



Preparation of Teeth for Veneers

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Abstract: Veneers are porcelain or ceramic linings that replace the outer layer of teeth. They allow you to correct irregularities in the shape and color of the tooth, and also protect your teeth (for example, when playing wind instruments). Veneers are made according to the shape and color of the patient's teeth and their wishes.

Keywords: Porcelain, shape and color of the tooth.

Introduction: Veneers are porcelain or ceramic linings that replace the outer layer of teeth. They allow you to correct irregularities in the shape and color of the tooth, and also protect your teeth (for example, when playing wind instruments). Veneers are made according to the shape and color of the patient's teeth and their wishes.

A veneer is a plate with a thickness of 0.2 mm or more that is glued to the labial, that is, the labial side of the tooth and performs aesthetic, restorative, masking, phonetic and alimentary functions. The composite plate is an organic bisgma resin filled with ceramic or glass microparticles. An example of a ceramic plate is lithium disilicate glass ceramics.

For the manufacture of veneers, by and large, aggressive preparation of tooth enamel is not required, in some cases (microdentation or abrasion) it is possible to manufacture veneers without preparation of tooth tissues. With the observance of occlusal and gnathological principles in the clinic by the operator and compliance with all technological regulations in the laboratory by the technical engineer, this restoration method has long-term forecasts and can be widely recommended for use.

Preparation of teeth for veneers is a mandatory step necessary for the installation of any non-removable structures. During the procedure, the surface dental tissue is sanded (removed). In this way, the tooth is shaped so that it can be covered with a prosthesis

without increasing the volume.



Until recently, dissection was considered one of the most unpleasant and painful dental procedures. Today, it is performed absolutely painlessly, without causing the patient any discomfort.

Features of dental preparation for veneers

Before manipulation, it is important to calculate the

tooth depth correctly so as not to touch the pulp. For this purpose, an X-ray or CT scan is performed, which determines the anatomical and topographic nuances of the location of the pulp chamber, as well as the prevalence of a possible carious process.



Diagnosis usually includes a functional assessment of the bite, a photoprotocol. All this is required to prevent risks and manufacture reliable and comfortable micro-prostheses, which are veneers.

At the preparation stage, professional dental hygiene and caries treatment are mandatory.

Odontopreparation is, in fact, a surgical procedure. It provides for the permanent excision of hard dental tissues, including destroyed, softened and healthy

ones. That's why doctors follow the principles of gentle sanding, removing the enamel layer to a minimum.

There are several turning technologies with preparation or preservation of the cutting edge of the tooth. In the first case, the integrity of the latter is not violated, in the second two options are possible.:

- the cutting edge is sharpened around the entire perimeter;

- a step ledge is created on the palatine side.

Methods of preparation of teeth for veneers

Dissection can be carried out in several ways. The choice is determined by the planned outcome and the clinical situation.

To date, there are 4 methods:

- Laser;
- Ultrasonic;
- air-abrasive (sandblasting);
- tunnel.

Laser

In dentistry, a pulsed laser is used, which destroys the surface layer of teeth by heating the water contained in it. The deep layers of enamel and dentin are not affected. The fragments of the ground fabrics are cooled and washed off with an air-water jet.

Laser dissection is a gentle, delicate technique that preserves the maximum amount of tissue. It is suitable for the installation of veneers of all types, prevents bleeding, infection. After the procedure, the sensitivity of the teeth does not increase.

Ultrasonic

Ultrasound preparation is performed using a high-frequency vibration ultrasonic scaler, which removes the top layer of enamel safely and painlessly. Ultrasound has no negative effect on the pulp chamber and does not overheat the tissues.

This is a relatively new technique of gentle tooth grinding, in which accidental damage to neighboring units and healthy tissues is excluded. Due to the special shape of the tips, which provide the strongest adhesion to the enamel, it can be used to install even the thinnest veneers.

Air-abrasive (sandblasting)

For sandblasting, a device is used that supplies an air-abrasive jet under pressure. Sanding occurs due to the ingress of abrasive particles onto the enamel, which can be aluminum oxide or glass powder.

The air-water flow with the smallest solid particles gently removes the surface layer of the enamel, thereby creating a uniform roughness. After this treatment, the veneer is firmly attached to the tooth without damaging the pulp and dentin.

Tunnel

Tunneling is carried out using turbine installations equipped with speed regulators and special nozzles. The latter are made of metal alloys or diamond-coated. The main advantage of tunnel preparation is the ability to control the thickness of the layer to be removed.

The essence of the method lies in a thin profile inside the cutting edge of the tooth: this cut is called a tunnel. The outer – frontal – surface of the enamel is not sharpened. Tunnel preparation is considered the most gentle, since the natural shape and volume of dental tissues are preserved.

The stages of preparation of teeth for veneers

The preparation of teeth for veneers is a delicate, painstaking job that requires precision and skill from a doctor. Its stages depend on the type of microprostheses, but they necessarily include a thorough examination with an orthopantomogram or CT scan, and functional tests to assess bite.

When installing composite veneers made of filling material, the removal of casts is not required, the microprosthetics procedure is performed in one visit. 0.3-0.5 mm of enamel is sanded from the outer surface of the tooth, after which the composite is applied in layers in the required amount.

This stage is necessary, since an unshaded tooth will be too convex, and its shade will be unnatural and opaque. They try to maintain the boundaries of preparation within the limits of tooth enamel.

Before installing ceramic veneers, casts are taken from the dentition, on the basis of which a virtual model of the future smile is made. Several options are being created that are suitable for the shape and size of the patient's teeth – a wax model of the wax-up jaw.

The selected option is printed out and becomes real, which you can try on and feel its convenience. If necessary, make adjustments on the spot, as this is a mock-up model. That is, the patient sees the future result before the manufacture of veneers begins.

The selection stage often takes longer than the production, and can last up to three weeks. Coordinating the design of new teeth is the most crucial moment.

Thus, preparation for veneers belongs to a complex section of orthopedic treatment. That is why the installation of micro-prostheses fully justifies its cost, especially considering the price of the material - dental porcelain.

REFERENCES

Asrorovna, X. N., Baxriddinovich, T. A., Bustanovna, I. N., Valijon O'g'li, D. S., & Qizi, T. K. F. (2021). Clinical Application Of Dental Photography By A Dentist. The American Journal of Medical Sciences and Pharmaceutical Research, 3(09), 10-13.

Ugli, A. A. A., & Bustanovna, I. N. (2024). STUDY OF THE CONDITION OF PARODONT IN PERIODONTITIS IN FETAL WOMEN. European International Journal of

Multidisciplinary Research and Management Studies, 4(05), 149-156.

Kizi, J. O. A., & Bustanovna, I. N. (2024). FAMILIARIZATION WITH THE HYGIENIC ASSESSMENT OF THE CONDITION OF THE ORAL MUCOSA IN ORTHOPEDIC TREATMENT. European International Journal of Multidisciplinary Research and Management Studies, 4(05), 89-96.

Bustanovna, I. N. (2024). Determination of the Effectiveness of Dental Measures for the Prevention of Periodontal Dental Diseases in Workers of the Production of Metal Structures. International Journal of Scientific Trends, 3(5), 108-114.

Bustanovna, I. N. (2022). Assessment of clinical and morphological changes in the oral organs and tissues in post-menopause women. Thematics Journal of Education, 7(3).

Bustanovna, I. N., & Berdiqulovich, N. A. (2022). ПРОФИЛАКТИКА И ЛЕЧЕНИЯ КАРИЕСА У ПОСТОЯННЫХ ЗУБОВ. JOURNAL OF BIOMEDICINE AND PRACTICE, 7(1).

Bustanovna, I. N. (2024). PATHOGENESIS OF PERIODONTAL DISEASE IN ELDERLY WOMEN. Лучшие интеллектуальные исследования, 21(3), 25-29.

Bustanovna, I. N. (2024). TO STUDY THE HYGIENIC ASSESSMENT OF THE CONDITION OF THE ORAL MUCOSA DURING ORTHOPEDIC TREATMENT. Лучшие интеллектуальные исследования, 21(1), 9-15.

Bustanovna, I. N. (2024). CLINICAL AND LABORATORY CHANGES IN PERIODONTITIS. Journal of new century innovations, 51(2), 58-65.

Bustanovna, I. N. (2024). Morphological Changes in Oral Organs and Tissues in Women after Menopause and their Analysis. International Journal of Scientific Trends, 3(3), 87-93.

Bustanovna, I. N. (2024). Hygienic Assessment of The Condition of The Oral Mucosa After Orthopedic Treatment. International Journal of Scientific Trends, 3(3), 56-61.

Bustanovna, P. I. N. (2024). Further Research the Features of the Use of Metal-Ceramic Structures in Anomalies of Development and Position of Teeth. International Journal of Scientific Trends, 3(3), 67-71.

Bustanovna, I. N. (2024). The Effectiveness of the Use of the Drug "Proroot MTA" in the Therapeutic and Surgical Treatment of Periodontitis. International Journal of Scientific Trends, 3(3), 72-75.

Bustanovna, P. I. N. (2024). Research of the Structure of Somatic Pathology in Patients with Aphthous Stomatitis. International Journal of Scientific Trends, 3(3), 51-55.

Bustanovna, I. N., & Abdusattor o'g, A. A. A. (2024). Analysis of Errors and Complications in the Use of Endocal Structures Used in Dentistry. International Journal of Scientific Trends, 3(3), 82-86.

Bustanovna, I. N. (2024). Complications Arising in the Oral Cavity after Polychemotherapy in Patients with Hemablastoses. International Journal of Scientific Trends, 3(3), 62-66.

Bustanovna, I. N., & Sharipovna, N. N. (2023). Research cases in women after menopause clinical and morphological changes in oral organs and their analysis. Journal of biomedicine and practice, 8(3).

Bustanovna, I. N., & Sharipovna, N. N. (2023). Essential Factors Of Etiopathogenesis In The Development Of Parodontal Diseases In Post-Menopausal Women. Eurasian Medical Research Periodical, 20, 64-69.

Fakhriddin, C. H. A. K. K. A. N. O. V., Shokhrub, S. A. M. A. D. O. V., & Nilufar, I. S. L. A. M. O. V. A. (2022). ENDOKANAL PIN-KONSTRUKSIYALARNI ISHLATISHDA ASORATLAR VA XATOLAR TAHLILI. JOURNAL OF BIOMEDICINE AND PRACTICE, 7(1).

Очилов, Х. У., & Исламова, Н. Б. (2024). Особенности артикуляции и окклюзии зубных рядов у пациентов с генерализованной формой повышенного стирания. SAMARALI TA'LIM VA BARQAROR INNOVATSIYALAR JURNALI, 2(4), 422-430.

Ortikova, N., & Rizaev, J. (2021, May). The Prevalence And Reasons Of Stomatophobia In Children. In E-Conference Globe (pp. 339-341).

Ortikova, N. (2023). ANALYSIS OF ANESTHESIA METHODS FOR DENTAL FEAR AND ANXIETY. Центральноеазиатский журнал академических исследований, 1(1), 8-12.

Ortikova, N. K. (2023). DENTAL ANXIETY AS A SPECIAL PLACE IN SCIENTIFIC KNOWLEDGE. SCHOLAR, 1(29), 104-112.

Исламова, Н. Б. (2024). ПАРОДОНТ КАСАЛЛИКЛАРИДА ОРГАНИЗМДАГИ УМУМИЙ ЎЗГАРИШЛАРНИ ТАҲЛИЛИ ВА ДАВОЛАШ САМАРАДОРЛИГИНИ ТАКОМИЛЛАШТИРИШ. ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ, 43(7), 18-22.

Islamova, N. B., & Chakkonov, F. K. (2021). Changes in the tissues and organs of the mouth

Исламова, Н. Б., & Чакконов, Ф. Х. (2021). Изменения в тканях и органах рта при эндокринных заболеваниях. In Актуальные вопросы стоматологии (pp. 320-326).

Nazarova, N. S., & Isloмова, N. B. (2022). postmenopauza davridagi ayollarda stomatologik kasalliklarining klinik va mikrobiologik ko'rsatmalari va

механизмлари. Журнал "Медицина и инновации", (2),
204-211.