



Clinical-Immunological Interpretation of Soft Tissue Damage in Children of Small School Age

1. Eshmamatov Islombek Akhmatovich
2. Suvonov Kayum Jakhonovich

Received 2nd Mar 2023,
Accepted 3rd Apr 2023,
Online 10th May 2023

Abstract: The oral mucosa comes into direct contact with the external environment from the moment a child is born and throughout his whole life. There were very few reports that there would be information about the spread of mechanical injuries (Chizhevsky I.V.). Taking these features into account, it is possible to provide the child with timely qualified medical care on the first trip and reduce the risk of injury complications.

Key words: soft tissue, schoolchildren, clinical and immunological interpretation.

^{1,2}Tashkent State Dental Institute

Introduction. On the mucous membrane in the process of formation of canker sore and other pathological injuries cause discomfort, pain to the child while eating. The peculiarity of the oral cavity is that any injury to the mucous membrane is immediately accompanied by its infection (Elizarov V.M. 2017). The degree of harmful effects and clinical manifestations depend on the type of observer, massiveness, exposure time, pathogenicity, body defenses (Strakhova S.Yu., 2018). Pathogenic and conditionally pathogenic microorganisms sometimes penetrate through lesions of the oral mucosa, representatives of the normal microflora of the oral cavity. Treatment of patients with soft tissue injuries with Imudon is of great interest in practice (Khairzamanova K. A., 2019). This occurs with clear signs of pain in the oral mucosa, which has an infectious-traumatic origin and is manifested by polymorphic elements of the area - erosions, aphthae, plaque, etc. (T.V., Gevorkyan T.V., 2014; Gileva O.S. 2015; Kosyuga S.Yu., 2017).

In a number of foreign studies, scientists have shown that in the treatment of patients with diseases of the oral cavity, there is an improvement in the condition of patients with oral soft tissue injuries, as well as a decrease in inflammatory laboratory indicators of the activity of the traumatic condition.

It has been shown that in patients with soft tissue injuries of the oral cavity, immunity and the level of immunoglobulin are reduced compared to a healthy child. Treatment of children with multiple oral injuries began with coagulation by topical steroids, analgesics, and antimicrobials in many similar and often monotype ways. Today, there is a decrease in local immunity in the oral cavity, disruption of the salivary glands, and an increase in lymph nodes. This is caused by damage to the organs of the oral cavity by extern objects and because of bad habits (constant biting of the lips, langes, the child always does something in the mouth). First of all, dental care for children with such patients should be quickly

organized with all the necessary measures. To do this, we first treat the oral cavity with an antiseptic using modern mouth rinses. Then we apply the Imudon to them. In this regard, therapy with the use of the Imudon preparation is included.

The purpose of this work: to evaluate the effectiveness of Imudon in the complex treatment of traumatic wounds of the oral mucosa on the example of a clinical case.

Currently, the Imudon preparation is increasingly used in dentistry. Due to their complex composition, they have a wide spectrum of anti-inflammatory action, as a result of which they increase the effectiveness of treatment and expand the scope of these drugs.

The aim of the study will be to determine the dental and immunological efficacy of Imudon in the treatment of soft tissue injuries in children of primary school age.

Research objectives:

1. Determination and assessment of the prevalence of oral soft tissue injuries of children of primary school age.
2. Determination of the degree of influence of Imudon on general and local immune factors in soft tissue injuries of the oral cavity in children of primary school age, assessment of the immune status of these patients.

It was shown that the results of the impact on the indices of differentiation of epithelial cells of various treatment methods are manifested in the most pronounced acceleration of the process of maturation of sequential dilution epithelial cells with the use of the drug Imudon, which was confirmed by an increase in XDI by 1.5 times after 5 methods of treatment and they remained in the period of the entire observation (6 months).

Table № 1. The effect of complex usage of preparation Imudon is shown as a change in the number of epithelial cells of children with damage of the soft tissues of the oral cavity.

Study period	Treatment methods	
	Main (n=40)	Comparison (n=40)
Norm	590,2±29,1	
Initial score	325,4±16,2	
After 5 procedures	485,2±24,6	408,4±18,4
After treatment	581,1±24,9	501,8±22,6
After 1 month	576,4±23,5	481,3±23,1
After 6 months	565,6±27,5	435,3±20,1

After 5 procedures, with the use of the drug imudon, a significant acceleration of the process of maturation of epithelial cells was also observed, but it was weakly expressed compared to the value in the main group. After the course of treatment, the xdi indicators increased more pronouncedly, these initial indicators were confirmed by a 1.5-fold increase in the cell differentiation index, but these values were 1.3 times lower than the main group and 1.2 times lower than the normal values. From observations for 6 months, it was found that after a month of using SNG, their value remained in the indicators achieved after treatment, and after 6 months it significantly increased, but did not reach the initial level.

So, according to the results of cytological studies, when using the drug imudon, their complex use allows us to say with confidence that they have an anti-inflammatory effect, which is strongly pronounced.

A similar dynamics of the above indicators when compared was recorded in the group, but they did not reach the normal values, and the average value was 1.2 and 1.4 times higher than the norm, respectively. When using the drug imudon 6 months after the dilution of the complex treatment, the results obtained after the treatment were preserved, they significantly differed from the indicators after the treatment, but did not give the initial result.

In chronic inflammatory and destructive processes leading to a weakening of the immunity of the upper jaw, which creates conditions for an outbreak of the disease, we studied the state of the immune system in the oral cavity by the amount of secretory immunoglobulin A in saliva - this test is widely used in dental practice. The results of the study are presented in table No. 2.

Table № 2. The change of th state of secretory immunoglobulin A (sIgA г/л) in the immune system of children with the damages of oral soft tissue under the influence of complex and alloxide coagulation with the use of Imudon.

sIgA g/l	Treatment methods	
	Main (n=40)	Comparison (n=40)
Norm	0,27±0,01	
Before treatment	0,15±0,01	
After treatment	0,26±0,01	0,22±0,01

The table No. 2 shows that in the initial case, in sick children with a change of the state of sIgA g / l, the immune defense in the oral cavity was sharply weakened, this indicates a decrease in the amount of secretory immunoglobulin A in saliva by almost 2 times compared to the norm.

A comparative analysis of the state of local immunity under the influence of various methods of treatment showed a more pronounced positive effect of complex use when using the drug imudon, which manifests itself in a peak decrease in local immunity, an increase in secretory immunoglobulin A in saliva to standard values, indicating that these indicators persisted for entire period (up to 6 months)

When using the drug imudon, despite the fact that their indicators are significantly increased, after treatment they differ from the norm. For an illustrative example, let's take the data shown in Figure 2.

Thus, the results obtained indicate that only with the complex use of the drug imudon a pronounced and stable normalization of local immunity can be achieved, which is of great importance not only for satisfying the effectiveness of transferred treatment, but also in prevention.

Bibliography

1. Avtina T. V., Pankrusheva T.A., Avtina N.V. Methods of quantitative evaluation of the mucoadhesive parameters of a bio-soluble polymer film // *Universum: Medicine and pharmacology: electron. scientific. journal.* 2016. № 9 (31). (In Russ).
2. Aksenov K.A., M.V. Lomakin, G.D. Kapanadze, N.V. Smeshko. Experimental modeling of surgical wound healing in the oral cavity//*Biomedicine* No. 1, 2011, pp. 34-41. (In Russ).
3. O.U. Rakhmatullaeva, K.E. Shomurodov, A.A. Khadzhimetov, Z.A. Jilonova, I.A. Eshmamatov, M.A. Xomidov. "Indicators of hemostatic homeostasis in the postoperative period after tooth extraction in patients with viral hepatitis" https://www.academia.edu/84825281/Indicators_of_hemostatic_homeostasis_in_the_postoperative_period_after_tooth_extraction_in_patients_with_viral_hepatitis?source=news_feed_share
4. Boldyreva O.V., Vakhrushev S.G., Toropova L.A. The use of platelet-enriched plasma in medical practice // *Modern problems of science and education.* – 2016. – № 5. (In Russ)

5. Bazarny, V.V. On the expediency of determining some cytokines in oral fluid in gingivitis / V.V. Bazarny, L.G. Polushina // Actual issues of modern medicine : collection of scientific tr. Yekaterinburg, 2014. pp. 90-91. (In Russ)
6. Isaeva, Adel, et al. "Efficacy of a Plant-Based Dental Gel for Chronic Simple Marginal Gingivitis: A Clinical Trial." *Archiv Euromedica*, vol. 10, no. 4, Dec. 2020, pp. 144–48. Crossref, <https://doi.org/10.35630/2199-885x/2020/10/4.33>
7. Gualerzi, Alice, et al. "Acute Effects of Cigarette Smoke on Three-Dimensional Cultures of Normal Human Oral Mucosa." *Inhalation Toxicology*, vol. 24, no. 6, May 2012, pp. 382–89. Crossref, <https://doi.org/10.3109/08958378.2012.679367>
8. OU, Rakhmatullaeva, et al. "Assessment of the Functional State of the Endothelium in Patients with Viral Hepatitis before Tooth Extraction." *International Journal of Current Research and Review*, vol. 13, no. 06, 2021, pp. 04–08. Crossref, <https://doi.org/10.31782/ijcrr.2021.13632>.
9. Huntley, Peter Nils. "Avoiding Pitfalls in Planning with the Incognito Lingual System." *Journal of Orthodontics*, vol. 40, no. sup1, Sept. 2013, pp. s54–59. Crossref, <https://doi.org/10.1179/1465313313y.0000000074>.
10. Маннанов Ж. Ж., Эшмаматов И. А. "Diagnostic value of von willebrand factor on changes in tissue oxygenation during dental implantation in persons with previous coronavirus disease» *International journal for miasto przyszłości laboratorium wiedzy* , issn-l:2544-980x, Kielce 2022 vol. 29 (2022) , page 183-185
11. Маннанов Ж. Ж. " Efficacy of swiss energy calcivit in dental implant planning in persons with secondary adentia who have previously had a coronavirus infection" *Central asia journal of medical and natural sciences* , issn: 2776-0979, 2022, page 325-331
12. Маннонов Ж.Ж., Эшмаматов И.А. «Клиническое обоснование дентальной имплантации у лиц, перенесших коронавирусную инфекцию при вторичной адентии» IV международного конгресса стоматологов «Актуальные проблемы стоматологии и челюстно-лицевой хирургии» и VIII-съезда стоматологов Узбекистана 2021 г.
13. Маннанов Ж.Ж. "Developing an integrated approach to dental implant planning in patients with background pathology and covid –19" "The American journal of medical sciences and pharmaceutical research 09. 2021 .США , 117 – 125 стр