



Unicystic Ameloblastoma Diagnosed as Radicular Cyst: A Case Report

Radiküler Kist Olarak Tanımlanan Unikistik Ameloblastoma : Bir Olgu Sunumu

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ABSTRACT

The unicystic ameloblastoma (UA) is a less encountered variant of the ameloblastoma which is mostly encountered asymptotically in the posterior mandible. Here is a report of a 46 year old male patient with a diffuse swelling in the right posterior mandible.

Key words: Unicystic ameloblastoma, radicular cyst, mandible.

ÖZET

Unikistik Ameloblastoma (UA) çoğunlukla posterior mandibulada asemptomatik olarak karşılaşılan ameloblastomanın daha az görülen bir varyantıdır. Burada sağ posteriyor mandibulada yaygın şişliği olan 46 yaşındaki bir erkek hastanın raporu sunulmuştur.

Anahtar kelimeler: Unikistik ameloblastoma, radiküler kist, mandibula.

INTRODUCTION

Ameloblastoma is a true neoplasm of odontogenic epithelium. It represents about 1% of all oral ectodermal tumors and 9% of odontogenic tumors¹. It is a slow growing persistent and locally aggressive neoplasm of epithelial origin. Its peak is in the 3rd and 4th decades of life and has equal sex distribution². The most common site involved is the molar region and ramus of the mandible. In the maxilla, it is often found in the molar region and in some cases it may extend into the maxillary sinus, nasal cavity or base of the skull³.

Ameloblastomas have been categorized into three biologic variants: cystic (unicystic), solid (multisystem) and peripheral⁴. The unicystic

ameloblastoma represents an ameloblastoma variant that on examination presents as a cyst. Three histological types are recognized according to the degree of ameloblastomatous epithelial extension, namely luminal, intraluminal, and mural types⁵. This classification has a direct relation on their biological behavior, treatment, and prognosis. Compared to solid and multicystic ameloblastomas, unicystic ameloblastomas are believed to be less aggressive and respond favorably to conservative management including enucleation, curettage, and marsupialization. More aggressive surgical interventions such as resection should be put off until recurrence occurs⁶.

Hence here we report a case of unicystic ameloblastoma in a 46 year old male patient for its unusual clinical presentation and will also discuss the treatment.

CASE REPORT

A 46 year old patient came with the chief complaint of a diffuse swelling in the right posterior mandible since 2 weeks. Patient gives the history of root canal treatment in relation to right posterior tooth 6months back. He noticed pain and swelling in relation to the same tooth 2 weeks back. The swelling was small initially which gradually increased in size. On examination, a swelling of size 1 × 0.5 cm was seen extending from mandibular right canine to mandibular right first molar. Buccal cortical plate was found to be expanded (Figure-1).

The patient was subjected to following investigations to reach to a probable diagnosis. Aspiration of the lesion was carried out as a chair side investigation which gave a straw coloured fluid, which was sent for histopathological examination. Mandibular right second premolar and mandibular right first molar showed no response to Electric pulp vitality test. Lateral

oblique body of the right mandible shows a well-defined radiolucency extending from mandibular right canine to mandibular right first molar (Figure 2). Computed tomogram showed a well-defined cystic cavity extending from mandibular right canine to mandibular right first molar (Figure 3A & 3B). Based on the history, clinical presentation and the investigations a provisional diagnosis of radicular cyst was given. Root canal treatment and apsectomy of mandibular right canine, first premolar, second premolar and first molar following which cyst enucleation was done which was sent for histopathological examination.

The histology of the enucleated cyst showed cystic cavity lined by disrupted odontogenic epithelium with connective tissue capsule. Thick band of dentinoid formation was evident at epithelium connective tissue interface. Odontogenic epithelial islands and proliferating ameloblastomatous follicles in the deeper part of connective tissue capsule. Moderately dense collagen bundles with foci of chronic inflammatory infiltrate. Hence the final diagnosis given was transmural variant of unicystic ameloblastoma. The patient has been under follow up for one year with no functional or aesthetic complaints (Figure 4).



Figure 1. Intraoral pre op picture showing obliteration of the buccal vestibule extending from mandibular right canine to mandibular right first molar.

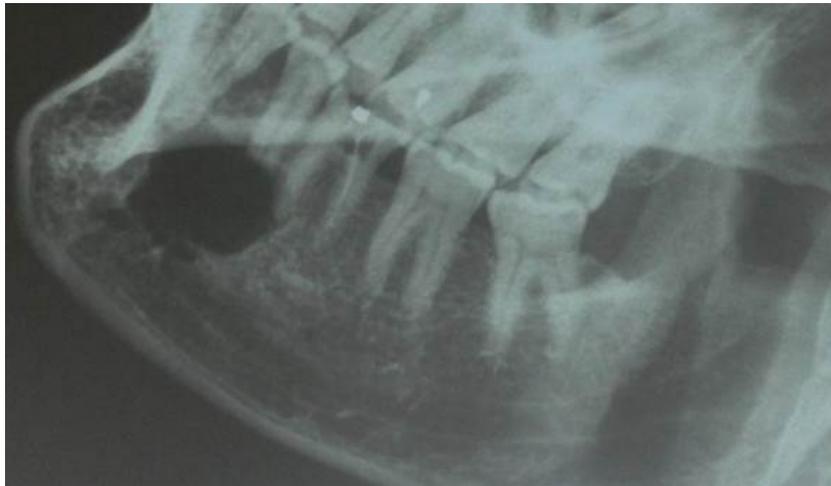


Figure 2. Lateral oblique body of the right mandible showing well defined oval shaped radiolucency extending from root of mandibular right canine to the mesial root of mandibular right first molar.

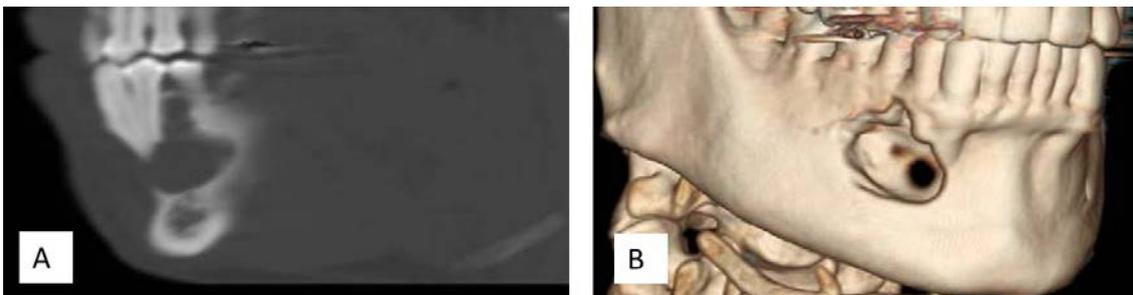


Figure 3: **A-** Computed tomographic image in sagittal section showing well defined hypo dense area in the right posterior mandible. **B-** Computed tomographic image showing 3D reconstruction of the oval shaped cystic cavity in right posterior mandible extending from mandibular right canine to mandibular right first molar.



Figure 4. Post-operative intra oral picture.

DISCUSSION

Unicystic ameloblastoma is an odontogenic disorder with common clinical and radiographical manifestations like that of other odontogenic lesions (dentigerous cyst, odontogenic keratocyst) making the diagnosis difficult⁷. The mean age at the time of diagnosis differs considerably according to the UA variants. Those diagnosed as dentigerous, occurred in younger patients with a mean age of 16.5 years, while for nondentigerous the mean age was 35.2 years with age ranging from 40 to 70 years⁸. In the present case, patient was 46-year-old, which is in accordance to the literature. The maxilla: Mandible ratio being 1:7 for the dentigerous type and 1:4.7 for the non-dentigerous type⁸. Dentigerous cyst, odontogenic keratocyst, residual cyst, adenomatoid odontogenic tumor, giant cell lesion and sometimes solid ameloblastoma can be the considered as the differential diagnosis for Unicystic ameloblastoma.

The local swelling is usually asymptomatic, slowly enlarges, non-tender, hard or bony in consistency. Superimposed infection did cause pain in some cases. The radiographic appearance of all UAs is divided into two main patterns, unilocular and multilocular; there is a clear predominance of the unilocular configuration in all studies. The unilocular: Multilocular ratio was 4.3:1.2⁸. The histopathologic diagnosis plays an important role in treatment planning. In a clinicopathologic study of 57 cases of UA, Ackermann classified this into the following three histologic groups: Group I: Luminal UA Group II: Intraluminal/plexiform UA and Group III: Mural UA.

Simple luminal unicystic ameloblastoma shows a flat ameloblastic cyst lining. The intraluminal type is characterized by tumor growth into the cyst lumen with soft luminal projections and microscopically resembles conventional ameloblastoma. The mural subtype exhibits infiltrating growth into the wall of the cyst and possibly beyond into the surrounding bone⁹.

The importance of the UA is that it possesses a much better prognosis after enucleation or curettage compared to that of a classic intraosseous ameloblastoma. Its recurrence rate after these procedures is around 15%. The reason for this better prognosis is that the ameloblastoma involves only the epithelial lining of the cyst or projects into its lumen⁸. Enucleation alone yielded 30.5% recurrence rate, followed by recurrence rate of 18% for marsupialization, 16% for enucleation with application Carnoy's solution and 3.6% for resection⁸.

CONCLUSION

UA is a type of ameloblastoma which presents with a variety of clinical, radiological and histopathological features. Timely intervention and conservative surgical treatment followed by Carnoy's solution application may improve treatment outcome and potential complications associated with larger resection.

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