



# THE MATTER OF USING LASER THERAPY IN THE TREATMENT OF ACUTE HERPETIC STOMATITIS IN CHILDREN

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## Abstract:

In the article, the viral etiology of acute herpetic stomatitis, which has the highest rate among oral mucosal diseases in children, visited the admission department of the Regional Children's Multidisciplinary Medical Center and various departments modern methods of treatment of sick children who are being treated as a related disease are widely covered in . In the article, we divided the children who came to the reception department with acute herpetic stomatitis in different departments of the hospital into 2 groups. Local treatment measures were applied to first group, and local treatment with antiseptic agents was applied to the 2 groups and a comprehensive approach including red gel-neon laser treatment is recommended. A complex approach to the treatment of acute herpetic stomatitis is local treatment with antiseptic agents and laser therapy has shown its maximum effectiveness in a short time all the symptoms of illness in children: intoxication, mouth in the oral cavity the symptoms of the disease, aphthae disappeared, there was no recurrence of the disease, and it reduced the severe forms of the disease in a short time and restored the normal immunity in children in a short time.

**Keywords:** Oral mucosa (OCML), acute herpetic stomatitis, antiseptic agents, red gel-neon laser, children

**RELEVANCE OF THE TOPIC.** Herpetic stomatitis in children is a herpes virus infection that occurs with primary damage to the mucous membrane of the oral cavity and symptoms of general intoxication. In pediatrics and children's dentistry, herpetic stomatitis ranks first among inflammatory diseases of the oral cavity in children. Herpetic stomatitis takes the leading place in 80-85% of cases of oral mucosal diseases in children. Herpetic stomatitis appears at the first contact of the child's body with the simple herpes virus type I. Most often, herpetic stomatitis occurs in children aged 1 to 3 years, which is associated with their age-related morphological features, a decrease in the level of transplacental antibodies, and the immaturity of cellular and specific immunity. Herpetic stomatitis can be observed in children of the first half year of life, this condition is often noted in children who are on artificial feeding. There are two types of herpetic stomatitis in children: primary acute and chronic recurrent. Children with acute herpetic stomatitis become asymptomatic carriers of the virus or suffer from chronic infection. Herpetic stomatitis in children can be accompanied by damage to the nervous system and internal organs, a

decrease in the immune system, and therefore requires serious attention from pediatricians, pediatric dentists, pediatric immunologists, pediatric neurologists, and other specialists.

Among older children, the incidence is significantly lower, which is due to the acquired immunity after herpetic infection.

Herpes simplex virus type I is a DNA-storage virus belonging to the Herpesviridae family and clinically manifests as a rash on the skin of the face and oral mucosa. After entering the child's body, OGV actively multiplies in epithelial cells and surrounding lymph nodes (most often, under the jaw), then enters the bloodstream (primary viremia) and from there to various organs (liver, spleen, etc.), then increases and leads to the appearance of secondary viremia. At the next stage, children develop symptoms of herpetic stomatitis: damage to the mucous membrane of the lips, oral cavity and throat is observed. Later, herpes infection settles in the nerve cells, the disease can go into a latent form and live for life, appearing from time to time as the child's immunity decreases.



Recurrence of chronic herpetic stomatitis in children occurs against the background of weakened immunity under the influence of provoking factors: hypothermia, excessive heat, stress, vitamin deficiency, taking large doses of antibiotics, acute respiratory viral infections. Most often, herpetic stomatitis in children is observed in spring and autumn.

In recent years, the recurrence of this disease with the transition to a chronic form is observed more and more. This is because herpetic stomatitis, as a rule, appears and develops in weakened children in conditions of a sharp decrease in the body's natural protective and adaptive reactions.

One of the important aspects of the treatment-prevention complex of diseases of the mucous membrane of the oral cavity is to eliminate the causes of their occurrence, as well as to prevent them from turning into erosion using various methods and tools. At VBKTTM, combined red gel-neon laser therapy is currently used in clinical practice for the treatment of oral mucosa, including recurrent herpetic stomatitis. The combination of red gel-neon laser therapy with low-intensity pulsed laser radiation and antiseptic ointments is increasingly used in the hospital due to the wide preventive and therapeutic effect on tissues and the body as a whole.

**THE PURPOSE OF THE RESEARCH:** To determine the effectiveness and the matter of "laser therapy" in the treatment of acute herpetic stomatitis and to improve treatment methods.

**METHOD OF EXAMINATION:** We conducted this study among patients who applied to the reception department of the multidisciplinary children's medical center of Samarkand region and were treated in the departments of pulmonology, gastroenterology, otorhinolaryngology, neurology, and maxillofacial surgery. We conducted it in identified patient children. For this purpose, we took 54 children diagnosed with acute herpetic stomatitis from the above-mentioned departments and children aged 1 to 6 who visited the reception department as the goal of our research. Among the 54 patients examined by us, 22 (40.7%) of them were children who applied to the reception department. 9 people (16.7%) were in the department of gastroenterology, 10 people (18.5%) were in the department of otorhinolaryngology, 8 people (14.8%) were in the department of pulmonology, 5 people (9.2%) were in the department of neurology. During the examination, we conducted a general examination of the children, a survey was conducted with the parents of the children, medical anamnesis and life anamnesis were collected. The clinical condition of sick children was studied. Mainly, sick children complained of

increased body temperature, severe pain in the mouth, decreased appetite, and restlessness. When the oral cavity was examined, the mucous membrane was red and swollen, the tongue was covered with yellow crust, and there were erosions in the oral cavity covered with gray crust. Canker sores spread on the tongue and inner surfaces of the lips, bleeding gums, drooling, bad breath were observed in some children.

We divided the sick children into 2 groups and each group consisted of 27 sick children. In group 1, the patient's mouth was swabbed with antiseptic agents, furatsillin, and swab dipped in novocaine for anesthesia against the background of general therapy for children. Then, 0.1% and 3% aciclovir ointment and camestat gel ointment were applied to the areas with aphthae in the oral cavity. Nystatin and aciclovir tablets were prescribed for oral administration. In addition to treatment measures, laser therapy was applied to children in group 2. For this purpose, gel-neon red laser exposure of 0.75 Dj/cm<sup>2</sup> for 5 minutes to 5 days was applied to the areas with aphthae in the head of the mouth.

#### **RESEARCH RESULTS AND DISCUSSION:**

A comparative assessment of the effectiveness of treatment of 54 patients in 2 groups of children under our observation was conducted based on subjective data, dynamics of clinical observations and laboratory examination. In group 1 children, the result became clear after 4 days. Bleeding from gums decreased, epithelization of aphthae occurred on the 4th day after treatment. The aphthae began to turn into epithelium gradually, and the hyperemic border around the aphthae decreased on the 5th day. The recovery of the oral cavity and the recovery of the sick child took place on the 8-9th day. Lymph nodes became smaller on the 10th day of the disease. The microbiological parameters of the oral mucosa also changed after treatment. The analysis of the results of the treatment from the patients in the 2nd group showed that in the 2nd group of children with acute herpetic stomatitis, a complex including local treatment with antiseptic agents and red gel-neon laser treatment treatment was significantly more effective than topical treatment alone. In group 2, intoxication of the body and pain in the mucous membrane of the oral cavity also disappeared for 2 days. In all patient children, severe inflammatory symptoms decreased on the 2nd day, aphthae began to turn into epithelium. The oral mucosa became pink on the 3rd day. The children recovered completely on the 5th day.

**CONCLUSION:** A comprehensive approach to the treatment of acute herpetic stomatitis, local treatment with antiseptic agents and laser therapy, showed its



maximum effectiveness, in a short time all the symptoms of illness in children: intoxication, in the oral cavity pain symptoms, aphthae disappeared, no recurrence of the disease was observed.

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