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Edentulism, loss of functional dentition and oral mucosal lesions in community-dwelling older people

Edentulismo, perda de dentição functional e lesões de mucosa bucal em idosos da comunidade

Edentulismo, pérdida de dentición funcional y lesiones de la mucosa oral en personas mayores que viven en la comunidad

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Abstract

Introduction: Oral health problems may affect the systemic health of older people, eventually contributing to frailty. **Aim:** to determine risk factors for edentulism, loss of functional dentition and oral mucosal lesions in community-dwelling elderly. **Methodology:** This cross-sectional study was conducted in an older people care program in Southern Brazil. Sociodemographic and socioeconomic variables were collected by questionnaires, and the clinical oral condition of the participants was assessed by oral clinical examination. Edentulism and loss of functional dentition were determined based on the count of teeth, while the oral lesions were identified clinically. Bivariate and multivariate logistic regression models were used to determine the odds of edentulism, loss of functional dentition and oral lesions. **Results:** 148 elders participated of the study, with a mean age of 69.5 ± 6.3 years. Being female increased the odds of being edentulous (OR=2.247; 95%CI=1.076-4.693) and of lacking functional dentition (OR=3.947; 95%CI=1.789-8.705), along with being older than 72 years as compared to people with 66 years of less ($OR_{edentulism}$=2.574; 95%CI=1.033-6.415 and $OR_{functional\_dent}$=4.961; 95%CI=1.700-14.482). People who did not wear upper full denture had a OR=0.175 (95%CI=0.072-0.426) of presenting oral mucosal lesions. **Conclusion:** Being female and older significantly increases the odds of being edentulous or lacking functional dentition. Besides, using upper full denture increases the odds of presenting oral mucosal lesions.

Keywords: Aged; Oral health; Tooth loss; Logistic models; Risk factors.

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Resumo

Introdução: Problemas de saúde bucal podem afetar a saúde sistêmica de idosos, eventualmente contribuindo para a fragilidade. **Objetivo:** determinar fatores de risco para edentulismo, perda de dentição funcional e lesões da mucosa oral em idosos residentes na comunidade. **Metodologia:** Este estudo transversal foi conduzido em um programa de assistência a idosos no Sul do Brasil. Variáveis sociodemográficas e socioeconômicas foram coletadas por questionários, e a condição clínica bucal dos participantes foi avaliada por exame clínico bucal. Edentulismo e perda de dentição funcional foram determinados com base na contagem de dentes, enquanto as lesões orais foram identificadas clinicamente. Modelos de regressão logística bivariada e multivariada foram utilizados para determinar as chances de edentulismo, perda de dentição funcional e lesões orais. **Resultados:** 148 idosos participaram do estudo, com média de idade de 69,5 ± 6,3 anos. Ser do sexo feminino aumentou as chances de ser edêntulo (OR=2,247; IC95%=1,076-4,693) e de não ter dentição funcional (OR=3,947; IC95%=1,789-8,705), juntamente com ter mais de 72 anos em comparação com pessoas com 66 anos ou menos ($OR_{edentulismo}$=2,574; IC95%=1,033-6,415 e $OR_{dent\_funcional}$=4,961; IC95%=1,700-14,482). Pessoas que não usavam prótese total superior tiveram OR=0,175 (IC95%=0,072-0,426) de apresentar lesões na mucosa oral. **Conclusão:** Ser do sexo feminino e mais velho aumenta significativamente as chances de ser edêntulo ou não ter dentição funcional. Além disso, usar prótese total superior aumenta as chances de apresentar lesões na mucosa oral.

Palavras-chave: Idoso; Saúde bucal; Perda dentária; Modelos logísticos; Fatores de risco.

Resumen

Introducción: Los problemas de salud bucal pueden afectar la salud sistémica de las personas mayores, contribuyendo eventualmente a la fragilidad. Objetivo: determinar los factores de riesgo para el edentulismo, la pérdida de la dentición funcional y las lesiones de la mucosa oral en ancianos que viven en la comunidad. Metodología: Este estudio transversal se realizó en un programa de atención a personas mayores en el sur de Brasil. Las variables sociodemográficas y socioeconómicas se recopilaron mediante cuestionarios, y la condición clínica bucal de los participantes se evaluó mediante un examen clínico bucal. El edentulismo y la pérdida de la dentición funcional se determinaron con base en el recuento de dientes, mientras que las lesiones bucales se identificaron clínicamente. Se utilizaron modelos de regresión logística bivariados y multivariados para determinar las probabilidades de edentulismo, pérdida de la dentición funcional y lesiones bucales. Resultados: 148 ancianos participaron en el estudio, con una edad media de 69,5 ± 6,3 años. Ser mujer aumentó las probabilidades de ser edéntulo (OR=2,247; IC95%=1,076-4,693) y de carecer de dentición funcional (OR=3,947; IC95%=1,789-8,705), junto con ser mayor de 72 años en comparación con las personas con 66 años o menos ($OR_{edentulismo}$=2,574; IC95%=1,033-6,415 y $OR_{dentación\_funcional}$=4,961; IC95%=1,700-14,482). Las personas que no usaban prótesis completa superior tuvieron un OR=0,175 (IC95%=0,072-0,426) de presentar lesiones en la mucosa oral. Conclusión: Ser mujer y mayor aumenta significativamente las probabilidades de ser edéntulo o carecer de dentición funcional. Además, el uso de prótesis superior completa aumenta las probabilidades de presentar lesiones en la mucosa oral.

Descriptores: Envejecimiento; Salud bucal; Pérdida de dientes; Modelos logísticos; Factores de riesgo.

Introduction

The global population's ongoing aging process raises concerns about economic sustainability and healthcare demands[1,2]. Oral health in older adults presents distinct challenges and has been considered a potential geriatric syndrome with serious implications for general health when inadequately managed[3]. Poor oral health can lead to malnutrition[4], physical frailty[5], and respiratory infections, which may ultimately result in death[6]. Although oral health in older adults reflects a lifetime accumulation of diseases and conditions, it often continues to deteriorate progressively[3].

Dental caries, periodontitis, xerostomia, oral mucosal lesions, precancerous or cancerous conditions, and tooth loss are particularly prevalent among older individuals[7]. Tooth loss, one of the most common oral conditions in this age group, results from complex interactions between biological, cultural, economic, and social factors[8]. In many cases, tooth loss leads to edentulism – the complete loss of natural teeth – or to the loss of functional dentition, defined as having fewer than 20 natural teeth[9].

The prevalence of edentulism ranges from 11% to 63% globally[10]. In Brazil, it affected 37% of individuals aged 65–74 years in 2023[11]; yet projections suggest a substantial increase by 2040[8,12]. The most recent National Oral Health Survey (SBBrasil 2023) reported a mean of 19.9 missing teeth among adults aged 65–74 years[11], a value close to the threshold for functional dentition. Tooth loss significantly affects older adults' quality of life, compromising nutrition, self-esteem, and social interaction[10]. Dentate older adults generally report better oral health self-perception and quality of life than their edentulous counterparts[13].

Oral mucosal lesions also substantially affect oral health-related quality of life. These lesions encompass a broad spectrum of diseases that may originate in the oral mucosa or result from systemic conditions[14]. They can impair mastication and swallowing and cause pain, itching, or discomfort[15]. Some lesions may progress to malignancy or lead to systemic infections.

The prevalence of oral mucosal lesions in the general population ranges from 5% to 65%, depending on demographic and methodological variations across studies[16]. Older adults are particularly vulnerable due to the higher prevalence of predisposing factors. Hyposalivation, whether medication-induced or disease-related, increases susceptibility to opportunistic infections such as candidiasis[17]. Ill-fitting or damaged dentures may cause traumatic lesions[18], and tobacco use is associated with premalignant and malignant changes[19,20].

Given the high prevalence and potential adverse effects of these conditions on oral health and quality of life in the elderly, this study aimed to identify factors influencing the prevalence of edentulism, loss of functional dentition, and oral mucosal lesions among community-dwelling older adults.

Methodology

The City of the Elderly Program, maintained by the municipal public administration, was the locus of this cross-sectional study. Data was collected from March to November 2016, after approval in the Ethic Committee (protocol no. 1.266.459). Inclusion criteria involved participants of the program older than 60 years with no neurodegenerative conditions. One hundred and forty-eight participants, from 1.000 (14.8%), selected sequentially amongst those participating of the program, had their data collected by interview and oral clinical examination and were, therefore, included in the proposed analysis sample.

Sociodemographic variables involved gender (male/female), age (classified as three age groups, based on tertiles) and educational level (collected as number of years of study and classified as < 4 years, 4-7 years, 8-10 years and 11 years or more, which corresponded to the first part of elementary education, the second part of the elementary education, the start of high school and completion of high schools/tertiary education, respectively). The socioeconomic condition was assessed by means of the Economic Classification Criteria Brazil from the Brazilian Association of Research Companies. These criteria take into consideration the presence and number of home items, such as colour TV, radio, bathroom, automobile, washing machine, etc, and the level of instruction of the family responsible to provide a score and grade the socioeconomic level into classes, as follows: A – 45-100 points; B1 – 38-44 points; B2 – 29-37 points; C1 – 23-28 points; C2 – 17-22 points and D-E – 0-16 points. For analytical purposes, grades B (B1 and B2) and C (C1 and C2) were joined together. The participants were asked whether they took medicines and which medicines they took. The presence of polypharmacy (Yes/No) considered those who took five or more medicines concomitantly throughout the last seven days[21].

The oral clinical condition was collected by four previously calibrated examiners (Kappa coefficient = 0.83-1.00) in the healthcare center of the City of the Elderly Program. Clinical exams were performed with sterile gauze, dental mirror and CPI probe under artificial lightning. Oral examination was based on the criteria proposed by the World Health Organization[22], and involved use of and need for dentures (with emphasis on full dentures), number of missing teeth and presence of oral mucosal lesions. Edentulism and loss of functional dentition were determined based on the count of teeth. Individuals presenting 20 teeth or less were classified as lacking functional dentition[9]. Oral

lesions were diagnosed based on clinical examination only, and the individuals presenting oral lesions were referred to the university clinics for treatment. All variables were dichotomized.

Chi-square test was used to verify the association between use of full denture, edentulism and loss of functional dentition and need of full denture in upper and lower arches (α=0.05). Following, data were analysed using bivariate logistic regression analysis considering edentulism, loss of functional dentition and presence of oral lesions as dependent variables. The independent variables presenting p-values <0.25 and those considered clinically-epidemiologically relevant were loaded to a multivariate model using the Enter method. Then, the original multivariate model was compared to models built without each independent variable. A final model preserved independent variables that presented a p-value <0.05 in the multivariate analysis[23]. The results were expressed as odds ratio (OR) and its corresponding 95% confidence interval (95% CI). The analysis was conducted using the Statistical Package for Social Sciences (SPSS) 20.0.

Results

The mean age of the study participants was 69.5 ± 6.3 years, and the mean time of study was 4.9 ± 3.4 years. Table 1 presents the absolute and relative frequency of the sociodemographic and clinical characteristics of the participants, along with the corresponding 95% CI.

Table 1. Sociodemographic and clinical characteristics of the study participants (n=148)

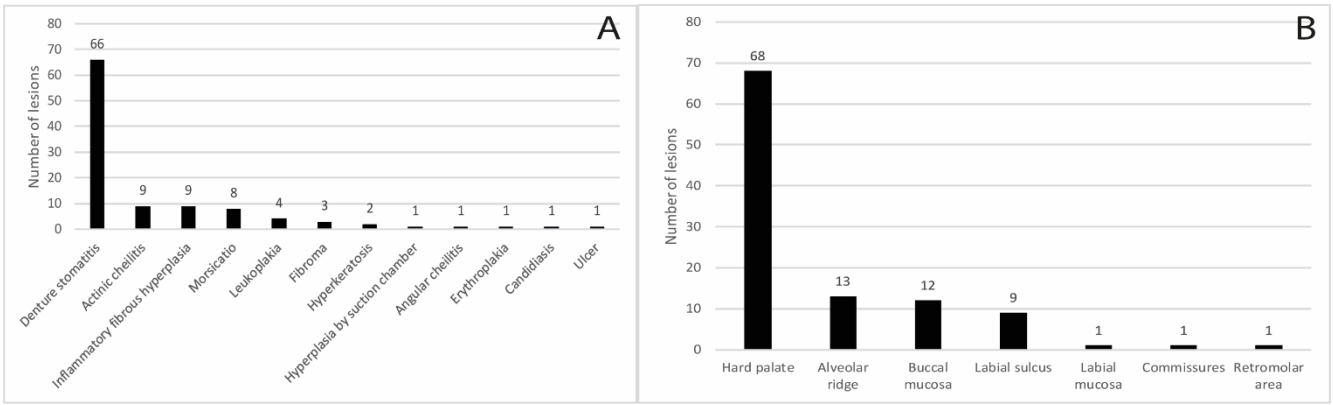
Variable	n (%)	95%CI
Sociodemographic characteristics		
Gender		
Male	55 (37.2)	29.4-45.0
Female	93 (62.8)	55.0-70.6
Age group (tertile)		
≤ 66 years	49 (33.1)	25.5-40.7
67-72 years	60 (40.5)	32.6-48.4
> 72 years	39 (26.4)	19.3-33.5
Educational level		
< 4 years	46 (31.1)	23.6-38.6
4-7 years	76 (51.4)	43.3-59.5
8-10 years	13 (8.8)	4.2-13.4
11 or more	13 (8.8)	4.2-13.4
ABEP*		
A	0 (0.0)	-
B	21 (14.2)	8.6-19.8
C	62 (41.9)	34.0-49.8
D-E	64 (43.2)	35.2-51.2
Polymedication		
Yes	41 (27.7)	20.5-34.9
No	107 (72.3)	65.1-79.5

Clinical conditions		
Edentulism		
Yes	62 (41.9)	34.0-49.8
No	86 (58.1)	50.2-66.0
Loss of functional dentition		
Yes	99 (66.9)	59.3-74.5
No	49 (33.1)	25.5-40.7
Use of upper full denture		
Yes	116 (78.4)	71.8-85.0
No	32 (21.6)	15.0-28.2
Use of lower full denture (n=147)		
Yes	61 (41.2)	33.2-49.2
No	86 (58.1)	50.1-66.1
Need of upper full denture (n=147)		
Yes	62 (41.9)	33.9-49.9
No	45 (57.4)	49.4-65.4
Need of lower full denture (n=146)		
Yes	50 (33.8)	26.1-41.5
No	96 (64.9)	57.2-72.6
Oral mucosal lesion		
Yes	84 (56.8)	48.8-64.8
No	64 (43.2)	35.2-51.2

* ABEP: Economic Classification Criteria Brazil from the Brazilian Association of Research Companies

The proportion of edentulism and loss of functional dentition was of 41.9% and 66.9%, respectively. Also, 56.8% of the participants presented some oral mucosal lesion and 13.5% presented more than one lesion. Figure 1 reveals the type of lesion and the site of occurrence.

Figure 1. Occurrence of oral mucosal lesions. A – Type of lesion diagnosed. B – Site of occurrence of the lesions



The most frequent lesion was denture stomatitis, and the most frequent location of lesion occurrence was the hard palate. Full denture use was significantly associated to full denture need both in the upper (χ^2=25.579; p<0.001) and in the lower arches (χ^2=83.255; p<0.001), with 53.0% of upper

full denture wearers and 78.0% of lower full denture wearers requiring denture replacement. Also, edentulism was significantly associated to full denture need, with 52.5% of edentulous older people in need of full upper denture (χ^2=4.520; p<0.034) and 76.7% in need of full lower denture (χ^2=81.398; p<0.001). Finally, loss of functional dentition was significantly associated to full denture need, with 52.0% of people lacking functional dentition needing full upper denture (χ^2=11.729; p<0.001) and 50.5% needing full lower denture (χ^2=33.971; p<0.001).

Almost 93.0% of the participants took some medication (n =137). The mean number of medications consumed was 2.9 ± 2.7, with a minimum of 0 and a maximum of 10. Approximately 28% were polymedicated.

Table 2. Bivariate logistic regression analysis for edentulism and loss of functional dentition

Variable	Edentulism				Loss of functional dentition			
	Yes n (%)	No n (%)	OR (95%CI)	p	Yes n (%)	No n (%)	OR (95%CI)	p
Sociodemographic characteristics								
Gender				0.084				0.005
Male	18 (29.0)	37 (43.0)	1		29 (29.3)	26 (53.1)	1	
Female	44 (71.0)	49 (57.0)	1.846 (0.921-3.698)		70 (70.7)	23 (46.9)	2.729 (1.343-5.542)	
Age group (years)				0.297				0.139
≤ 66 years	17 (27.4)	32 (37.2)	1		28 (28.3)	21 (42.9)	1	
67-72 years	25 (40.3)	35 (40.7)	1.345 (0.616-2.935)		40 (40.4)	20 (40.8)	1.500 (0.688-3.272)	
> 72 years	20 (32.3)	19 (22.1)	1.981 (0.838-4.684)		31 (31.3)	8 (16.3)	2.906 (1.111-7.601)	
Educational level				0.402				0.184
< 4 years	21 (33.9)	25 (29.1)	1		33 (33.3)	13 (26.5)	1	
4-7 years	34 (54.8)	42 (48.8)	0.964 (0.462-2.011)		52 (52.5)	24 (49.0)	0.854 (0.382-1.907)	
8-10 years	3 (4.8)	10 (11.6)	0.357 (0.087-1.470)		5 (5.1)	8 (16.3)	0.246 (0.068-0.893)	
11 or more	4 (6.5)	9 (10.5)	0.529 (0.142-1.967)		9 (9.1)	4 (8.2)	0.886 (0.232-3.389)	
ABEP*				0.259				0.547
A	0 (0.0)	0 (0.0)			0 (0.0)	0 (0.0)		
B	8 (12.9)	13 (15.3)	1		15 (15.2)	6 (12.5)	1	
C	31 (50.0)	31 (36.5)	1.625 (0.591-4.469)		44 (44.4)	18 (37.5)	0.978 (0.327-2.920)	
D-E	23 (37.1)	41 (48.2)	0.912 (0.329-2.523)		40 (40.4)	24 (50.0)	0.667 (0.228-1.950)	
Polymedication				0.498				0.539
Yes	19 (30.6)	22 (25.6)	1		29 (29.3)	12 (24.5)	1	
No	43 (69.4)	64 (74.4)	0.778 (0.377-1.607)		70 (70.7)	37 (75.5)	0.783 (0.358-1.711)	

* ABEP: Economic Classification Criteria Brazil from the Brazilian Association of Research Companies

Table 3. Bivariate logistic regression analysis for presence of oral mucosal lesion

Variable	Presence of lesion			
	Yes n (%)	No n (%)	OR (95%CI)	p
Sociodemographic characteristics				
Gender				0.014
Male	24 (28.6)	31 (48.4)	1	
Female	60 (71.4)	33 (51.6)	2.348 (1.188-4.642)	
Age group (years)				0.728
≤ 66 years	26 (31.0)	23 (35.9)	1	
67-72 years	34 (40.5)	26 (40.6)	1.157 (0.542-2.470)	
> 72 years	24 (28.6)	15 (23.4)	1.415 (0.602-3.328)	
Educational level				0.448
< 4 years	29 (34.5)	17 (26.6)	1	
4-7 years	40 (47.6)	36 (56.3)	0.651 (0.308-1.378)	
8-10 years	6 (7.1)	7 (10.9)	0.502 (0.145-1.743)	
11 or more	9 (10.7)	4 (6.3)	1.319 (0.352-4.943)	
ABEP*				0.383
A	0 (0.0)	0 (0.0)		
B	13 (15.7)	8 (12.5)	1	
C	38 (45.8)	24 (37.5)	0.974 (0.352-2.697)	
D-E	32 (38.6)	32 (50.0)	0.615 (0.225-1.686)	
Polymedication				0.036
Yes	29 (34.5)	12 (18.8)	1	
No	55 (65.5)	52 (81.2)	0.438 (0.202-0.947)	
Clinical conditions				
Edentulism				0.345
Yes	38 (45.2)	24 (37.5)	1	
No	46 (54.8)	40 (62.5)	0.726 (0.374-1.411)	
Loss of functional dentition				0.180
Yes	60 (71.4)	39 (60.9)	1	
No	24 (28.6)	25 (39.1)	0.624 (0.313-1.244)	
Use of upper full denture				<0.001
Yes	76 (90.5)	40 (62.5)	1	
No	8 (9.5)	24 (37.5)	0.175 (0.072-0.426)	
Use of lower full denture (n=147)				0.599
Yes	36 (43.4)	25 (39.1)	1	
No	47 (56.6)	39 (60.9)	0.837 (0.431-1.625)	
Need of upper full denture (n=147)				0.045
Yes	41 (49.4)	21 (32.8)	1	
No	42 (50.6)	43 (67.2)	0.500 (0.254-0.984)	
Need of lower full denture (n=146)				0.747
Yes	29 (35.4)	21 (32.8)	1	
No	53 (64.6)	43 (67.2)	0.893 (0.447-1.781)	

* ABEP: Economic Classification Criteria Brazil from the Brazilian Association of Research Companies

Table 4. Multivariate logistic regression analysis for edentulism, loss of functional dentition and presence of oral mucosal lesion

Variable	Edentulism OR	95%CI	R^2
Gender			0.048
Male	1		
Female	2.247	1.076-4.693	
Age group (years)			
≤ 66 years	1		
67-72 years	1.493	0.672-3.316	
> 72 years	2.574	1.033-6.415	
	Loss of functional dentition		
	OR	95%CI	R^2
Gender			0.111
Male	1		
Female	3.947	1.789-8.705	
Age group (years)			
≤ 66 years	1		
67-72 years	1.882	0.816-4.341	
> 72 years	4.961	1.700-14.482	
	Presence of lesion		
	OR	95%CI	R^2
Use of upper full denture			0.109
Yes	1		
No	0.175	0.072-0.426	

Discussion

This study confirmed the trend of poor oral health among older adults, characterized by high rates of edentulism, loss of functional dentition, and oral mucosal lesions (Table 1). Being female and of advanced age doubled the odds of edentulism and increased by fourfold the likelihood of lacking functional dentition. The main factor associated with oral mucosal lesions was the use of an upper full denture, as most lesions corresponded to denture stomatitis located primarily in the hard palate.

The significantly higher odds of edentulism and loss of functional dentition among participants aged over 72 years compared with those in the youngest tertile corroborate the well-established relationship between tooth loss and aging[19]. Although dental caries and periodontal disease – the leading causes of tooth extraction[24] – are preventable, microbial imbalance in the oral cavity can trigger recurrent disease episodes. Consequently, aging increases susceptibility to recurrent oral diseases and progressive tooth loss[7,8,9,10].

Female sex has also been identified as a risk factor for tooth loss and edentulism[10], a finding that likely reflects historical social and cultural contexts. In past decades, dental extractions were culturally accepted as an appropriate treatment or preventive measure for toothache. Women, due to

their domestic roles, greater health awareness, and higher access to dental services, may have been more likely to undergo multiple extractions[9,25]. Later, longitudinal studies revealed that dentate elderly men experience greater risk of tooth loss, as many women had already lost most of their teeth earlier in life, reinforcing the gender effect on early tooth loss and edentulism[26].

The high prevalence of edentulism and functional dentition loss observed aligns with national data on Brazilian older adults[9,11]. Extensive tooth loss, particularly when associated with denture need, remains concerning. Changes in dietary intake and nutritional status have been linked to the number of remaining teeth and edentulism[27]. Poor oral health, including severe tooth loss, impairs food intake and contributes to physical decline, disability, and frailty[4]. These findings reflect the historically mutilating nature of public oral healthcare in Brazil[9]. Although significant advances toward conservative care were achieved after 2003 with the inclusion of endodontic and prosthetic services in public healthcare[8], coverage remains limited and should be expanded.

Over half of the participants presented oral mucosal lesions, predominantly in the hard palate. In the bivariate regression analysis, being female, polymedicated, and using or requiring an upper full denture significantly increased the odds of presenting such lesions (Table 3). While men generally exhibit poorer oral hygiene and greater periodontal disease severity[28], women were more often affected by denture-related lesions, likely due to their higher prevalence of early tooth loss and denture use[18]. These findings underscore that early extractions, if not accompanied by proper oral health education, can lead to chronic prosthetic complications. Night-time denture use, denture biofilm, and lack of cleansing solutions have been previously identified as risk factors for denture-related lesions[18].

Polymedicated participants exhibited a 56% higher likelihood of developing oral mucosal lesions. Polypharmacy is common among older adults due to multiple chronic conditions[29]. Many of these medications exert anticholinergic effects on salivary gland neuroreceptors, reducing salivary flow[30]. As saliva plays a critical protective role against oral infections, such as candidiasis[17,31], polypharmacy-induced hyposalivation increases susceptibility to mucosal lesions.

In the multivariate model (Table 4), only the use of upper full dentures remained significantly associated with oral mucosal lesions, with 83% higher odds among users. Although denture need was significant in the bivariate model, it lost significance after adjustment. Denture quality—considering retention, stability, fixation, and esthetics—was assessed, and fixation issues were infrequent. Inflammatory fibrous hyperplasia and suction chamber-related hyperplasia occurred in isolated cases. Female sex also lost significance after adjustment, possibly because most upper full denture users were women. The association between upper full dentures and mucosal lesions, particularly when dentures are not removed during sleep, is well-documented[18].

Potentially malignant lesions were uncommon, with leukoplakia observed in 2.7% of

participants, consistent with Brazilian data (3%)[32] but lower than the prevalence reported in India (14.7%)[33]. The development of these lesions is strongly linked to tobacco use, which was not assessed in this study. Nonetheless, evidence suggests their prevalence may decrease with advancing age, as older adults often cease smoking for medical reasons[33]. Despite this, age-related thinning of the oral epithelium and reduced collagen synthesis increase mucosal permeability to carcinogens[34], reinforcing the importance of early detection and management to prevent malignant transformation into squamous cell carcinoma[35].

Educational level and socioeconomic status did not influence the prevalence of edentulism, functional dentition loss, or mucosal lesions, contrasting with previous studies[9]. However, the sample was predominantly composed of individuals with low educational attainment (≤7 years, 82%) and classified within socioeconomic classes C, D, or E (85%), which may have limited variability. Additionally, the outdated and mutilating dental care model prevalent five to six decades ago was likely the only option available to such populations.

A limitation of this study was the smaller-than-planned sample size, although this did not result in excessively wide confidence intervals in regression analyses. Conducted among participants of a municipal elderly care program, the study included active, community-dwelling older adults. Nonetheless, their oral health remained poor, indicating persistent unmet needs. The incorporation of dedicated oral health teams into primary care services could help address these demands and improve oral health outcomes in this population.

Conclusion

Being female and older significantly increases the odds of being edentulous or lacking functional dentition. More than half of the study participants presented some oral mucosal lesion. The most frequent lesion found was denture stomatitis in the hard palate. Using upper full denture increases in 83% the odds of presenting oral mucosal lesions.

Author´s contributions

Conceptualization – SARJ, VSC, SM; Data curation – SARJ; Formal analysis – SARJ; Methodology – RL, MGK; Supervision – SARJ; Writing – original daft – SARJ; Writing – review & editing – VSC, RL, MGK, SM and CAS.

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