WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.084
Volume 10, Issue 6, 1526-1531. Research Article ISSN 2277– 7105

A STUDY ON APHTHOUS ULCER AND ITS ASSOCIATION WITH STRESS AMONG COLLEGE STUDENTS

Rukzana Bisar[1]*, Dhanya Dharman[2], Deepa Manohar[3], Shaiju S. Daran[4], Nefcy Navas[1] and Ashima Basheer[1]

[1]Pharm. D, Ezhuthachan College of Pharmaceutical Sciences, Trivandrum, Kerala, India.

[2]Department of Pharmacy Practice, Ezhuthachan College of Pharmaceutical Science, Trivandrum, Kerala, India.

[3]Department of Pharmacology, Ezhuthachan College of Pharmaceutical Science, Trivandrum, Kerala, India.

[4]Department of Pharmaceutics, Ezhuthachan College of Pharmaceutical Science, Trivandrum, Kerala, India.

Article Received on
18 April 2021,

Revised on 08 May 2021,
Accepted on 28 May 2021

DOI: 10.20959/wjpr20216-20623

***Corresponding Author**
Rukzana Bisar
Pharm. D, Ezhuthachan College of Pharmaceutical Sciences, Trivandrum, Kerala, India.

ABSTRACT

Aphthous ulcers or recurrent aphthous stomatitis (RAS) are common inflammatory lesions of the oral mucosa. Recurrent aphthous stomatitis is one of the most common mucosal disorders of the mouth. Previous studies have suggested that stress and anxiety have a role in the onset and recurrence of aphthous ulcers. Stress related disorders are one of the leading causes of morbidity and even the dental students have been one of the bearers of this condition. Study was aimed to estimate the prevalence of Aphthous ulcer among medical students and to find out its association with stress. It was a cross sectional questionnaire study on 75 college students of both sex group of age varying from 18 to 25 years was carried out. Questionnaire contained17 pre-validated questionnaire and the data is analyzed using descriptive statistics. It includes questions about aphthous ulcers and questions on perceived stress by modified perceived stress scale. Perceived stress scores were high among the pharmacy students especially among the ulcer experienced group. The distribution of RAS was more prominent in medical students. Medical students show a high prevalence of aphthous ulcers. and the prevalence was correlated with stress level.

KEYWORDS: Aphthous ulcer, Recurrent aphthous stomatitis, Perceived stress.

INTRODUCTION

Aphthous ulcers or recurrent aphthous stomatitis (RAS) are common inflammatory lesions of the oral mucosa. The estimated prevalence of oral ulcers worldwide is 4%, with aphthous ulcers being the most common, affecting as many as 25% of the population worldwide.[1] RAS occurs usually in the non-keratinized areas like lips, ventral surface of the tongue, buccal mucosa, floor of the mouth and soft palate.[2] The etiology of RAS is uncertain, and both environmental and genetic factors are indicated. The precipitating factors include stress, physical or chemical trauma, infection, allergy, genetic predisposition, or nutritional deficiencies.[3,4] Increased levels of salivary cortisol or of reactive oxygen species in the saliva initiates the lesions.[5,6] Recurrent aphthous stomatitis [RAS] or recurrent aphthous ulceration is a frequent pathologic situation mainly differentiated by the repetitive occurrence of benign and noncontagious oral ulceration. These ulcers are very widespread, disturbing around 20% of the individuals to some quantity.[7,8] Numerous hypotheses have been formulated regarding the etiology of RAS. These include both environmental and genetic factors. The impulsive factors comprise stress, allergy, infection, genetic predisposition, trauma and nutritional deficiencies.[9] A variety of studies had found a correlation between RAS and stress level.[10,11] Hence, the present investigation intended to determine the prevalence of recurrent aphthous ulcers and its association with stress.

METHODOLOGY

It was a cross sectional questionnaire study on 75 college students of both sex group of age varying from 18 to 25 years was carried out. The data were collected using questionnaires. The questionnaires had two sections. The first section contained personal information and questions related to aphthous ulcers, such as ulcer experience, number of episodes in the last 1 year, number of ulcers in each episode, duration of each episode, site of ulcer, symptoms and remedial measures, associated conditions, self–reported periods of stress, tobacco consumption and family history. The second part dealt with 10 questions about perceived stress using a modified perceived stress scale (PSS) by Cohen. Stress scores in those with or without aphthous ulcers were compared.

Inclusion criteria

1. Aphthous Ulcer of both sex group of age varies from 18 to 25 years.

Exclusion criteria

1. Aphthous Ulcer of both sex group of age below 18 and above 25 years.
2. Patients those who refused to be included in the study.

Data collection

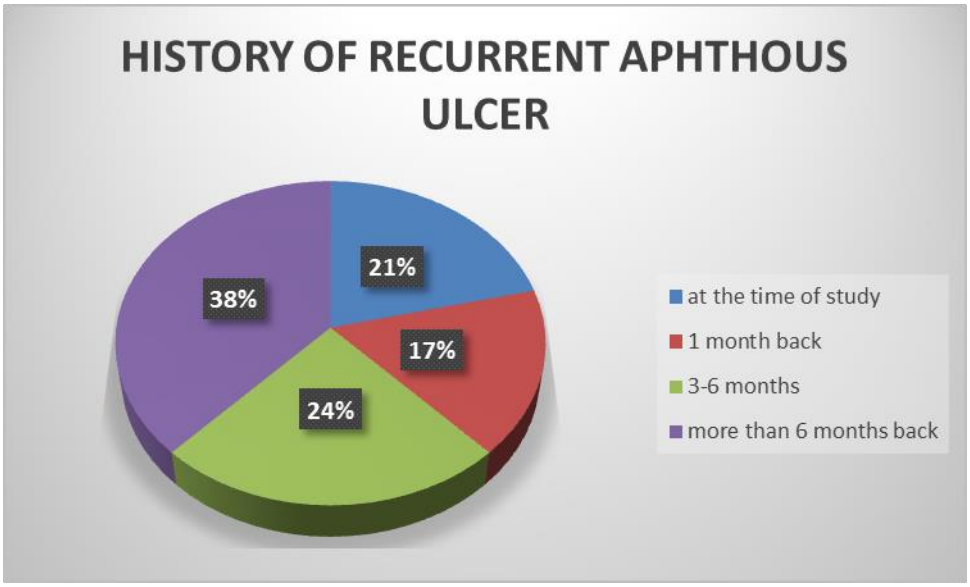
Data were collected during the 2018–2019 academic year. Questionnaires were distributed to 75 pharmacy students. 66 students completed the questionnaire, with a response rate of 92%. All the participants were between the age group 18- 25. Respondents completed the online structured questionnaire forms which composed of check box questions regarding socio-demographic data, food habits, common sites affected, Form of stress and duration of the ulcer etc. Self medication practice and various side effect of therapy were recorded.

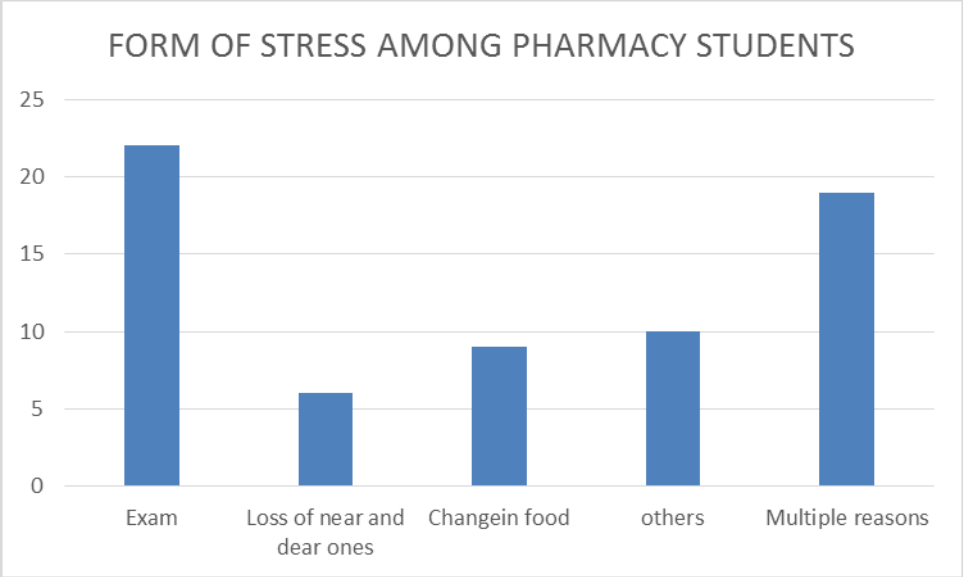
Statistical analysis

All data collected were analyzed using both descriptive and inferential statistics. The data were analyzed using descriptive statistics for demographic characteristics, food habits, Form of stress, common sites affected, Duration of the ulcer. Self medication practice and various side effect of therapy were analysed and the value of $P < 0.05$ was considered statistically significant.

RESULTS

Questionnaires were distributed to 75 pharmacy students. Among this 66 students experienced aphthous ulcer. Among those who complained of ulcer episodes, 14 were suffering at the time of the study, 11 of them had ulcer 1 month back, 16 of them between 3 and 6 months and 25 of them had more than 6 months back. Majority were having a single ulcer during each episode and lasting for 3-5 days. Predominant area of occurrence was cheek followed by lips and gums. Slight (41.6%) to moderate pain (37%) was frequently observed. Majority of the participants didn't take any medication whereas a good proportion (20) had used vitamins and topical gels and very few had sought some home remedies. Out of the 66 participants who experienced ulcer, 43 were females and 23 were males. Among the 75 participants,66 reported to have some form of stress out of which 22 had exam as the main cause of stress. For 9 of them change of food, 6 of them loss of near and dear ones and 10 of them 2 or more of these were the causes of stress. 13 students with ulcer reported to have an associated vitamin deficiency and 4 of them had associated fever and gastric ulcer 2 had skin problems.





DISCUSSION

As our study population was pharmacy students, we can attribute this high prevalence rate of aphthous ulcer in this study to stress because compared to other professional courses pharmacy students endure more stress due to the nature of the pharmacy curriculum. Apart from that students appear to be under some stress due to the fear of impending exams or compulsion to complete assignments given. Mental stress provokes immune regulatory activity by escalating the number of leukocytes at the site of inflammation, this characteristic often noticed during the pathogenesis of RAS Recurrent aphthous ulcers occur on areas of the mouth where the mucosa is non-keratinized and loosely attached, in particular, the buccal mucosa and labial mucosa, floor of the mouth, ventral surface of the tongue and soft palate. Educational level had great impact on the pervasiveness of recurrent aphthous stomatitis. It

has been proposed that patients with a positive family history of RAS may develop oral ulcers at an earlier age and have more severe symptoms than those with no such history.We should aim to decrease the symptoms when treating and also to prolong duration of ulcer free periods. Patients should also be advised to maintain good daily oral hygiene. Measures should be taken to decrease the stress among pharmacy students which not only decrease their suffering but also improve their academic performance.

CONCLUSION

In this study we found that prevalence of aphthous ulcers was high among pharmacy students and the self reported stress was also very high among them. When we evaluated with modified perceived stress scores (PSS), we found a significant association between stress and aphthous ulcer which was confirming the above said finding. As it is clear about the high stress among medical students, some interventions are required to reduce the stress among medical students.

ACKNOWLEDGEMENT

We Express our heartfelt gratitude to our professors of Pharmacy Practice and friends of Ezhuthachan college of pharmaceutical sciences and also thanks to participants of this Study.

CONFLICTS OF INTEREST

The author declares no conflict of interests.

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