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✓ *Resume,*

*Traumatic injuries of the oral mucosa of children are accompanied by a large number of complications and an increase in the need of the children's population for dental care. Only examinations and medical measures, without carrying out preventive measures, cannot lead to the achievement of significant successes in reducing the dental incidence of children. This article substantiates the need to improve the prevention and treatment of dental diseases in preschool children.*

*Keywords: traumatic lesions, young children, inflammation, oral mucosa, prevention, treatment.*

**ТРАВМАТИЧЕСКИЕ ПОВРЕЖДЕНИЯ СЛИЗИСТОЙ ОБОЛОЧКИ ПОЛОСТИ РТА  
У ДЕТЕЙ МЛАДШЕГО ВОЗРАСТА**

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✓ *Резюме*

*Травматические повреждения слизистой оболочки полости рта детей сопровождаются большим количеством осложнений и повышением потребности детского населения в стоматологической помощи. Только осмотры и лечебные меры, без проведения профилактических мероприятий, не могут привести к достижению существенных успехов в снижении стоматологической заболеваемости детей. В этой статье обосновывается необходимость улучшения профилактики и лечения стоматологических заболеваний у детей дошкольного возраста.*

*Ключевые слова: травматические поражения, дети младшего возраста, воспаления, слизистая оболочка полости рта, профилактика, лечение.*

**YOSH BOLALARDA OG'IZ BO'SHLIG'I SHILLIQ QAVATINING TRAVMATIK  
SHIKASTLANISHLARI**

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*Bolalar og'iz shilliq qavatining travmatik shikastlanishi ko'plab asoratlar va ularning stomatologik yordamga bo'lgan ehtiyojini ortishi bilan keladi. Bolalar stomatologik kasalliklarini kamaytirishda, profilaktika chora-tadbirlari o'tkazilmay turib, faqatgina ko'riklar va tibbiy tadbirlar muvaffaqiyatga olib kelmaydi. Ushbu maqola maktabgacha yoshdagi bolalarda stomatologik kasalliklarnig oldini olish va davolashni takomillashtirish zarurligini asoslaydi.*

*Kalit so'zlar: travmatik shikastlanishlar, yosh bolalar, yallig'lanish, og'iz bo'shlig'i shilliq qavati, oldini olish, davolash.*

**Relevance**

**I**n the practice of a pediatric dentist, it is often necessary to deal with the consequences of traumatic injuries of the oral mucosa. Traumatic stomatitis can develop at any age, but it is most often observed in children. This is associated with a high risk of injuries of various etiologies

[2, 9]. The relevance of this problem is due to a fairly high level of injuries in children. Traumatic exposure reduces the barrier function of the mucous membrane, which becomes the entrance gate of infection for the introduction of microorganisms and the development of

inflammation. Ulcers, aphthae and other pathological formations formed during traumatic stomatitis on the mucous membrane cause discomfort and pain to the child when eating. The peculiarity of the oral cavity is that any traumatic damage to the mucous membrane is immediately accompanied by its infection. Traumatic injuries belong to a group of diseases affecting the local oral mucosa (OOM) [3, 4]. Physical or chemical influences can be an etiological factor. Among the physical, the most common cause is mechanical injury, acute or chronic (as a result of bruising, biting) [1, 8]. Iatrogenic includes violations of the integrity of the mucous membrane caused by dental manipulations: trauma with a sharp instrument, bur, disk due to the careless work of the doctor or the patient's restless behavior; damage to the mucous membrane with sharp edges of the tooth, filling, prosthesis [5, 6, 10]. Physical factors include exposure to high and low temperatures.

Thermal burns occur in hot food (drink) lovers. Cold injuries can result from the treatment of pathology using the cryodestruction method. In children, the reason for the effect of low temperature is the touch of the tongue to a metal object in the cold [2, 7].

**The purpose of the study.** Improving the dental health of children with traumatic injuries of the oral cavity justification for optimizing the organization of dental care for young children.

### **Material and methods**

Basic and additional diagnostic examinations conducted at the outpatient level: external examination of the face (skin, facial symmetry, skin color, condition of the lymph nodes); complaints and anamnesis; visual examination of the oral mucosa (color, moisture, consistency, thickening, thinning, deformation, integrity of the epithelium); palpation of regional lymph nodes (submandibular, parotid, chin lymph nodes); determination of the integrity of the epithelium.

### **The results of the study and their discussion**

*Mechanical injury.* Acute trauma is more often localized in the anterior parts of the tongue, on the lips, cheeks and can manifest itself as edema, hyperemia, hemorrhage, abrasion. Thanks to the active defense mechanisms of the oral cavity, small injuries are subject to rapid healing.

Severe trauma can lead to ulceration. So, deep biting of the tongue, cheeks, lips or trauma to the mucous membrane with a sharp instrument is accompanied by bleeding, then you appear advanced tissue edema. The accession of a

secondary infection contributes to the development of the ulcerative process. Acute catarrhal, or serous, stomatitis often occurs against the background of a general disease and occurs in all age groups, but most often in children.

The mucous membrane can be injured by toys and other objects, as well as by the influence of bad habits (sucking on the lips, cheeks, fingers). OOM becomes edematous, bright red. On the lateral parts of the tongue and the inner surfaces of the cheeks, teeth imprints are determined.

Edematous hyperemic papillae partially cover the crowns of the teeth. Salivation decreases, saliva is viscous, viscous. The back of the tongue is covered with plaque. Initially white, it can be pigmented. Bad breath is noted. Mechanical injury.

Acute trauma is more often localized in the anterior parts of the tongue, on the lips, cheeks and can manifest itself as edema, hyperemia, hemorrhage, abrasion. Thanks to the active defense mechanisms of the oral cavity, small injuries are subject to rapid healing. ... Severe trauma can lead to ulceration. So, deep biting of the tongue, cheeks, lips or trauma to the mucous membrane with a sharp instrument is accompanied by bleeding, then there is a pronounced swelling of the tissues.

The accession of a secondary infection contributes to the development of the ulcerative process. Acute catarrhal, or serous, stomatitis often occurs against the background of a general disease and occurs in all age groups, but most often in children. The mucous membrane can be injured by toys and other objects, as well as by the influence of bad habits (sucking on the lips, cheeks, fingers). OOM becomes edematous, bright red (Fig. 3). On the lateral parts of the tongue and the inner surfaces of the cheeks, teeth imprints are determined. Edematous hyperemic papillae partially cover the crowns of the teeth. Salivation decreases, saliva is viscous, viscous. The back of the tongue is covered with plaque. ... Initially white, it can be pigmented. Bad breath is noted. In case of trauma, accompanied by a fracture of the crown, dislocation of the tooth, accidental injury to the gums when brushing teeth, acute catarrhal gingivitis occurs, which is clinically characterized by hyperemia of the gingival margin or the entire gum to the transitional fold. The gums are swollen, bleeds easily, especially while eating, when brushing teeth. The inflammation is accompanied by a painful reaction. Eating is difficult, "soft" foods reduce the self-cleaning of the mouth, which increases the inflammatory process. When the

gums are affected in the area of individual teeth, the disease is considered as localized. Gingivitis proceeds more severely against the background of general pathology (diseases of the gastrointestinal tract, infectious processes, etc.), in the absence of treatment, acute gingivitis becomes chronic. The gums become edematous, with a bluish tinge. Bleeding can be expressed to a greater or lesser extent: when chewing, brushing teeth, or touching. Bad breath appears. Soreness is weaker compared to acute gingivitis. On the roentgenogram, changes in the alveolar structures are not detected, however, with a prolonged course of the process, osteoporosis of the interdental septa may appear.

*Chronic mechanical trauma* to the oral mucosa is most often associated with malocclusion, the presence of carious teeth, improperly made prostheses. Children with orthodontic designs are at increased risk of chronic injury, and therefore require special attention. It is also necessary to take into account the combined effect of a mechanical factor with a chemical, allergenic factor, which aggravates the course of the process. Chronic inflammation is also caused by the preserved roots of decayed teeth, difficult teething, habitual biting (or biting) of the lips and cheeks. The clinical picture is very variable and is manifested in some cases by catarrhal inflammation (hyperemia, edema), in others - defects of the mucous membrane in the form of erosions, ulcers, thirdly, hyperplastic processes (papillomatosis, fibromatosis), and finally, a tendency to increased keratinization of the epithelium - hyperkeratosis.

The impact of the microbial factor significantly affects the course of traumatic injuries. If left untreated, the bacterial flora of the oral cavity causes tissue melting. As a result, a traumatic ulcer is formed, the bottom of which is covered with purulent, necrotic or fibrinous plaque (easily detachable). Its edges are uneven, the surrounding mucous membrane is hyperemic, edematous. Regional lymph nodes are enlarged and painful. When localized in the area of the transitional fold, the ulcer acquires a slit-like shape and is difficult to detect. Dilution of the edges of the ulcer reveals the nature of the discharge or plaque at the bottom of the ulcer: serous, purulent, necrotic contents speaks in favor of a traumatic ulcer. The location of the ulcer on the gum, hard palate can cause exposure of bone structures.

A long course of the process (weeks, months) leads to the formation of tuberosity and compaction of the bottom and edges of the ulcer as a result of infiltration, its significant spread

deep into the tissues, and a tendency to malignancy. Such an ulcer is called decubital. The inflammatory process of oral mucosa in children can be initiated by sharp edges of teeth or fillings, remnants of the roots of milk teeth, improper use of oral hygiene products, biting the tongue, lips, cheeks. As a result, traumatic ulcers are most often found on the tip or lateral surfaces of the tongue, but may appear in the cheek, lip, or transitional fold. Their constant sign is soreness, expressed at various stages. First, catarrhal inflammation develops, then erosion appears at the site of injury. The latter goes into a superficial, and then a deep ulcer: damage to the epithelium continues into the mucous layer. The bottom of the ulcer becomes covered with a dirty gray coating, and the edges rise and become denser. Hyperemia and tissue edema surround the ulcer. Regional lymph nodes enlarge and become painful. Elimination of the traumatic factor leads to ulcer healing, which is significantly accelerated against the background of anti-inflammatory therapy. A peculiar picture of superficial ulcers in infants is represented by "Bednar's aphthae", located on the border of the hard and soft palate. A defect in the mucous membrane occurs as a result of trauma with a horn during artificial feeding or wiping the oral cavity with a napkin. The localization of the ulcer is explained by the presence of pterygoid processes of the main bone under a thin delicate layer of the mucous membrane, which is easily damaged. The localization of the ulcer is explained by the presence of pterygoid processes of the main bone under a thin delicate layer of the mucous membrane, which is easily damaged. ulcers surrounded by a rim of inflammation and covered with a yellowish coating.

In young children, damage to the frenum of the tongue may occur, which occurs as a result of injury during coughing: the tongue is pressed against the sharp edges of the lower teeth. In fact, such an injury is a pressure ulcer and begins to develop as erosion, with damage to the epithelial layer. The presence of a traumatic factor and the addition of a secondary infection leads to the formation of an ulcer covered with a grayish coating. The ulcerative process is characterized by sharp soreness, which causes anxiety in the child, refusal to eat. The ulcer can deepen until the frenum of the tongue is completely destroyed and is accompanied by an increase in regional lymph nodes.

*Chronic traumatic* effects in some cases contribute to the development of hyperplastic processes on the mucous membrane. We observed a patient with papilloma, formed as a

result of the habit of pressing the tip of the tongue into the diastema on the lower jaw. The lesion element, soft consistency, without signs of inflammation, reached 2 mm in diameter. Chronic electrical injury can include the effect of microcurrents on the mucous membrane as a result of the emergence of potentials between the elements of metal structures (fillings). Subjective sensations are characterized by an unpleasant aftertaste of acid, salt, metal. In some cases, there is a violation of salivation, loss of taste, paresthesia, burning sensation, nausea. The decisive sign will be the presence of a potential difference caused by microcurrents above 20  $\mu$ A.

Conservative therapy without replacement of prostheses rarely gives a positive result. On the other hand, the removal of prostheses does not always ensure the disappearance of symptoms without therapeutic intervention. The most characteristic, persistent and early sign of side effects of X-ray therapy (radiation injury) is dry mouth as a result of impaired salivation.

Hyposalivation progresses, it becomes difficult to chew, swallow food, taste sensations disappear (the psychoemotional status of the patient is disturbed). The first clinical symptoms of radiation injury in the mouth, in addition to impaired salivation, are manifested by hyperemia and edema of the oral mucosa. Dryness of the mucous membrane contributes to the appearance of erosion, cracks at the slightest injury to the epithelium.

Accession of a secondary infection (bacterial, fungal, viral) is possible. Signs of keratinization are found: compaction, folding of the mucous membrane, opacity of the epithelium. The rejection of the stratum corneum is accompanied by erosion of the surface with the formation of necrotic plaque, prone to spreading inward and outward. Drainage filmy radioactive mucositis develops.

Interstitial  $\gamma$ -therapy of a tumor can cause a pronounced picture of necrosis with the formation of a radiation ulcer with clear boundaries, dense, rounded edges. The bottom is covered with necrotic plaque. Sharp soreness, similar to neuritis, requires symptomatic treatment. In many cases, it becomes necessary to differentiate a radiation ulcer with a recurrence of a malignant tumor, since their localization coincides. ... Poor oral hygiene and unsanded teeth contribute to complications of radiation injuries.

Thermal injury occurs when the mucous membrane is exposed to hot objects, food, water, steam and is especially difficult in children. Depending on the temperature and duration of

contact, catarrhal inflammation or cystic lesions develops.

Hyperemia, edema, soreness characterize superficial inflammation. The presence of maceration of the epithelium can lead to the formation of bright red or pink erosions, which are epithelized under the influence of keratoplastic agents. A severe burn causes the appearance of blisters, which quickly open up with the formation of painful erosions. The accession of a secondary infection in combination with local traumatic factors can lead to complications and slow down the epithelialization of the burned surface. Exposure to low temperatures (a metal object in the cold) leads to desquamation of the epithelium and the formation of painful erosions of various areas and depths.

*Chemical trauma* is observed in the oral cavity after exposure to the mucous membrane of potent drugs that have a cauterizing effect. In children, injuries can occur in everyday life due to careless storage of chemicals and their accidental use inside. In such cases, combined burns of the OSR, esophagus and pharynx develop.

Swallowing products based on alkalis and acids leads to severe pain, inability to swallow. On the mucous membrane, hyperemia, edema, and increased salivation are determined. Then foci of necrosis appear with the formation of a white or gray film. Deep lesions are the result of colliquation necrosis from alkali. Healing proceeds extremely slowly with the formation of scars. In dental practice, acids (arsenous, phosphoric) most often cause burns. An area of hyperemia, edema appears on the mucous membrane, then desquamation of the epithelium can be observed. The effect of the reagent leads to coagulation of the epithelium in the form of a whitish film, tightly adhered to the underlying connective tissue. Prolonged contact with a chemical can cause necrosis not only of the mucous membrane, but also of the underlying bone structures.

Unfavorable factors of production (acid vapors in the air) can also lead to chemical injury to OCPD. As a result, catarrhal phenomena, desquamative processes are found. With severe lesions, erosion, aphthae, hyperkeratosis are formed. Specific changes in the oral cavity occur when exposed to heavy metal salts. A dark pigmented border appears along the gingival margin, often against the background of an eroded mucous membrane.

The treatment of traumatic injuries of the oral mucosa includes the elimination of the irritating

factor (grinding the sharp edges of the tooth, filling, removing the roots, correcting the prosthesis). Local pathogenetic treatment requires the use of anti-inflammatory, epithelial, drugs that promote the regeneration of connective tissue. ... Symptomatic therapy may include pain relievers, hemostatic agents. Antibacterial substances are prescribed in order to prevent complications in the form of secondary infection.

Healing of traumatic injuries is accelerated by oil solutions of vitamins A and E, carotolin, methyluracil ointment, solcoseryl. Rinsing is prescribed with antiseptic solutions, for example, chlorhexidine. Application of anesthetic talker, pyromecaine ointment, lidocaine aerosols before meals reduce pain. In case of burns, "Zimezol" is used in aerosols. Thorough oral hygiene is an obligatory link in the treatment regimen and prevention of complications.

### Conclusion

Traumatic lesions of the oral mucosa have a very diverse picture: from catarrhal inflammation to ulcerative or hyperplastic manifestations. The cause of damage can be both external traumatic factors and local defects and deformations of the dentition. Also Careless dental practice or restless behavior of the patient influence possible etiologically. Young children require special attention, in whom the diagnosis and treatment of diseases of oral mucosa are significantly difficult. Knowledge of the clinical manifestations of traumatic disorders of the mucous membrane allows in each clinical case to choose the optimal medical tactics.

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