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THE EFFECTIVENESS OF THE USE OF MAGNETIC-INFRARED-LASER THERAPY IN TRAUMATIC INJURIES OF ORAL TISSUES IN PRESCHOOL CHILDREN

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Abstract. The mucous layer of the oral cavity is the initial part of the digestive tract, so it is exposed to various local influences, as well as reflects all the physiological and pathological processes occurring in the human body. Mechanical and chemical traumas in the oral cavity are common in childhood. Trauma to the oral cavity, including the mucous membrane, is of great importance in the early years of life, so it is important that every dentist be able to properly plan dental care for this category of children. The mucous layer of the oral cavity is in direct contact with the external environment from the time a child is born and throughout its life. When studying data from the literature, it was found that there is little information about the prevalence of mechanical trauma.

Keywords: Oral mucosa, traumatic stomatitis, magnetic-infrared-laser (MIL) therapy, research results.

Given the characteristics of traumatic stomatitis, it is possible to provide the child with timely qualified medical care on the first visit and reduce the risk of complications from injuries. In practice, pediatric dentists often have to deal with the consequences of trauma to the oral mucosa. Traumatic stomatitis can develop at any age, but is most common in children[1,2]. This is due to the high risk of trauma of various etiologies. Wounds, aphthae, and other pathological traumas that occur during traumatic stomatitis of the mucous membrane cause discomfort and pain to the child while eating. The peculiarity of the oral cavity is that any trauma to the mucous membrane is immediately accompanied by its infection. The degree of adverse effects and clinical manifestations depend on the nature of the pathogen, the time and intensity of exposure, the individual characteristics of the child's body. Bacteria, microbes, and some fungi multiply and parasitize and enter the oral cavity through trauma to the mucous membrane. Long-term treatment of patients with traumatic stomatitis has led to the use of magnetic-infrared-laser (MIL) therapy, which has increased the interest of physicians in practice. Oral cavity with infectious-traumatic genesis occurs with a clear sign of pain in the areas of the mucous membrane and is manifested by polymorphic elements of the industry - erosion, aphthae, wounds, plaque and others[2,4].

The urgency of this problem is due to the relatively high level of trauma in children. Traumatic exposure reduces the protective, barrier function of the mucous membrane, which becomes the gateway to infection for the entry of microorganisms and the development of inflammation. Against the background of the emergence of

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clinically additional pathology of the oral cavity in patients with trauma, the urgency of the problem increases due to the progressive decline of the dental components of patients' quality of life. An important problem of modern conservative and prophylactic dentistry is the search for optimal means to prevent inflammatory diseases of the oral mucosa resulting from trauma; the success of therapy depends not only on the correct choice of active substance, but also on the oral cavity. Dosage form, as well as methods of administration [2,3].

Patients with traumatic stomatitis, patients aged 1 to 5 years, who visited the Bukhara Regional Children's Dental Clinic and applied at the Bukhara city, district clinics. Oral mucosal trauma has been shown to be more common in children aged 1 and 5 years. The age levels of the children were structured according to the WHO classification (Table 1).

Table 1

Age levels of the children examined

Patient age	Research methods			
	Basic		Additional	
	Number of patients	%	Number of patients	%
2019 (1 year)	8	10.5	---	---
2018 (2 year)	14	18.5	13	20
2017 (3 year)	18	23.7	15	23
2016 (4 year)	17	22.3	19	29
2015 (5 year)	19	25.0	18	28
Total	76	100	65	100

We divided the main group and the additional group and studied the effectiveness of treatment of patients. 8-year-olds (10.5%), 2-year-olds 14 (18.5%), 3-year-olds 18 (23.7%), 4-year-olds 17 (22.3%), 5-year-olds 19 (25.0%) was in the group range[5,6].

13-year-olds (20%), 3-year-olds 15 (23.%), 4-year-olds 19 (29%), 5-year-olds 18 (28.0%) were in the additional group range.

The average age of patients with traumatic stomatitis is 1-5 years. From the data presented (Table 1), the number of patients with traumatic stomatitis in the age group of 3-5 years is 54, which is 71%. The additional group was consistent with the main group by age[6].

The duration of the disease examination was up to 1-2 years. The clinical forms of traumatic stomatitis in the examined children are presented in Table 2.

Table 2

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Clinical forms of traumatic stomatitis in children examined were counted in groups and expressed in%.

Age	Research methods							
	Basic				Additional			
	Sharp TS		Chronic TS		Sharp TS		Chronic TS	
	Number	%	Number	%	Number	%	Number	%
2015 (5year)	6	8%	13	17%	7	11%	11	16%
2016 (4year)	2	2%	15	20%	9	13%	10	15%
2017 (3year)	3	6%	15	20%	7	11%	8	12%
2018 (2year)	2	2%	12	16%	10	15%	5	7%
2019 (1year)	2	2%	6	7%	----	----	----	----
Total	15	20%	61%	80%	33	50%	32	50%
	76 (100%)				65 (100%)			

From the data in Table 2, it can be seen that the majority of the examined children had a chronic diagnosis of traumatic stomatitis, the remaining clinical forms were combined into a systemic form of traumatic stomatitis according to the literature. As a result, sick children were divided into the following 2 groups (Table 2).

Dental general admissions and clinical-laboratory studies were performed in the examined children. Acute (chemical-physical) and chronic (mechanical) diagnosis of traumatic stomatitis was made. The studies evaluated clinical anamnesis, laboratory and instrumental parameters during the initial examination.

Held:

1.Disease research methods
2. Methods of clinical research
3. Molecular genetic research (polymerase chain reaction)
4. Microbiological tests
5. Immunological examinations

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The duration of treatment of sick children was 5-7 days. It was seen on the nature of the treatment complex, which included the use of physiotherapeutic treatment and metabolic therapy.

The treatment regimen for patients with traumatic stomatitis was as follows [8,9]:

1. Treatment regimen planning created.
2. The oral cavity was treated with antiseptic.
3. MIL therapy is prescribed (depending on the nature of the disease)
4. Immunomodulatory drugs were given.
5. Local therapy was ordered.
6. Nonsteroidal drugs were prescribed when the inflammatory process was high.
7. When accompanied by fungi, antifungal treatment was given and antifungal drugs were given.
8. In case of allergies, it is treated with antihistamines.
9. Glucocorticosteroids were given as a result of hormonal disorders.

Peculiarities of dental caries in children with traumatic stomatitis.

The results of a study in sick children revealed a high frequency of occurrence of major dental diseases in the oral cavity in a comparative study of patients with healthy children in the main group (Table 3).

Table 3

Prevalence of major dental diseases in children with traumatic stomatitis.

Groups		Dental diseases					
		Dental caries		Gingivitis		Paradontitis	
		Number	%	Number	%	Number	%
Basic n=76	Sharp	11	73%	3	25%	1	2%
	Chronic	46	75%	12	19%	3	6%
Additional n=65	Sharp	25	75%	8	25%	---	---
	Chronic	16	50%	14	43%	2	7%

Indications for the detection of major dental diseases in children with acute (chemical) type and chronic (mechanical) form of traumatic stomatitis showed a significantly higher incidence of major dental diseases compared to healthy children in the main group. However, the incidence in children with the chronic type is particularly high compared to patients with the acute type[7].

The state of oral hygiene in children with traumatic stomatitis.

When consulting a pediatric dentist, the main complaints of patients were pain of varying intensity during traumatic stomatitis, strong pain in the oral cavity

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during meals, enlargement of regional lymph nodes, and sometimes fever. The mucous layer of the tongue is hyperemic, covered with plaque. The localization of traumatic stomatitis is the tongue, soft palate, lips, cheeks, and transition folds. The main causes of traumatic injuries are teething of tissues with teeth, injuries and burns with sharp edges of teeth, cognitive injuries of foreign bodies.

Table 4

Presence of somatic diseases in children with traumatic stomatitis

Somatic pathology	The absolute number of patients	The result
Cardiovascular pathology	14	9,92%
Diseases of the gastrointestinal tract	8	5,6%
Respiratory diseases	16	11,34%
Healthy	103	73,14%
Total	141	100%

During the survey, 141 patients with mucosal injuries were diagnosed with somatic diseases of the oral cavity: 14 (9.92%) cardiovascular pathology, 8 (5.6%) diseases of the gastrointestinal tract, 16 (11.34%) diseases of the respiratory system . Most were patients aged 4-5 years. 103 (73.14%) individuals were considered healthy (no somatic disease detected), and patients without concomitant disease (Table 4).

In recent years, it has been known that it is difficult, if not impossible, to stop the development of diseases in the organs and tissues of the oral cavity only with therapeutic measures. Therefore, it is necessary to develop measures for the prevention of major dental diseases and widely apply them in practice.

Table 5

Preliminary indicators of the hygienic condition of the oral cavity.

HI level, score	Groups, number of patients (%)	
	Basic	Additional
	n=76	n=65
Good 0-0,6	14 (18,42 %)	21 (33,84 %)

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Satisfactory 0,7-1,6	36 (47,36 %)	23 (35,38 %)
Bad 1,7-2,5	24 (31,54 %)	19 (29,23 %)
Too bad>2,6	2 (2,63 %)	1 (1,53 %)
Total	76 (100%)	65 (100%)

Despite the large number of popular data on oral hygiene in children and the availability of a variety of hygiene products in the modern market, the state of oral hygiene in a very large part of the population remains unsatisfactory. The study of oral hygiene in children with TS is presented in Table 5. A study of the level of oral hygiene showed that the majority of patients had very low levels in the main group of children [10].

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