

PREVALENCE OF ORAL MUCOSAL LESIONS IN A PERUVIAN POPULATION

Prevalencia de lesiones de la mucosa oral en una población peruana.

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ABSTRACT

Aim: To determine the prevalence of lesions in the oral mucosa in a Peruvian population.

Materials and Methods: The sample consisted of 139 patients treated at the Moche Stomatology Clinic - Faculty of Stomatology of the National University of Trujillo, during the year 2019. A total of 139 excisional biopsies were performed and the diagnosis of the diseases or injuries was determined by histopathological studies.

Results: The prevalence of benign lesions comprised 99.28% of all diagnoses, while only 0.72% were malignant lesions.

Conclusions: Fibrous hyperplasia is the most prevalent lesion in the buccal mucosa and its most frequent location was the labial mucosa, followed by the dorsum of the tongue and the buccal mucosa.

Keywords: *Epidemiology; Mouth mucosa; Pathology, oral; Mouth diseases; Hyperplasia; Prevalence.*

RESUMEN

Objetivo: Determinar la prevalencia de lesiones en la mucosa oral en una población peruana.

Materiales y Métodos: La muestra estuvo compuesta por 139 pacientes atendidos en la Clínica de Estomatología Moche, Facultad de Estomatología de la Universidad Nacional de Trujillo, durante el año 2019. Se realizaron 139 biopsias escisionales y en los estudios histopatológicos se determinó el diagnóstico de las enfermedades o lesiones.

Resultados: La prevalencia de lesiones benignas fue del 99,28% de todos los diagnósticos histopatológicos, mientras que las lesiones malignas sólo alcanzaron el 0,72%.

Conclusión: La hiperplasia fibrosa es la lesión más prevalente en la mucosa bucal y su localización más frecuente fue la mucosa labial, seguida del dorso de la lengua y la mucosa bucal.

Palabras Clave: *Epidemiología; Mucosa bucal; Patología bucal; Enfermedades de la boca; Hiperplasia; Prevalencia.*

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INTRODUCTION

Oral health influences the quality of life of individuals, and it negatively affects speech, chewing, swallowing and undermines social interaction if altered.^{1,2}

Oral mucosal lesions are a group of alterations that are located in the soft tissues of the mouth, differentiated by their etiologies, clinical characteristics, prognoses, and treatments. According to the literature, the prevalence of diseases of the oral mucosa ranges from 9.19% to 91.9%.³⁻¹¹ with malignant tumors the most studied entity, but which represents only a minority of these lesions.^{12,13}

Studies on oral mucosal lesions indicate that there is a need for additional epidemiological data, since the prevalence of many of these lesions differ. Furthermore, some of them report the prevalence of only a few diagnoses, which does not accurately show the variability and prevalence of all lesions in the oral cavity.^{2,10,12}

The prevalence of oral mucosal diseases in residents within nursing homes and patients referred to oral medicine specialists is even higher (95-100%).¹⁴⁻¹⁶ These differences in prevalence may be due to geographical characteristics, age, sex, habits, medication intake, the presence of dental prostheses, among other factors.¹²

It is obvious that oral mucosal lesions change and increase with age, however, not only due to age itself, but due to the consequence of bad habits (such as alcohol consumption and smoking). In addition, oral precancerous lesions (*ie*, lesions with greater malignant potential) are oral lichen planus, leukoplakia, and ery-

throplakia, the last two being dependent on alcohol and tobacco intake.^{2-4,9-13,16}

The prevalence of oral mucosa lesions is relevant for dentists, and updated information contributes to their recognition as well as favoring timely diagnosis and regular monitoring. Revealing potentially malignant lesions thus can help plan future oral health studies and improve regional screening programs.

Furthermore, to date, there are few studies published in Peru on this matter. Therefore, the objective of our study was to determine the prevalence of lesions in the oral mucosa in a Peruvian population.

MATERIALS AND METHODS

This was an observational, descriptive and cross-sectional study carried out at the Moche Stomatology Clinic of the Faculty of Stomatology of the Universidad Nacional de Trujillo - Peru, from March to December 2019.

For the execution of the present investigation, followed the regulations of the School of Stomatology of the Faculty of Medicine of the Universidad Nacional de Trujillo, with the respective authorization (project approval code No 49991601148).

Likewise it was subject to the principles of the Declaration of Helsinki II, adopted for the 64th World Medical Assembly, in Fortaleza – Brazil, October 2013; and the informed consent of each patient who participated in the study was obtained. The sample consisted of 156 patients.

Selection criteria

Histopathological studies of patients over 18 years of age, who underwent a biopsy for pathological diagnosis at the Moche Stomatology Clinic - Faculty of Stomatology of the National University of Trujillo, during the year 2019, were included. Those cases that indicated intraosseous lesions, those lesions that were not indicated for biopsy (such as lesions due to secondary syphilis, HSV, etc.), did not have a clinical history and correctly developed biopsy or when a definitive diagnosis has not been determined were excluded.

Data collection process

Data collection took place between the months of March and December 2019 based on the physical records of histopathological reports received during this period.

After this, a data collection sheet was made, where the histopathological diagnosis was synthesized and grouped into one of the different pathological groups (fibrous hyperplasia, papilloma, mucocele, hemangioma, non-physiological melanosis, squamous cell carcinoma, frictional keratosis, condyloma, lipoma, intradermal nevus and desquamative cheilitis); the location of the lesion, the patient's sex and its age were recorded.

Statistical analysis

The collected data was processed in the statistical program SPSS 23.0 (IBM, USA), to later be presented in tables and graphs according to the proposed objectives.

The absolute and relative frequencies of oral mucosal lesions were calculated.

Table 1. Distribution of oral mucosal lesions by location

Type of lesion			Location								Sex		Age group (years)						
	n	%	Labial mucosa	Jugal mucosa	Dorsal surface of the tongue	Ventral surface of the tongue	Frenulum	Hard palate	Gum	Others	M	F	18	30	40	50	60	70	
Fibrous hyperplasia	101	72.66	33	24	31	2	2	4	3	2	47	54	21	20	19	21	9	11	
Papilloma	18	12.95	8	1	7	0	0	0	1	1	6	12	6	3	4	4	0	1	
Mucocele	5	3.6	5	0	0	0	0	0	0	0	1	4	3	0	1	0	1	0	
Hemangioma	5	3.6	4	1	0	0	0	0	0	0	5	0	2	1	0	0	1	1	
Non-Physiological melanosis	4	2.88	0	2	0	0	2	0	0	0	2	2	0	0	1	0	2	1	
Squamous cell carcinoma	1	0.72	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
Frictional keratosis	1	0.72	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	
Condyloma	1	0.72	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	
Lipoma	1	0.72	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	
Intradermal nevus	1	0.72	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	
Desquamative cheilitis	1	0.72	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	
Total	139	100	53	29	39	2	5	4	4	3	63	76	34	24	25	26	14	16	

RESULTS

A total of 156 histopathological diagnoses were recorded, of which 17 were eliminated due to incorrect or incomplete medical records and/or biopsy records, leaving a total of 139. The records reported that 63 histopathological diagnoses corresponded to male patients and 76 to the female patients. The ages of the patients were in the range of 18 to 82 years, with an average of 45.79 ± 14.63 years.

Eleven different histopathological diagnoses were recorded, including reactive, autoimmune, viral lesions, benign neoplasms, among others; fibrous hyperplasia being the most frequent (72.66%). The most frequently affected location in the oral cavity was the labial mucosa (53%), followed by the tongue (39%) and the buccal mucosa (29%) (Table 1).

The prevalence of benign lesions was 99.28% of all histopathological diagnoses, while malignant lesions only reached 0.72% (*squamous cell carcinoma*) (Table 1). In addition, fibrous hyperplasia was the most frequent for both men and women and for all age groups (Table 1).

DISCUSSION

This study is one of the few carried out in Peru and the only one carried out in the north of the country on lesions in the oral mucosa with this methodology. The records that were obtained from the year 2019 show a percentage of malignant neoplasms close to 1%, which differs from the numerous foreign studies^{17,18} that show higher percentages, which indicates that this is associated with the characteristics of each zone.

Of the 139 histopathological diagnoses, the highest number of pathologies were found in females, in agreement with Radwan-Oczko *et al.*,² Shrestha *et al.*,¹⁹ Ge *et al.*,¹⁰ and Suarez-Rojas *et al.*,¹¹ but not in agreement with the results of Bassey *et al.*,¹⁷ Kovac *et al.*⁴

Pentenero *et al.*,²⁰ and Agrawal *et al.*,²¹ who conclude that oral lesions are more frequently found in men, and also, based on what was found by Kansky *et al.*,¹² who report that oral lesions are found equally in both sexes.

We found similarity in the prevalence of lesions for all age groups, which agrees with what has been published in the international and national literature.^{10,18,19,22,23}

Fibrous hyperplasia was the most frequently found lesion of the oral mucosa, as reported by similar studies, whereas traumatic fibroma and inflammatory fibrous hyperplasia are also determined as frequent lesions.^{2,16,18,19,22,23}

Regarding the location of the oral cavity lesions, the most frequently affected regions were the labial mucosa, followed by the buccal mucosa and tongue, which agrees with Gupta *et al.*,²⁴ and Collins *et al.*,⁹ but differ with Agrawal *et al.*,²¹ who report that the most common region was the tongue.

Lesions of an inflammatory nature comprise approximately 66% of all lesions in the oral cavity, with the majority of these lesions attributed to poor hygiene and the use of fixed or removable appliances. Most of the cases have been reported between the fourth and sixth decade of life, determining a direct relationship between the frequency of this lesion with the increase in the period of use of a prosthesis, in agreement with Radwan-Oczko *et al.*,² and Shet *et al.*²²

To date there are no studies that show the prevalence and location of the lesions in the population studied, highlighting the importance of this study; however, it is appropriate to point out that there are some limitations, such as not having analyzed the risk factors associated with the appearance of lesions of the oral mucosa and that this study was carried out in a population that does not represent the entire country.

Additionally, this study identifies the epidemiological characteristics of oral mucosa lesions, benign and malignant neoplasms according to their gender, age, type and location, so we can state that it will enrich the knowledge and diagnostic criteria that lead to new and better proposals in the care protocol.

CONCLUSION

The prevalence of benign lesions was 99.28% of all histopathological diagnoses, while malignant lesions comprise only 0.72%.

Fibrous hyperplasia is the most prevalent lesion in the buccal mucosa and its most frequent location was the labial mucosa, followed by the dorsum of the tongue and the buccal mucosa.

CONFLICT OF INTERESTS

The authors declare that they have no conflict of interest in relation to the published results

ETHICS APPROVAL

Study approved by the ethics committee of the School of Stomatology of the Faculty of Medicine of the Universidad Nacional de Trujillo (project approval code N° 49991601148)

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AUTHORS' CONTRIBUTIONS

Guillén-Galarza M: Planned the study, supervised, wrote the manuscript and reviewed the final manuscript.

Jiménez-Prado C: Collected the data, performed the data analysis and reviewed the final manuscript.

Guardia-Méndez G: Collected the data and reviewed the final manuscript

Arbildo-Vega H: Performed data analysis, wrote the manuscript, and reviewed the final manuscript.

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PEER REVIEW

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