Case Report

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Unicystic Ameloblastoma of the Left Mandibular Body Region: A Case Report

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ABSTRACT

Background: Unicystic ameloblastoma is a rare, benign tumor of odontogenic epithelium. We report a case of unicystic ameloblastoma in a 38-year-old male with swelling in the posterior left mandibular region. Periapical, panoramic radiographs showed well-defined radiolucency in relation to left mandibular canine to first molar. On aspiration it yielded straw coloured fluid. Incision biopsy report showed the feature of unicystic ameloblastoma. Case was treated by peripheral osteotomy followed by application Carnoy's solution.

Keywords: Mandible, dentistry, unicystic Ameloblastoma odontogenic tumor.

INTRODUCTION

Mandibular swellings may be caused by many benign lesion, such as Ameloblastoma, Radicular cyst, Dentigerous cyst, Keratocystic odontogenic tumor, Central giant cell granuloma, Fibroosseous lesions and Osteomas. These can be divided into lesions of odontogenic or nonodontogenic origin. [1].

The most common tumour of odontogenic origin is ameloblastoma, which develops from epithelial cellular elements and dental tissues in their various phases of development. It is a slow-growing, persistent, and locally aggressive neoplasm of epithelial origin. Its peak incidence is in the 3rd to 4th decades of life and has an equal distribution in both males and females. It is often associated with an unerupted third molar [2] and it may be detected during the course of routine radiography. There are three forms of ameloblastomas, namely multicystic, peripheral, and unicystic tumors [3]. Intraosseous lesions are of two types- solid/conventional. The growth pattern of Unicystic Ameloblastoma is seen in approximately 6% of ameloblastomas. It tends to occur in a younger population compared with the patient population with conventional ameloblastomas. We present a case of a large unicystic mandibular ameloblastoma in a 30 year old male patient.

CASE REPORT

A 38 year old male patient presented with a slowly growing swelling on the posterior left side of the lower jaw since 6 months (Figure1). Initially, swelling was small in size which was growing gradually till the present size. There was no associated pain, paresthesia, difficulty in opening the mouth, chewing or articulating.Medical, surgical, dental ,family and personal histories were not significant, there were no abnormalities detected on general physical examination. Extra oral examination showed a bilaterally symmetrical face and no change in colour or exudate was observed. No neck nodes were palpable. Intra oral examination showed there was 4 x5 cm swelling

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Fig 1: Extra oral view.

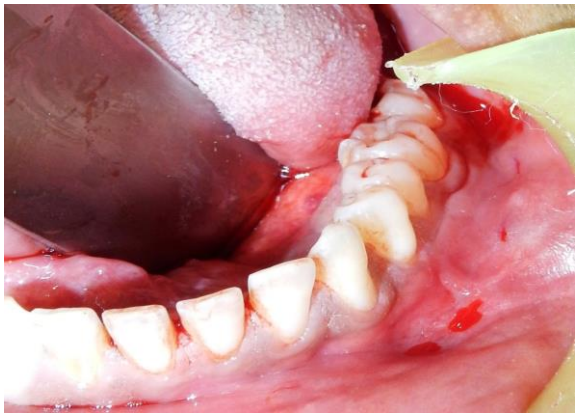

Fig 2: Intra oral swelling.

Fig 3: OPG showing the lesion extending from left mandibular canine to first molar.

present which was extending w.r.t 33 to 36 anterior –posterior with buccolingual expansion (figure.2). The oral mucosa was normal. An orthopantomogram (OPG) was done, which showed unilocular radiolucency lesion in the left side of the mandible extending,from 33 to 36 tooth region (Figure.3). On aspiration straw coloured fluid was seen (Figure.4), and the incisional biopsy (Figure.5)

Fig 4: Straw coloured fluid aspirated.

Fig 5: Incisional biopsy.

Fig 6: Surgical site after peripheral osteotomy.

Fig 7: Carnoy's solution applied.

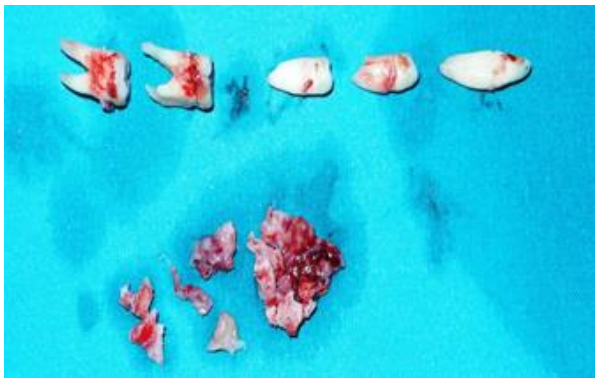

Fig 8: Extracted teeth and lesion.

showed features of unicystic ameloblastoma. The patient was taken up for surgery under general anaesthesia. Extraction of 33 to 37 was done along with peripheral osteotomy (Figure.6,8). followed by Carnoy's solution application for 3 min(Figure.7). The obtained specimen had histopathologic features consistent with unilocular ameloblastoma. Follow up done for 1 year showed no sign of recurrence.

DISCUSSION

The term ameloblastoma was suggested by Churchill in 1934 [5]. There are almost fifteen different types of this tumor. The most commonly occurring histological varieties of this tumor are follicular, plexiform, granular, desmoplastic, basal cell, unicystic and the lesser occurring peripheral variant. (5)

Unicystic ameloblastoma is a rare type of ameloblastoma, accounting for about 6% of all ameloblastomas [6]. About 50% of the cases occur in the second decade of life [1]. The mandible is affected more often than the maxilla. These tumors are most commonly encountered in the posterior mandible followed by the parasymphysis region, anterior maxilla, and the posterior maxilla [7]. In our case the lesion was present in the mandibular body region. 50 to 80% of cases are associated with tooth impaction, the mandibular third molar being most often involved. In our case there was no impacted tooth. Patients most commonly present with swelling and facial asymmetry, pain being an occasional presenting symptom. Mucosal ulceration is rare, but may be caused by continued growth of the tumor. Small lesions are sometimes discovered on routine radiographic screening or as a result of local effects (like tooth mobility, occlusal alterations and failure of eruption of teeth) produced by the tumor [8].

Ackermann [9] 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).

Another histologic subgrouping by Philipsen and Reichart [10] has also been described:

Subgroup 1: Luminal UA
Subgroup 1.2: Luminal and intraluminal
Subgroup 1.2.3: Luminal, intraluminal and intramural
Subgroup 1.3: Luminal and intramural

The Unicystic Ameloblastoma diagnosed as subgroups 1 and 1.2 can be treated conservatively (careful enucleation), whereas subgroups 1.2.3 and 1.3 showing intramural growths require radical resection .as for a solid or multicystic ameloblastoma [3].

Following enucleation, vigorous curettage of the bone should be avoided as it may implant foci of ameloblastoma more deeply into bone. Chemical cauterization with Carnoy's solution is also advocated for subgroups 1 and 1.2. Subgroups 1.2.3 and 1.3 have a high risk for recurrence, requiring more aggressive surgical procedures. This is because the cystic wall in these cases has islands of ameloblastoma tumor cells and there may be penetration into the surrounding cancellous bone [11-12]. Late recurrence following treatment is commonly seen, the average interval for recurrence being 7 years. Recurrence is also related to histologic subtypes of UA, with those invading the fibrous wall having a rate of 35.7%, but others only 6.7% [12]. Recurrence rates are also related to the type of initial treatment. In our case peripheral osteotomy was performed followed by Carnoy's solution application. Two years follow up was done and no sign of recurrence was observed.

CONCLUSION

The unicystic ameloblastoma is characterized by specific clinical, imaging, and histological features. For proper understanding of such cases, more in depth analysis and long term follow-up is needed.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

REFERENCES

1. Ramesh RS, Manjunath S, Ustad TH, Pais S, Shivakumar K. Unicystic ameloblastoma of the mandible – an unusual case report and review of literature. Head Neck Oncol 2010; 14;2:1

2. Gerzenshtein J, Zhang F, Caplan J, Anand V, Lineaweaver W. Immediate mandibular reconstruction with microsurgical fibula flap transfer following wide resection for ameloblastoma. J Craniofac Surg.2006;17(1):178–182. doi: 10.1097/01.scs.0000190350.37978.2c.

3. Philipsen HP, Reichart PA. Odontogenic tumors and allied lesions. Quintessence Pub. Co. Ltd; 2004. Classification of odontogenic tumors and allied lesions; pp. 21–3.

4. T-J, Wu Y-T, Yu S-F, Yu G-Y. Unicystic ameloblastoma. A clinicopathological study of 33 Chinese patients. Am J 2000;24:1385-92

5. Dandekar RC, Shankar AA. Unicystic ameloblastoma: mimicking a cyst. Journal of Nepal Dental Association 2010; 11:66-9

6. Bhalerao S, Chaudhary R, Tamgadge A, Periera T, Tamgadge S. Unicystic ameloblastoma –A case report. IJCD 2011; 2:65-8 - See more at: http://www.jpmsonline.com/jpms-vol3-issue2-pages106-109-cr.html#sthash.FkNqalaq.dpuf

7. Yunus M, Baig N, Haque A, Aslam A, Atique S, Bostan S, Syed AM. Unicystic ameloblastoma: a distinct clinicopathologic entity. Pakistan Oral & Dental Journal 2009; 29: 9-12. - See more at: http://www.jpmsonline.com/jpms-vol3-issue2-pages106-109-cr.html#sthash.FkNqalaq.dpuf

8. Roos RE, Raubenheimer EJ, van Heerden WF. Clinico-pathological study of 30 unicystic ameloblastomas. J Dent Assoc S Afr. 1994;49:559–62.

9. Philipsen HP, Reichart PA. Odontogenic tumors and allied lesions. Quintessence Pub. Co. Ltd; 2004. Classification of odontogenic tumors and allied lesions; pp. 21–3.

10. Chana, Jagdeep S, Yang-Ming Chang, Wei, Fu-Chan, Shen, Yu-Fen, Chan Chiu-Po, Lin Hsiu-Na, Tsai Chi-Ying, Jeng Seng-Feng. Segmental mandibulectomy and immediate free fibula osteoseptocutaneous flap reconstruction with endosteal implants: An ideal treatment method for mandibular ameloblastoma. Plast Reconstr Surg. 2004;113(1):80–87. doi: 10.1097/01.PRS.0000097719.69616.29.

11. Li TJ, Kitano M, Arimura K, Sugihara K. Recurrence of unicystic ameloblastoma: A case report and review of the literature. Arch Pathol Lab Med. 1998;122:371–4.

12. Li T, Wu Y, Yu S, Yu G. Clinicopathological features of unicystic ameloblastoma with special reference to its recurrence. Zhonghua Kou Qiang Yi Xue Za Zhi. 2002;37:210–2.