



# FAN, TA'LIM VA AMALIYOT INTEGRATSIYASI

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Olimova D.V.

Assistant of the Department of General Hygiene and Ecology, Bukhara State

Medical Institute

A COMPLEX APPROACH TO GLOSSALGIA TREATMENT BASED ON THE CURRENT DATA
ON THE SPECIFICITY OF ITS ETIOPATHOGENESIS

The aim of the study was to assess the efficacy of a novel complex approach to glossalgia treatment based on the current data on the specificity of its etiopathogenesis.

Materials and Methods. 58 patients with glossalgia aged 42–55 years have been examined and treated. The condition of the capillary blood flow was determined by laser Doppler flowmetry. At the laboratory stage, such indices of the local immunity in the oral cavity as sIgA, IgA, IgG, and lysozyme have been investigated, and the coefficient of local immunity factors balance has also been calculated.

**Results.** Of 58 patients receiving our complex etiopathogenetically justified treatment, complete recovery has been reached in 39 individuals and significant improvement in 19.

**Conclusion.** Introduction of preparations improving microcirculation and normalizing metabolic processes in glossalgia treatment results in more rapid and long-term effect.

Key words: glossalgia; glossalgia treatment

Introduction

Glossalgia - a disease expressed in pain and a feeling of burning the tongue, is considered the most ambiguous in understanding and one of the most difficult in the treatment of neurostomatological pathology. It is characterized by pain in the mouth without any signs of inflammation and without any specific lesions. Glossalgia is characteristic of clinical heterogeneity, which is realized at the level of comorbidity with somatic pathology [1–3].



Achievements of recent years in related fields of medicine - biochemistry, neurophysiology, neurology and psychiatry - allow you to significantly expand understanding of the pathogenesis of neurostomatological diseases [4].

A large number of works have been devoted to the etiology, pathogenesis and methods of treatment of glossalgia, but there is no consensus. Some authors consider it a polyetiological disease, confirming their point vision by the presence in the clinical picture of factors such as dyshormonemia, changes in the function of the nervous systems, diseases of the gastrointestinal tract, cardiovascular system, etc. On this they claim that the treatment of glossalgia should be symptomatic, i.e. focused on the correction of shifts that are detected when this disease. But even when using local influences (blockades, applications, physiotherapy), symptomatic treatment remains ineffective [4].

Other authors, based on modern ideas about the pathogenesis of language diseases, believe that in the occurrence of glossalgia, an important general factors play a role, such as disturbances in system of immuno- and neuroregulation. These mechanisms are still poorly understood and the assessment of their role very relevant.

The results of the treatment of glossalgia at present disappoint. Even timely diagnosis and adequate therapy guarantees the success of treatment only in 32% of cases.

An analysis of modern literature data allows us to suggest that all groups of factors leading to glossalgia are only provocative. But the actual causal factor serves as the state of the language itself, together with the structures that provide it with humoral and neurotrophic substrates. Indirectly, this is evidenced by the fact that many people who have provoking factors are expressed in a significant degrees, and they are combined with each other, glossalgia does not occur.

We believe that numerous studies neurological status, biochemical, immunological and other indicators in glossalgia are the study of important links in pathogenesis, but not the most cause of the disease, which is still unclear. Therefore, the treatments used and prevention should be focused on individual links in the pathogenesis of this disease. And since many systems of the body are involved in pathogenesis, therefore, a complex approach to treatment.

Taking into account current data on the mechanisms of pathogenesis, a new approach to the treatment of glossalgia has been developed, which consists in the use of correction of immuno- and neuroregulation preparations.

The purpose of the study is to evaluate the effectiveness new comprehensive approach to the treatment of glossalgia with taking into account modern data on the features of the etiopathogenesis of this pathology.

**Examined** and 58 patients with glossalgia were treated (38 women and 20 men), 30 apparently healthy individuals served control group (15 women and 15 men aged). The age of patients with glossalgia was 42–55 years. 57 examined patients suffered from diseases of the gastrointestinal tract and liver, 50 people had cardiovascular pathology, 19 had endocrine diseases.



The subjects complained of a feeling of heaviness, "fatigue" of the tongue, especially with increased speech load, numbness, "tightness" of the tongue, "tingling", "burning", pain, paresthesia, dryness oral cavity. Paresthetic and pain sensations are not had clear boundaries and were unstable.

According to the anamnesis, they disappeared during the reception. Food, in the morning unpleasant sensations were often absent or were weakly expressed, intensified in the evening or during prolonged conversation, nervous excitement.

In the anamnesis, there were often various dental procedures, in some cases leading to pain and paresthesia in the tongue.

In order to determine the state of capillary blood flow in the tongue in patients with glossalgia and in the control group, laser Doppler flowmetry was performed, since with glossalgia at the time of pain attack, it is possible to develop a short-term cerebrovascular accident - ischemia, with which occurs narrowing of small arteries, a decrease in the number of functioning capillaries, a decrease volumetric and linear velocity of blood flow. In order to determine the state of capillary blood flow in the tongue in patients with glossalgia and in the control group, laser Doppler flowmetry was performed, since with glossalgia at the time of pain attack, it is possible to develop a short-term cerebrovascular accident - ischemia, with which occurs narrowing of small arteries, a decrease in the number of functioning capillaries, a decrease volumetric and linear velocity of blood flow.

Results and discussion

An analysis of the results of the immunological study showed that all patients with glossalgia had a reduced concentration of lysozyme in saliva and statistically significantly increased concentration of IgG.

Also, in all patients, the concentration of IgA was significantly reduced, and sIgA — only in persons with concomitant diseases. Dysgammaglobulinemia detected IgG and IgA. Both of these immunoglobulins reflect the state of not only local immunity, but also the general one.

Since the detected dysgammaglobulinemia occurred in all patients, its presence should be considered a characteristic phenomenon for glossalgia.

After the treatment, the level of lysozyme, IgA and sIgA are increased, while IgG is reduced. Many cytokines are both mediators of the immune and neuroendocrine systems, therefore it is quite probably their participation in the pathogenesis of glossalgia. In that direction requires further research.

The authors, taking into account modern knowledge about the pathogenetic links of glossalgia and the data obtained developed a new integrated approach to the treatment of the disease. It includes, along with etiotropic, symptomatic and sanogenetic therapy, pathogenetic treatment and provides differentiated approach to the treatment of various groups of patients.

Etiopathogenetically oriented treatment glossalgia is to eliminate provocative factors and triggers, which is achieved the use of agents that affect tissue exchange and normalizing the psycho-emotional sphere patient.



To correct such pathogenic factors, as a violation of microcirculation, hypoxia, vasospasm and increased platelet aggregation, it was it was decided to supplement the treatment with drugs to normalize metabolic processes, vascular drugs that improve cerebral circulation, as well as drugs for neuroregulation.

For brain enhancement therapy blood circulation, brain metabolism, regulation metabolism, decrease in psycho-emotional tension and vegetovascular disorders, normalization and activation of the processes of protective inhibition in the central nervous system and microcirculation in all tissues, the patients were randomly divided into three groups assigned to: group 1 - injections of Cortexin 2 ml intramuscularly 1 time per day for 10 days and Combilipen in the form of intramuscular injections according to 2 ml 1 time per day for 10 days;

Group 2 - Vinpocetine 1 tablet 0.05 g 3 times a day for 1 month in combination with Alka-Prim (1 tablet 0.1 g 3 times a day under the tongue for 1 month); Neuromultivit (1 tablet 2 times a day in within 1 month);

group 3 - injections of Cerebrolysin 2 ml intramuscularly for 10 days; Milgamma in the form intramuscular injections of 2 ml 1 time per day for 10 days.

Preparations containing B vitamins have been assigned to patients of all three groups. were taken into account active participation in the processes of nerve excitation in the synapses of vitamin B1, as well as the need for vitamin B6, which acts as coenzyme of the most important enzymes of nervous tissues.

The best results have been shown using set of drugs in the 1st group, which is consistent with data of a number of domestic scientists. Also a positive effect, but somewhat smaller, showed scheme 3, preferably applied abroad.

The lower effect may be due to the fact that Cerebrolysin contains only 15% of neuropeptide fractions, unlike Cortexin. Modern neurochemistry has proven that neuropeptides are the main neurotrophic pharmacological load.

Now there is a new drug Cerebrolysin EO21, enriched with peptides up to 25%, which in experiments has a greater clinical effect, involved in the biosynthesis of neurotransmitters (adrenaline, norepinephrine, dopamine).

Further research in this direction will show how effective it is. Scheme 2, in our opinion, is indicated for patients with the least pronounced manifestations of clinical symptoms. It does not give such a noticeable effect, like 1st and 3rd schemes.

To eliminate internal psychological conflict, mobilize natural opportunities of the patient to combat glossalgia, psychological conversations were conducted with patients and relatives with aim to change the already habitual "painful" behavior.

Recommended individual therapy sessions physical education to increase the level of physical activity, contributing to the improvement of microcirculation, normalization of the psychological background of the patient and social adaptation, which, in turn, activates the processes of sanogenesis in this pathology.

To evaluate the effectiveness of ongoing therapy glossalgia examination was performed twice – before and after treatment. The results were statistically confirmed



(p<0.05). Comparison made obtained clinical indicators of the condition of patients, as well as their difference with control values.

After complex therapy, glossalgia is positive dynamics of microcirculation indicators, according to of laser Doppler flowmetry was characterized by the normalization of all indices (see table).

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A statistically significant (p<0.01) decrease in the microcirculation index and an increase in root-mean-square deviation (flux) and coefficient of variation due to a decrease in congestion in the venular link of microcirculation and increased tissue perfusion with blood after treatment. An improvement in microcirculation, vasomotor activity of microvessels was noted.

Flux increase is due to more intensive functioning of regulatory mechanisms microcirculation.

When treating patients with glossalgia, one should take into account the fact that in their dental status they have high incidence of periodontal disease (from 20 to 66%), as well as poorly supplied and fabricated orthopedic structures (8–30%). In this regard, all patients underwent professional hygiene and sanitation of the oral cavity, and rational prosthetics were recommended.

As a result of complex pathogenetically substantiated treatment of patients with glossalgia, there were the following results were obtained: out of 58 patients, complete recovery was achieved in 39 people (67.2%), significant improvement in 19 people (32.8%). Stable remission was observed during dynamic observation for two years.

Thus, the use of etiopathogenetically substantiated drug regimen, which included Cortexin and Milgamma, showed the most pronounced improvement in clinical and laboratory indicators, in particular immune: decrease in Csb was already observed by the 6th day, on the 14th and 30th days a progressive decrease in Csb also continued.

#### Conclusion

In an integrated approach to the treatment of glossalgia it is necessary to take into account the peculiarities of the etiology and pathogenesis of this disease. This approach should be aimed at normalizing psycho-emotional condition, functions of internal organs with the mandatory inclusion of drugs that improve trophism language and creating conditions for the normalization of local immunity and the state of microcirculatory channels. It is preferable to use the complex drugs, including Cortexin and Milgamma, Cerebrolysin and Combilipen. And in less severe cases - Vinpocetine, Alka-Prim and Neuromultivit.

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