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ORAL MUCOSAL LESIONS AND ASSOCIATED FACTORS: A RETROSPECTIVE STUDY

LESÕES DA MUCOSA ORAL E FATORES ASSOCIADOS: UM ESTUDO RETROSPECTIVO

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ABSTRACT: **Aim**: To characterize oral mucosal lesions and related factors in patients at a public dental service of medium complexity in a city in Ceará. **Methodology**: This study consists of documentary research carried out in a dental specialty center, from June to July 2019. To this end, we adopted a tool which approached everything from demographic characteristics to histopathological diagnosis of oral lesions. **Results**: Of the 94 medical records, 25.00% and 66.67% showed hyperplasia and squamous cell carcinoma as the diagnosis of fundamental lesions of the nodule and ulcer type, respectively. A significant association was observed between female gender and age equal to or greater than 30 years and absence of papilloma and mucocele, respectively. **Conclusions**: We conclude that the patients presented different types of fundamental lesions and histopathological diagnoses, especially nodule and hyperplasia, respectively. Furthermore, female gender, age equal to or greater than 30 years, abstinence from tobacco and alcohol and absence of family history of cancer were factors associated with the absence of oral lesions among participants.

KEYWORDS: Oral lesions. Epidemiology. Oral health.

RESUMO: **Objetivo**: Caracterizar as lesões da mucosa oral e fatores relacionados de pacientes de um serviço odontológico público de média complexidade de um município cearense. **Metodologia**: Trata-se de pesquisa documental realizada em centro de especialidades odontológicas, no período de junho a julho de 2019. Para tanto, adotou-se instrumento, o qual abordou desde características demográficas a diagnóstico histopatológico das lesões orais. **Resultados**: Dos 94 prontuários, 25,00% e 66,67% evidenciaram hiperplasia e carcinoma espinocelular como diagnóstico de lesões fundamentais do tipo nódulo e úlcera, respectivamente. Observou-se associação significativa entre sexo feminino e idade igual ou superior a 30 anos e ausência de papiloma e mucocele, respectivamente. **Conslusões**: Conclui-se que os pacientes apresentavam diferentes tipos de lesões fundamentais e diagnósticos histopatológicos, especialmente nódulo e hiperplasia, respectivamente. Ainda, sexo feminino, idade igual ou superior a 30 anos, privação de tabaco e álcool e ausência de histórico familiar de câncer foram fatores associados à ausência de lesões orais entre participantes.

PALAVRAS-CHAVE: Lesões orais. Epidemiologia. Saúde bucal.

INTRODUCTION

Oral mucosal lesions, defined as any abnormal alteration that occurs in the mucosa that lines the oral cavity, represent an important global public health problem due to their prevalence, severity, and individual and community impact. Concerning their signs and symptoms, these lesions can range from pain and inability or difficulty to chew and/or swallow to progression into oral cancer and systemic involvement, with psychological, social and economic repercussions.[1]

Regarding etiology, although not fully understood, it includes trauma, non-communicable diseases (such as diabetes, cardiovascular diseases and cancer), infections and allergies as well as immune-mediated diseases, developmental disorders and others.[2] Among risk factors, the consumption of tobacco and alcoholic beverages and the use of dental prostheses are mentioned as the main ones.[1]

As for the diagnosis, lesions of the oral mucosa can be evidenced by clinical examination, brief history, detailed description and biopsy, if recommended. This diagnosis can be made especially by the dentist and the otorhinolaryngologist, as a result of the anatomical and functional contiguity between the oral cavity and the oropharynx.[2] Regarding classification, these lesions can be grouped into exophytic, red and white, ulcerations, and pigmentations.[3] Among them, white lesions stand out in the clinical practice of the dental surgeon.[4]

In epidemiological terms, data on the occurrence of lesions of the oral mucosa are still scarce, especially in rural areas and in populations of the African continent.[5-6] In addition, there are divergences in the number of cases between regions and countries, which may be associated with factors such as gender, age, and geographical, cultural, social and economic conditions. Genetic issues and behavioral aspects also contribute.[1] As a consequence of these facts, the promotion, prevention and management of oral health are not adequately conducted, interfering in the recognition and diagnosis of oral mucosal lesions and the action of health professionals.[5]

Despite this scenario, the literature reports that approximately 4.9% to 64.7% of the global population is affected by lesions of the oral mucosa.[5] Specifically, studies have indicated a prevalence of 10.8%, 61.8%, 29.4%, 25.33%, and 51.12% for these lesions in samples from the Chinese, Lebanese, Palestinian, Indian, and Pakistani populations, respectively.[7-8] In Brazil, despite the limited number of publications, they show a prevalence of 23.3%[6] and 10.2%[2] for cases of oral mucosal lesions.

In this sense, epidemiological studies involving lesions that affect the oral cavity are important to know, among other points, the epidemiological aspects, types, and etiological and risk factors of these conditions. Thus, it will be possible to plan specific promotion and prevention actions for each population.

In addition, for health professionals, particularly dentists and otorhinolaryngologists, these studies can guide their diagnostic hypotheses, since they will be based on epidemiological data.[2,9] Moreover, these professionals can be encouraged to perform regular evaluations of their patients' oral cavity, enabling the identification and follow-up of diseases of the upper digestive tract or other areas of the body, even interfering in the prognosis.[2] This attitude can be helped by nurses, since daily care of the oral cavity is attributed to them.

Based on the above, the study aimed to characterize oral mucosal lesions and related factors of patients from a medium-complexity public dental service in a city in Ceará.

METHODOLOGY

This consists of documentary, descriptive and quantitative research, carried out from June to July 2019. The study was conducted with patients from the Stomatology Clinic of the Regional Dental Specialties Center (CEO, in Portuguese) of the municipality of Baturité, located in the state of Ceará.

In particular, the Dr. José Marcelo de Holanda Dental Specialties Center is one of the units built and equipped by the Government of the State of Ceará, within the Program for the Expansion and Improvement of Specialized Health Care in the State of Ceará. It provides care to patients referred from Basic Health Units in the region in the following areas: periodontics, endodontics, care for patients with special needs, oral and maxillofacial surgery/stomatology, orthodontics and dental prosthesis/temporomandibular joint disorders.

Regarding its choice as the location of the study, this was due to the fact that it is a reference institution in the care of patients with oral problems in the health micro-region of Baturité. This comprises the municipalities of Aracoiaba, Aratuba, Baturité, Capistrano, Guaramiranga, Itapiúna, Mulungu and Pacoti.

Concerning the sample, it was composed of medical records of patients who were examined at the Stomatology Clinic from January 2017 to June 2019, when the digital medical record system was instituted. All medical records available in the aforementioned time interval were included in the research, regardless of the absence of information necessary for the study.

For data collection, a tool previously developed by the authors was used, containing information about: demographic characteristics (gender, age, place of birth, and occupation); main risk behaviors in the face of oral mucosal lesions (smoking and alcohol consumption); comorbidities; use of medication; family history of malignant neoplasm; fundamental injury; and histopathological diagnosis of oral lesions.

After obtaining the data, the fundamental lesions, considered as morphological alterations that manifest at the beginning of the disease, knowledge of which is essential for communication among professionals and the formulation of diagnostic hypotheses, were classified according to Hipólito and Martins.[10] Thus, the lesions were categorized as: blister; erosion; fissure; hyperplastic; macula; nodule; papule; plaque; pseudomembranous; vesicle; and ulcer. However, as a result of the record of fundamental lesions that did not fit into any of the categories adopted by the aforementioned authors[4], the class called “other” was created.

The data obtained were properly organized in Excel for Windows, version 2013, and analyzed using the Epi Info software, version 7.2.1.0. A descriptive analysis of the data was performed, obtaining the relative and absolute frequencies of the categorical variables. To analyze the associations between these variables, the Chi-square or Fisher’s exact tests were used. A significance level of $P < 0.05$ was adopted.

The project was submitted to and approved by the Research Ethics Committee of the University for International Integration of the Afro-Brazilian Lusophony (UNILAB), according to CAAE 14383119.8.0000.5576 and report number 3.357.085. The research minimized the possible harm to patients and avoided the foreseen risks, in the moral, intellectual, social, psychic and/or cultural spheres, in the short and long term, complying with Resolution 466/12 of the National Health Council (CNS, in Portuguese).

RESULTS

We found that, of the 94 medical records analyzed, 62.77% (n = 59) were of female patients, 27.66% (n = 26) were of patients between 30 and 39 years old, and 28.72% (n = 27) were patients from

the municipality of Baturité (CE). Regarding occupation, we observed that 53.93% (n = 48) of the medical records were related to farmer patients (Table 1).

Table 1 – Sociodemographic profile of patients treated at the Stomatology Clinic of the Dental Specialties Center (CEO) in the municipality of Baturité, Brazil, 2019.

Variables	N	%
Gender (n = 94)		
Male	35	37.23
Female	59	62.77
Age (years) (n = 94)		
< 18	8	8.51
18 to 29	9	9.57
30 to 39	26	27.66
40 to 49	15	15.96
50 to 59	16	17.02
> 60	20	21.28
Place of birth (n = 94)		
Aracoiaba	15	15.95
Aratuba	12	12.77
Baturité	27	28.72
Capistrano	10	10.64
Guaramiranga	5	5.32
Itapiúna	8	8.51
Mulungu	5	5.32
Pacoti	10	10.64
Quixadá	2	2.13
Occupation* (n = 89)		
Administrative agent	2	2,25
Farmer	48	53,93
Retired	10	11,24
Sales	4	4,49
Seamstress	1	1,12
Student	15	16,85
Teacher	3	3,37
Healthcare professional	3	3,37
General services professional	3	3,37

*Information not recorded in all medical records.

Regarding the classification of fundamental lesions, we observed that 40.42% (n = 38) of the medical records did not mention the type of lesion. Of those that did, 29.79% (n = 28) reported the presence of a nodule (Table 2).

Concerning the histopathological diagnosis, for the fundamental lesion of the blister type, mucocele was recorded in all medical records, a result similar to that observed for inflammatory hyperplasia. As for the nodule as a fundamental lesion, hyperplasia stood out among the other histopathological diagnoses (25% – n = 7). For plaque and ulcer, all and 66.67% (n = 2) of the medical records indicated leukoplakia and squamous cell carcinoma as a result of the histopathological analysis, respectively.

As for the medical records in which the type of fundamental lesion was not recorded, 47.37% (n = 18) did not have a histopathological diagnosis and 7.89% (n = 3) pointed to hyperplasia as diagnosis.

For the "other" category, fibroma stood out as a histopathological analysis (44.44% – n = 4) among the fundamental lesion/exophytic lesion.

Table 2 – Types of fundamental lesion and histopathological diagnosis of samples obtained from patients. Baturité, Brazil, 2019.

Types of fundamental lesion	Histopathological diagnosis	N (%)
Blister (n = 5)	Mucocele	5 (100.00)
Inflammatory hyperplasia (n =1)	Inflammatory hyperplasia	1 (100.00)
Nodule (n = 28)	Fibroma	5 (17.86)
	Pyogenic granuloma	3 (10.71)
	Hemangioma	2 (7.14)
	Hyperplasia	7 (25.00)
	Lipoma	1 (3.57)
	Mucocele	3 (10.71)
	Nodule	1 (3.57)
	Papilloma	5 (17.86)
	No diagnosis	1 (3.57)
Plaque (n = 4)	Leukoplakia	4 (100.00)
Ulcer (n = 3)	Squamous cell carcinoma	2 (66.67)
	Traumatic lesion	1 (33.33)
No record of fundamental lesion (n = 38)	Carcinoma	2 (5.26)
	Cyst	2 (5.26)
	Dysplasia	1 (2.63)
	Erythroplakia	2 (5.26)
	Fibroma	2 (5.26)
	Granuloma	2 (5.26)
	Hemangioma	1 (2.63)
	Hyperplasia	3 (7.89)
	Central giant cell lesion	1 (2.63)
	Leukoplakia	2 (5.26)
	Melanotic macula	1 (2.63)
	Mucocele	1 (2.63)
	No diagnosis	18 (47.37)
Other (n = 15)		
Calcified (n = 1)	Sialolithiasis	1 (100.00)
Lesion/exophytic lesion (n = 9)	Fibroma	4 (44.44)
	Herpes	1 (11.11)
	Mucocele	2 (22.22)
	Papilloma	2 (22.22)
Necrotic salivary gland/ mucocele (n = 2)	Mucocele	2 (100.00)
Seropurulent/unique/ granular tissue (n = 3)	Cyst	2 (66.67)
	Pyogenic granuloma	1 (33.33)

Regarding the presence of comorbidities, it was observed that, of the 94 medical records, 41.49% (n = 39) indicated their existence among the patients, with 38.46% (n = 15) recording Systemic Arterial

Hypertension (SAH). Concerning medication consumption, 39.36% (n = 37) of the medical records reported the use of some type of medication by the patients, which included, especially, antihypertensive drugs (hydrochlorothiazide, losartan, propranolol and captopril) (Table 3).

Table 3 – Presence of comorbidities and use of medications by patients. Baturité, Brazil, 2019.

Variables	N	%
Presence of comorbidities (n = 39)		
Systemic Arterial Hypertension	15	38.46
Diabetes Mellitus	6	15.40
Gastritis	4	10.26
Dyslipidemias	3	7.70
Rheumatic Disease	2	5.13
Hyperthyroidism	1	2.56
Endometriosis	1	2.56
Cerebral Palsy	1	2.56
HIV[a]	1	2.56
HELLP syndrome	1	2.56
Depression	1	2.56
Kidney disease	1	2.56
CVA[b]	1	2.56
Cancer	1	2.56
Medication use (n = 37)		
Antihypertensive	15	40.54
Antidiabetic	5	13.51
Gastric protector	5	13.51
Antidepressant	3	8.11
Hormone	3	8.11
Anxiolytic	2	5.40
Antifungal	1	2.70
Digitalis	1	2.70
Antirretroviral	1	2.70
Analgesic	1	2.70

[a]HIV – Human Immunodeficiency Virus; [b]CVA – Cerebral Vascular Accident.

As for the main risk behaviors in the face of oral mucosal lesions, 77.91% (n = 67) and 95.40% (n = 83) indicated that the participants had not consumed tobacco or alcohol, respectively. Regarding the family history of malignant neoplasms, 77.01% (n = 67) of the medical records did not indicate a history of cancer in the family (Table 4).

Table 4 – Main risk behaviors in the face of oral mucosa lesions and family history of malignant neoplasm of patients. Baturité, Brazil, 2019.

Variables	N	%
Smoking* (n = 86)		
Yes	19	22.09
No	67	77.91
Alcohol consumption* (n = 87)		
Yes	4	4.60
No	83	95.40
Family history of malignant neoplasm* (n = 87)		
Yes	20	22.99
No	67	77.01

*Information not recorded in all medical records.

Concerning the association between the patients' sociodemographic aspects and the type of fundamental lesion, we observed a significant association between being 30 years of age or older and not having a blister in the oral cavity. For the main risk behaviors in the face of oral cavity lesions, we found a significant relationship between not smoking or consuming alcohol and not exhibiting plaque as a fundamental oral lesion (Table 5).

Table 5 – Association between sociodemographic aspects, risk behaviors and types of fundamental lesion of patients. Baturité, Brazil, 2019.

Variables	Fundamental lesion					
	Blister			Plaque		
	Yes N (%)	No N (%)	P Value	Yes N (%)	No N (%)	P Value
Age (n = 56)						
< 30 years	4 (33.33)	8 (66.67)	0.005	0 (0.00)	12 (100.00)	>0.05
≥ 30 years	1 (2.27)	43* (97.73)		4 (9.09)	40 (90.91)	
Smoking (n = 52)						
Yes	0 (0.00)	11 (100.00)	>0.05	3 (27.27)	8 (72.73)	0.026
No	4 (9.76)	37 (90.24)		1 (2.44)	40* (97.56)	
Alcohol consumption (n = 53)						
Yes	0 (0.00)	3 (100.00)	>0.05	2 (66.67)	1 (33.33)	0.012
No	5 (10.00)	45 (90.00)		2 (4.00)	48* (96.00)	

*Fisher's exact test.

Regarding the association between sociodemographic aspects and the histopathological diagnosis of the patients' samples, we observed a significant association between being female and not having papilloma in the oral cavity, as well as being 30 years of age or older and not having mucocele.

As for the history of cancer, there was a significant relationship between not having this history and not exhibiting oral hyperplasia (Table 6).

Table 6 – Association between sociodemographic aspects, family history of cancer and histopathological diagnosis of the samples obtained from the patients. Baturité, Brazil, 2019.

Variables	Histopathological diagnosis								
	Hyperplasia			Mucocele			Papilloma		
	Yes N (%)	No N (%)	P Value	Yes N (%)	No N (%)	P Value	Yes N (%)	No N (%)	P Value
Gender (n = 75)									
Female	8 (16.33)	41 (83.67)	>0.05	6 (12.24)	43 (87.76)	>0.05	7 (14.29)	42* (85.71)	0.043
Male	3 (11.54)	23 (88.46)		7 (26.92)	19 (73.08)		0 (0.00)	26 (100.00)	
Age (n = 75)									
< 30 years	0 (0.00)	13 (100.00)	>0.05	7 (53.85)	6 (46.15)	0.000	2 (15.38)	11 (84.62)	>0.05
≥ 30 years	11 (17.74)	51 (82.26)		6 (9.68)	56* (90.32)		5 (8.06)	57 (91.94)	
History of cancer (n = 72)									
Yes	0 (0.00)	18 (100.00)	0.044	3 (16.67)	15 (83.33)	>0.05	1 (5.56)	17 (94.44)	>0.05
No	10 (18.52)	44* (81.48)		10 (18.52)	44 (81.48)		6 (11.11)	48 (88.89)	

*Fisher's exact test.

DISCUSSION

This study, by characterizing the lesions of the oral mucosa and related factors in patients of a public dental service of medium complexity, a reference for the Baturité Massif, may minimize the insufficiency of epidemiological data from the state of Ceará regarding these pathological alterations. The findings of this research may also help in the recognition and early diagnosis of these lesions by health professionals and the institution of appropriate therapies and measures to prevent complications.

Regarding the results, the data showed a predominance of female patients, a finding that corroborated the study by Santos et al.[11], which found that 58.8% of the patients affected by oral lesions were women. This result can be understood if we acknowledge that women constitute the majority of the Brazilian population, in addition to the greater concern they assume with regard to health, an attitude that can be accentuated by cultural issues.

In addition to these factors, we can suppose that the greater presence of female patients in the study results from their greater incidence of oral lesions as a consequence of hormonal changes. It should be noted that female sex hormones are capable of increasing the expression of vascular

endothelial growth factor and fibroblasts, thus facilitating the growth and development of lesions, such as pyogenic granuloma.[12]

Concerning age, the predominant age group in the study was an unexpected finding, since elderly individuals are more susceptible to oral diseases/lesions due to the action of factors such as: presence of chronic degenerative diseases; tooth loss and use of fixed and removable prostheses; greater vulnerability of the oral mucosa to harmful substances and microorganisms; and reduction of the regenerative process in the epithelial tissue and collagen synthesis in the connective tissue of the oral mucosa.[13] However, some studies indicate a significant increase in the incidence of lesions and tumors in the oral cavity in younger individuals.[14]

As for the prevalence of patients from Baturité, this data can be justified by the fact that the research was conducted at the Regional CEO of Baturité, located in this municipality, capital of the Baturité health micro-region. The presence of participants from other municipalities reinforces this CEO's status as reference to the cities that make up the Baturité Massif. Regarding occupation, the fact that more than half of the sample was composed of farmers may be related to the fact that the participants lived in rural locations of the state of Ceará, where agricultural practice is one of the main economic activities.

Regarding fundamental lesions, the fact that almost half of the medical records do not record this type of lesion may be associated with a deficiency in the dental surgeon's knowledge, which may result from a training focused on dental problems to the detriment of an instruction aimed at an adequate and complete anamnesis and physical examination. We can also assume that the absence of this information may be associated with the limited time of the consultation and the lack of attention and interest of the professional, as well as overwork and lack of knowledge of the legal importance of a medical record.

For the higher prevalence of nodules (solid, superficial or deep and pedicled or sessile lesions, with a size greater than 5 mm and less than or equal to 2 cm) as a fundamental lesion among patients, this finding corroborates the literature, which mentions that reactive hyperplastic lesions, resulting from an intense repair process induced by chronic irritation of low intensity[15], whose clinical presentation is the nodule[16], represent the most recurrent group of oral lesions, except for caries, periodontal diseases, and periapical inflammatory lesions.[15]

In this context, although it did not stand out among the fundamental lesions recorded in this study, the absence of blisters (lesions characterized by circumscribed epithelial elevation consisting of a cavity filled with fluid) was related to patients whose age was 30 years or older. This result was unexpected, since, although the blister is a condition that may occur at different ages, such as in the first years of life, middle-aged adults, and the elderly, it is expected to affect mainly the elderly as a result of the action of endogenous and exogenous factors, such as immunological alterations, infections, medication consumption, and the action of physical agents.

When evaluating the histopathological result in relation to the type of fundamental lesion, the diagnosis of mucocele, when the blister is recorded as a fundamental lesion, in all the medical records evaluated, is consistent with the studies addressing oral lesions, which recognize it as one of the most prevalent lesions.[17]

In this sense, it is worth mentioning that mucocele is considered the most common disease that affects the minor salivary glands, regardless of gender, occurring especially in children and young adults (the latter comprise the population aged 20 to 24 years). In particular, the greater susceptibility of these age groups corroborates the data obtained here, which indicated that patients aged 30 years or older did not have mucocele.

Generally asymptomatic, mucocele is characterized by the accumulation of mucin in the soft tissue, after rupture of the salivary gland duct, usually by mechanical trauma (extravasation mucocele), or in the larger salivary gland, by obstruction of the duct (retention mucocele). This dome-shaped increase in volume can occur in any area of the oral cavity where there are salivary glands, especially in the lower lip.[18]

For the histopathological analysis of inflammatory hyperplasia, despite the validation of its macroscopic examination by the CEO professional, identifying and recording it in the medical record as a fundamental lesion, the conclusion of its diagnosis was not enabled. In fact, this type of lesion can represent inflammatory fibrous hyperplasia or inflammatory gingival hyperplasia.

Inflammatory fibrous hyperplasia, considered very frequent in the oral cavity[19], defined as the increase in the number of fibrous connective tissue cells resulting from mechanical trauma, such as poor adaptation of the prosthesis, as well as its poor hygiene or prolonged use without its removal, has a bulky, smooth, pedicled appearance, and slow and painless growth. With greater incidence in female patients, inflammatory fibrous hyperplasia occurs in different areas of the oral cavity, such as the lips, tongue, cheek, and palate.[20] Regarding inflammatory gingival hyperplasia, this is a condition in which there is an increase in the volume of inflamed gingival tissue due to the presence of bacterial plaque.

Concerning the greater number of patients who presented hyperplasia as a histopathological diagnosis in cases of fundamental lesions of the nodule type, this finding was very generalized, since there are specific hyperplastic lesions, such as fibroma and pyogenic granuloma,[15] which present as nodules. On the other hand, the other histopathological results associated with the nodule as a fundamental lesion present it as a clinical manifestation.

Still in the context of hyperplastic lesions, a result of this research indicated an association between not having a family history of cancer and not having this type of lesion in the oral cavity. This information is understandable if we conceive hyperplasia as a cell proliferation that, although controlled, can lose this control and evolve into a neoplasm, including malignant (cancer).

Regarding leukoplakia as a histopathological finding related to the plaque fundamental lesion, this result is in accordance with the fact that this type of condition presents as a white plaque or spot adhered to the mucosa that cannot be removed by scraping. In particular, this type of lesion has an incidence ranging from 0.42% to 5% and is potentially malignant, having, as risk factors, infectious agents, nutritional agents and toxic habits (smoking and alcohol consumption).[21] Classified as homogeneous and non-homogeneous, the former are more frequent, uniform, white, and little symptomatic, while the latter are non-uniform, predominantly white, and symptomatic in the case of erosion. The latter can also be warts, exophytic proliferative warts, nodular, and erythroleukoplakia.[21]

With regard to the greater number of medical records indicating the histopathological diagnosis of squamous cell carcinoma in the face of an ulcer-type fundamental lesion, this finding can be justified by the ulcerous aspect that this type of carcinoma presents[22] or by the fact that it originates from ulcers, a rare condition called Marjolin's ulcer.[23]

It is worth mentioning that squamous cell carcinoma is a malignant neoplasm that affects both sexes[22] (although the literature also mentions a predilection for the male gender)[23], especially individuals aged 40 to 60 years and regardless of socioeconomic level and ethnicity[23] (despite a probable predisposition by Caucasians).[22] Clinically, squamous cell carcinoma usually involves a persistent, painless, ulcerated lesion, as well as hardened and not/or red or white.[22]

In epidemiological terms, out of all cutaneous neoplasms, squamous cell carcinoma occurs in about 16 to 20% of cases[23] and, as for oral cancer, it affects approximately 90 to 95% of individuals.[22]

Regarding the risk factors, smoking, alcohol consumption, eating habits and exposure to sunlight are mentioned, among others.[22]

Concerning the cases in which the type of fundamental lesion was not recorded, the fact that almost half did not show the result of the histopathological analysis raises the need to make patients and professionals aware of the importance of this information. However, when there were records of the histopathological result of the patients whose type of fundamental lesion had not been recorded, the highlight for hyperplasia, if considered the one affecting the gingival tissue, may be associated with comorbidities, such as Diabetes Mellitus, medication consumption, such as antihypertensives, hormonal changes, and local factors, such as dental biofilm, orthodontic appliances, and poorly adapted prostheses.

In the "other" category, the fact that fibroma stood out, as a histopathological finding linked to the fundamental lesion of the type lesion/exophytic lesion, corroborated the study by Silveira et al.[24], which indicated it as the most prevalent lesion, including mucocele, pyogenic granuloma and papilloma. Although not specified, assuming that it is a traumatic fibroma or fibrous hyperplasia, its higher number among patients whose fundamental lesion was included in the "other" category can be understood because this type of lesion is the most observed in the oral cavity.[25]

Regarding comorbidities, their presence in almost half of the patients, although unpredictable if we consider that most of them were not elderly, can be understood by observing that the most evident disease among these participants was Systemic Arterial Hypertension. Indeed, this is an increasingly constant condition among adults in the country.[26]

In this sense, it is worth mentioning that the presence of oral lesions in these patients may be related to the fact that hypertension can generate microvascular damage and interfere with the repair process, even inducing low density of type I and II collagen.[27] In addition, the use of antihypertensive drugs can cause gingival hyperplasia.[28]

With regard to medication consumption, the percentage of patients who used medicaments was lower than those who had comorbidities, which can be harmful to systemic health and, consequently, to oral health. In particular, regarding the prominence of antihypertensive drugs among the medications used, which is consistent with the fact that hypertension was the most cited condition among patients, all those recorded in the medical records are among the five main classes of drugs recommended by the Brazilian Guidelines on Arterial Hypertension – 2020.

When the main risk behaviors for oral mucosal lesions were evaluated, the high number of patients who did not use alcohol or tobacco was a surprising result, since these factors constitute a risk for the development of lesions in the oral cavity. Particularly, for the reduced adherence to tobacco consumption, this phenomenon may result from the anti-smoking campaigns instituted in recent decades. Regarding the significant number of patients who did not drink alcohol, this data differs from the literature, which mentions a small progress in global policies aimed at restricting harmful alcohol consumption.[29]

Concerning the family history of malignant neoplasm, the high number of participants who did not have this history may be a protective factor, minimizing the risk of oral lesions presented by them being oral cancer. This is considered the most common malignant neoplasm in the head and neck region, occupying the sixth position among the other types of cancer, involving an uncontrolled cell proliferation in areas such as the lips, oral mucosa and floor, alveolus, and hard and soft palate.[30]

Furthermore, when evaluating the relationship between fundamental lesions and the main risk behaviors, the association between not being a smoker and not exhibiting plaque in the oral cavity was a

finding that corroborated the literature. In fact, the literature associates the common occurrence of nicotine stomatitis, a white lesion (plaque) that may present numerous papules, with the habit of smoking.[3]

For alcohol consumption, the relationship observed here between not having this habit and not having plaque can be understood if it is assumed that the consumption of alcoholic beverages, especially if associated with smoking, is a risk factor for oral cancer, which can be originated in white plaques.

When the association between sociodemographic aspects and the histopathological diagnosis of the samples was evaluated, the fact that female patients did not exhibit papilloma in the oral cavity can be understood by acknowledging the role that women play in relation to health care, despite their greater vulnerability to infection by the Human Papilloma Virus (HPV)[31], in addition to the institution of public policies aimed at their integral health. Despite this result, the occurrence of papilloma in both sexes is reported.[32]

In particular, the dissemination of this research's findings will enable understanding the reality of the patients treated at the Stomatology Clinic of the Regional Dental Specialties Center (CEO) of the municipality of Baturité in the context of oral lesions, which may highlight the importance of this institution in the identification, diagnosis and therapeutic and preventative conduct. Consequently, there may be a greater search for this type of service and an improvement in the quality of life of the affected subjects, as well as an attenuation of the physical, psychological, social and economic impacts at the individual, family and community levels.

It may also motivate the interest of health care professionals in overcoming the different challenges that compromise their performance as health promoters. This attitude can make them more active in the search for solutions in different political, economic and social spheres. Furthermore, this study may stimulate similar research in other areas of Ceará and states in the Brazilian regions

Regarding the limitations of the study, we mention the inherent nature of its design, since retrospective studies are subject to biases related to the quality of the original information records. In addition, the time frame used here was smaller in comparison with studies already published in the literature involving the theme. However, even considering these limitations, data analysis allows the identification of the most prevalent oral lesions in patients treated at the institution and their associated factors.

CONCLUSION

Based on the results obtained, we can conclude that the patients affected by lesions of the oral mucosa were, for the most part, female, aged 30 to 39 years, from the municipality of Baturité and farmers. The sample also did not have the habit of consuming tobacco or drinking alcohol, in addition to having comorbidities and using medications. In addition, generally, they did not have a family history of cancer.

Regarding oral mucosal lesions, the patients presented different types of fundamental lesions and histopathological diagnoses, especially nodule and hyperplasia, respectively. Concerning the histopathological diagnosis, mucocele, inflammatory hyperplasia, hyperplasia, leukoplakia, and squamous cell carcinoma corresponded to the histopathological results of the fundamental lesions blister, inflammatory hyperplasia, nodule, plaque, and ulcer, respectively. In addition, for those who did not have this type of diagnosis identified in their medical records, there was no record of the fundamental lesion. Among the fundamental lesions classified as "other", the exophytic lesion stood out, with a histopathological diagnosis of fibroma.

Relative to possible factors associated with these lesions, age equal to or greater than 30 years was related to the absence of blisters and mucocele. For smoking and alcohol consumption, the lack of

these habits was associated with the absence of plaque as a fundamental lesion. The same occurred for the absence of a family history of cancer and absence of oral hyperplasia, as well as being a female patient and not manifesting papilloma.

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