

Oral squamous cell carcinoma in a young patient – Case report and literature review*

*Carcinoma epidermóide oral em paciente jovem – Relato de caso e revisão da literatura**

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Abstract: Squamous cell carcinoma is the most common malignant neoplasm of the oral cavity, usually affecting individuals over 50 years of age. It rarely occurs in patients who are less than 40 years old (1 to 6%). This report describes a case of squamous cell carcinoma, staged T2N1M0 (stage III), involving the lateral border and dorsal surface of the tongue of a 25-year-old white female patient, with no smoking or drinking habits. Initial tumor presentation was of deep ulceration and intense pain. This report focuses on the etiological factors, differential diagnosis and prognosis related to the case. Additionally, a brief literature review regarding squamous cell carcinoma in young patients is also included.

Keywords: Carcinoma, squamous cell; Precancerous conditions; Tongue neoplasms

Resumo: O carcinoma epidermóide constitui a neoplasia maligna mais comum da boca, afetando principalmente indivíduos com mais de 50 anos. Sua ocorrência em jovens, com idade inferior a 40 anos, é rara (1 a 6% dos casos). Descreve-se um caso de carcinoma epidermóide acometendo dorso e borda da língua, classificado como T2N1M0 (estádio III), em paciente do sexo feminino, leucoderma, 25 anos, não-fumante e não-etilista. A apresentação inicial do caso era de ulceração profunda com dor intensa. Fatores predisponentes locais e gerais, diagnóstico diferencial e prognóstico são discutidos, bem como a revisão da literatura referente a diversos aspectos do carcinoma epidermóide em jovens.

Palavras-chave: Carcinoma de células escamosas; Condições pré-cancerosas; Neoplasias da língua

INTRODUCTION

Squamous cell carcinoma (SCC) represents from 90% to 95% of all malignant neoplasms of the oral cavity, being located mainly in the tongue, especially in the lateral posterior border. It generally affects men aged over 50, most of them with a history of high tobacco and alcohol consumption.^{1,2} SCC rarely occurs in the young, i.e., patients under the age of 40. In this group, real influence of carcinogenic fac-

tors is widely debated, mainly regarding alcohol and tobacco. Some authors^{2,3} argue that these substances, recognized as carcinogenic in older patients, may also be related to SCC etiology in younger ones. Others,^{4,5} however, report that many of those patients never smoked or drank alcoholic beverages, or, still, that duration of exposure to these agents would be too short to induce malignant transformation.

Received on August 11, 2003.

Approved by the Consultive Council and accepted for publication on May 05, 2006.

* Work done at Universidade de São Paulo - USP - Campus São Paulo, (SP). Patient first seen and under clinical follow-up at Faculdade de Odontologia da Universidade de São Paulo - USP - São Paulo (SP), Brazil.

Conflict of interest: None

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Loco-regional recurrences and SCC prognosis in youngsters are also controversial matters. Patients belonging to younger age range groups are considered by some authors^{3,6,7} to bear more aggressive diseases when compared to population in the older age ranges. Other investigators, nevertheless, have found a similar prognosis for both evaluated age groups.^{1,8}

Clinical aspect of oral mucosa SCC seems not to present distinguishing features for any age range.¹ Classical feature of the lesion is a persistent ulceration with hardening and peripheral infiltration, either being associated with vegetations, red or whitish staining, or not. Predominant location is lateral border of the tongue or oral floor.

The importance of this report lies on the rarity of a SCC in a young patient (25 years old) and in the study of etiological and differential diagnosis aspects associated to such disease in this age range.

CASE REPORT

Twenty five-year-old white female patient, housemaid, coming from and living in Alagoas (Northeastern Brazil), came to the Universidade de São Paulo Dentistry School Outpatient Clinic (FO/USP) in May 2002 with the complaint of intense pain associated to a tongue lesion, with duration of two months. She reported that, at the onset of pain, sought for the public health services (March 2002), where, after detection of the lesion, a biopsy was performed, with the result of a chronic unspecific inflammatory process. From this hospital, the patient was referred to FO/USP. According to her own report, there had been a reddish spot for ten years in the location where afterwards the current lesion developed. Upon physical examination, an extensive ulceration was observed, with largest diameter of 2.5 cm, irregular borders, necrotic background (approximately 8 mm deep), surrounded by an erythematous atrophic area, located at dorsum and left lateral border of the tongue (Figure 1). Whitish areas could be observed in the periphery of the ulceration. There was hardening of borders and surrounding areas, indicating large infiltration.

A cervical lymph node was detected on the left, fix and not painful. Medical history of the patients had no important episodes. Patient denied history of smoking, ethanol consumption or any other harmful habits. Her family history registered a diabetic aunt and a grandmother who had died of uterus cancer. In the period the patient was in the hospital, several laboratorial exams were performed, such as complete blood count, toxoplasmosis, anti-HIV and cytomegalovirus serology. Positivity was noted only for cytomegalovirus, reactant for IgG. Patient had been using antibiotics and analgesics for two weeks.



FIGURE 1: Lesion in tongue dorsum and lateral border, exhibiting deep and necrotic ulceration, with large infiltration in surrounding tissues

Formulated diagnostic hypotheses were those of SCC, histoplasmosis and traumatic eosinophilic granuloma, with the performance of another biopsy. Anatomopathologic result was of squamous cell carcinoma (Figure 2), the neoplasm classified as T2N1M0 (stage III), based on mouth cancer TNM classification criteria of the UICC/AJC (American Joint Committee for Cancer Staging).⁹

Patient was referred to the Oncology Department at Hospital das Clínicas (USP) for treatment, which consisted of surgery, namely total glossectomy with bilateral cervical node dissection. After surgery, treatment was completed with simultaneous radiation therapy and chemotherapy, for a two-month period. Patient is currently under periodic control, including a follow-up by a speech therapist and a nutritionist.

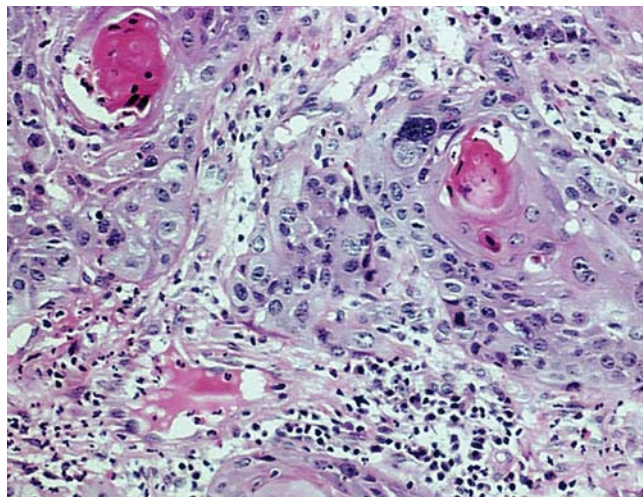


FIGURE 2: Microphotography of the histopathological examination, showing intense pleomorphism and great number of mitoses of epithelial cells (hematoxylin-eosin, 200x)

DISCUSSION

SCC is not a frequent event in young patients. Only one to 6% of SCC cases occur in patients under the age of 40, being the occurrence in children and adolescent extremely rare.^{2,5,7} Characterization of young patients bearing head and neck SCC is arbitrary. Most authors consider young patients with SCC as those under 40 years of age,^{1,5,6} even though others use as reference ages under 20 or 30 years.^{3,4} Age average in cases registered in literature as young bearers of SCC ranges from 30.8 to 34.2, with the largest part of patients belonging to male gender.^{1,5,8}

Site of greatest occurrence of oral cancer in the group of patients under 40 is the tongue, similarly to what is observed in the older range patients.⁵ Clinical manifestation of SCC in young patients has no distinguishing features from that of the older; nevertheless, literature reports that many clinicians tend not to include SCC as a diagnostic hypothesis in young patients, simply because such disease is not compatible to age range.⁷ In these case, differential diagnosis normally includes deep mycoses,¹⁰ primary syphilis cancrum and tuberculosis.¹¹

A widely debated aspect of SCC in young patients regards etiological factors associated to the development of the disease. This interest is based on the fact that risk factors (smoking and drinking) that are usually observed in elderly patients are not verified in young ones.^{4,5} Despite the demonstration by some studies^{2,3} that the same etiological factors are present for both age ranges, the possibility of the existence of a carcinogenic action of tobacco and alcohol in the young patient is low, given that in this group exposure time would be relatively short for the establishment of a cause-effect relation. Thus, other factors should be investigated in order to explain SCC etiology in young patients, among which are included: genetic predisposition, previous viral infection, feeding habits, states immunodeficiency, occupational exposure to the carcinogenic factor, socioeconomic condition and oral hygiene.²

In the present report, patient was in a very young age range (25 years) and did not report any smoking or drinking habits. Likely etiologic factors associated with past medical history were not significant. As family history, there was a single case of cancer, that of her grandmother, who suffered from uterus cervical cancer, making the hypothesis of genetic predisposition unlikely. The most elucidating factor for a justification of SCC in this patient was the exis-

tence of a supposedly pre-malignancy in the site where, afterwards, the neoplasm developed. Presence of a precursor lesion with a three year duration, previous to the appearing of a tongue lateral border SCC was also described by Torossian et al.⁷ in a thirteen-year-old child. Still concerning the etiology of the case, other suggested hypothesis was citomegalovirus infection. Such possibility, however, is only speculative, for citomegalovirus Positivity was only serologic, with no indicative signs of an oral infection by this virus in the patient. Moreover, viral types most often associated with SCC are the Epstein-Barr viruses¹² and several types of human papiloma virus (HPV).¹³

Regarding differential diagnosis of the case, besides SCC, were included as hypotheses traumatic eosinophilic granuloma and hystoplasmosis. The hypothesis of traumatic eosinophilic granuloma was considered due to patient's age and clinical features, even though central necrosis in this case was not very typical. As to hystoplasmosis, although the lesion was compatible with this infection, a medical history with no suggestive symptoms of this disease and a good general physical state of the patient restrained this hypothesis.¹⁴

There is still in literature a certain debate regarding SCC prognosis in young patients. Some authors consider the lesion to be particularly aggressive in the young, thus with a worse prognosis when compared to that of older patients. Some studies have shown that young patients tend to present a greater loco-regional recurrence rate and a smaller survival rate,^{6,7} whereas others have described a similar prognosis for both age ranges.^{1,8} Therefore, some authors have indicated a more aggressive treatment for SCC in young patients,^{6,7} while others recommend that treatment be institutes in a similar fashion to those in patients of older age.¹⁵

Treatment adopted for this case followed the recommended standards for tongue SCC, regardless of patient age, consisting of surgery with bilateral neck emptying, followed by radiation and chemotherapy. Patient is still under periodic monitoring at the outpatient clinic and the hospital where treatment was carried, also receiving follow up by speech therapy and nutrition.

Oral SCC is rare in young patients, and observation of cases such as that described here should involve a careful clinical study, along with an analysis of etiologic factors associated with the disease. Proper therapy is also equally important in the care of these patients. □

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