

# 20-year Follow-up of Recurrent Glandular Odontogenic Cyst Mimicking a Periapical Lesion

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## Abstract

Periapical lesions usually are caused by root canal infection; nevertheless, other pathologies may eventually involve the tooth apex, making the correct diagnosis more difficult. Glandular odontogenic cysts (GOCs) are uncommon and, despite their cystic nature, may present an aggressive behavior and a high recurrence rate. This report describes a recurrent GOC mimicking a periapical lesion that was followed up for 20 years. A 45-year-old woman described tooth discomfort for several years in the anterior region of the mandible that was not exacerbated during eating or occlusion. Clinical examination revealed no signs of swelling, redness, or inflammation in the gingival or surrounding soft tissue. Nevertheless, periapical radiography showed a well-defined large radiolucent lesion in the periapical region of teeth #22, #23, #24, and #25. The pulp test confirmed that all these teeth were vital. An incisional biopsy was performed, and with the histopathological diagnosis of an odontogenic cyst, the lesion was enucleated surgically. After recurrence, the extensive periapical multilocular lesions were again surgically removed. Based on the microscopic findings, the final diagnosis was GOC. One year later, there were no signs of recurrence. GOCs associated with the root apex may mimic periapical inflammatory diseases. Clinical, radiographic, and histopathological findings are essential for the diagnosis of inconclusive radiolucent findings in the periapical region. Biopsy specimens should be sent to a specialized oral pathology laboratory. (*J Endod* 2017; ■:1–6)

## Key Words

Apical periodontitis, glandular odontogenic cyst, nonendodontic lesions, periapical cyst, periapical lesion

Periapical radiolucencies often characterize lesions of endodontic origin (1). In some cases, however, periapical lesions may result from other pathologies (2–5), leading to misdiagnosis.

Glandular odontogenic cysts (GOCs) are uncommon (6, 7) and, despite their cystic nature, may have an aggressive behavior and recurrences (8). GOCs were described by Padayachee and Van Wyk in 1987 (9), who suggested the term sialo-odontogenic cyst, and the following year Gardner et al (10) suggested the term GOCs. They commonly affect the anterior region of the mandible and usually patients in the fifth decade of life without sex predilection. Because of their persistent growth potential, GOCs may cross the midline, with pain and swelling found in a significant number of cases although some may be asymptomatic. Radiographs show GOCs as well-defined unilocular or multilocular radiolucent lesions involving the periapical region of various vital teeth (8). Thinning of the cortical plate and perforation are frequent (11). The radiographic differential diagnosis of GOCs includes radicular cysts, keratocysts, ameloblastomas, odontogenic myxomas, and simple bone cysts. Microscopically, GOCs may also resemble dentigerous and radicular cysts with mucous metaplasia and, more importantly, mucoepidermoid carcinomas (7, 11). The evident diversity of lesions that should be included in the clinical and histologic differential diagnosis of GOCs makes their identification difficult.

A description of the clinical presentation of a nonendodontic periapical lesion followed up in the long-term should aid clinicians in making differential diagnoses and decisions about unclear radiolucent findings. This study reports on the 20-year follow-up of a recurrent case of GOC that initially mimicked an endodontic periapical lesion.

## Case Report

In 1996, a 45-year-old white woman was referred to the Stomatologic Service of the School of Dentistry, University of Anápolis, Anápolis, Brazil. Her main complaint was “slight discomfort” in the anterior mandible for the past 3 months. The patient reported that the discomfort was constant, of the same intensity at all times, and was not exacerbated during eating or occlusion. There was no history of trauma or any recent dental

## Significance

Endodontists must be familiar with the diagnosis of radiolucent nonendodontic periapical lesions. Clinical, radiographic, and histopathological findings are essential for the correct diagnosis of a glandular odontogenic cyst in the periapical region.

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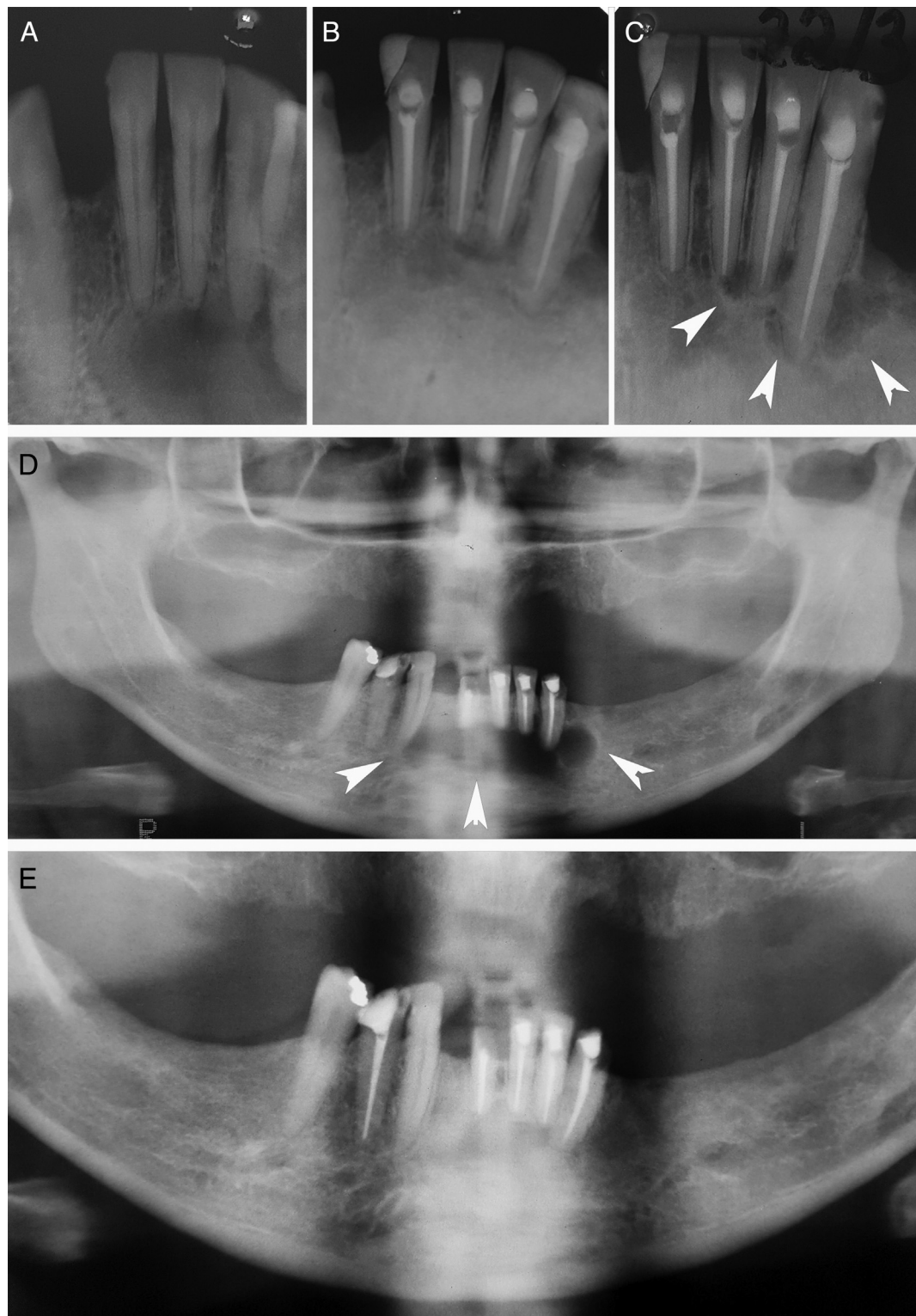
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## Case Report/Clinical Techniques

intervention. Intraoral examination revealed no signs of swelling, redness, or inflammation in the gingiva or surrounding soft tissue of the anterior region of the mandible. The teeth in the affected area showed no signs of crown cracks or restorative treatments, and the percussion

test was normal. Periapical radiography revealed a well-defined, large, radiolucent, apparently unilocular lesion in the periapical region of teeth #22, #23, #24, and #25 (Fig. 1A). Pulp vitality testing using tetrafluoroethane spray confirmed a positive response in all teeth associated with



**Figure 1.** (A) A periapical radiograph showing an osteolytic radiolucent unilocular lesion in the periapical region of teeth #22, #23, #24, and #25. (B) Three months after surgical curettage, a periapical radiograph showing signs of bone repair. (C) One year later, a multilocular radiolucent lesion is associated with the root apex of teeth #22, #23, #24, and #25 (arrowheads). (D) Two years after the previous radiographic examination, an extensive multilocular radiolucent lesion with scalloped borders is noted in the anterior mandible (arrowheads). (E) Three months after surgical enucleation, a radiograph showing signs of bone repair.

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