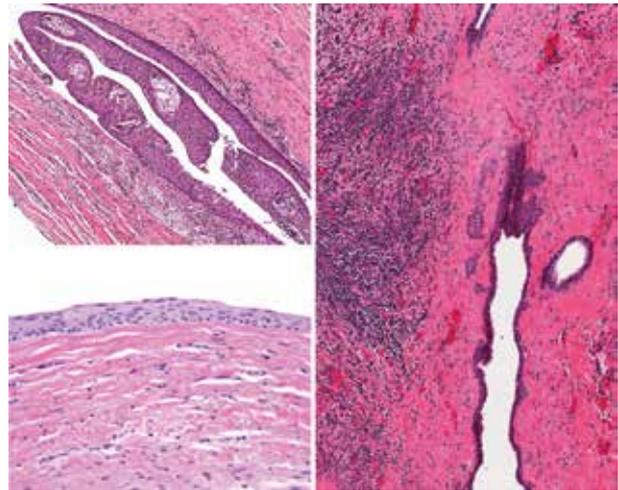


Figure 2. Left: A few layers of epithelium are noted, lacking a palisading of the nuclei and showing an abrupt junction with the surrounding fibrous tissue. Right: Inflammation is noted in the adjacent stroma, with several projections of the epithelium into the stroma.

A dentigerous cyst is a development cyst that surrounds and envelops the crown of an unerupted tooth, attached at the crown-root (cemento-enamel or cervical) junction. Dentigerous cysts account for about 20% of all odontogenic cysts, developing during a peak age of 10 to 30 years, with a male predilection (3:2). The lesion presents in the mandible (3rd molar region) about twice as often as the maxilla (near maxillary canines).

Patients are usually asymptomatic, so these cysts are incidentally discovered during routine dental imaging. However, pain may be experienced with bone expansion or resorption of adjacent teeth. Imaging studies (orthopantomographs) usually show a unilocular radiolucency surrounding the crown of the affected tooth (figure 1), with a well-defined sclerotic border. Cyst enucleation or extraction is generally employed, although marsupialization is sometimes used for larger lesions.

Histologically, there is a difference in findings depending on whether the lesion is inflamed. The noninflamed cyst shows 2 to 3 cell layers of cuboidal to squamoid

cells adjacent to fibrous connective tissue (figure 2), rarely showing ciliated, mucous, or sebaceous cells. The inflamed cyst shows a much thicker, proliferative epithelium, with hyperplastic rete, chronic inflammation (figure 2), and sometimes hyalinized keratin (Rushton bodies). Cholesterol clefts are common.

The differential diagnosis includes a dental follicle, an eruption cyst (a soft-tissue cyst overlying the erupting tooth), a glandular odontogenic cyst, and a unicystic ameloblastoma, while an odontogenic keratocyst may also be considered.

Suggested reading

- Johnson NR, Gannon OM, Savage NW, Batstone MD. Frequency of odontogenic cysts and tumors: A systematic review. *J Investig Clin Dent* 2014;5(1):9-14.
- Lin HP, Wang YP, Chen HM, et al. A clinicopathological study of 338 dentigerous cysts. *J Oral Pathol Med* 2013;42(6):462-7.

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