

**PATTERN OF PRESENTATIONS OF ORAL ULCERATIONS AND THEIR
IMPACT ON ORAL HEALTH RELATED QUALITY OF LIFE OF PATIENTS**

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Abstract

Introduction

Oral ulcer is generally defined as damage of both epithelium and lamina propria of the oral mucosa leading to discontinuity of the oral mucosa. If an ulcerative lesion lasts for two weeks or longer, it is considered chronic; otherwise, it is regarded as an acute ulcer.

Materials and Methods - This study was a retrospective cohort study of all cases that presented with oral ulcers in the oral medicine clinic between May 2021 and May 2022. The clinical diagnosis of oral ulcers was based on the WHO guidelines for oral mucosa diagnosis. All the case notes in the department were retrieved and reviewed. Information extracted from the case notes included age, sex, medical history, clinical findings and treatment received. The data was analyzed using SPSS statistical software.

Results - In our study, we found that there was a statistical significance between age and different types of oral ulcers ($p < 0.05$). No statistical significance was noted between gender and different types of oral ulcers. Male patients between 30 - 60 years of age were more prevalent with oral ulcers. Traumatic and recurrent aphthous ulcers were more prevalent.

Conclusion - Within the limits of this study, we concluded Recurrent aphthous ulcer was the most frequent form of oral ulceration and was commoner in males. Physical stress was the most frequently implicated predisposing factor. Further studies on a larger scale are required to find possible associations that would help determine clinical outcomes.

Key words: Discontinuity of epithelium, Recurrent Aphthous ulcer, Stress, Traumatic ulcer,

Introduction

Oral ulceration is one of the common reasons for Oral Medicine consultations. It is basically defined as damage of both epithelium and lamina propria of the oral mucosa leading to discontinuity of the oral mucosa (1). Dissimilarly to mucosal erosions which involve the loss of only the superficial layers of the oral epithelium, oral ulcerations is associated with loss of the entire epithelial layers and lamina propria. Patients usually show signs of oral painful wounds that may affect any oral mucosa, especially the lips, tongue, floor of the mouth, palate and buccal mucosa (2). The usual presentation is that of painful "aphthae," a term of ancient origin referring to ulceration of the oral mucosal surface (3). The aetiology of oral ulcer has been well documented in the literature (1,3,4). Traumatic ulcer results from the presence of mechanical (sharp cusps of tooth, appliances in the mouth, etc), radiation, chemical (excessive topical medications such as salicylate, aspirin burns, etc) and radiation injury to oral mucosa during radiotherapy (3,5). Removal or the control of the respective source of trauma is confined to the management. Others are pain control and prevention of secondary infection which are quite essential steps in the management of such oral ulcerations (6). Infectious ulcers result from the presence of pathogenic organism such as bacterial (syphilitic ulcer, tuberculous ulcer, acute ulcerative gingivitis), virus (herpetic gingivostomatitis, shingles p) and fungi (such as in histoplasmosis) (3, 7). Other implicated aetiology are immune dysfunction (aphthous ulceration, erythema multiforme e.t.c), stress induced ulcer and drugs. Syndromic forms of oral ulceration had also been reported. Such include Behcet's syndrome and Reiter's syndromes in these cases, oral ulcerations are seen in conjunction with genital and corneal ulcerations. Stress and psychological factors have also been considered as notable etiological factors in some form of oral ulcerations probably due to the role played by stress in immune dysfunction (8).

Pain and discomfort associated with oral ulcer has been reported to be associated with reduced quality of life (9). It is also associated with difficulty in feeding and taste disturbances. Although oral ulcerations are encountered frequently in daily dental practice, information on the local experience and pattern of presentation of this condition in the South Indian population is scanty. This study was aimed at describing the epidemiology and pattern of presentation of oral ulcerations among patients seen in the Oral Medicine clinic of South Indian hospital set-up.

Materials and Methods:

This study was done in Private Dental College, Chennai, TamilNadu. A total of 100 records of patients who had been diagnosed with oral ulceration and subjected to medications between July 2021 to Jan 2022 were assessed for this study. The data collection and analysis was done by a single examiner. The patients who had clinical signs and symptoms of Oral ulcers were included in the study. Relevant history that revealed predisposing factors and systemic conditions of the patients were also recorded. Other information recorded are the results of the

examinations such as the location, number and shape of ulcers as well as other lesions seen. A simple random sampling was done to avoid sampling bias. The data collected were tabulated in an excel sheet. Gender, age, and type of condylar changes were recorded. The extracted data was tabulated in MS Excel and analyzed using SPSS 19 Descriptive statistics and chi-square tests were performed with the level of significance at 5% ($P < 0.05$).

Results:

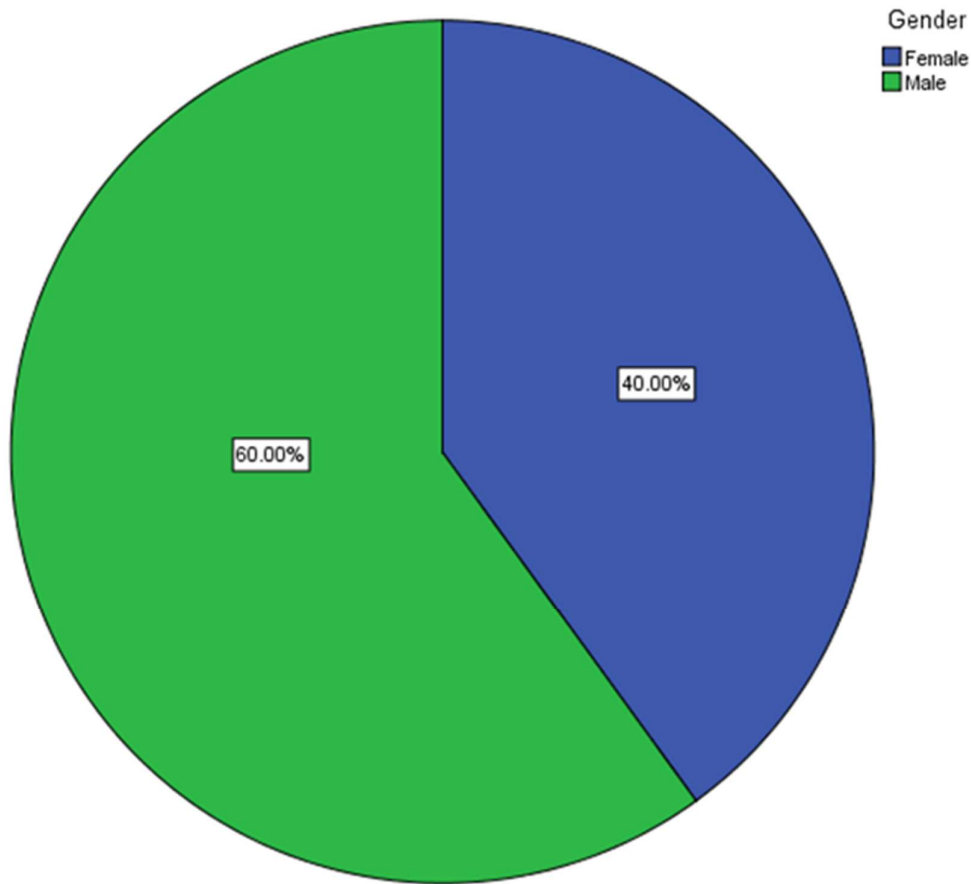


Figure 1: Pie chart showing the gender distribution among patients. Blue color denotes female patients and green color denotes male patients. 60% of the patients were male, 40% patients were female. Males were diagnosed more with different types of oral lesions in comparison to female patients.

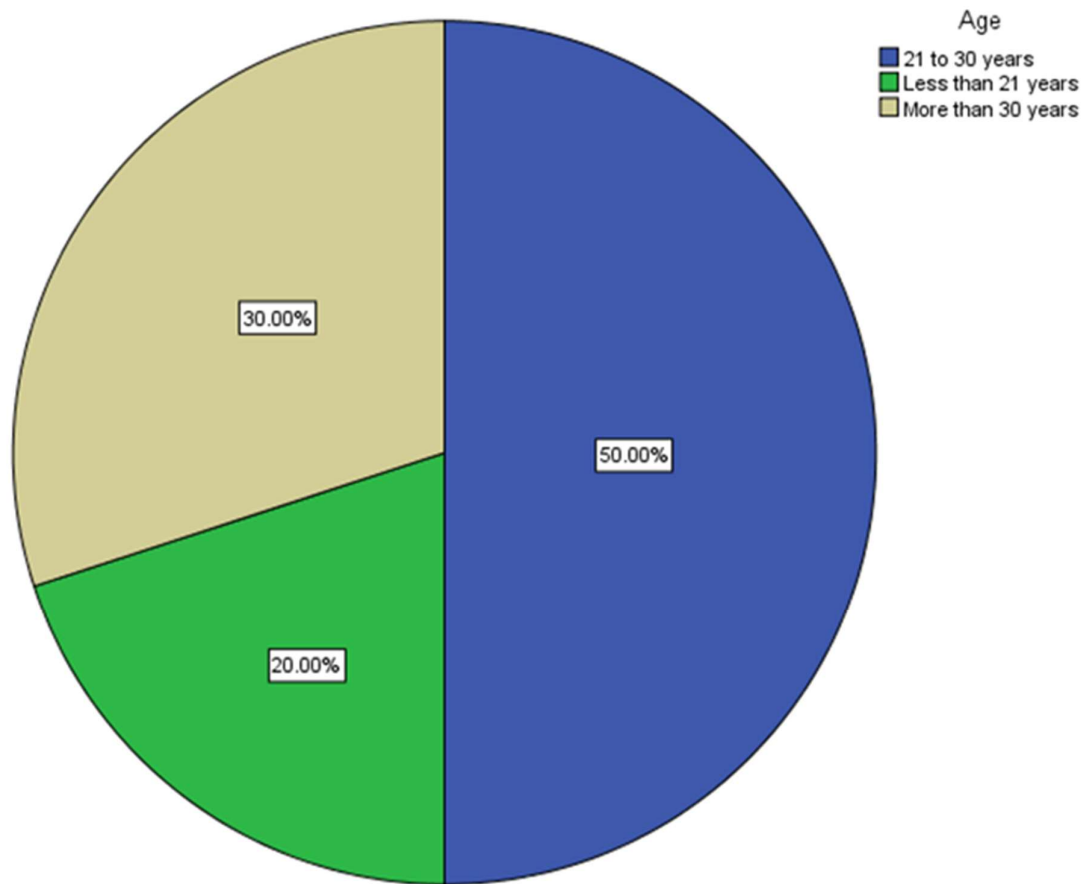


Figure 2: Pie chart showing the Age distribution among the patients. Blue colour denotes patients of age 21 - 30 years, Green colour denotes patients of age below 21 years and grey colour denotes patients of age above 30 years. 50% of patients belonged to the group of 21 - 30 years, 20% of patients belonged to the group of below 21 years of age and 30% of patients belonged to the group of above 31 years of age. Patients belonging to the age group of 21 - 30 years are reported more in number with oral lesions.

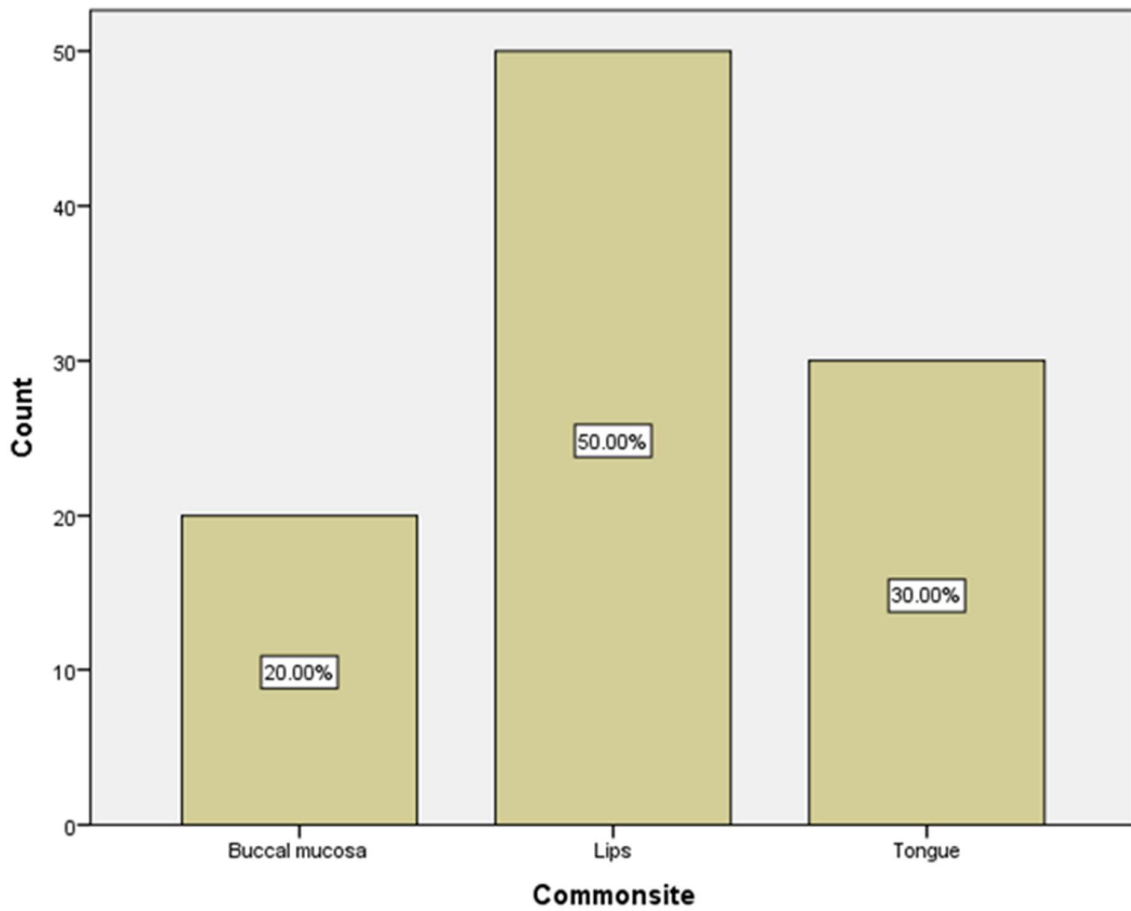


Figure 3: Bar chart showing the common site distribution among patients. Lips were the most common site of occurrence of oral lesions.

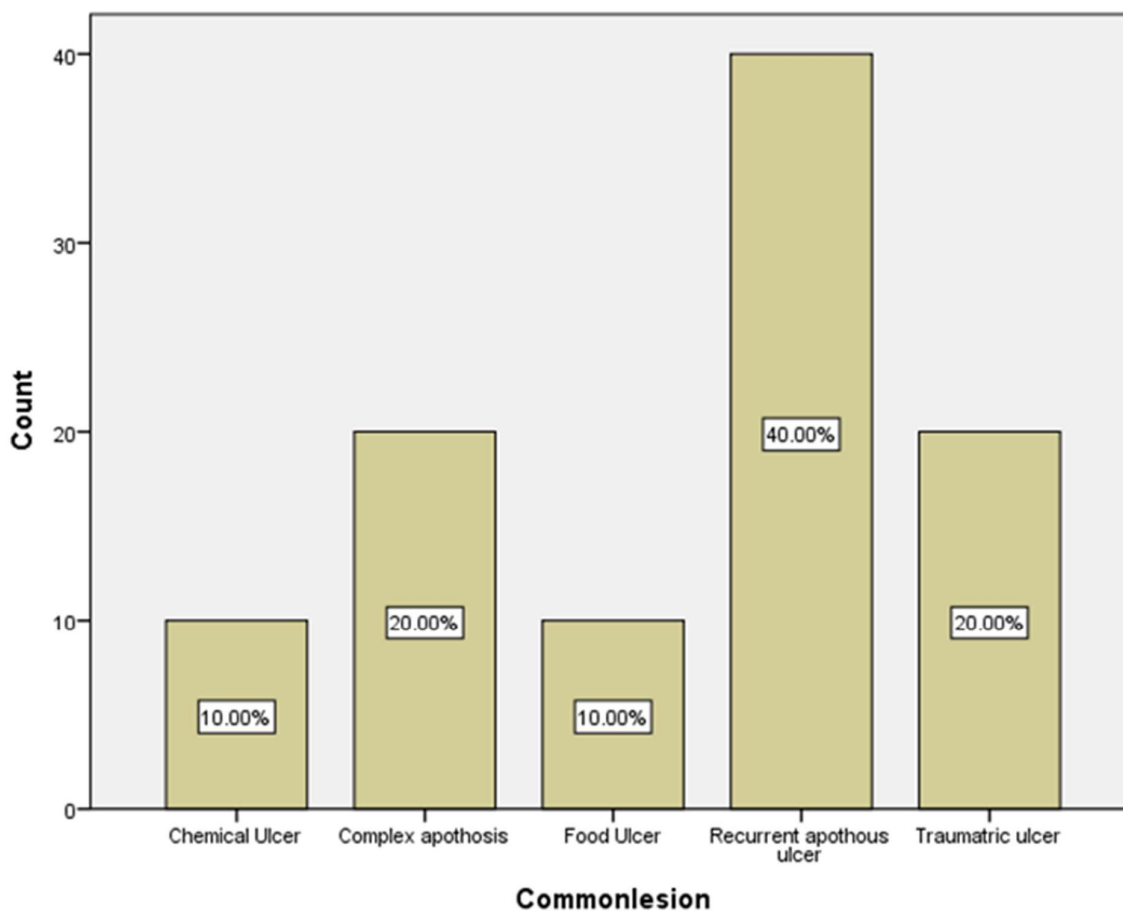


Figure 4: Bar chart showing the common oral lesion diagnosed among patients. Recurrent aphthous ulcers were the most common among all oral lesions.

Discussion:

Oral ulceration is one of the commonest reasons for dental consultations and has been associated with impaired quality of life (9). The prevalence of oral ulceration in this study was 20%. This result is at odds with a United State study that reported 4% (10). Unlike this study which was conducted among cases who come for dental consultations, the US study was a community predicated study and that may be responsible for the lower prevalence. In a study done among cases with Behcet pattern prevalent , 25% was reported (11). Recurrent aphthous ulcer which is presumably the commonest oral ulceration affects a range of 5 to 66% of the

population depending on the group studied (1). Some former African studies had, still, reported low prevalence for oral ulceration as low as 1.3% and 1.96% being the findings of a Ghanaian study by Amoateng et al and a Nigerian study by Omoregie et al singly (12, 13).

The distribution of oral ulcers is greatly affected by sex. The finding of this study showed a male predilection with a male female ratio 2.1: 1. This is in agreement with the reports of Omoregie et al (12). Unlike this study, Amoateng et al (13) reported a female ascendancy. Female tendencies to oral ulcers may be due to hormonal changes which are peculiar to females, hormonal changes is one of the preparing factors to oral ulcerations (14).

Minor aphthous ulcer, also known as *mickuliz aphthae* was the most frequent oral ulcer presented in this study, representing 54% of all oral ulcerations seen. This finding is in agreement with utmost earlier studies (1). It generally presents as small, round or elliptical ulcers with circumscribed peripheries, erythematous haloes and pusillanous or slate fibromembranous bottom (8). Recurrent aphthous ulcer is the commonest complaint of the oral mucosa affecting between 5 to 66% with about 20% of individuals in the utmost population having the condition to some degree (13). The advanced frequency of the preparing factors of aphthous ulcer among the crowd may be responsible for the advanced frequency of aphthous ulceration (8).

The commonest position of oral ulcer in this study was lower lip, seen in 40% of the subjects. This finding is in agreement with the report of an Iranian study by Mortazavi et al, 2016 that showed the lips as the commonest point of oral examination (1, 2) still, a Nigerian study by Ojo et al before reported the point distribution of the ulcers in favour of the gingiva for intermittent aphthous ulcer (15). The later study was done among children who are known to naturally have an advanced frequency of gingivitis (16) this presumably is responsible for the advanced prevalence of ulceration in the gingivae. The distribution of oral ulceration is also affected by age. In this study, oral ulceration is commonest among the subjects, age order. This is in agreement with the report of Chaudhuri et al, 2016 who examined 705 cases with ulceration and showed that the most frequent age group of circumstance to be 21- 30 with 145(20.7%) subjects. Muhaidat et al, still, in a Jordan population study reported oral ulcer to be commonest among those in 31- 40 years (17). Most of the integrated aetiology of oral ulcers is subjects in active individualities between ages 21-.40; this may be responsible for the higher prevalence in the age groups.(1).(2)

Physical and emotional stress has been strongly associated with oral ulcers and that was set up in this study. The mechanisms explaining stress as an etiological factor in Recurrent a phthous ulcer circumstances are not fully- understood. Increased situations of salivary cortisol or of reactive oxygen species in the saliva have been suggested as the creator of the lesions (18-20). Due to stress, cases may begin parafunctional habits that beget traumatic injuries to the area, thus leading to an episode (19). A heritable modification of pathways linked to stressful responses may also be involved (20). The real part of stress is still unknown but it can

presumably be related with the variations that affect multiple vulnerable system factors including the distribution, proliferation and exertion of lymphocytes and natural killer cells, phagocytosis, and product of cytokines and antibodies. Our team has extensive knowledge and research experience that has translate into high quality publications(3–12)

Conclusion:

This study showed a higher prevalence of oral ulcerations among patients presenting at Oral Medicine Clinic having reported that about one out of every five patients has oral ulceration. The oral ulcers seen in this study were mainly recurrent aphthous, others are complex aphthosis, traumatic ulcer due to biting the oral tissues or injuries from food and chemical ulcers. Male predilection was also found in this study. Lips were the commonest intra oral site and the disorder was commonest among patients at age group 21-30 years. Having identified stress as a major predisposing factor to the development of oral ulcers, it has become necessary to recommend proper health education and programmes that will ease the stress of the population. Also understanding the pathophysiology, careful examination of oral ulcers and determining the underlying causes will assist immensely in the management of such lesions.

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