Case Report

Revisiting Cementoblastoma with a Rare Case Presentation

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Cementoblastoma is a rare benign odontogenic neoplasm which is characterized by the proliferation of cellular cementum. Diagnosis of cementoblastoma is challenging because of its protracted clinical, radiographic features, and bland histological appearance; most often cementoblastoma is often confused with other cementum and bone originated lesions. The aim of this article is to overview/revisit, approach the diagnosis of cementoblastoma, and also present a unique radiographic appearance of a cementoblastoma lesion associated with an impacted tooth.

1. Introduction

The cementoblastoma was first described by Dewey in 1927 as an odontogenic tumor of mesenchymal origin [1]. Cementoblastoma is a true neoplasm of cementum which is also designated as true cementoma. It constitutes less than 1% of the odontogenic tumor with distinctive features, occurring almost always in the posterior mandible region and usually affects young people less than 25 yrs. In most of the cases the tumor tends to be associated with the permanent first molar. Cases have been also reported involvement of deciduous teeth [2]. The histopathological features of cementoblastoma closely resemble osteoblastoma [3].

2. Case History

A 19-year-old male patient complained of swelling in the left body of mandible with an increase in size for the past two months. On clinical examination, an extraoral swelling presents in lower one-third of the face which measures about 3 × 3 cm in size. Intraoral swelling was associated with partially impacted 36. The swelling was well defined and firm-to-hard in consistency, with expansion of lingual and buccal cortex. Tenderness on palpation was noticed. On radiographical examination, OPG revealed a large, well-defined periapical radiolucency arising from the lateral root surface of an impacted permanent left mandibular first molar and second premolar. The lesion was surrounded by a thin, uniform radiopaque line as can be seen in Figure 1. Considering the clinical and radiographical findings, ossifying fibroma was given as the clinical diagnosis. The gross specimen included multiple bits of hard tissues with permanent mandibular first molar and second premolar tooth and 2 bits of soft tissue as can be seen in Figure 2. The largest hard tissue measured approximately 3.5 cm. Hematoxylin and eosin stained sections showed prominent cementoblasts, irregular lacunae, increased active cementoblasts as can be seen in Figure 3(a). The numerous basophilic reversal lines are observed in Paget disease as can be seen in Figure 3(b). Areas of multinucleated giant cells were seen along with areas of loosely arranged vascular connective tissue stroma as can be seen in Figure 3(c). The final histopathological diagnosis was given as cementoblastoma.

3. Discussion

Cementoblastomas are slow growing lesions with unlimited growth potential. They are odontogenic tumors and are derived from ectomesenchymal cells of the periodontium including cementoblasts. These tumors are commonly seen in children and young persons; males are more frequently affected than females, with more occurrences in mandible
Table 1: Literature review of previous report cases of cementoblastoma associated with impacted teeth.

<table>
<thead>
<tr>
<th>Author</th>
<th>Age/gender</th>
<th>Clinical sign &amp; symptom</th>
<th>Lesion associated with impacted teeth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piattelliet al.</td>
<td>35 yrs/F</td>
<td>Pain in lower right mandibular posterior region</td>
<td>Associated with impacted 48</td>
</tr>
<tr>
<td>Sumer et al.</td>
<td>46 yrs/M</td>
<td>Pain, trismus, &amp; swelling in mandibular left posterior region</td>
<td>Associated with impacted 38</td>
</tr>
<tr>
<td>Chauhan</td>
<td>33 yrs/M</td>
<td>Pain &amp; swelling in lower right back region</td>
<td>Associated with impacted 48</td>
</tr>
<tr>
<td>Dinakaret al.</td>
<td>41 yrs/M</td>
<td>Pain &amp; swelling in lower right back region</td>
<td>Associated with partially erupted 48</td>
</tr>
<tr>
<td>Present case</td>
<td>19 yrs/M</td>
<td>Swelling with mild pain in lower left posterior regions</td>
<td>Associated with partially erupted 36</td>
</tr>
</tbody>
</table>

Figure 1: Orthopantomograph shows a well-circumscribed radiolucent mass attached to the lateral root surface of impacted permanent left mandibular first molar.

Figure 2: Gross specimen shows multiple bits of hard and soft tissues.

The present case is an association with impacted mandibular first molar which has rarest occurrence for cementoblastoma in a 19 yrs male. These lesions are usually slow growing benign neoplasms. These lesions with unusual clinical and
radiographic presentation can lead to a misdiagnosis. The clinicians as well as oral pathologists must bear in mind several possible differential diagnoses due to its unspecific nature. Surgical removal is the treatment of choice and postoperative follow-up is highly recommended.

Competing Interests

The authors declare that there is no conflict of interests regarding the publication of this paper.

References
