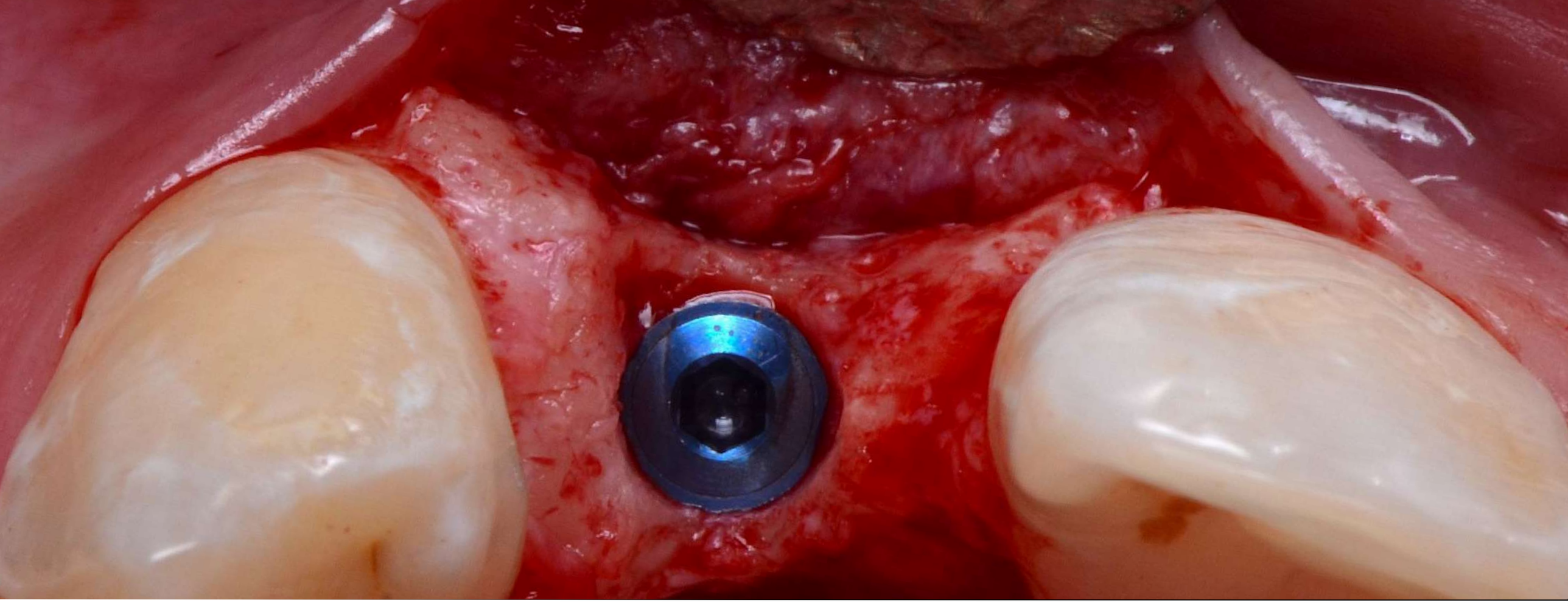






Surgical and Prosthetic Protocol for Unitary Implant in Healed Flange

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Abstract: This case presentation is about a 19 year old female patient who reported that, eight years ago, the upper right lateral incisor was detected radiographically retained in an unfavorable position, so it was decided at the time to do the surgical extraction and orthodontic treatment.
She has used a removable acrylic prosthesis ever since and now wishes to replace tooth 12 with an integrated bone implant.
This a step by step description of the treatment.











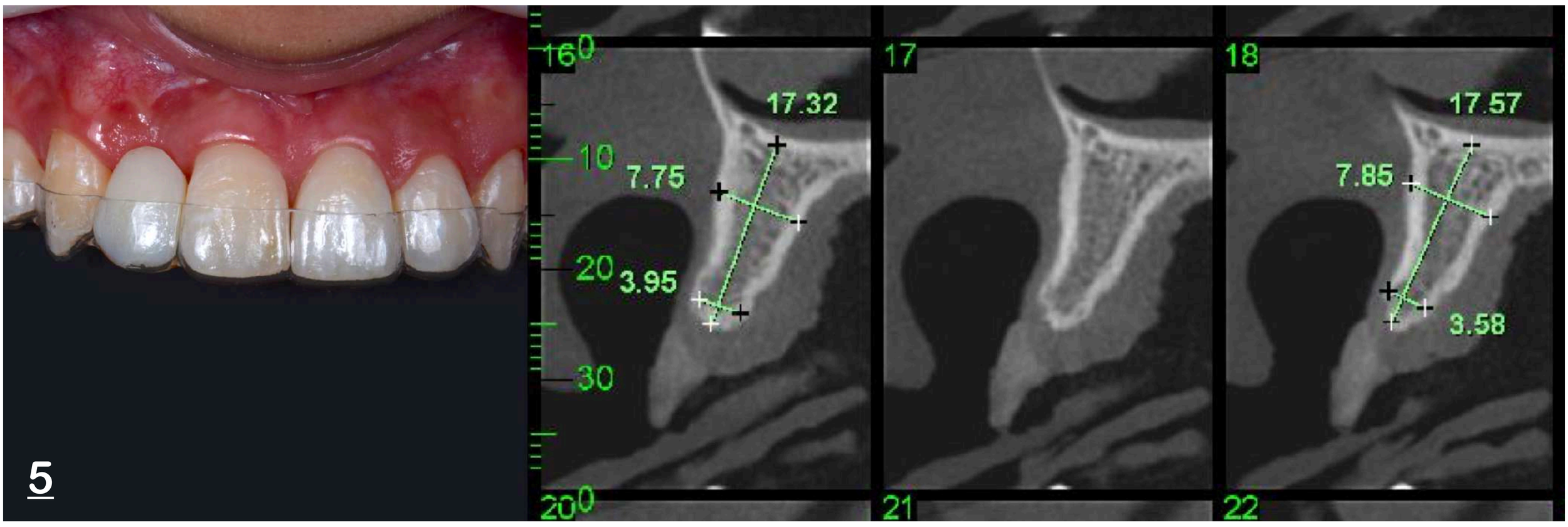
Fig. 1 Initial photograph of smile showing the absence of piece 12

Figs. 2a and 2b Intraoral aspect revealing the scar of the surgical extraction and the horizontal bone-gingival defect.

Figs. 3a and 3b Diagnostic wax up of the model and bys acryl dento gingival mock up

Fig. 4 Photograph of the mock-up from an angle showing the material compensating the horizontal defect and proposing the ideal emergency profile according to the wax up.





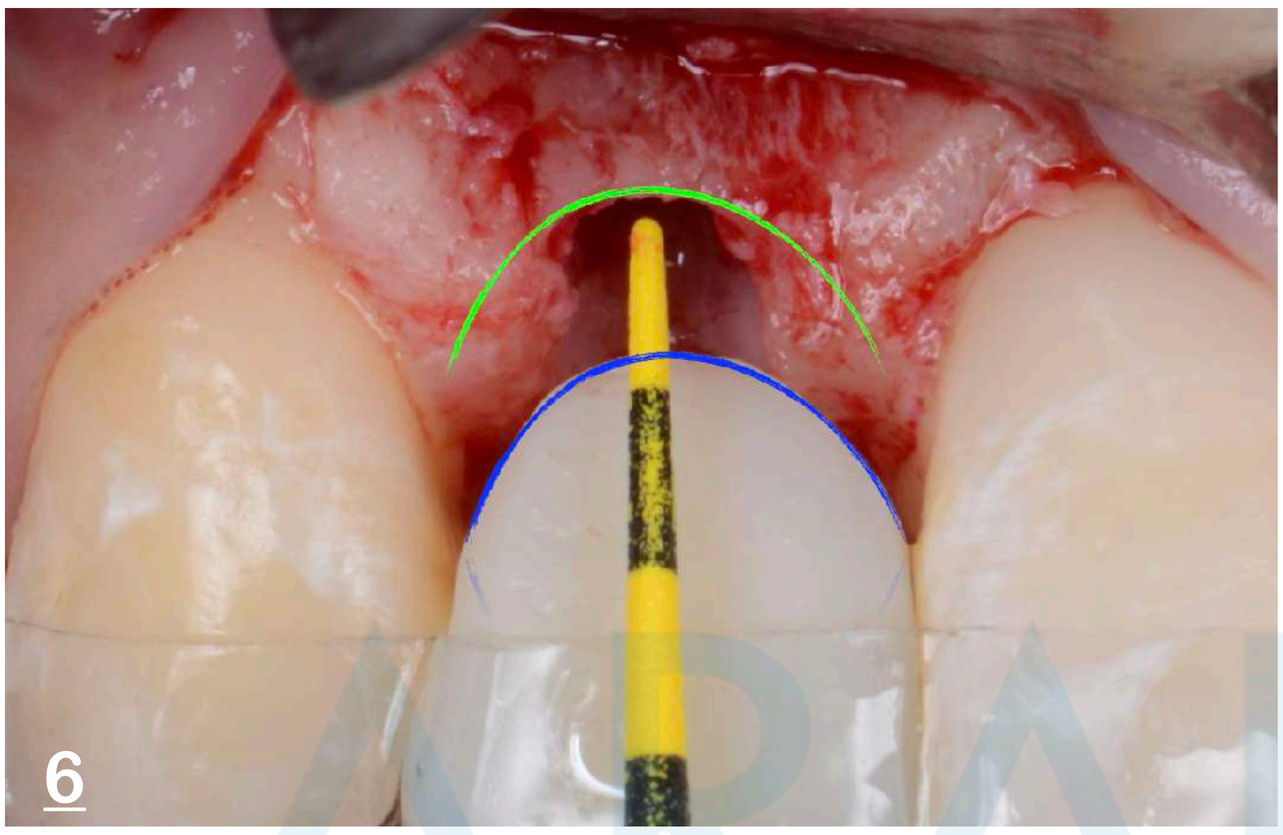
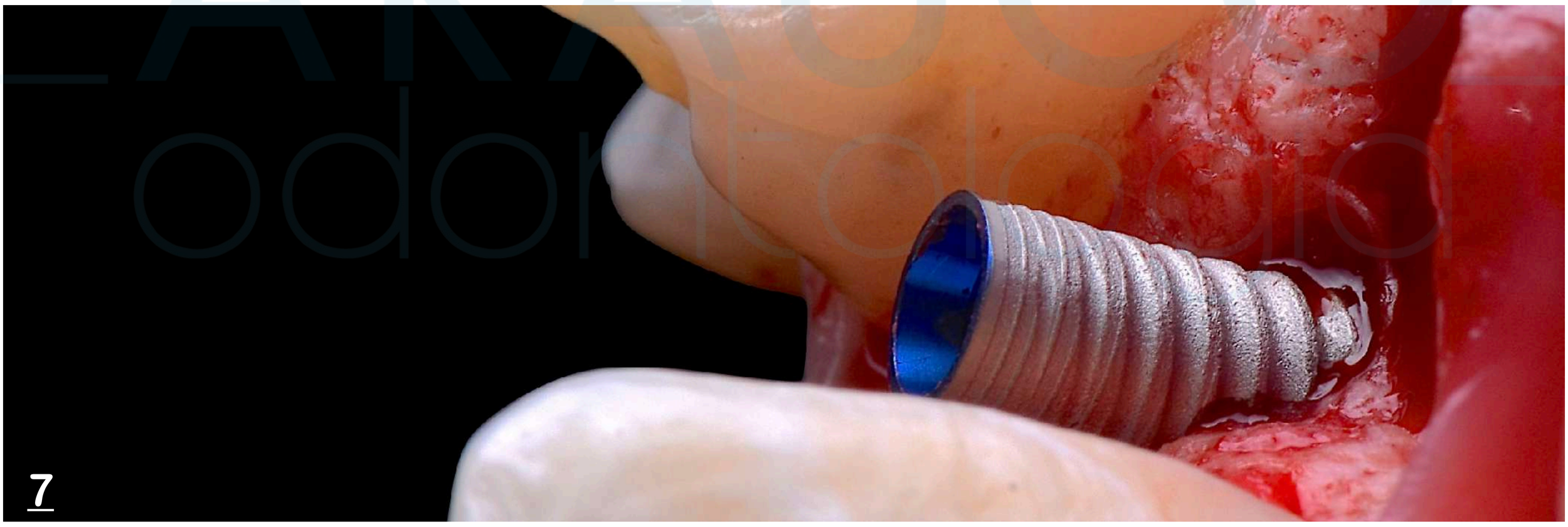


Fig. 5 Bis acryl tomographic guide with a medium radiopacity that permits the observance and planning of the position of the implant according to the prosthetic crown and to decide if the restoration will be screwed or cemented

Fig. 6 Flap elevation where the remodeling of the bone can be observed to achieve a correct distance from the clinical neck of the future prosthesis to the implant platform.



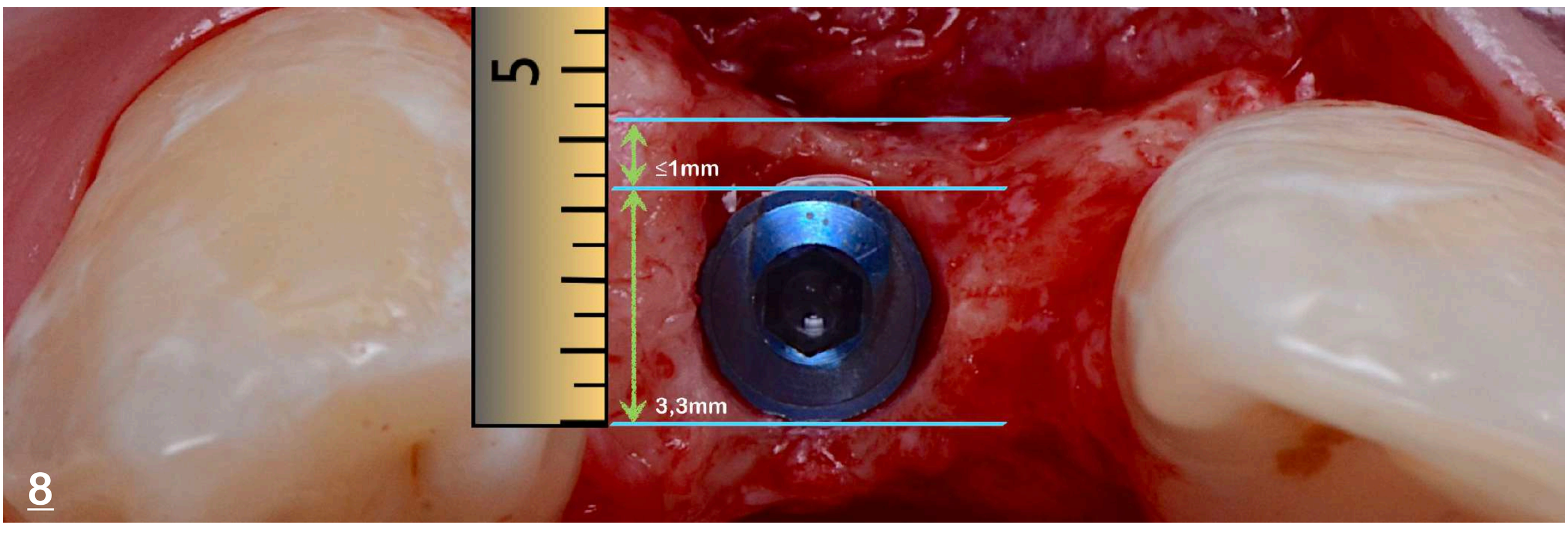
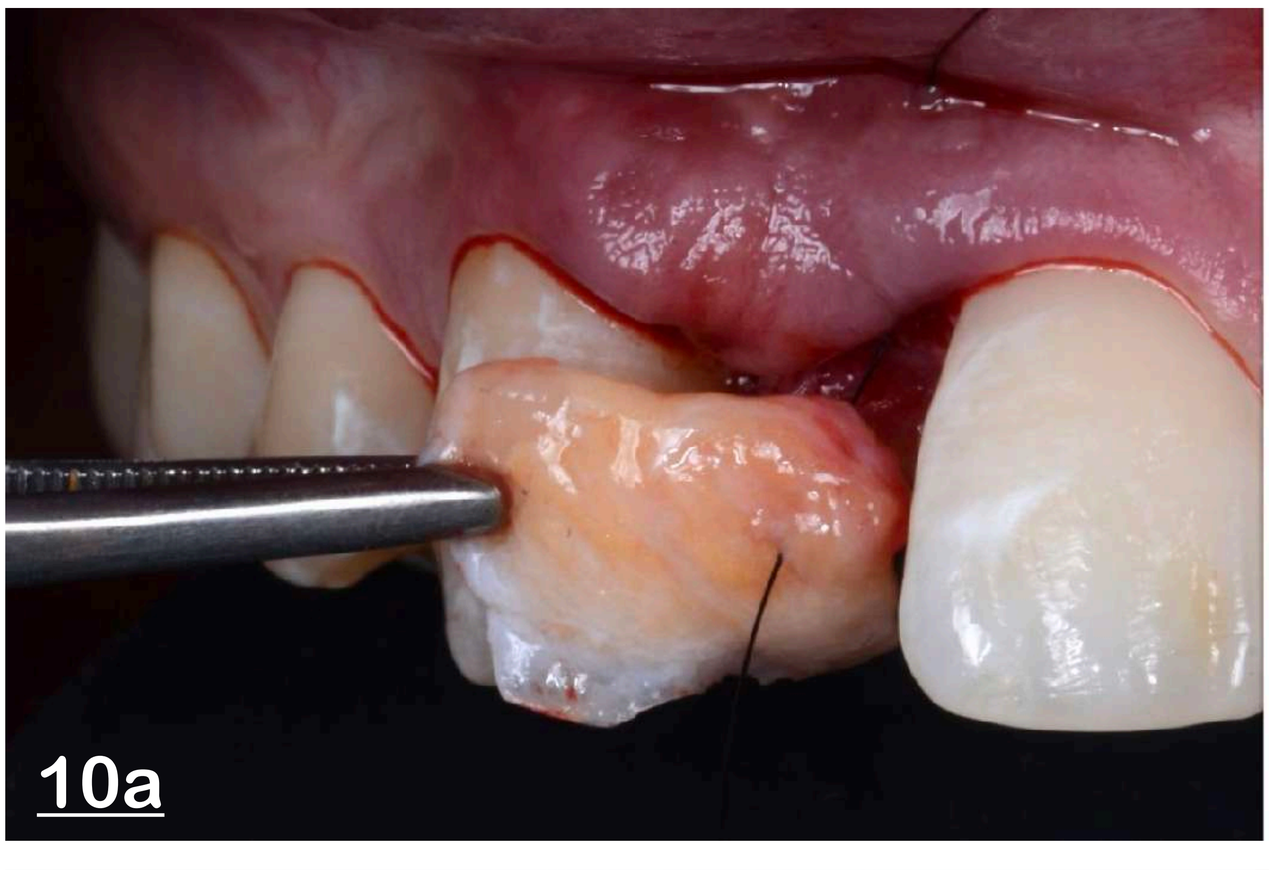


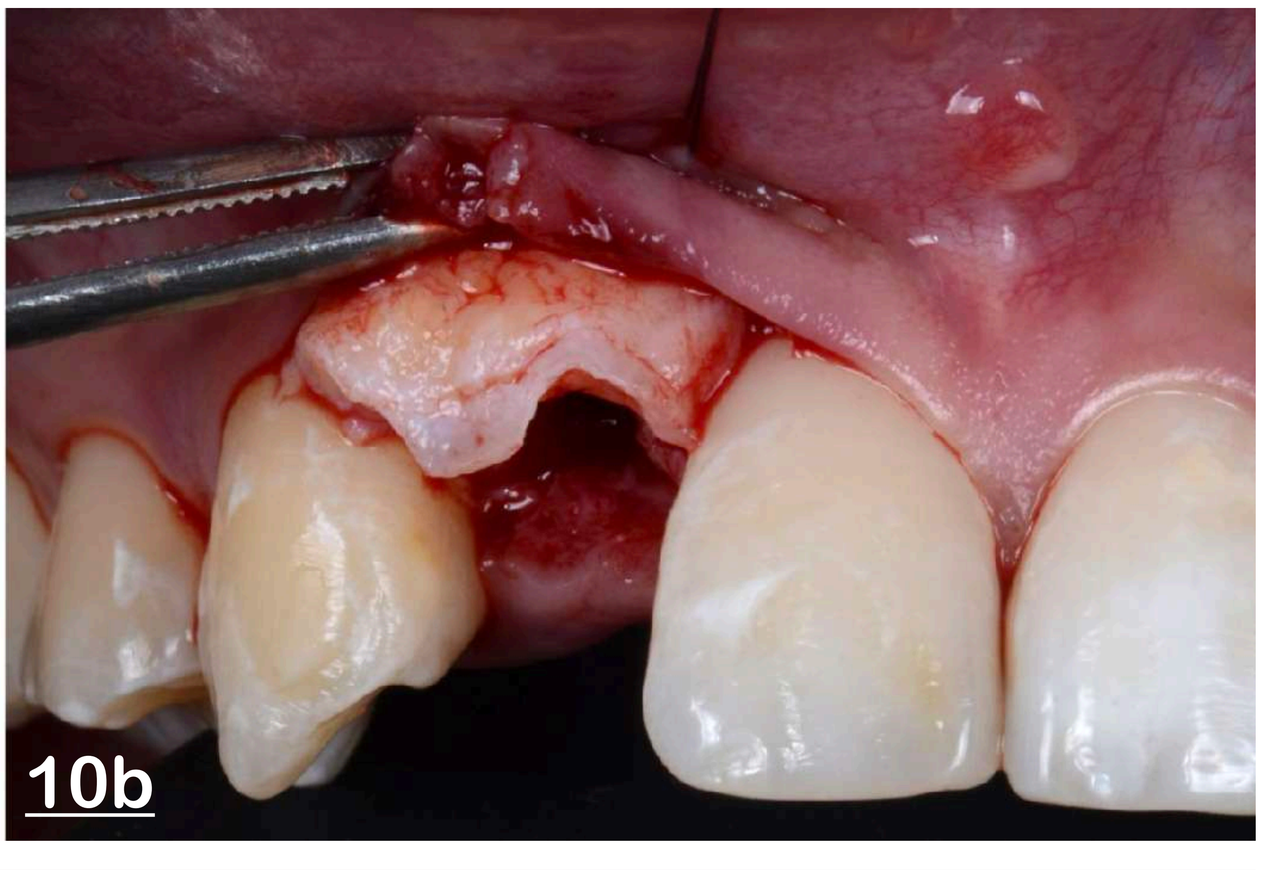
Fig. 7 Implant installation surgery MIS V3 3.30x13 NP

Fig. 8 Incisal view with a calibrated ruler showing the measurement of the bone defect and the presence of ≤1mm of bone in the buccal region of the implant



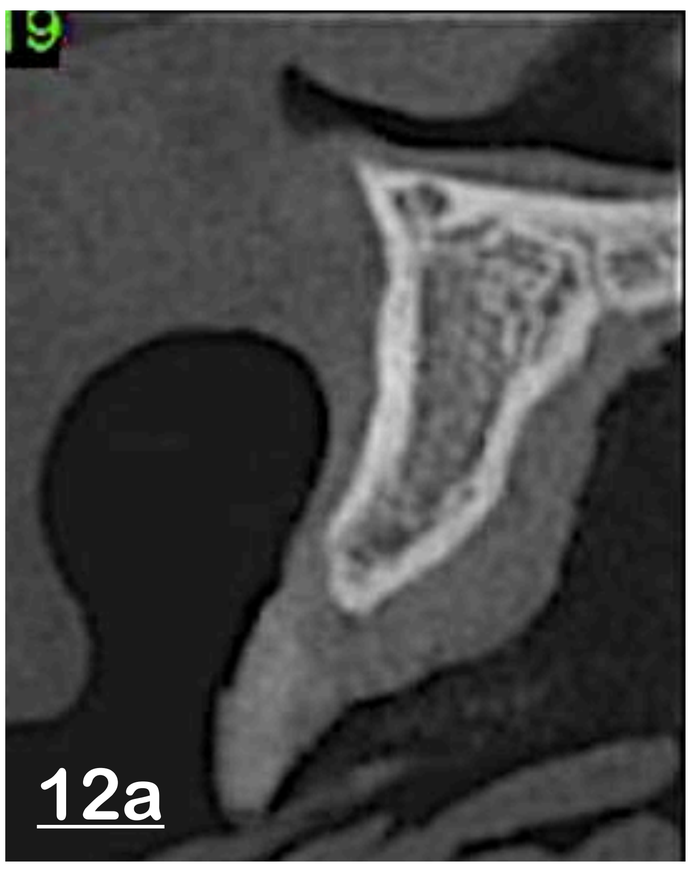


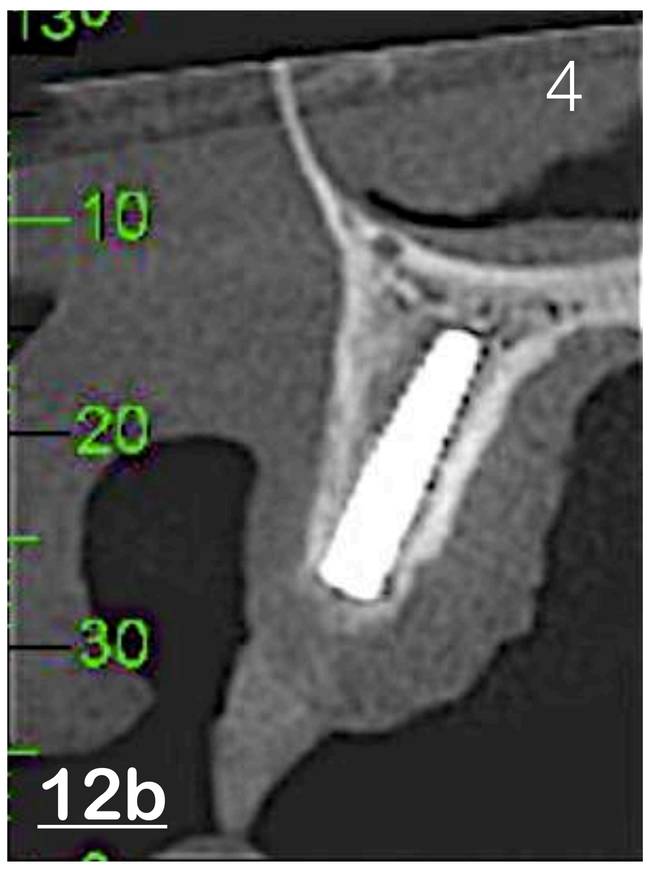












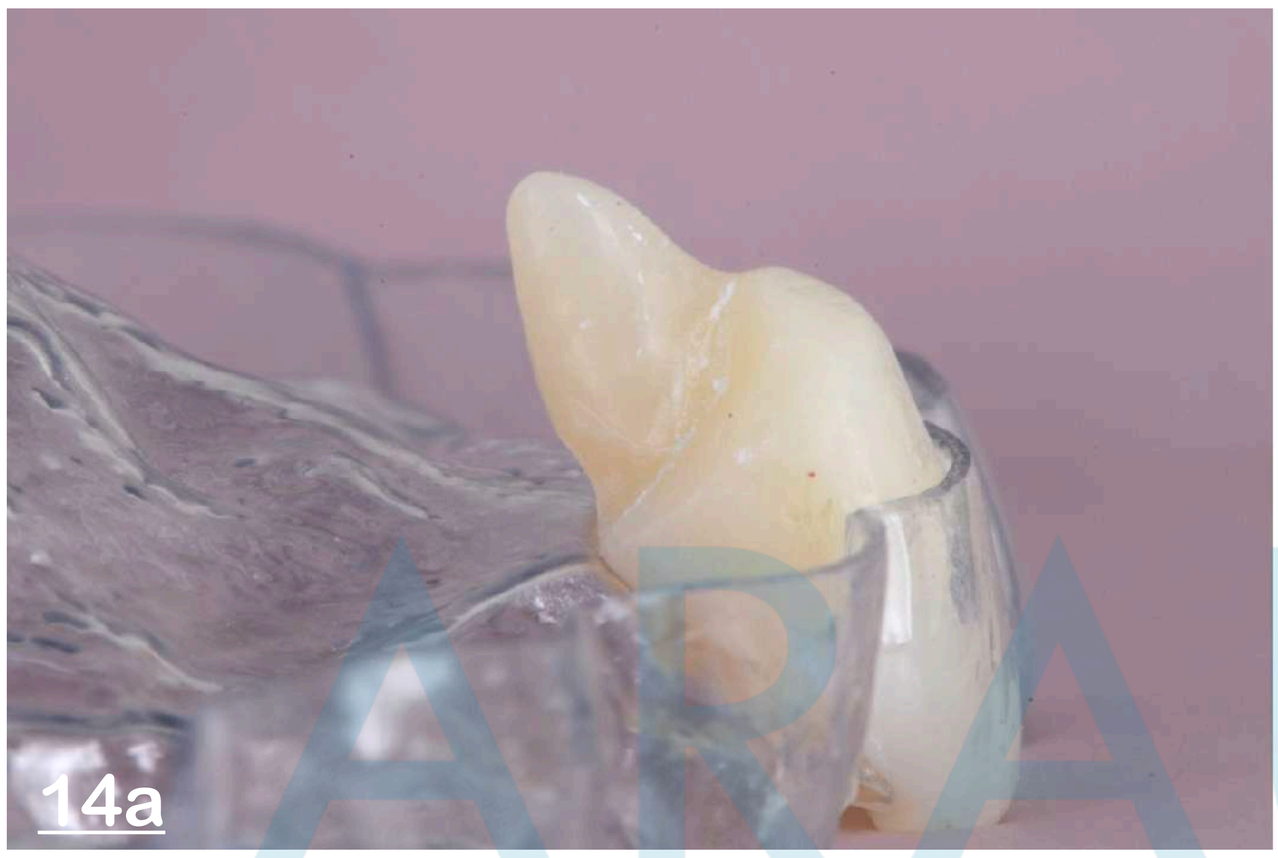
Figs. 9, 10a and 10b Connective tissue graft removed from the palate and located in the recipient area to improve the thickness and appearance of the buccal soft tissue

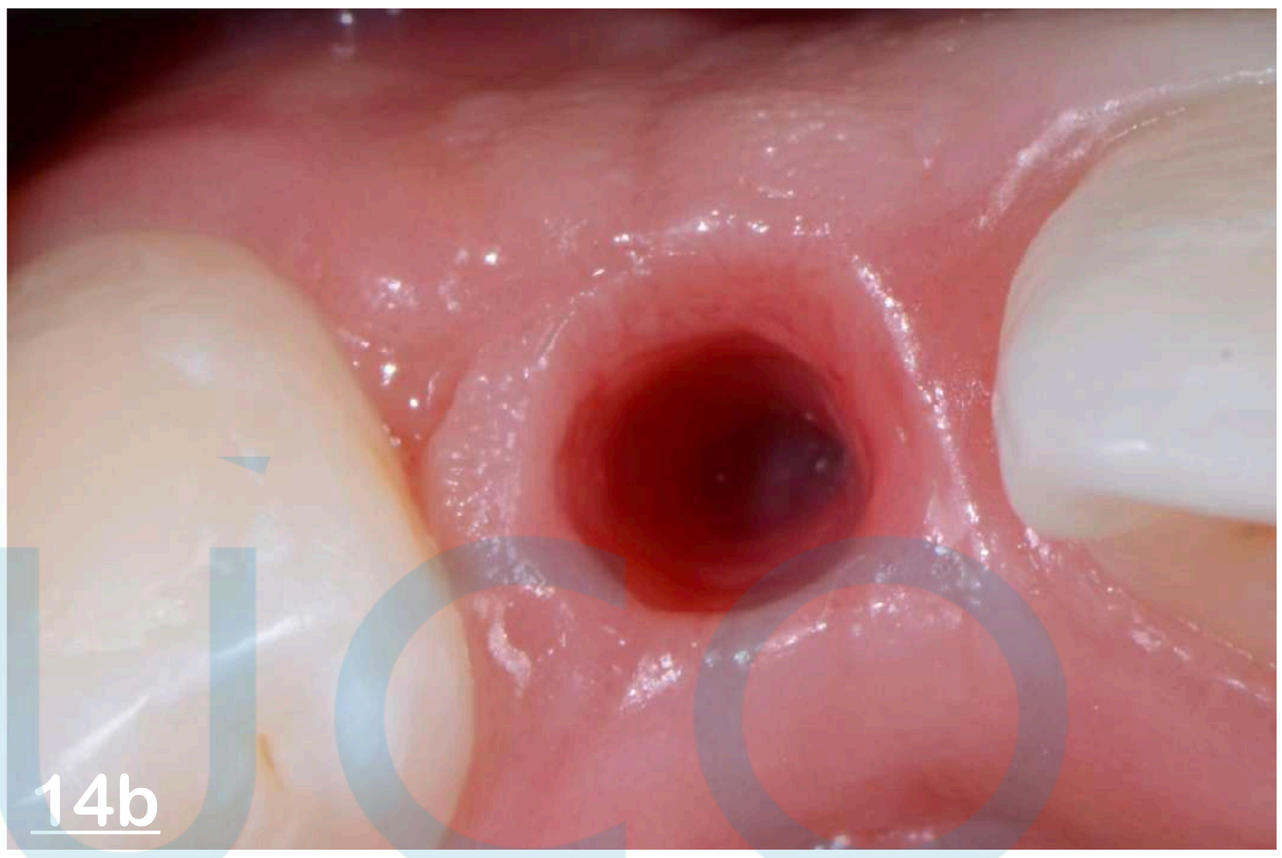
Figs. 11a and 12a Incisal view of initial model and initial tomographic image. In both images the horizontal defect and collapse of tissues can be noticed.

Figs. 11b and 12 b Incisal view and tomographic image four months after implant surgery and connective tissue graft where we can observe the increase of vestibular tissue thickness and the correct location of the implant for the cemented prosthesis

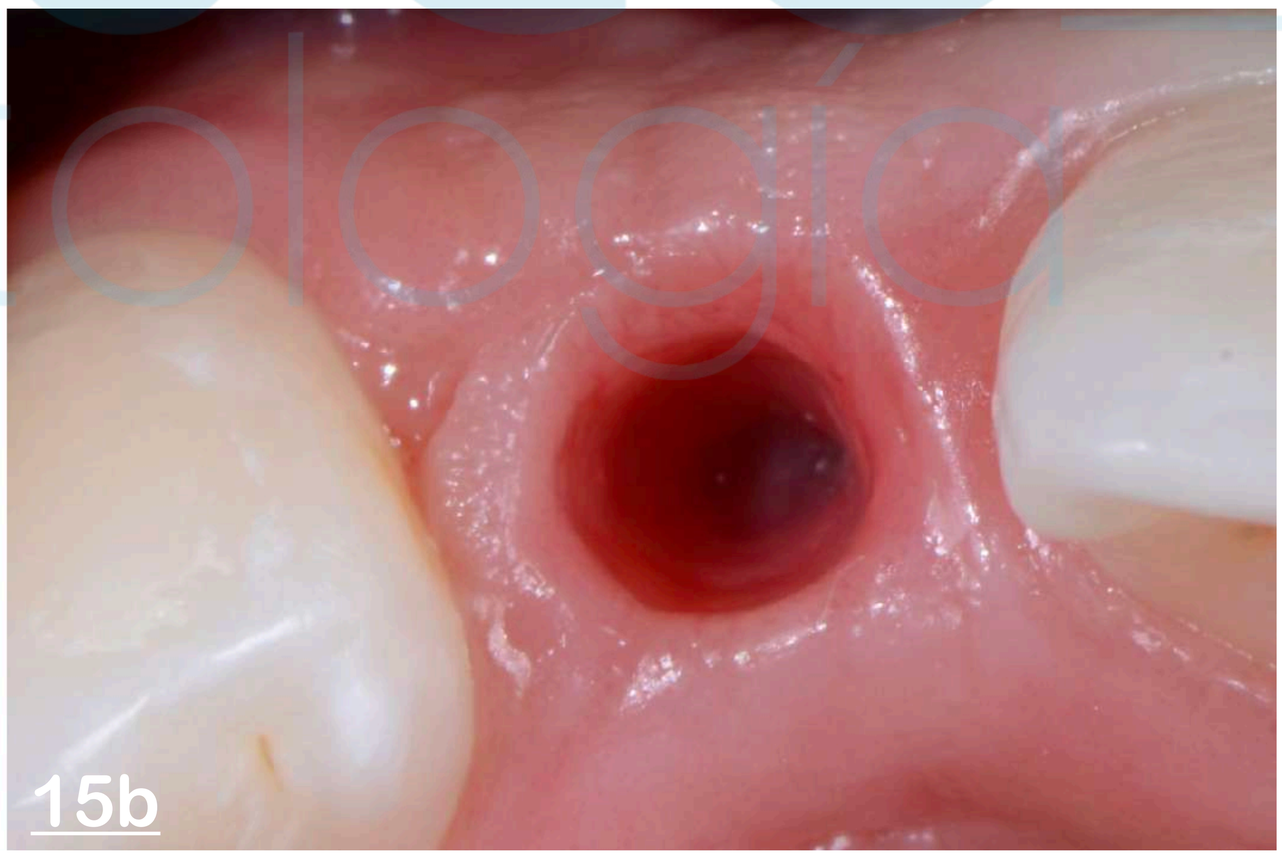
















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Figs. 13a to 16 b Conditioning of the soft tissue by means of a removable splint with periodic increments of composite resin creating areas of slight compression. This technique provides an atraumatic and controlled access to the implant making the future installation of the fixed pillar much easier





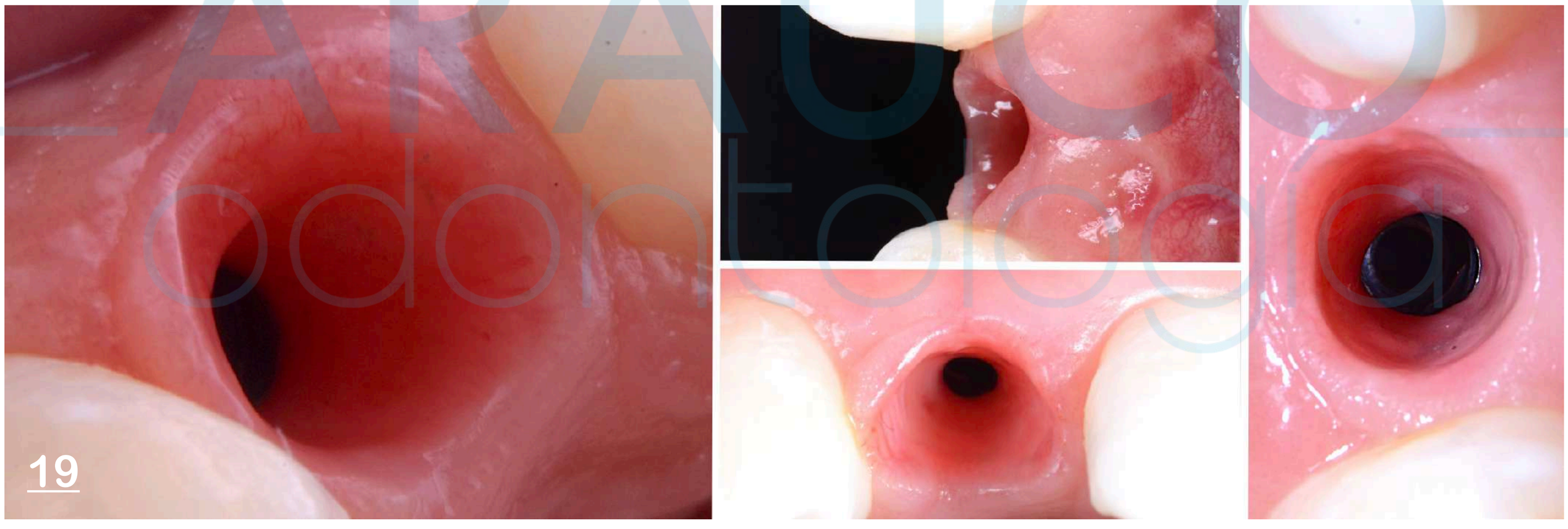
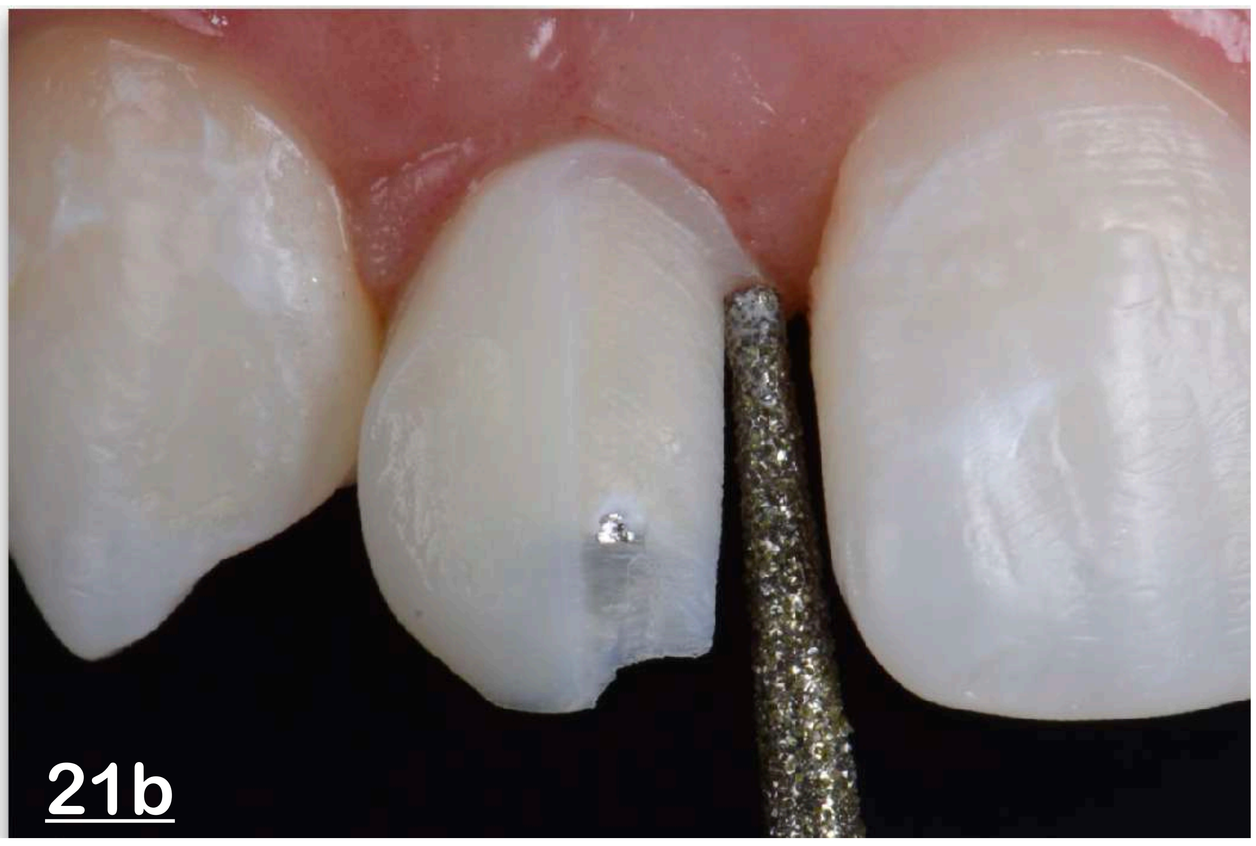


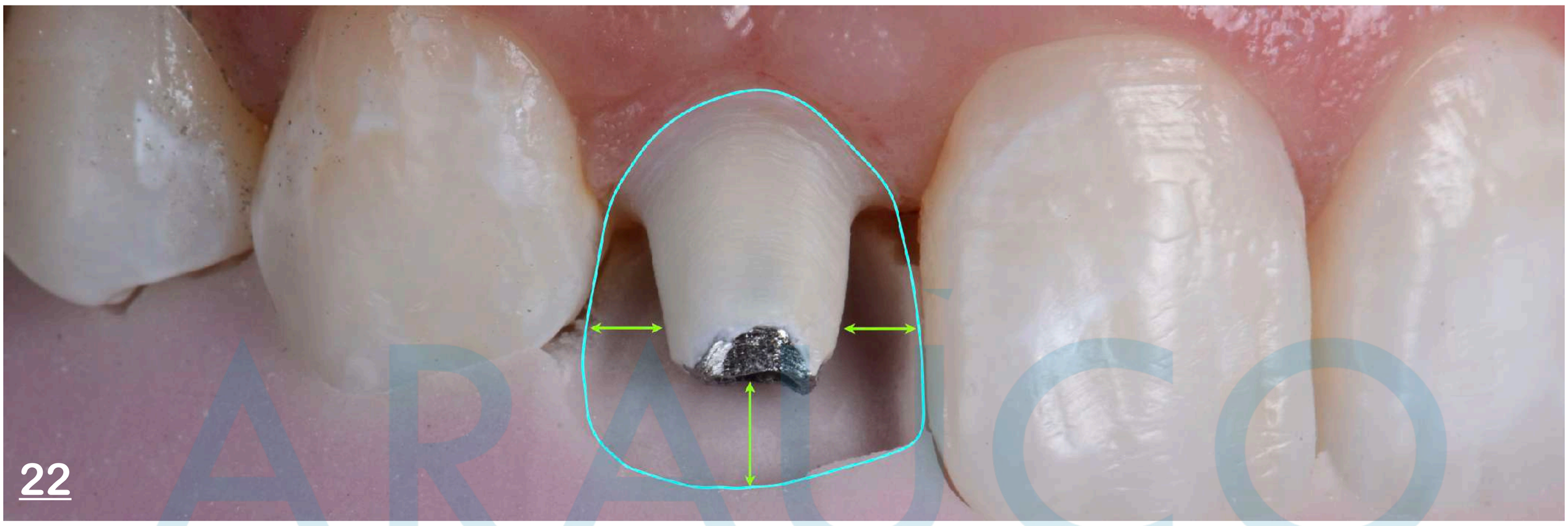


Fig. 17 Provisional abutment and crown installed in initial stage, defining horizontal and vertical profiles and starting the management of soft prosthetic tissue

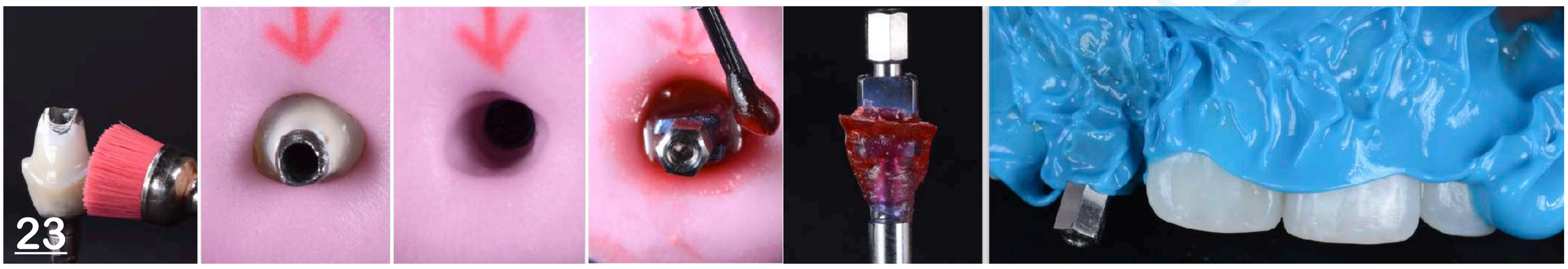
Figs. 18, 19 and 20 Modifications in the shape of the tooth making increases and wear of the provisional material, achieving a concave surface in the buccal face and straight or convex one in the interproximals, taking care of the polishing of the surface to achieve health and stability in the soft tissues







Figs. 21 y 22 Preparation of the provisional tooth in the same way as if it were a conventional preparation for cemented crown on a natural tooth. This technique allows very accurately determining the shape and ideal size of the abutment to receive a cemented crown that also has the desired shape and the correct thickness of material without modifying soft tissues that have already been stabilized.



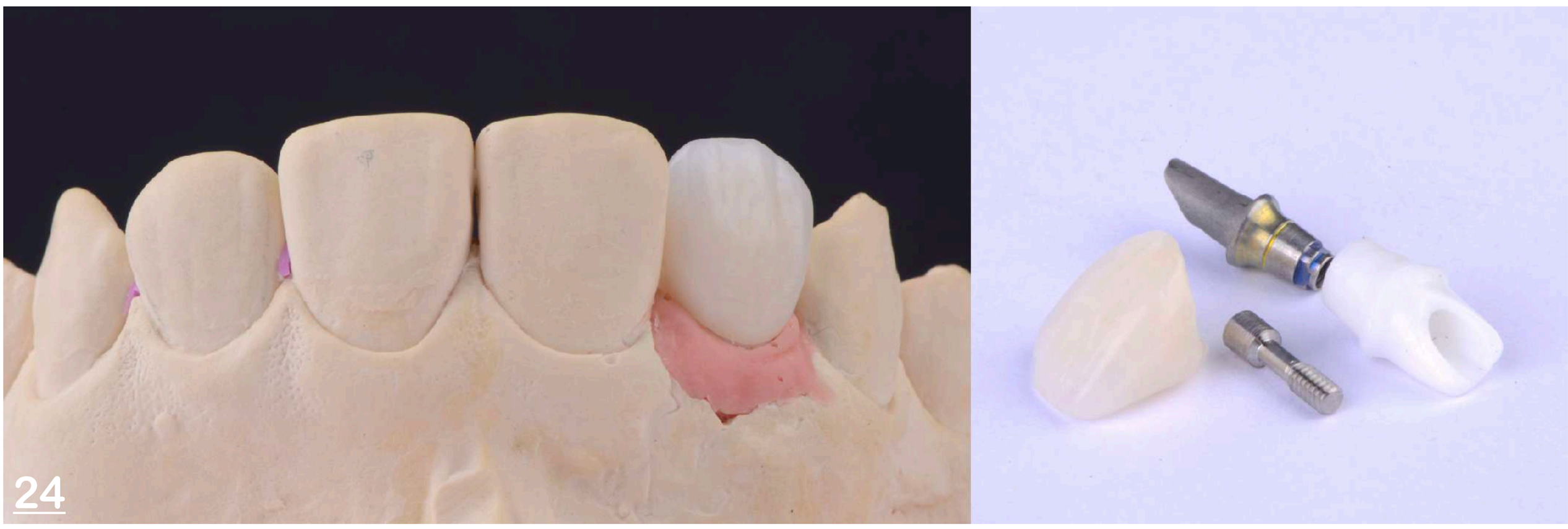


Fig. 23 Once obtained the ideal shape in the temporary abutment a duplicate of the sub gingival part is made with laboratory silicone to customize the transfer with acrylic resin and obtain an accurate and personalized definitive impression. The coronal part of the provisional abutment can also be duplicated or scanned so that the final abutment has the same shape.

Fig. 24 Final abutment and metal free crown *(Marco Terrazas, Dental Technician, Cochabamba, Bolivia.)*

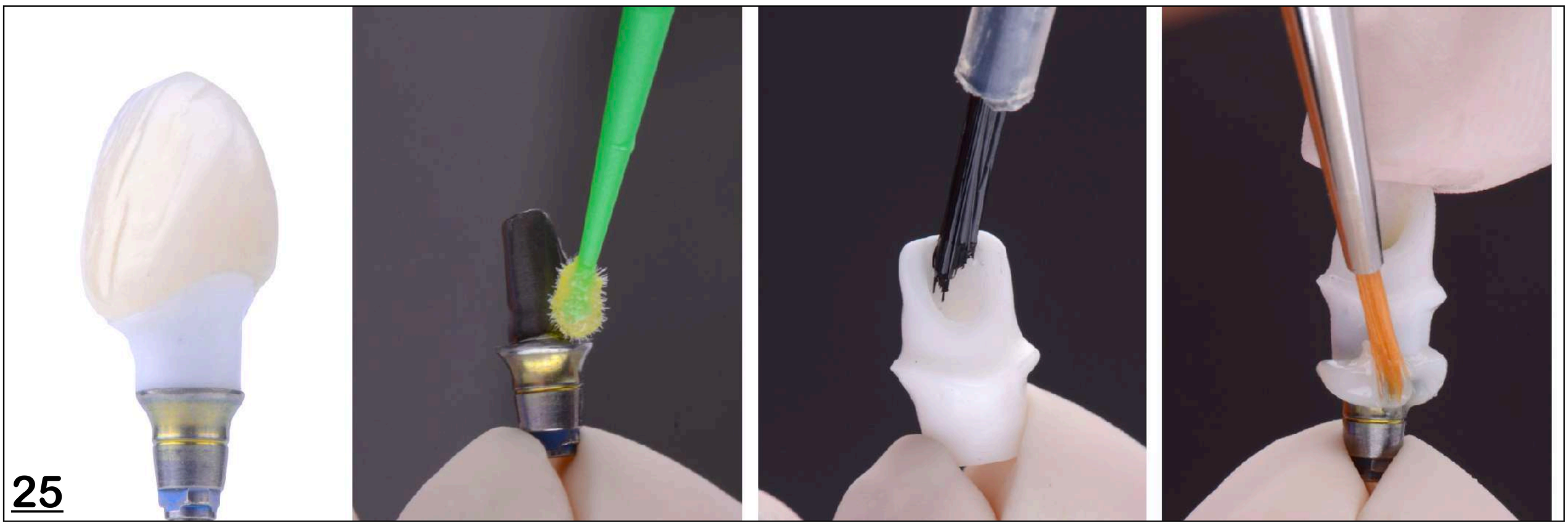


Fig. 25 Extraoral cementation of the customized abutment, carefully removing and cleaning all excess cement before screwing the abutment.

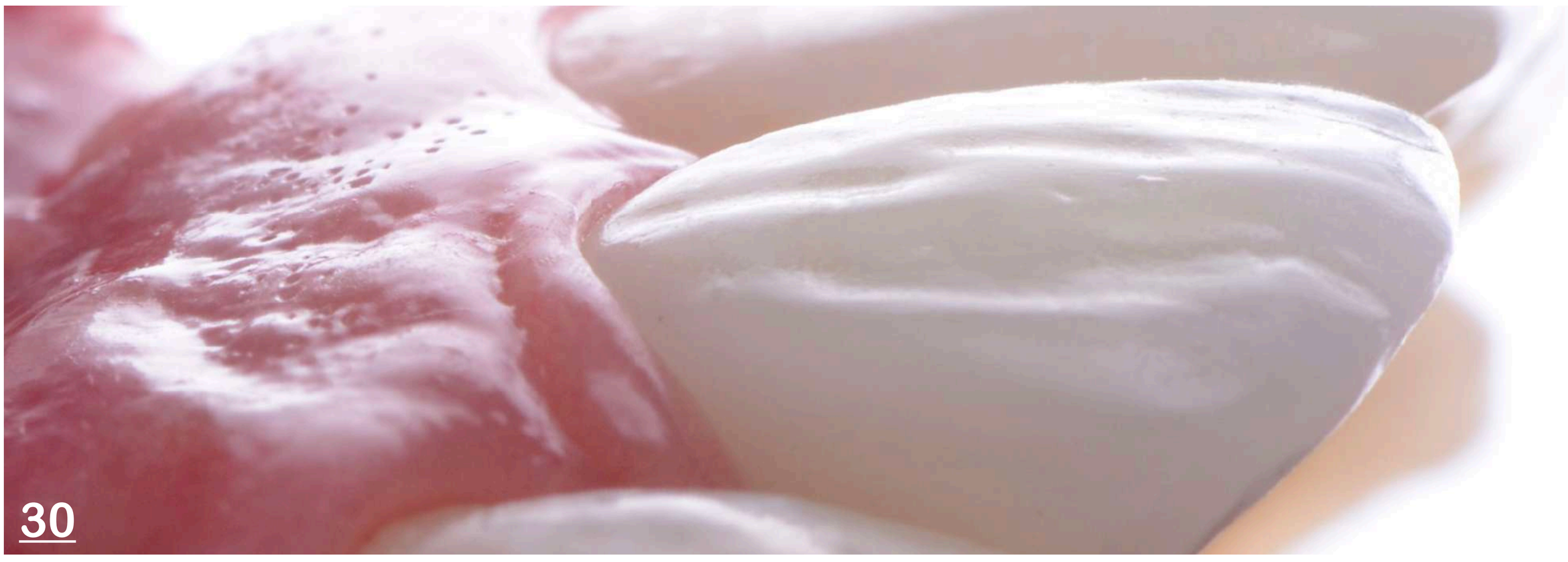




Figs. 26 y 27 Definitive cementation of the ceramic crown, cemented crowns over implants are susceptible to be left with cement remains, however the use of absolute isolation allows to have control of the excesses of cement, visualizing with precision the lines of termination to remove and to clean residues carefully.







Figs. 28, 29 y 30 Case completed, showing the satisfactory appearance of the restoration and stability of soft tissues. The correct shape and size can be observed according to the contralateral tooth. (in the middle of the procedure dental bleaching was performed)