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The Prevalence of the Oral Mucosal Lesions among Adult Patients in Abu Ghraib City (Iraq)

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ABSTRACT

Background: The oral mucosal lesions have a major challenge in the oral cavity. The aim of the present study was to find out the oral mucosal lesions prevalence in Abu ghraib city (Iraq).
Materials and Methods: The present study consisted of 1100 patients (550 [50%] women and 550 [50%] men; age range 18-67 years). The patients in our study were divided into five groups that based on age. All the patients were examined clinically and then questioned if there are any habits (like smoking, pan chewing, and alcohol intake) and also the frequency and the duration of their habit and systemic disease. The diagnosis of the disease was made based on the history and the clinical features according to the WHO guidelines.
Result: Among the 1100 screened patients, only 91 patients (8.27%) had oral lesions. 43 males had oral lesion that constituted 7.8% of the total examined patients, while the females was 48 patients that had oral lesion which constituted 8.72%. The age range of the patients was between 18-67 years. The prevalence of the oral lesions was more among the females (8.72%) than the males (7.8%). The oral mucosal lesions were described according to the genders which consisted of 11 types of lesion, the abscess, pericoronitis, pulp polyp, candidiasis, material alba, linea alba, mucocel, leukoplakia, lichenplanus, fibroma and hairy tongue. For the male it was (3.09%, 1.45%, 0.72%, 0.18%, 1.09%, 0.36%, 0.18%, 0.18%, 0.18%, 0.36% and 0%) respectively. And for the female it was (2.9%, 2%, 0.72%, 0.72%, 0.18%, 0.9%, 0.36%, 0.36%, 0%, 0.36%, and 0.18%).
Conclusions: The oral lesion prevalence was significantly differed by social levels, sex and the ages. The abscesses in the young females were more prevalent. The present study has supplied information about the aspects of the epidemiology the oral mucosal lesions that may help a lot of in the planning of the future oral health studies.

Key words: Lesion of the oral cavity, Prevalence, Adult

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INTRODUCTION

The health of the oral cavity is very important to the quality of the life of all individuals. The lesions of the oral cavity can cause many discomfort or can cause a pain that may interferes with the swallowing, mastication, as well as the speech, and also they can produce symptoms like xerostomia, halitosis, or even oral dysesthesia, which really interfere with the daily social activities [1]. The oral mucosa is similar to that of the skin, but the oral mucosa subjected to a more complex due to inconstant environment. This complex in nature modifies the pattern of the disease presentation in the mouth [2]. The oral mucosal lesions can be occurred as a result of any infections like (bacterial, viral, fungal), or due to local trauma or irritation like (traumatic keratosis, irritational fibroma, burns), or due to systemic diseases or excessive consumption of tobacco, betel quid and also alcohol [3]. The concept of the oral and the dental health is commonly being perceived to be limited to the carious teeth and the periodontal diseases by both the clinicians and the academics. Based on this view, the diseases of the oral mucosal areas are generally disregarded by the dental practitioners. The current researches mainly regarded on a single lesion or include lesions in the single anatomical area [4]. Despite of the World Health Organization's (WHO) reports supporting epidemiological studies, there is a little number of researches about the oral mucosal lesions and these have a lot of problems about the ensuring standardization. There are some differences in the diagnostic criteria and the methodology of these studies. There are some lesions that can be diagnosed by verifying some data gathered during taking the history and/or by physical examination while there are other lesions which need more confirmation through specialized procedures. Among the various methods available for diagnosing of the oral lesions, histopathological examination is also used for the tissue biopsy of a suspicious lesion. Moreover, the differences in the geographic region where this study was conducted and the racial differences

may also affect the results [5]. The oral mucosal lesion prevalence in general population has been reported 15.5% in Turkey [6], 9.7% in Malaysia [7], 61.6% in Slovenia [8], 25% in Italy [9] and 15% in Saudi Arabia [10]. Fewer studies have been conducted in the Iraqi population on the lesions of the oral mucosa. The aim of this study was to evaluate the type and the extent of the oral mucosal lesions among the community population in Abu Ghraib governorate, Iraq.

MATERIALS AND METHODS

This study consisted of 1100 patients (550 [50%] women and 550 [50%] men; age range: 18-67 years). The patients were divided into five groups based on age. All the patients in our study were examined clinically and then questioned if there are any habits (like pan chewing, smoking, and alcohol intake) and also the duration and the frequency of their habit and the systemic disease. The patients who have difficulty in the opening of their mouth the intraoral examination was impossible were excluded from this study. The history was obtained from the patient or from the patient's relative for those who were unable to communicate because of their disease. In our study the examination of the patients were clinically done by two trained examiners with the using of the artificial light, mouth mirror, as well as the gauze; and the diagnosis was made depending on the history and the clinical features according to the WHO guidelines [11] and the color Atlas of the oral lesion [12] for more details. The biopsies were advised in case when there were suspicious lesions. The data was analyzed by using the SPSS software program (Statistical Package for the Social Sciences, version 22, (SSPS). Chi-square test was used to analyze the data.

RESULTS

Among the 1100 screened patients, only 91 patients (8.27%) had oral lesions. 43 females had oral lesion that constituted 7.8% of the total examined patients, while 48 males patients had oral lesion which constituted 8.72%. The age range of the patients was between 18-67 years. The prevalence of the oral lesions was more among the females (8.72%) than the males (7.8%). The oral mucosal lesions were described according to the genders which consisted of 11 types of lesion as shown in Table 1, the abscess, pericoronitis, pulp polyp, candidiasis, material alba, linea alba, mucocel, leukoplakia, lichenplanus, fibroma and hairy tongue. For the males it was (3.09%, 1.45%, 0.72%, 0.18%, 1.09%, 0.36%, 0.18%, 0.18%, 0.18%, 0.36%, and 0%) respectively. And for the females it was (2.9%, 2%, 0.72%, 0.72%, 0.18%, 0.9%, 0.36%, 0.36%, 0%, 0.36%, and 0.18%) respectively. The distribution of the oral mucosal lesion were classified according to the age for both genders as shown in Table 2, that describes the prevalence of the abscess, pericoronitis, pulp polyp, material alba and the linea alba between the age of (18-47 years) while the prevalence of the leukoplakia between the age of (48-67 years). For the candidiasis it appears to affect all the age group as shown by the Table 2. The site of oral mucosal lesion of the study population were shown in Table 3, that describes the high prevalence of the lesion were in alveolar ridge/gingiva which is (41(3.72)%) followed by lower third molar area (19(1.72)%) and the buccal mucosa (14(1.27)%) and then the lower 1st molar (8(0.72)%) and lastly both the lip and the tongue (5-4(0.45)-(0.36)%) respectively.

Table 1: Distribution of oral mucosal lesion according to genders

Oral mucosal lesion	Male		Female		Total		P(Chi-Square)
	N=550	(%)	N=550	(%)	N=1100	(%)	
Abscess	17	3.09	16	2.9	33	3	0.89*
Pericoronitis	8	1.45	11	2	19	1.72	0.06*
Pulp Polyp	4	0.72	4	0.72	8	0.72	0.88*
Candidiasis	1	0.18	4	0.72	5	0.45	0.13*
Material alba	6	1.09	1	0.18	7	0.63	0.06*
Linea alba	2	0.36	5	0.9	7	0.63	0.18*
Muccocel	1	0.18	2	0.36	3	0.27	0.5*
Leukoplakia	1	0.18	2	0.36	3	0.27	0.5*
Lichenplanus	1	0.18	0	0	1	0.09	**
Fibroma	2	0.36	2	0.36	4	0.36	0.91*
Hairy tongue	0	0	1	0.18	1	0.09	**
Total	43	7.8	48	8.72	91	8.27	-

*Not Significant; P>0.05; **cannot calculate

Table 2: Distribution of oral mucosal lesion according to age for both genders

Oral mucosal lesion	18-27 years	28-37 years	38-47 years	48-57 years	58-67 years	Total
	No (%)	No (%)	No (%)	No (%)	No (%)	
Abscess	12 (1.09)	15 (1.36)	6 (0.54)	0 (0.0)	0 (0.0)	33 (3)
Pericoronitis	12 (1.09)	7 (0.63)	0 (0.0)	0 (0.0)	0 (0.0)	19 (1.72)
Pulp Polyp	7 (0.63)	1 (0.09)	0 (0.0)	0 (0.0)	0 (0.0)	8 ((0.72)
Candidiasis	1 (0.09)	1 (0.09)	1 (0.09)	1 (0.09)	1 (0.09)	5 (0.45)
Material alba	3 (0.27)	2 (0.18)	2 (0.18)	0 (0.0)	0 (0.0)	7 (0.63)
Linea alba	2 (0.18)	3 (0.27)	2 (0.18)	0 (0.0)	0 (0.0)	7 (0.63)
Muccocel	2 (0.18)	1 (0.09)	0 (0.0)	0 (0.0)	0 (0.0)	3 (0.27)
Leukoplakia	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.09)	2 (0.18)	3 (0.27)
Lichenplanus	0 (0.0)	1 (0.09)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.09)
Fibroma	0 (0.0)	0 (0.0)	4 (0.36)	0 (0.0)	0 (0.0)	4 (0.36)
Hairy tongue	0 (0.0)	1 (0.09)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.09)
Total	39 (3.54)	32 (2.9)	15 (1.36)	2 (0.18)	3 (0.27)	91 (8.27)

Table 3: Distribution of study population by site of the lesion

Site of the lesion	Number (%)
Buccal mucosa	14 (1.27)
Tongue	4 (0.36)
Alveolar ridge/gingiva	41 (3.72)
Lower first molar	8 (0.72)
Lower third molar area	19 (1.72)
Lip	5 (0.45)
Total	91 (8.27)

DISCUSSION

The present study showed that among 1100 patients only 91 patients (8.27%) had oral lesions, the resultant was near to that found by Najm [13] (8.8%), and was over to that found by Majeed et al. [14] in the Missan governorate, south of Iraq (4.6%), and Saraswathi et al. [15] in the study that done in the south India (4.1%). On the other hand our finding was less than that found by Abdullah et al. [16] in the Sulaimani, north of Iraq (25.4%), and Cebeci et al. in the study of adult Turkish population (15.5%) [6].

These variations in the results could be explained by several factors like Geographical factors, Difference of the size of the sample, Distribution of the sex and the age of the sample, and the variation in criteria of the examination. The differences in the prevalence of oral lesions may be due to the socioeconomic factors, Medication used Cultural levels, and systemic diseases. The other factors that may be accused are the food type, uses of dentures, and the type and number of the lesion included.

In the present study, the oral mucosal lesions were slightly more prevalent among females (8.72%) than in males (7.8%). This disagreed with the findings of Najm [13] (females 7.57%, males 10.304%), Abdullah et al. [16] (females 4.64%, males 5.9%) in Sulaimania, Iraq, Pentenero et al. [9] (females 22.89%, males 27.3%) in the Turin area, but it was in the agreement with the findings of Majeed et al. [14] (females 51.08%, males 48.92%) in the Missan governorate, south of Iraq and Almobeeriek and Aldosari [10] (females 57.7%, males 42.3%) among the Saudi dental patients in which the lesions of the oral cavity were more prevalent in the females than in the males.

In our present study, the most common listed oral lesion was the abscess followed by pericorontis and pulp polyp. The abscess lesion reported was (3%) of the total lesion and recorded at the age (18-47 years), and this was in the agreement with the study done by Chandroth et al. [17] but recorded at the age of (48-67 years).

The prevalence of precoronitis and the pulp polyp was (1.72%,0.72%) respectively at the age of (18-37 years) which indicates the time of eruption of the wisdom tooth that lost its enough space during its eruption, coinciding with low of both socioeconomic and educational level that give rise to these results, on the other hand most of the population thought that 1st molar is deciduous so they neglect it, which ends up with its infection and the appearance of the pulp polyp.

The prevalence of the oral candidiasis in our study was (0.45%) and it was found to have more prevalence among the females (0.72%) than the males (0.18%) and distributed in all age groups and this findings are comparable with the findings of Majeed et al. [14] (0.272%,0.186%) and Abdullah et al. [16] (1.09%,0.33%). But in reverse to the findings of Amen et al. [18] (0.14%,0.30%), Najm [13] (0.12%,0.34%), and Chandroth et al. [17] (0.7%,1.2%). The occurrence of such lesion is due to poor oral hygiene, denture abuse and physical activity.

The prevalence of the material Alba and the linea Alba in our study was (0.63%) between the age of (18-47) years. For the material Alba it was more common between the males (1.09%) than the females (0.18%) and this was due to poor oral hygiene and the level of the socioeconomic with the resultant of neglecting of the oral health. The linea alba was seen more among the females (0.9%) than in the males (0.36%), our finding was comparable to the finding of Gaphor et al. [16], females (5.86%) and males (3.64%) and disagreed with the findings of Ali et al. [19], females (9.8%) and males (13.8) that is mostly associated with the friction, pressure, or trauma from the teeth to the cheek due to sucking habits [20].

The mucocele was diagnosed in (0.27%) of the patients and this was in agreement with the findings of Espinoza et al. [21] in Santiago, Chile (0.2%), Najm [13] (0.51%) and Ali et al. [19] in Kuwait (0.7%) and higher than the findings of Amen et al. [18] (0.07%) and Abdullah et al. [16] (0.03%).

Leukoplakia was seen in (0.27%) of all patients, this was higher than the findings of Najm [13] (0.08%), Abdullah et al. [16] in Sulaimani (0.09%) and Majeed et al. [14] in Missan (0.01%). But lower than the findings of other studies that was done by Espinoza et al. [21] in Santiago, Chile (1.7%).

The oral lichen planus was assigned in (0.09%) of the total study population and this was lower than the finding of Abdullah et al. [16] in Sulaimani (0.25%), Majeed et al. [14] in Missan (0.18%), Najm [13] (0.25%), Almobeeriek and Aldosari [10] (0.35%) and Espinoza et al. [17] in Santiago, Chile (2.1%).

The prevalence of fibroma in our study was (0.36%) of all patients which was in agreement with the findings of Abdullah et al. [16] in Sulaimani (0.38%) and was lower than the findings of Najm [13] in Basrah (1.12%) and Espinoza et al. [21] in Santiago, Chile (9.4%). The prevalence of fibroma was equally distributed between the males and the females and this was in disagreement with those findings of Najm [13] in Basrah (male 0.6%, female 0.5%) and Cebeci et al. [6] in the study of adult Turkish population (male 0.5%, female 0.3%).

The hairy tongue was present in (0.09%) of the study population and this was less than that present in the study of Almobeeriek and Aldosari [10] in Saudi dental

patients (0.55%), Abdullah et al. [16] in Sulaimania (1.87%), Ali et al. [19] in Kuwait (5.6%) and Jahanbani et al. [22] in Iran (8.9%).

The most common site of the oral lesions in our study was the alveolar ridge (gingiva) which constituted about (3.73%) followed by lower third molar area (1.72%) and the buccal mucosa (1.27), and this was differ from the previous study as in Ali et al. [19] in Kuwait where the common site was in buccal mucosa (49.1%), while in the study of Ghanaei et al. [23] in Iran the common site of the oral lesion was in the tongue (10%), and then in the gingiva (5.5%). In the study done by Chandroth et al. [17] in India the common site of the oral lesions was in the lip (53.4%). This variation in the sites among the different studies was explained by the prevalence of the different diseases at the different areas and countries and the way of the patient livings.

CONCLUSION

The oral lesion prevalence was significantly differed by social levels, sex and the ages. The abscesses in the young females were more prevalent. The present study has supplied information about the aspects of the epidemiology the oral mucosal lesions that may help a lot of in the planning of the future oral health studies.

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