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Case Report | **Oral Medicine & Radiology**

Glandular Odontogenic Cyst – A Case Report

Sandhyakrishna, M[1*], Dr. Deepak Daryani[2]

[1]Postgraduate in Oral Medicine and Radiology, Malabar Dental College and Research centre, Edapal, Kerela, India
[2]Head of the Department Oral Medicine and Radiology, Malabar Dental College and Research Centre, Edapal, Kerala, India

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***Corresponding author:** Sandhyakrishna, M
Postgraduate in Oral Medicine and Radiology, Malabar Dental College and Research centre, Edapal, Kerela, India

Abstract

A glandular odontogenic cyst (GOC) is an uncommon jawbone cyst of odontogenic origin with characteristic histological findings of a lined epithelium that contains mucous cells, ciliated cells, and intraepithelial gland-like structures. We herein report a case of GOC arising in the upper left back tooth region in a 31-year-old female patient. An IOPA radiograph revealed a well-defined unilocular radiolucent area extending from the distal aspect of the root of left first molar to the distal aspect of third molar on the same side. The patient was treated by extraction of 26, 27 & 28 followed by enucleation of the cystic lesion. The surgical specimen was histologically examined and diagnosed as a GOC.

Keywords: Glandular odontogenic cyst, Enucleation, Unilocular lesion.

INTRODUCTION

Glandular odontogenic cysts (GOCs) are rare cystic lesions of odontogenic origin that were first described in 1988 by Gardner *et al.*, [1]. The cysts developing from the odontogenic epithelium are referred to as odontogenic cysts. It may be both developmental and inflammatory in origin. Glandular odontogenic cysts (GOC) are developmental in origin with aggressive nature. It is generally accepted to be odontogenic in nature, but it shows glandular and salivary features owing to its pluripotentiality [2]. Histologically, GOC shows a non-keratinized stratified squamous epithelial lining, focal plaque like thickening within the lining, microcysts or intraepithelial crypts containing mucin, mucous cells and hyaline bodies, eosinophilic cuboidal or columnar cells that may be ciliated, papillary projections of epithelium and absence of inflammation in the subepithelial connective tissue [3].

CASE REPORT

A 31-year-old female patient was reported to our department with a chief complaint of decayed tooth in her upper left back tooth region since 4 years. Intraoral examination showed grossly decayed tooth in relation to 26, 27, 28. An IOPA radiograph (Figure 1) revealed a well-defined unilocular radiolucent area extending from the distal aspect of the root of left upper first molar to the periapical region of the upper left third molar.the third molar was displaced toward the distal region and included in the lesion. Resorption of the second molar roots was evident. A biopsy was performed under a tentative diagnosis of odontogenic cyst or benign tumor, The resected mass was 2 × 2 × 2 cm in size and consisted of a thin cyst wall and unicystic space containing brown serous fluid (Figure 2). The histological diagnosis of the biopsy specimen was a GOC (Figure 3). The patient was treated by extraction of the first, second, and third molars and enucleation of the cystic lesion (Figure 4).

Histologic examination shows cystic cavity lined by epithelium supported by connective tissue capsule. Epithelium is pseudostratified ciliated columnar variety with papillary configuration at surface. It also shows presence of numerous goblet cells within the epithelium. Focal presence of squamouc epithelium with 2-3 cell layer thicknes and reactive hyperplasia of epithelium to the inflammatory cell also noted regionally . Connectivwe tissue stroma is densely collagenous with localized presence of mixed inflammatory cells. Connective tissue stroma is moderately vascular with presence of adipocytes.The histological diagnosis of the surgical specimen was a GOC.

Figure 1: An IOPA radiograph in relation to 26, 27 and 28 revealed a unilocular lesion in the left maxilla

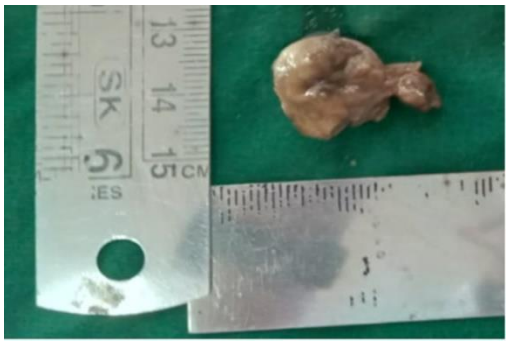

Figure 2: Specimen:- formalin fixed mixed tissue (root stump with a cystic lesion attached) measuring 2*2*2 cm in diameter, grayish white in color

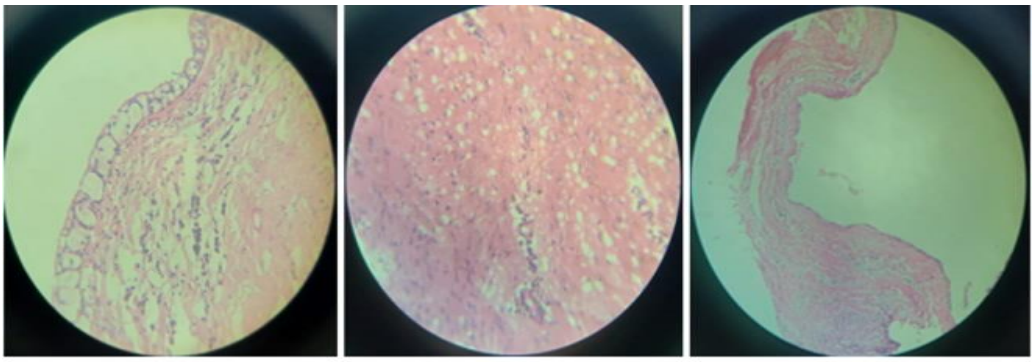

Figure 3: Histopathological examination of given H & E stained soft tissue section shows cystic cavity lined by epithelium supported by connective tissue capsule. Epithelium is pseudostratified ciliated columnar variety with papillary configuration at surface. It also shows presence of numerous goblet cells within the epithelium. Focal presence of squamouc epithelium with 2-3 cell layer thicknes and reactive hyperplasia of epithelium to the inflammatory cell also noted regionally . Connectivwe tissue stroma is densely collagenous with localized presence of mixed inflammatory cells. Connective tissue stroma is moderately vascular with presence of adipocytes

Figure 4: Intraoperative findings of enucleation

DISCUSSION

Padayachee and Van Wyk in 1987 reported two cases of GOC, which they termed as "sialo-odontogenic cyst," because of the microscopic familiarity to the salivary gland tissue and proposed that this lesion has three characteristic features: [1] it is radiologically multilocular and intrabony, [2] it can recur, and [3] it is multicystic. The GOC in the current case was found in the posterior region of the maxilla in a 31-year-old women [4].

Radiographically, GOC is a localized, intraosseous radiolucent lesion with well-defined borders, which can be either multilocular or unilocular. Cortical bone thinning, perforation, root resorption, and displacement of the involved teeth have also been reported [5]. In the present case report, a well-defined unilocular radiolucent lesion with corticated margins, involving the left maxilla, with tooth displacement and root resorption, was noted on IOPAR.

The widely accepted treatment of GOC is enucleation with adjunctive treatment due to its high recurrence rate [6]. Majority of the cases reported in the literature have been treated with marsupialization, enucleation and curettage [7]. Carnoy's solution and cryotherapy, in addition, have been used with satisfactory outcomes [8]. However, marginal or segmental resection has been suggested because of the potential for recurrence and the aggressive nature of GOC [9]. Cell kinetics in the GOC epithelium has been postulated by some authors for the propensity of these cysts to recur [10]. A post-operative follow-up period is crucial in these cases because the recurrence potential is high.

CONCLUSION

A high index of suspicion must be maintained for the timely diagnosis of GOC. Radiographic features are useful in determining the final diagnosis especially due to the non-specific clinical manifestations of this entity.

3D imaging is particularly valuable in visualizing the internal structure of the lesion and determining cortical integrity.

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