



Unilocular Radiolucent Lesion in Right Mandible: A Case Report

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BACKGROUND

The differential diagnosis of unilocular radiolucent lesions is commonly benign; definitive diagnosis through biopsy, however, is imperative to rule out malignancy. Of the odontogenic cysts, dentigerous cyst is the most common and often associated with mandibular third molars. When a suspected dentigerous cyst is large in nature, the definitive diagnosis may be an odontogenic keratocyst or unicystic ameloblastoma. Radiographic evaluation is not sufficient to definitively discern between the three lesions. Reaching a definitive diagnosis is necessary due to increased pathogenesis associated with lesions on the differential diagnosis.

CLINICAL PRESENTATION

A 13-year-old female patient presented to the Riley Hospital for Children Outpatient Dental Clinic for routine evaluation. Patient had been adherent with routine evaluations since the age of 9, establishing care in the clinic in August 2020. At the age of 12, an incidental finding on panoramic revealed a radiolucent lesion. Pericoronal radiolucent unilocular lesion extending from mid-ramus to mid-angle of the right mandible, associated with impacted #32. Lesion appears to attach at the cemento-enamel junction (CEJ). Root resorption is evident in association with teeth #30 and #31. Follow up imaging in December 2024 reveals a soap bubble appearance on the superior portion of the lesion but is largely consistent with the previous imaging from April when considering size and involvement of adjacent structures. Intraoral and extraoral evaluations were both insignificant and did not show evidence of expansion or swelling. Patient reports being asymptomatic.

Patient was referred to oral surgery for biopsy to obtain definitive diagnosis and subsequent treatment.

Frequency of Occurrence	Lesion or Condition	Comments or Special Characteristics
A. Unilocular Radiolucencies: Pericoronal Location		
***	Hyperplastic dental follicle	<5 mm in thickness
***	Dentigerous cyst	>5 mm in thickness
**	Eruption cyst	Bluish swelling overlying erupting tooth
**	Odontogenic keratocyst	—
*	Orthokeratinized odontogenic cyst	—
*	Ameloblastoma	Especially unicystic type
*	Ameloblastic fibroma	Usually in younger patients
*	Adenomatoid odontogenic tumor	Usually in anterior region of jaws; most often with maxillary canines; usually in teenagers
*	Calcifying odontogenic cyst	Gorlin cyst
*	Carcinoma arising in dentigerous cyst	Mostly in older adults
*	Intraosseous muco-epidermoid carcinoma	Mostly in posterior mandible
*	Other odontogenic lesions	Examples: calcifying epithelial odontogenic tumor, odontogenic myxoma, central odontogenic fibroma

PANORAMIC RADIOGRAPHS



September 21, 2020: 9 years old



April 14, 2024: 12 years old



December 12, 2024: 13 years old

DIFFERENTIAL DIAGNOSES

Lesions included on the differential include: dentigerous cyst, odontogenic keratocyst, and unicystic ameloblastoma.

Dentigerous cyst is the most common odontogenic cyst and frequently associated with impacted mandibular third molars. Commonly attached at the CEJ, these lesions are treated with enucleation and extraction of associated teeth. While rare, the dentigerous cyst lining can evolve to be neoplastic in nature, manifesting as ameloblastoma, squamous cell carcinoma or intraosseous mucoepidermoid carcinoma.

Odontogenic keratocysts (OKC) are generally unilocular, but larger lesions can present in a multilocular fashion. They are commonly seen in the younger population. It can mimic the presentation commonly seen with a dentigerous cyst. These lesions can be associated with expansion. Treatment consists of enucleation and curettage. Due to their high recurrence rate, ostectomy can be performed to minimize this chance; long term monitoring is indicated.

Unicystic ameloblastomas are benign neoplasms and most commonly seen in the mandible. While ameloblastomas are rare, they initially present in a unicystic fashion and can grow rapidly and aggressively to be multilocular. Treatment consists of aggressive curettage, and recurrence tends to be minimal; again, long term monitoring is indicated.

All three lesions are generally found as incidental findings during routine radiographs. The larger the size of the pericoronal radiolucency, the more likely it is to be associated with the latter presentations of OKC and ameloblastoma.

TREATMENT/MANAGEMENT

In April 2024, the patient was referred to oral surgery for evaluation, biopsy, and subsequent treatment. Patient returned to the pediatric dentistry clinic in May 2024 for restorative treatment and reported there had been no follow up. Patient returned to the pediatric dentistry clinic in December 2024 for a recall appointment, where there had still been no follow up with oral surgery. New referrals were sent, and the patient was urged to schedule for definitive treatment. Since December 2024, family has been contacted multiple times and reports they have not yet scheduled for follow up. The parents are aware of the risks associated with failure to treat the lesion, including expansion, neoplastic evolution, and neural implications attributed to compression of the inferior alveolar nerve.

REFERENCES

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