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CASE REPORT

Erosive Lesion of the Buccal Mucosa Revealing an Early Squamous Cell Carcinoma

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ABSTRACT
Oral squamous cell carcinoma is the most common epithelial malignant neoplasm affecting the oral cavity. It accounts for 90% of all oral cancers. It usually arises from a pre-existing potentially malignant lesion, and occasionally *de novo*. The use of tobacco, betel quid and alcohol are well known risk factors for oral squamous cell carcinoma.
Early detection is an important criterion for achieving high cure rate. Occasionally, OSCC may be misdiagnosed because of its variable and innocuous clinical appearance.We report the case of an early presentation of Oral squamous cell carcinoma in a patient aged 70 without preexisting risk factors, with a painful and soft erosion in the buccal mucosa for 2 months. The lesion resembled other benign lesions, but biopsy was mandatory and revealed an early squamous cell carcinoma.

KEYWORDS: Erosion, Ulceration, Oral Squamous Carcinoma, Oral Mucosa

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INTRODUCTION

The diagnosis of oral erosions and ulcerationsof the oral cavity is a challenge due to their similar appearances. While many oral ulcers and erosions are most often the result of chronic trauma, some may indicate an underlying systemic condition such as a gastrointestinal dysfunction, malignancy, immunologic abnormality, or cutaneous disease. [1]Single ulcerations that originated from trauma or other causes must be distinguished from oral squamous cell carcinoma (OSCC) that also typically presents as solitary ulcer. [2,3]
An OSCC is the most common persistent ulcer affecting the oral cavity which encompasses 90-95% of oral cancers. [4]It generally affects men aged over 50, most of them with a history or risk factors of high tobacco smoking, alcohol consumption, and smokeless tobacco use…[2,5] OSCC has various clinical presentations and may, at times, be ambiguous. Early lesions are often asymptomatic and can often be misdiagnosed as other inflammatory lesions in the oral cavity, a fact that can cause the patient to delay seeking treatment. [4]
An early OSCC may be a shallow ulcer with a velvety red base and a firm, raised border. A healing chronic traumatic ulcer can resemble an early OSCC because its base may be filled with reddish-pink granulation tissue.[4,6]
A 70-year-old male patient, without history of bad habits, presented with a painful and soft erosive lesion, located on the right buccal mucosa for the previous two months, mimicking a non-malignant lesion, that revealed after follow-up and biopsy a SCC.

CASE REPORT

A male patient aged 70, presented with a painful lesion in the right buccal mucosa that had been present for 2 months. He had consulted before other health professionals and was treated by symptomatic medications without any improvement. The patient had a well-balanced diabetes. He did not have bad habits such as smoking, or consumption of alcohol or drugs.
On extraoral examination, there was no lymphadenopathy. On intraoral examination, he presented with an erosion in the right buccal mucosa **(Figure 1)**, between the right upper and lower wisdom teeth, of 1.5x1.5cmof diameter, red in color, with ill-defined borders, and soft and painful on palpation. There was also a small yellowish ulcer of 0,5x0,5mm of diameter above the erosion, with regular borders, soft and tender on palpation, and parallel to tooth 18, that has a sharp distal cusp. An old amalgam on teeth 17 and 48 was also noted. No other lesions could be detected at other sites. The presumptive diagnosis was traumatic lesion because there was a sharp cusp, erosive lichen planus, erythroplakia, lichenoid reaction due to presence of amalgam, or an oral squamous cell carcinoma.
We smoothened the distal sharp cusp of the right maxillary third molar and prescribed an antiseptic and an

anti-inflammatory gel. The patient came back 4 days after with the persistence of pain in contact of tooth 18. We proceeded then to the extraction and followed the lesion for 15 days. The lesion did not improve and became more ulcerated and more painful **(Figure 2)**. An incisional biopsy was proceeded, that showed a well differentiated oral squamous cell carcinoma **(Figure 3)**.

A cervicofacial Computed Tomography (CT) and a thoraco-abdominal CT was prescribed. There was no metastasis, but an infraclinical homolateral lymphadenopathy of the parotid chain. The patient was addressed to an oral and maxillofacial surgeon who proceeded to the resection. Chemotherapy and radiotherapy were also prescribed after surgery. No recurrence or metastasis was detected after one year of follow-up.

DISCUSSION

Ulcerated lesions of the oral cavity have many underlying etiologic factors, most commonly infection, immune related, traumatic, or neoplastic. A detailed patient history is critical in assessing ulcerative oral lesions and should include a complete medical and medication history; whether an inciting or triggering trauma, condition, or medication can be identified; the length of time the lesion has been present; the frequency of episodes in recurrent cases; the presence or absence of pain; and the growth of the lesion over time. For multiple or recurrent lesions, the presence or history of ulcers on the skin, genital areas, or eyes should be evaluated along with any accompanying systemic symptoms such as fever, arthritis, or other signs of underlying systemic disease. [7]

In this case report, the patient presented with a painful erosion that appeared 2 months ago. The patient had no history of smoking and alcohol, no lymphadenopathy on extra oral examination and a soft lesion on intraoral palpation. Plus, the presence of a sharp cusp, an amalgam restoration at close contact of the lesion. The first diagnosis that we can evoke are traumatic lesions or lichenoid reactions, but other erosions must be kept in mind such as erythroplakia, erosive lichen planus without forgetting the SCC. Sometimes it is difficult to differentiate these lesions on only clinical examination.

Traumatic ulcerations are considered as the most common oral ulcerations. [8] They can result from physical, thermal, or chemical injuries. Such ulcers generally heal within 10-14 days, but they can persist for a longer time due to systemic disorders or persistence of the etiological factors (sharp edges of teeth, restorations and ill-fitting dentures) [4] Usually, presentation is a well-defined erythematous area with raised margins surrounded by erythematous halo and floor covered with yellowish or greyish pseudomembranous slough. [8]Patients complain of tenderness or pain in the area of the lesion and the traumatic agent/factors can usually be identified.[4,6]Clinical presentation often suggests etiology**.** [8]Rarely the origin of trauma is obscure thus can cause difficulty in establishing the proper diagnosis.[4]

In the case reported, even if the clinical presentation of the erosion does not correspond to the classic presentation of traumatic ulcer, the presence of a small ulceration parallel to a sharp distal cusp does not eliminate the diagnosis of traumatic ulcer.

Erythroplakia is defined as "A fiery red patch that cannot be characterized clinically or pathologically as any other definable disease". Clinical appearance is characterized by flat or even depressed erythematous change of the mucosa without a patch lesion. Both red and white changes in the same lesion refer to as "*erythroleukoplakia.* Erythroplakia is usually less than 1.5 cm in diameter, but it can also be less than 1 cmand larger than 4 cm. Mostly, a solitary lesion occurs over the surface of any part of the oral cavity. But the most commonly affected areas are the soft palate, the floor of the mouth, and the buccal mucosa. [9]

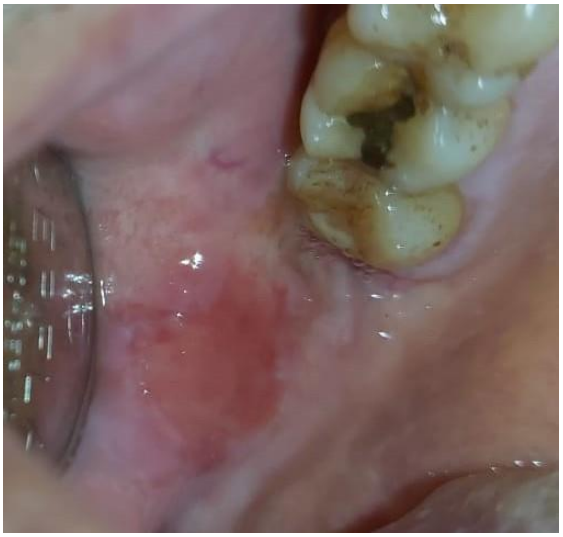

Figure 1: An erythematous lesion with irregular margins on the right buccal mucosa.

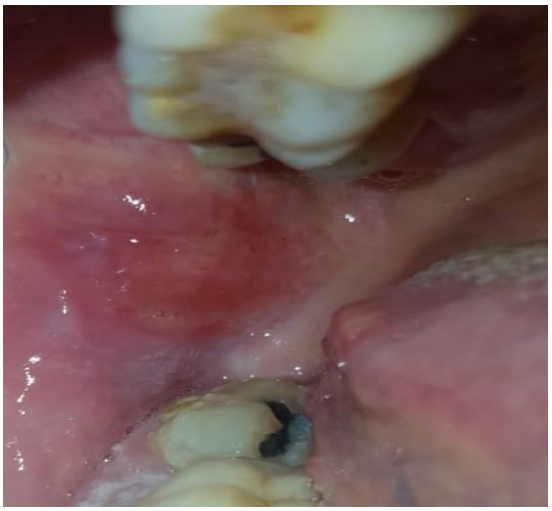

Figure 2: No improvement after 15 days of follow-up, but a little aggravation of the lesion.

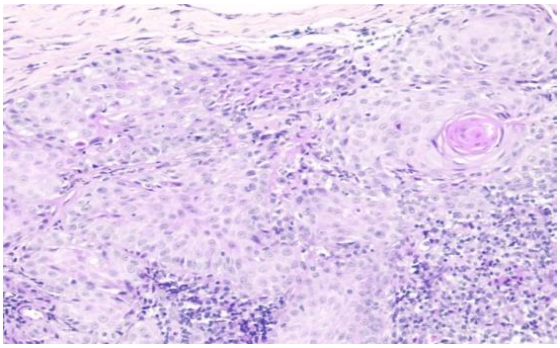

Figure 3: H&E stain 100* showing a well differentiated squamous cell carcinoma.

Etiopathogenesis is not known exactly.[9]Hashibe*et al* reported that chewing tobacco and alcohol drinking arestrong risk factors for erythroplakia in the Indian population.[10]

Malignant transformation rates is very high (vary from 14% to 50%), so early effective treatment is mandatory. [9]

Oral erythroplakia should be differentiate from any disease which clinically appears red in the oral cavity such as Oral candidiasis, oral histoplasmosis, oral tuberculosis, Oral Lichen Planus, lupus erythematosus, pemphigus, pemphigoids, Kaposi's sarcoma, early squamous cell carcinoma, local irritation, and drug reaction. [9,11]

The case report presented with a red lesion of 1,5 cm of diameter, without raised edges and softness on palpation. A diagnosis of erythoplakia could be considered.

Lichen planus is a T-cell-mediated autoimmune interface disease in which the basal cell layer of mucosa and/or skin is attacked. Oral lichen planus presents in different clinical forms. All forms are seen mostly in patients older than 40 years and in men and women equally; in addition, all have a predilection for the buccal mucosa, the tongue, and the attached gingiva, particularly the buccal regions. [12]

The atrophic pattern presents as a red lesion. The erosive form is usually seen as irregular erosion or ulceration covered with a fibrinous plaque or pseudomembrane. [11,12]

Both atrophic and erosive pattern are generally associated with a burning sensation and pain that exacerbate by trauma and hot, spicy or acidic foods.Both need to be confirmed by biopsy to make the correct diagnosis. [11]

Oral lichenoid lesions (OLL) are frequently observed in the tongue, gingiva, and buccal mucosa, they are classified in four types: lesions related to direct contact (OLLC), most commonly associated with amalgam restorations; lesions related to drugs (OLLD); lichenoid lesions in chronic graft versus host disease (GVHD); and lesions associated with systemic diseases such as lupus erythematosus.[13]

The clinical features associated with OLL may vary considerably, varying from white linear plaques, associated or not with erythema, to homogeneous white plaques, or ulcerations. In addition, more than one form can be present concurrently. [13] Symptomatology can range from subjective discomfort to severe pain. However, OLLC do not migrate and involve only the oral mucosa directly in contact with dental amalgam restorations, which is a differential diagnosis from the true lichen planus.[14]

In the case presented, there was an amalgam restoration in teeth 17 and 48, near the right buccal mucosa. An OLL is also considerable.

Oral squamous cell carcinoma presents in several clinical forms. The most common symptom of OSCC is a non-healing ulcer. OSCC also demonstrates other clinical presentations such as exophytic (outward growing) or endophytic (inward growing), a persistent red (erythroplakic) or white patch (leukoplakic), all of which show visible changes to the surface. OSCC is characterized by firmness or induration on palpation with irregular raised margins, and fixed to the underlying tissues, which can be a helpful diagnostic clue, and with palpable and tender regional lymphnodes. [3,4,8,15] Oral SCC is usually painless unless it is secondarily infected. [2]

The floor of the mouth and lateral tongue are the most common intraoral sites for this malignancy. The major risk factors for oral cancer include tobacco use and alcohol consumption. SCC of the lip, associated with ultraviolet light and pipe smoking, often presents as a chronic, nonhealing ulcer at the vermillion border. [15] In some Asian countries, chewing betel quid is a risk factor for oral cancer and increased the incidence of squamous cell carcinoma of the buccal mucosa. [16]

Oral SCC can arise from pre-existing potentially malignant disorders including oral leukoplakia, erythroplakia, submucous fibrosis and lichenoid dysplastic lesions, or can arise *de novo*.[17,18] There is a debate in the literature with regard to the malignant potential of oral lichen planus, in particular the erosive form. [2]

In the presented case, we found a painful erosion near the upper right third molar that has a sharp distal cusp, soft on palpation and with no palpable regional lymphnodes. Furthermore, the patient has no risk factors. However, the erosion was irregular in shape and persistent. An OSCC is also suspected**.**

The course of oral SCC is unpredictable, but the TNM stage (T-tumour size, N-nodal metastasis, M-distant metastasis) of the primary tumor correlates well with the survival rate [18]. The prognosis is best when the primary tumor is small and there is no evidence of regional lymphnode involvement or distant metastasis. In fact, the 5- year survival rate of persons with early-stage oral SCC according to the TNM staging system may reach 80% - 90%, whereas the five-year survival rate for advanced-stage oral SCC is about 40%.[2,19]

Treatment of squamous cell carcinoma is mainly a surgical excision and a radical neck dissection in the case of lymph node metastasis. Radiotherapy is considered as adjunct postoperative treatment along with chemotherapy and is a definite treatment of choice in case of advanced stages of cancer.[18,19]

After considering all these diagnoses, and after trying to eliminate a possible etiological factor, and following up the course of the lesion for two weeks with no improvement. A biopsy was mandatory. This is an example of another case that had seen a lot of health professionals without paying a serious attention to the lesion. Even though, the patient could be diagnosed at a relatively early stage of the OSCC.

CONCLUSION

Squamous cell carcinoma is the most common malignant epithelial neoplasm. It can mimic a variety of benign conditions occurring at multiple sites, leading to misdiagnosis, delay in treatment and bad prognosis. Therefore, Dentists and all oral health professionals should be aware and alert of the possibility of SCC.Any ulcer that is present longer than 2 weeks, that cannot be explained, orafter the eradication of etiological factors and local treatments, should be further evaluated and biopsied.

AUTHORS' CONTRIBUTIONS

Both authors have actively participated in the redaction, the revision of the manuscript, and provided approval for this final revised version.

PATIENTS' CONSENT

Written informed consents were obtained from the patients for the publication of this case report.

REFERENCES

[1] Val M, Lupatelli M, Ardore M, Marino R, Pentenero M. Persistent Oral Erosion: A Diagnostic Challange. Proceedings 2019;35:10. DOI; 10.3390/proceedings2019035010

[2] Feller L, Lemmer J. Oral Squamous Cell Carcinoma: Epidemiology, Clinical Presentation and Treatment. JCT 2012;03:263–8. DOI: 10.4236/jct.2012.34037.

[3] Mailiza F, Rifani R. Chronic Ulcer Mimicking Oral Squamous Cell Carcinoma (A Case Report). Bdent 2019;6:49–55. DOI: 10.33854/jbd.v6i1.211.

[4] Nelonda R, Setiadhi R. Management of chronic traumatic ulcer mimicking oral squamous cell carcinoma on the tongue. Dent J (Maj Ked Gigi) 2018;51:76. DOI: 10.20473/j.djmkg.v51.i2.p76-80.

[5] Warnakulasuriya S. Global Epidemiology of Oral and Oropharyngeal Cancer. Oral Oncology 2009;45:309–19. DOI: 10.1016/j.oraloncology.2008.06.002.

[6] Nidarsh H, Mithra H, Aashta P, Rasksha B. Differential diagnosis of long term tongue ulcers. Int Res J Pharm 2012;3:145–8. DOI: 10.12788/j.sder.2015.0170

[7] Fitzpatrick SG, Cohen DM, Clark AN. Ulcerated Lesions of the Oral Mucosa: Clinical and Histologic Review. Head Neck Pathol 2019;13:91–102. DOI: 10.1007/s12105-018-0981-8.

[8] Nalin DAS, Mary DJ, Padiath S. Traumatic Ulcer – Mimicking Squamous Cell Carcinoma. Journal of Dental and Medical Sciences 2016;15:83–6. DOI: 0.9790/0853-1503068386.

[9] Reichart P, Philipsen HP. Oral erythroplakia-a review 2005;41:551–61. DOI: 10.1016/j.oraloncology.2004.12.003

[10] Hashibe M, Mathew B, Kuruvilla B, Thomas G, Sankaranarayanan R, Parkin DM, et al. Chewing tobacco, alcohol, and the risk of erythroplakia. Cancer Epidemiol Biomarkers Prev 2000;9:639–45.

[11] Yardimci G, Kutlubay Z, Engin B, Tuzun Y. Precancerous lesions of oral mucosa. World J Clin Cases 2014;2:866–72. DOI: 10.12998/wjcc.v2.i12.866.

[12] Marx RE, Stern D. Oral and maxillofacial pathology: A rationale for diagnosis and treatment. 2nd edition. Hanover: Quitessence Publishing; 2012.

[13] Cobos-Fuentes M-J, Martínez-Sahuquillo-Márquez A, Gallardo-Castillo I, Armas-Padrón J-R, Moreno-Fernández A, Bullón-Fernández P. Oral lichenoid lesions related to contact with dental materials: a literature review. Med Oral Patol Oral Cir Bucal 2009;14:e514-520. DOI: 10.4317/medoral.14.e514

[14] Van der Waal I. Oral lichen planus and oral lichenoid lesions; a critical appraisal with emphasis on the diagnostic aspects. Med Oral Patol Oral Cir Bucal 2009;14:310-314.

[15] Siu A, Landon K, Ramos D. Differential diagnosis and management of oral ulcers. Sem Cutan Med Surg 2015;34:171–7. DOI: 10.12788/j.sder.2015.0170.

[16] Musani MA, Jawed I, Marfani S, Khambaty Y, Jalisi M, Khan SA. Carcinoma cheek: regional pattern and mangement. J Ayub Med Coll Abbottabad 2009;21:87–91.

[17] Van der Waal I. Potentially malignant disorders of the oral and oropharyngeal mucosa; terminology, classification and present concepts of management. Oral Oncol 2009;45:317–23. DOI: 10.1016/j.oraloncology.2008.05.016.

[18] Scully C, Bagan J. Oral squamous cell carcinoma overview. Oral Oncol 2009;45:301–8. DOI: 0.1016/j.oraloncology.2009.01.004.

[19] Brandizzi D, Gandolfo M, Velazco ML, Cabrini RL, Lanfranchi HE. Clinical features and evolution of oral cancer: A study of 274 cases in Buenos Aires, Argentina. Med Oral Patol Oral Cir Bucal 2008;13:544–8.