



*Full Length Research Paper*

# Some occurrence aspects of chronic recurrent aphthous stomatitis of the oral cavity

<sup>1</sup>Nazira Khabibova, <sup>2</sup>Abdugaffor Khadjimetov

<sup>1</sup>Bukhara State Medical Institute

<sup>2</sup>Tashkent State Dental Institute.

Accepted 27 July, 2019

This article was devoted to one of the most common oral diseases - chronic recurrent aphthous stomatitis (CRAS). Predicting the next relapse of lesions is very difficult, it is impossible to predict and aggravate the process, that is, the transformation of Mikulich's aft to a more severe degree – scarringashes - Seth's aphthaeus, herpetiform ulceration of Cook. The problem is further complicated by the fact that so far no measures of communal prevention of diseases of the SARR have been developed. From 2016 to 2018, at the Department of Dentistry at the Bukhara Medical Institute. We examined more than 200 patients with seasonal allergic rhinitis — 112 patients (group 1) and 88 patients with chronic recurrent aphthous stomatitis (CRAS) (group 2).

**Keywords:** chronic recurrent aphthous stomatitis, seasonal allergic rhinitis

## INTRODUCTION

For many years in clinical practice, patients seeking dental care with diseases of the oral mucosa (SOPR), represent one of the most difficult problems in dentistry due to difficulties in diagnosis and treatment [1,2,3,4,5]. The problem is further complicated by the fact that so far no measures of communal prevention of diseases of the SARR have been developed [6,7,8]. According to the WHO, aphthous stomatitis affects up to 20% of the population. According to other researchers, about 20% of the population suffers from aphthae at one or another period of life, while the majority of patients range from 20 to 40 years.

According to many authors [9, 10, 11, 14], the etiology and pathogenesis of CRAS is based on an autoimmune theory, which allows to associate the occurrence of pathological elements with impaired cellular and humoral immunity, both local and general. In 2017, NB Petrukhina was able to suggest the allergic nature of the onset of CRAS. As an allergen, there can be food products, dust, toothpastes, worms and their metabolic products medicinal substances. A number of authors widely

discuss the issue of the allergic genesis of the disease [12,13]. Based on the foregoing, it is safe to say that the etiology and pathogenesis of chronic recurrent aphthous stomatitis has not been fully elucidated to date. The emergence of aft, severe pain, sleep disturbance, headache, carcinophobia, which ultimately leads to a decrease in the quality of life of patients and requires its solution. Therefore, HRAC is currently an important medical and social problem.

**The purpose of this study** was to study changes in the level of diaminoxidase in patients with aphthous stomatitis and allergic rhinitis.

## MATERIALS AND METHODS

From 2016 to 2018, at the Department of Dentistry at the Bukhara Medical Institute. We examined more than 200 patients with seasonal allergic rhinitis — 112 patients (group 1) and 88 patients with chronic recurrent aphthous stomatitis (CRAS) (group 2). This took into account the clinical symptoms of the disease, allergic history; allergy screening data; laboratory test data (increase in total IgE).

Diagnosis was also made when patients had complaints such as: the occurrence of itching and aft of the tongue or oral mucosa, abdominal pain, after many multiple episodes of clinical manifestations of allergy to some products.

Method for determination of diamine oxidase (DAO): measurement of the concentration of diamine oxidase in serum was carried out by ELISA on an enzyme immunoassay analyzer COBAS-411 (ROSH). The study of histamine was carried out from a deproteinized sample with organic solvents in the presence of NaOH and NaCl (to bind AA) with stripping to acid. Components were identified by GC-MS. For the determination of histamine, calibration solutions were prepared with concentrations of 0. 1.0. 5, 1. 0.5. 0.10.0 ng / ml in 0.1 HC1. Histamine is eluted with 4 ml of 0.1N. hydrochloric acid at the speed of the elution solution of 0.4 ml / min. Results are expressed in  $\mu\text{mol} / \text{L}$ . The research results are processed using the criterion of t-Student.

## RESULTS AND DISCUSSIONS

After analyzing the questionnaires in patients of both groups, the following clinical manifestations of intolerance to products with a high content of histamine were identified. In the 2nd group, only 16 (13.6%) of the patients examined found more than 2 signs, histamine tolerance often suffer from cyclic headaches and OTG dysmenorrhea, which indicates a high probability of this syndrome. In the 1st group, seasonal allergic rhinitis (SAR) only in 3 (2.9%) patients revealed more than 2 signs characterizing OTG. flatulence, rhinorrhea, nasal congestion, urticaria. The most frequent complaint presented by patients is flatulence in 10 patients of the

2nd group. Symptoms such as nasal congestion, rhinorrhea were found only in patients of the 2nd group. In both groups, the level of diamine oxidase was determined. The frequency of occurrence of the syndrome of low tolerance to histamine in the 2nd group is 2.5 times more than in the 1st group.

The decrease in the utilization of histamine, which comes from food, causes the presence of symptoms in these patients throughout the year and explains the more severe course of food allergies.

From the analysis of patient questionnaires it is clear that the most frequent symptoms that occur after eating foods with a high level of histamine are: flatulence.

Analysis of the obtained research results showed that in patients of group 1 there was an increase in the level of histamine in the oral fluid by 30%, while in patients of group 2, an increase of 92%. Examination of the level of histamine in the blood of the examined persons, its increase was revealed in patients of group 1 — by 26%, in patients of group 2 — by a factor of 2. The increase in the concentration of histamine in the blood of the examined persons was due to a decrease in the activity of histaminase in the blood.

So the activity of diaminoxidase in the blood of the examined individuals of group 1 was reduced when comparing the control group by an average of 1.5 times, patients of the second group 3.4 times.

An increase in histamine levels may be due to its release as a result of direct (non-selective, cytotoxic) and indirect (selective, non-cytotoxic, selective) effects of the liberator. Histaminat in this situation may be attributed to some food products (fish, tomatoes, egg white, strawberries, strawberries, chocolate). Nonspecific histamine liberalization is accompanied by an increase in serum histamine levels.

**Table 1:** Indicators of histamine in the blood, oral fluid, urine and blood diamine oxidase activity

Surveyed groups	Histamine in the oral fluid $\mu\text{mol} / \text{l}$	Histamine in the blood $\mu\text{mol} / \text{l}$	Histamine in urine $\mu\text{mol} / \text{l}$	Diamine oxidase blood IU / ml
Healthy faces n = 18	8,01± 0,56	1,57±0,02	3,13±0,01	14,6±0,98
Patients with allergic rhinitis (1 g) n = 121	10,38±0,98	1,98±0,021	5,68±0,42	10,0±0,76
Patients with aphthous stomatitis (group 2) n = 88	15,34±1,12	3,18±0,23**	11,78±18**	4,25±0,32*

Note: \* - significance of differences  $p < 0.05$

An increase in the level of histamine can be associated not only with its excessive liberalization, but also with violations of histamine inactivation. It is known that inactivation of histamine is accomplished in several ways: by oxidation with diaminoxidase, monoamine oxidase, nitrogen methylation in the ring, histamine-fox properties

of the plasma, binding by glycoproteins, and isopholes. The inactivation processes at these levels are violated in the following cases: when the monoamine oxidase content decreases, conditions are created for the blood to be thrown from the portal system into the general bloodstream, the intestinal mucosa is increased, with

conditions for the excessive absorption of histamine, with an excess flow of histamine in the intestine taking medication or foodstuffs with properties of histaminoliberation, receipt or frequent, prolonged use of products with a high content of histamine, tyramine, histaminoliberators. Excessive formation of histamine and tyramine is possible with intestinal dysbiosis, due to intestinal microflora with decarboxylating activity. Thus, an increase in the concentration of histamine in the body is associated with a violation of its inactivation mechanisms and eating foods containing histamine and other amines (for example, tyramine, phenylethylamine) in significant amounts. These are fermented cheeses, wines, fermented and canned products, such as: pork liver, dried ham, salted (pickled) cabbage, sausages, canned fish, spinach, tomatoes, brewer's yeast, pickled herring, avocado, chocolate, cocoa beans and others.

Liberation of mediators (histamine in the first place) leads to the expansion and stagnation of blood in the capillaries, increasing the permeability of their walls. Clinically, these processes are expressed by the appearance of hyperemia and itching of the skin, urticaria, angioedema and aphthous stomatitis. Thus, Histamine Low Tolerance Syndrome is found in patients with cross-food allergy more than in patients with seasonal allergic rhinitis. This is due to the presence of cross-food allergies in patients.

## CONCLUSION

Consequently, the timely diagnosis of a pseudo-allergic reaction, which we observe in the form of chronic relapsing aphthous stomatitis, is of practical importance, since most often they are not an independent nosological form, but are only a sign of the underlying disease caused by chronic bowel disease, liver and oral mucosa, and in general the whole body.

## REFERENCES

1. Autoimmune reactions in diseases of the digestive system / T.M.Tsaregorodtseva, T.I.Serova, E.V.Vinnitskaya [and others] // *Ter. Archives*. - 2009. - T. 81, No. 2. - p. 68-71.
2. Bazikyan E. A. Clinical condition of hard dental tissues in patients with diseases of the upper digestive tract / E.A. Bazikyan, G. Lukina // *Proceedings of the XXIII and XXIV All-Russian scientific and practical conferences*. - M., 2010. - p. 51-53.
3. Baranovsky, A. Yu. Inflammatory bowel diseases (diagnosis and treatment): method. recom. / A.Yu. Baranovsky, O.B. Shchukina, E.A. Kondrashina. - SPb. : GOU DPO SPbMAPO Publishing House, 2009. - 300 p.
4. Baranovsky, A. Yu. Achievements and prospects for the study of functional and inflammatory bowel diseases in SPbMAPO / A.Yu. Baranovsky, V.I. Simanenkova // *SPbMAPO Bulletin*. - 2010. - T. 2, No. 2. - p. 121-134.
5. Belousova E. A. Ulcerative colitis and Crohn's disease // *Tver: Triad*, 2002. - 128 p.
6. Bushueva T.V. The role of cytokines in the development of chronic relapsing aphthous stomatitis / T.V.Bushueva, G.I.Ron, N.D.Chernysheva // *Ural Medical Journal*. - 2010. - № 8 (73) .- p. 9-10.
7. Gergel N. I. Study of oral fluid in the evaluation of the activity of the inflammatory process / N.N. Gergel, I.F. Sidorova, Yu.A. Kosyakova // *Materials of the VI International Scientific and Practical University conf. "Health and Education in the 21st Century."* - M., 2004. - p. 85.
8. Zaynelova, A. A. Improving the methods of diagnosing and treating recurrent oral aphthosis in intestinal diseases: author. dis. ... Cand. honey. Sciences: 14.00.21 / ZaynelovaAygulAlhanovna .- Almaty, 2009. - 24 p.
9. Maev I. V. Molecular genetic mechanisms for the development of Crohn's disease / I.V. Maev, D.N. Andreev // *Molecular medicine*. - 2014. - № 3. - C. 21-27.
10. Recurrent aphthous stomatitis - etiology, pathogenesis (part I) / O.F. Rabinovich, I.M. Rabinovich, E.L. Panfilova [and others] // *Dentistry-2010*. - No. 1. - P. 71-74.
11. Trukhan, D.I. Changes in the tissues and organs of the oral cavity in diseases of the digestive system // D.I.Trukhan, L.Yu.Trukhan, I.A.Viktorova // *Proceedings of the XX Int. conf. "Actual issues of dentistry."* - Omsk, 2014. - p. 197-199.
12. Truha L. Yu. Changes in the organs and tissues of the oral cavity in case of diseases of the internal organs // L.Yu.Trukhan, D.I.Trukhan, I.A.Viktorova // *Reference polyclinic physician*. - 2011. - №7. - C.8-14.
13. Dunlap, C.L. Chronic stomatitis: an early sign of Crohn's disease / C.L.Dunlap, C.A.Friesen, R. Shultz // *J.Am. Dent. Assoc.* - 1997. - Vol. 128, No. 3. - P. 347-348.
14. Logan, R.M. Links to oral and gastrointestinal health / R.M.Logan // *Curr. Opin. Support Palliat. Care*. - 2010. - Vol. 4, No. 1. - P. 31-35.