



Previous diagnosis as an aid in the clinical management of a malignant lesion on the lateral border of the tongue: case report

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Date of Submission: 09-06-2023

Date of Acceptance: 19-06-2023

ABSTRACT: 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 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, mouth neoplasm, pathology, oral, diagnosis.

I. INTRODUCTION

Oral cancer is a common pathology characterized as a malignant epithelial neoplasm, originating from transmissible infections or squamous cells.⁽¹⁾ 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 subclassifications.⁽²⁾ 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 cavity.⁽³⁾

SCC is described from epithelial disruption with ulcer development, located parallel to the epithelium in the center or peripheral injured area.⁽⁴⁾ 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 tissues.⁽⁷⁾

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 malignancy.⁽⁸⁾ Faced with the process of development of the pathology, the forms of treatment chosen start with the response of the histopathological report through the biopsy.⁽⁴⁾ 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)

Therefore, 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.

II. 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 (Fig. 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.



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

Initially, intraoral antiseptis was 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 (Fig. 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 (Fig. 3, 4 and 5).



Fig. 2. Infiltrative anesthesia.



Fig. 3. Clamping and incision.



Fig. 4. Fragment removed.



Fig. 5. Clinical appearance after removal



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 (Fig. 6). 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 (Fig. 7).



Fig. 6. Overview of the surgical area.



Fig. 7. Clinical appearance after 10 days.

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 (Fig. 8 and

9). 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.

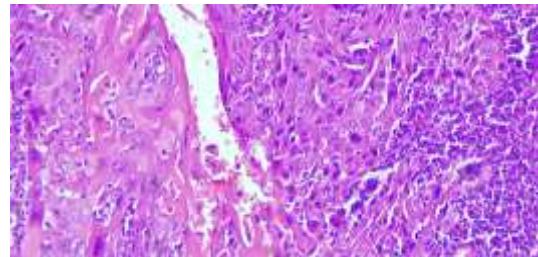


Fig. 8. Histopathological section at H&E x200 magnification.

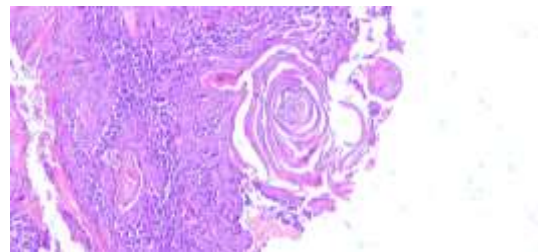


Fig. 9. Histopathological section at H&E x100 magnification.

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 (Fig. 10 and 11).



Fig. 10. Intraoral appearance after hemiglossectomy.



Fig. 11. Extraoral appearance after lymph node emptying.

III. DISCUSSION

SCC is characterized as a malignant neoplasm of pathological development located in the epithelium lining, considered the sixth most common cancer in the world.⁽¹⁰⁾ 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 cancer.¹²

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 death, as well as its unfavorable prognosis.¹³ 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 diagnosis.¹⁸ 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 Almangush et al. (2021)¹⁸ 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)¹⁹ 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 chemoradiotherapy.⁸

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 failure.⁸ Jerjes et al. (2010)²⁰ 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.

IV. 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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