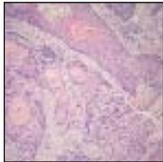


Gingival Squamous Cell Carcinoma Mimicking Periodontal Disease



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Gingival squamous cell carcinoma (GSCC) is relatively rare, representing less than 10% of oral cavity squamous cell carcinomas. Because of its proximity to the teeth and periodontium, the tumor can mimic tooth-related benign inflammatory conditions. In this article, a case of GSCC with clinical features very similar to those of periodontal disease in an 86-year-old nonsmoking woman is presented. Consequently, clinicians should be aware of this pathology to play an important role in the early detection of gingival cancer. (Int J Periodontics Restorative Dent 2011;31:97–100.)

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Squamous cell carcinoma of the gingiva (GSCC) is an uncommon oral tumor that is more likely to affect women.¹⁻⁴ In general, the main risk factors for oral SCC are tobacco and alcohol consumption.^{1,5} In contrast, these behaviors are only weakly associated with GSCC, and its etiology is not yet well established.^{1,5}

Clinically, GSCC usually appears as an exophytic mass with a granular, papillary, or verrucous surface, or it presents as an ulcerative lesion.⁶ Gingival pain is the most predominant symptom, but in the early stages, the disease may be asymptomatic.^{3,4} Because of its various appearances and similarity to common periodontal lesions, GSCC may be misdiagnosed.^{7,8} Therefore, a case of gingival carcinoma mimicking periodontal disease is presented.

Case report

An 86-year-old woman was referred to the Stomatology Department at A.C. Camargo Hospital, São Paulo, Brazil, for evaluation of a lesion located in the maxillary gingiva. During



Fig 1 Clinical (left) frontal and (right) occlusal views showing a proliferative and infiltrative gingival lesion with an irregular surface. The buccal and palatal gingiva of the maxillary right first premolar to central incisor were involved.

the anamnesis, the patient denied any tobacco and alcohol consumption. Her dental history revealed a 4-month periodontal treatment for suspected gingival hyperplasia related to nifedipine use (medication the patient was taking to treat hypertension). Subsequently, the disease progressed and an incisional biopsy was performed. The histopathologic analysis showed an infiltrative SCC.

On clinical examination, a hyperplastic and erythematous lesion was observed, presenting an ulcerative and verrucous surface. The tumor involved the buccal and palatal marginal gingiva of the maxillary right anterior teeth (first premolar to central incisor; Fig 1). Periapical radiography presented no significant periodontal or periapical bone alteration. The patient's hygiene was fair, and there was no mobility of the involved teeth.

Treatment consisted of a maxillectomy via block resection. The surgical defect was reconstructed with the use of an antebrachial skin flap. Microscopic evaluation of the specimen revealed invasive well-differentiated SCC (Fig 2), and the surgical margins were neoplasia-free.

Discussion

The majority of intraoral SCCs originate from nonkeratinized mucosa of the tongue and floor of the mouth. In addition, their main risk factors are cigarette smoking and alcohol consumption. In contrast, GSCCs are weakly associated with these behaviors¹⁻⁵ and have the greatest predilection for elderly women.¹ Most gingival tumors are

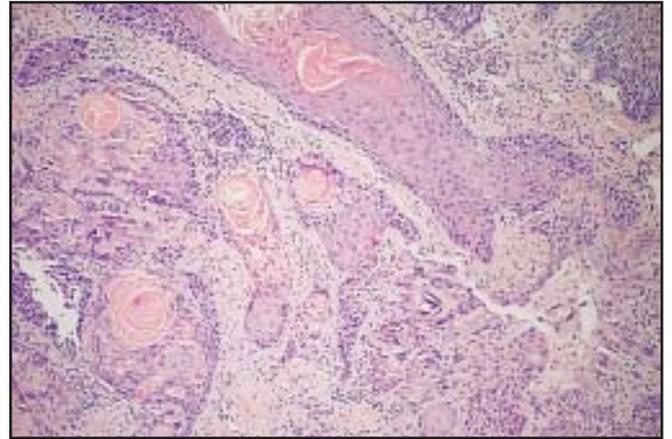
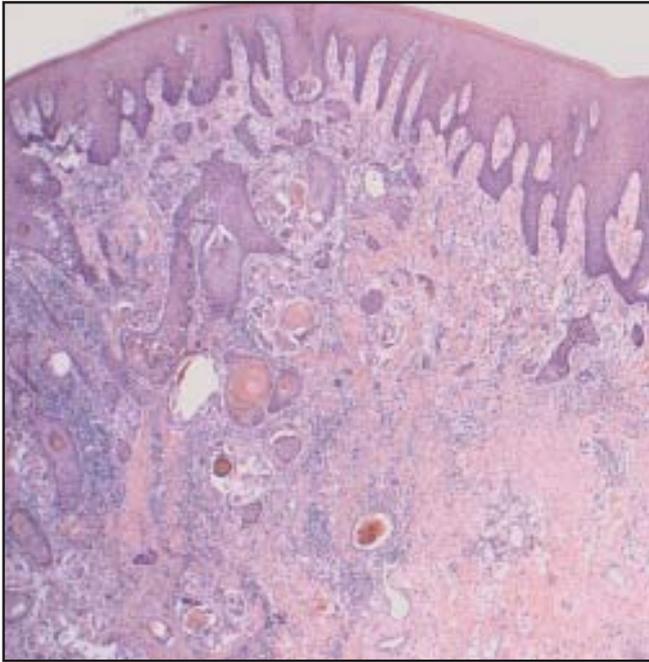


Fig 2 Histopathologic analysis. (left) Islands of invasive neoplastic epithelial cells were noted in the connective tissue (hematoxylin-eosin, magnification $\times 50$). (above) At higher magnification, keratin pearls were observed inside the connective tissue (hematoxylin-eosin, magnification $\times 100$).

well-differentiated and arise from keratinized mucosa of the mandibular posterior gingiva, in which the tumor may destroy the underlying bone structure, causing tooth mobility.⁹ In accordance with the epidemiologic data, the tumor in the present report affected an elderly woman without any tobacco smoking or alcohol drinking habits. However, the tumor was located in the anterior gingiva of the maxillary teeth, and no tooth mobility was observed.

Clinically, GSCC may be misdiagnosed because of its variable appearances.^{6,10} It usually appears as an exophytic mass with a granular, papillary, or verrucous surface, or it presents as an ulcerative lesion.⁶ However, in the early stages, the disease can also present as an erythematous lesion with a smooth surface.⁶

Gingival pain is the most predominant symptom, but in the early stages, the tumor may be asymptomatic.^{3,4} Moreover, the clinical similarity between gingival tumors and periodontal disease may increase the difficulty in diagnosing these tumors early. An important feature that could help arouse clinical suspicion of malignancy is related to the fact that periodontitis is normally generalized and GSCCs are localized. In this case, the patient presented with painless hyperplastic and erythematous gingiva with white and ulcerated areas that could resemble an inflammatory lesion affecting the periodontium. The biopsy performed after periodontal treatment was crucial to the diagnosis. Therefore, it is prudent to biopsy any lesion that remains longer than 2 weeks after removal of the suspected etiologic agents.⁵

Bone involvement in GSCC influences the presence of neck metastasis, therapy decisions, and prognosis of the disease.^{2,7} Since gingival carcinomas are neoplasms that invade bone directly, they represent one of the most serious oral cavity malignancies. Consequently, an important determinant of poor prognosis is the finding of an advanced stage of the disease at diagnosis.¹¹ Thus, early diagnosis has been emphasized to improve survival from GSCC.⁷

Conclusion

Dentists, and more specifically periodontists, should be aware of gingival lesions that do not heal with conventional treatment, an indicator for possible gingival cancer. Moreover, clinicians can play an important role in the early detection of gingival tumors.

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