



PREVALENCE OF RECURRENT APHTHOUS ULCERATION IN WESTERN MAHARASHTRA – A PROSPECTIVE STUDY.

Medicine

K. A. Kamala* M.D.S., Associate professor, Department of Oral Medicine And Radiology, School of Dental Sciences, KIMSUDU, Karad, Pin code -415110, District- Satara, Maharashtra, India. *Corresponding Author

Dr. S. Sankethguddad M.D.S. Department of Periodontology, Shivtej Arogya Seva Sanstha's Yogita Dental College and Hospital, Khed, District- Ratnagiri, Maharashtra, India.

ABSTRACT

Aim: A prospective study was conducted with aim to determine the prevalence of recurrent aphthous ulcerations in western Maharashtra population. **Material and Methods:** About 2240 patients attending the Department of Oral Medicine and Radiology during the period from August, 2012 to Feb, 2014 with various complaints were examined. Of the 2240 patients examined 1215 were males and 1025 were females. **Results:** Out of 2240 patients, about 360 patients presented with recurrent aphthous ulceration (16.07%). Females (73.61%) were more commonly affected than males (26.38%). Patients in the second and third decade were most commonly affected. Stress was the most common factor associated with recurrent aphthous stomatitis (54.72%). Buccal Mucosa (40%) was most commonly affected followed by tongue (28.33%) and lower labial mucosa (15.83%). **Conclusion:** The results of the present study indicate that recurrent aphthous ulceration is a common mucosal disorder in the Indian population. The early and proper diagnosis of the ulcers will help the dental practitioner in providing information to the patient regarding awareness and management of the condition.

KEYWORDS

Recurrent aphthous ulcers, prevalence, stress, treatment.

INTRODUCTION

Recurrent aphthous ulcerations (RAU) is a common disease of the oral cavity, affecting about 20% of the world's Population.¹ It is a common inflammatory ulcerative condition encountered in daily dental practice.² The prevalence rate of this condition varied from 5-66% among different parts of the world and in different samples of population.³

Clinically RAU are classified on the basis of ulcer size in to major, minor, and herpetiform and more common in women, in people under the age of 40 years. A prodromal burning sensation lasting 24 to 48 hours can often precede the onset of ulcers.⁴ RAU mainly occurs in the non-keratinized areas as buccal mucosa, lips, tongue and soft palate. These present clinically as multiple, small, round, or ovoid ulcers, with circumscribed margins, covered by a yellowish or gray-white fibrinous exudates and surrounded by an erythematous halo. There is intense or moderate pain and the ulcers heal in 10-14 days for the more common type and more than 2 weeks for the severe type.^{5,6,7,8}

The etiology of recurrent aphthous stomatitis is uncertain, and both environmental and genetic factors are indicated. It has been associated with a number of causes including stress, trauma, infection, allergy, genetic predisposition, or nutritional deficiencies.^{9,10} Systemic conditions including genetic predisposition, immune dysregulation, and family history might play a role in recurrent aphthous ulceration in some patients.⁹

A variety of medications are used currently for the management of RAU depending on the severity of the ulcers. But still there is no particular curative treatment available for RAU. The primary goals of the therapy for RAU are relief of pain, reduction of ulcer duration, and restoration of normal oral function. Secondary goals include reduction in the frequency and severity of recurrences and maintenance of remission.¹¹ Pain relief of minor lesions can be achieved with help of topical anesthetic agents (such as benzocaine and lidocaine), emollient orabase, antimicrobial mouthwashes and topical corticosteroids.¹² In more severe cases, the use of a high potency topical steroids preparation such as flucinonoide, betamethasone, or clobetasole, placed directly on the lesion, shortens healing time and reduces the size of the ulcers. Others includes amlexanox paste and a topical tetracycline or doxycycline used either as mouthrinse or applied as paste directly on the lesion.¹¹

Systemic medication can be tried if topical therapy is ineffective. Levamisole has shown variable efficacy with dose of 150mg per day

for consecutive days followed by gap of two weeks. Then repeat for 3 days and this is to be done 3 times. Other drugs that have been reported to reduce the number of ulcers are colchicines, pentoxifylline, dapsone and thalidomide. Each of these drugs has the potential for side effects and toxicity, so have to be used cautiously.^{11,12}

The present study aimed to determine the prevalence of aphthous ulceration in regard to the other oral lesions in patients attending Oral Diagnosis Department at Tatyasheb Kore Dental College, Kolhapur, Maharashtra, India.

MATERIAL AND METHODS

Present study was conducted on the out patients department reporting with various complaints to the department of Oral Medicine and Radiology, at Tatyasheb Kore Dental College, Kolhapur, Maharashtra, India. Ethical clearance from the Institutional Ethical Committee was obtained. A written informed consent was obtained from the patients. Out of 2240 patients examined 1215 were males and 1025 were females. RAU was diagnosed depending on clinical features. The collected data was entered into the computer, and frequency and distribution tables of RAU were generated using Statistical Package for Social Sciences (SPSS16) version.

RESULTS

Out of 2240 about 360 patients presented with RAU (16.07%). Females 265 (73.61%) were more commonly affected than males 95 (26.38%). Patients in the second and third decade were most commonly affected 263 (73.05%), followed by first to second decade 69 (19.16%) and third to fourth decade 28 (7.77%) [Table 1]. Stress was the most common factor associated with RAU 197 (54.72%) followed by nutritional deficiency 90 (25%), food stuff 47 (13.05%) and other factors 26 (7.22%) [Table 2]. Buccal Mucosa 144 (40%) was most commonly affected followed by tongue 102 (28.33%), lower labial mucosa 57 (15.83%) and upper labial mucosa 19 (5.27%) [table 3].

Table 1. Distribution of ulcer according to Age and Gender

Sl. No	Age group range (in years)	Male (%)	Female (%)
1	10-21 yrs	16 (16.84)	53 (20)
2	22-31 yrs	67 (70.52)	196 (73.96)
3	32-41 yrs	12 (12.63)	16 (6.03)
Total	360	95 (26.38)	265 (73.61)

Table 2. Different Triggering factors related to RAU

Sl.No.	Triggering factors	No. of Patients (%)
1	Stress	197 (54.72%)
2	Nutritional deficiency	90 (25%)
3	Food Stuff	47 (13.05%)
4	Other factors (trauma, menstruation etc.)	26 (7.22%)
	Total	360 (100)

Table 3. Distribution of RAU according to the sites

Sl.No.	Site	No. of Patient Affected (%)
1	Buccal Mucosa	144 (40%)
2	Tongue (tip, lateral border)	102 (28.33)
3	Lower Labial Mucosa	57 (15.83)
4	Upper Labial Mucosa	30 (8.33)
5	Buccal Vestibule	19 (5.27)
6	Other (gingiva, commissure, soft palate)	8 (2.22)
	Total	360 (100)

DISCUSSION

Oral ulceration is encountered frequently in our daily practice; it causes a lot of suffering and agony for the patients throughout their life. In the present study the overall prevalence rate was 16.07%, females were most commonly affected than males 73.61%, second to third decade age group was affected more than other age groups and stress was most common etiologic factor. Buccal mucosa was most commonly affected than other site. Similar results were found in other Indian studies with little variations.

In a study conducted by Patil S et al the prevalence rate of RAU was 21.7%, females 56.3% were affected more than males 43.7%, third to fourth decade age group was most commonly affected and stress 40.45% was most common etiologic factor.¹³ The results of another study conducted by Rathod U et al, showed similar results with females: male ratio 51.85: 48.14%, first to second decade age group was most commonly affected, stress (81.81%) was most common etiologic factor and buccal mucosa 40.45% was most frequently affected site.¹⁴

Byahatti SM conducted a prospective study of occurrence of RAU in a group of Libyan patients. The prevalence of RAU was 6% with female: male ratio 63:37 which was less than compared to the present study, second to third decade was 71% was most commonly affected, stress 29% was common etiologic factor and buccal mucosa was most commonly affected.² The results of Abdullah MJ et al showed high prevalence rate of RAU 28.2%, female: male ration 55.4%:44.6%, second to third decade was most commonly affected, stress 43.3% was common etiologic factor and lip and buccal mucosa was most commonly affected.⁸

A- kareem SAL et al conducted study of prevalence of RAU for four academic years in Sulaimani city Iraq. In his study the prevalence of RAU was 15% similar to the present study. Males were most commonly affected 56% than the females 44% which was in contrast to present study. The highest numbers of patients were seen in the younger age groups second to third decade of life and the most frequent sites for the occurrence of RAU was the internal surface of the lower lip 36% followed by buccal mucosa 25% and only minorities of patients were reported emotional stress as a possible etiologic factor.³

Salem C et al in his study of prevalence of RAU stated that prevalence of RAU was 16.4% which was similar to present study. Males were most commonly affected 63% than females 39% which was in contrast to the present study. The most common age group affected was third to fourth decade 2.7% followed by second to third decade 2.6%. The locations most o ten affected were the labial mucosa 32% followed by buccal mucosa 30%.¹⁵

CONCLUSION

RAU is a common, recurrent painful ulceration affecting the world's population. The etiopathogenesis of this disease is not clear. Treatment

strategies must be directed toward providing symptomatic relief by reducing pain, increasing the duration of ulcer-free periods, and also by accelerating ulcer healing. Knowledge regarding the prevalence of RAU gives an insight into the proportion of the population suffering from the condition and the possible related factors. This study provides important information about the prevalence of RAU in western Maharashtra of India. The early and correct diagnosis of RAU will help the dental practitioner in providing awareness regarding the causes and management of the condition to the patient.

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