ISSN: 0975-8585

Research Journal of Pharmaceutical, Biological and Chemical Sciences

Prevalence of Oral Mucosal Lesions in Slovenia.

Terlevic Dabic D[1], Kansky A[2], and Vucicevic Boras V[3]*.

[1]Private Dental Practice, Ljubljana, Slovenia.
[2]Clinical Hospital Center Ljubljana, Slovenia.
[3]Department of Oral Medicine, School of Dentistry, University of Zagreb, Croatia.

ABSTRACT

Epidemiologic data upon prevalence of oral mucosal lesions in many countries are rare. However, they are valuable in helping patients and directing state health programmes. The aim of this study was to analyse oral mucosal lesions in a sample of 1908 patients referred to the general dental practices in Slovenia. Oral mucosal lesions were recorded according to WHO. Statistical analysis was performed by use of Kolmogorov Smirnoff test, Mann Whitney, and chi square test ($p<0.05$ were considered significant). The result of this study show that the most common mucosal lesion was cheek chewing which was found in 42 (2.20%) patients followed by fibroma which was found in 40 (2.10%) of the patients, geographic tongue which was found in 25 (1.31%) of the patients, amalgam tattoo and Fordyce spots which were found in 24 (1.26%) of the patients, respectively, and vascular lesion (haemangioma or varix) which was found in 23 (1.21%) of the patients. No significant differences between males and females regarding age, smoking and alcohol intake were observed. We might conclude the oral mucosal lesions are prevalent in adult Slovenian population which points out the increasing need for training in their recognizing and treatment.

Keywords: oral mucosal lesion, dental, fibroma.

Corresponding author

ISSN: 0975-8585

INTRODUCTION

Oral mucosal lesions can interfere with daily activities such as mastication, swallowing and speech. As population is getting older, it seems that more oral mucosal lesions are seen in dental offices. The dentists should be able to differentiate lesions. Prevalence of type of oral mucosal lesions differs according to the geographical varieties, i.e. some of the lesions are rarely encountered in Europe such as oral submucous fibrosis which is frequently seen in India. While most of these lesions are innocuous, some of them should alert dentist to referral to other dental specialists such as oral medicine and oral surgery ones. The aim of this study was to obtain baseline information about epidemiologic aspects of oral mucosal lesions in order to recognize need for national programs targeting on oral health. Many studies reported that lesion prevalence differed significantly by age, sex, denture wearing and tobacco use (Schulman [1], Feng et al. [2], Pentenero et al. [3]). Within residents of the nursing home and patients referred to the oral medicine services, prevalence of oral mucosal ranges from 95-100% [4, 5]. However, prevalence of oral mucosal lesions in the general population varies from 10.8%-61.6% [2, 6, 7]. Campisi and Margiotta [8] found even greater prevalence of oral mucosal lesions in 81.3% of their patients. The prevalence of oral mucosal disease seems to be higher in older patients when compared to the younger patients. However, age is not the only factor and other factors such as medications, trauma, oral and denture hygiene may also have a role in the prevalence of oral mucosal lesions [9]. Data upon prevalence of oral mucosal lesions in some countries are lacking. In Slovenia, more precisely in the capital city of Ljubljana, only one epidemiological study (6) was performed in the nineties. Therefore, the aim of this study was to assess the prevalence of oral mucosal lesions in Slovenian population seen in 10 general dental settings.

MATERIALS AND METHODS

Prior to this study every participant signed informed consent according to Helsinki II. In a sample of 1908 patients referred to the general dental practices in Slovenia. One thousand nine hundred eight patients (1157 (60.6%) females and 751 (39.4%) males) were examined. Patient age ranged from 11 to 92 years. Median age of the participant was 58 years. Oral mucosal lesions were recorded according to WHO Guide to Epidemiology and Diagnosis of Oral Mucosal Diseases and Conditions [10].

Statistical analysis

The normality of distribution was tested by Kolmogorov Smirnoff test. Due to non-normal distribution, non-parametric statistics was used. Scale variables were expressed as median (range). To assess the difference between scale variables Mann Whitney test was used. To assess the difference between categorical variables chi square test was used. P values lower than 0.05 ($p<0.05$) were considered statistically significant.

RESULTS

Demographic data of the participants are presented in Table 1. No significant differences between males and females regarding age, smoking and alcohol intake were observed.

Table 1: Demographic data of the participants

Gender (%) Males Females	 1157 (60.6) 751(39.4)
Age Median (Range)	58 (11-92)
Smoking (%)	
No	1248 (65.4)
Yes	660 (34.6)
Alcohol (%) (missing 75)	
Every day	33 (1.8)
Occasionally	1162 (62.6)
Never	660 (35.6)
Dental visits (%)	

(missing 41)	
When in need for treatment	325 (17.2)
Once every 3 years	301 (15.9)
Once a year	1263 (66.9)
Oral mucosal lesion (%)	
Present	126 (16.8)
Not present	625 (83.2)
Aware of oral mucosal lesion (%) (missing 45)	
Yes	342 (17.9)
No	1566 (82.1)
Referred for specialist evaluation (missing 104)	
No (%)	1701 (93.2)
Yes (%)	125 (6.8)

The most common mucosal lesion was cheek chewing which was found in 42 (2.20%) patients followed by fibroma which was found in 40 (2.10%) of the patients, geographic tongue which was found in 25 (1.31%) of the patients, amalgam tattoo and Fordyce spots which were found in 24 (1.26%) of the patients, respectively, and vascular lesion (haemangioma or varix) which was found in 23 (1.21%) of the patients. Great majority of the patients (1877; 98.4%) had one oral mucosal lesion, 28 (1.5%) patients had two oral mucosal lesions and three (0.1%) patients had three oral mucosal lesions. Oral lesions observed in this study are presented in Table 2. No significant difference between males and females in the proportion of oral lesions was observed (p=0.522). Oral lesions were more common in smokers than in non-smokers (p<0.001). Oral cancer was found in four (0.2%) patients.

Table 2: Oral lesions found in this study

Oral lesion	N (%)
Cheek chewing	42 (2.20)
Fibroma	40 (2.10)
Geographic tongue	25 (1.31)
Amalgam tattoo	24 (1.26)
Fordyce spots	24 (1.26)
Vascular lesion (haemangioma/varix)	23 (1.21)
Denture induced ulceration	22 (1.15)
Hyperkeratosis	19 (1)
Coated tongue (Lingua villosa alba)	15 (0.79)
Fissured tongue	15 (0.79)
Denture stomatitis	14 (0.73)
Mucocele	12 (0.63)
Oral lichen planus/Lichenoid lesions	12 (0.63)
Aphthous ulceration	11 (0.58)
Oral papilloma	7 (0.36)
Labial herpes	6 (0.31)
Nicotine stomatitis	6 (0.31)
Oral verruca	5 (0.26)
Oral cancer	4 (0.20)
Smoker's melanosis	4 (0.20)
Actinic cheilitis	3 (0.16)
Angular cheilitis	1 (0.05)
Candidosis	1 (0.05)
Gingival hyperplasia	1 (0.05)
Lingua accreta	1 (0.05)
Not specified	5 (0.26)

DISCUSSION

Results from the published studies so far [6,9,11], point out that the Fordyce spots are the most frequent condition seen in patients regarding oral mucosal lesions which is not in concordance with the results of this study. Within this study Fordyce spots were seen in 1.26% of our patients. Coated tongue was seen in 0.79 % of our patients which was a lower percentage than the ones reported in other studies. Campisi and Margiotta [8] reported that the most common types of lesions were coated tongue (51.4%), leukoplakia (13.8%), traumatic lesions (9.2%), and actinic cheilitis (4.6%). In general, prevalence of benign migratory glossitis (BMG) ranges from 1-2.5% [12]. Miloglu et al. [13] found that prevalence of BMG was 1.5% in the Turkish population. These findings are in concordance with ours as we found geographic tongue in 1.31% of our patients. Dos Santos et al. [14] showed that the most common lesion in their patients was fissured tongue which is also not in concordance with our results. Within the published literature, some authors suggested that BMG frequently coexists with fissured tongue (FT). Chosack et al [15] found in 48.8% of the patients with BMG also FT. Miloglu et al. [13] reported the coexistence of two conditions in 34.5% patients. Ghose and Baghdaddy [16] reported significant coexistence of BMG and FT only in men. This result is not in agreement with ours, as we have not found coexistence of the two conditions. Cueto et al. [17] reported that in 85 patients (67.5%) out of 126 patients certain oral mucosal lesion was seen and the most frequent one was denture-induced stomatitis (37.1%). The same authors [17] noted that there is a statistically significant association between the use of denture and the presence of oral candidiasis. Mathew et al. [11] reported that denture stomatitis occurred more frequently in females when compared to the males, which was not confirmed in our study as 7 both female and male patients had denture stomatitis. Furthermore, Mathew et al. [11] reported that tobacco-related oral mucosal lesions (leukoplakia, smoker's palate, oral submucous fibrosis, and oral malignancies) were more prevalent among men than among women. Actually, we found no significant differences in oral lesion prevalence between genders except for oral cancer.

Four cases of oral cancer were seen within this study, three cases were seen in males and one in the female. Campisi and Margiotta [8] found that of 180 patients, only 1 had squamous cell carcinoma (0.9%). Our results are contrary to the one of Mozafari et al. [4], Feng et al [2], Brailo et al. [5], Kovac-Kovacic and Skaleric [6], and Triantos [18] who found no oral malignancies even in a bigger sample of patients. In the study of Cebeci et al. [9] 3 patients (0.06%) were diagnosed as having squamous cell carcinoma, and 1 patient (0.02%) was diagnosed as having adenocarcinoma. Interestingly, all malignant lesions were observed in female patients.

REFERENCES

[1] Shulman JD, Beach MM, Rivera-Hidalgo F. J Am Dent Assoc 2004; 135: 1279-86.
[2] Feng J, Zhou Z, Shen X, Wang Y, Shi L, Wang Y, Hu Y, Sun H, Liu W. J Oral Pathol Med 2014.
[3] Pentenero M, Broccoletti R, Carbone M, Conrotto D, Gandolfo S. Oral Dis 2008; 14: 356-66.
[4] Mozafari PM, Dalirsani Z, Delavarian Z, Amirchaghmaghi M, Shakeri MT, Esfandyari A, Falaki F. Gerodontol 2012; 29: e930-4.
[5] Brailo V, Boras VV, Pintar E, Juras DV, Karaman N, Rogulj AA. Lijec Vjesn 2013; 135: 205-8.
[6] Kovac-Kovacic M, Skaleric U. J Oral Pathol Med 2000; 29: 331-5.
[7] Espinoza I, Rojas R, Aranda W, Gamonal J. J Oral Pathol Med 2003; 32: 571-5.
[8] Campisi G, Margiotta V. J Oral Pathol Med 2001;30(1):22-8.
[9] Cebeci AR İ, Gülşahı A, Kamburoğlu K, Orhan BK, Öztaş B. Med Oral Patol Oral Cir Bucal. 2009; 14 (6):E272-7.
[10] Kramer IR, PindborgJJ, BezroukovV, InfirriJ S. Community Dent Oral Epidemiol 1980;8(1):1-26.
[11] Mathew AL, Pain KM, Sholapurkar AA, Vengal M. Indian J Dent Res 2008; 19: 99-103.
[12] Assimakopoulos D, Patrikakos G, Fotika C, Elisaf M. Am J Med 2002; 113: 751-5.
[13] Miloglu O, Goregen M, Akgul HM, Acemoglu H. Oral Surg Oral med Oral Pathol Oral Radiol Endod 2009; 107: e29-33.
[14] dos Santos CM, Hilgert JB, Padilha DM, Hugo FN. Gerodontol 2010 Jun;27(2):134-40.
[15] Chosack A, Zadik D, Eidelman E. Community Dent Oral Epidemiol 1974; 2: 253-7.
[16] Ghose LJ, Baghdady VS. Community Dent Oral Epidemiol 1982; 10: 214-6.
[17] Cueto A, Martínez R, Niklander S, Deichler J, Barraza A, Esguep A. Gerodontol 2013; 30: 201–206.
[18] Triantos D. J Oral Pathol Med 2005; 34:577-82.