



Clinical and Immunological Evaluation of Orthopedic Treatment of Patients with Inflammatory Periodontal Diseases of Various Orthopedic Constructions

Rajabov O. A.

Bukhara State Medical Institute

Abstract: Dental health is one of the important components of human somatic health. Existing modern methods of diagnosis and treatment of inflammatory reactions in the oral cavity, as a rule, do not take into account the presence of orthopedic structures and give general recommendations for periodontal diseases without taking into account the influence of the structural material of orthopedic structures on local immunity.

Relevance of the study. A variety of structural materials that may differ in chemical composition, manufacturing technology and application, respectively, physico-chemical properties, and have good technological properties, corrosion resistance, toxicologic inertia, are actively used in dentistry to replace defects in dentition (Ismoilov A.A., 2012; Mirgazizov M.Z., 2013; Tlustenko V.P., 2015). The human body is not indifferent to substances entering the oral cavity, which leads to a violation of the homeostasis of the oral cavity - this is confirmed by the clinical experience of many researchers engaged in practical dentistry (Volozhin

A.I., 2005; Olesova V.N., 2015). In addition, the presence of concomitant diseases and various endogenous and exogenous risk factors affects both the course of inflammatory periodontal diseases and the development of defects in the hard tissues of teeth and secondary adentia.

According to the above, the aim is to assess the clinical and immunological state of the oral cavity in patients with inflammatory periodontal diseases with various orthopedic structures.

Materials and methods. The study was conducted by gender, by age group: 18-29 years old, 30-39 years old, 40-49 years old, 50-59 years old, over 60 years old and by orthopedic profile diagnoses. At this stage, patients were ranked according to the following types of orthopedic structures: removable, non-removable, combined. A comprehensive examination was carried out to treat patients with defects in the dentition and hard tissues of the teeth. Among the various orthopedic structures, depending on the structural material, prostheses were distinguished: metal-ceramic, all-ceramic, combined.

Comprehensive treatment of patients in the comparison group included traditional periodontal treatment with oral sanitation, removal of dental deposits, hygiene training and its control, anti-inflammatory measures in periodontal tissues.

Immunological studies were carried out before and after complex treatment in 161 patients aged 18 to 74 years, the main group of which consisted of 90 patients with defects of dentition and hard tissues of teeth and with VZP, who underwent orthopedic treatment with metal-ceramic, all-ceramic and combined structures; comparison group - 50 people with and without orthopedic structures in the oral cavity; control group - 21 people without and without orthopedic structures. When determining

the immunological status of patients with defects in the dentition and hard tissues of the teeth and with ESP, they were divided into three groups: group 1 - with gingivitis, group 2 - with mild chronic periodontitis, group 3 - with moderate chronic periodontitis.

Also, the main group of 90 people with various orthopedic structures and VST was ranked according to the structural material of prostheses into

3 groups: group I - patients with metal-ceramic structures, group II - patients with structures made of metal-free ceramics and group III - patients with combined structures.

As the material of the immunological study, oral fluid (RV) was taken from patients with defects in the dentition and hard tissues of the teeth and with VZP and in healthy individuals. The immunological study was carried out by enzyme immunoassay (ELISA) with the study of the content of immunoglobulins of classes A, s-A, G, M, E, interleukins - IL-4, IL-6, IL-1P, IF-a in RYE.

Comprehensive treatment of patients in the comparison group included traditional periodontal treatment with oral sanitation, removal of dental deposits, hygiene training and its control, anti-inflammatory measures in periodontal tissues[1.2.3.5.7.9].

To assess the condition of the oral cavity of patients with defects in the dentition and hard tissues of the teeth and with VZP, the oral cavity was assessed using objective and subjective criteria before complex treatment. When examining subjective and objective criteria of the oral cavity condition, we determined that before complex treatment, 9.2% of patients had discomfort, 4.3% had a burning sensation, 4.1% had halitosis, 6.5% had dryness, 3.0% had stomalgia, 44.6% had discoloration of the oral mucosa (SOPR), 9.7% have tooth prints, 4.9% have erosions and ulcers (Fig.1).

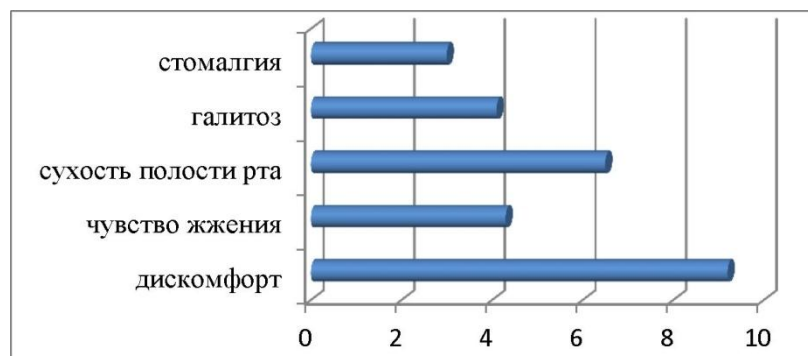


Figure - Structure of subjective criteria of oral cavity condition in patients with defects of dentition and hard tissues of teeth and with inflammatory periodontal diseases, %.

- An immunological study was conducted in 90 people of the main group, 50 people of the comparison group and 21 people of the control group. Due to the fact that immunoglobulins play an important role in the formation of immunity, we investigated the frequency of occurrence and quantitative changes in the concentration of immunoglobulins of the main classes in the RV for in-depth determination of the nuances of the formation of local immunity in patients with defects of dentition and hard tissues of teeth and with VZP.

Results and their discussion.

- As a result of our research, we found that among the orthopedic profile patients, the largest number were patients with DZR1 - 31%, followed by patients with DTTZ - 28%, with DZRSH - 18%, DZR11 - 15% and DZR1U - 6%. The smallest proportion was the contingent of patients with complete absence of teeth - 2% (Fig.16).
- Defect of the dentition I class according to Kennedy
- Defect of the dentition class II according to Kennedy
- Defect of the dentition grade III according to Kennedy
- Defect of the dentition IV class according to Kennedy

- Complete absence of teeth
- Defect of hard tissues of teeth

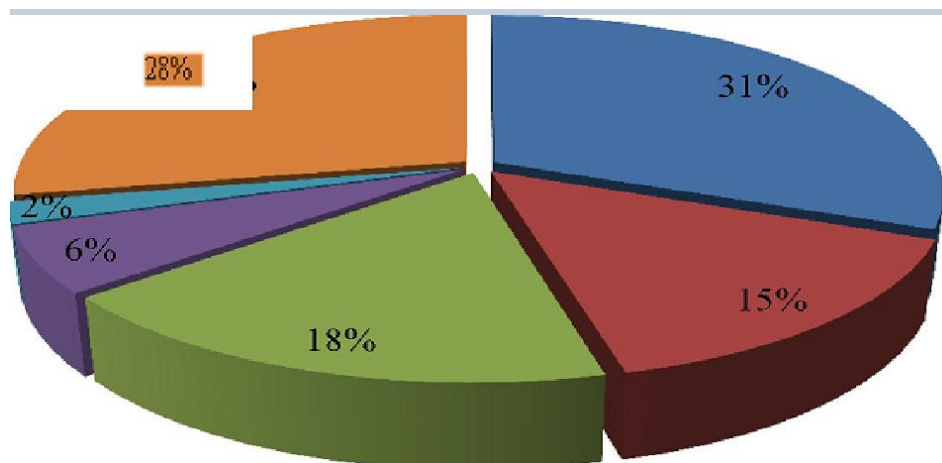


Figure 16 - Prevalence of defects of dentition and hard tissues of teeth

We found that the IgA content in the RV of the main group tended to decrease from 0.026 ± 0.08 to 0.037 ± 0.14 compared to the control group, and the secretory form of this immunoglobulin tended to increase from 0.162 ± 0.14 to 0.233 ± 0.12 . There was a more significant increase in the concentration of IgG in the RV - from 0.043 ± 0.05 to 0.252 ± 0.07 in comparison with the control group. Traces of IgM in the RV were determined, which practically did not differ from the data in the control group. There was a slight content of IgE in the RV in all groups, including the control group. The content of immunoglobulins of the main classes in RYE did not statistically differ from those in the comparison group.

The main cytokines (IL-4 IL-6 IF-a IL-1P) activate macrophage processes, enhancing protective reactions in the tissues of the oral cavity under various endogenous and exogenous influences. In the context of the above, a detailed study of changes in the concentrations of these cytokines is important[2.4.6.8.10.11].

In the study of the cytokine profile in patients with defects of dentition and hard tissues of teeth with VZP in 1,2,3 groups of the main group, there was a decrease in the content of IL-4 depending on the severity of VZP in comparison with the control group from 22.05 ± 5.06 to 16.21 ± 6.08 pg/ml, the content of IL-6 increased from 0.156 ± 0.17 to 5.555 ± 0.25 pg/ml in comparison with the control group, IF-a tended to decrease and decreased from 0.62 ± 0.47 to 2.49 ± 0.40 pg/ml in comparison with the control group, IL-ip - increased from 12.73 ± 25.27 to 133.75 ± 17.77 pg/ml in comparison with the control group. The cytokine profile of the oral cavity in patients of the main group and the comparison group did not differ.

Conclusions:

Thus, the share of non-removable orthopedic structures was 45% and tends to increase, therefore, a more detailed study of the effect of these structures on the clinical and immunological status of the oral cavity of patients with VZP is relevant. Thus, humoral factors of local immunity in patients of the main group and the comparison group did not differ statistically. There was a slight imbalance of the main classes of immunoglobulins A, s-A, G, M, E, depending on the severity of inflammatory and dystrophic processes in periodontal tissues. IL-4 decreased by 2-1.5 times at all stages of VZP, IL-6 increased sharply with an aggravation of the severity of VZP, IL-ip increased by more than 2 times in groups 2 and 3, IF-a tended to decrease with an aggravation of the severity of VZP.

Literature

1. Rajabov O.A. The State of Immune Homeostasis of the Mucosa in Prosthetics with Metaloceramic and Zirconic Dental Prosthesis. //Central Asian journal of medical and natural sciences. – Испания - 2021. - P.-367-377.

2. Otabek Rajabov, Zaynitdin Kamalov, Husnitdin Irsaliev, Fatima Irsalieva. Comparative Assessment of the Cytokine Profile in Dynamics in Patients with Orthopedic Constructions from Different Construction Materials. //Annals of the Romanian Society for Cell Biology,-Румыния-2021. - Vol. 25. - P. - 3197-3202. - (Scopus)
3. Ражабов О.А. Металлокерамика ва циркон протезлардан фойдаланилганда оғиз бўшлиғидаги клиник функционал ўзгаришларнинг диагностик таҳлиллари. //Проблемы биологии и медицины научный журнал по теоретическим и практическим проблемам биологии и медицины – Самарканд. - 2021. - № 4 (129) С. – 54 - 57 (14.00.00; № 19)
4. Ражабов О.А. “Сравнительная оценка цитокинового профиля в динамике у пациентов с металлокерамическими и цирконными зубными протезами” //Проблемы биологии и медицины Научный журнал по теоретическим и практическим проблемам биологии и медицины” – Самарканд - 2021. - № 5 (130). С. - 104-108 (14.00.00; №19)
5. Ирсалиев Х.И., Ирсалиева Ф.Х., Ражабов О.А. “Иммунный барьер полости рта при дефектах зубных рядов и после протезирования металлокерамическими протезами” //Stomatologiya. Тошкент, 2021.- № 4(85). – С.-57-62 (14.00.00; №12)
6. Ражабов О.А. “Влияние зубных протезов на деятельность ротовой полости и десну». //Tibbiyotda yangi kun. - Бухоро, 2022.- № 5 (43) С. - 218-223. (14.00.00; №22)
7. Rajabov.O.A. “Results of Chincial and HegienicStudies of Fixed Dentures in the Oral Cavity” //Middle Evroreal Scentifik Bulletin. Volume 24 Issue 2694 – 9970. Чехия - P. - 117-121
8. Rajabov O.A., Asrorov Sh. A. Clinical Characteristics of Patients with Defects of Dentition and Hard Tissues of Teeth and with inframatory Periodontal Diseases //Central asian journal of medical and natural sciences . – Испания - 2022. - P. - 229-234.
9. Rajabov O.A.,Xodjayeva Sh.Sh. Comparative assessment of structural and functional changes in periodontal tissues during prosthetics with metal- keramik and zirconium dentures //ScienceAsia 48 2022.-P.-969-981(Scopus)
10. Xodjayeva Sh.Sh., Rajabov O.A. Immunological Studiyes In Group Of Patients With Metal Ceramik Prosthetics Before And After //INTERNATIONAL JOURNAL OF HEALTH SYSTEMS AND MEDICAL SCIENCES Volume 1 No 4 Oct-2022.-P.-130-135. (Scopus)
11. Xodjayeva Sh.Sh., Rajabov O.A. STUDIYES IN A GROUP OF PATIENTS WITH ZIRCONIUM PROSTHETICS BEFORE AND AFTER TUROPEAN JOURNAL OF MEDICINE AND PRACTICE Vol. 2 No 4 Oct-2022.-P.- 137-142