



Squamous cell carcinoma from oral lichen planus: a case report of a lesion with 28 years of evolution

Wanessa da Silva Silveira¹, Ezequiel Gregolin Bottezini¹, Maria Salete Linden¹, Isadora Rinaldi¹,
Luiz Renato Paranhos², João Paulo de Carli¹, Micheline Trentin¹, Pâmela Letícia dos Santos³

¹Department of Dentistry, University of Passo Fundo, Passo Fundo,

²Department of Dentistry, Federal University of Sergipe, Lagarto,

³Department of Dentistry, Sagrado Coração University, Bauru, Brazil

Abstract (J Korean Assoc Oral Maxillofac Surg 2017;43 Suppl 1:S14-18)

Lichen planus (LP) is a relatively common mucocutaneous disease with autoimmune etiology. Considering its malignancy potential, it is important to define the correct diagnosis, treatment, and clinical follow-up for patients with LP so that the disease is not diagnosed late, thus hindering the chances of curing the disease. This study aims to describe a clinical case of oral squamous cell carcinoma, potentially originated from LP. The patient is undergoing clinical and histopathological follow-up. A 64-year-old Caucasian male patient presented with a proliferative verrucous lesion on the tongue and sought treatment at the School of Dentistry, University of Passo Fundo (UPF), Passo Fundo, Brazil. He claimed the lesion had been present since 1988, and had been initially diagnosed as “oral lichen planus.” The physical exam presented three diagnostic hypotheses: plaque-like oral LP, verrucous carcinoma, and squamous cell carcinoma. After incisional biopsy and histopathological analysis, squamous cell carcinoma was diagnosed, probably originating from oral LP. The case study shows that malignancy from oral LP is possible, which justifies periodic clinical and histopathological follow-up, as well as the elimination of risk factors for carcinoma in patients with oral LP.

Key words: Squamous cell carcinoma, Oral lichen planus, Oral cancer, Mouth neoplasms

[paper submitted 2017. 2. 10 / revised 2017. 5. 11 / accepted 2017. 5. 26]

I. Introduction

Lichen planus (LP) is a chronic mucocutaneous disease characterized by outbreaks and inactivation; it is also an immunological disorder with unknown causal factors¹. Stress is the most significant etiological factor for LP. While exacerbation of the lesion by psychological stress and anxiety has not yet been proven, prolonged emotional stress has been shown to enhance the initiation and clinical expression of such a lesion².

Considering that initial LP and carcinoma lesions are most

often asymptomatic, early diagnosis is hindered, and the manifestations can be being overlooked by the patient or health professionals³. Oral biopsy is recommended to confirm the malignancy suspicion of precancerous lesions such as leukoplakia, ulceration, erythroplakia, or LP⁴.

Oral squamous cell carcinoma is responsible for more than 90% of all oral cancers and is one of the most aggressive diseases worldwide⁵. The individuals most affected by oral cancer are male, Caucasian, and over 40 years old; the sites most often affected are the tongue and the floor of the mouth⁶.

The present work aims, through a brief literature review, to present a comprehensive view of squamous cell carcinoma, with the goal of introducing dentists to better diagnostic methods for such lesions. This study also aims to highlight the importance of periodic clinical follow-up of precancerous lesions such as LP by establishing a logical sequence of diagnosis and clinical management of a patient with oral squamous cell carcinoma, probably originating from LP.

Pâmela Letícia dos Santos

Department of Dentistry, Sagrado Coração University, Irmã Armanda, 10-50 Jardim Brasil, Bauru 17011-160, Brazil

TEL: +55-14-21077000 FAX: +55-14-21077000

E-mail: pamelalsantos@hotmail.com

ORCID: <http://orcid.org/0000-0003-1734-4187>

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II. Case Report

A 64-year-old Caucasian male patient with high levels of stress sought dental assistance at the School of Dentistry, University of Passo Fundo, Passo Fundo, Brazil, in 2014. He asked for assessment of a tongue lesion, which had been significantly increasing in size for approximately 6 months.

In the dental visit, he reported pain when swallowing and a lesion in his tongue, which had been diagnosed in 1988 through a histopathological exam as “oral lichen planus.” The patient was not able to recall the place at which the exam was



Fig. 1. Initial clinical aspect of the vegetating lesion in the dorsum of the tongue.

Wanessa da Silva Silveira et al: Squamous cell carcinoma from oral lichen planus: a case report of a lesion with 28 years of evolution. *J Korean Assoc Oral Maxillofac Surg* 2017



Fig. 2. Initial clinical aspect of the vegetating lesion in the belly of the tongue.

Wanessa da Silva Silveira et al: Squamous cell carcinoma from oral lichen planus: a case report of a lesion with 28 years of evolution. *J Korean Assoc Oral Maxillofac Surg* 2017

performed; however, he affirmed that the lesion remained the same over the years. Dental follow-up was not performed because the patient did not seek assistance again.

During anamnesis, the patient asserted that he does not consume and never has consumed alcoholic beverages, and that he does not smoke and has never smoked. The first biopsy, performed in 1988, showed bilateral lesions in the jugal mucosa, edge, and dorsum of the tongue. These lesions presented as erythematous depapillated areas associated with leukoplakic areas in the form of grooves that caused burning, with a 3-year evolution. The result of the histopathological exam was “erosive oral lichen planus.”

The physical exam in 2014 revealed a lesion on the left edge and in the posterior area of the dorsum of the tongue, extending to the floor of the mouth. The lesion was approximately 10 cm along its largest axis and showed aspects of ulcerated vegetation. It also presented a leukoplakic and erythematous surface and firm consistency, which are clinically suggestive of a malignant lesion of the epithelial lining whose origin is related to oral LP.(Fig. 1, 2) According to the clinical classification of oral and oropharyngeal cancer stages described by the American Cancer Society (2015), the patient was stage III, T3, M0, N0.

The possible diagnosed were erosive oral LP, squamous cell carcinoma, and verrucous carcinoma. Considering the potential for a malignant lesion, we chose to perform an incisional biopsy of the lesion at the edge of the tongue.

The surgical procedure was performed under local anesthesia around the lesion with mepivacaine and 1:100,000



Fig. 3. Anesthetic infiltration before incisional biopsy.

Wanessa da Silva Silveira et al: Squamous cell carcinoma from oral lichen planus: a case report of a lesion with 28 years of evolution. *J Korean Assoc Oral Maxillofac Surg* 2017

adrenaline (DFL, Rio de Janeiro, Brazil).(Fig. 3) A simple interrupted suture was initiated at the upper region of the lesion for traction (Fig. 4, 5), favoring a circular incision around the lesion.(Fig. 6) Lastly, suturing was performed.(Fig. 7)

Immediately after the operation, an analgesic was prescribed for pain. In addition, the patient was required to use topical 0.12% chlorhexidine digluconate mouthwash three times a day for seven days after his oral hygiene routine.

The histopathological exam of the surgical piece showed a squamous cell carcinoma lesion grade I (well differentiated).

Upon diagnosis, the patient was referred to an oncological team including a head and neck surgeon, an oral and maxillofacial surgeon, an oncologist, and a speech therapist. The surgery to remove the lesion has not yet been performed because the patient is under chemotherapy and radiotherapy to reduce the lesion size. The patient is also under clinical follow-up with no signs of recurrence. Moreover, after approximately 6 chemotherapy sessions and 35 radiotherapy sessions, significant improvement can be observed, with characteristics of proper healing and absence of papillae on the left lateral edge of the tongue.(Fig. 8-10) Thus, due to the significant lesion

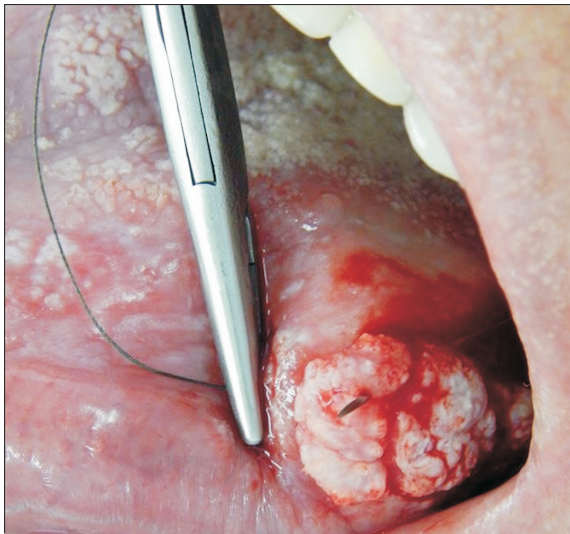


Fig. 4. Collection of a lesion sample with needle and suture thread.
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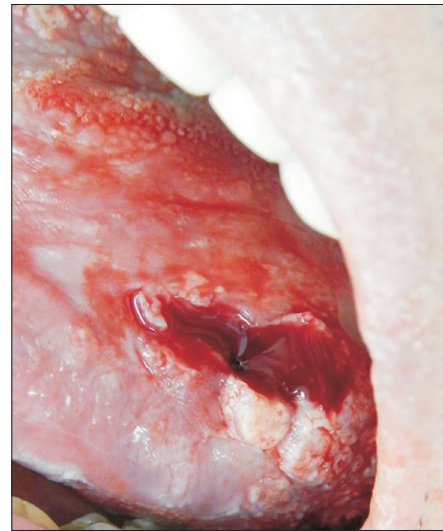


Fig. 6. Scaphoid-shaped surgical site immediately after biopsy.
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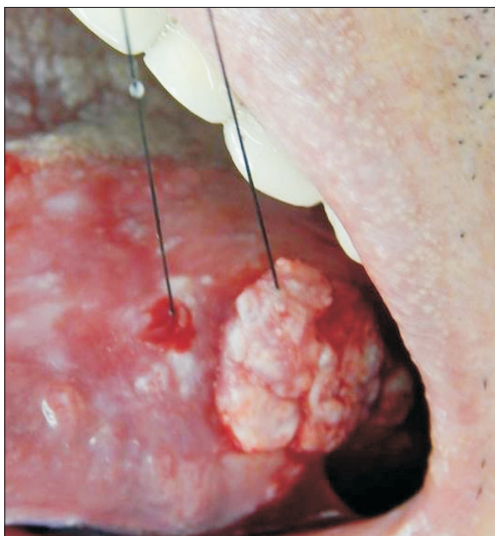


Fig. 5. Lesion with suture thread.
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Fig. 7. Suture performed in the incisional biopsy area.
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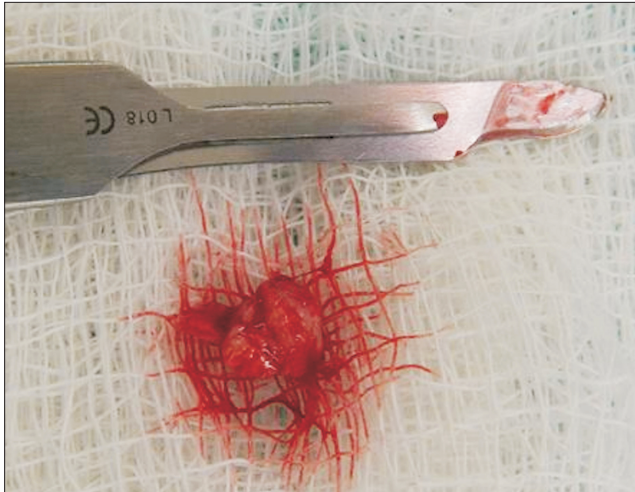


Fig. 8. Aspect of the lesion after incisional biopsy.
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Fig. 9. Aspect of the lesion 2 years after incisional biopsy, 6 chemotherapy sessions, and 35 radiotherapy sessions.
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regression caused by radiotherapy and chemotherapy, the medical team did not recommend complete excision of the lesion.

III. Discussion

The focus of the present study was to highlight, through a clinical case, the importance of the potential origin of oral squamous cell carcinoma in an LP lesion⁷⁻⁹. In such a lesion, the epithelium covering the LP becomes more susceptible to oncogenic factors.

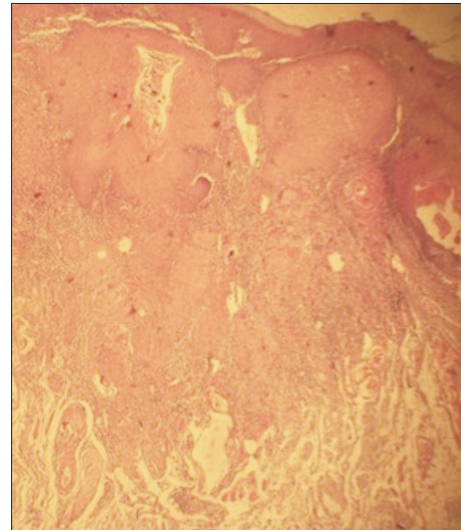


Fig. 10. Grade I squamous cell carcinoma composed of numerous atypical pleomorphic cells and keratin pearls (H&E staining, x100).

Wanessa da Silva Silveira et al: Squamous cell carcinoma from oral lichen planus: a case report of a lesion with 28 years of evolution. J Korean Assoc Oral Maxillofac Surg 2017

The rate of transformation of LP in squamous cell carcinoma in individual studies has ranged from 0% to 3.5%. There might be a higher frequency of malignancy in some sites, such as the tongue, followed by the oral and gingival mucosa⁷. These findings correspond with those of the present study, considering that the lesion studied was located on the edge of the tongue. The patient described here was a 64-year-old Caucasian man¹⁰, consistent with the observation that squamous cell carcinoma is more prevalent in Caucasian men over 50 years. However, the present study disagrees with the conclusion that LP lesions are more common in women¹¹.

In the present case, the lesion initially presented (in 1988) as plaques and white patches, clinical aspects that are characteristic of LP lesions. Later (2014), the lesion presented as a vegetation with leukoplakic and erythematous areas on the edge of the tongue, suggestive of a malignant lesion. This was confirmed by the histopathological exam. Such lesion evolution indirectly confirms the evolution of the initial LP diagnosis for squamous cell carcinoma, which potentially presented as vegetation on the edges of the tongue¹².

The lesion described in the present work involved the edge of the tongue, whereas squamous cell carcinoma and LP largely affect the tongue itself¹³⁻¹⁵.

In 2014, the clinical aspect suggesting malignant lesion led to the performance of an incisional biopsy, whose tissue sample was later forwarded for histopathological exam. Definitive diagnosis of squamous cell carcinoma was performed

by biopsy, followed by an anatomopathological exam¹⁶.

The main etiological factors of oral squamous cell carcinoma are tobacco, alcohol, and constant stress¹⁷. Out of these factors, the patient described here only presented stress, which possibly influenced the occurrence of LP and the later occurrence of squamous cell carcinoma. Stress can act as a triggering agent².

For the patient described here, the squamous cell carcinoma was treated through surgery, radiotherapy, and chemotherapy¹⁸. It is worth noting that, in the present study, the patient quit dental follow-up for 26 years. If the patient had continued dental follow-up via periodic visits, followed by biopsies and routine histopathological exams, the lesion might not have progressed to squamous cell carcinoma. Early detection of premalignant lesions and oral cancer is essential for achieving favorable prognoses¹⁹.

In conclusion, considering that oral LP is a relatively common disease with cancerization potential, the present study highlights to the scientific community the need for early treatment and follow-up of precancerous oral lesions. Moreover, this work reports the main clinical and histopathological characteristics of oral squamous cell carcinoma, a lesion with high rates of morbidity and mortality.

Conflict of Interest

No potential conflict of interest relevant to this article was reported.

ORCID

Wanessa da Silva Silveira, <http://orcid.org/0000-0001-9848-3917>

Ezequiel Gregolin Bottezini, <http://orcid.org/0000-0001-7863-567X>

Maria Salete Linden, <http://orcid.org/0000-0001-6501-1710>
Isadora Rinaldi, <http://orcid.org/0000-0003-1864-5985>

Luiz Renato Paranhos, <http://orcid.org/0000-0002-7599-0120>

João Paulo de Carli, <http://orcid.org/0000-0002-4705-6226>

Micheline Trentin, <http://orcid.org/0000-0001-5040-3578>

Pâmela Leticia dos Santos, <http://orcid.org/0000-0003-1734-4187>

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