

FREQUENCY AND PATTERN OF RECURRENT APTHOUS ULCERS IN PATIENTS REPORTING TO ORAL MEDICINE AND DIAGNOSIS DEPARTMENT OF ISLAMABAD DENTAL HOSPITAL

¹SHAHIDA MAQBOOL, ²NIDA FATIMA, ³KHALID MAHMOOD SIDDIQI, ⁴MUHAMMAH JAMAL, ⁵MUHAMMAD ZEESHAN BAIG, ⁶SOFIA NOOR, ⁷SIDRA HAMEED

ABSTRACT

The objective of the study was to acquire base line data regarding frequency and pattern of Recurrent Aphthous Ulcers (RAU). Study was conducted in Islamabad Dental Hospital (IDH), in Oct-Nov 2018. All patients who reported first time in the Out Patient Department (OPD) during the study duration were screened for RAU irrespective of gender and age.

A total of (n=2209) patients were included in the study who visited OPD in above mentioned time period. The frequency of RAU was 1.2% (n=27) out of which females were (59.2%) and male were (40.7%). Result was statistically insignificant when Chi-Square test was applied on gender. Participants reported with history of RAU in last 6 months were 497 (22.5%). The most affected age group was 31-40 years. Buccal mucosa and tongue were the sites on which greater number of ulcers was reported. All patients presented difficulty in eating and pain because of ulcers in oral cavity.

It was concluded that 22.5% of reported patients had ulcers in last six months but active ulcer was present in 1.2% of the participants of the study.

Key Words: oral diseases, oral irritation, frequency, oral ulcers, pain

INTRODUCTION

Ulceration is defined as breach in the surface of epithelium and in oral cavity ulceration occurs when there is loss of integrity of mucosal membrane showing surface excavation and sloughed necrotic tissue in a particular inflamed area.¹ Aphthous ulcers are among

those mucosal diseases which are observed commonly in all dental settings and their presence imparts negative effect on quality of life resulting agony and irritation to the patients.² They affect 25% of the population globally with greater prevalence in females mostly in third or fourth decade of life.³

Recurrent aphthous ulcers (RAU) are painful lesions which may be round or ovoid in shape with defined borders and irregular margins, yellow or grey base covered by fibro membranous layer.⁴ They can affect both keratinized and non-keratinized mucosa but mostly occurs on lips, soft palate, buccal or labial mucosa or tongue.⁵ The aphthous ulcers are divided into three types (minor, major, herpetiform) depending upon their sizes.⁶ Minor ulcers make up more than 80% of all recurrent aphthous ulcers. They are shallow and well circumscribed, whereas major aphthous ulcers are deep. They usually heal without scarring.⁷

These RAU exhibit a potential to re-occur at regular time intervals and heal within two weeks. The etiology is not known clearly but the trigger factors include genetics, trauma, food sensitivity, hormonal disturbance during puberty or pregnancy, vitamin B12 or iron deficiency, medication, menstruation, stress and systemic disorders.^{7,8} Ulcers are associated with altered immunity of the body and it is considered that they occur more often in smokers and their frequency is

¹ Shahida Maqbool, Senior Lecturer, Oral Medicine, Islamabad Medical and Dental College, Shaheed Zulfiqar Ali Bhutto Medical University, Islamabad. Mob: 03485127003 Email: shahida.maqbool@iideas.edu.pk

² Nida Fatima, Post Graduate Resident, Oral Medicine, Islamabad Medical and Dental College, Shaheed Zulfiqar Ali Bhutto Medical University, Islamabad Mob: 03215104517, Email: nida.oralmed17@iideas.edu.pk

³ **Corresponding Author:** Khalid Mahmood Siddiqi, Head and Associate Professor, Oral and Maxillofacial Surgery/Oral Medicine, Islamabad Medical and Dental College, Shaheed Zulfiqar Ali Bhutto Medical University, Islamabad Mob: 03005105215, Email: drkhalidms@gmail.com

⁴ Muhammad Jamal, Assistant Professor, Oral and Maxillofacial Surgery, Islamabad Medical and Dental College, Shaheed Zulfiqar Ali Bhutto Medical University, Islamabad. Mob: 03349106424, Email: jamal_kcd@hotmail.com

⁵ Muhammad Zeeshan Baig, Assistant Professor, Oral and Maxillofacial Surgery, Islamabad Medical and Dental College, Shaheed Zulfiqar Ali Bhutto Medical University, Islamabad. Mob: 03214669917, Email: zeesh7@hotmail.com

⁶ Sofia Noor, Ex-House Surgeons, Islamabad Dental Hospital, Islamabad. Mob: 03345872346

⁷ Sidra Hameed, Ex-House Surgeons, Islamabad Dental Hospital, Islamabad. Mob: 03345872346

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increased even after cessation of smoking.^{7,9} Prevalence rate of RAU varies in different areas ranging from 78% to 1.2%.^{1,8,10,11} Treatment of RAU is aimed at symptom reduction and it includes topical agents for example antiseptics (chlorohexidine), antibiotics (tetracycline) corticosteroids or levamisole.^{9,12}

The author was unable to find any study revealing the frequency or prevalence of RAU in our population so a study was planned to assess the frequency of aphthous ulcer patients coming to Oral Medicine and Diagnosis Department of Islamabad Dental Hospital, Barakahu after the approval from Institutional Review Board (IRB). This study will contribute to collect the baseline data about frequency of RAU which will help eventually in future studies and research.

METHODOLOGY

A cross-sectional study was conducted in Islamabad Dental Hospital. Patients reporting first time to out-patient department of Oral Medicine and Diagnosis over a period of six weeks were included. Patients not willing to participate or to give history of ulceration were excluded. All the participants were examined on dental chair. A verbal consent was taken, study was explained to all the participants, and those who presented with active ulcer or had a history of ulcer in last six months were noted. More information about active RAU shape, size, numbers and site were also noted. The data was entered and evaluated in SPSS version 22. Descriptive analysis was done. Frequencies and percentages were calculated and presented in tables and charts. Stratification according to gender and age was also done and compared using Chi-Square test.

RESULTS

A total of 2209 patient were included in the study. Gender distribution showed male to female ratio of 1: 1.2. Mean age and standard deviation was 34.61± 16.4 as shown in Table 1. Participants who gave history of ulceration during last six months were 497 (22.5%). Gender distribution in these participants is shown in Fig. 1. Mean age of patients with history of RAU was 39.83±12.1. Active RAU were found in 27 patients (1.3%). Stratification of these patients showed male to

TABLE 1: AGE DISTRIBUTION

	Male	Female	Total
	1044	1165	2209
Mean	35.09	34.19	34.61
Median	33.00	32.00	30
Std. Deviation	17.245	15.721	16.461
Range	88	80	88

TABLE 2: CHARACTERISTICS OF ACTIVE RAU

Characteristics of RAU	Frequency	Percentage %	Total
Painful	Yes	27	100
	No	0	0
Difficulty in eating	Yes	27	100
	No	0	0
Size	>10mm	2	7.7
	<10mm	25	92.5
Shape	Round	19	70.3
	Non-circular	8	29.6
Number	Single	12	44.4
	Multiple	15	55.6

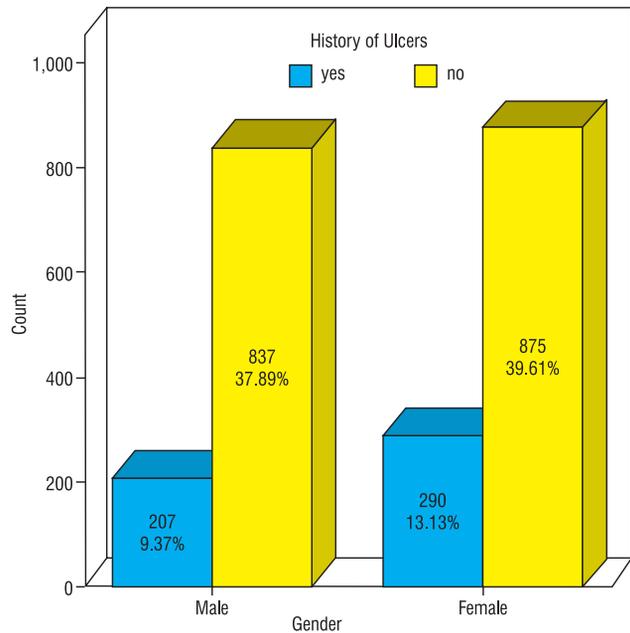


Fig 1: Gender distribution in patients with positive history of Ulcers

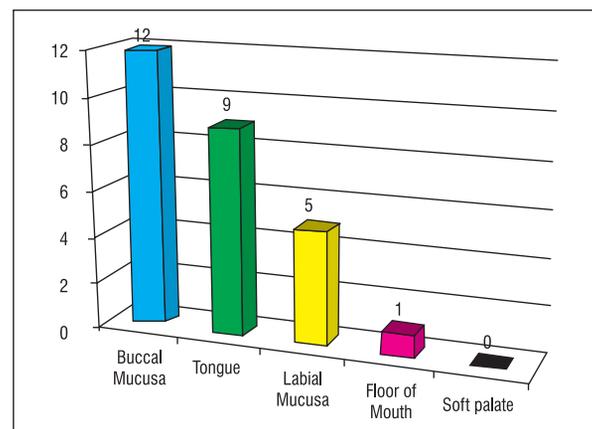


Fig 2: Site Distribution of patients with active RAU

female ratio 1:1.5. Out of these 27 patients, 19 presented the history of previous ulceration.

Comparison among age bracket and active RAU by Chi-Square test was statistically significant ($p=0.006$). The number of males was less than affected females but the results were statistically insignificant ($p=0.495$) when association was explored between gender and ulcers. All patients (100%) with active RAU reported that they were experiencing pain and had difficulty in eating. Size of 92.5% of reported ulcers was less than 10 mm and 70.3% were of round shape. 55.6% of patients presented with multiple ulcers. Characteristics of active ulceration were summarized in table 2.

The percentage of occurrence of ulcers in different sites of mouth as labial mucosa, buccal mucosa, tongue, soft palate, and floor of mouth was 25.9%, 44.4%, 33.3%, 0%, 3.7% respectively. The results showed that RAU occurred at buccal mucosa most frequently i.e. in 12 patients out of 27. No ulcer on soft palate was reported. The frequency of patients having positive ulcer at different sites is shown in fig 2.

DISCUSSION

Different surveys have reported the prevalence of RAU with marked variations ranging from 5-66% in different population from all parts of the world.^{3,10,13} Up till now the highest prevalence rate reported was 78.1% in a study from Jordan.¹⁴ In Sweden it was 17%¹⁵ and in Iran rate was 25.2%.¹⁶ It was similar to the prevalence reported in Turkey which was around 25.5%.¹⁷ The prevalence reported by Bhatnager et al was 1.53% in North India which is quite low.^{10,14} Present study had shown similar results of 1.2%. It was also inquired from patients that did they experienced presence of ulcer in oral cavity during last six months. Frequency of patients with history of aphthous ulcer in this study was 22.5%. Frequency reported by another study was 1.53%.^{15,18} It was also estimated that one out of five persons have developed ulcers at least once in their life time.^{16,19} Low frequency in present study can be explained by the fact that history is based on memory of patients. There is a possibility that people might not exactly remember or recall the time when ulcers developed in oral cavity. Secondly, in developing countries people tend to delay their visit to dental clinics because of lack of awareness and poor socioeconomic status. Patients visit hospitals only in case of severe pain or in any debilitating condition. Due to the self-healing nature of RAU, people first tend to ignore them or tried to control their discomfort, later may use some home remedies as well. A study conducted in Rawalpindi has reported that 45% of RAU patients used self-medication for the treatment.^{17,20}

History and thorough clinical examination are the essentials for diagnosis of RAU. RAU can affect

any gender irrespective of gender. They have more predilections for females and it holds true for the present study in which number of females (59.3%) is greater than males (40.8%) but results were statistically insignificant. Statistically significant difference was observed when presence of RAU was compared in different age groups using Chi-Square test. A higher percentage were reported with the complaint of ulcers in third decade of life. Changes in the hormone levels during menstruation or pregnancy and decreased ability to handle stressful conditions were considered to be main reasons for which women tend to seek doctor consultation more often. In contrary to that a study conducted in US reported RAU more in male but statistically significant difference was not found.^{18,21}

Moreover, a survey was conducted on clinical features of recurrent aphthous ulcers in Jordan university of science and technology in which the results showed that 85% of the ulcers were less than a cm in size, 66% were circular in shape, 92% were painful, 82% interfered with eating and 55% located in and around lips and buccal mucosa.¹⁵ Present study had shown similar results that size of ulcers in 90% of patients with active ulcers was less than 1 cm. Moreover, buccal or labial mucosa and tongue are the sites which are prone to trauma and in this study frequency of RAU on buccal mucosa were highest amongst all.

Aphthous ulcers also interfere in eating and swallowing. Many patients reported that they were unable to eat or drink properly because of pain and irritation.¹⁹⁻²³ In this study all patients gave complaint of pain and difficulty during food intake.

It is recommended to take measures which raise awareness among people to visit oral health care providers regularly. Moreover, any non-healing ulcers present in oral cavity for more than two weeks raises suspicion and need attention. Clinical and histopathological examination of such lesions are necessary for early detection of oral malignancies.

CONCLUSION

It was concluded that RAU found in present population was in low percentage. No gender predilection was found but age group 31-40 years was most commonly affected. Buccal mucosa and tongue was the most common affected sites.

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CONTRIBUTIONS BY AUTHORS

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|---|---|
| 1 Shahida Maqbool: | Contributed to the concept, data collection. |
| 2 Nida Fatima: | Contributed to the analysis, data interpretation and writing of the manuscript. |
| 3 Khalid Mahmood Siddiqi: | Contributed to the concept, design, supervision of the study and critical revision of the manuscript. |
| 4 Muhammad Jamal: | Contributed to the writing and proof reading of the manuscript. |
| 5 Muhammad Zeeshan Baig: | Contributed to the design and proof reading of the manuscript. |
| 6 Sofia Noor & Sidra Hameed: | Contributed to the data collection and data interpretation. |