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**PREVIOUS SURGICAL APPROACH FOR THE TREATMENT OF CARCINOGENIC
LESION ON THE LATERAL BORDER OF THE TONGUE: A CASE REPORT**

Abordagem cirúrgica prévia para o tratamento de lesão carcinogênica na borda
lateral da língua: relato de caso

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Michelly Alves Manoel

Nilton Lins University
Orcid.org/0000-0002-7259-8844

Jefferson Pires da Silva Júnior*

Nilton Lins University
Orcid.org/0000-0001-6977-1629

Jorge Henrique de Sousa Martins

Nilton Lins University
Orcid.org/0000-0003-2315-2464

Pedro Paulo Lopes de Almeida

Nilton Lins University
Orcid.org/0000-0003-2217-9999

Ana Paula Ferreira de Souza

Federal University of Amazonas
Orcid.org/0000-0003-2217-9999

Flávio Lima do Amaral Silva

Nilton Lins University
Orcid.org/0000-0002-4182-3316

Jeconias Câmara

Federal University of Amazonas
Orcid.org/0000-0001-7260-0900

Anderson Moreira de Medeiros

Nilton Lins University
Orcid.org/0009-0002-5142-157X

*Autor correspondente: Dentistry professor. Nilton Lins University, Manaus, AM, Brazil. E-mail: jefferson.junior@uniltonlins.edu.br | ORCID - <https://orcid.org/0000-0001-6977-1629>.

ABSTRACT

That said, the objective of the present study is to address the diagnosis of SCC characterized in clinical and histopathological aspects, as well as to emphasize the importance of the diagnosis and treatment for these conditions. A 53-year-old female, melanoderma, attended the Nilton Lins University Dental Clinic complaining of the presence of a large blister on the side of the tongue. In the intraoral clinical examination, the presence of an extensive bullous lesion with cleft characteristics was highlighted, positioned on the right lateral border of the tongue. In view of the aspects presented, the hypothesis of pathology with malignant characteristics similar to carcinoma was considered. Based on this hypothesis, an incisional biopsy was performed and sent to histopathology to confirm the suspicion of a malignancy. The surgical specimen was then immersed in a container containing 10% formaldehyde and sent to the Department of Pathology and Legal Medicine of the Federal University of Amazonas School of Medicine for histopathological analysis. After histopathological confirmation, the definitive diagnosis was well-differentiated squamous cell carcinoma. Therefore, the case addressed highlights the importance of early diagnosis of lesions in the oral cavity, increasing the chances of a favorable prognosis. The hypothesis was confirmed through the combination of clinical and histopathological characteristics, guiding the management and choice of the most appropriate form of treatment.

Keywords: Carcinoma, Squamous Cell. Neoplasm. Pathology, Oral. Diagnosis Differential.

RESUMO

O objetivo do presente estudo é abordar o diagnóstico do Carcinoma de Células Escamosas (CEC) caracterizado nos aspectos clínicos e histopatológicos, bem como enfatizar a importância do diagnóstico e tratamento para essas condições. Paciente, gênero feminino 53 anos, melanoderma, compareceu à Clínica Odontológica da Universidade Nilton Lins queixando-se da presença de uma grande bolha na lateral da língua. No exame clínico intraoral, destacou-se a presença de uma extensa lesão bolhosa com características de fenda, posicionada na borda lateral direita da língua. Diante dos aspectos apresentados, considerou-se a hipótese de patologia com características malignas semelhantes ao carcinoma. Com base nessa hipótese, foi realizada uma biópsia incisional e encaminhada para histopatologia para confirmar a suspeita de malignidade. A amostra cirúrgica foi então imersa em um recipiente contendo formaldeído a 10% e enviada ao Departamento de Patologia e Medicina Legal da Faculdade de Medicina da Universidade Federal do Amazonas para análise histopatológica. Após a confirmação histopatológica, o diagnóstico definitivo foi carcinoma de células escamosas bem diferenciadas. Portanto, o caso abordado destaca a importância do diagnóstico precoce de lesões na cavidade oral, aumentando as chances de um prognóstico favorável. A hipótese foi confirmada através da combinação de características clínicas e histopatológicas, orientando o manejo e a escolha da forma de tratamento mais adequada.

Descritores: Carcinoma de células escamosas; Neoplasia; Patologia oral; Diagnóstico diferencial.

INTRODUCTION

Oral cancer is a common pathology characterized as a malignant epithelial neoplasm, originating from transmissible infections or squamous cells¹. Carcinoma is a malignant tumor of cellular origin, influenced by intrinsic factors, whether they are because of genetics, diet and systemic status or extrinsic through the consumption of substances such as tobacco and alcohol, factors that determine the involvement of pathological development, and there may be other subclassifications². How much its evolution is well-differentiated as squamous cell carcinoma, also called SCC, denotes its aggressive characteristics with a gradual evolution process, being one of the most common odontogenic tumors in the oral cavity³.

SCC is described from epithelial disruption with ulcer development, located parallel to the epithelium in the center or peripheral injured area⁴. Most of them have a hard base and consistency, showing a granular background with edges that surround the lesion and may only be infiltrative or destructive when it generates a deep lesion and tissue loss^{5,6}. Histologically, they present different degrees of cell differentiation, areas of individual keratinization with the formation of keratin “pearls,” lining the epithelium with the presence of islands and invasive cords of squamous cells and constant chronic inflammatory infiltrate with gaps between the underlying tissues⁷.

The biopsy is a surgical maneuver intended to complement the clinical examination and may be excisional when there is total removal of the pathological content and incisional in cases of partial removal due to suspicion of malignancy⁸. Faced with the process of development of the pathology, the forms of treatment chosen start with the response of the histopathological report through the biopsy⁴. Based on the biopsy result, the most appropriate form of treatment is chosen, ranging from: surgical resections associated with drug therapy, combined or not with chemotherapy and radiotherapy processes, requiring long-term follow-ups^{8,9}.

That said, the objective of the present study is to address the diagnosis of SCC characterized in clinical and histopathological aspects, as well as to emphasize the importance of the diagnosis and treatment for these conditions.

CASE REPORT

A 53-year-old female patient, melanoderma, attended the Nilton Lins University Dental Clinic, reporting as her main complaint the presence of a large blister on the side of her tongue. An informed consent form was signed and the treatment began.

During the anamnesis, the patient reported having a habit of biting, an action that acts as a relief from her daily stress. She reported that the lesion was slow growing with approximately five years of evolution. She denied having systemic alterations, chronic diseases and allergies, however, she is a smoker and drinks alcohol.

In the intraoral clinical examination, clinically satisfactory restorations, inactive caries lesions without justification of intervention, and stable oral hygiene were verified. In addition, the presence of an extensive lesion with the characteristic of a slit in the center of the anomaly was highlighted, not presenting uniformity, positioned on the right lateral border of the tongue with a sessile base and fibrous consistency (Figure 1). In view of the extrinsic factors presented, in association with the clinical aspects of an exophytic lesion with a nodular surface and the presence of a centralized cleft, which was painless with a five-year evolution, the diagnostic hypothesis of pathology with malignant characteristics similar to SCC was considered. Based on the hypothesis, the initial treatment plan chosen was incisional biopsy and it was sent to histopathology to confirm the suspicion of a malignancy.

Figure 1: Extensive nodular lesion located in right lateral border of tongue.



Initially, intraoral antiseptics were performed with 0.12% chlorhexidine digluconate through mouthwash for 1 minute, and extraorally using topical 2% chlorhexidine digluconate with subsequent assembly of the operative field. After assembly, 2% lidocaine anesthetic salt associated with epinephrine at a concentration of 1:100,000 were administered infiltratively, 1cm away from the peripheral area of the lesion (Figure 2). When operative silence was achieved, the edge of the lesion closest to the healthy

tissue was clamped using Adson forceps. Subsequently, with the aid of a #15 scalpel blade, part of the pathological content was removed along with a portion of healthy tissue (Figures 3).

Figure 2: Clinical appearance after removal.



Figure 3: Fragment removed.



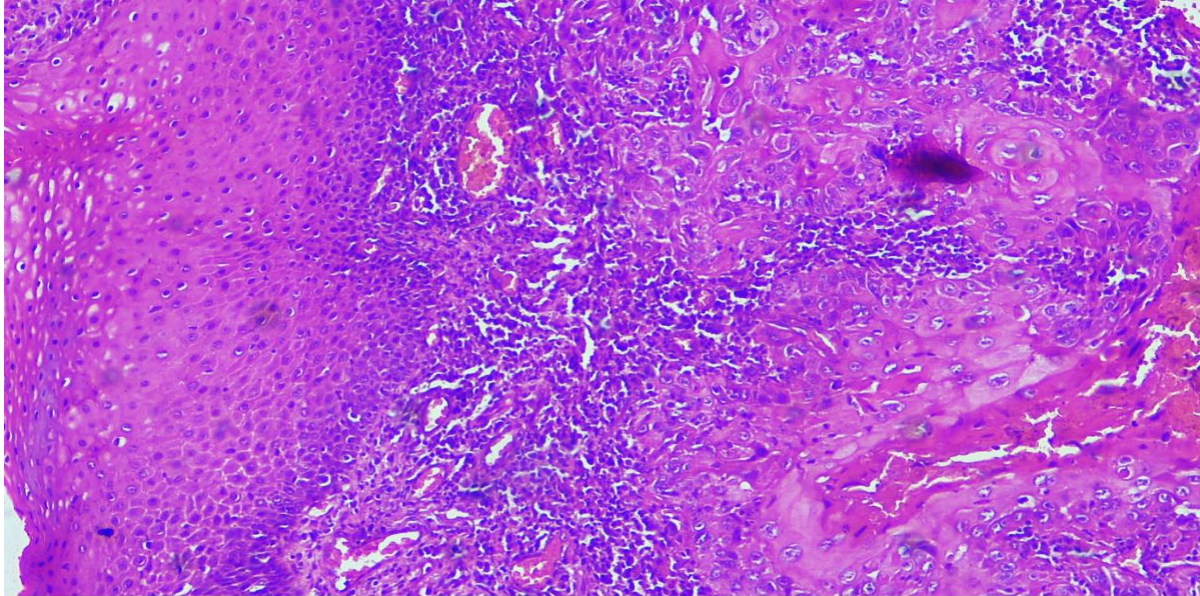
Next, using gauze soaked in a 0.9% saline solution, hemostasis was controlled with compression in the surgical area. Subsequently, tissue synthesis was performed using the technique of simple stitches, using 4-0 nylon suture. The surgical specimen was then immersed in a container containing a 10% formaldehyde solution and sent to the Department of Pathology and Legal Medicine of the Federal University of Amazonas School of Medicine for histopathological analysis for possible conclusion of the diagnostic hypothesis.

For postoperative care, the following were prescribed: anti-inflammatory medication (nimesulide 100mg), 1 tablet every 12 hours for 3 days, and analgesic medication (dipyrone sodium 500mg), 1 tablet every 6 hours for 2 days. The patient was advised that the initial treatment requires a conclusive response with a histopathological report to determine any definitive treatment. After 10 days, she returned for suture removal, presenting adequate healing.

In the histopathological sections stained with HE, the removed tissue fragment revealed a malignant neoplastic lesion characterized by the appearance of hyperchromatic squamous cells, areas of keratinization and chronic inflammatory infiltrate. In addition, it was possible to notice the presence of cracks crossing the epithelium lining, making it fragile. Based on the clinical characteristics combined with the histopathological section analyzed, the definitive diagnosis was well-differentiated squamous cell carcinoma (Figure 4). The patient was then referred to the Fundação

Centro de Controle de Oncologia do Estado do Amazonas (FCECOM), to continue with the definitive treatment of the diagnosed pathology.

Figure 4: Histopathological section at 200x magnification.



After referral, during care at the specialized unit, a new biopsy was performed to verify the peripheral extension of the margins of the lesion, where the borders delimited in a safe zone were highlighted for removal of the pathological fragment. Next, a hemiglossectomy was performed, resulting in the complete surgical removal of the lesion. However, during the surgical act, due to the high possibility of recurrence, the cervical lymph nodes on the side corresponding to the pathology were dissected. At the end of the surgical procedure, a new biopsy of the removed material was performed, which confirmed the non-involvement of the cervical lymphatic chain, ruling out any need for adjuvant treatment. The patient is still under periodic medical, speech and physical therapy follow-ups (Figures 5 and 6).

Figure 5. Clinical appearance after 1 year of follow-up.



Figure 6. Extraoral clinical appearance in the region after lymph node emptying.



DISCUSSION

SCC is characterized as a malignant neoplasm of pathological development located in the epithelium lining, considered the sixth most common cancer in the world¹⁰. During its carcinogenic evolution, a multifactorial process is evident in which its predominant factors are highlighted by the association of tobacco and alcohol consumption, resulting in the deliberate increase of its pathogenic viability^{2,11}. It is

worth mentioning that its exposure to the human papilloma virus is also related to the development of the pathology, reaching significant rates of oral tumors in patients under 45 years of age, causing premalignant squamous intraepithelial neoplasms that can progress to cancer¹².

In the oral cavity, the SCC can be located anywhere in the buccal mucosa, but it has a greater predisposition in areas corresponding to the buccal floor, bottom lip and tongue, which is the location with the highest recurrence and risk of ash, as well as its unfavorable prognosis¹³. According to Liu *et al* (2016)¹⁴ there is a predilection of leucoderma for the male gender, occurring mostly between the 6th and 7th decade of life. However, Mohideen *et al.* (2019)¹⁵ point to an increase in the incidence in young adults aged less than 45 years in recent decades, equally distributed in both genders. In the reported clinical case, it portrays a 53-year-old patient, black, alcoholic and smoker, conditions that corroborate the main findings of the aforementioned literature.

This type of cancer presents disruption of the epithelium with the formation of a base ulcer and hardened consistency, in addition to a granular and coarse background with edges surrounding the area of the lesion which can be divided into ulcerative, nodular and vegetative lesions^{4,5}. The cited case presents a bullous lesion of fibrous consistency, extensive, with the presence of a slit, without characteristics of uniformity, located on the right lateral border of the tongue. Such aspects are similar to descriptions reported by Valle *et al.* (2016)⁶ describing the clinical presentation of a pertinent exophytic lesion with induration. Paderno *et al.* (2018)¹⁶ emphasize the frequent appearance of this pathology in the region of the tongue, usually located on the border in the posterior region.

Menegon *et al.* (2020)¹⁷ address that prior incisional biopsy should be performed for cases involving suspected malignancy; performed at the base of the ulcer close to the hardened and elevated edge; removing part of the lesion combined with the surrounding healthy tissue. The sample should not be completely represented by necrotic tissue, and should also be deep enough to include the tumor infiltration front and underlying healthy tissue in order to serve as a comparison in the histopathological examination, thus being able to determine the most appropriate diagnosis¹⁸. In agreement with the literature, an incisional biopsy was performed in the present clinical case, removing part of the edge of the lesion along with the healthy tissue fragment.

Regarding the choice of treatment, according to Almagush *et al.* (2021)¹⁹ there are variable possibilities ranging from: chemotherapy, radiotherapy or even surgical

resections, however, they state that there is a need to recognize the clinical staging, as well as the degree of histopathological differentiation of the tumor. Fang *et al.* (2013)²⁰ also reiterate that in the initial stages, surgery or radiotherapy can be chosen, while in cases of advanced tumors, a combination of surgical resection and adjuvant therapy should be performed. The standard of care is characterized by surgical resection with/without the use of postoperative adjuvant therapy, however, there are results that show better survival statistics in the last decade through the use of surgical techniques combined with the use of postoperative radiotherapy or chemoradiotherapy⁸.

Patients with oral cancer have high levels of locoregional recurrence and development of new subsequent primary cancers, requiring control of factors associated with risk in order to act in the reduction of treatment failure⁸. Jerjes *et al.* (2010)⁵ point out that SCC has a high tendency for recurrence at the primary site, where it is mostly located on the lateral border of the tongue and on the floor of the mouth, later extending to involve the cervical lymph nodes. In the clinical case reported, the patient was referred to the responsible care unit, constantly being followed-up.

CONCLUSION

Therefore, the case addressed highlights the importance of early diagnosis of lesions in the oral cavity, increasing the chances of a favorable prognosis. The hypothesis was confirmed through the combination of clinical characteristics combined with histopathology, guiding the management and choice of the most appropriate form of treatment.

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