



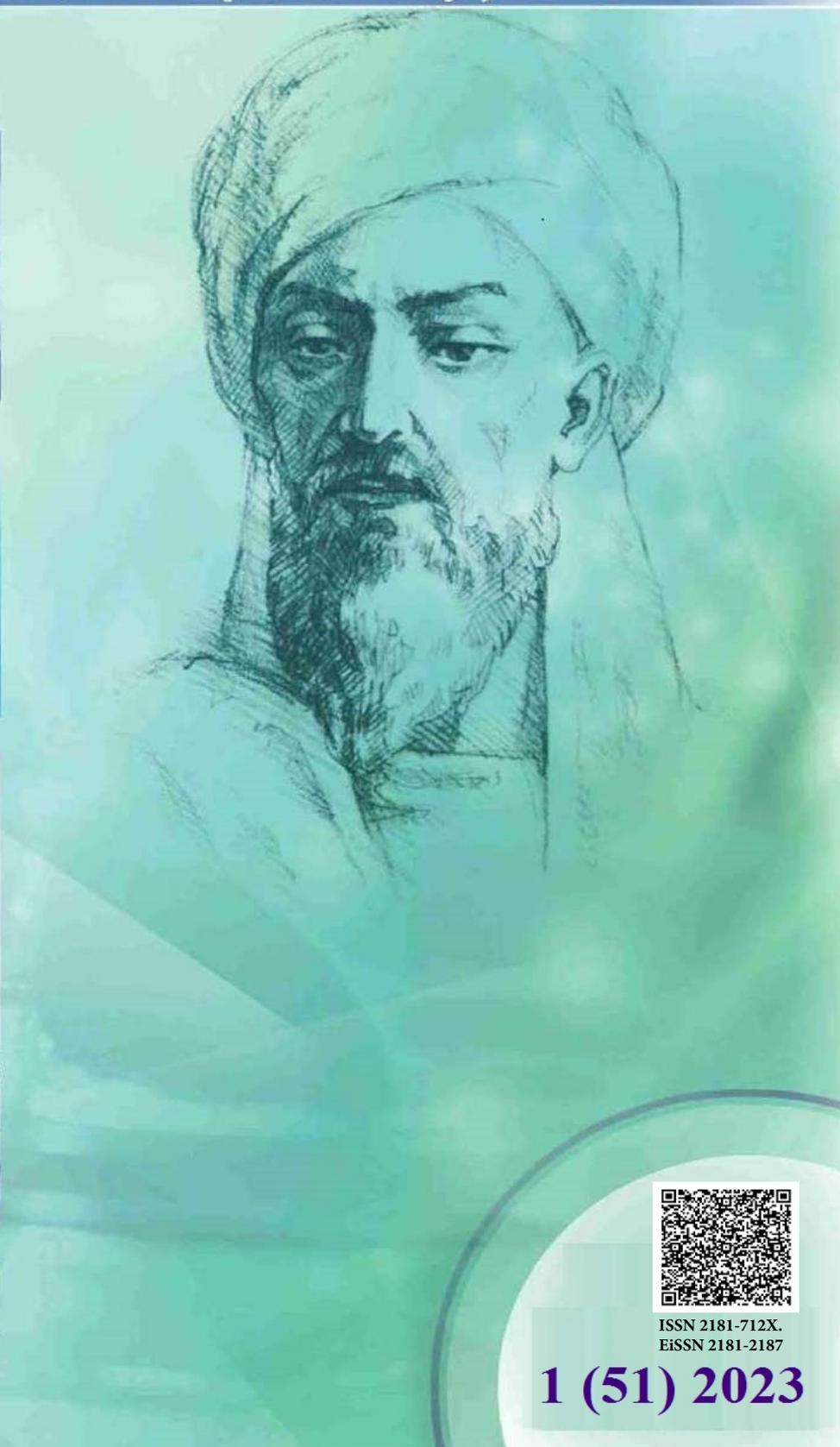
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НОВЫЙ ДЕНЬ В МЕДИЦИНЕ  
NEW DAY IN MEDICINE**

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## ETIOPATHOGENETIC ASPECTS OF DENTAL DISEASES IN PATIENTS WITH BRONCHIAL ASTHMA

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### ✓ *Resume*

*The etiology and pathogenesis of inflammatory diseases of the oral cavity are characterized by multifactoriality, in which the microbial factor takes the main place (Pokrovsky V.I. et al., 1994; Loginova N.I., Volozhin A.I., 1995; Lemetskaya T.I., Akulovich.V.; Akulovich199. ; Grigoryan A.S., 1999 ; Grigoryan A.S., Grudyanov A.I., Rabukhina N.A., Frolova O.A., 2004). A decrease in local and general resistance leads to an increase in the concentration of microorganisms, their toxins, and tissue decomposition products in the infectious center (Supiev T.K., 2001; Durnovo Ye.A., 2003). Thus, the harmful effect of microorganisms manifests itself when their number and effectiveness are high and traditional mechanisms cannot neutralize them or the activity of local and systemic immunity decreases (Antonova I.N., 2000; Bezrukova I.V., Grudyanov A.I., 2002).*

*Keywords: bronchial asthma, etiopathogenesis, oral cavity, saliva, modern views..*

## ЭТИОПАТОГЕНЕТИЧЕСКИЕ АСПЕКТЫ СТОМАТОЛОГИЧЕСКИХ ЗАБОЛЕВАНИЙ У БОЛЬНЫХ БРОНХИАЛЬНОЙ АСТМОЙ

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### ✓ *Резюме*

*Этиология и патогенез воспалительных заболеваний полости рта характеризуются многофакторностью, в которой основное место занимает микробный фактор (Покровский В.И. и др., 1994; Логинова Н.И., Воложин А.И., 1995; Лемецкая Т.И., Акулович В.В.; Акулович199. ; Григорян А.С., 1999; Григорян А.С., Грудянов А.И., Рабухина Н.А., Фролова О.А., 2004). Снижение местной и общей резистентности приводит к увеличению концентрации микроорганизмов, их токсинов и продуктов тканевого распада в инфекционном очаге (Супиев Т.К., 2001; Дурново Е.А., 2003). Так, вредоносное действие микроорганизмов проявляется при высокой их численности и эффективности и невозможности их нейтрализации традиционными механизмами или при снижении активности местного и системного иммунитета (Антонова И.Н., 2000; Безрукова И.В., Грудянов А.И., 2002).*

*Ключевые слова: бронхиальная астма, этиопатогенез, полость рта, слюна, современные взгляды.*

## BRONXIAL ASTMA BILAN OG'RIGAN BEMORLARDA STOMATOLOGIK KASALLIKLARNING ETIOPATOGENETIK JIHATLARI

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✓ **Rezyume**

*Og'iz bo'shlig'ining yallig'lanish kasalliklarining etiologiyasi va patogenezini ko'p faktorlilik bilan tavsiflanadi, bunda mikroob omili asosiy o'rinni egallaydi (Pokrovskiy V.I. va boshq., 1994; Loginova N.I., Volojin A.I., 1995; Lemetskaya T.I., Akulovich 199.V.; Akulovich 199. ; Grigoryan A.S., 1999; Grigoryan A.S., Grudyanov A.I., Rabuxina N.A., Frolova O.A., 2004). Mahalliy va umumiy qarshilikning pasayishi infeksiya o'choqda mikroorganizmlar, ularning toksinlari va to'qimalarning parchalanish mahsulotlari konsentratsiyasining oshishiga olib keladi (Supiev T.K., 2001; Durnovo Ye.A., 2003). Shunday qilib, mikroorganizmlarning zararli ta'siri ularning soni va ta'sirchanligi yuqori bo'lganda va an'anaviy mexanizmlar ularni zararsizlantira olmasa yoki mahalliy va tizimli immunitetning faolligi pasayganda o'zini namoyon qiladi (Antonova I.N., 2000; Bezrukova I.V., Grudyanov A.I., 2002).*

*Kalit so'zlar: bronxial astma, etiopatogenez, og'iz bo'shlig'i, so'lak, zamonaviy qarashlar.*

### Relevance

The reliability of the research results was determined by the use of modern and tested theoretical and practical methods and approaches, adequate selection of patients, the reliability of the obtained results was confirmed by the use of complementary and interrelated studies. The comparison of the reliability of the obtained results with other results obtained by foreign and domestic authors confirms that our results are reliable and valid, and the conclusions have been confirmed by competent bodies.

The main role in periodontal tissue changes is played by enzymes such as collagenase, elastase, fibrinolysin, chondroitin sulphatase, etc. (Kirsanov A.I., Gorbacheva I.A., Nikolaeva L.A. et al., 1991; Oganyan E.S., 2001; Freeman G., Uback N.-G. 5 1998).

The chronification of the odontogenic focus and the development of fibrous changes in the periapical tissues contribute to the disruption of microcirculation in this area (Kirichuk V.F., 2006; Bozkurt F.Y. et al., 2000), which is associated with an important pathogenetic factor in the development of inflammatory diseases along with an increase in the permeability of vascular tissues. is (Risovannyi S.I., 2001; Orehova L.Yu., Lukavenko A.V., Lukavenko A.A., 2004; Orehova L.Yu., Kudryavtseva T.V., Kuchumova E.D. et al., 2005).

Disruption of microcirculation not only plays a key role in the pathogenesis of inflammatory periodontal diseases, but is also associated with it.

The level of their severity (Rakhimova E.N., 2006; Parfenova S.V., 2007) during inflammation, the indicator of vascular tone, peripheral resistance and elasticity of vessels in the microcirculation bed of the periodontium decreases (Zolotarev Yu.B., Guseva I.E., 2001; Kamilov Kh.P., 2002).

To detect disturbances in the microcirculation bed of the periodontium, the method of dopplerography of periodontal vessels is used (Kuchumova E.D., Prokhorova O.V., 2005; Kozlov V.A., Kudryavtseva O.T., 2002; Orehova L.Yu. et al., 2002). This method is based on the Doppler effect, which consists in changing the frequency of the signal reflected from a moving object to a value proportional to the speed of the reflector.

The active factor in the plaque is a protein component that affects the vascular permeability of the periodontal tissue, creates conditions for the formation of the autoimmune component of changes (Loginova N.K., Volozhin A.I., 1995; Orehova L.Yu., Levin M. Ya., Kalinin V.I., 1996; Freidlin I.S., 1996; Anusaksathien O., Polby A.E., 1991; Hillman G., Krause S., Genstensen W., 1999).

Increased permeability of periodontal vessels and the development of vasculitis among the acute virogenic factors noted in the development of gingivitis significantly increase leukocyte migration, which may be one of the reasons for increased lysozyme activity (Pokrovsky V.I. et al., 1994; Orehova L.Yu., Levin M Ya., Sofronov B.N., 1997; Monk-Arquelles D.H., 1995).

Plaque and stone formation processes cannot be explained only by the presence of viral inflammation. The quality and quantity of oral fluid plays the most important role in plaque and stone formation (Ezikiyan G.I., Leontev V.K., Persits et al., 1991; Ghyakonis I.M., Paypalene P.A., 1993). Saliva, as a natural liquid biological environment, plays a major role in the vital activity of teeth and periodontium, maintaining the homeostasis of the oral cavity. The neutralizing and mineralizing properties of saliva mainly depend on the state of the acid-alkaline balance, the indicator of which is the pH balance. The hydrogen index of mixed saliva is the main natural regulator of the homeostasis of enamel mineral components and the dynamic balance of metabolic processes in the "enamel-saliva"

system. The rate of enamel demineralization mainly depends on rN: the lower it is, the faster the demineralization process.

Thus, the reduction of saliva and changes in the composition of saliva lead to various diseases of the oral cavity. The leading role in the emergence and chronic development of various diseases depends on the violation of local and systemic immunity.

Antonova I.N. (2000) found that low concentrations of lysozyme, sIgA, and IgG in the oral fluid of patients with periodontal inflammation are unfavorable prognostically, and professional oral hygiene is considered ineffective in such patients.

In recent years, many studies have been conducted, as a result of which it has been proved that cytokines are involved in the pathogenesis of inflammatory periodontal diseases. It is known that inflammatory periodontal diseases are associated with an increase in anti-inflammatory cytokines, including interferons.

The idea of an autoimmune component in the pathogenesis of periodontal diseases was expressed by researchers in the mid-60s (Burch P.R., Jackson D., 1966), when the assumption that periodontal osteocytes were damaged by autoantibodies was confirmed.

In later work, it is the periodontal tissue complex as a target for immune attack (Anusaksathien O., Dolby A.E., 1991). A significant correlation between the level of periodontal indices and the level of serum autoantibodies to gum antigen was reported by Safarov T. in 1985. during the study of periodontal diseases associated with stomach ulcers.

Fundamental studies that determine the role and place of autoimmunity in periodontal pathology (Orekhov L.Yu., Levin M.Ya., Kalinin V.I., 1996; Orehova L.Yu., 1997; Orehova L.Yu. et al., 2000). The significance of the level of autoantibodies to gingival tissues in the pathogenesis of chronic recurrent periodontitis and their high prognostic value were obtained.

The additional contact of plaque and periodontal tissues leads to the emergence of autoimmune processes with alterative changes in these tissues (Lappin D.F., Kinaue D.E., 1999; Jonsdottir I.H., 2000).

Currently, it has been found that periodontal-specific antigen, antibodies to this antigen, circulating immune complexes (AIK), as well as a number of non-specific immune complexes can be detected in the blood of patients with periodontal inflammatory diseases. Changes that indicate the possibility of the development of an autoimmune process during the formation of chronic inflammation (Lappin D.F., Kinaue D.E., 1999; Jonsdottir I.H., 2000). A close relationship between autoimmune changes and the clinical characteristics of the disease, as well as the prognosis, was found (Orekhova L.Yu., 1997).

#### **The purpose of the study:**

Assessment of the development of complex methods for the study of the condition of the tissues of the oral cavity in patients with bronchial asthma and the treatment of their diseases.

**Subject of study:** 155 patients aged 20 to 45 years.

**Subject of research:** Oral fluid, blood, blood serum, oral mucosa smear, official medical documents to study the degree of the disease.

**Research methods:** Dental, immunological, microbiological, morphological, statistical methods were used.

#### **Research tasks**

1. To assess the condition of oral cavity tissues in patients with bronchial asthma and to determine the relationship between various clinical and pathogenetic problems.

2. Determination of the amount of macro and microelements (Ca, Mg, Na, K, S, Zn) in blood test, blood plasma, saliva of patients with bronchial asthma.

3. Determination of hemodynamic characteristics of periodontal tissues in patients with bronchial asthma. Study of the effect of glucocorticosteroid therapy on the condition of oral cavity organs in patients with bronchial asthma.

4. Justification of the need for a comprehensive approach to the treatment of patients with bronchial asthma with different clinical-pathogenetic options.

#### **Practical importance of research results:**

Our dentists must diagnose not only dental pathology, but also general disorders of homeostasis of various types (metabolic, immunological, etc.), which will allow you to make the right choice.

Compilation of several tactics and algorithm for the treatment of dental diseases in patients with bronchial asthma.

As a result of the research, new information was obtained on the characteristics of inflammatory periodontal diseases in patients with bronchial asthma, depending on the clinical and pathogenetic variant. The generally accepted treatment scheme for exacerbation of bronchial asthma provides a reduction in the level of periodontal inflammation, but at the same time leads to immune dysregulation and eventually leads to a chronic condition.

It should be noted that the treatment of bronchial asthma does not completely restore the metabolism of chemical elements, which has a negative effect on the organs of the oral cavity.

The use of inhalers during the hospitalization of patients with bronchial asthma, especially in order to minimize the side effects of corticosteroids on the oral cavity, it is necessary to conduct a mandatory consultation with dentists, which is associated with increasing the dose and frequency.

Patients with bronchial asthma are at risk of dental disease and therefore should be under the control of a pulmonologist and a dentist at the same time during the clinical remission phase.

#### **The practical results of the research are as follows:**

The results of the conducted research are the theoretical basis for the development of modern dental approaches to the treatment and prevention of basic dental diseases, dental caries and periodontal diseases in children with bronchial asthma. Comprehensive treatment and prevention of dental caries, soft tissue diseases of the periodontium are evaluated and the expediency of using dental treatment-prophylactic measures developed against the background of treatment of the main disease in patients with bronchial asthma is based. Clinical, clinical-functional and cytological methods have confirmed the high efficiency of using an electric toothbrush in the care of the oral cavity in patients with bronchial asthma.

#### **Conclusion**

The complex developed for the treatment and prevention of the main dental diseases allows to improve the level of dental health in patients and the efficiency of dental care in patients with bronchial asthma.

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