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Unicystic Ameloblastoma - A Case Report with Review of Literature

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Abstract

Ameloblastoma is the second most common odontogenic tumor after Odontomas. Ameloblastoma is a true neoplasm of odontogenic epithelial origin. Unicystic ameloblastoma, predominantly occur in the posterior part of the mandible usually in the second and third decades of life. Here describes a case report of unicystic ameloblastoma occurring in the left posterior mandible of 22year-old female. Radiograph showed a well-defined unilocular radiolucency lesion with involvement of mandibular left first molar to impacted second molar. It was initially diagnosed as a dentigerous cyst based on radiology and clinical finding and treated by enucleation and extraction of all involve teeth. Histopathological examination of the specimen showed unicystic ameloblastoma. After surgery, healing of the mandibular bone defect was uneventful, as shown by 1-3year follow-up of panoramic and CBCT radiograph respectively.

Keyword: Unicystic ameloblastoma; Marsupialization; Enucleation; Recurrence

Introduction

Unicystic ameloblastoma is a slow growing, locally invasive, epithelial odontogenic tumor of the jaws with a high rate of recurrence if not removed adequately, but with virtually no tendency to metastasize [1]. It occurs in younger patients, predominantly in the second to third decade, with the mean age at presentation reported as 25.5 years [2]. It is a slow-growing, persistent, and locally aggressive with the main site of origin being the posterior portion of the mandible associated with impacted tooth [3]. Sometimes the presentations of unicystic ameloblastoma are indistinguishable from those of dentigerous cysts with clinical and radiographically [4, 5].

Case report

A 22year old female patient was reported to the Department of Oral and Maxillofacial Surgery, Rims Dental institute, with painless slow growing swelling on the left side of face for one year (Figure 1). Swelling was a firm non-tender, measuring 5cm x 4cm in the left side of the mandible, involving the ramus, angle and body up-to the left lower 1st permanent molar tooth. Systemic examination was normal. An orthopantomogram (OPG) showed unilocular radiolucent lesion in the left side of mandible with a thinned-out cortex and a well demarcated border (Figure 2), involvement of the lower permanent first molar to impacted second molar. Primary it was diagnosed as a dentigerous cyst and treated by enucleation with removal of impacted second molar under local anesthesia and closure achieved. The histopathologic features showed unilocular ameloblastoma (Figure 3).

Figure 1: Swelling on the left side of face.

Figure 2: OPG showed unilocular radiolucent lesion in the left side of mandible with a thinned-out cortex.

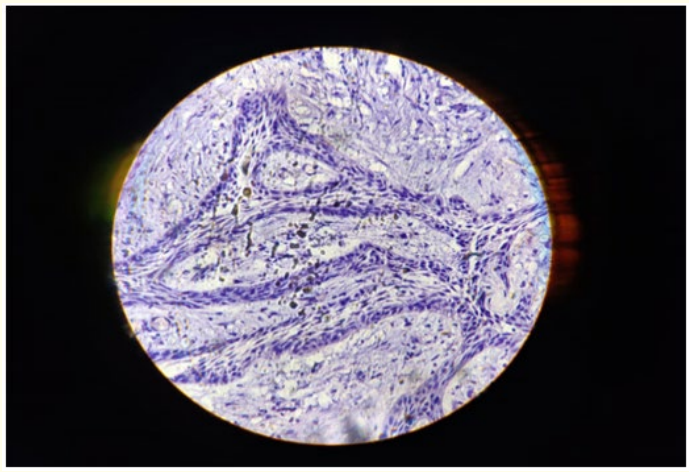

Figure 3: Histopathologic features consistent with unilocular ameloblastoma.

Discussion

A unicystic ameloblastoma was first described by Robinson and Martinez in 1977 [4]. Which usually occur in younger populations. The mandibular third molar being most commonly involved about 50-80% cases are associated with unerupted and impaction tooth [4, 5]. Unicystic ameloblastomas are considered to be a less aggressive form of ameloblastoma and can be successfully treated by simple enucleation [6]. Conservative interventions are generally preferred for unicystic ameloblastomas in the mandible but are not suggested for those in the maxilla, because of the spongy osteoarchitecture of the maxilla and there is chance of spreading of the tumor to the vital structures such as the pterygomaxillary fossa, orbit, and cranium [5, 7]. Conservative treatment is suggested, especially in younger populations, in light of the devastating impacts on the developing jaw, masticatory function, facial growth, and psychosocial aspects [8-10]. In extensive lesions, marsupialization may be an alternative treatment, because it is easy to perform and safe, and can reduce the size of the lesion and surgical morbidity [11]. Unicystic ameloblastomas compare favorably with their solid counterparts in terms of clinical behavior and response to treatment [4, 5, 12]. Unicystic ameloblastomas are characterized as a slow growing and relatively locally aggressive cystic lesion [10]. We suggest that relatively conservative therapies can initially be applied for unicystic ameloblastoma with more aggressive approaches being reserved for later recurrence [11]. Here, a case of unicystic ameloblastoma that occurred in the left posterior mandible of 22year old female has described. Lesion was enucleated and 1year (figure-4) to 3 years follow up done. After 3 years evaluation of bone defect (cross sectional image) suggested homogenous in nature, saucer shape bone defect with no active lesion was noted. And defect has adequate clearance to inferior alveolar nerve canal. All these features were suggested of delayed wound healing with no active infection. (Figure-5). According to Lau et al [13] reported recurrence rates of 30.5% for enucleation alone, 16% for enucleation followed by application of Carnoy's solution, and 18% by marsupialization followed by enucleation, 3.6% for resection. More than 50% of cases recurred within 5 years after the operation [10]. Long term follow up is mandatory for unicystic ameloblastoma since recurrence may take place 5 years after removal [7, 11].

Figure 4: OPG showed no active lesion after 1year follow-up.

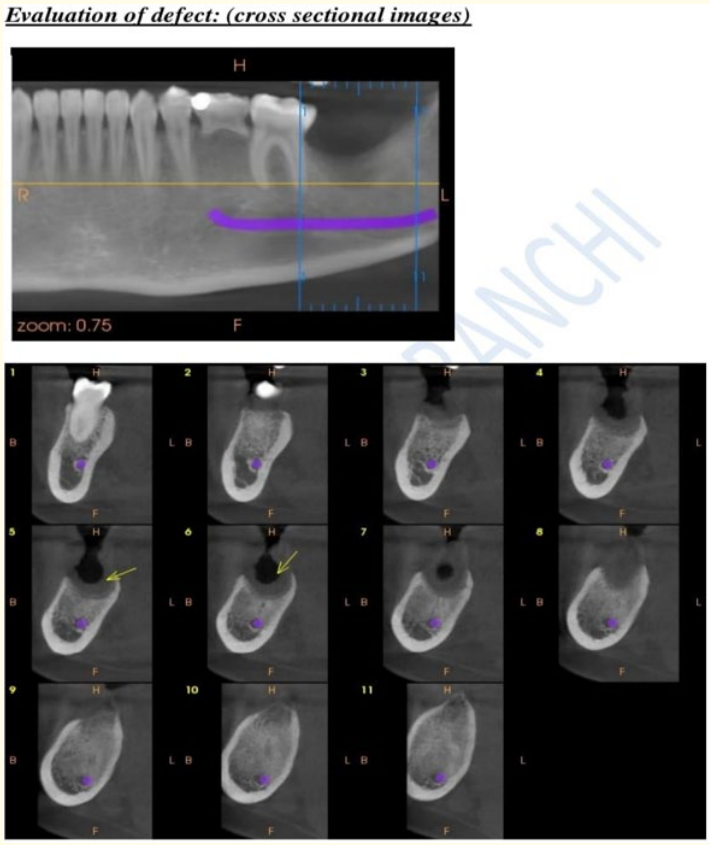

Figure 5: CBCT (cross sectional images) after 3 years, showed saucer shaped bone defect with no active lesion and adequate clearance to inferior alveolar nerve canal.

Conclusion

In conclusion frequent postsurgical radiographic examinations and long term follow up is favorable for early detection of recurrence.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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