



IGE LEVELS IN RECURRENT APHTHOUS STOMATITIS IN KASHMIRI POPULATION

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Introduction

Recurrent aphthous stomatitis is the most common recurrent ulceration affecting the oral cavity and affect about 20% of population¹. It is quit disturbing as it causes difficulty in speaking swallowing and eating and affects patients quality of life negatively². It is characterized by multiple small recurrent, round ovoid ulcers which have circumscribed margins, erythematous haloes and yellowish or grayish floor. Mostly present on nonkeratinised and mobile mucosa and rarely present on gingiva and hard palate³. In 80% of cases RAS commences before 30 years of age, while onset in later years should raise suspicion about RAS being part of more complex disorder like Behcets syndrome⁴.

The lesions of recurrent ulceration may represent one disease but they may be the manifestation of various systemic disease particularly those of gastrointestinal tract. Etiology is mostly unknown more than 40% of RAS patients have history of the disease in their 1st degree relatives⁵. A number of predisposing events have been attributed to the causation of the RAS these include trauma, stress, hormonal imbalances, smoking cessation, food hypersensitivity, infection, immune dysregulation^{6, 7}. Studies in the past have noted alteration in serum and salivary levels of IgA and IgG^{8, 9}. Also elevated serum levels IgE have been reported in Behcets disease patients¹⁰.

There is an increasing evidence of association between elevated serum levels of IgE and immune mediated dermatological conditions.

AIM

The study was conducted to explore the association between serum IgE levels in patients suffering from recurrent aphthous stomatitis.

Subjects and methods: - A total of 30 RAS were included in the study that in included minor RAS, major RAS and herpeticiform RAS. Also included in the study were 30 control subjects who come to the department for other disorder

Inclusion criteria were patients aged between 18-50 years of age. History of recurrent ulcers in oral cavity, with at least two episodes in previous 1 year.

Exclusion criteria were HIV infection, hepatitis B and C infection, oral mucosal disorders like pemphigus, oral lichen planus, ulceration associated with systemic disease like ulcerative colitis behcets syndrome, Reiters syndrome, history of medication intake that have been associated oral ulceration like chemotherapeutic agents, history of corticosteroid intake.

All the patients included in the study were informed regarding the study and informed consent were taken from each patient. A detailed history of each patient was taken that include demographic features (like age, sex, education etc) family history of RAS, smoking habits, age at the 1st presentation of disease, history of stress, occupation.

All the patients were subjects to basic laboratory investigations like complete blood count to rule out hematological abnormalities and serum levels of IgE in patients and controls. Serum IgE levels were calculated using radioimmunoassay.

Patients were enquired about recurrent ulceration related systemic conditions by answering questionnaire that include

- Inflammatory bowl disorder or glutein-sensetive enteropathy
- Behcets syndrome according to criteria of the international group for Behcets disease
- Past or present history of allergy.

Statistical Analysis: -Statistical software SPSS (version 20.0) and Microsoft Excel were used to carry out the statistical analysis of data. Descriptive Statistics of data including the means and standard deviations for numerical variables and the percentages of different categories for categorical variables was obtained. Parametric data was analyzed by employing Student's independent t-test. Chi-square test or Fisher's exact test, whichever appropriate, was used for comparison of categorical variables. Graphically the data was presented by bar and pie diagrams. A P-value of less than 0.05 was considered statistically significant

Results: -In the present study females were affected more commonly than males as shown in table 1 and figure 1

Figure 1showing the gender distribution among RAS patients

	Females	Males
Cases	17	13
Controls	16	14

Table 1 Showing Gender Distribution
In the present study majority patients were below the age of 30 (80%) as shown in the figure 2

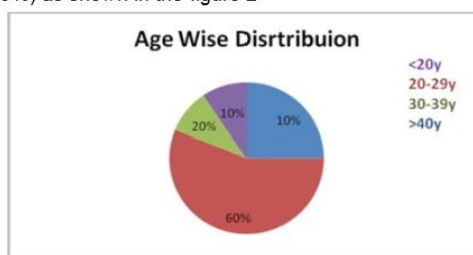


Figure 2 showing the age distribution of RAS patients

In the present study minor recurrent aphthous was present in 27 patients (90%) while major aphthous was present in 1(3%) patient and herpetiform ulceration was present in 2(7%) patients. Labial mucosa was involved most commonly followed by tongue, buccal mucosa, floor of mouth, palate.

When comparing the average IgE levels in cases and controls it was found to be statistically significant in cases than controls in the present study. Also 42 % of the RAS patients reported higher than normal levels of IgE. The frequency and severity were directly proportional to the serum levels of IgE.

Serum IgE levels in cases and controls (in IU/ml)

	Cases	Controls	P value
Females	204.5+17.3	160.4+16.3	0.028*
Males	211.4+15.3	164.2+14.3	0.032*

*P value statistically significant <0.05

Discussion:- RAS is commonest recurrent oral ulceration with in cadence of 1 in every 5 subjects¹¹. On the basis of clinical and laboratory evidence RAS is believed to be the immunologically mediated condition. There is well defined sequence of cellular changes within the ulcerative lesion as it progress through the various stages of ulceration and systemic immune system shows range of altered parameters that reflect disease activity and susceptibility^{12,13}.

The basic aim of our study was to investigate association between serum IgE levels in RAS patients. There was statistically significant elevated serum levels IgE in RAS when compared with the controls. The elevated levels were more common in patients in more frequent recurrences and more severity of lesions. Scully et al (1982) in their study observed higher levels of IgE and IgD in patients of RAS than in normal controls or patients with other ulcerative conditions¹⁴. The elevated levels were more common in female patients than in male patients.

Study conducted by G Almozino et al in Israeli population found that elevated serum IgE levels in RAS patients and were associated with younger age < 12 years of schooling, early onset of RAS, RAS frequency of every 2 weeks, female gender. They advocated that serum IgE levels should be considered as a part of initial work up in RAS patients¹⁵. However they conducted their study on multi ethnic groups while our study was confined to the local Kashmiri population.

Bays et al in the study found IgE bearing lymphocytes in the RAS lesional tissues and their peripheral blood of these patients¹⁶. Natah et al in their study found showed an increase in number of mast cells in perilesional tissues from RAS lesion with signs of increase activity as found in active degranulation phase or activation phase inflammation¹⁷.

Also in our study RAS was more common in young adults (23.5y+4.3y) this was consistent with the studies of Ship et al¹⁸, Mc Cullough¹⁹, Chattopadhyay and Chatterji²⁰. The most common sites of occurrence in decreasing order were labial mucosa(83%), tongue (lateral and anterior surfaces58%), buccal mucosa(21%); palatal mucosa was involved in 1 case which was in consistent with previous studies.

Hematological deficiencies were present 24% of patients and were in the form of iron deficiency anemia, megaloblastic anemia and were consistent with other studies in the past²¹.

Conclusion: in the present study elevated serum levels were found in patients with recurrent aphthous stomatitis in the study group than in the control group. However since sample size in our study was

very less we suggest a large study containing large sample size should be conducted to verify our results. Also we conclude that serum IgE should be included in the initial workup in the treatment of the RAS.

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