

Prevalence of oral lesions in Al-Muthannagovernorate, Iraq : (Clinicopathological study)

Ali Hadi Fahad¹, Sabah Qaysar Musa²

¹Lecturer, Department of Pediatric, Orthodontics and Preventive Dentistry, College of Dentistry, Kufa University

²Asst. Lecturer, Department of Oral Diagnosis, College of Dentistry, Al-Muthanna University

ABSTRACT

Background: The aim of the current study is to find out the prevalence of oral lesions in AL-Muthanna governorate and to find out the possible associated factors related to such prevalence in relation to gender, age and site.

Aim of study: this study was carried out to evaluate the prevalence of oral lesions in this town that didn't has any previous evaluation of wide range of basic data in its central hospital and will provide it for future study and comparison with surrounding towns.

Materials and methods: In the present study, biopsy records of 684 cases of different body lesions over a 3 years period (2012-2015) were reviewed from the files of the laboratories of Al-Hussein teaching hospital in the governorate of AL-Muthanna. The available clinical data regarding age, gender and location were obtained for each case with oral lesion.

Results: Among the 684 patients (178 males and 506 females), the overall prevalence of oral lesion was found to be only 25 patients (3.6%). 9 of them were males and constituted 1.3% of total examined cases, while 16 females had oral lesion constituted 2.3%. The age range of the patients was between (15-70) years. Oral lesions were more prevalent among females (2.3%) than males (1.3%), and there was significant statistical difference between males and females. The most common oral lesions were the pyogenicgranuloma, which diagnosed in 10 cases (40%) of orally affected patients. The highest prevalence was observed in tongue 4(16 %) while the lowest prevalence was found in the floor of the mouth 1(4%). The age groups (20 -35) years were highly affected by oral lesions 13(52%).

Conclusions: Lesion prevalence differed significantly by age, sex. This study has provided information's about the epidemiologic aspects of oral lesions that may prove valuable in planning of future oral health studies.

Keywords: Oral lesions, Oral health, prevalence.

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INTRODUCTION

The oral mucosa acts as a protective wall against injurious factors such as trauma, pathogens, and carcinogenic agents. A wide variety of lesions and conditions can affect this mucosa; some of them are harmless, while others may have serious complications.^[1]

The quality of life of all individuals is influenced to certain extent by the oral health. Oral lesions can result in pain or discomfort that interferes with mastication, swallowing, and speech, so symptoms such as halitosis, xerostomia, or oral dysesthesia may be developed and then can disturb the daily social activities.^[2]

Hence, oral soft tissue examination is essential, and it should be achieved in a systematic manner to include all parts of the oral cavity.^[3]

Among the wide range of factors leading to alteration in the oral mucosa are infections from bacteria, fungi, viruses, parasites, and other agents; physical and thermal influences, changes in the immune system, systemic diseases, neoplasia, trauma and other factors, some of which are issues of aging^[4,5]. In some instances, long-term habits such as using tobacco or alcohol can cause precancerous or cancerous lesions.^[6]

Epidemiologic studies give important information to interpret the prevalence, incidence, and severity of oral disease in a specialized population.^[7]

Diagnosis of a wide variety of lesions that occur in the oral cavity is an essential part of dental practice. An important element in establishing a diagnosis is knowledge of the lesions relative frequency, or prevalence at one point in time.^[8] In Iraq population, only limited information on oral mucosal alterations or conditions is available, however few isolated studies on the prevalence of the oral lesions in Iraq have been reported. No epidemiological studies, and no special attention has been paid to study the prevalence of oral lesion in Al Muthanna city where the environment is relatively different in regarding to the weather, habits, types of food, life style, socioeconomic status and oral hygiene.^[9]

AIM OF STUDY

1: This study was carried out to evaluate the prevalence of oral lesions in this town that didn't have any previous evaluation of wide range of basic data in its central hospital. 2: We will provide this study for future studies and comparison with surrounding towns.

MATERIALS AND METHODS

1. **Materials:** A total of 684 of biopsy records for patients with various body lesions representing 178 males (26%) and 506 females (74%) during the period from 2012 to 2015 were randomly selected and included in this study. The patient's age range was between (15-66) years in order to allow future comparison between age groups.

2. **Sample Selection:** The samples were selected and reviewed from the files of the laboratories of Al-Hussein teaching hospital in AL-Muthanna governorate, 280 km south of Baghdad, itself part of middle Euphrates of Iraq.

3. The diagnosis had been done according to the history and clinical examination and histopathological study for the selected biopsies^[9].

4. **Statistical analysis:** statistical package for social science (SPSS-15) was employed for the Statistical analysis of the collected data, and excels 2003 for figures. Chi-square was used at a level of P value ($P < 0.05$ significant, $P > 0.05$ non-significant and $P < 0.001$ highly significant).

RESULTS

Among the 684 patients, only 25 patients (3.6%) had oral lesions. 9 males had oral lesion representing 1.3% of total examined patients, while 16 females had oral lesion constituted 2.3%. The patients' ages range between 15-70 years.

The prevalence of oral lesions was more among females (2.3%) than males (1.3%), and there was significant statistical difference between males and females (Table 2).

The most common oral lesions we noticed in this study were the pyogenic granuloma, which had been diagnosed in 10 cases (40%) of orally affected patients.

The benign squamous papilloma were found in 4 cases (16%) of patients with oral lesions, also the same ratio 4 cases (16%) represented the benign tumor of pleomorphic adenoma. Inflammatory lesions of salivary glands (sialadenitis) were diagnosed in 3 patients (12%) of the examined cases persons with oral disease. We also observed the presence of 2 cases (8%) with inflammatory cyst.

In this study the ratio of each of invasive well differentiated squamous cell carcinoma and fibroma constitute (4%) one case of the patient having oral lesions.

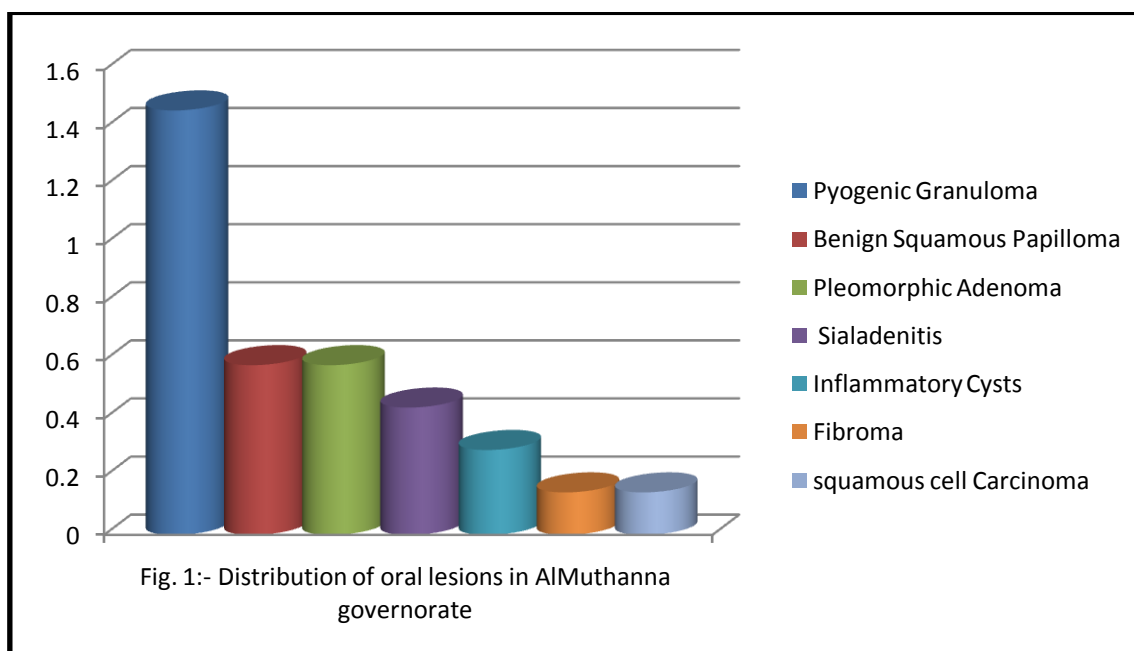
The highest prevalence was observed in the tongue (16%) ($n=4$) while the lowest prevalence was found in the floor of the mouth (4%) ($n=1$). The age group (25 -34) years were the most commonly affected age by oral lesions ($n=10$) (40%) while the least affected age group was (65-66) years as shown in (Table 1).

Table 1: Prevalence of oral conditions by age range and sex

Age	Male	Female	Total	% of patient with oral lesions	% of totally examined patients
15-24 years	2	5	7	28	1.023
25-34 years	5	5	10	40	1.461
35-44 years	0	2	2	8	0.292
45-54 years	1	2	3	12	0.438
55-64 years	0	2	2	8	0.292
65-66 years	1	0	1	4	0.146
Total	9	16	25	100	3.654

Table 2: Distribution of oral lesions in Al-Muthanna governorate

Lesion	No. of patients	%	Male	%	Female	%
Pyogenic granuloma	10	1.461	3	0.438	7	1.023
Benign squamous papilloma	4	0.584	1	0.146	3	0.438
Pleomorphic adenoma	4	0.584	3	0.438	1	0.146
sialadenitis	3	0.438	1	0.146	2	0.292
Inflammatory cysts	2	0.292	0	0	2	0.292
Fibroma	1	0.146	1	0.146	0	0
Squamous cell carcinoma	1	0.146	0	0	1	0.146
Total	25	3.654	9	1.315	16	2.339



DISCUSSION

Oral lesions present a significant health problem with a considerable morbidity. Despite its importance, there are few reports on its prevalence among the population of my city; Al-Muthanna governorate.

The findings of this study possibly provide important and missing information about the types and prevalence of oral lesions among AlMuthanna patients and can serve as baseline data for future studies on the prevalence of different oral lesions in the general population.

In our study the prevalence of oral lesions is (3.6%). In general the prevalence of oral lesions in Al-Muthannagovernorate is considered to be low in relation to the most of other epidemiological studies. Al-Muthannagovernorate is a small city, and hence the low prevalence, in addition to that, the style of life and types of food that depend on milk, vegetables and fishes raise the immune system for its population to a degree that overcomes both the low education and poor oral hygiene may lead to that low prevalence. Also many patients with advanced oral lesions such as malignancy were referred to or prefer to seek treatment and management in Baghdad or out of Iraq where more facilities such as hospital of radiotherapy and nuclear medicine center and developed laboratory investigations and specialized surgical centers are present and provided for those patients which may not reflect the real number of patients with oral lesions in Al-Muthanna governorate.

Incidence of oral lesions and mortality rates vary between different races, gender and age groups ^[10].

These results may be due to environmental factors such as chemicals, radiation that coming from the remnants and weapons of the previous wars and viruses which are important promoting factors in the development of oral lesions ^[11, 12].

Also, intrinsic factors include systemic or generalized states, such as general malnutrition or iron deficiency anemia ^[13,14], that may reflect the different rates between males and females.

The data of this study were obtained from the files of the laboratories of Al-Hussein teaching hospital in AL-Muthanna governorate

Among the 684 patients, only 25patients (3.6%) had one or more oral lesions, this result was comparable to that found by Jabar and Majeed^[9] in Missan governorate , south of Iraq(4.6%), Saraswathi et al.^[15] in a cross sectional study in south India (4.1%). But less than that found by Gaphor and Abdullah^[16] in Sulaimani , north of Iraq (25,4%), Cebeci et al^[17] in a study of adult Turkish population(15.5%) and Rooban et al.^[18] in Chennai, south India (25%). And extremely less than that found by Mathew et al ^[19] in Manipal, India(41.2%) and Garcia-pola Vallejo et al.^[20] among an adult Spanish population(51.1%),The result of our study was more than that found by Byakodi et al^[21] in a study done in Sangli, India (2.5%).These variations could be explained due to: Racial factor, geographical factors, , different of sample size, sex distribution of the sample, age distribution of the sample, specific cultural habits like smoking and use of alcohol, variation in criteria of examination , real differences in the prevalence of oral lesions ,socioeconomic factors, cultural levels, medication used, systemic diseases, use of dentures, food type and the number and type of the lesions included in the study.

Consistent with data from China, ^[22] tongue conditions were a frequent observation in our study, comprising almost one-third of the mucosal lesions.

In accordance with others^[23,24], our results showed a more prevalence of oral lesions among females (2.3%) and young adults (25-34 years) (1.46%).Other reports, however, indicated that oral lesions tend to increase with age in association with tobacco consumption and denture use^[25,26]. The age of the patient is crucial in patient assessment, treatment planning and health education.

Oral mucosal lesions were slightly more prevalent among females (2.3%) than in males (1.3%). This is in agreement with the finding by Jabar and Majeed^[9] in Missangovernorate, south of Iraq and Almobeeriek and Aldosari^[27] among Saudi dental patients (Saudia Arabia has many environmental and educational factors and conditions similar to those found in Al Muthanna city because that most of borders between Iraq and Saudia Arabia lies in Almuthanna city) but disagrees with the finding of Gaphor and Abdullah^[16] in Sulaimani, north of Iraq, Pentenero et al.^[28] in Turin area in which oral lesions where more prevalent in males than in females.

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