UNICYSTIC AMELOBLASTOMA IN A 7 YEAR OLD MALE : A RARE ENTITY

Authors:

Lekshmi Venugopal [1]
Jaya Jacob[2]
M A Merina [3]
Rajalakshmi G[4]

Post Graduate Students
Department of Oral and Maxillofacial Pathology
Mar Baselios Dental College,
Kothamangalam, Kerala.

Address for Correspondence

Lekshmi Venugopal
Post graduate students
Department of Oral and Maxillofacial Pathology
Mar Baselios Dental College,
Kothamangalam,Kerala.

ABSTRACT

Ameloblastoma is the most common aggressive benign odontogenic tumors of the jaws the tumor is often asymptomatic , presenting as a slow growing facial swelling or an incidental finding on a radiograph. Ameloblastoma is a locally destructive tumor with a propensity for recurrence if not entirely excised. A few cases of malignant changes with distant metastasis have been reported in the literature. Ameloblastoma is more commonly seen in 3rd and 4th decades of life and is considered as a rarity in the younger age groups.1 The treatment of ameloblastoma is still controversial as it explains some special problems in the growth and development of jaws in children. Incidence behavior and prognosis of tumor in children make surgical consideration different from adults.

J Odontol Res 2017;5(2)31-4.

Introduction

Many benign lesions cause mandibular swellings, and these can be divided into those of odontogenic and non odontogenic origin lesions include ameloblastoma, radicular cyst, dentigerous cyst, keratocystic odontogenic tumor, central giant cell granuloma, fibro-osseous lesions and osteomas.[2] The most common tumor of odontogenic origin is ameloblastoma which develops from epithelial cellular elements and dental tissues in various phases of development. Relative frequency of Unicystic Ameloblastoma (UA) has been reported between 5% and 22% of all types of ameloblastomas.[1] The concept of Unicystic Ameloblastoma (UA) was first described by Robinson and Martinez[1]. More than 90% of Unicystic ameloblastoma occurs in mandible usually in posterior region. The present case has a significant importance because of its early age of occurrence and absence of impacted teeth.

Case Report

A 7 year old male patient presented with a swelling on the left side of the mouth for 1 month. There was no associated pain, difficulty in mouth opening and chewing or articulating. There is no relevant dental or medical history. On physical examination there was a diffuse swelling seen intraorally measuring 2x1 cm from the mesial aspect of 74 to distal aspect of 75, there was no signs of erythema , ulcerations or sinus tract. On palpation of the lesion swelling was found to be firm to bony hard and non tender. Temperature over the swelling was no raised. No neck nodes were palpable OPG of the lesion showed circumscribed unilocular radiolucency in relation to 74, 75 region. Based on the history, clinical and radiographic examination a provisional diagnosis of odontogenic cyst was made. After parental consent an excisional biopsy was performed. Histopathology revealed an odontogenic cyst lining epithelium exhibiting a basal layer with hyperchromatic nuclei arranged in palisading manner, in many foci basal layer exhibits cytoplasmic vacoulisation. Supra basilar layer exhibits stellate reticulum like cells. The histopathologic features correspond to Unicystic Ameloblastoma - Luminal type.

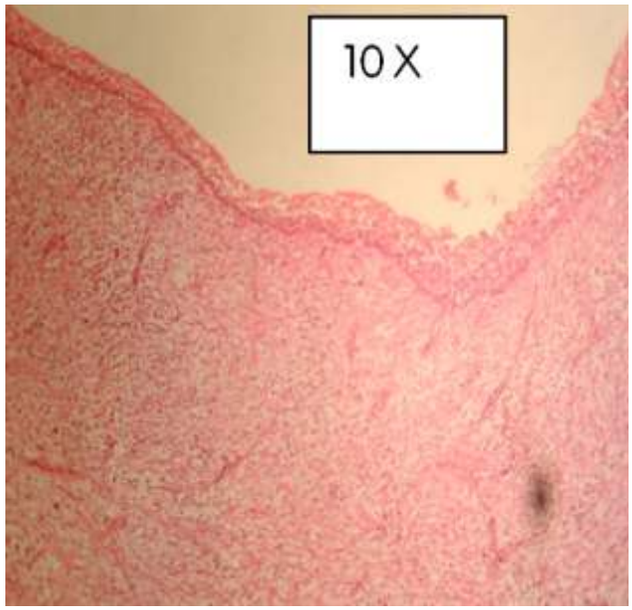
Discussion

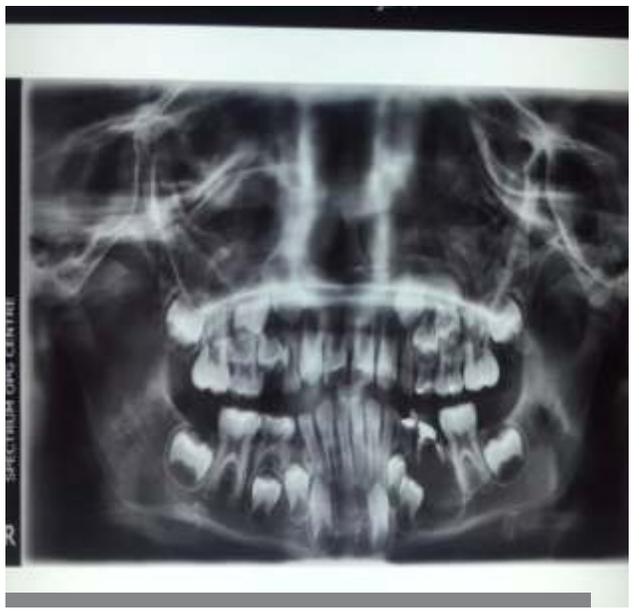
Ameloblastomas are benign tumors whose importance lies in their potential to grow to enormous size with resulting bone deformity and a higher rate of recurrence following incomplete excision. Ameloblastoma is rare before the age of 10 years.[2,3,4] The radiographic stages of ameloblastoma are not a characteristic- a local area of bone destruction of cyst like often unilocular appearance.[4] This is not surprising as it is generally recognized that ameloblastoma amay arise in the wall of a non neoplastic cyst as a result of neoplastic change[1]. Due to the strong likelihood of recurrence curettage or mass excision without a safety margin is not recommended for the treatment of ameloblastoma.[5] When a diagnoss of ameloblastoma is obtained the treatment must be aggressive and radical.[6]

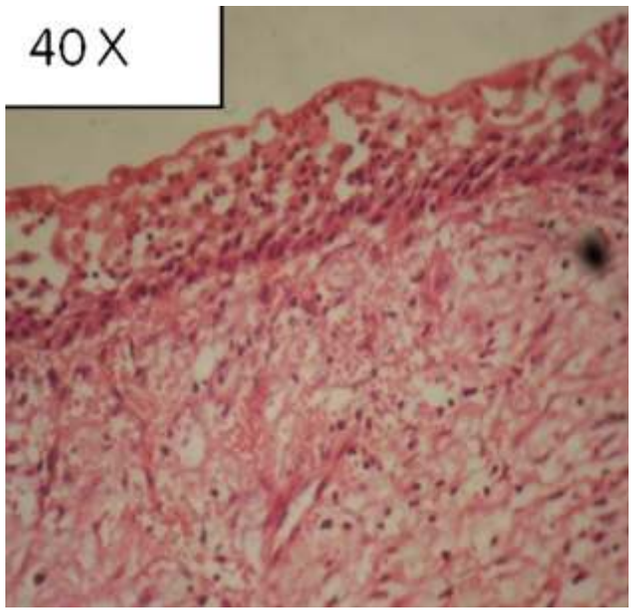
UA shares clinical and radiographical features with other odontogenic lesions and hence the diagnosis can not be made on clinical and radiographic features alone[7,8]. Thus a histopathological evaluation is mandatory for the confirmation of diagnosis. According to Robert and Diane, UA may arise from reduced enamel epithelium or may occur as transformation of dentigerous cyst into UA or due to cystic degeneration of solid ameloblastoma. Ackerman classified entity into three histological groups namely, Luminal, intra luminal and mural, Ackermans classification was modified by Philipsen and Reichart, reclassified into 4 subtypes namely subtype 1 luminal UA , subtype 1.2 luminal and intraluminal UA, 1.2.3 Luminal, intraluminal and intramural UA, 1.3 luminal and intra mural UA. The recurrence depends on histological variant and treatment type. Mural UA has highest recurrence rate among all UAs .[1]

Conclusion

Though considered as benign ameloblastoma is locally invasive odontogenic tumor with a high rate of recurrence.[9] UA 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 mandatory and also utmost importance to correlate histopathologic findings with clinical and radiographic features to


10 X




40 X

achieve at a correct definitive diagnosis as all such lesions may have prognostically different biologic behaviors and the final diagnosis may alter the therapeutic decision significantly.[10]

References

1 PA Reichart , H P Philipsen Odontogenic tumors and allied lesions.

2 Robinson L, Martinez MG, Unicystic ameloblastoma. A prognostically distict entity. Cancer 1977;40:2278-85.

3 Nithin Guptha, Susmitha saxena et al, Unicystic ameloblastoma of mandible JOMFP 2008;20:65-70.

4 Handa H, Bailoor DN et al Unicystic ameloblastoma of mandible. Aggressive treatment a myth a or a need - Case report and extensive review of literatue, IOSR-JDMS 2013;12(2):26-31.

5 Richa W, Bhuvnesh S et al Unicystic ameloblastoma in a 23 year old male : A case report. IJADS 2016;2(4);87-92.

6 Jitender R Kubbi, Swapna Tipirisety, Ramakanth Dubundu, Unicystic ameloblastoma of mandible, non dentigerous variant, a rare case report, JIAOMR ,2016;28(4): 420-23.

7 Ramesh RS, Manjunath S, Ustad T H, Shivakumar K, Unicystic ameloblastoma of mandible an unusual case report and review of literature, Head and neck oncol , 2010;2: 1-5

8 Bahandana Sharma, Balaji N, Sumathy MK, Unicystic Ameloblastoma a diagnostic dilemma TMU J Dent 2014;1(3):131-133.

9 Simi Thankappan, Valsala Thomas, Sherin Nair, Unicystic ameloblastoma 3 case reports and review of literature JIAOMR 2008;20(2):65-70.

10 Haug RH, Hauer CR, Smith B, Reviewing the unicystic ameloblastoma report of 2 cases J AM Dent Assoc 1990;121:703-705.