East African Scholars Journal of Medicine and Surgery
Abbreviated Key Title: EAS J Med Surg
ISSN: 2663-1857 (Print) & ISSN: 2663-7332 (Online)
Published By East African Scholars Publisher, Kenya

OPEN ACCESS

Volume-5 | Issue-2 | Feb-2023 | DOI: 10.36349/easjms.2023.v05i02.003

Cases Report

Odontogenic Keratocyst with Focus of Ameloblastoma - A Case Report

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Article History
Received: 13.01.2023
Accepted: 21.02.2023
Published: 25.02.2023

Journal homepage:
https://www.easpublisher.com

Quick Response Code

Abstract: Odontogenic keratocyst (OKC) and ameloblastomas are distinct histopathologically diagnosed odontogenic lesions of the oral cavity. Both are primarily located in the posterior regions of the mandible, however, they can involve the maxilla as well. The occurrence of both an OKC and ameloblastoma in a patient is very uncommon. In this case reports we present a case of 17 year old male with histological features of both odentogenic keratocyst and ameloblastoma.

Keywords: Odentogenic keratocyst, ameloblastoma.

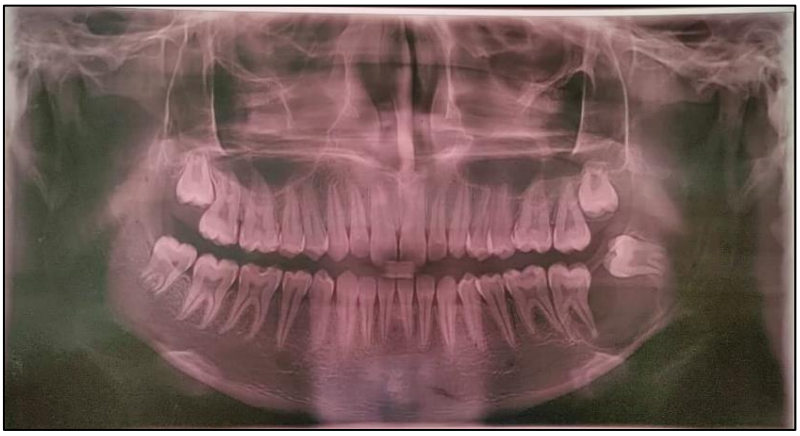
INTRODUCTION

Odontogenic keratocyst (OKC) are classified as benign, intraosseous developmental odontogenic cysts that occur in the mandible in 70% of reported cases Radiographically, OKCs may mimic ameloblastomas, appearing as radiolucency with a well-defined, corticated periphery. Curved internal septa may also be present, imparting a multilocular appearance. Ameloblastomas are classified as benign odontogenic tumors that are slow-growing and locally infiltrative neoplasms. Ameloblastomas most often involve the mandible (80%) and may have a high recurrence rate, especially when associated with conservative treatment.

The present case describes the synchronous occurrence of OKC and ameloblastoma in the mandible of a 17 years old male. Clinico-pathologic understanding of both lesions signifies the need for careful management plan and prevention of recurrence.

CASE REPORT

We present a case of 17-year-old male presented with swelling in posterior aspect of lower mandible of left side for 2 months and pain since one month. On examination a 2x2cm sized swelling noted in left lower ramus of mandible. Imaging studies showed a well-defined lesion 3.2x2.5cm involving the ramus. FNA aspirated yellow colored fluid and cytology report was cystic lesion with inflammation. On histopathological evaluation, we get features of odentogenic keratocyst with focus of ameloblastoma.



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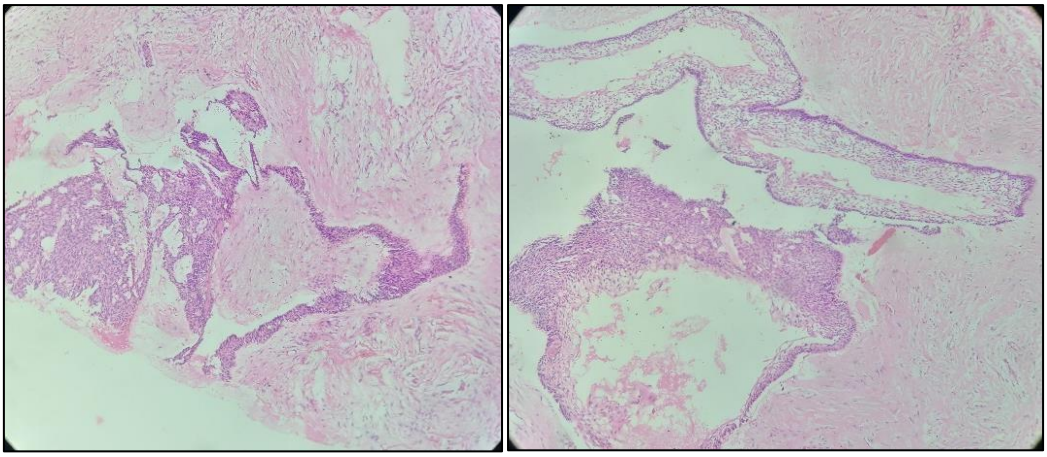

Follow-up

Patient is on conservative management. If swelling increase in size will consider surgical management.

DISCUSSION

The 2017 WHO Classification of Head and Neck Tumors categorizes ameloblastomas and OKCs as benign epithelial odontogenic tumors and odontogenic cysts respectively 14. OKCs arise from the cell rests of the dental lamina. Ameloblastomas can also arise from the rests of dental lamina, but may also arise from the developing enamel organ, the epithelial lining of an odontogenic cyst or the basal cell layer of the oral mucosa. Both lesions have a marked tendency to involve the posterior mandible 15. Both entities often occur in the same location and may arise from the same cell origin. These similarities are all possible explanations for the occurrence of synchronous lesions. Most importantly, regarding the etiopathogenesis of ameloblastomas and OKCs, there are reports of activation of the mitogen-activated protein kinase pathway for both lesions. Activated mutations are seen in FGFR2, SMO, BRAF and RAS along the sonic Treatment of these lesions should commensurate with established protocols. The choice of treatment of both lesions must take into account the patient's age, lesion size, any history of previous recurrence and potential soft tissue involvement. Treatment of ameloblastoma ranges from conservative marsupialisation or enucleation to radical surgery.

The ideal treatment for OKCs is controversial and therapy has to be individually tailored for each case, to achieve the best possible prognosis.

The present case confirmed the possible synchronous occurrence of distinct histopathological entities in the mandible of a 17 years old male patient, OKC and ameloblastoma. This case also highlights the importance of identifying accurate diagnoses for such lesions, which may prompt clinical implications. The potential high recurrence rates for both entities diagnosed in this case indicate the need for careful management plan and prevention of recurrence.

CONCLUSION

We present an extremely rare and interesting case of synchronous ameloblastoma and OKC in two distinct locations with histopathologic confirmation. Both of these benign odontogenic lesions can have similar radiographic appearances and high recurrence rates, especially if the appropriate treatment modality is not implemented. The occurrence of two separate synchronous odontogenic lesions, probably arising from the same cell lines, provides insight into the origin of these epithelial lesions. This report is a valuable example of an ameloblastoma and OKC occurring simultaneously and underscores the diagnosis and management strategies for successful treatment.

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Cite This Article: Alina Mariam Varghese (2023). Odentogenic Keratocyst with Focus of Ameloblastoma - A Case Report. *East African Scholars J Med Surg*, *5*(2), 22-23.