

Erupting Complex Odontoma: Coronal to Impacted Second Molar Associated with Dentigerous Cyst

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ABSTRACT

The most common odontogenic tumours are odontomas, they account for 22% of them, but their apparent eruption into oral cavity is rare. We report a rare case of erupting complex odontoma coronal to impacted second molar associated with dentigerous cyst.

Keywords: Erupting odontoma; Complex odontoma; Dentigerous cyst

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Odontomas are nonaggressive hamartomatous developmental malformations or lesions of odontogenic origin which consists of enamel, dentin, cementum and pulpal tissue. Odontomas are classified as compound and complex odontomas. A compound odontoma forms an agglomeration of small structures resembling teeth, whereas complex

odontoma forms in irregular mass in a disorderly pattern (1, 2).

Complex odontoma is less frequently seen than compound odontoma (3). Occasionally, a dentigerous cyst may arise from the epithelial lining of the fibrous capsule of a complex odontoma. Complex odontoma rarely located coronally to impacted teeth facilitating eruption in to



Figure 1: Erupted odontoma in the oral cavity in the region of left mandibular second molar

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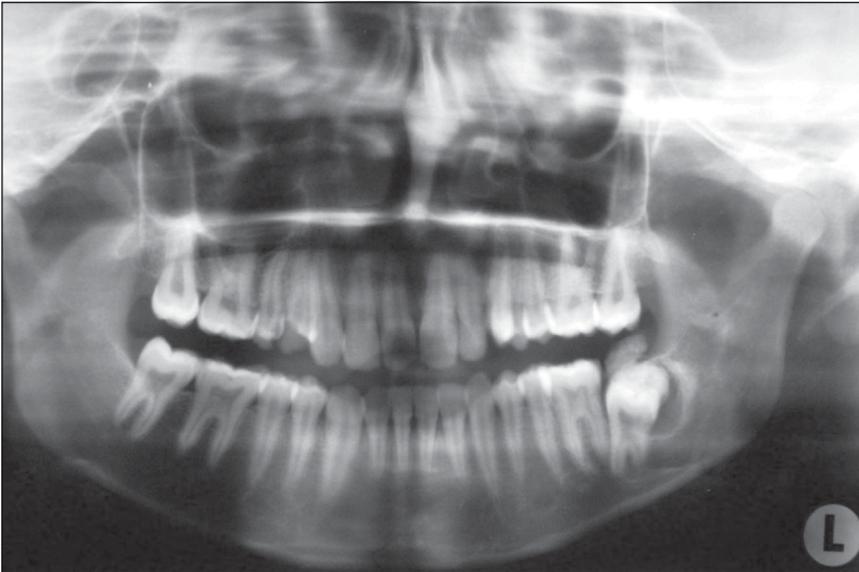


Figure 2. Orthopantomogram showing odontoma present coronal to impacted second molar with surrounded by well defined radiolucency



Figure 3 Lesion excised along with the teeth by sectioning

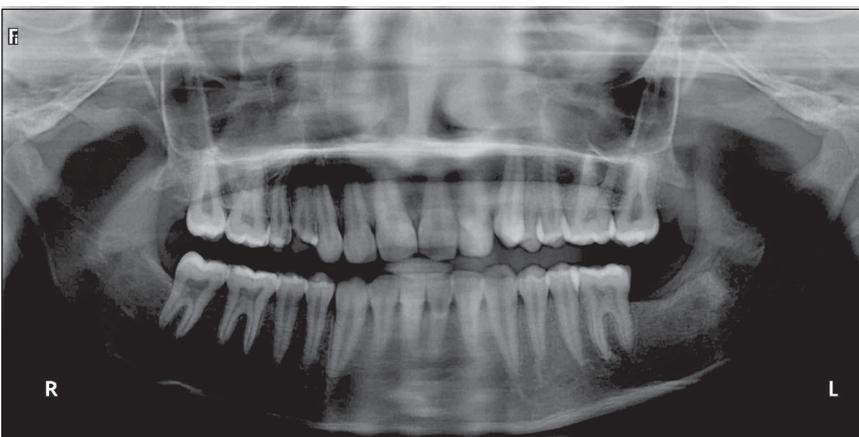


Figure 4. Six month postoperative orthopantomogram showing bone formation

the oral cavity, termed erupted complex odontoma. We report a case of complex odontoma, in which apparent eruption has occurred in the area of the left mandibular second molar associated with dentigerous cyst.

CASE REPORT

A 14 year old male patient was referred to dept of oral and maxillofacial surgery with hard mass, pain and swelling in posterior region of mandible. The patient has noticed hard mass 5 months back in same region, which progressively increased in size. Intraoral examination revealed whitish yellow mass resembling dentin measuring 15X 9mm in the left mandibular second molar region, pus drainage was present in vestibular region with sinus tract. On palpation expansion of the buccal cortical plate was evident.

Radiographs revealed well defined radiopaque mass (2.5X2.2cm), similar to density of dental tissue, coronal to mesioinferiorly displaced mandibular second molar, surrounded by radiolucent zone with radiopaque borders. Aspiration of the lesion yielded yellowish color fluid. Preoperative diagnosis of erupting complex odontoma with infected dentigerous cyst was made. Under local anaesthesia, lesion was excised along with impacted tooth. Histopathological study of the excised mass confirmed preoperative diagnosis of complex odontoma associated with dentigerous cyst.

DISCUSSION

The term odontoma was coined by Paul Broca in 1867 (4). The most common odontogenic tumours are odontomas, they account for 22% of them (3). Odontomas are considered as developmental anomalies rather than true neoplasm. Most odontomas are detected during routine examination in the first two decades of life, and mean age at the time of diagnosis is 14 years.

Clinically odontomas are classified as intraosseous and extraosseous. Intraosseous odontomas occur inside the bone and may erupt into oral cavity, whereas

the extraosseous odontomas occur in the soft tissue covering the tooth bearing portions of the jaws (5).

Odontomas are generally asymptomatic; usually remain small, rarely exceeding the diameter of the tooth. Occasionally it does become large and may produce expansion of bone with consequent facial asymmetry. This is particularly true if dentigerous cyst develops around the odontoma. Sign and symptoms associated consist of unerupted teeth or impacted teeth, retained deciduous teeth, swelling and incidence of infection (4).

To date, 20 cases of erupted odontomas are reported in the literature, out of that 11 cases are complex odontoma and 9 erupted odontomas are associated with impacted teeth (6).

Vengal *et al* reported mechanism of eruption of odontoma is different from tooth eruption because of lack of periodontal ligament in odontoma. A increase in size of the odontoma over time produces a force sufficient to cause bone

resorption (5). Junquera *et al* reported most of the erupted odontomas are related to unerupted teeth, so he postulated that the eruptive force of these teeth plays an important role in odontoma eruption (7). Ragalli *et al* suggested reactive growth of capsule may contribute eruption of odontoma (8). In our case eruptive force of impacted teeth must have contributed odontoma to erupt, as it is located coronal to impacted teeth, but it also may be due to resorption of bone caused by infected dentigerous cyst.

The preferred treatment plan in erupted odontoma associated with impacted tooth is excision of lesion and allowing impacted tooth to erupt. But in our case, as it is associated with dentigerous cyst impacted teeth was removed along with the lesion.

CONCLUSION

Odontomas are rarely erupt in to oral cavity and tend to be associated with impacted teeth. The treatment of choice if associated with dentigerous cyst is excision of impacted teeth along with the lesion, followed by histological analysis.

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