Mucoepidermoid carcinoma diagnosed in orthodontic patients

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A detailed clinical examination is important for early diagnosis of oral lesions in every dental specialty, including orthodontics, particularly because these patients are constantly checked during orthodontic treatment. This report describes 2 men receiving orthodontic treatment and who had swelling on the hard palate diagnosed as mucoepidermoid carcinoma. Both patients received appropriate treatment and had a good prognosis because of the rapid recognition of these oral lesions by their orthodontists. (Am J Orthod Dentofacial Orthop 2010;138:349-51)

In dentistry, whatever the specialty, clinicians must be able to recognize normal oral structures, variations of normality, and lesions. The oral cavity is accessible, and most oral lesions can be easily identified. Salivary-gland tumors are relatively uncommon; consequently, a substantial number of these lesions are diagnosed as advanced disease.1 Mucoepidermoid carcinoma (MEC) is the most common malignant tumor of the major and minor salivary glands in adults and children.2

The prognosis of patients with MEC depends on several factors such as histologic grade, staging of the tumor, invasion, and involvement of adjacent structures. According to this information, it is possible to estimate the risks of recurrence and death.3,4 It is well known that patients with low-grade malignant tumors detected at the initial clinical stage have a better prognosis than do patients with advanced disease.3 However, several oral lesions, including malignant tumors, can be asymptomatic and thus delay an early diagnosis.

CASE REPORT 1

A 31-year-old man was referred to the oral diagnosis clinic of Piracicaba Dental School of the University of Campinas in Brazil by his orthodontist for evaluation of a painless swelling on the hard palate. The patient reported that the lesion had been present for about 2 months. On oral examination, swelling on the right side of the hard palate was observed. The swelling was soft and circular, measuring approximately 1.0 × 0.8 cm at its maximum dimension (Fig 1). No regional lymph node enlargement was detected in the extraoral examination. The panoramic radiograph showed no bone alteration. An incisional biopsy was taken, and the histopathologic analysis showed a glandular neoplasm composed of cellular proliferation of mucous, epidermoid, and intermediate cells with a prominent intracystic space, establishing the diagnosis of low-grade mucoepidermoid carcinoma (Fig 2). The patient was referred to a head and neck surgeon, who performed a wide local excision with adequate tumor-free margins. The patient has been in follow-up for about 5 years without signs of recurrence or metastasis (Fig 3).

CASE REPORT 2

Similarly, a 30-year-old man was referred by his orthodontist for analysis of a lump on the palate. During the intraoral examination, the swelling was observed on the left side of the hard palate with bluish coloration; it measured 1.2 cm in diameter (Fig 4). The patient reported that he did not know about the lesion, but sometimes he felt an itch on the palate. No regional lymph node enlargement was detected, and the panoramic x-ray showed no bone involvement. An incisional biopsy was performed, and the histopathologic analysis was compatible with low-grade mucoepidermoid carcinoma. Perineural invasion and mitotic figures were absent. The patient was referred to a head and neck surgeon, who surgically removed the tumor. The patient has been in follow-up for about
2 years, and no signs of recurrence or metastasis have been observed.

**DISCUSSION**

Salivary-gland tumors are relatively rare neoplasms, affecting predominantly the major salivary glands; most are benign. On the other hand, minor salivary-gland tumors are less common, and about 50% of them are malignant. Carcinomas of the salivary glands have an unknown etiology and can be aggressive when diagnosis is late. MEC, the most prevalent malignant epithelial salivary-gland neoplasm, comprises about 36% to 59% of all malignant oral salivary gland tumors. MEC can be characterized by higher incidence on the palate and predilection for the parotids and minor oral salivary glands. Sex predominance is controversial, and the mean age is approximately 45 years.

All dentists, whatever their specialty, can make a correct clinical examination and recognize oral lesions. Orthodontic treatments generally last for years, with patients returning monthly to see the orthodontist; thus, orthodontists have great responsibility in recognizing oral lesions in their initial stage. Consequently, orthodontists can contribute to early diagnosis, adequate treatment, and good prognosis, as occurred for these 2 men. Quintella et al emphasized the importance of orthodontists recognizing white oral lesions because these alterations can be a traumatic or premalignant lesion.

In addition to a correct clinical examination, a proper anamnesis with a complete medical history are extremely important and could prevent diagnostic mistakes. Complementary examinations such as panoramic
radiographs can be necessary in the diagnostic process. However, x-rays do not replace a perceptive clinical examination because the lesion might affect only soft tissue. In our 2 patients, the panoramic x-ray did not indicate any involvement or bone alteration. Fine-needle aspiration cytology is also helpful to diagnose salivary-gland tumors, and a biopsy is an important additional examination along with clinical impressions and radiologic studies.12

In addition to diagnosis, orthodontists can also participate in treatment and patient rehabilitation.13 Rinchuse et al.14 described the orthodontic treatment of patients who used bisphosphonates, a pharmacologic agent with important clinical implications in inhibition of tooth movement and jaw necrosis.14

CONCLUSIONS

Regular clinical follow-ups with adequate oral examinations are opportunities to detect oral lesions such as salivary-gland tumors in their initial stage, and a multidisciplinary approach is essential for obtaining treatment success and a good prognosis.

REFERENCES