

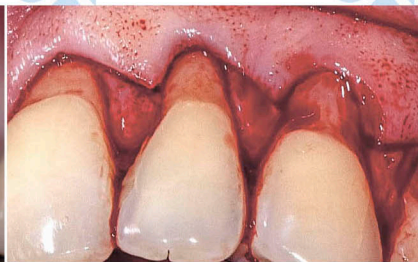
CLINICAL EXAMPLES OF "LYOPLAST-S" ® IN VARIOUS ARTS OF ORAL SURGERY

1. SURGICAL TREATMENT OF MULTIPLE RECESSION OF THE GUMS 1-2 CLASSES ACCORDING TO MILLER IN THE AREA OF 21-24TH TEETH

The case describes the use of a dura mater collagen membrane as a plastic material for thickening the gum biotype in the treatment of multiple recessions instead of free de-epithelized autotransplants from the palate.



1. Initial clinical picture in the oral cavity. Gum recessions in the 21st, 22nd, 23rd and 24th teeth of grade 1-2 Miller. Lack of attached gums in the area of 22-24 teeth.



2. Design of an apical-coronal displacement operation in a two-layer technique with an adequate surgical technique according to M. de Sanctis, J. Zuccelli (2000).



3. De-epithelization of the anatomical interdental papillae with an acute method (scalpel) to create an acceptance zone for surgical papillae.



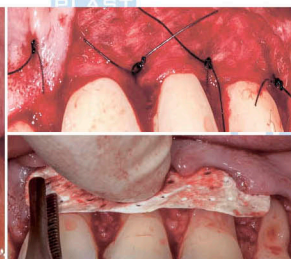
4. The size of the required graft is 15 mm in the area of the 21st and 22nd teeth. For the formation of attachment and thickening of the gum biotype in the area of 21-22 teeth about 30 mm.



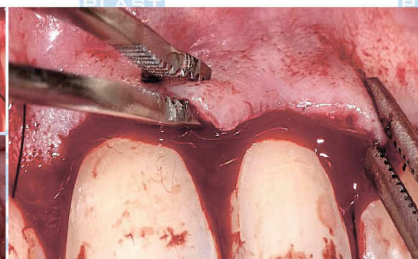
5. Allogenic collagen membrane (dura mater), pre-modeled with scissors and perforated in a dry form with a periodontal probe, ready for hydration.



6. Fixation of membrane at the CEC level, where it is necessary to create an attached gingiva. Restores the level of biological width at the physiological level.



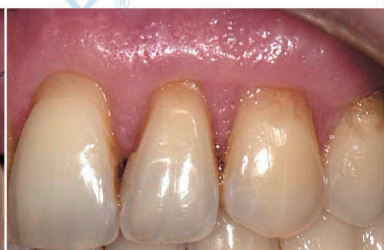
7. Fixation with double loop-shaped sutures to the teeth or single interrupted sutures to the anatomical de-epithelial papillae.



8. Control of mobility of flap, if necessary, additional mobilization by the acute method. Design of flap is compared with anatomical papillae.



9. Fixation of flap with double looped stitches to the teeth from the central tooth to the distal bilateral. Complete closure of the membrane to flap.



10. Clinical picture in the oral cavity 3 months after surgery. Marked thickening of the volume of attached keratinized gums. Reducing the depth of the recession.



11. 6 months. The volume of the gums is within the physiological norm. Restoration of the interdental papilla. Reducing the depth of recessions of 21, 22, 23 and 24 teeth.



12. 12 months. Final restorations of non-carious lesions in the CEC region. Complete elimination of gingival recession and restoration of the volume and quality of soft tissues.

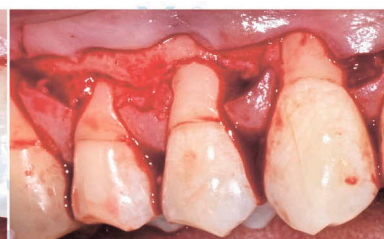
2. MULTIPLE GINGIVAL RECESSION TREATMENT IN GRADE 2 OF THE 13TH-15TH TEETH BEFORE ORTHODONTIC TREATMENT



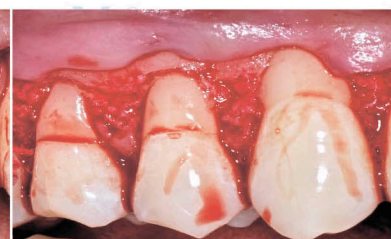
1. Initial clinical picture in the oral cavity. Gum recessions in the 13th, 14th, 15th and 16th grade 2 teeth according to Miller. Lack of attached gums in the area of 13-16 teeth.



2. Design of an apical-coronal displacement operation in a two-layer technique with an adequate surgical technique according to M. de Sanctis, J. Zuccelli (2000).



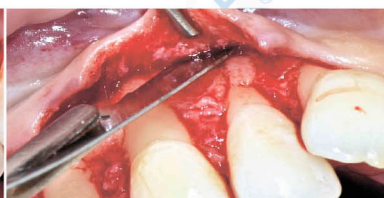
3. The 14th tooth is selected as the central recession tooth. SNL medially bilaterally rotated to it. Flap is full-layer with maximum periosteum preservation.



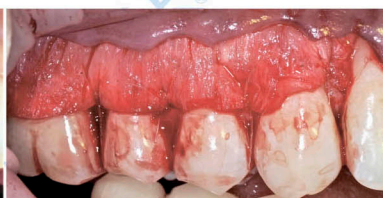
4. De-epithelization of the anatomical interdental papillae with an acute method (with scalpel) to create an acceptance zone for the surgical papillae (flap).



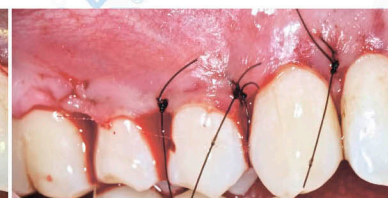
5. Chemical treatment of tooth root surfaces with gel 18-22% EDTA, exposure time 2 minutes. Removal of bacteria from the cell-free cement of the root surface.



6. Control of mobility of flap, if necessary, additional mobilization by the acute method (with scalpel). Design of flap is compared with anatomical papillae.



7. Fixation of membrane at the level of the Central Electric Networks, where it is necessary to create an attached gingiva. Restores the level of biological width at the physiological level.



8. Fixation of flap with double loop-shaped stitches to the teeth from the central tooth to the distal bilateral. Complete closure of the membrane to flap.



9. Clinical picture in the oral cavity 9 months after surgery. Marked thickening of the volume of attached keratinized gums. Reducing the depth of the recession.

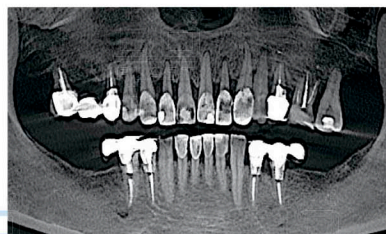


10. 18 months. The volume of the gums is within the physiological norm. Restoration of the interdental papilla. Reducing the depth of recessions for 13, 14, 15 and 16 teeth.

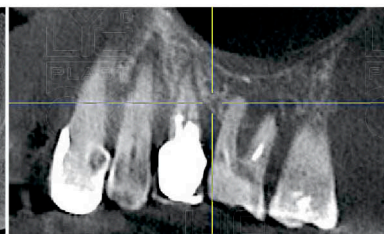


11. 30 months. Final restorations of non-carious lesions in the CEC region. Complete elimination of gingival recession and restoration of the volume and quality of soft tissues.

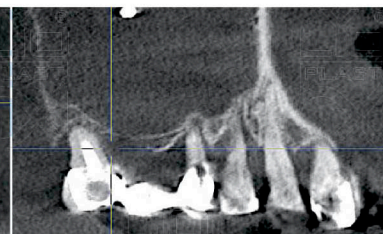
3.COMPARATIVE USE OF XENO AND ALLOMATERIALS FOR RAISING THE BOTTOM OF THE MAXILLARY SINUS WITH SIMULTANEOUS IMPLANTATION



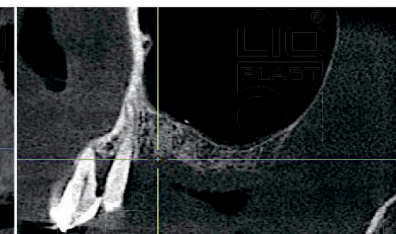
1. The original picture. CGP severe severity, edentia 36, 37, 47, 46 teeth. Probing 17-14, 24-27 teeth 12 mm, mobility, exposure of necks to 1/2 the length of the roots.



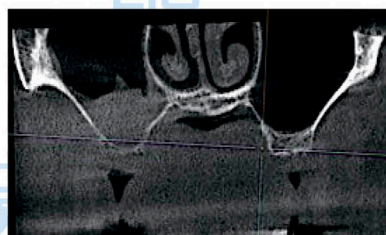
2. The maxillary alveolar resorption is registered, reaching the apices of individual teeth, on average 2/3 of the root length, with a predominance of the vertical.



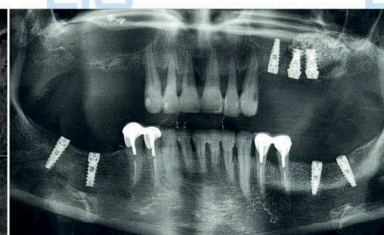
3. In the area of the maxillary sinus on the right, a filling material was found in the right sinus with peripheral edema of the mucous membrane of the h / w sinus on the right.



4. Removal of teeth (partially). Curettage of the wells and preservation using Lyoplast-S® (sponge mineralized powder). The height of the bone is 4.2 mm.



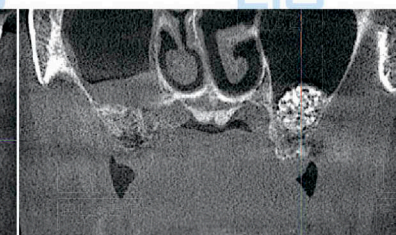
5. The bone volume determines the choice of material and surgical technique. in the 1st quadrant - an alloblock with bicortical implant fixations, in the 2nd - a classic sinus lift with a xenograft.



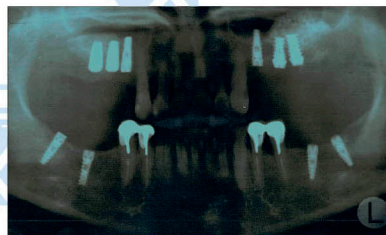
6. X-ray picture after implantation in the 2nd quadrant. X-ray contrast material, Achieving optimal primary stability of implants.



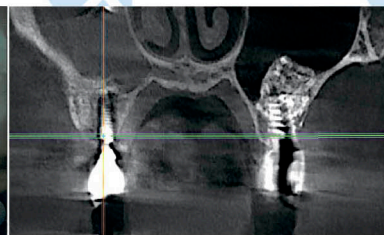
7. The difference in the electron density of the material due to differences in the origin and production technology. Allogenic material in the picture is more homogeneous.



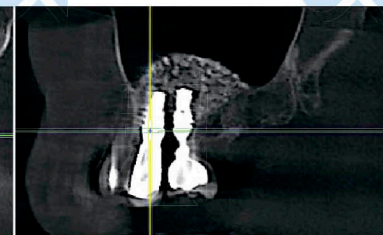
8. It is noticeable in the photo that the xen material was not mixed with its own fabrics throughout the volume. In the area of allomaterial, the structure has a physiological appearance.



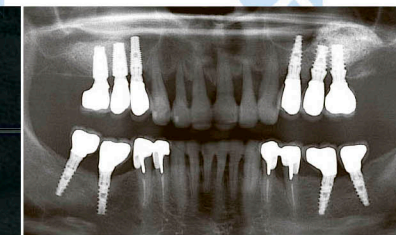
9. Computed tomography 6 months after the implants are installed. All implants are stable, ready for prosthetics. Noticeable difference pattern in the sine.



10. Computed tomography after 12 months. Made prosthetics single crowns on implants with the manufacture of individual abutments.



11. Xenomaterial granules that have not been replaced by their own tissues due to the patient's low regenerative potential are well visualized.

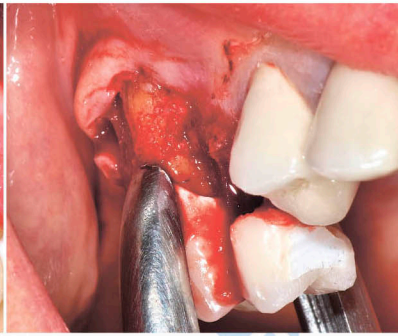


12. In the first quadrant, a new bone of good quality is visualized without residual material. In the second quadrant - granules of material having a characteristic pattern.

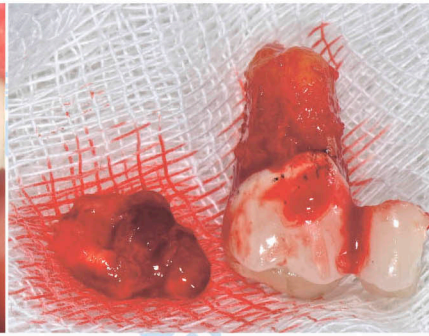
4. CYSTECTOMY OF THE ODONTOGENIC CYST OF THE 12TH 13TH AND 14TH TEETH. PLASTIC DEFECTS



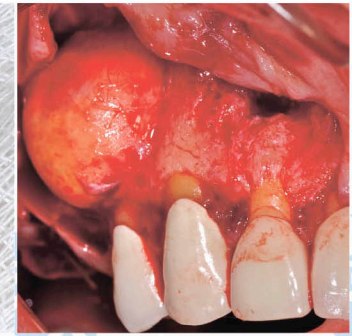
1. The original clinical picture in the mouth. The odontogenic cyst of the upper jaw was diagnosed with preservation of the integrity of the cyst membrane.



2. Removal of the 16th tooth, cystectomy, well inspection. Sawing orthopedic structure for tooth extraction. The tooth is mobile, at the root of granulation.



3. Removal of the 16th tooth, cystectomy, well inspection. Partial lysis of the tooth root, granulation formations and areas of the shell of the cyst.



4. Incision and flap design of the alveolar. Visualization of cysts in the roots of the 14th and 15th teeth of a large size. Resorption of the vestibular bone wall.



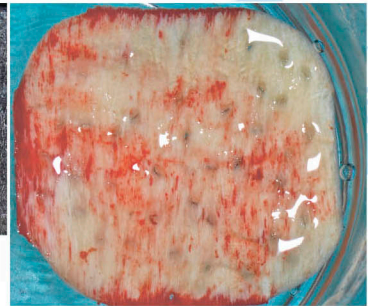
5. Cystectomy, defect revision. The husked cyst of 15 mm. The shell of the cyst is preserved, parts of the shell of the cyst are absent in the cavity.



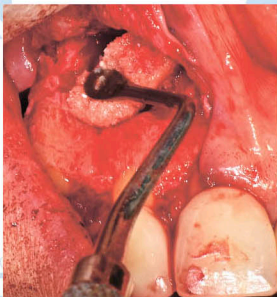
6. Preparation of bone bioimplant. Mixing demineralized compact bone powder and mineralized sponge powder.



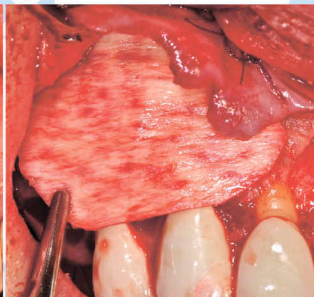
7. Preparation of bioimplants and PRF membranes. Obtaining a fibrin clot from the patient's venous blood in test tubes with an activator.



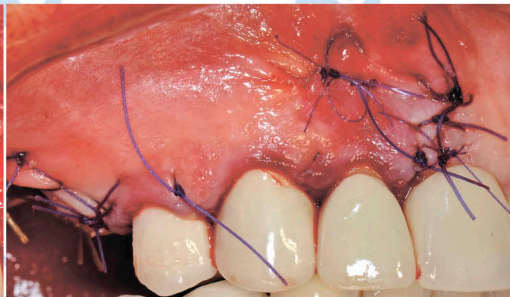
8. Preparation of bioimplant - collagen membrane (dura mater). Dry modeled perforated TMO membrane rehydrated in 0.9% NaCl.



9. Filling defects after cystectomy. Formation of osteotropic bioimplant with the addition of a liquid fraction of fibrin glue.



10. Filling the defect after cystectomy. Dry perforated membrane (dura mater) for the prevention of postoperative edema and better vascularization.

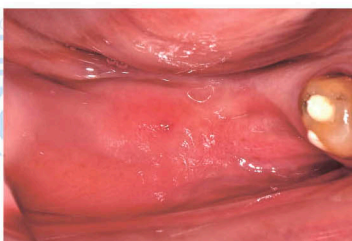


11. Alignment of the flap edges and suturing of the surgical wound. Double blanket mattress seam for tight fixation of the flap. Single interrupted sutures in the perforation zone of the flap.

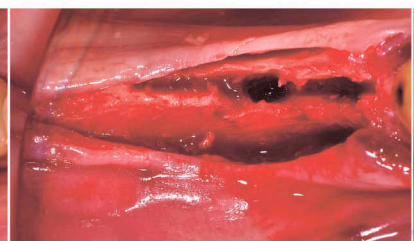


12. Clinical picture in the oral cavity after 12 months. Alveolar volume recovery in height and width. Soft tissue is normal. The color of the gums is pale pink.

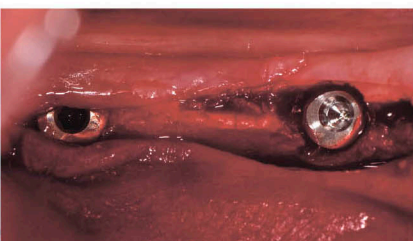
5. ALVEOLAR PROCESS AUGMENTATION BY SPLITTING WITH SIMULTANEOUS IMPLANT PLACEMENT



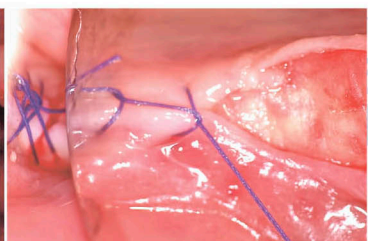
1. The original clinical picture in the mouth. Atrophy of the alveolar process in the positions of the 46th, 47th and 48th teeth. Atrophy of soft tissue gums.



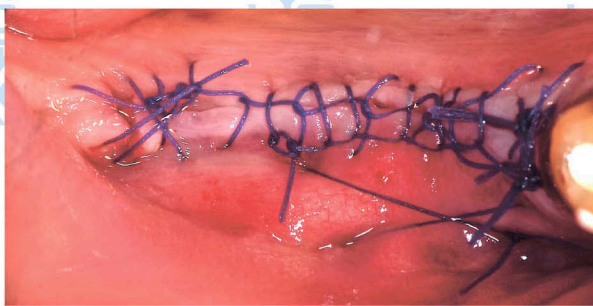
2. Alveolar process augmentation by splitting. Splitting alternate replacement of expanders in the positions of implants.



3. Installation of implants in surgical wells. Implant placement subcutaneously with minimal immersion under a compact plate.



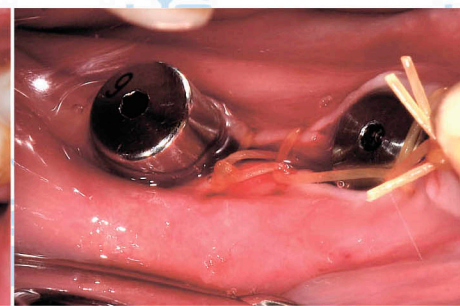
4. Reducing the edges of the flaps and suturing the wound. Closing the collagen membrane (dura mater) flap over the entire surface. Continuous knotted suture.



5. Large mattress cruciform stitch at the base of the alveolar. Compression and fixation of flap to the membrane and to the alveolar process.

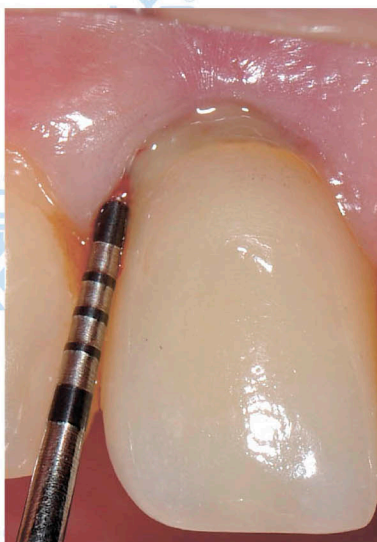


6. The clinical result of bone grafting after 8 months. The increase in the volume of the alveolar process in height and width. Measuring the thickness of the gums.

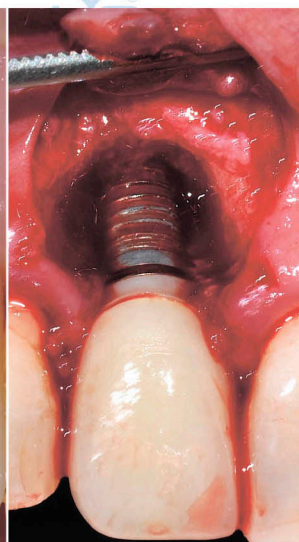


7. Installing the formers of the gums of the appropriate diameter. Lack of atrophy in the area of implants. Wound closure with continuous interrupted suture.

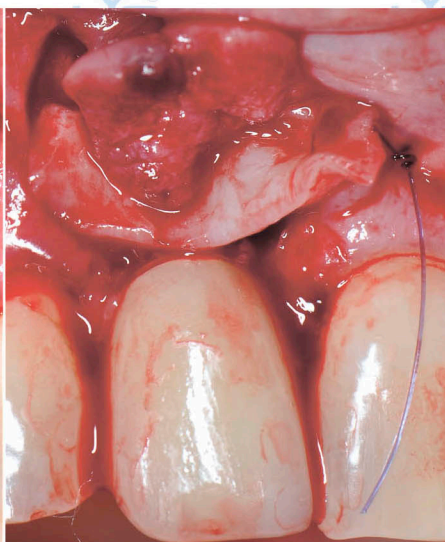
6. SURGICAL TREATMENT OF PERIIMPLANTITIS OF THE 12TH TOOTH



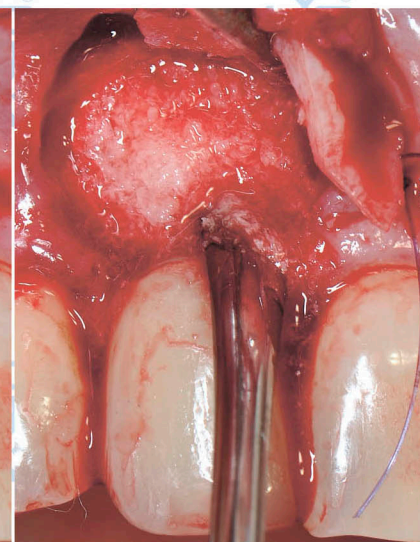
1. Initial clinical picture in the oral cavity. Sounding in the area of the interdenal papilla. Immersion probe 10 mm deep. Hemorrhagia.



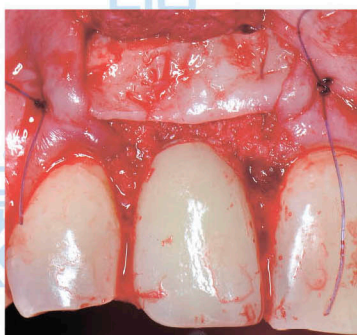
2. Bone defect in the implant area. Extensive bone resorption in the area of the implant. Circular defect with an exposure of more than half the length.



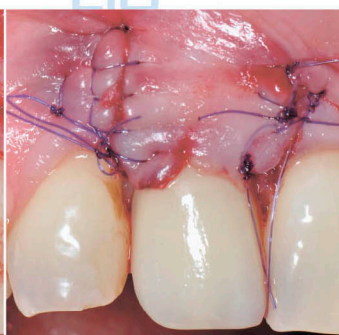
3. Formation of trapezoidal flap and its mobilization. The cleavage of flap below the level of MGC. Fixation of the autograft suture "on the reins".



4. Filling of the bone defect in the implant area. Mineralized sponge powder hydrated in 0.9% NaCl. Material introduction and condensation.



5. Positioning the autograft and fixation laterally. Uniform distribution of osteotropic bioimplant under fixed autograft.



6. Alignment of the edges of the patches and suturing of the wound. Fixing flap double blanket loop-like seam to the tooth. Subperiosteal sutures in the base of the flap.



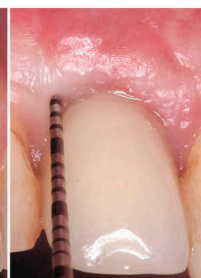
7. The clinical picture in the mouth at the time of removal of stitches (14 days). The formation of soft tissue volume is vestibular for the replacement of the defect and regeneration.



8. Clinical picture after 2 months. Restoration of interdenal papillae in height and volume. The movement of tissues continues. Low aesthetic indicators.



9. Clinical picture after 6 months. Full restoration of the volume and quality of soft tissues. Physiological view. High aesthetic performance. Norm.



10. Sounding in the area of the base of the interdenal papilla to a depth of biological width of 1 mm. Formation of an attached gingiva and restoration of the bone.