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Evaluation of mouth lesions among Baghdad outpatients visiting the departments of oral pathology and oral medicine

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Abstract

Introduction: This article seeks to familiarise clinicians with the assessment and treatment of common oral lesions encountered in primary care settings. According to their clinical presentation, lesions are classified as ulcerated lesions, white or variegated white-red lesions, masses and nodules, or pigmented lesions. Recurrent aphthous stomatitis, herpes simplex virus, oral squamous cell carcinoma, geographic tongue, oral candidiasis, oral lichen planus, pre-malignant disorders, pyogenic granuloma, mucocele, squamous cell papilloma, oral melanoma, hairy tongue, and amalgam tattoo are among the pathologies discussed. This study aims to ascertain the prevalence of oral lesions among patients and to determine their most prevalent manifestations.

Methods: One hundred outpatients were referred to the Departments of Oral Pathology and Oral Medicine between January 1 and June 30, 2023. The majority of referrals were for caries, periodontitis, neuralgia, prosthetic issues, and other complaints such as extraction requests, root planning and scaling, and general dental examinations.

Results: The findings provide insights into the types of oral lesions observed among the patients. Among the patients, 46% presented with aphthous ulcers, with 32% of them having no underlying systemic diseases. Leukoplakia was found in 18% of the patients, oral lichen planus in 9%, mucocele in 2%, candidiasis in 15%, squamous cell carcinoma in 4%, and traumatic ulcers in 6%.

Conclusion: The oral cavity is often neglected during routine examinations in general practice. Enhancing knowledge regarding the common presentations of oral lesions can empower practitioners to conduct thorough oral examinations and effectively manage any identified pathologies.

Keywords: Evaluation, mouth lesion, leukoplakia, cancer, tumor

Introductions

Traditionally, the oral mucosal membrane has been considered a reflection of overall health. Oral mucosal lesions can arise from various causes such as infections (bacterial, viral, fungal), local trauma or irritation (traumatic keratosis, irritational fibroma, burns), systemic diseases, and excessive consumption of tobacco, betel quid, and alcohol [1]. Some systemic illnesses cause symptoms or lesions on the oral mucosa, particularly the tongue. This article covers a wide range of pathologies, including herpes simplex virus, geographic tongue, oral candidiasis, oral lichen planus, pre-malignant disorders, pyogenic granuloma, mucocele, squamous cell papilloma, oral melanoma, hairy tongue, and amalgam tattoo. These lesions are typically seen during regular dental exams and may be present at birth or develop later in adulthood. Age, gender, and ethnicity may all affect them, and they may even be present before birth [2, 3]. The incidence of oral cancer exhibits significant geographical variations worldwide, influenced by factors such as ethnicity, habits, and the presence and severity of etiological factors [4]. In the United States, cancer of the oral cavity and pharynx accounts for 3% of all cancers [5, 6], whereas in India, cancer of the mouth and tongue may constitute up to 50% of all cancers, primarily associated with the consumption of betel quid and tobacco [7, 8]. Oral cancer ranks among the top ten most common cancers globally [9, 10]. It is the fourth most frequent cancer in developing countries and the eighth most frequent in developed countries [11]. Historically, oral cancer has been predominantly observed in individuals over the age of 40 [12], with a higher incidence in males compared to females worldwide [6]. The etiology of oral cancer is multifactorial, involving genetic, environmental, social, and behavioral factors. However, alcohol and tobacco are recognized as the most

significant risk factors for its development [12]. Objective: This study aims to evaluate mouth lesions among patients and determine the common presentations of oral lesions.

Method

All study participants (n=100) were referred to the Departments of Oral Pathology and Oral Medicine as outpatients between 1 January 2023 and 30 June 2023. Caries, periodontitis, neuralgia, prosthetic problems, and other complaints, such as patients requesting extraction, root planning and scaling, or a general dental examination, were referred to the clinic. Administration of data and Statistical analysis: The acquired data were encoded and inserted into SPSS 16.0 (Statistical Package for the Social Sciences (SPSS) 16.0 by IBM) (SPSS for Windows, Version 16.0.2007, SPSS Inc., Chicago, Illinois, United States of America). Mean and standard deviation were used to convey continuous variables. Frequency and percentage were used to analyse the categorical data.

Results

In Table 1, which presents the demographic information of the participants for 100 patients, including age, gender, academic achievement, site of infection, and smoking habits. Where the results of the study were that 5 (5%) of the participants were between the ages of 15-20 years, while 14 (14%) of them were between the age group of 20-29 years, (19%) of them were between 30-39 years, 13 (13%) were in the age group 40-49 years, 23 (23%) between 50-59, and 26 (26%) of them are between 60-65 years. Where the selected sample was 65% males and 35% female, and their educational attainment, 53 (53%) of them had completed primary school, 28 (28%) completed secondary school, and 19 (19%) completed college or above. As for the site of the lesion, the number of patients who were infected with the tongue was 43 (43%), and those who were infected with the buccal mucosa was 25 (25%). As for what was in the floor of the mouth, 15 (15%) and 17 (17%) were in the hard palate. And 70 (70%) of them were smokers.

Table 1: Show Demographic characteristics of Patients, n= (100)

Demographic characteristics	Categories	n	%
Age	15-	5	5%
	20-29	14	14%
	30-39	19	19%
	40-49	13	13%
	50-59	23	23%
	60-65	26	26%
Gender	Male	65	65%
	Female	35	35%
Education	Primary school	53	53%
	secondary school	28	28%
	college and higher education	19	19%
Site of lesion	Tongue	43	43%
	Buccal mucosa	25	25%
	Floor of mouth	15	15%
	Hard palate	17	17%
Habits	smoking	70	70%

In Table 2, which shows the types of lesions among patients the proportion of patients who had aphthous ulcer was 46%, 32% of them without systematic diseases, 14% were with

systematic diseases, 18% were Leukoplakia, 9% were with oral lichen plannus, 2% of them were Mucocele, also, 15% of them were candidiasis, and that 4% of them were squamous cell carcinoma SCC, and 6% had traumatic ulcers.

Table 2: distribution of mouth lesions among patients n=100

Type of lesion among patients	n	%
Aphthous ulcer	46	46%
1. Without systematic diseases.	32	
2. With systematic diseases.	14	
Leukoplakia	18	18%
With oral lichen plannus.	9	9%
Mucocele	2	2%
Candidiasis	15	15%
Squamous cell carcinoma SCC	4	4%
Traumatic ulcer	6	6%

Discussion

This study was conducted on a random sample of patients referred to the department of dentists in Baghdad. It is important to note that these patients may not represent a specific population. However, the distribution of patients across different age groups indicates that these oral lesions are more common among elderly individuals and men. The incidence of oral cancer varies significantly worldwide, and data interpretation can be challenging due to variations in cancer registration practices based on international criteria (ICD). In Iraq, despite being a significant problem, there is no comprehensive registry for all cases of oral cancer. Table 1 presents demographic information for the 100 participants, including age, gender, educational attainment, site of infection, and smoking habits. The study results showed that 5% of participants were between 15-20 years old, 14% were between 20-29 years old, 19% were between 30-39 years old, 13% were in the 40-49 age group, 23% were between 50-59 years old, and 26% were between 60-65 years old. In terms of educational attainment, 53% had completed primary school, 28% had completed secondary school, and 19% had completed college or higher education. Regarding the site of the lesions, 43% of patients had tongue infections, 25% had buccal mucosa infections, 15% had lesions in the floor of the mouth, and 17% had lesions in the hard palate. Furthermore, 70% of the participants were smokers. The frequency of oral cancer occurrence in this study was 4% of all body cancers, which is similar to the rates reported in the USA (3%) [5, 13] and the UK (2%) [14]. However, the occurrence of oral cancer among Iraqi patients shows greater variation compared to India, where it comprises up to 50% of all body cancers [7]. Oral cancer is among the top ten most common cancers in Southeast Asia [15]. Table 1 also highlights the distribution of injuries based on age groups, with a higher incidence observed in individuals over the age of 40, consistent with previous studies [16, 17]. Additionally, the table provides information on the site of oral lesions, which varies widely across different regions. The lower lip is the most frequent site in the USA, Canada, Kuwait, Australia, and Iraq [6, 17, 18], while the tongue is the most common site in Brazil, Scotland, Saudi Arabia, and France [6, 12, 18, 19]. In Southeast Asia (India), buccal mucosa is the most frequent site [15]. These variations in the site of occurrence can be attributed to differences in exposure to etiological factors such as smoking, alcohol consumption, actinic radiation, irritation,

and other factors. Table 2 provides information on the types of lesions among patients. The most common lesion observed was aphthous ulcer (46%), followed by leukoplakia (18%), oral lichen planus (9%), mucocele (2%), candidiasis (15%), and squamous cell carcinoma (4%). The incidence rates of these lesions differ from other studies conducted in different regions.

Conclusion

Enhancing knowledge about common oral lesion presentations is crucial for general practitioners to improve oral examinations and pathology management. Red flags for malignancy include non-resolving lesions after 3 weeks, ill-fitting prostheses, erythroplakia, leukoplakia, and indurated or fixed lesions. Risk factors like smoking, betel nut consumption, HPV infection, and immunocompromised status warrant closer attention during oral examinations.

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