

RU 2648855

The authors: Maria Alexandrovna Nosova, Alexey Nikolaevich Sharov, Larisa Teodorovna Volova, Dmitry Aleksandrovich Dolgushkin.

FORMULA OF DISCOVERY

A method for the surgical treatment of multiple gingival recessions, including the decapitalization of anatomical papillae, the mobilization of a mucostococcal graft, the surface treatment of roots, the collection of plastic material and its fixation to the decapitalized anatomical papillae; fixing over the plastic material of the rotated and coronally displaced mucous-supricular flap with double purse-string cuvetous sutures to combine surgical and de-epithelialized anatomical papillae, DIFFERENT in that, as a plastic material, an allogeneic dura mater is used, which is perforated intraoperatively with a periodontal probe, creating holes in it with a diameter of 0.1 mm at a distance of up to 5 mm from each other; additionally fix the mucoperiosteal flap with cross-shaped sutures. .



THE METHOD IS AS FOLLOWS:

Anesthesia is carried out in the area of intended intervention, the open surface of the root in the area of recessions is cleaned of plaque with an ultrasonic sclera. Then make cuts in the recession zone. Raspuschera blunt way to mobilize the mucoperiosteal flap, separating the mucosa from the submucosal and muscle cords. In the area of recessions, the anatomical papillae are decapitated, the root surface is treated with 17% EDTA gel, the zonospecific curette root is treated with cement and the root surface is polished with a fine diamond bur with an angular tip at a speed not exceeding 3000 rpm. Perform perforation of the allogeneic dura mater with a periodontal probe, creating holes in it with a diameter of 0.1 mm at a distance of up to 5 mm from each other, and fix it with interrupted sutures to the de-epithelialized anatomical papillae. A rotated and coronally displaced mucoperiosteal flap is fixed over the dura mater with double pouch cuffs completely covering it and seeking to combine surgical papillae with anatomical ones. Additionally fix mucoperiosteal flap cruciform sutures, pressing it to the dura mater. The operation zone is treated with antiseptic solutions.

THE METHOD IS ILLUSTRATED BY A CLINICAL EXAMPLE:

Patient, 47 years old. Complaints about the aesthetic defect of the gums in the left upper jaw teeth. From the anamnesis: observed at the orthodontist's doctor for two years, orthodontic treatment was carried out on a fixed technique about the occlusion anomaly. The recession of the gums of the teeth group was diagnosed: 26, 25, 24, 23, 22, 21 (I-II class according to Miller, 26 tooth III class). Was performed plastic zone of gingival recessions by the proposed method. The patient was recommended a sparing diet, careful cleaning of the teeth and rinsing the mouth with antiseptic solutions and applying an antiseptic gel for 2-3 weeks on the area of operation. In the postoperative period, the patient was repeatedly observed (after 14 days, 1.5 months, 3 months and 6 months), noting an increase in the volume of keratinized gums in the recession area from 1 to 2 mm; lack of sensitivity of dental tissues when probing; lack of bleeding gums when probing; the normal size of the gingival sulcus, complete closure of the depth of the gingival recession in the area of operation.

The proposed method of surgical treatment of multiple gingival recessions can be effectively used in dental institutions.

RU 2616337

The authors: Maria Alexandrovna Nosova, Alexey Nikolaevich Sharov, Larisa Teodorovna Volova, Dmitry Aleksandrovich Dolgushkin.

FORMULA OF DISCOVERY

The method of plastics of the alveolar process, which includes the incision, peeling of the mucoperiosteal flap, filling the defect area and fixing in it the bone block and autologous blood components, which differ in the form of an individual allogeneic implant before the operation bone block; during the incision and peeling of the mucoperiosteal flap, a syringe is used to collect the leaked blood, which is used to process allogeneic materials in three Petri dishes; prepare the recipient bed, perform its osteoperforation, collecting chips from spongy bone tissue; in the first dish, chips are mixed with blood and allogeneic bone powder from demineralized lamellar bone tissue; place the bone block in the recipient's bed, drill holes in it for the screws, and then move the bone block to the second cup, where it is impregnated with collected blood; in the third cup, allogeneic bone powder from demineralized lamellar bone tissue is impregnated with blood; slowly drill channels for screws in the recipient bed; evenly distribute the contents of the third cup on the surface of the bone block in contact with the recipient bed; fix the bone block with screws; The contents of the first cup are uniformly applied to the outer surface of the fixed bone block and the plastic area is covered with a mucoperiosteal flap. The invention relates to medicine, in particular to surgical dentistry, and is used for plastics of the alveolar process of the jaw before performing dental implantation.



The technical result of the proposed method is to reduce the complexity of the operation, the probability of postoperative complications; improving osteoinductive properties of materials used for plastics and improving the quality of newly formed bone tissue. Before the operation, an individual allogeneic implant is made on the basis of computer processing of the patient's research results, which is a bone block of a certain configuration and size, corresponding to the personal anatomy of the defect of a particular patient.

The sizes and configuration of allogeneic implants are chosen individually due to personalized preoperative planning. Allogeneic materials used for plastics are intraoperatively treated for a short time together with the patient's autologous tissues, thereby increasing their osteoinductive potential and reducing the likelihood of postoperative immune complications. All stages and features of the method ultimately contribute to improving the quality of bone tissue formed in the field of plastics.

THE METHOD IS ILLUSTRATED BY A CLINICAL EXAMPLE:

Patient N., 45 years old, came to the clinic with complaints of difficulty chewing food. Categorical refusal to use a removable denture. Objective: partial absence of teeth of the lower jaw, Kennedy Class II (35, 36, 37, 38 absent), significant and uneven atrophy of the bone tissue of the alveolar process. Teeth removed at the age of 15-23 years. Based on the computer processing of the patient's research results, an individual allogeneic implant was made. The patient underwent an operation according to the developed method without technical difficulties. The stitches were removed after 3 weeks. In the postoperative period, no complications were observed. Performed control studies showed the formation of high-quality bone tissue in the field of plastics. This allowed the patient to perform the installation of dental implants. The proposed method can be used in the departments of maxillofacial surgery and outpatient dental institutions.

RU 2631416

The authors: Maria Alexandrovna Nosova, Alexey Nikolaevich Sharov, Larisa Teodorovna Volova, Dmitry Aleksandrovich Dolgushkin.

FORMULA OF DISCOVERY

The method of drug support for patients when performing osteoplastic operations, including the use of antibacterial drugs in the pre- and postoperative periods. Distinguished by the fact that the patient uses the drug Klacid CP on the day of surgery and for six days after it at a dose of 500 mg as an antibacterial agent 1 tablet 2 times a day; the patient already in the preoperative period, seven days before the operation, receives the drug Trental in pills in a dose of 100 to 400 mg and the drug Actovegin, 1 tablet up to three times a day; This regimen of drugs is maintained for three weeks after surgery; from the first day after surgery to suture removal, the patient is prescribed topical PerioKin gel for local use 2-3 times a day to the area of operation; from the third day after the operation, a paste and a KIN® GINGIVAL ALPHANTA rinse after tooth brushing after a meal are prescribed, which the patient should use 2-3 times a day; for pain treatment, the patient takes a selective inhibitor, 1 tablet after a meal; from the first day after surgery to the removal of stitches, the patient takes Zyrtec in a dose of 10 mg, 1 tablet per day; Within three weeks after the operation, ultraviolet irradiation of the gums and local laser therapy are performed, alternating these physiotherapy procedures daily; 3 weeks after the operation, the patient begins to take the drug Osteogenon, 1 tablet twice a day, and Chlorophyll Forte GP, 1 capsule 1 time a day.

THE METHOD IS AS FOLLOWS

Before surgery, an assessment is made of the patient's general health and dental examination of the oral cavity. Apply the necessary additional diagnostic examination methods. Determine the type and volume of osteoplastic surgery. As an antibacterial agent, the patient uses the drug Klacid CP on the day of surgery and for six days after it in a dose of 500 mg, 1 tablet 2 times a day. The patient already in the preoperative period, seven days before the operation, receives the drug Trental in tablets in a dose of from 100 to 400 mg and the drug Actovegin, 1 tablet up to three times a day; This regimen of drugs is maintained for three weeks after surgery. From the first day after the operation until the sutures are removed, the patient is prescribed topically to the area of operation with PerioKin gel for local use 2-3 times a day; from the third day after the operation, a paste and a KIN® GINGIVAL ALPHANTA rinse after tooth brushing after a meal are prescribed, which the patient should use 2-3 times a day. For pain treatment, the patient takes a selective inhibitor 1 tablet after meals. From the first day after surgery to the removal of stitches, the patient takes Zyrtec in a dose of 10 mg, 1 tablet per day. Within three weeks after the operation, ultraviolet irradiation of the gums and local laser therapy are performed, alternating these physiotherapy procedures daily. After 3 weeks after surgery, the patient begins to take Osteogenon, 1 tablet twice a day, and Chlorophyll Forte GP, 1 capsule 1 time per day.

THE METHOD IS ILLUSTRATED BY A CLINICAL EXAMPLE:

Patient N., 45 years old, came to the clinic with complaints of difficulty chewing food. Categorical refusal to use a removable denture. Objective: partial absence of teeth of the lower jaw, Kennedy Class II (35, 36, 37, 38 absent), significant and uneven atrophy of the bone tissue of the alveolar process. Teeth removed at the age of 15-23 years. Based on computer processing of the patient's research results, an individual allogeneic implant was made from mineralized spongy bone tissue. The patient underwent osteoplastic surgery. In the pre-and postoperative period, the patient received medical support for the proposed method. There were no postoperative complications in the patient. Adverse reactions to the medication was not observed. The sutures were removed after 3 weeks. Performed control studies showed the formation of high-quality bone tissue in the field of plastics. This subsequently allowed the patient to perform the installation of dental implants, high-quality prosthetics. In all patients who underwent osteoplastic operations with drug support using the proposed method, in the postoperative period, there was no migration or rejection of bone-substituting materials; reliable implant-gingival attachment in case of dental implantation, stability of implants. The healing of the operating area occurred by primary intention, without divergence of the wound edges and signs of inflammation. None of the patients noted inconvenience and side effects when using drugs. The method of drug support of patients can be widely used in dental hospitals.



Larisa Teodorovna Volova, doctor of medical sciences, professor, academician of the RAE, director of IEMB (Institute of Experimental Medicine and Biotechnologies) of the Samara State Medical University. 



Maria Alexandrovna Nosova, dentist, surgeon, periodontist. Applicant for the degree of candidate of medical sciences IEMB FSBEI HPE SamSMU in the field of microsurgical techniques of periodontal plastics. 



Alexey Nikolaevich Sharov, pharmacist, Master of Economics. Highly qualified specialist in the field of operative pharmacology and pharmacotherapy, medical and dental marketing, market expert. 



Dmitry Aleksandrovich Dolgushkin, traumatologist - orthopedist, candidate of medical sciences, head of the department for management and protection of intellectual property objects of FSBEI HPE SamSMU. Patents for invention on "Lyoplast-S"® 

PATENTS FOR INVENTION ON "LYOPLAST-S" ®



Larisa Teodorovna Volova: "Within the walls of IEMB, SamSMU are engaged in various areas in the field of regeneration, biotechnology and genetic engineering. For over 30 years we have been working in the field of tissue technology, about 12 years in the field of cellular technology and 7 years in the field of nanotechnology."

In particular, such new medical technologies have been developed to regulate the processes of osteogenesis in delayed consolidation and periodontitis, osteoporosis, skin burns, and injuries. Our products are used to create cell-tissue grafts for chondroplasty and research in space medicine. They are not only a carrier of cells, but also a bioreactor, and also capable of performing formative and genetic functions.

We also developed technologies for obtaining and standardizing cultures of cells from the stroma of various organs and tissues of animals and humans; testing methodology for various drugs and medical devices, in vitro physiotherapy factors. Our priorities in the institute are: regenerative medicine and critical biotechnology. We have three laboratories for basic research: biochemistry, immunology, and morphology. The biotechnology department has a tissue bank and two laboratories: the cultivation of animal and human cells.