

Radiolucency: Dentists beware!!!

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ABSTRACT

Incidence of cysts or tumors in a general dental practice is rare, but still occurs, and many dentist regularly and commonly go for radiographic investigations and aspirations. Based on this they arrive at a final conclusion of a particular lesion. As for instance at times when a tooth is associated with a radiolucent lesion and where there is a straw colored fluid on aspiration, a common mistake by any dentist is to arrive at a final diagnosis of dentigerous cyst especially in pediatric age group. However, adenomatoid odontogenic tumor, dentigerous cyst, odontogenic keratocyst, unicystic ameloblastoma have many similar clinical and radiographic findings. Thus, all these features can mislead a dental surgeon to make a wrong diagnosis. Hereby we present three cases of the above said lesions with mimicking clinical & radiographic features along with straw colored aspirate in younger age group which was misdiagnosed as dentigerous cyst.

Keywords: Adenomatoid odontogenic tumor, Unicystic ameloblastoma, Odontogenic keratocyst, Dentigerous cyst, Radiolucent lesion

INTRODUCTION

Odontogenic lesions encompasses a wide spectrum of lesions & their variants, which either can be a cystic lesion or a tumor. Odontogenic cysts are derived from the epithelium associated with the development of the dental apparatus while a tumor through some aberration from the normal pattern of odontogenesis.^{1,2} But the fact, that these lesions can mimic each other many a times, (Table 1) can complicate the diagnosis. The Adenomatoid Odontogenic Tumor is a benign, nonaggressive odontogenic tumor which has been known by a number of descriptive names since it was first reported. In almost all instances, the lesion may be removed by surgical enucleation.^{3,4} Unicystic Ameloblastoma is another tumor of the odontogenic series which has been described as benign but locally invasive and which is usually managed conservatively.^{5–7} Dentigerous cyst, a cyst of odontogenic origin, has the potential of transforming into ameloblastoma & is again managed

similarly and thus joins the other two. Odontogenic keratocyst, is characterized by aggressive behavior has a debatable treatment options.⁴ All the above mentioned lesions can have a similar clinical and radiographic features which can mislead a dentist to make a final diagnosis clinically.

CASE REPORT

Case 1: A 13 year old boy was referred to us with a slow growing swelling in the anterior mandible for 14 months (Fig. 1). On examination, there was mild asymmetry on the right lower face with a non-tender swelling that was firm in consistency. Intraorally, a non-tender, firm swelling extending from 32 to 44 region, with bicortical expansion and obliterating the labial vestibule was seen (Fig. 2). Radiographically a well defined, smooth radiolucent mass, measuring 22 × 24 mm surrounded by a sclerotic border, associated with an unerupted tooth and displacing the

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Table 1 Similarities of the three lesions.

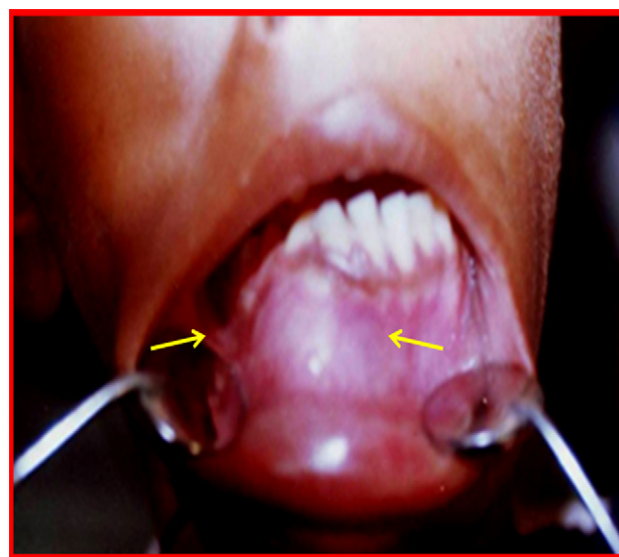
Lesion	Incidence	Age	Sex	Site	Management
Adenomatoid odontogenic tumor	2.2% to 7.5%	Second decade	>Females	Posterior mandible	Conservative
Ameloblastoma	18%	Second decade	>Males	Posterior mandible	Usually conservative
Dentigerous cyst	12.8%	Second decade	>Females	Posterior mandible	Conservative

adjacent teeth was seen. The impacted tooth associated with radiolucency was 43. The lesion was extending from 31 to 45 region and from the upper margin of the alveolar process to the lower border of the mandible (Fig. 3) was seen. On aspiration, a straw colored aspirate was collected. Based on all these findings a provisional diagnosis of Dentigerous cyst was made. Treatment of enucleation was made based on collective decision of the orthodontist and the surgeon as chances of tooth eruption was remote. Considering the age of the patient and size of the lesion, under general anesthesia the lesion was enucleated in toto (Fig. 4) by a vestibular approach. Histopathological examination revealed multi nodular proliferation of spindle, cuboidal & columnar cells, scattered ductlike structures filled with eosinophilic material which was suggestive of Adenomatoid Odontogenic Tumor of follicular variant.

Case 2: A 12 years old boy, was referred to us with slow growing swelling in the anterior mandible for about 9 months (Fig. 5) with facial asymmetry. Intraoral Examination revealed, a non-tender, firm, swelling extending from 32 region to 42 region with vestibular obliteration and bicortical expansion (Fig. 6). Radiographically a well defined radiolucency was seen lined by a sclerotic border,

extending from 7D to 8D region and from the alveolar process to the lower border of the mandible, measuring 31 × 18 mm, associated with an unerupted tooth (Fig. 7). The tooth associated with radiolucency was a supernumerary tooth. A straw colored fluid was aspirated and a provisional diagnosis of Dentigerous cyst was made. Under general anesthesia the lesion was enucleated in toto as it was a supernumerary tooth (Fig. 8), through an intraoral approach. Histopathologically the lesion showed epithelial lining with a basal cell layer composed of columnar cells displaying hyperchromatism and palisaded nuclei suggestive of Unicystic Ameoblastoma. In a postoperative follow up of 5 years, there is no sign of recurrence.

Case 3: A 14 years old Female child reported to us with a chief complaint of swelling in the anterior mandible for about 6–8 months which was gradually increasing in size (Fig. 9). On examination, there was obvious facial asymmetry and intraorally a nontender, firm, swelling extending from 33 region to 43 region, obliterating the labial vestibule along with bicortical expansion (Fig. 10) was seen. Radiographic examination revealed a well circumscribed radiolucency measuring 32 × 21 mm surrounded by a smooth sclerotic border, sparing the lower border of the mandible,

**Fig. 1** Preoperative picture of Case 1.**Fig. 2** Preoperative intraoral picture.

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