



## Laboratory Substantiation of Improvement of Periodontitis Treatment Methods

Abasniya S. R.<sup>1</sup>, Xabibova N. N.<sup>2</sup>

<sup>1,2</sup> Bukhara State Medical Institute

**Relevance.** This number is directly related to many creations of nature in the system of the universe, including human activity [Stakhov A., Sluchenkova A., Shcherbakov I. (2007), Shubnikov A.V., Koptsik V.A. (2004), A.P. Shurbeleva (2003)]. The face plays an important role in the process of interpersonal communication and is the object of research of artists (artists, sculptors, artists), anatomists, psychologists, representatives of medicine: plastic surgeons, maxillofacial surgeons, dentists, dermatologists [Bratu D., Ieremia Z., Uram-Cuculescu S. (2003), A.P. Shurbeleva.(2003)].

In most cases, the therapeutic action is aimed at eliminating deformations, defects, and disproportions of the face, and the doctor should know and feel the individual harmony of the architectonics of each patient's face, the violation of which can have negative consequences – the loss of the individuality of the face. This may be the reason for a decrease in the attractiveness of the face to others. Namely, the desire to be attractive is inherent in most people, since an attractive face helps to establish interpersonal contacts, facilitates the solution of tender and career problems [Kovalenko A. V.(2011), Talalaeva E.V.(2012), Almstrand A.C., Josefson M., Bredberg A.(2010), A.P. Shurbeleva.(2003)].

The face largely determines its attractiveness and is the main means of identification and non-verbal communication. According to the results of a study by J. Garwill (1992), 63% of patients believe that their problems with appearance negatively affected their personal life, and 44% – on social life [Kovalenko A.V. (2011), A.P. Shurbeleva.(2003)]. Very often, it is the desire to improve the aesthetics of teeth and face that is the main reason for contacting an orthodontist (KochelJ.Etal., 2010) [Talalaeva E.V. (2012)]. The advertising of "anthropometric standards" by the mass media can be the cause of the formation of an inferiority complex in people with deviations in some parameters of the face architectonics and the cause of the emergence of a difficult-to-overcome need for reconstructive operations, which do not always bring them satisfaction, peace of mind and success in solving life problems [Baindurashvilia.A.(2011)].

Despite this, the authors' opinions on the prevalence and pathogenesis of this anomaly differ markedly. It is indicated that according to Bogatyrvkov D.V. et al. (2003), facial asymmetry occurs only in 1.3–2% of cases, whereas scientists at the University of North Carolina (1997) revealed clear signs of facial asymmetry in 34% of the examined patients, and Farkas L.G. and Chung G. (1981), using special anthropometric methods, found asymmetry in all the examined individuals.

According to E.Y. Nikolaeva, such a difference in data can be explained, for example, by a wide variety of types of facial asymmetries: skeletal, functional, muscular, articular, as a result of neoplasms or inflammatory processes, as well as post-traumatic asymmetries resulting from improper fusion of the jaws after fractures. There is still no consensus on the question of whether E.Y. Nikolaeva (2009) comes to the conclusion of what is considered an asymmetry.

**The purpose of this study.** The aim is to improve methods for measuring morphometric features and diagnosing morphofunctional disorders of the maxillary system in people with chronic pathologies of the respiratory system.

**Research objectives:**

1. To identify age-related features of the growth of the gnathic part and the entire facial part of the skull and their effect on the sagittal and vertical dimensions of the face in normal and chronic pathologies of the respiratory system.
2. The tone of the masticatory muscles and the circular muscles of the mouth were studied, its effect on the parameters of the facial skull in patients with chronic pathologies of the respiratory system will be determined.
3. To study the structural features of the facial part of the head in normal and chronic pathology of the respiratory system.
4. To study the clinical and statistical relationship between various teleroentgenological parameters to improve the differential diagnosis of the maxillary system in normal and chronic pathology of the respiratory system.
5. To improve the clinical differential diagnosis of varieties of morphometric structures of the maxillary system in normal and pathological chronic respiratory failure.
6. To develop an algorithm for the diagnosis, treatment and prediction of deformation of the dental system in normal and chronic pathology of the respiratory system.

**The research material and the methods used to perform this research work.** The facial skeleton and dental system of 300 healthy people and 300 people with chronic pathologies of respiratory systems aged from 18 to 60 years will be examined. The main criteria for the selection of people in the study group will be confirmed by morphometric, roentgenological, orthopedic methods and clinical and laboratory studies. It should be noted that the examined will also be divided into age groups: by age 18-24 years, 25-34 years, 35-44 years and 45-60 years old and by severity of chronic respiratory pathology.

The research program at all stages will include both traditional and special methods of clinical and dental examination.

- a) clinical and dental research methods
- b) study of functional occlusion and evaluation of conflict relationships
- c) anthropometric methods
- d) biometric study of diagnostic models of jaws
- e) study of facial proportions
- f) assessment of the degree of need for orthodontic treatment
- g) Enzyme immunoassay methods: immunoglobulin A, M, J, secretory immunoglobulin A, hormones (cortisol, TSH), antiproteases (ceruloplasmin, transferrin, antitrypsin, TNF- $\alpha$ , IL-1, 4, 6, 10, CRP).
- h) Biochemical methods: acid-base state of blood and saliva, lysosomal enzymes of blood and saliva, magnesium level in saliva);
- i) Functional methods: ultrasound, densitometric, X-ray, rheographic;
- j) statistical methods.

For a long time, parodont diseases were considered as a process of focal infection with rare systemic consequences. However, in recent times, there have been more and more studies dedicated to the effects of parodont diseases on the common disease, and there are suggestions that this dependence can be in different directions. Over the past 20 years, doctors and scientists have been trying to explain correlation dependence between parodontitis and cardiovascular disease, diabetes, metabolic disorders and other diseases [2.4.6.8.10].

The risk of the occurrence of any disease is dynamic and will depend on the result of complex relationships of various factors that occur throughout life. Many variable risk factors, such as smoking and excessive calorie intake, lead to increased systemic markers of inflammation and can alter gene control through various biological mechanisms. This leads to a decrease in the body's response to various influences and adaptation norms.

Parodontitis and other common chronic inflammatory diseases have several influencing risk factors such as tobacco smoking, psychological stress and depression, alcohol consumption, obesity, diabetes, metabolic syndrome and osteoporosis.

In a series of studies, it has been shown that bacterial products, toxins and inflammatory products can spread to other foci of inflammation in the body when hygiene processes are carried out as a result of mechanical disruption of the integrity of the bioplionka [1.3.5.7.9.11].

In individuals with the right level of immune reaction, such transient bacteremia may not cause much harm. However, the immune system is weakened, such as diabetes, with diseases of the upper respiratory tract, making sufferers more prone.

Considering chronic generalized parodontitis as a dysbiotic inflammatory disease with a negative impact on Systemic Health, one can speak of the appearance of dysbiotic processes in the oral cavity and their persistence, which indirectly develops an inflammatory reaction in the body [12.14.16.18.20].

In the literature, information about the increased dependence and susceptibility of chronic generalized parodontitis to cardiovascular diseases, diabetes, chronic obstructive pulmonary diseases (ocular) and other systemic diseases is increasingly found. Most of the incidence of cardiovascular diseases in parodontitis is based on the "general hypothesis of susceptibility". According to him, direct bacterial invasion of blood vessels or a systemic inflammatory reaction leads to an increase in circulating cytokines, which damage the vascular endothelium.

Atherosclerosis, which was previously generally considered a lipid disorder, is currently an inflammatory disease. At the same time can explain the causal relationship between parodontitis and atherosclerosis, for example, in the parodontal complex, the inflammatory-destructive process forms the translocation of bacteria to systemic blood flow, that is, it calls bacteriemia, which is confirmed in patients with parodontitis and can provide atherogenic stimulation. Systemic inflammation leads to an increase in the level of circulating cytokines, which are of interest, and includes S-reactive protein (SRO), interleukin-1 (il-1), interleukin-6 (il-6),  $\alpha$ -tumor necrosis factor (Ono- $\alpha$ ) and prostaglandin E2. Studies conducted, on the other hand, have shown that the stagnation of the inflammatory-destructive process in parodont affects the decrease in the acceleration of atherosclerosis of the carotid artery in humans [11.13.15.17.19.21.23.25.27.29.31].

Many works are devoted to the connection of chronic parodontitis with such a metabolic disorder as diabetes mellitus. Today, when diabetes is considered as an additional symptom in nosology such as metabolic syndrome (MS), the information available helps to better understand the mechanism of pathogenesis.

At the same time, their influence on each other is bilateral. Having diabetes in a patient leads to the fact that the hyperinflammatory response to the pathogenic microbiota of the parodont is reversible, worsens the return of inflammation and calls for a slowdown in recovery, which leads to a rapid violation of the parodont. Chronic generalized parodontitis, in turn, has a negative effect on glycemic levels in patients with diabetes mellitus and leads to the development of diabetic complications.

The effect of parodontopatogens on the course of diabetes mellitus is explained by an increase in the level of systemic inflammatory mediators, which increases insulin resistance. Metatahlil data allow us to talk about the fact that the treatment of generalized parodontitis in patients with diabetes mellitus leads to an improvement in glycemic index [22.24.26.28.30.32].

A number of authors in their work confirms the thesis that there is a bilateral relationship between diabetes and parodontitis, in which diabetes increases the risk of parodontitis occurring, while

inflammation of the parodontе negatively affects the glycemic index. Terminal stage cases of macroalbuminuria and renal insufficiency increase 2 and 3 times, respectively, in diabetics with severe parodontitis compared to diabetics without severe parodontitis. In addition, the risk of cardiorenal death (ischemic heart disease and diabetic nephropathy) in diabetics with severe parodontitis is 3 times higher than in diabetics without severe parodontitis. Treatment of parodontitis is associated with a reduction in glycosylated hemoglobin HbA(1C) by 0.4%. At the same time, the authors came to the conclusion that the health of the oral cavity and the treatment of parodont are an integral part of the treatment of diabetes.

### Used Literature

1. Khabibova N.N. Characteristic features of free-radical processes and antioxidant protection in the oral cavity during chronic recurrent aphthous stomatitis// *European Science Review*. - 2018. - P. 191-193.
2. Khabibova N.N. Changes in biochemical and immunological indicators mixed saliva of patients with chronic recurrent aphthous stomatitis// *European journal of pharmaceutical and medical research*. –2018. – (5) 11. – P. 143-145.
3. Хабибова Н.Н. Клинико-биохимические особенности течения псевдоаллергических вариантов хронического рецидивирующего афтозного стоматита// *Проблемы биологии и медицины*. – 2018. - № 4 (104). – С. 220-222.
4. Хабибова Н.Н., Саидов А.А., Саидова М.Р. Сурункали рецидивирловчи афтозли стоматитда липидларни перекис оксидланишини ўзига хос хусусиятлари ва оғиз бўшлиғи антиоксидант химоясининг ҳолати// *Тиббиётда янги кун*. – 2018. - № 3 (23). – Б. 61-63.
5. Хабибова Н.Н., Вахидова М.А. Оценка защитной системы слизистой оболочки ротовой полости при хроническом рецидивирующем афтозном стоматите// *Вестник ТМА*. –2019. - № 3. – С. 131-133.
6. Хабибова Н.Н., Хабилов Н.Л. Роль адгезивных молекул в развитие афтозного стоматита// *Stomatologiya*. Ташкент. -2019. - № 3. – С. 32-36.
7. Khabibova N.N. Clinical characteristics of patients with recurrent aphthous stomatitis// *Annals of international medical and dental research*. – 2019. – Vol. 5. Issue 5. - P. 64-66.
8. Хабибова Н.Н., Хабилов Н.Л. Оценка сосудисто-тканевых расстройств и регионарного кровотока при хроническим рецидивирующим афтозном стоматите// *Новый день в медицине*. - 2019. – 3 (27). – С. 262-266.
9. Khabibova N.N., Khadjimetov A.A. Some occurrence aspects of chronic recurrent aphthous stomatitis of the oral cavity// *Global Journal of Medical, Physical and Health Education*. – 2019. - Vol. 7 (3). - P. 284-286.
10. Khabibova N.N. Characteristic features of the biochemical indicators of mixed saliva in patients with chronic recurrent aphthous stomatitis// *Global Science Research Journals*. - 2019. - Vol. 7 (8). – P. 521-526.
11. Хабибова Н.Н., Олимова Д.В., Норова М.Б. Лечение начальных форм кариеса методом инфильтрации. // *Тиббиётда янги кун*. с2020. - № 4 (32). – Б. 290-292
12. Nabibova N.N., Olimova D.V. Features of clinical manifestations, diagnostics and treatment of glossalgia. // *New Day in Medicine*. –2021. - № 6 (38). – P. 96-98
13. ХАБИБОВА Н.Н., ОЛИМОВА Д.В. THE EFFICIENCY OF GLOSSALGIA AND STOMATALGIA COMPLEX TREATMENT. // *Электронный научный журнал «Биология и интегративная медицина»* № 6 – ноябрь-декабрь (53) 2021. – С. 374-379
14. KHABIBOVA, N. N., RUZIEVA, S. S., SHIRINOVA, K. K., & QURBONOVA, N. I. (2021). INFLUENCE OF NATURAL AND ARTIFICIAL FEEDING ON THE FORMATION OF



DISORDERS OF TEETHING AND FORMATION OF OCCLUSION IN EARLY CHILDREN. *Journal of Natural Remedies*, 22(1 (1)), 87-91.

15. Khabibova, N. N. (2018). Changes in biochemical and immunological indicators mixed saliva of patients with chronic recurrent aphthous stomatitis. *European journal of pharmaceutical and medical research*.–2018.–(5), 11, 143-145.
16. Tailakova, D. I., & Khabibova, N. N. (2020). Determination of the immunological status of the oral cavity of the child population with congenital lip and palate in the studied areas. *European Journal of Molecular & Clinical Medicine*, 7(3), 3023-3026.
17. Khabibova, N. N. (2019). Characteristic Features of Biochemical Indicators of Mixed Saliva in Patients with Chronic Recurrent Aphthous Stomatitis. *Journal of Advances in Medicine and Medical Research*, 1-7.
18. Khabibova, N. N. (2019). Clinical characteristics of patients with recurrent aphthous stomatitis. *Annals of international medical and dental research*, 5(5), 64-66.
19. Khabibova, N. N. (2021). Examination of patients with different forms RFL MMOC Sobirov Sh. S.
20. Nasullaevna, H. N. (2018). Characteristic features of free-radical processes and antioxidant protection in the oral cavity during chronic recurrent aphthous stomatitis. *European science review*, (9-10-2).
21. Qurbonova, N., Khabibova, N., & Ikhtiyarova, G. A. (2020). Hygienic condition of the oral cavity and the level of hygienic knowledge of silk motor workers. *European Journal of Molecular & Clinical Medicine*, 7(3), 3027-3033.
22. Khabibova, N. N., & Khadjimetov, A. A. (2019). Some occurrence aspects of chronic recurrent aphthous stomatitis of the oral cavity. *Global Journal of Medical, Physical and Health Education*, 7(3), 284-286.
23. Хабибова, Н. Н., Вахидова, М. А., & Жабборова, Ф. У. (2016). Эффективность комплексной терапии генерализованного пародонтита у больных с ожирением. *Наука молодых–Eruditio Juvenium*, (2).
24. Khabibova, N. N., & Akhmadaliev, N. N. (2019). Diagnosis and prognosis of chronic recurrent aphthous stomatitis. In *4th international eduindex multidisciplinary conference* (p. 52).
25. Khabibova, N. N. (2019). The importance of adhesive molecules in the development of aftosis stomatitis. *Новый день в медицине*, (4), 84-86.
26. Хабибова, Н. Н. (2019). Динамическая оценка стоматологического статуса пациентов с рецидивирующим афтозным стоматитом. *Медицинские новости*, (11 (302)).
27. Хабибова, Н. Н. (2010). Клинические и параклинические показатели крови и слюны у больных пародонтитом отягощенных ожирением. *Врач-аспирант*, 43(6.4), 510-514.
28. Khabibova, N. N. (2019). Evaluation of vascular tissue disorders and regional bleeding under chronic reduced preparative atphosis. *Proceeding of The ICECRS*, 4.
29. Khabibova, N. N. (2019). LOCAL HUMORAL FACTORS OF THE IMMUNE PROTECTION IN PATIENTS WITH CRAS. *International Scientific Review*, (1), 39-41.
30. Хабибова, Н. Н. (2019). Включение пробиотиков в комплексное лечение хронического рецидивирующего афтозного стоматита. *Методические рекомендации. Бухара*, 29.
31. Хабибова, Н. Н. (2019). Аралашган сўлакнинг биокимёвий ва иммунологик кўрсаткичларини қўллаш йўли билан сурункали рецидив афтоз стоматитни эрта ташхислаш учун дастур.

32. Хабибова, Н. Н. (2019). Новый подход к диагностике, прогнозированию исхода лечения хронического рецидивирующим афтозном стоматитом. *Методические рекомендации. Бухара*, 28.
33. Хабибова, Н. Н. (2018). Клинико-биохимические особенности течения псевдоаллергических вариантов хронического рецидивирующего афтозного стоматита. *Проблемы биологии и медицины*, (4), 104.