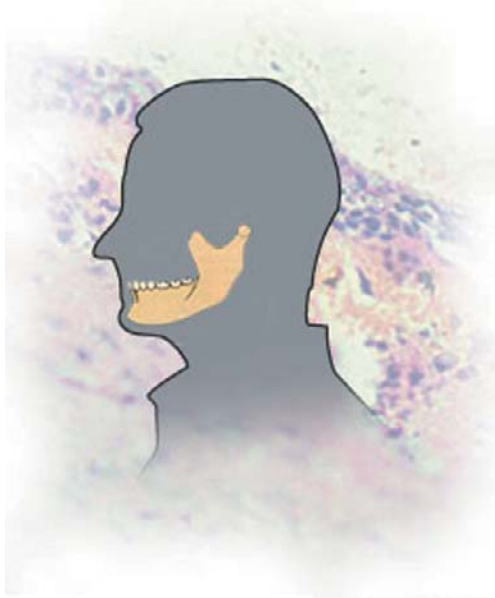


## A Large Glandular Odontogenic Cyst of the Mandible: Report of Case

Ümit Ertas, DDS, PhD; M.Cemil Büyükkurt, DDS, PhD  
Metin Güngörmüş, DDS, PhD; Ömer Kaya, DDS, PhD



### Abstract

Glandular odontogenic cyst (GOC) is generally considered uncommon, but several investigators claim there is a more frequent occurrence than previously thought. However these case reports lacked confirming data to validate their claim. On the other hand, it is possible that cases of central mucoepidermoid carcinoma or later periodontal cyst might be viewed as glandular odontogenic cyst. This is a report of a case of a 70-year old male who presented with a firm swelling in the right side of his edentulous mandible. Radiographic examination revealed a multilocular radiolucent lesion in the mandible extending from the right first premolar to the left second premolar and reaching the inferior mandible. Clinical findings, the health history, and microscopic examination of excised tissue confirmed the diagnosis of GOC. The lesion was excised and post-operative healing was uneventful.

**Keywords:** Glandular odontogenic cyst, GOC, odontogenic cyst, mucoepidermoid carcinoma, lateral periodontal cyst

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## Introduction

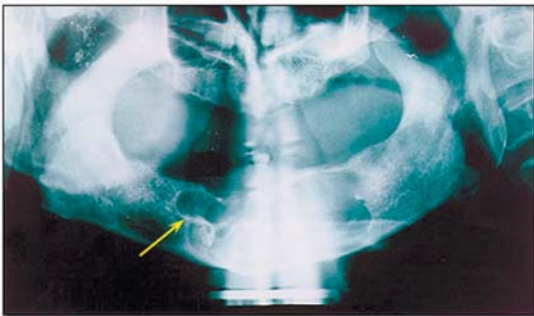
The glandular odontogenic cyst (GOC), or the sialo odontogenic cyst, described in 1987 by Gardner, et. al. shares some features with both the bothyroid odontogenic cyst and a mucous-producing salivary gland tumor.<sup>1</sup> The first relevant publications presenting a total of 10 cases were those of Padayache, Van Wyk, and Gardner, et. al.<sup>2</sup> Thirty-nine cases have been reported in the literature review that have been published.<sup>3</sup> The occurrence of the GOC might be considered uncommon. However, the cyst may not be as rare in light of the findings of other investigators who claim they encountered typical examples even though they fail to provide precise data other than radiographs and/or photomicrographs.<sup>4</sup> Furthermore, it is entirely possible those cases diagnosed as central mucoepidermoid carcinoma or lateral periodontal cyst might be reviewed as examples of GOC.<sup>4,5</sup>

## Report of Case

A 70-year old white man was referred in May 1998 to the Oral and Maxillofacial Surgery Clinic because of pain and swelling in the anterior region of the mandible. This swelling was causing him difficulty with wearing a lower total denture.

Physical examination showed a large swelling of the mandible approximately 5 x 2 x 2 cm in size creating a mandibular asymmetry. The overlying skin was normal in color and appearance, and the swelling was firm. Intraoral examination showed an edentulous mandible, alveolar resorption, and a shallow vestibule.

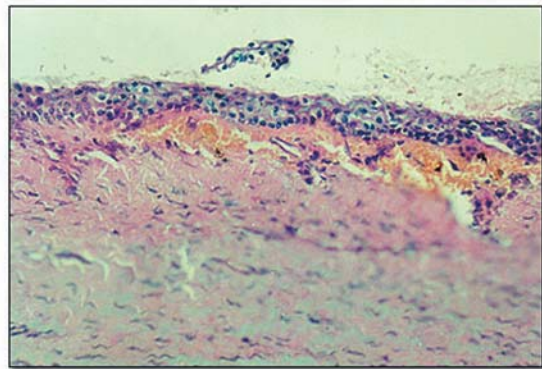
Radiographic examination revealed a multilocular radiolucent lesion in the mandible extending from the right first premolar to the left second premolar



**Figure 1.** The panoramic radiograph shows a multilocular radiolucent lesion in the mandible extending from the right first premolar to the left second premolar and reaching the inferior border of the mandible.

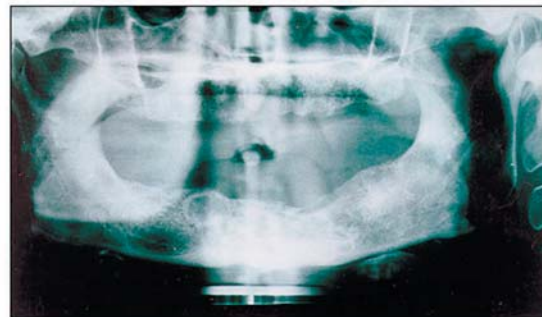
and reaching the inferior mandible. (Figure 1) A sterile 14-gauge needle was inserted intraorally to the left of the mandibular midline in order to aspirate the lesion. A small amount of yellowish-brown, serious fluid was obtained. The presumptive diagnosis was a cyst. A local anesthetic was administered and the cyst was surgically removed by enucleation. The wound was closed primarily and healing was uneventful. The lesion was sent to an oral pathologist for review.

Microscopic examination of the tissue showed multilocular cystic cavities infiltrating the adjacent bone. These cavities were lined by cuboidal to columnar epithelium with surrounding areas of normal bone and fibrous connective tissue. (Figure 2)



**Figure 2.** Microscopic examination of the tissue showed multilocular cystic cavities infiltrating the adjacent bone.

The healing process was uneventful, and there was no evidence of recurrence 4 years postoperatively. (Figure 3)



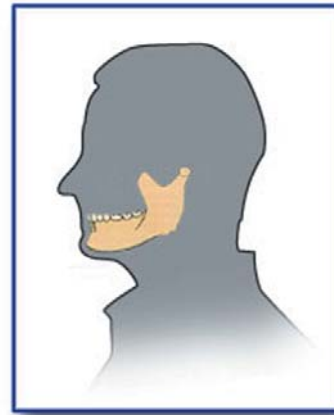
**Figure 3.** The healing process was uneventful, and there was no evidence of recurrence 4 years postoperatively.

## Discussion

The clinical aspects of the present case are consistent with those reported for most GOC. From the limited number of cases of GOC that have appeared in the literature, it seems these lesions have a predilection for men and for the mandible.<sup>6</sup> The most common form of clinical presentation is a slow growing swelling.<sup>7</sup> The GOC is usually localized intraosseously and may appear to be unilocular or multilocular radiographically.<sup>6,9</sup>

Histopathologically, a cystic cavity lined by a nonkeratinized, stratified, squamous epithelium varying in thickness was found with localized plaque-like thickenings of the epithelium. Present were variable numbers of mucus-secreting cells in the surface layer of the epithelium that sometimes formed crypt-like invaginations or gland-like areas. There was also a subepithelial fibrous tissue tendency along with multiple cysts, some of which were within adjacent bone marrow spaces. There was an absence of inflammation.<sup>8</sup>

The histologic similarity between the GOC and central mucoepidermoid carcinoma is significant, and it is highly possible that cases previously diagnosed as the latter were indeed GOC.



The GOC remains a rare lesion but should be considered in the differential diagnosis of unilocular and multilocular radiolucencies of the jaws.<sup>10</sup>

Several methods of treatment of GOC including curettage, enucleation, and local block excision have been used. In this case, the treatment was a careful and complete enucleation. Although there was no recurrence in the current case, 4 years after enucleation, it is imperative the patient be followed carefully.

## References

1. Regezi JA, Sciubba JJ :Oral Pathology (ed 3). Philadelphia, WB Saunders, 1999, pp 299-300.
2. Economopoulou P, Patrikiou A. Glandular Odontogenic Cyst of the Maxilla. Report of case. J Oral Maxillofac Surg. 1995 Jul;53(7):834-7. Review. No abstract available.
3. Ramer M, Montazem A, Lane SL , Lumerman H : Glandular Odontogenic Cyst Report of a case and review of the literature. Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 1997 Jul;84(1):54-7. Review.
4. Waldron CA, Koh ML. Central Mucoepidermoid Carcinoma of the Jaws. J Oral Maxillofac Surg. 1990 Aug;48(8):871-7. Review. No abstract available.
5. Kaugars GE. Botryoid Odontogenic Cyst. Oral Surg Oral Med Oral Pathol. 1986 Nov;62(5):555-9.
6. Patron M, Colmenero C, Larrauri J. Glandular Odontogenic Cyst: Clinopathologic analysis of three cases. Oral Surg Oral Med Oral Pathol. 1991 Jul;72(1):71-4. Review.
7. Binda JE, Kuepper R, Pulse C : Glandular Odontogenic Cyst: A case Report and Review of the Literature. Col Dent Rev. 1997 2:1.
8. Hussain K, Edmondson HD, Browne RM. Glandular odontogenic cysts. Diagnosis and treatment. Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 1995 May;79(5):593-602. Review.
9. Bhatt V, Monaghan A, Brown AM, Rippin JW. Does the Glandular odontogenic cyst require aggressive management? Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2001 Sep;92(3):249-51. No abstract available.
10. Chavez JA, Richter KJ. Glandular odontogenic cyst of the mandible. J Oral Maxillofac Surg. 1999 Apr;57(4):461-4. Review. No abstract available.

## About the Authors

**Ümit Ertaş, DDS, PhD**



Dr. Ertaş is an Assistant Professor in the Department of Oral and Maxillofacial Surgery in the Faculty of Dentistry at Atatürk University in Erzurum, Turkey.

**M.Cemil Büyükkurt, DDS**



Dr. Büyükkurt is a researcher in the Department of Oral and Maxillofacial Surgery in the Faculty of Dentistry at Atatürk University in Erzurum, Turkey.

**Metin Güngörmüş, DDS, PhD**



Dr. Güngörmüş is an Associate Professor in the Department of Oral and Maxillofacial Surgery in the Faculty of Dentistry at Atatürk University in Erzurum, Turkey. He is a member of the Turkish Oral and Maxillofacial Surgery Society.

**Ömer Kaya, DDS, PhD**



Dr. Kaya is a Professor in the Department of Oral and Maxillofacial Surgery in the Faculty of Dentistry at Atatürk University in Erzurum, Turkey.