

CASE PRESENTATION

Oral leukoplakia on a middle rhomboidal glossitis. Presentation of a clinical case

Leucoplasia bucal sobre una glositis romboidal media. Presentación de un caso clínico

Mario Manuel Dopico Abreu¹ , Claudia María Díaz Lazo¹ , Alina Abreu Noroña¹  

¹Universidad de Ciencias Médicas de Pinar del Río. Facultad de Ciencias Médicas “Dr. Ernesto Che Guevara de la Serna”. Pinar del Río, Cuba.

Cite as: Dopico Abreu MM, Díaz Lazo CM, Abreu Noroña A. Oral leukoplakia on a middle rhomboidal glossitis. Presentation of a clinical case. *Odontología (Montevideo)*. 2023; 1:28. <https://doi.org/10.62486/agodonto202328>

Submitted: 12-07-2023

Revised: 24-09-2023

Accepted: 24-12-2023

Published: 25-12-2023

Editor: Nairobi Hernández Bridón 

Corresponding author: Alina Abreu Noroña 

ABSTRACT

Introduction: premalignant lesions may appear in the oral cavity, to which we must be alert, to facilitate the early diagnosis of oral cancer. Leukoplakia is a white, premalignant lesion that does not come off when scraped and cannot be classified as another disease.

Objective: to present a case of homogeneous oral leukoplakia on a middle rhomboidal glossitis.

Case presentation: a 49-year-old patient is presented, with a health history, who attended a dental consultation for periodic check-ups, in whom a whitish lesion was detected on the dorsal surface of the tongue. During the interrogation, the patient's oral habit was: cheilophagia and a history of burn trauma in the referred area. Once referred to the Maxillofacial Surgery service, the lesion was excised and biopsied, corresponding to homogeneous leukoplakia. Medial rhomboid glossitis and a history of burn trauma are assumed to be risk factors.

Conclusions: the evolution was favorable for one year. Early diagnosis and consequent treatment were possible, contributing to the early detection and prevention of a cancerous lesion.

Keywords: Risk Factors; Oral Cancer; Premalignant Lesion; Leukoplakia.

RESUMEN

Introducción: en la cavidad bucal pueden aparecer lesiones premalignas, ante las que debemos estar alerta, para hacer facilitar el diagnóstico precoz del cáncer bucal. La leucoplasia es una lesión premaligna, blanca, que no se desprende al raspado, no clasificable como otra enfermedad.

Objetivo: presentar un caso de una Leucoplasia bucal homogénea sobre una glositis romboidal media.

Presentación de caso: se presenta una paciente de 49 años, con antecedentes de salud, que acudió a consulta estomatológica, para revisión periódica, a la que se le detectó una lesión blanquecina en la superficie dorsal de la lengua. Durante el interrogatorio la paciente presenta como hábito bucal: queilofagia y antecedentes de trauma por quemadura en la zona referida. Una vez remitida al servicio de Cirugía Maxilofacial, se le realizó la exéresis y biopsia de la lesión, correspondiéndose con una Leucoplasia homogénea. Como factor de riesgo se determinó una glositis romboidal media y antecedente de trauma por quemadura.

Conclusiones: la evolución fue favorable, durante un año. Fue posible el diagnóstico temprano y la conducta consecuente, contribuyendo a la detección precoz y prevención de una lesión cancerosa.

Palabras clave: Factores de Riesgo; Cáncer Bucal; Lesión Premaligna; Leucoplasia.

INTRODUCTION

Premalignant oral mucosa lesions have a higher incidence in the elderly adult population, with more than 95 % of lesions occurring in people over 40. As the oral cavity is difficult to access, early detection is required to prevent malignant transformation. The definitive diagnosis of intraoral squamous cell carcinomas is usually made after age 60.^(1,2) About 40 % of these tumors start on the floor of the mouth or the lateral and ventral surfaces of the tongue, and it is common for these tumors to develop from preexisting precancerous lesions of the leukoplakia, erythroplakia, or erythroleukoplakia type, requiring surveillance and appropriate treatment.^(3,4)

Three conditions in the mouth: leukoplakia, erythroplakia, and inverted smoker's palate have been considered precursors to cancer:⁽⁵⁾

- Leukoplakia is characterized by a whitish patch or plaque that develops in the mouth in response to prolonged irritation.
- Erythroplasia is characterized by a raised red patch or plaque that develops in the mouth.
- Inverted smoker's palate: described as a heavily keratinized lesion of the palate caused by smoking with the cigarette or tobacco burning inside the mouth.

This terminology has now been replaced by Potentially Malignant Disorders (PMD) in its latest classification, which considers around 12 conditions such as Leukoplakia, Erythroplakia, Erythro-leukoplakia, Submucous Oral Fibrosis, Congenital Dyskeratosis, Tobacco Chewing Keratosis, Palatal Lesions Associated with Reverse Smoking, Chronic Candidiasis, lichen planus, discoid lupus erythematosus, syphilitic glossitis, and actinic cheilitis.^(6,7)

The WHO defined Leukoplakia in 1978 as a plaque that scraping cannot remove. It is a clinical term, and the lesion has no specific histology, may show atrophy or hyperplasia, and may or may not be associated with epithelial dysplasia. It has a variable behavior pattern but tends to become malignant.⁽⁸⁾

Leukoplakia is the most common DOPM, appearing anywhere in the oral cavity and oropharynx. Both sexes are almost equally affected. It has a preference for the tongue and vermillion border of the lips.⁽⁹⁾

Histopathologically, oral leukoplakia ranges from hyperkeratosis without epithelial dysplasia to severe dysplasia with epithelial atrophy or hyperplasia.⁽⁵⁾ Clinically, two subtypes are distinguished: homogeneous and non-homogeneous lesions; the difference between them lies in the uniformity and delimitation of the plaques and the presence or absence of red infiltrate between them. This is the case with non-homogeneous lesions, which are considered more dangerous because they risk malignant transformation.⁽¹⁰⁾

Tobacco use is a significant risk factor for leukoplakia and oral cancer. Combination with alcohol increases the risk even further. Chronic trauma and poor dietary habits may indicate the potential for these types of lesions to develop. A kind of leukoplakia called hairy leukoplakia affects people whose immune system has been weakened by a disease such as human papillomavirus and HIV.⁽¹¹⁾

The possibility of prevention and the accessibility of the oral cavity for examination are more than enough reasons to justify permanent health programs tailored to our country's specific conditions. The following presentation aims to demonstrate the importance of early detection and treatment of this type of lesion through diagnosis in the dental office.

CASE PRESENTATION

A 49-year-old female patient with no previous medical history came to the dental clinic for a routine check-up. During the check-up, a whitish lesion was detected on the dorsal surface of her tongue.

During the interview:

- No history of personal illness.
- No family history of illness.
- No reaction to medication.
- No toxic habits, but reported cheilophagia.
- History of burn trauma in the area referred to.

The extraoral examination was unremarkable. The examination of the lymph nodes and TMJ was also unremarkable.

During the examination for early detection of oral cancer (PDCB), the following was detected on the dorsal surface of the tongue: where the anterior two-thirds joined the posterior third, whitish lesions measuring approximately 1 and 3 mm, which did not detach upon scraping and were asymptomatic. The tongue's surface where the lesions were located appeared raised, depopulated, pink in color, and firm in consistency, corresponding to a case of rhomboid glossitis (figure 1).



Figure 1. Tongue-located lesions

Comprehensive diagnosis:

Epidemiological diagnosis: Group III

Clinical diagnosis:

- Lesion consistent with homogeneous leukoplakia, with differential diagnosis including Carcinoma in situ
- Comprehensive treatment plan:
- Educational activities addressing risk factors for oral cancer and how to prevent it. Dietary habits.

Consumption of hot and spicy foods.

- Control of risk factors. Elimination of sharp edges.
- Tartrectomy
- Epidemiological surveillance
- Discharge from primary care
- Referral to CMF consultation

Excision and biopsy of the lesion were performed.

Final diagnosis: Homogeneous leukoplakia.

A diet rich in fruits and vegetables was recommended, eliminating local irritants and periodic check-ups for one year. The patient had a satisfactory evolution in the check-ups performed during one year.

DISCUSSION

Oral leukoplakia is usually the most common ODM, with an incidence of 1,5 % to 12 % in the population. It is particularly prevalent among people aged 40 to 60. Some authors have shown that there is no current preference for either sex.^(5,9) It is seven times more common in smokers than in non-smokers, which is the leading risk factor. It usually appears on the gums, floor of the mouth, inside of the cheeks, or cheeks, and on the tongue.⁽⁷⁾

In non-smokers, it generally appears on the sides of the tongue. Other factors have been described, such as infections and chronic irritation caused by poorly fitting dentures, infection with *Candida albicans*, Epstein-Barr virus, and certain genetic disorders.⁽⁷⁾ The American Cancer Society has proposed a series of measures to reduce the incidence of this disease, including abstaining from tobacco and alcohol consumption and adopting proper dietary habits. Adequate consumption of fruits and vegetables reduces the risk by 10 %.^(4,7,8,9,10)

Early diagnosis is essential to reduce the risk of malignant transformation. Treatment of this lesion is surgical. Clinical and histopathological differential diagnosis is critical, as it can sometimes be confused with other lesions such as lichen planus and verrucous leukoplakia (an aggressive lesion with no clear etiology).⁽¹²⁾ The tissue transformations that oral leukoplakia undergoes, towards a state of biological aggressiveness, histological changes, and variation in keratin differentiation, cause this entity to develop as a pre-neoplastic or precancerous lesion.^(8,13)

What is unusual in the case we presented is the presence of median rhomboid glossitis (MRG), on which the lesion was located. This type of glossitis is rare and probably underdiagnosed; several hypotheses have been proposed for its etiology, including alterations in embryonic development and inflammatory, infectious, and even immunological causes.⁽¹⁴⁾ Histopathology shows an absence of filiform papillae and macroscopically appears as a bright red or pink area, slightly elevated, in the posterior region of the dorsum of the tongue and front of the lingual V. This formation may be a site for lesions of traumatic and infectious origin.⁽¹⁵⁾ Based on the characteristics of these lesions, diagnoses such as homogeneous leukoplakia and chronic hyperplastic

candidiasis, among others, may be considered.^(16,17) In this case, the patient reported a history of trauma due to frequent consumption of very hot foods.

The timely diagnosis made by the stomatologist when a patient comes to the clinic for another reason remains the primary tool for the early identification of oral cancer.

CONCLUSIONS

Early diagnosis and appropriate treatment were possible, contributing to the early detection and prevention of a cancerous lesion. Stomatologists should perform a thorough head and neck examination on all patients who come in for an oral cavity checkup.

REFERENCES

1. Ávila -Chiong G, Rojas-pérez S, Santos-Medina S, Durañona-Alvarez L. Caracterización de las lesiones de la mucosa bucal en pacientes portadores de prótesis. Revista Electrónica Dr. Zoilo E Marinello Vidaurreta. 2014 Ago; 39 (8): [Aprox 5 p]. <http://revzoilomarinellosld.sld.cu/index.php/zmv/article/view/216/395>. ISSN 1029-3027
2. Chusino-Alarcón E, Bravo-Cevallos DM. Lesiones bucales pre malignas y malignas en el adulto mayor. Dom Cien. 2016; 2(3): 136-146. <https://dialnet.unirioja.es/descarga/articulo/5761569.pdf>
3. Rodríguez- Fernández Y, Maestre-Cabello JR, Naranjo-Amaro A, Martínez- Revol Y. Manejo del paciente oncológico con cáncer de suelo de boca. Revista Cubana de Otorrinolaringología y Cirugía de Cabeza y Cuello. 2019; 3 (3):1-12. <http://revotorrino.sld.cu/index.php/otl/article/view/100>
4. Nápoles-González I, Álvarez-Rivero A, Santana -Álvarez J, Puerto- Pérez T. Atención estomatológica al paciente con cáncer bucal. Archivo Médico Camagüey. 2022; 26: [Aprox. 16 p]. <https://revistaamc.sld.cu/index.php/amc/article/view/9044>
5. Medline Plus en español. Betesda(MD): Biblioteca Nacional de Medicina (EEUU). Leucoplasia; <http://www.nlm.nih.gov/medlineplus/spanish/ency/article/001046.htm>
6. López Castro JG, Guzmán-Gastélum DA, Espinosa-Cristóbal LF, Cuevas-González JC, Tovar-Carrillo KL, Reyes López SY, et al. Lesiones potencialmente malignas de la cavidad bucal. Ciencia en la frontera: revista de ciencia y tecnología de la UACJ. 2021; 1: [Aprox. 9 p]. <https://erevistas.uacj.mx/ojs/index.php/cienciafrontera/article/download/3594/3266/16496>
7. Tovia EG, Carmona Lourdy MC, Díaz Caballero AJ, Harris Ricardo J, Lanfranchi, Tizeira HE. Expresiones clínicas de los trastornos potencialmente malignos en la cavidad oral. Revisión integrativa de la literatura. UnivOdontol. 2018 Ene-Jun; 37 (78): [Aprox. 16 p]. <https://revistas.javeriana.edu.co/index.php/revUnivOdontologica/article/download/23643/20902/91078>
8. Figueroa Pérez Y, Pérez Aréchaga D, Borges García T, Ortiz Díaz LA, Cabrera García AG, Jiménez Rodríguez Y. Potencial de transformación maligna de las lesiones blanquecinas bucales. Rev Cub Med Mil. 2021 Jun; 50(2): [aprox 15p]. <https://revmedmilitar.sld.cu/index.php/mil/article/view/1071/884>
9. Iparraguirre MF, Fajardo X, Cameiro E, Couto PH. Desórdenes orales potencialmente malignos- Lo que el odontólogo debe conocer. Rev Estomatol. Herediana.2020 Jul; 30(3): 216-223. http://www.scielo.org.pe/scielo.php?script=sci_arttext&pid=S1019-43552020000300216&es.
10. Wamakulasuriya S. Oral potencialy malignat disorders: A comprehensive review on clinical aspects and management. Oral Oncol. 2020 Mar; 102:1-5. <https://sci-hub.se/downloads/2020-01-25/b4/10.1016@j.oraloncology.2019.104550.pdf>
11. Galindez-Acosta MF, Gilligan Gerardo M. Leucoplasia bucal asociada al virus de papiloma humano. Infeccion bipolar en paciente joven. Rev de la fac de CM de Córdoba. 2020; 77(4):367-372. <https://revistas.unc.edu.ar/index.php/med/article/download/30733/32344/104718>
12. Altozano-Rodulfo P, Sierra-Santos L. Lengua Blanca: Leucoplasia verrugosa proliferativa. REV CLIN MED FAM. 2019; 12(3):163-166. http://scielo.isciii.es/scielo.php?script=sci_arttext&pid=S1699-695X2019000300163&lng=es.

13. Castelnaux Martínez M, Montoya Sánchez I, Serguera Batista Y, Giraldo Moran RM, Pérez Rosabal A. Caracterización clínica y epidemiológica de pacientes con leucoplasia bucal. MEDISAN; 2020; 24(1):4-15. http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S1029-30192020000100004&lng
14. Avayú HE, Lahsen MP, Le Bert Z M, Corredoira SY. Glositis Romboidal media: A propósito de dos casos. Rev. Chilena Dermatol. 2011; 27(1):5-8. https://www.sochiderm.org/web/revista/27_1/17.pdf
15. Rioseco VM. Glositis romboidal media: revisión a propósito de un caso clínico. Rev Chilena Dermatol. 2012; 28(3):296-299. https://www.sochiderm.org/web/revista/28_3/6.pdf
16. Delgado Azañero W, Arrascue Dulanto M, Lévano Loayza S. Candidiasis hiperplásica crónica de la lengua: Una lesión con cambios displásicos. Rev Est Herediana. 2021; 31 (4):303-10. http://www.scielo.org.pe/scielo.php?script=sci_arttext&pid=S1019-43552021000400303&lng=es
17. García Molina Y, González Lara M, Crespo Morales A. Lesiones premalignas y malignas en el complejo bucal en La Palma, Pinar del Río. Rev Ciencias Médicas. 2018; 22(6): 61-69. http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S1561-31942018000600061&lng=es.

FINANCIACIÓN

None.

CONFLICTOS DE INTERÉS

None.

DECLARACIÓN DE AUTORÍA

Research, administration, approval of final manuscript: Mario Manuel Dopico Abreu.

Research, draft writing, approval of final manuscript: Claudia María Díaz Lazo.

Methodological review, draft writing, approval of final manuscript: Alina Abreu Noroña.