**Giyazova Malika Mukhammadovna** – Ph.D., dotsent
**Rasulov Jasur Nasimovich** – master
*Asian International University (Bukhara, Uzbekistan)*

## ASSESSMENT OF THE HYGIENIC CONDITION OF THE ORAL CAVITY WHEN USING DENTURES

***Abstract:*** *In this article, modern oral hygiene in prosthetics includes daily mechanical (brushes, pastes) and chemical cleaning of prostheses, the use of irrigators, as well as professional hygiene every 6 months. Data on the condition of the oral mucosa and the effectiveness of oral hygiene during prosthetics are presented.*

***Keywords.*** *Oral hygiene is the daily mechanical impact on dentures, the oral mucosa, and oral hygiene products.*

**Гиязова Малика Мухаммадовна** – Ph.D., доцент
**Расулов Жасур Насимович** – магистр
*Осиё Халқаро Университети (Бухоро, Ўзбекистон)*

## ТИШ ПРОТЕЗЛАРИ ҚЎЛЛАНИЛГАНДА ОҒИЗ БЎШЛИҒИ ГИГИЕНИК ҲОЛАТИНИ БАҲОЛАШ

***Аннотация,*** *ушбу мақолада протезлашда замонавий оғиз гигиенаси протезларни кундалик механик (чўткалар, пасталар) ва кимёвий тозалашни, ирригаторлардан фойдаланишни, шунингдек ҳар 6 ойда профессионал гигиенани ўз ичига олади. Протезлаш жараёнида оғиз бўшлиғи шиллиқ қавати ҳолати ва оғиз бўшлиғи гигиена самарадорлиги тўғрисида маълумотлар келтирилган.*

***Калит сўзлар.*** *оғиз гигиенаси протезларни кундалик механик таъсирлар, оғиз бўшлиғи шиллиқ қавати, оғиз бўшлиғи гигиеник воситалари.*

**Гиязова Малика Мухаммадовна** – Ph.D., доцент
**Расулов Жасур Насимович** – магистр
*Азиатский Международный Университет (Бухара, Узбекистан)*

## ОЦЕНКА ГИГИЕНИЧЕСКОГО СОСТОЯНИЯ ПОЛОСТИ РТА ПРИ ИСПОЛЬЗОВАНИИ ЗУБНЫХ ПРОТЕЗОВ

***Аннотация:*** *В данной статье современная гигиена полости рта при протезировании включает ежедневную механическую (щетки, пасты) и химическую чистку протезов, использование ирригаторов, а также профессиональную гигиену каждые 6 месяцев. Представлены данные о состоянии слизистой оболочки полости рта и эффективности гигиены полости рта в процессе протезирования.*

***Ключевые слова.*** *Гигиена полости рта — это ежедневное механическое воздействие на зубные протезы, слизистую оболочку полости рта и гигиенические средства полости рта.*

**Relevance.** The extensive accumulated experience of using the dental implantation method has revealed the main complication of implantation both at the stages of prosthetics and at different stages of prosthetics on implants - inflammation in the periimplant tissues. According to various sources, it occurs at least 30% and 10%, respectively, using the example of a three-year period after the completion of prosthetics. In the absence of treatment, peri-implantitis ends with disintegration of the implant.; The treatment of peri-implantitis is a complex problem associated, in addition to eliminating inflammation, with the need to restore lost bone tissue. According to studies examining the effects of hygiene levels on the development of mucositis and periimplantitis, the main role is played by hygiene levels. Against the background of the well-known low motivation of the population to ensure an adequate level of individual oral hygiene, the development of effective approaches to oral hygiene at the stages of implantological treatment remains an urgent task. Hygienic aspects in patients with implants can be considered in several directions. The main stage is the level of hygiene before the implant is installed, after the implant is opened, immediately before prosthetics and at the stage of medical examination. The urgent task remains to maintain a high level of hygiene using both specific hygienic methods and medical support at the stage of treatment and preventive consultations [1.3.5.7.9.11.13.15.17.19].

Modern oral hygiene in prosthetics includes daily mechanical (brushes, pastes) and chemical (tablets, solutions) cleaning of dentures, the use of irrigators, as well as professional hygiene every 6 months. The effectiveness is assessed by the absence of plaque, gum inflammation and structural stability. Organization of dental hygiene • Removable dentures: Daily brushing and non-abrasive paste morning and evening. Mandatory rinsing after meals. The use of antiseptic tablets (once a day or a week) for

disinfection. Storage in its pure form (in air or in solution, according to recommendations). • Non-removable dentures (crowns, bridges): Cleaning 2 times a day. Mandatory use of an irrigator, superflossers and interdental brushes to clean the gum contact area. • Prosthetics on implants: Especially careful hygiene using soft brushes, special threads and irrigators (low pressure) to prevent peri-implantitis. • Mucosal care: Daily gum massage, tongue cleansing with a soft brush. Assessment of hygiene effectiveness The effectiveness is assessed by the dentist and the patient according to the following criteria: 1. Clinical indicators: Absence of inflammation, bleeding, plaque on the prosthesis and gums. 2. Index assessment: The use of indexes (for example, PHP) to assess the level of hygiene. 3. Visual inspection: Absence of persistent unpleasant odor (halitosis), perfect cleanliness of the prosthesis base.

Regular visits to the dentist (every six months) are a mandatory component, including professional cleaning of dentures in an ultrasound tub. Inflammation is often detected in the tissues surrounding the implant, which poses a serious challenge in terms of ensuring the long-term success of prosthetics on implants. The nine-year experience of prosthetics on implants described by N.A. Uzunyan reflects only the removal of implants due to peri-implantitis, depending on different implantation conditions. In her work, 2% of the implants were removed after 5 years, 7.6% after 7 years and 7.7% after 9 years, indicating the onset of the phase of complete adaptation of the implant to the operating conditions for a period of 7 years. The frequency of implant removal depends less on the state of health, and more on the initial state of periodontitis and hygiene (in patients with periodontitis, implant disintegration was 7.9%, without periodontitis - 4.1%; with a satisfactory level of hygiene - 4.3%, with insufficient hygiene - 9.5%). There was no statistically significant difference in the frequency of implant removal between implants of different localization, while disintegration was more common with Lekholm/Zarb type IV (10.5%), with complete absence of teeth (13.4%), and with short implants (12.9%) [2.4.6.8.10.12.14.16.18.20].

The provocative role of cement fixation of prostheses on implants for the development of periimplantitis, leading to the disintegration of 9.7% of implants over a nine-year period, is shown.The polished neck of the implant is important in the development of inflammatory complications: mucositis, peri-implantitis with resorption by one third and one second of the implant height in such implants were detected in the amount of 26.8%, 16.1%, 5.4%; in the absence of a polished neck - in 19.9%, 11.5% and 4.4% of implants. Individual abutments differed little from the standard ones in the development of inflammation in periimplant tissues under manufacturing conditions in Moscow CAD/CAM centers. In just three years, in Povstyanko's study, mucositis was observed in 20.5% of implants, periimplantitis with small bone resorption in 11.9%, and half the height of the implant in 4.5%.

In a difficult clinical situation, Bronstein D.A. studied implantation on toothless jaws with a long-term analysis of periimplant tissues (10 years). Previously, during the same period, the results of implantation from different doctors in Moscow were analyzed in relation to patients with partial and complete absence of teeth. After 10 years of loading, 44.6% of the more than 4,500 implants had mucositis and 30.8% had peri-implantitis. 5.1% of the implants were removed due to peri-implantation. In the ten-year follow-up group, the listed indicators were 30.4%, 40.7%, 12.5%. The development of inflammatory complications in the form of mucositis and peri-implantitis in these clinical situations was as high as 48.0%, 20.9% (by one third) and 10.1%. Periimplantitis is one of the most common complications of dental implantation and can manifest itself both during the period before permanent dentures are fixed on implants and during the period of functioning on implants. Most often, peri-implantitis manifests itself at different times after the completion of prosthetics, the stage of mucositis (inflammation in the peri-implant gum) passes and manifests itself not only in chronic gingival inflammation, but also in bone resorption of the cervical region of the implant. Two mechanisms of peri-implantitis development are considered: bone tissue overload due to insufficient number of implants and due to insufficient oral hygiene. The second reason is obvious, and in this regard, the efforts of implantologists to prevent peri-implantitis are primarily aimed at optimizing the hygienic condition of the mouth and peri-implant tissues. The analysis of biochemical markers of inflammation in peri-implantitis revealed the following patterns: increased serum concentrations of RH-1ß, IL-6, IL-17A without a change in anti-inflammatory IL-10 in blood serum, but with a decrease in its dental furrows; increased serum (by 163.0%) and local (by 231.0%) CD401 in severe periimplantitis; increased activity of tissue myeloperoxidase and decreased tissue antioxidant potential.

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The effect of the implant-abutment junction node for the prevention of peri-implantitis is taken into account by implant manufacturers, based on the desire to minimize the micro gap of the junction. They showed the absence of permeability of Staphylococcus aureus and Bacillus stearothermophilus into the implant from the external environment and the absence of microbes from the implant. It is concluded that it is advisable to pair the height of 1.8 mm and the angles of 5°, as well as tighten the locking screw with a force of 25 N/cm to securely connect the abutment to the implant (tension fixation). According to the authors, such a junction does not open under load and ensures the sealing of the structure. Similar studies are being conducted by other implant manufacturers: according to general opinion, the smaller the angle of connection of the abutment with the implant and the larger the area of their contact, the fewer opportunities for micro-insemination and the development of inflammation. The design features of the implants and their material can accumulate plaque and lead to peri-implantitis. Analyzing the role of different surfaces of modern implants based on literature data, Ushakov A.I. notes: the development of peri-implantitis does not depend on the properties of the surface of the intraosseous part of the implants. The author pays special attention to the technological purity of the implant surface, comparing the surfaces of Nobel (electret), SLA (acid-shot blasting) and RBM (acid-shot blasting using highly diluted acids), he prefers the RBM surface. It is important that the POSEIDO association has found a large amount of contamination (chemical and mechanical) in the implants of almost all well-known manufacturers. According to V.E. Tolmachev's research, the state of immunity is of great importance in the process of osseointegration and in the prevention of implantation complications. The indicators of immune homeostasis cell expression revealed by immunohistochemical methods make it possible to predict and prevent complications of dental implant osseointegration before clinical manifestations appear. It is recommended to study cytological parameters obtained by phase contrast microscopy in the period preceding clinical manifestations (according to indications with immunohistochemical phenotyping of cellular elements). As a result of observations of 90 patients with prosthetic implants (with satisfactory oral hygiene), O.M. Pokrovskaya compared the effectiveness of using individual hygiene (manual interdental brush, WaterPik irrigator) after 1, 6, 12 months. Along with the oral hygiene indices, the author conducted a microbiological analysis of the gingival sulcus in implants in 44 patients using aerobic and anaerobic microbial cultivation. During the year of follow-up, the author recorded a deterioration in the hygiene index of IGim from 0.27 to 1.3 points; the gingival index GI also worsened (from 0.09 to 1.2 points).

**Conclusion.** The number of microorganisms increased: S.Sahvarans (from 5.4 to 4.2); P.anaerobius (from 6.2 to 5.8); Enterococcusspp. (from 4.1 to 4.2); Corynebacterium (from 3.8 to 4.5); Enterobacteriumspp. (from 3.8 to 3.7); Prevotellaintermedia (from 2.7 to 2.8). According to the author, representatives of facultative anaerobic streptococcal flora (S.sanguis, S.salivarius, Enterococcusspp.) were most often found in the periimplant space, including in combination with enterobacteria. Like other authors, O.M. Pokrovskaya saw a direct dependence of the hygienic condition of implants on dental hygiene. It was shown that when using an irrigator in combination with other listed hygienic techniques, hygiene indicators improved by 50%, the condition of the peri-implant gum by 90%, and periodontal pathogens in the oral cavity decreased.

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