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Intra-luminal unicystic ameloblastoma of mandible: An unusual case report

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Abstract: The most common odontogenic tumor is ameloblastoma which develops from epithelial cellular elements and dental tissues in various phases of development. We present case of unicystic mandibular ameloblastoma encountered by us that managed by enucleation & were allowed to heal secondary by iodoform dressing. No recurrence was detected after one year a follow-up.

Keywords: Odontogenic tumor, ameloblastoma.

INTRODUCTION

Mandibular Swellings mainly occur due to odontogenic or non-odontogenic etiology. Unicystic ameloblastoma (UA) variant of ameloblastoma was first described by Robinson and Martinez in 1977 [1]. The other name as recognized by WHO is "cystogenic ameloblastoma" [2]. Unicystic ameloblastoma is a tumor of young age group and accounts for 10% to 15% of all intra-osseous ameloblastoma [3]. More than 90% of those found in the mandible approximately 50-80% of cases are associated with an impacted or unerupted tooth [4]. Although the unicystic ameloblastoma is a "cystic" appearing lesion on gross examination, subsequent microscopic examination shows the presence of ameloblastoma within the cyst wall [5]. Radiographically, the lesions commonly show expansive unilocular radiolucencies with a well-demarcated border [6]. Here, we present case of unicystic ameloblastoma that managed by enucleation & were allowed to heal secondary by iodoform dressing. No recurrence was detected after one year of a follow-up.

CASE-REPORT

A 23- year old male patient came to the department of oral & maxillofacial surgery ,career P.G. institute of dental sciences & hospital ,Lucknow ,Uttar Pradesh ,India with chief complaint of swelling on mandibular left body region since one month [Fig.-1]. He has undergone dental extraction of left canine & first and second premolar 6 month back due to pain & pus discharge on the same region. After extraction he got relieved from symptoms but after one month the pain recur on the same region. Pain was dull chronic continuous & radiating on the left mandible region. On OPG it reveals 3 loculi interconnecting radiolucency extending from distal side of left lateral incisor toward the left mandibular first maolar. Root resorption was present on mandibular first molar [Fig.-2]. Incisional biopsy was carried out and diagnosis of intra-luminal UA was made and enucleation followed by carnoys solution was planned. Under conscious sedation crevicular incision was made from mandibular left first incisor toward mandibular second molar. The lesion was enucleate and irrigated with copious saline. Cavity was also chemically curettage with carnoy solution for 5min with protection of inferior alveolar nerve with vaseline gauze, when it was encountered. Curettage was done carefully so that we could avoid pathological fracture of mandible & maintained the lower boarder continuity. After that cavity was packed with iodoform gauge. No recurrence or parathesia was seen on 1 year follow-up period [Fig.-3].

Fig-1:-Preoperative view

Fig-2:- Preoperative OPG

Fig.-3:-Postoperative OPG after one year follow up

DISCUSSION

Unicystic ameloblastomas are a rare variant of ameloblastomas, which usually occur in younger populations.The term unicystic ameloblastoma was adopted in the second edition of the international histologic classification of odontogenic tumors [7]. They are characterized by slow growth and being relatively locally aggressive, with the main site of origin being the posterior portion of the mandible. The exact pathogenesis of this tumor is difficult to understand. However, the radiographic features of unicystic ameloblastoma are usually unilocular with a well circumscribed area of radiolucency. Sometimes theses lesions also have a multilocular radiographic appearance [8] According to Eversole and Paikkatt *et al*., this neoplasm shows six different radiographic patterns as follows: Unilocular, macromultilocular, pericoronal, interradicular, scalloped or periapical expansile radiolucencies [9,10,11].

Ackermann classified this entity into the following three histologic groups:

- Group I: Luminal UA (tumor confined to the luminal surface of the cyst)
- Group II: Intraluminal/plexiform UA (nodular proliferation into the lumen without infiltration of tumor cells into the connective tissue wall), and
- Group III: Mural UA (invasive islands of ameloblastomatous epithelium in the connective tissue wall not involving the entire epithelium).

Dentigerous cyst, odontogenic keratocyst, residual cyst, adenomatoid odontogenic tumor, giant cell lesion and sometimes solid ameloblastoma can be the possible differential diagnosis for Unicystic ameloblastoma.. Great difficulty exists in differentiating dentigerous cyst from UA. However, following manifestations favors UA. Defect in the wall of cyst, unilocular cystic lesion extending into the ramus and expansion of both the buccal and lingual cortex (tumor usually grows buccally and lingually, whereas the cyst grows towards most dependent part i.e buccally), presence of erythematous and granulomatous tissue at the marginal gingival (mucosal ulceration) with absence of bony cortex [12]. Keratocyst usually spread anterio- posteriorly and seldom shows cortical expansion. Residual cysts are associated with missing teeth that have been extracted [13]. Adenomatoid odontogenic tumors have a predilection for anterior maxilla whereas central giant lesion often arises anterior to first mandibular molar [13]. Solid ameloblastoma is multilocular and rarely seen in younger patient l [14].

Treatment of UA continues to be controversial, available treatment options are enucleation, enucleation followed by use of Carnoy's solution, marsupialization followed by enucleation, marginal resection and

aggressive resection which is depends on age, general health, clinico-radiographic variant, anatomic locations and clinical behavior of the lesion. The concept discussed by Ackerman *et al.* [15]. That unicystic ameloblastomas that do not exhibit perforation beyond the basement membrane require less aggressive surgery than those demonstrating proliferation beyond the basement membrane into the connective tissue wall.

In the present case report patients were treated with enucleation and curettage followed by Carnoy's solution application for 5 minutes to decrease the chance of recurrence.and were allowed to healed by secondary intention by the use of iodoform dressing.. Lee *et al.* [16] reported recurrence rates of 10 % by using Carnoy's solution after enucleation and curettage.

In our experience with these cases of unicystic ameloblastoma, treated with enucleation followed by carnoys solution. Adequate amount of bone healing in operated area was seen in OPG at 1 year follow-up. No recurrence & parathesia was noted. However long term follow up is required in these cases.

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