



Case report

An extensive swelling in the anterior mandible – A case report



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HIGHLIGHTS

- GOC is an extremely rare, benign, cystic lesion of jaw with high rate of recurrence.
- Various differential diagnoses were present and we confirmed GOC by incisional biopsy.
- GOC has a definite histopathological criteria put forth by Kaplan.
- Managed according to proposed treatment protocol.
- We recommend incisional biopsy whenever possible to confirm lesion and modify treatment accordingly.

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ABSTRACT

Introduction: Glandular odontogenic cyst is a rare developmental odontogenic cyst, which often pose a challenge to diagnose it clinically.

Presentation of a case: A 32 year old female patient was referred to the oral and maxillofacial surgery department with a chief complaint of a painless swelling in the anterior mandible, extending from mandibular left premolar to right first molar region, with fluctuancy and egg shell crackling at right premolar region. The associated teeth were firm. Radio graphically a large radiolucent lesion was seen extending from mandibular left premolar to right first molar region.

Discussion: We had many differential diagnoses including keratocystic odontogenic tumour, ameloblastoma and radicular cyst. Incisional biopsy was taken from the most fluctuant area, which was histopathologically suggestive of glandular odontogenic cyst. Enucleation of the cyst, peripheral ostectomy, extraction of teeth and Carnoy's solution application were done under general anaesthesia.

Conclusion: We often neglect to include uncommon lesions in the differential diagnosis, which may lead to inadequacy in the management protocol. Whenever possible, incisional biopsy should be performed to confirm the lesion before surgical enucleation. Here we present a case in which we were fortunate enough to diagnose the lesion by an incisional biopsy and managed according to the standard protocol.

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1. Introduction

Intra oral lesions most of the times pose a challenge in its diagnosis. Among the various differential diagnoses we often neglect to include uncommon lesions. This may lead to pitfalls in the management protocol. One such uncommon lesion which we encountered recently is the glandular odontogenic cyst. Glandular odontogenic cyst is a rare, benign cystic lesion of jaw characterised histologically by epithelial lining with cuboidal or columnar cells,

both at surface and lining, with crypts or cyst like spaces within the thickness of the epithelium [1].

Glandular odontogenic cyst was first reported by Padayachee and Wyk in 1987 and misnamed as sialo odontogenic cyst [2]. Gardener et al. suggested the term glandular odontogenic cyst due to the lack of evidence of salivary gland origin [3]. Later glandular odontogenic cyst was classified under developmental odontogenic cyst by WHO (World Health Organisation) [1]. Here we report a rare lesion with an attempt to discuss the various differential diagnoses, clinical, radiological and histopathological features and its management. This case has been reported in line with SCARE (Surgical case report) criteria [4].

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2. Presentation of a case

A 32 year old female patient reported to our department with a swelling in relation to the anterior mandible which was noticed 6 months back and gradually increased to the present size. Three years back she had undergone extraction of mandibular left first molar due to caries. No other contributing medical or dental history noted. Intra orally vestibular obliteration was seen from second premolar on left side to first molar on right side with a swelling more prominent on the anterior mandibular region (Fig. 1). Swelling was firm on palpation with fluctuancy and egg shell crackling noted in relation to first premolar to first molar region. No punctum, discharge or sinus noted. Teeth were firm and no dental abnormalities were present other than generalised periodontitis. Vitality testing showed that all the teeth were vital. Panoramic view revealed a large radiolucent lesion extending from mesial root of first molar on right side to distal aspect of second premolar on left side with irregular ragged borders and extending in between the root apices (Fig. 2). Septae are seen extending into the lesion. No root resorption was noticed. Differential diagnosis for periapical radiolucencies like radicular cyst, keratocystic odontogenic tumour and ameloblastoma were derived. Ameloblastoma was ruled out since there was no root resorption. Provisional diagnosis was more in favour of keratocystic odontogenic tumour.

Incisional biopsy was planned and was taken from mandibular right premolar region which was the area of suspected cortical perforation (Fig. 3). Consistency of the lining was thick unlike that of KCOT which aroused the suspicion of a different lesion. Histopathological analysis revealed a rare lesion – glandular odontogenic cyst. Treatment plan has to be modified and a more radical approach was taken under general anaesthesia. Intraoperatively, the lining mucosa was seen unusually thick (Fig. 4). Severe bone loss and cortical bone perforation was noticed in relation to mandibular anterior region (Fig. 5). The lining was adherent to the roots in these regions, so an intraoperative decision was taken to extract the involved teeth. The root apices of left canine and premolar and right second molar involved in the lesion were removed and the root canal treatment of these teeth was done at a later date. The entire lesion was surgically enucleated and peripheral osteotomy of 2–3 mm was done. As an additional precaution Carnoy's solution was applied as per the protocol for treatment of keratocystic odontogenic tumour. Wound was primarily closed after proper haemostasis. Histopathological examination of the enucleated soft tissue specimen followed the Kaplan's criteria and diagnosis was confirmed with glandular odontogenic cyst (Fig. 6). Postoperative period was uneventful (Fig. 7). At 2 weeks post op period a good healing was noted (Fig. 8). 6 months follow up radiograph revealed no evidence of recurrence and there was



Fig. 1. Intraoral photograph showing swelling extending from distal aspect of 35 to mesial aspect of 46.

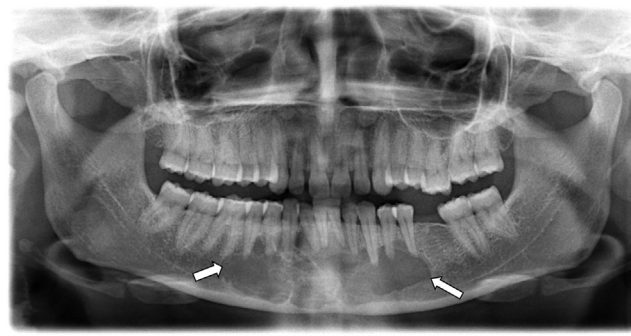


Fig. 2. Panoramic view showing large radiolucent lesion extending from distal aspect of 35 to mesial root of 46.



Fig. 3. Incisional biopsy from 44 to 46 region.



Fig. 4. Intraoperative view showing thick cystic lining.

initiation of bone formation.

3. Discussion

Glandular odontogenic cyst commonly occur in mean age group of 45–50 [5], rarely occurs before the age of 20. Commonest site of preference is anterior region in mandibular lesion. Size can range from as small as 1 cm to large lesions involving most of the jaw. Clinical feature relies mostly on size of lesion. Small lesion may be asymptomatic whereas large lesions may cause expansion which

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