

Prevalence of Recurrent Aphthous Ulcer in Dental Patients in Multispecialty Hospital

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ABSTRACT

Background: The aim of the study is to evaluate the prevalence of recurrent aphthous ulcer in multispecialty hospital.

Materials & Methods: Five hundred patients of age group 10-70years reporting to the out-patient department were screened and recalled for regular check-ups for a period of 2 years. The data were collected, verified and were sent for statistical analysis. The frequency and distribution of RAS in gender, age were calculated.

Results: Out of 540 patients, only 65 patients were clinically diagnosed to be suffering from RAS. The prevalence of RAS was 12.89. There was a higher prevalence in females as compared to males and it was most common in the second and third decades of life.

Conclusion: Based on the results of our study, the prevalence of RAS in which was very low as compared to other Indian population. Females were more commonly affected. The most common age affected in our study group was second and third decades.

Keywords: Aphthae, recurrent ulcer, RAS.

INTRODUCTION

Oral ulcers are the most common complain of patients reporting to out-patient department. An aphthous ulcer is defined as a well-circumscribed sometimes depressed lesion with an epithelial defect that is covered by a fibrin clot, resulting in yellow-white appearance. If an aphthous ulcer heals and re appears after certain duration of time it is stated as recurrent aphthous stomatitis. Hippocrates was the first to give the term "aphthae" which was further described by Miculicz and Kummel as "Miculicz's aphthae."⁽¹⁾

On the basis of size, the aphthous ulcer can be classified as major, minor or herpetiform. ⁽²⁾ Minor aphthous ulcers are small (less than one cm in diameter), well defined, shallow, and heal within two weeks without scars. Major ulcers, however, are bigger, deeper, and take up to six weeks to heal leaving a scar behind. Herpetiform ulceration is also characterized by small (3-6 mm), shallow ulcers which takes weeks to heal, but with many numerous ulcers at once. ⁽²⁾

The estimated point prevalence of oral ulcers worldwide is 4%, with aphthous ulcers being the

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most common, affecting as many as 25% of the population worldwide. ⁽³⁾ However, the exact cause of recurrent aphthous stomatitis is not known but various predisposing factors triggering the incidence are associated local trauma, stress, food hypersensitivity, hormonal changes, microorganisms, and vitamin and trace element deficiencies. ^(4,5) Systemic conditions including genetic predisposition, immune dysregulation, and family history might play a role in recurrent aphthous ulceration in some patients. ⁽⁶⁾

Table 1: Age and gender wise distribution of Recurrent aphthous stomatitis:

AGE	N=504	MALE	FEMALE	PERCENTAGE(AGE)
10-19	5	1	4	0.99
20-29	34	5	29	6.74
30-39	12	4	8	2.38
40-49	6	1	5	1.19
50-59	5	2	3	0.99
60-69	3	2	1	0.59

Table 2: Distribution according to Predisposing factors:

Predisposing factors	No.of patients	%
Stress	41	8.13
Food	3	0.59
Nutritional deficiency	8	1.58
Other factors		
Married	9	1.78
Unmarried,	4	0.79

MATERIALS AND METHODS

Five hundred forty patients of age group 10-70 years reporting to the out- patient department were screened and recalled for regular check -ups for a period of 2 years. An informed consent was taken from all the subjects. The subjects were interviewed and were made to fill a set of questionnaires which included questions related to sociodemographic details, and predisposing factors of recurrent aphthous ulceration. The data were collected, verified and were sent for statistical analysis. The frequency distribution of recurrent aphthous ulceration was calculated. Chi-square test was also used to compare the prevalence of recurrent

aphthous ulceration between categories of age, gender, education, occupation and family history of recurrent aphthous ulceration.

RESULTS

Out of 540 patients, 36 patients did not turn up for regular check -ups. Out of remaining 504 patients, 65 patients had recurrent aphthous stomatitis. The prevalence of recurrent aphthous stomatitis being 12.89. The mean age of participants was 37.5years, and age ranged from 10-70 years. About 65% participants were females and 35%were males. Table 1 represents the age and gender wise distribution of patients having recurrent aphthous stomatitis.6.74% of patients ranged of age group 20-29 years and maximum participants were females. Female participants (77%) reported that they had recurrent aphthous ulceration (23%) more than males and the difference between the genders was statistically significant ($p < 0.003$). Approximately 63% of participants reported that their recurrent aphthous ulcerations were related to stress,4% related it to food,12.3% related it to nutritional deficiency,13.8 % were married.

DISCUSSION

The most common ulcer affecting the oral cavity is aphthous ulcer. To get an insight of population of people affected by recurrent aphthous stomatitis, studying the prevalence of the disease is necessary. Review of literature shows 80 % of the patients show minor type of recurrent aphthous stomatitis. ⁽⁷⁾ Major causative factor of aphthous ulcer are mainly due to trauma, self-elicited injuries and burn, some factors may include malignant conditions, underlying systemic disease, skin disorder or auto-immune disease. ⁽⁸⁾ Evidence suggests an immunologic basis for RAS. The most current etiopathogenesis indicated a cross reactivity between a streptococcal heat shock protein (hsp) and the human mitochondria hsp in the oral mucosa, which may lead to a T-cell mediated response to antigens. ⁽⁹⁾ Deficiencies in iron, folic acid, and vitamin B12 are more common in RAS patients. ⁽¹⁰⁾ An association has been noted between psychiatric factors and RAS but not in all studies. ⁽¹¹⁾ Virus can be a reason for RAS.⁽¹²⁾

In the present study most common factor for RAS was stress, followed by nutritional deficiency. The

mechanisms explaining stress as an etiological factor in RAS episodes are not fully-understood. Increased levels of salivary cortisol or of reactive oxygen species in the saliva, have been suggested as the initiator of the lesions. ^(13, 14) Due to stress, patients may begin parafunctional habits that cause traumatic injuries to the area, thus leading to an episode. ⁽¹³⁾ A genetic alteration of pathways linked to stressful responses may also be involved. ⁽¹⁵⁾ The real role of stress is still unknown but it can be probably related with the modifications that affect multiple immune system components including the distribution, proliferation and activity of lymphocytes and natural killer cells, phagocytosis, and production of cytokines and antibodies. Females (77%) were more frequently affected than males (23%) and this difference was statistically significant ($p < 0.005$). Females are more prone to stress and emotional situations which can affect their immune response. They seek medical examination more frequently than males. The hormonal changes during pregnancy and menstruation also play a role. ⁽¹⁵⁾

CONCLUSION

Based on the results of our study, the prevalence of RAS in which was very low as compared to other Indian population. Females were more commonly affected. The most common age affected in our study group was second and third decades. The most common site was buccal mucosa followed by labial mucosa and tongue.

CONFLICTS OF INTEREST

The authors declare they have no potential conflict of interests regarding this article.

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