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Prevalence of Oral Mucosal Lesions in Patients Attending Oral Diagnosis Clinic at School Of Dentistry, University Of Sulaimani

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Abstract:
Objective: *To report prevalence of oral mucosal lesions in patients attending oral diagnosis clinic at school of dentistry for seeking dental treatment.*
Patients and Methods: *A cross-sectional study was carried out among patients (n=1325) who were visiting the Department of Oral Diagnosis at School of Dentistry, University of Sulaimani; of which; 650 (49.05%) were male and 675 (50.94%) were female aged from 10-79 years with mean age= 44.5±12.64 years, demographic information (age, sex) were obtained as well as clinical examination including features of the lesion, anatomical location, extension were also collected from patients. The lesions that could not be diagnosed by clinical examinations alone were analyzed histopathologically. Chi square test was used to analyze the data.*
Result: *Prevalence of oral lesion was 2.64%. The most common detected oral lesion was recurrent aphthous ulceration (0.75%). Oral mucosal lesions were more prevalent among females (2.81%) than males (2.46%); however it was not statistically significant (P=0.68). The vast majority of oral lesions were seen in age group of 20-39 years (60.52%) where as the most common location for oral lesions were buccal mucosa (25.71%)*
Conclusion: *Routine examinations of oral cavities is important in diagnosing several oral lesions and this will help practitioners to establish early diagnosis and treatment and better prognosis*
Keywords: *prevalence, oral lesion, oral diagnosis, Sulaimani.*

I. Introduction

Oral health is important to the quality of life of all individuals. Oral lesions can cause discomfort or pain that interferes with mastication, swallowing, and speech. Oral lesions can produce symptoms such as halitosis, xerostomia, or oral dysesthesia, which interfere with daily social activities (1). Further more, poor oral hygiene, sharp teeth, and improperly fitting dentures have been thought to play a role in the occurrence of oral mucosal lesions (2,3). Denture wearers, besides suffering the characteristic lesions from their ill fitted dentures, they present traumatic ulcerations more frequency than nonusers, candidosis may occupy second place in frequency (4,5,6). Oral disease is a health problem that is not only a matter of oral hygiene and local condition, but can also be a precursor to other dangerous and potentially life threatening illnesses (7). According to different investigations, it is a common finding to observe oral pluripathology in the elderly. This could be explained due to high frequency of systemic diseases, aging process, metabolic changes, nutritional factors, medications, prosthetic use, psychobiological habits and alcohol or tobacco use; therefore, several conditions should be encounter in this particular age group (8,9) Diagnosis of wide variety of lesions that occur in the oral cavity is an essential part of dental practice. An important element in establishing diagnosis is the knowledge of the lesions relative frequency, or prevalence at one point of time (10). Oral health survey data are essential for proper health planning programs. The pattern of disease may be affected by many factors including patients awareness, changes in lifestyle and increasing interest in oral health. (11). In Sulaimani city there is a great need for clinical studies to establish baseline data on the prevalence of oral lesions and there are few studies were done regarding prevalence of oral lesions. The aim of this study is to detect prevalence of oral mucosal lesions in patients attending oral diagnosis clinic at school of dentistry, university of sulaimani.

II. Patient And Methods

A cross-sectional survey was carried out among patients (n=1325) who were visiting the department of Oral Diagnosis at school of dentistry, university of sulaimani along 7 successive months (September 2013-April 2014) for seeking dental treatment. This research was approved by the Committee of Ethics at Research of the University of Sulaimani. According to Declaration of Helsinki, signed consent forms were obtained from all participants before conducting the study (12). 650 (49.05%) were male and 675 (50.94%) were female. The patients were categorized into four age groups: less than twenty, twenty to thirty nine years (young age), forty to fifty nine years, (middle age) and equal and more than sixty (old age). An interview was conducted to collect

information using a structured questionnaire including patient demography (age and sex) during the clinical examination, the following elements including features of the lesion, anatomical location, and extension were analyzed as well as dental and general medical histories of the patients were obtained. At the time of clinical examination, we established a preliminary diagnosis. Some of the mucosal changes were diagnosed solely by clinical examination the diagnosis was made based on history, clinical features, and investigations according to theWHO (1997) criteria (13). When clinical features were not diagnostic and where no clinical improvement was observed, a biopsy was undertaken.

SPSS version 16 (Statistical Package for the Social Sciences) was used. The prevalence of oral lesions was analyzed regarding the total number of the subjects, for females and males separately. Comparisons were then carried out using Pearson chi-square test. P-values of less than 0.05 were regarded as statistically significant and P-values of less than 0.01, and 0.001were regarded as highly significant, while P-values of more than 0.05 were considered as insignificant.

III. Result

The present study comprised 1325 patients attending oral diagnosis clinic; of which; 650 (49.05%) were male and 675 (50.94%) were female; aged from 10-79 years, prevalence of oral lesion in this study sample was (2.64%); the most common reported oral lesion was recurrent aphthous ulceration (0.75%) followed by traumatic ulcer (0.37%), and denture stomatitis (0.30%) and Recurrent aphthous ulceration was more prevalent among males (1.07%) than females (0.44%); however; it was not statistically significant (P=0.18). Total oral mucosal lesions were more prevalent among females (2.81%) than males (2.46%); however it was not statistically significant (P=0.68) (Table1).

The total oral lesions showed greater significant distribution in age group 20-39 years, (60.52%) (P=0.02), followed by 40-59 years (18.42%) and ≥60 years (15.78%) were it showed statistically significant prevalence of oral mucosal lesion than age group 40-59 years (P=0.01) and ≥60 years (P=0.02) While the occurrence of oral lesions in age group below 20 years comprised the lowest proportion (5.26%). The highest frequency of recurrent aphthous ulceration was seen in 20-39 years (90%), while denture induced hyperplasia has reached the highest distribution among ≥60 years patients however it was not statistically significant (P=0.50) (Table 2).

The most common site for oral mucosal lesions was the buccal mucosa (25.71%) the second affected sites were palate (20%) and Lip and tongue each (17.14%); however it was not statistically significant (P=0.05), while the least common involved site was the mucobuccal fold of maxilla and mandible (2.85%) as demonstrated in Figure 1.

IV. Discussion

Oral mucosal conditions and diseases may be caused by infectious diseases (bacterial or viral), systemic diseases (metabolic or immunologic), drug-related reactions, or lifestyle factors such as the consumption of tobacco, betel quid, or alcohol (14). The prevalence of oral mucosal disease has been found to be higher in older patients than in younger individuals (15). Furthermore a relation has been reported between oral mucosal disorders and aging (15,16). However age is not the only factor that correlating with diseases of the oral mucosa; other factors such as trauma, the effects of medications, and oral and denture hygiene also play a role (15). Epidemiological studies performed over the past few years have shown considerable variation in the prevalence of oral mucous lesions among different regions throughout the world (17). There are considerable methodological problems related to the absence of standard protocols and the wide variation in the methods used. Consequently, the prevalences found for each lesion vary widely among research groups (17).

In the current study the prevalence of total oral mucosal lesion was (2.64%), this result is comparable with a study done by Saraswathi et al. (18). (4.1%). On the other hand other investigator reported high value in different countries which were (57%, 41.2%, 15.5%) respectively (8, 19, 20). These variations could be related to many factors, different methodologies used, sex and age distribution of the sample, Specific cultural habits like smoking and use of alcohol, variation in the clinical interpretation of parameters, real geographical distributrion differences of oral lesions, racial factor, educational level of the patients, socioeconomic factors, cultural levels, medication used, systemic diseases, use of dentures, food type and sample size included in the study.

The most common reported oral mucosal lesion was recurrent aphthous ulceration followed by traumatic ulcer and denture stomatitis.

In a study by Gaphor and Abdullah (6) fissured tongue was the most common reported lesion. In another study done by Najm, (21) the most common reported lesion were ulcerated lesion including traumatic ulcer, in an Italian study by Campisi et al. (3) different total percentage of oral lesion was found (81.3%), with the most common types of lesion noted were coated tongue (51.4%), leukoplakia (13.8%), traumatic lesions

(9.2%), and actinic cheilitis (4.6%). Mujica et al (8) reported denture stomatitis as the most common oral lesion followed by oral leukoplakia, and hemangioma.

The highest prevalence of oral lesions was in 20-39 years which is in agreement with other study done by Gaphor and Abdullah (22), Probably because majority of patients attending oral diagnosis clinic are of young aged.

In this study oral mucosal lesions were more prevalent among females than males, similarly Al-mobeeriek and Aldosari (11) found higher frequency of oral lesions among females. Probably females are more sensitive and are more concern about their oral and general health than males as was shown in this study that a higher number of female patients attending oral diagnosis clinic at School of Dentistry. On contrary Pentenero et al. (23) reported higher prevalence of oral lesions among males than females.

The present study also showed that recurrent aphthous ulceration is more frequent in male than females which was in agreement with the result of a study performed by Rivera-Hidalgo et al. (24) who found a higher prevalence of RAU among males. On contrary, Abdullah (25) and Gaphor and Hussein (26) reported RAU to be more common among females. Perhaps because sample size was different or using different criteria for data collection. There is some evidence that the disease has a high distribution in younger adults, decreasing in both incidence and severity with age (27). This study revealed the highest prevalence of recurrent aphthous ulceration was in 20-39 years. The same result was seen by Abdullah (25) in sulaimani.

The most common location for oral lesions were buccal mucosa followed by palate; Similarly in a study by Gaphor and Abdullah (6) and in another study done by Garcia pola et al (28) buccal mucosa was the most common location for oral lesions

In conclusion oral health is important and affect quality of life of patients therefore dentist can have an active role in detection and early diagnosis of several oral lesions and subsequently an accurate treatment which result in reducing complications associated with delay in diagnosis and result in good prognosis.

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Table1. Prevalence of oral lesions according to sex

Oral lesions	Male N=650 N (%)	Female N=675 N (%)	Total N=1325 N (%)	P-value
Recurrent aphthous ulceration	7 (1.07)	3 (0.44)	10 (0.75)	0.18
Traumatic ulcer	1 (0.15)	4 (0.59)	5 (0.37)	0.19
Denture stomatitis	00 (00.00)	4 (0.59)	4 (0.30)	0.04
Denture induced hyperplasia	2 (0.30)	2 (0.29)	4 (0.30)	0.97
Candidiasis	2 (0.30)	1 (0.14)	3 (0.22)	0.54
Recurrent herpes simplex	1 (0.15)	1 (0.14)	2 (0.15)	0.97
Geographic tongue	2 (0.30)	00 (00.00)	2 (0.15)	0.14
Lichen planus	00 (00.00)	1 (0.14)	1 (0.07)	0.32
Hemangioma	1 (0.15)	00 (00.00)	1 (0.07)	0.30
Fibroepethelial hyperplasia	00 (00.00)	1 (0.14)	1 (0.07)	0.30
Mucocele	00 (00.00)	1 (0.14)	1 (0.07)	0.32
Mucoepidermoid carcinoma	00 (00.00)	1 (0.14)	1 (0.07)	0.32
Total	16 (2.46)	19 (2.81)	35 (2.64)	0.68

Table 2. Distribution of 35 patients reported oral lesions according to age

Oral lesion	<20 N (%)	20-39 N (%)	40-59 N (%)	≥60 N (%)	Total N (%)
Recurrent aphthous ulceration	1 (10)	9 (90)	00 (00.00)	00 (00.00)	10 (26.31)
Traumatic ulcer	00 (00.00)	3 (60)	00 (00.00)	2 (40)	5 (13.15)
Denture stomatitis	00 (00.00)	00 (00.00)	4 (100)	00 (00.00)	4 (10.52)
Denture induced hyperplasia	00 (00.00)	1 (25)	00 (00.00)	3 (75)	4 (10.52)
Candidiasis	00 (00.00)	2 (66.66)	1 (33.33)	00 (00.00)	3 (7.89)
Recurrent herpes simplex	1 (50)	1 (50)	00 (00.00)	00 (00.00)	2 (5.26)
Geographic tongue	00 (00.00)	2 (100)	00 (00.00)	00 (00.00)	2 (5.26)
Lichen planus	00 (00.00)	00 (00.00)	1 (100)	00 (00.00)	1 (2.63)
Hemangioma	00 (00.00)	00 (00.00)	00 (00.00)	1 (100)	1 (2.63)
Fibroepethelial hyperplasia	00 (00.00)	00 (00.00)	1 (100)	00 (00.00)	1 (2.63)
Mucocele	00 (00.00)	1 (100)	00 (00.00)	00 (00.00)	1 (2.63)
Mucoepidermoid carcinoma	00 (00.00)	1 (100)	00 (00.00)	00 (00.00)	1 (2.63)
Total	2 (5.26)	20 (60.52)	7 (18.42)	6 (15.78)	35 (100)

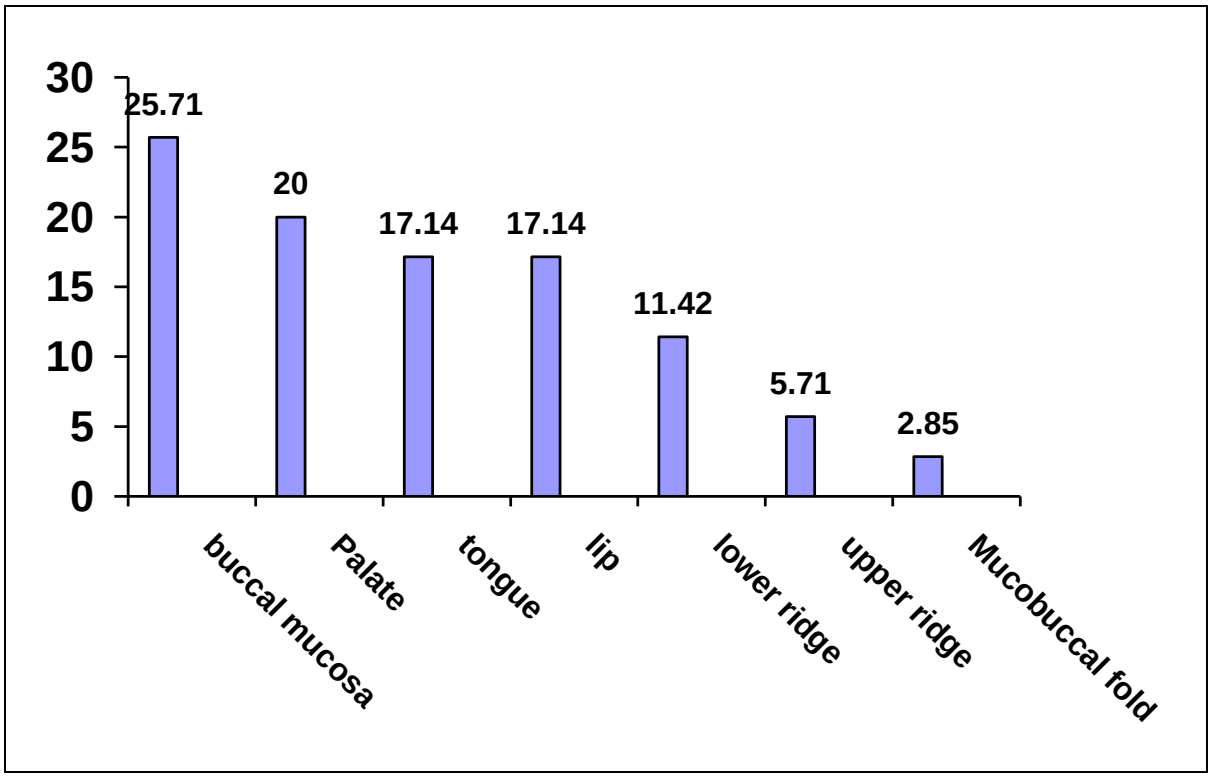

Figure 1.prevalence of oral lesions according to location