

The effect of dietary habits on the development of the recurrent aphthous stomatitis

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ABSTRACT

Background: The aim was to assess the relationship between the dietary habits and development of recurrent aphthous stomatitis. **Materials and Methods:** Two groups (30 patients with RAS who have been following dietary habits and not associated with systemic disease or hematologic abnormalities, and the control group consist of 28 patients without recurrent aphthous stomatitis). **Results:** A Mann-Whitney test ($P>0.05$) shows no significance difference between the patients with RAS and the control group. Both groups eating similar food such as cheese, cow's milk, tea, lemon, coffee, orange, apple, yoghurt, and tomato, spicy food, but the patients with RAS ate specific foods containing (pH) like; oranges and lemons more frequently than the control group. **Conclusion:** Dietary habits have no important role in development of RAS but can lay a minor role in the pathogenesis of RAS either by causing hypersensitivity or by deficiency of some vitamins and minerals.

Key words: Aphthous stomatitis, dietary habits, recurrent

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INTRODUCTION

Recurrent aphthous stomatitis RSA is a common oral disorder occurring in up to 25–30 of population. The etiology of this disease is unknown; therefore many predisposing factors may have an important role in development of RAS such as heredity, bacteriology, trauma, endocrinology, and nutrition. Also many studies have demonstrated that iron, folate; vitamin B1, B2, B6, B12 deficiencies, and sensitivity to some foods in patients with RAS.¹ This study is aimed to evaluate the relationship between dietary habits and RAS.

MATERIALS AND METHODS

A total of 50 patients have refereed to my clinic complaining of RAS. Only 30 patients out of 50 participated in this study.

All of those 30 patients (17 male, 13 female, maximum age 45 years, minimum age 22 years) have followed dietary habits. The patients with RAS and the control group were

assessed and questioned by the specialist in nutrition about the daily intake frequencies of some foods which are frequently consumed in Syria, and their effects on RAS. The Research Ethics Committee at Alfarabi College of dentistry provided a favorable ethical opinion.

The medical history of those patients has demonstrated that RAS occurred at least more than four times per years.

Twelve patients out of 50 were not included in this study because some of those patients have hematologic abnormalities or systemic disease. Also eight patients out of 50 were not included in this study because they do not follow any dietary programmers.

The control group consists of 28 patients without recurrent aphthous stomatitis.

Statistics analysis

A Mann-Whitney test and correlation test have been used.

RESULTS

All the clinical data of the participant patients in this study is shown in Table 1.

The range of the patient's age is (22-45), the maximum age is 45, and minimum is 22.

The Mann-Whitney test ($P>0.05$) shows that there was no significance difference between the patients with RAS

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Table 1: Clinical features of recurrent aphthous stomatitis

Case	Age	Gender	Type of RAS
1	22	M	Minor
2	24	M	Minor
3	25	M	Minor
4	26	M	Minor
5	29	M	Minor
6	37	M	Minor
7	35	M	Minor
8	27	M	Minor
9	33	M	Minor
10	38	M	Minor
11	39	M	Minor
12	34	M	Minor
13	35	M	Minor
14	24	M	Minor
15	28	M	Minor
16	30	M	Minor
17	31	M	Minor
18	34	F	Minor
19	45	F	Minor
20	26	F	Minor
21	32	F	Minor
22	36	F	Minor
23	41	F	Minor
24	44	F	Minor
25	29	F	Minor
26	25	F	Minor
27	33	F	Minor
28	38	F	Minor
29	32	F	Minor
30	31	F	Minor

and the control group; moreover, the patients with RAS were found to eat similar foods like cheese, cow’s milk, tea, lemon, coffee, orange, yoghurt and tomato, spicy food; but the patients with RAS ate specific foods containing (ph) like oranges and lemons more frequently than the control group Table 2. Also the correlation test has shown there was no correlation between the age and gender and occurrence of RAS for the patients with RAS followed dietary habits.

DISCUSSION

Safadi² has reported that 82% of the participant patients claimed that the RAS interfered with food eating and swallowing. Some researchers have indicated that the development of RAS is associated with the use of some certain foods: Cows’ milk, gluten, chocolate, nuts, cheese.³⁻⁶ Eversole *et al.*⁷ found no significant association between RAS and three specific food (tomatoes, strawberries, and walnuts). Wilson⁸ has noted an increased prevalence of atopy among RAS patients.

Wray⁵ has mentioned that there is no significant difference in the incidence of atopy in RAS patients compared with

Table 2: Comparison of the types of food for patients with RAS and the control group

Case	The types of food for patients with RAS followed dietary habits	Control group
1	Cheese, cow’s milk, tea, coffee, apple, yoghurt and tomato, spicy food, lemon, orange	The same food
2	The same food	The same food
3	The same food	The same food
4	The same food	The same food
5	The same food	The same food
6	The same food	The same food
7	The same food	The same food
8	The same food	The same food
9	The same food	The same food
10	The same food	The same food
11	The same food	The same food
12	The same food	The same food
13	The same food	The same food
14	The same food	The same food
15	The same food	The same food
16	The same food	The same food
17	The same food	The same food
18	The same food	The same food
19	The same food	The same food
20	The same food	The same food
21	The same food	The same food
22	The same food	The same food
23	The same food	The same food
24	The same food	The same food
25	The same food	The same food
26	The same food	The same food without orange and lemon
27	The same food	The same food without orange and lemon
28	The same food	The same food without orange and lemon
29	The same food	The same food without orange and lemon
30	The same food	The same food without orange and lemon

the normal population. Hay and Reade⁹ have demonstrated that there is relationship between RAS and consuming some food items such as figs, cheese, tomato, tomato sauce, vinegar, lemon, pineapple, milk, cheese, wheat flour. They have concluded that the removal of the dietary habits can reduce the frequency of RAS. Wright *et al.*¹⁰ reported that the food allergy was a significant factor in the development of RAS, but they did not find a relationship between gluten containing foods and the occurrence of RAS. Ogura *et al.*,¹¹ have mentioned that the patients with RAS consume foods containing calcium, iron, vitamin B1, and vitamin C less frequently than the control patients and concluded that the deficiencies of some vitamins and minerals might

play a role in the pathogenesis of RAS. Kozlak *et al.*¹² have suggested that consuming sufficient amounts of the vitamins B12 and folate may be a useful strategy to reduce the number and/or duration of RAS episodes.

CONCLUSION

Dietary habits have no important role in development of RAS but can be playing a minor role in the pathogenesis of RAS either by causing hypersensitivity or by deficiency of some vitamins and minerals.

This study has shown that RAS patients ate acidic pH-containing foods like oranges and lemons more frequently than controls and this might have initiated RAS lesions as irritation factors. The other patients might have hypersensitivity to specific food such as yoghurt and tomato, and spicy food.

REFERENCES

1. Natah SS, Konttien YT, Ennatah NS, Ashammakhi N, Sharkey KA, Hayrien-Immonen R. Recurrent aphthous ulcers today: A review of the growing knowledge. *Int J Maxillofac Surg* 2004;33:221-34.
2. Safadi RA. Prevalence of recurrent aphthous ulceration in Jordanian dental patients. *BMC Oral Health* 2009;9:31.
3. Thomas HC, Ferguson A, McLennan JG, Mason DK. Food antibodies in oral disease: A study of serum antibodies to food proteins in aphthous ulceration and other oral disease. *J Clin Pathol* 1973;26:371-4.
4. Miller MF, Shipp II. A retrospective study of the prevalence and incidence of recurrent aphthous ulcers in a professional population, 1958-1971. *Oral Surg Oral Med Oral Pathol* 1977;43:532-7.
5. Wray D, Vlagopoulos TP, Siraganian RP. Food allergens and basophil histamine release in recurrent aphthous stomatitis. *Oral Surg Oral Med Oral Pathol* 1982;54:388-95.
6. Hay KD, Reade PC. The use of an elimination diet in the treatment of recurrent aphthous ulceration of the oral cavity. *Oral Surg Oral Med Oral Pathol* 1984;57:504-7.
7. Eversole LE, Shopper TP, Chambers DW. Effects of suspected foodstuff challenging agents in the etiology of recurrent aphthous stomatitis. *Oral Surg Oral Med Oral Pathol* 1982;54:33-8.
8. Wilson CW. Food sensitivities, taste changes, aphthous ulcers and atopic symptoms in allergic disease. *Ann Allergy* 1980;44:302-7.
9. Hay KD, Reade PC. The use of an elimination diet in the treatment of recurrent aphthous ulceration of the oral cavity. *Oral Surg Oral Med Oral Pathol* 1984;57:504-7.
10. Wright A, Ryan FP, Willingham SE, Holt S, Page AC, Hindle MO, *et al.* Food allergy or intolerance in severe recurrent aphthous ulceration of the mouth. *Br Med J (Clin Res Ed)* 1986;292:1237-8.
11. Ogura M, Yamamoto T, Morita M, Watanabe T. A case-control study on food intake of patients with recurrent aphthous stomatitis. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2001;91:45-9.
12. Kozlak ST, Walsh SJ, Lalla RV. Reduced dietary intake of vitamin B12 and folate in patients with recurrent aphthous stomatitis. *J Oral Pathol Med* 2010;39:420-3.

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