Unitite

SCIENTIFIC DENTAL JOURNAL

S.I.N.


IMPLANTAT
EDUCATION POWERED BY S.I.N.

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SUMMARY

INTRODUCTION

From the synergy between the exclusive macrogeometry and the most advanced surface nanoactivation, **Unitite®** was born, a line of implants that has revolutionized the global market for its originality, innovation, and outstanding performance.

To reach the final product, **Unitite®** was developed based on 8 years of research at the best universities in the world, with studies starting around 2008. Therefore, we can prove its effectiveness through clinical and scientific results. More than 5 million dollars were invested in equipment, research, and validations. With the support of over 30 consultants, the line was thoroughly tested before its launch in early 2016, with more than 2,000 implants placed. Combining clinical trials with the studies conducted, the **Unitite®** line demonstrated excellent results, low bone loss, and superior quality of bone formed after implant placement.

UNITITE IS NOT JUST AN IMPLANT, IT IS A CONCEPT.

This concept is based on three main pillars:

MACROGEOMETRY

Its macrogeometry, exclusive to S.I.N., was meticulously designed, and the technologies applied to it align with what the implant market demands: high installation stability, accelerated bone regeneration, and versatility for the rehabilitation of any case.

This macrogeometry consists of the combination of the best features of conical and cylindrical implants, making it suitable for all bone densities, including post-extraction, with easy installation and excellent primary stability.

HEALING CHAMBERS AND HYBRID HEALING

The combination of the external threads, which contact the bone tissue, and the internal threads, which remain detached, promotes high-quality hybrid healing, contributing to greater bone quality and accelerated secondary stability. In addition, we have exclusive cervical microthreads that increase the bone contact area and improve the dissipation of occlusal forces, especially shear forces, thus reducing the risk of bone resorption.

MICROGEOMETRY

One of the most impactful advances in implantology has been surface treatments that alter the topography of implants. Surfaces that were initially smooth and machined became rough, facilitating osseointegration. This process increases fibrin adhesion and the contact area between the implant and bone, in addition to serving as a substrate for additive treatments.

The implants in the **Unitite®** line feature an initial surface treatment called Double Acid Etching (Sulfuric Acid and 30% Nitric Acid), which provides the implants with a moderately rough surface microtopography and prepares them to receive the nanometric bioactive Hydroxyapatite surface.

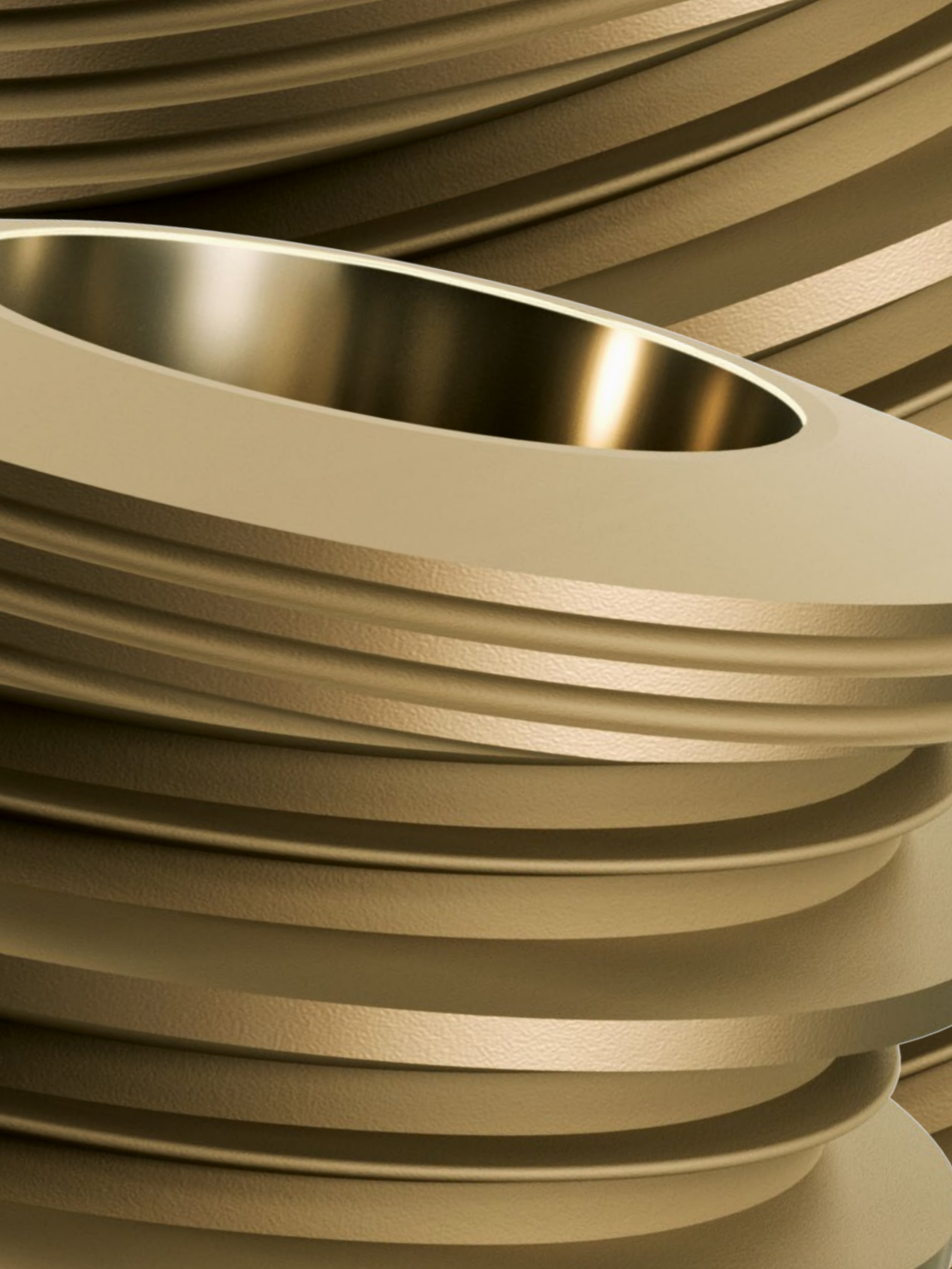
NANO SURFACE

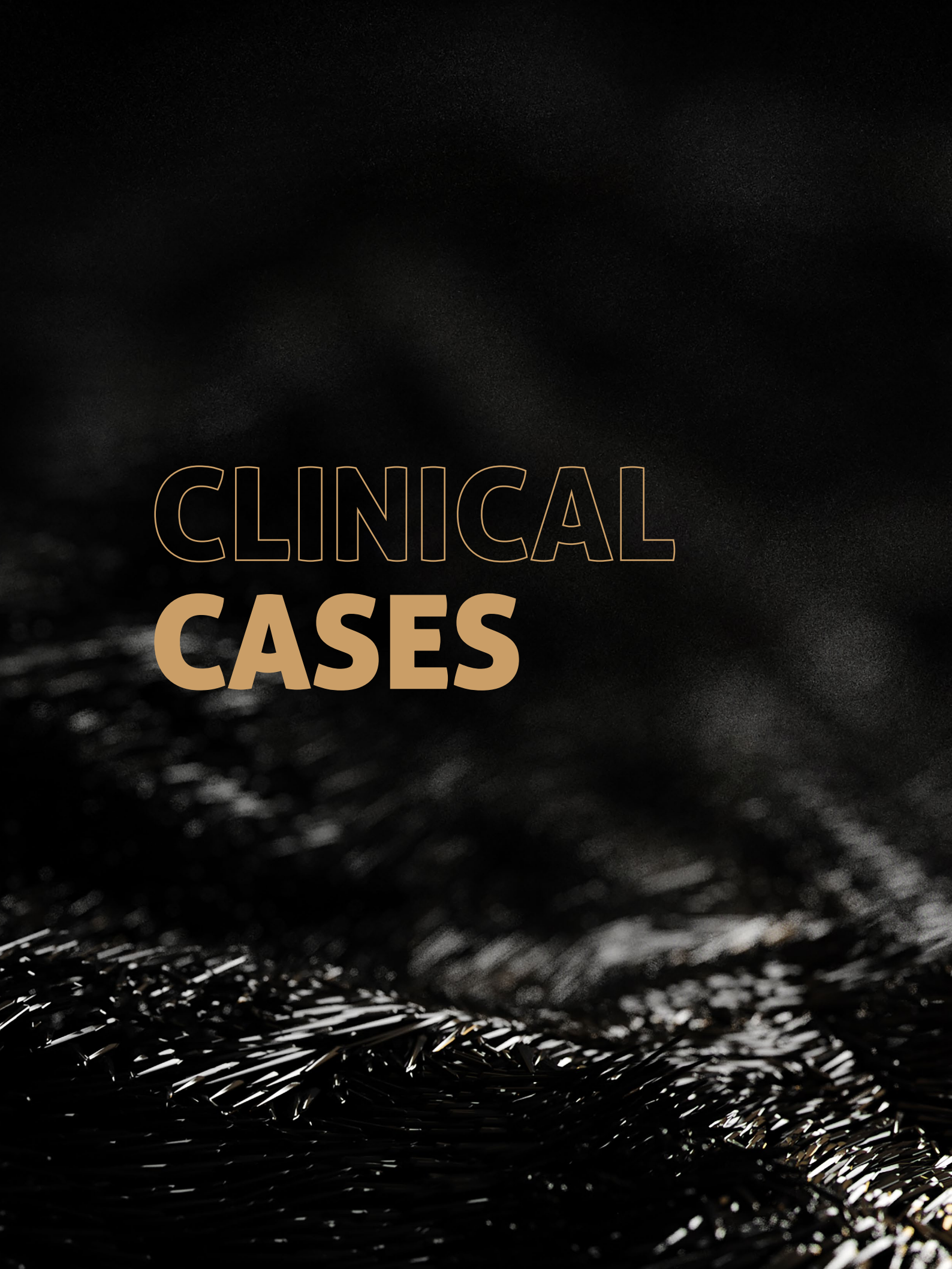
Combined with its exclusive macrogeometry, the **Unitite®** line has innovated the national market by introducing the FIRST BIOACTIVE surface, the HANano Surface, also exclusive and developed at leading universities in Sweden, which significantly accelerates osseointegration. Its main features, such as similarity to the mineral component of bones and teeth, excellent biocompatibility, osteoconductivity, and bioactivity, allow the proliferation of bone cells (fibroblasts and osteoblasts), which do not distinguish it from bone surface, enhancing the regeneration process and its quality. In addition, there is a significant increase in hydrophilicity, allowing the surface to be wetted by blood.

his high hydrophilicity is generated by an ultrathin layer of hydroxyapatite, which enhances cell migration and increases the activity of proteins involved in the osseointegration process, accelerating bone remodeling. Thoughtfully designed, this concept is combined with the hybrid macrogeometry, resulting in increased precision between the drilling system and the design of the external threads, achieving high stability and minimizing compression of the peri-implant scar tissue. This leads to secondary stability, meaning accelerated osseointegration with higher quality of newly formed bone tissue around the implant.

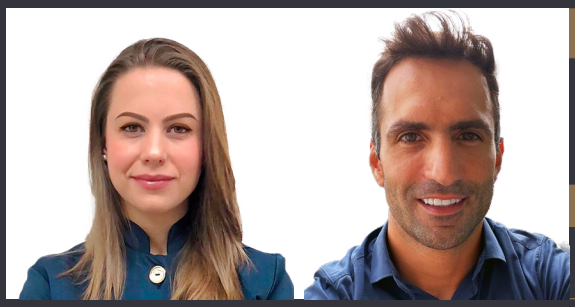
With the **Unitite®** line, you have access to the best of current implantology in a variety of clinical situations. With Unitite® Slim and Unitite® Compact, your surgical planning offers more possibilities for innovative, high-performance solutions, as the three models cover any case that may arise in the daily practice of implantologists, regardless of bone quality or bone availability, thus demonstrating the versatility a **PREMIUM** product needs to have.

And, like all S.I.N. products, the **Unitite®** line holds registration and certifications in several countries, including Brazil, Mexico, Morocco, Paraguay, Peru, India, Ecuador, Colombia, USA, Spain, Portugal, Italy, and Bulgaria. It also has important certifications such as CE, FDA 510(k), health product registration with ANVISA, and specific standards like ISO 13485, MDSAP, CBPF, ISO 9001, ISO 14001, and ISO 45001. This demonstrates the company's commitment to the quality and safety of the products offered to the end customer, as well as the strength and scope of this PREMIUM line to address a wide range of cases in everyday clinical practice.




CLINICAL
CASES

BORDERLINE AREAS WITH THE USE OF SLIM IMPLANTS AND GUIDED SURGERY



BY DRA. BRUNA GHIRALDINI

PhD in Implant Dentistry; Master's degree and Specialist in Periodontics; Postgraduate in Implant Dentistry; Postgraduate in Aesthetics; MBA in Business Management from Fundação Getúlio Vargas; and Coordinator of the Product Research and Development Department at S.I.N.

BY DR. LEANDRO LEÃO

Master's degree in Biomaterials; Implant Specialist; Postgraduate in Facial Surgery; MBA in Managerial Excellence.

CASE INTRODUCTION

The placement of immediate implants in patients with agenesis of permanent anterior teeth often becomes a challenge due to the incomplete development of the region to be rehabilitated, requiring meticulous planning and skill to execute.

TREATMENT EXPLANATION

The patient presented residual roots of teeth 71 and 81, which were surgically removed. Using guided surgery, two Unitite Slim 2.9 x 10 mm implants were placed, considering that the lower central region has a reduced mesiodistal space. Given this challenge, it was also necessary to use two separate guides in the same surgery to prevent collision between the sleeves, allowing the procedure to be performed in a guided manner. After 4 months, the case was rehabilitated.

PATIENT RECORD

Male patient, 21 years old.
Chief Complaint: Absence of the central incisors.
Medical History: Patient had congenital nephropathy and calcium deficiency.
Treatment Plan: Removal of residual roots of teeth 71 and 81, placement of immediate implants using guided surgery, and implant-supported prosthetic rehabilitation after 4 months

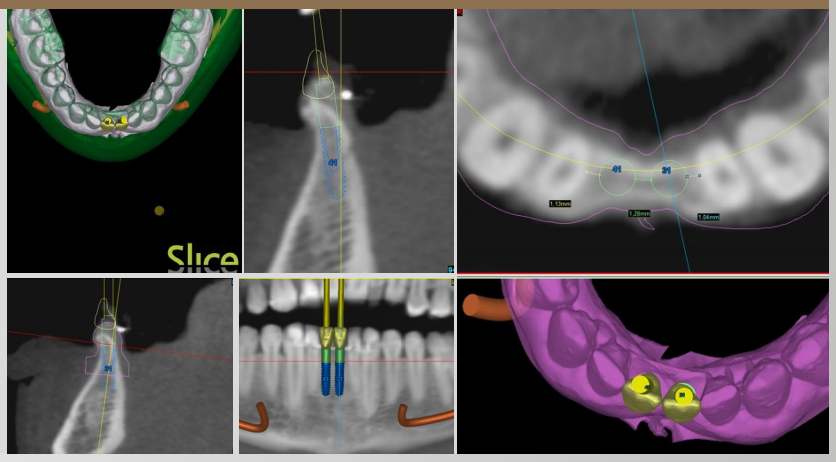
BEFORE

Initial appearance of the patient and the region to be rehabilitated, with the ridge showing the residual roots of teeth 71 and 81, covered by soft tissue.

RADIOGRAPHY/CT SCAN

For guided surgery planning, computed tomography (CT) scans in DICOM format were requested with the lips retracted, along with intraoral scanning of the arches in STL format.

In the images on the side, these files can be seen imported into specialized planning software, with a virtual prosthetic wax-up of the case.



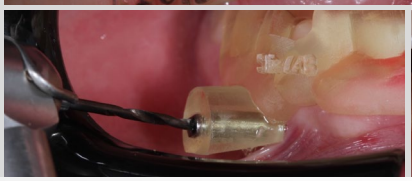
STEP-BY-STEP PROCEDURE

Following the approval of the digital planning, two surgical guides were fabricated to prevent errors in sleeve positioning. Due to the reduced interproximal space, the sleeves would have collided if a single guide had been used.

The second photo shows how the sleeve occupies both prosthetic spaces. The guides were trial-fitted prior to the surgical procedure.

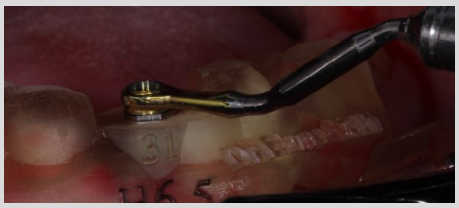
INTRAOPERATIVE

After the root removal, the surgical guides were individually secured using bilateral fixation pins and supported by the adjacent teeth.



INTRAOPERATIVE

Taking advantage of the alveoli after the removal of the residual roots, no incision was necessary. The drilling protocol and use of drill reducers recommended by the manufacturer were strictly followed, with no intraoperative changes or complications.

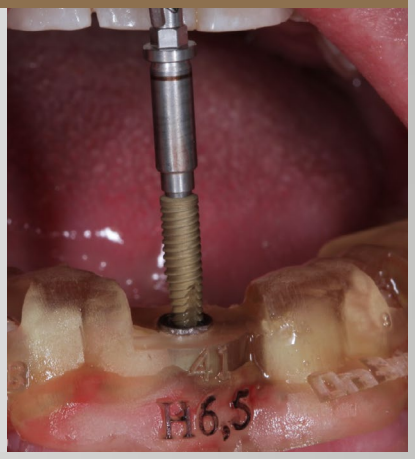


INTRAOPERATIVE

The same steps were repeated for the subsequent region, but using an individual guide for each tooth, as previously explained.

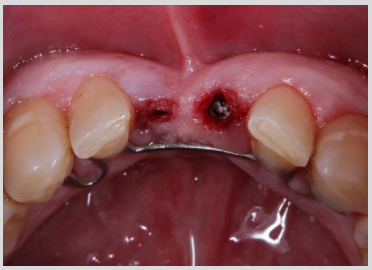
IMPLANT USED

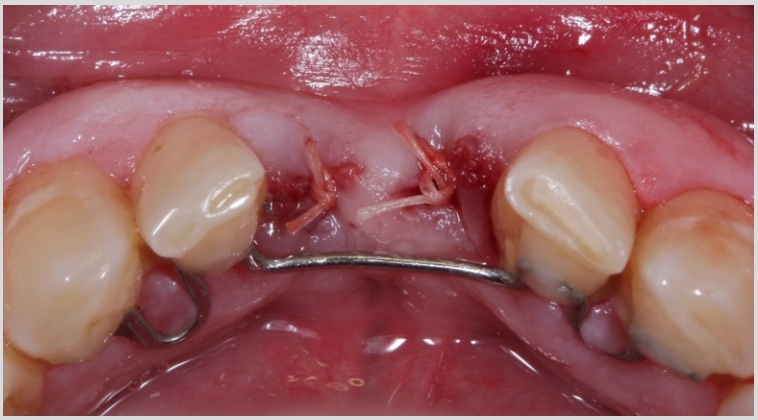
A total of 15 **Unitite Slim** *implants, 2.9 mm in diameter and 10 mm in length, were placed in both regions.*



IMPLANT USED

After implant placement, the surgical guide was removed and the suturing was performed using resorbable Vicryl thread.



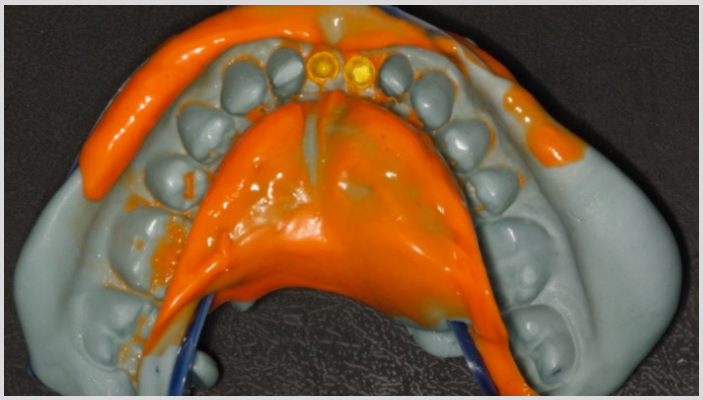


PROSTHETIC PHASE

Four months after implant placement, the sites were reopened, and universal abutments with a 2.5 mm transmucosal height were installed to preserve the soft tissue architecture.

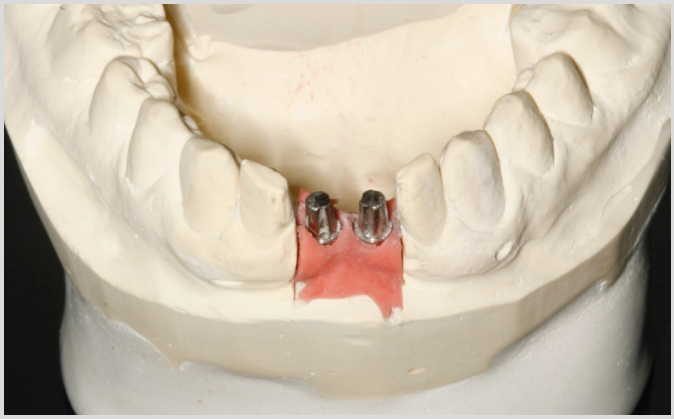
PROSTHETIC PHASE

Impression taken with a polyacetal transfer and addition silicone 17, showing accurate transfer with the precise internal fit of the component.



PROSTHETIC PHASE

The impression was sent to the laboratory for the fabrication of the working model in plaster, with an analog positioned to replicate the abutment used in the mouth.



PROSTHETIC PHASE

In the laboratory, the plaster model was scanned and, through the CAD-CAM workflow, the crowns were milled in lithium disilicate (E-Max) and layered.

FINAL RADIOGRAPH

Impression taken with a polyacetal transfer and addition silicone 17, showing accurate transfer with the precise internal fit of the component.

FINAL RESULT

Final outcome restoring the patient's self-esteem, bringing back naturalness, aesthetics, and function.

REHABILITATION WITH SPLINTED AND NON-SPLINTED EXTRA-SHORT IMPLANTS IN ATROPHIC MANDIBLES: RANDOMIZED CONTROLLED SPLIT-MOUTH CLINICAL STUDY

BY DR. BRUNO SALLES SOTTO MAIOR

PhD in Dental Prosthesis from FOP-UNICAMP; Master's degree in Dentistry from FO-UFJF; Specialist in Dental Prosthesis from FOB-USP; Associate Professor at the Faculty of Dentistry, FO-UFJF; Coordinator of the Master's and Doctorate in Dentistry programs at FO-UFJF; and Coordinator of the Postgraduate Program in Implant Dentistry and Dental Prosthesis at São Leopoldo Mandic.

CASE INTRODUCTION

The patient required implant rehabilitation in the mandibular molar region. Anatomical limitations, due to mandibular resorption and aiming to avoid advanced surgical techniques to increase alveolar bone height for the placement of longer implants, led to the decision to use extra-short implants.

TREATMENT EXPLANATION

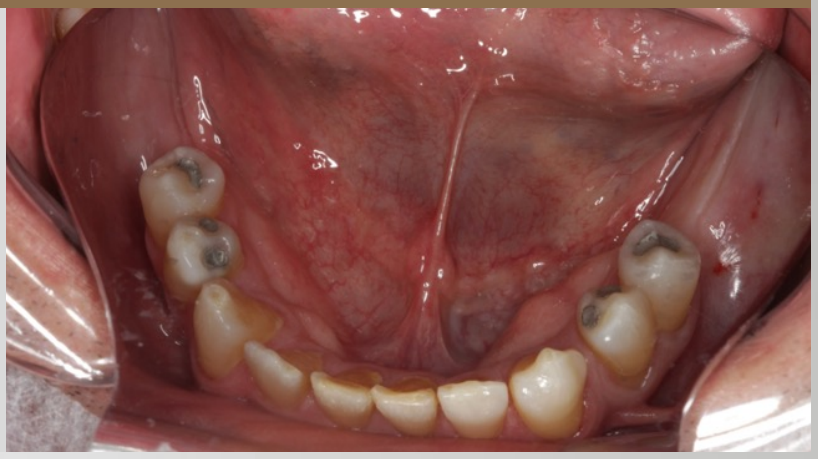
After evaluating the tomographic images, the use of Unitite Compact implants was planned for the rehabilitation of the mandibular molars (first and second molars). On one side of the mandible, splinted crowns were planned, and on the other side, single (non-splinted) crowns, to evaluate the performance of each type of prosthesis.

PATIENT RECORD

Female patient, 39 years old.
Chief Complaint: The patient is resistant to using a removable prosthesis, complains of TMJ pain, and is self-conscious about the absence of posterior lower teeth.
Medical History: Hypertensive patient, taking 50 mg of losartan.
Treatment Plan: The treatment was planned with the placement of extra-short implants and rehabilitation with splinted and non-splinted prostheses to observe biomechanical behavior and clinical periodontal parameters.

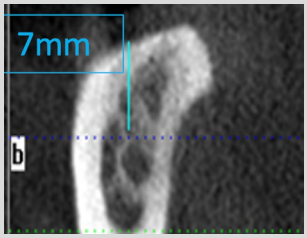
BEFORE

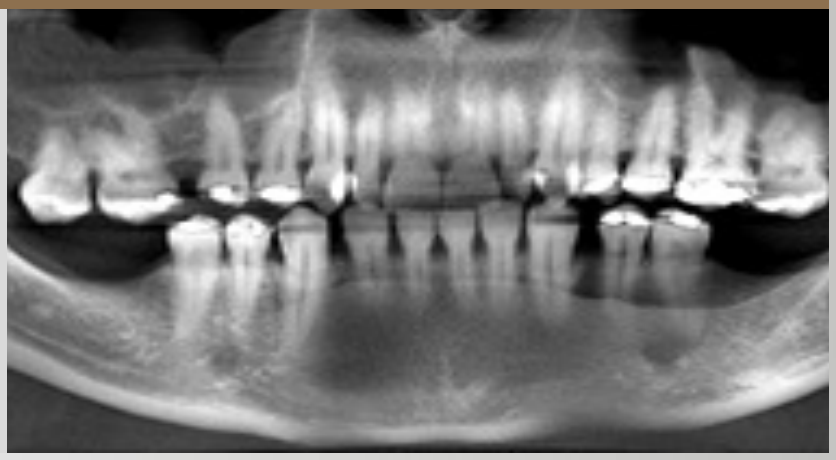
Initial photo showing alveolar bone atrophy in the partially edentulous mandible.



RADIOGRAPHY/CT SCAN

Cone beam tomography showing mandibular atrophy and inadequate bone volume for standard or long implants.



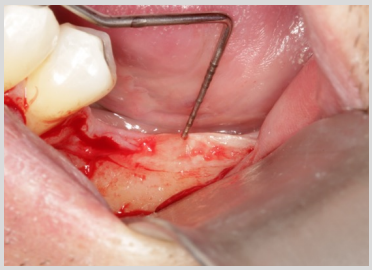


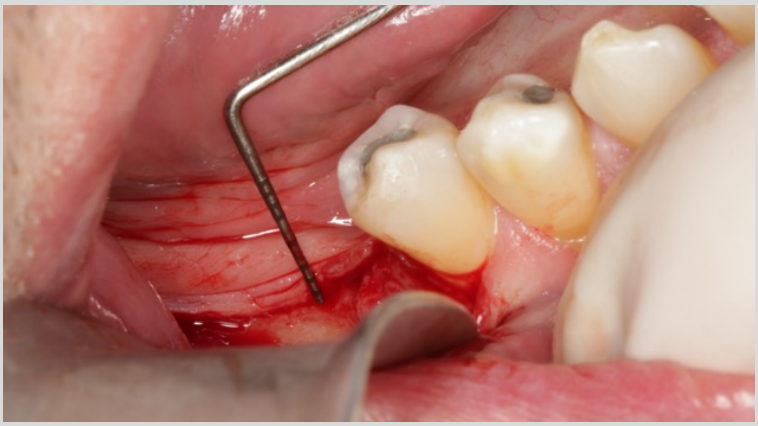
STEP-BY-STEP PROCEDURE

Photo showing the surgical guide fabricated with an acetate plate over the plaster model after prior wax-up.

INTRAOPERATIVE

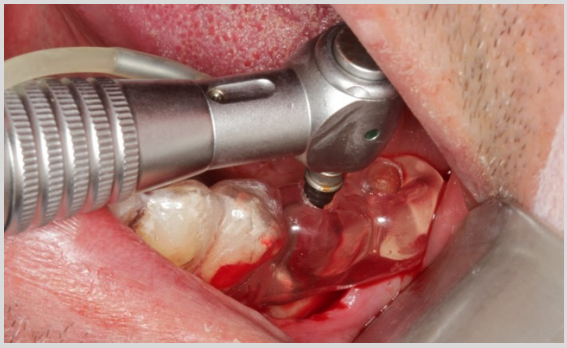
Photos after incision and detachment of the alveolar mucosa on the left and right sides. The mucosal thickness was measured using a millimeter probe.

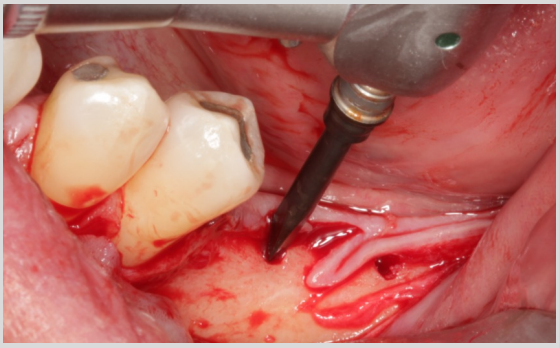




INTRAOPERATIVE

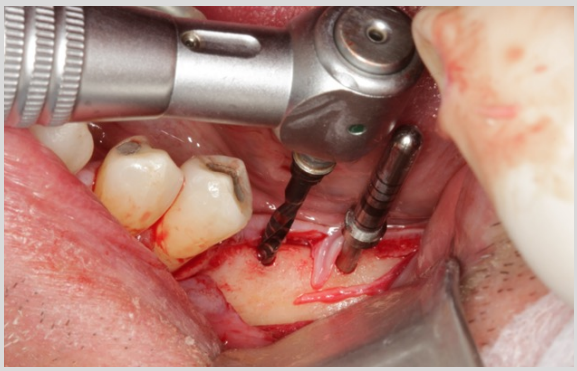
Marking the position with the guide and beginning the drilling on the right and left sides.

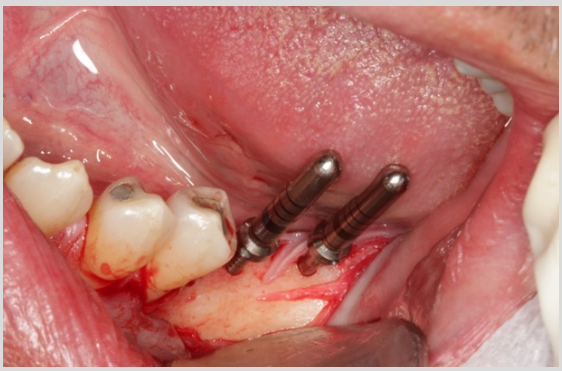




INTRAOPERATIVE

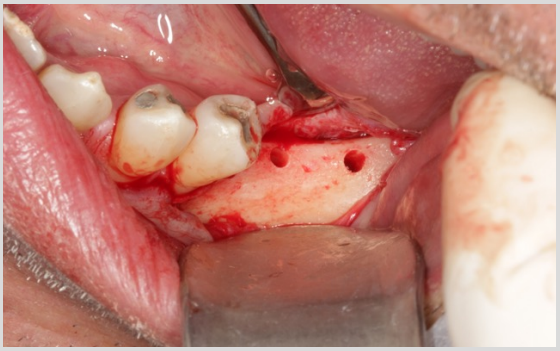
Continuation of drilling and verification of implant parallelism.





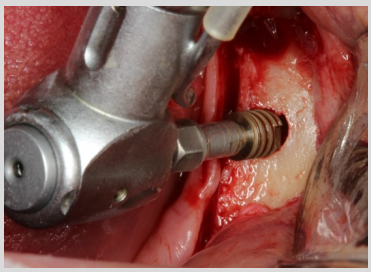
INTRAOPERATIVE

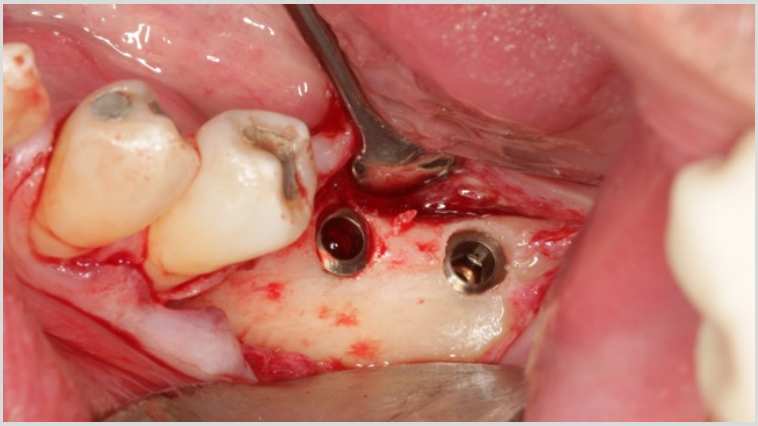
Bone perforation after drilling with a 2.0 mm drill.



INTRAOPERATIVE

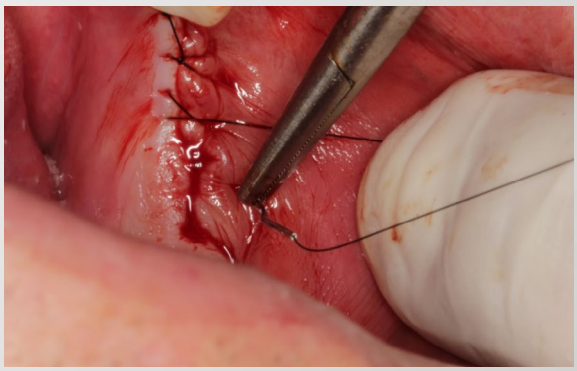
Insertion of the implant into the prepared bone. The same procedures were performed on both the right and left sides.





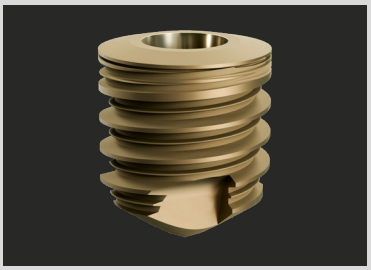
INTRAOPERATIVE

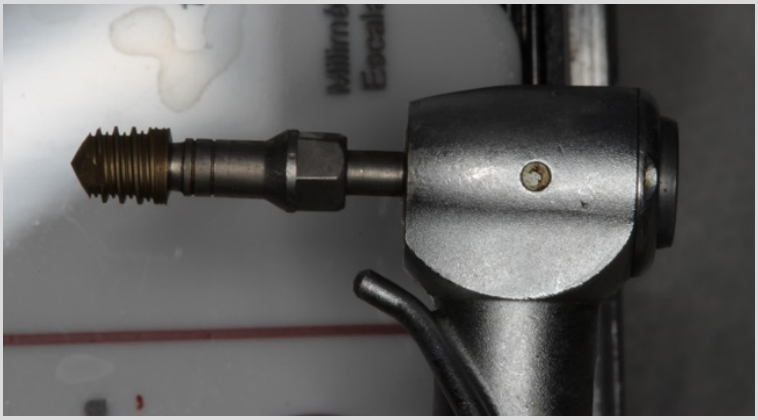
Suturing after implant placement.



IMPLANT USED

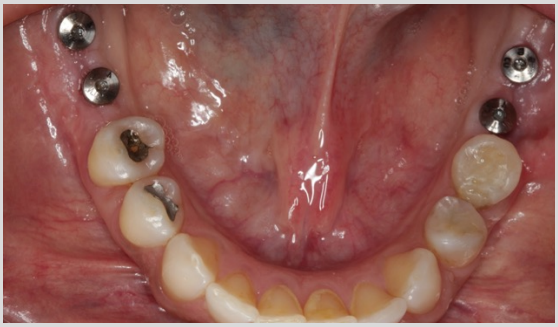
The implant selected for this case was the **Unitite Compact**, *4 mm in diameter and 5 mm in length.*





PROSTHETIC PHASE

Image after reopening and placement of the healing abutments. After gingival healing, abutments for splinted prostheses were installed on the right side and for non-splinted prostheses on the left side.

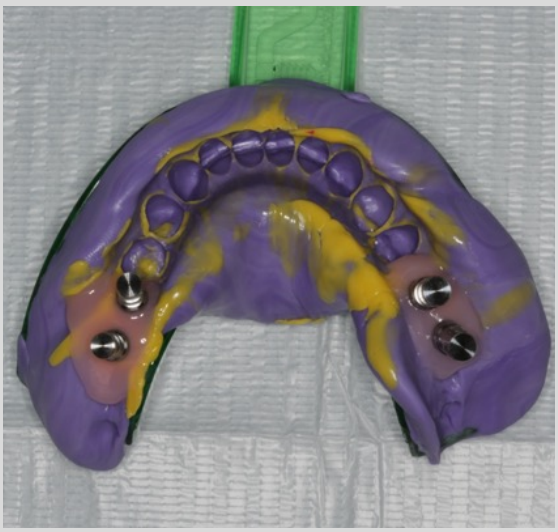


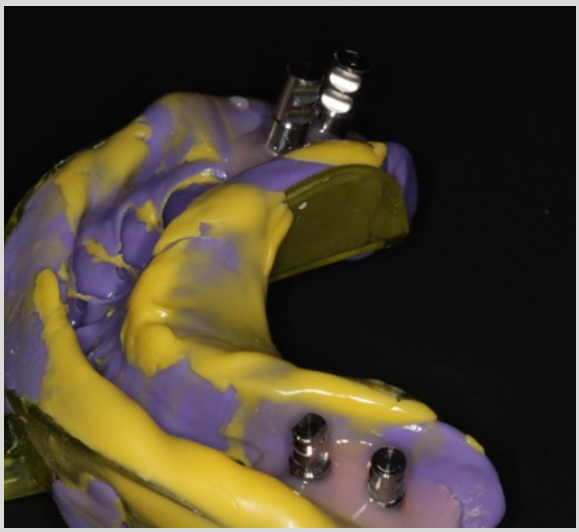
PROSTHETIC PHASE

Positioning of the impression copings in the mouth and connection of the copings with acrylic resin.

PROSTHETIC PHASE

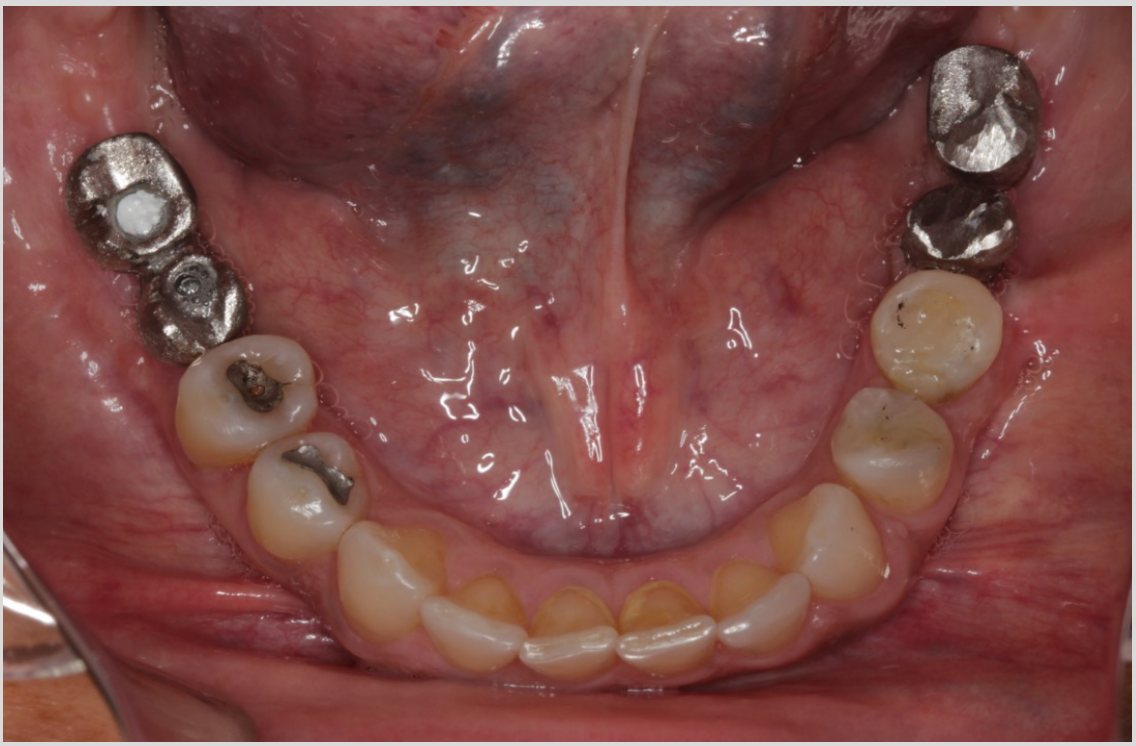
Implant transfer impression with placement of artificial gingiva.





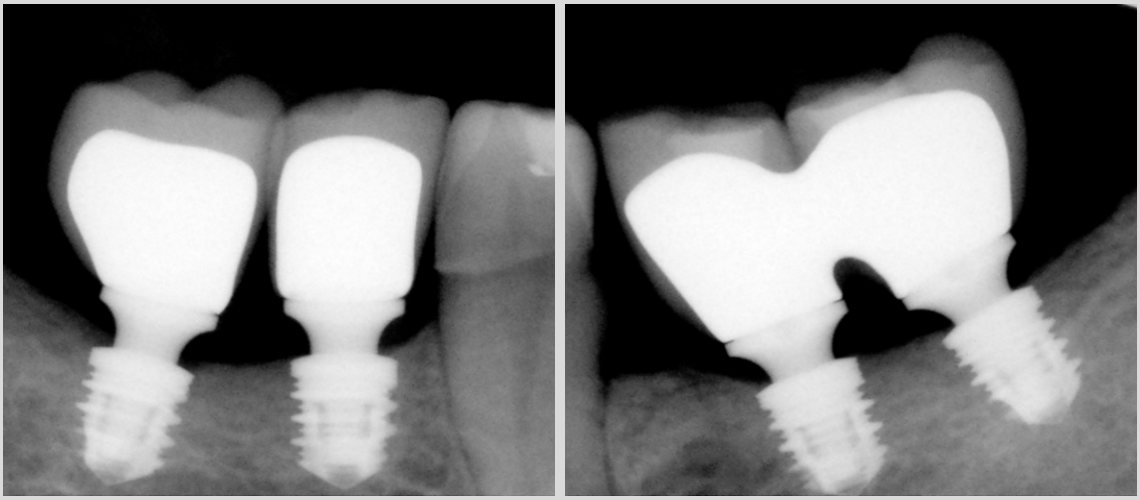
PROSTHETIC PHASE

Trial of the metal framework (left side: cemented single prosthesis; right side: screw-retained splinted prosthesis).



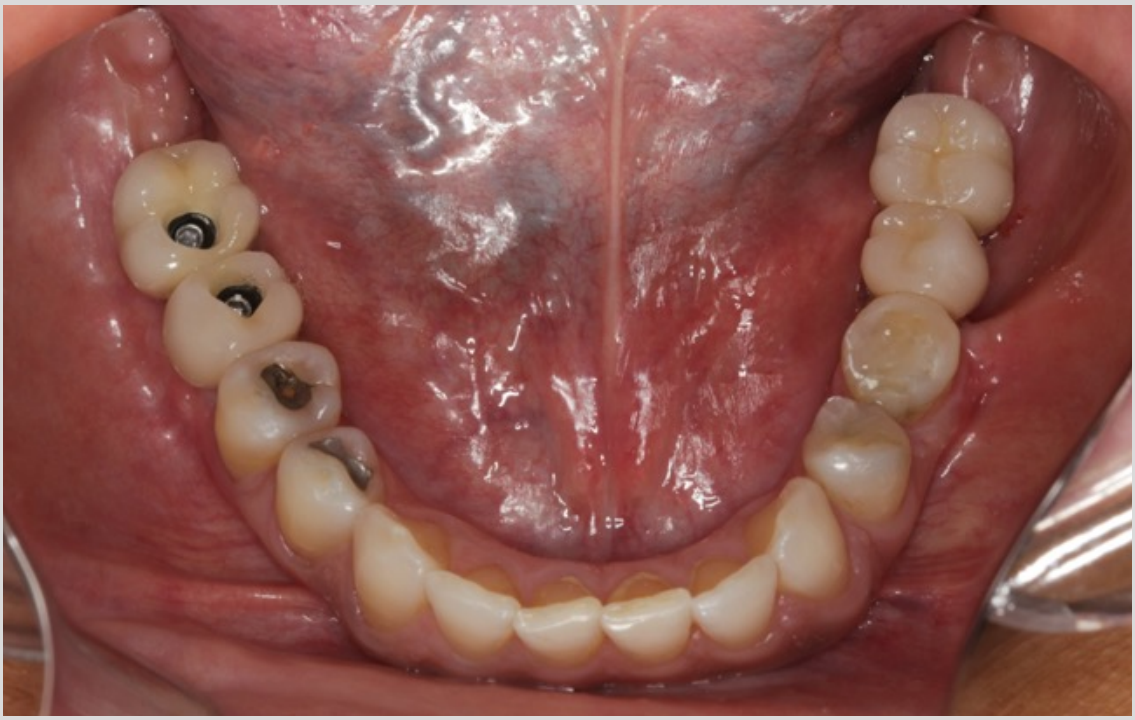
FINAL X-RAY

Radiographs taken using XCP Dentsply Sirona® holders and acrylic occlusal devices to maintain positional accuracy, ensuring proper radiographic follow-up.



FINAL RESULT

Placement of the metal-ceramic crowns. Left side with cemented prostheses, presenting single crowns, and right side with screw-retained and splinted prostheses.



REHABILITATION OF ATROPHIC MANDIBLE WITH EXTRA-SHORT IMPLANTS

BY DR. ELDER BRITO

Specialist in Implant Dentistry EAP-GO; Master's degree in Implant Dentistry SLM-Campinas; Specialist in Restorative Dentistry ABO-GO; Coordinator of Specialization and Advanced Implant Surgery CIOG-Cursos Goiânia.

CASE INTRODUCTION

The challenge of rehabilitating atrophic mandibles with short implants.

TREATMENT EXPLANATION

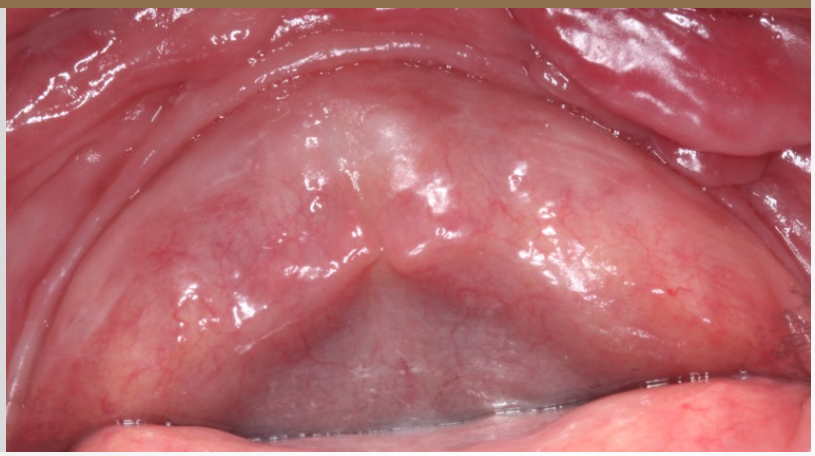
Clinical examination of the patient, tomography, and virtual planning were performed to determine the best three-dimensional positioning in areas with limited bone availability. Situations like this require extra attention due to the risk of mandibular fracture.

PATIENT RECORD

Female patient, 62 years old.
Chief Complaint: he patient reports discomfort while chewing due to the lack of stability of the complete denture and exposure of the mental nerve.
Medical History: Patient with no history of comorbidities.
Treatment Plan: After tomographic analysis, virtual planning, guided surgery, and placement of 4 Unitite Compact implants were planned.

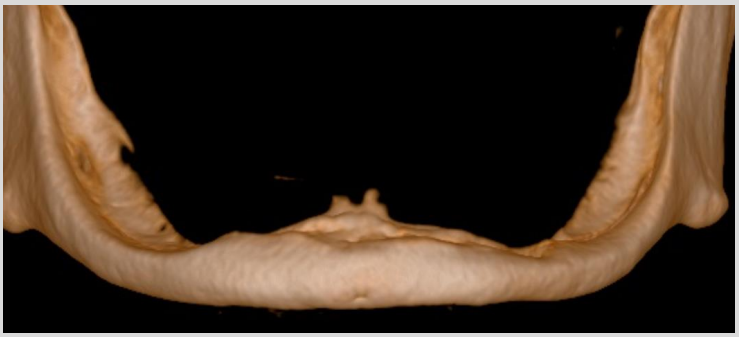
BEFORE

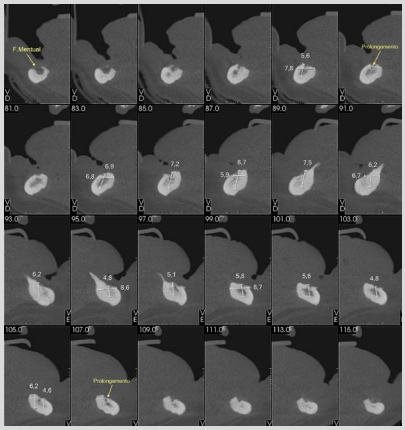
Clinical view of the case. Absence of keratinized tissue can be observed



RADIOGRAPHY/CT SCAN

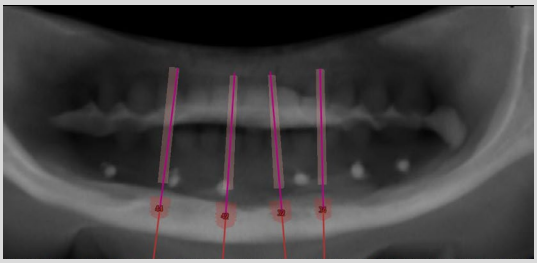
The 3D image shows the atrophic mandible. In the axial slices, the available bone height ranges from 4.8 to 8.7 mm.

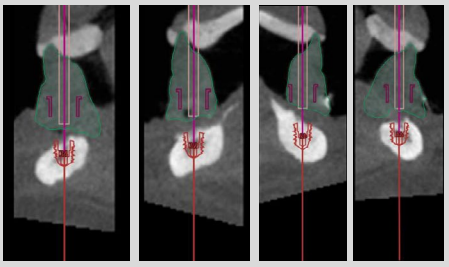


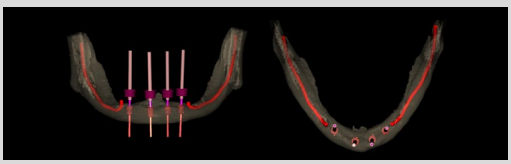


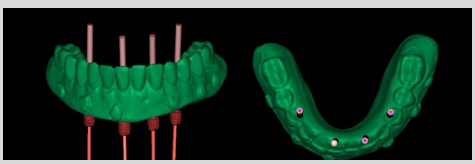
STEP-BY-STEP PROCEDURE

Slice showing the implants virtually positioned and the virtual planning.



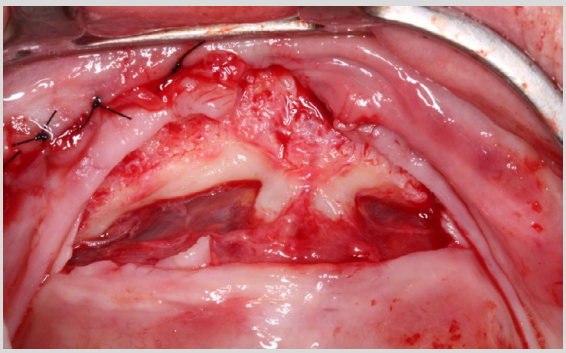


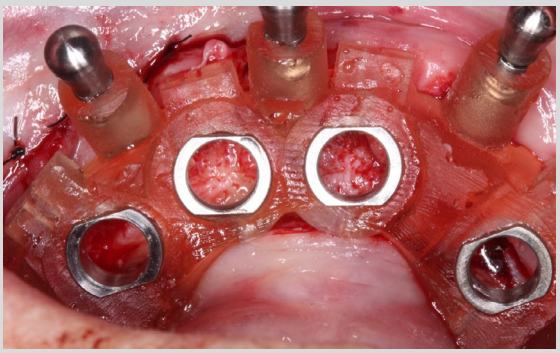




INTRAOPERATIVE

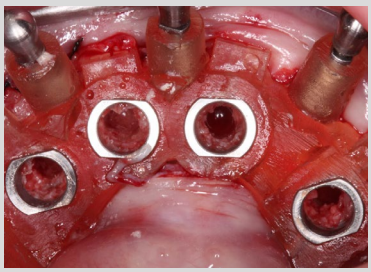
Incision made, dividing the mucosa more lingually to provide relaxation in the mental region and avoid the mental nerve, with the guide positioned.

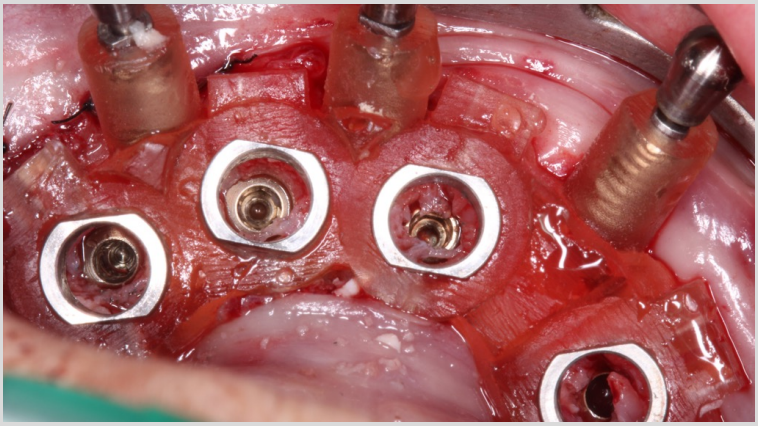




IMPLANT USED

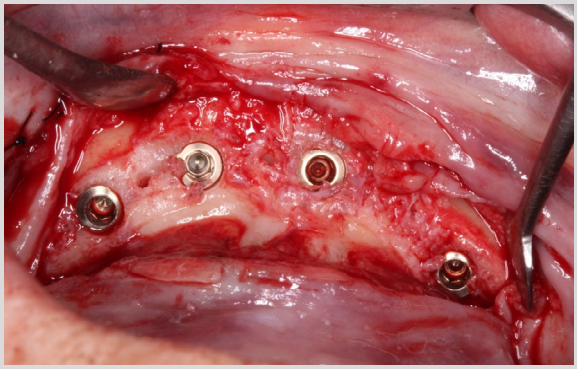
Perforations performed for the placement of the **Unitite Compact** *implants, which were installed using guided surgery.*

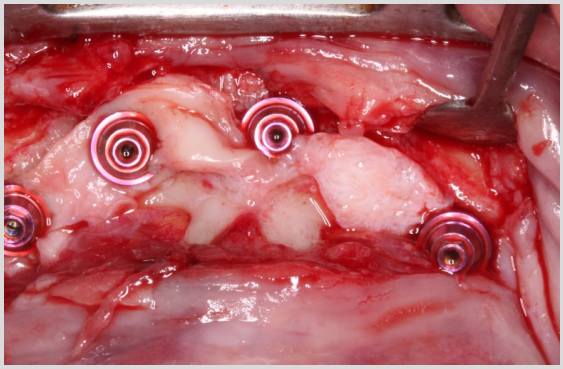




PROVISIONALIZATION

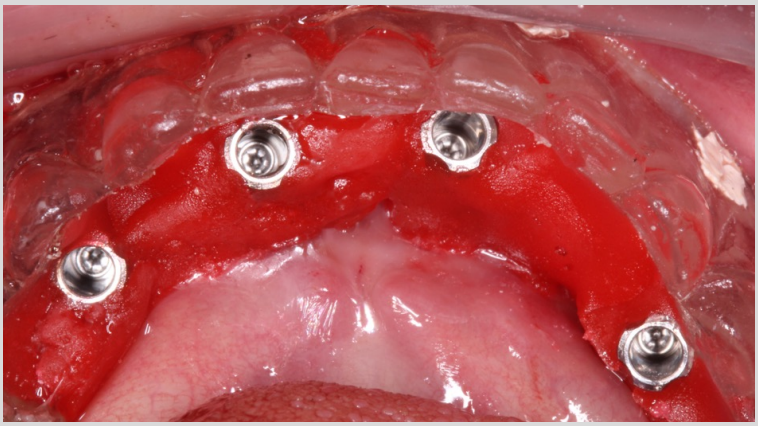
Implants placed and guide removed. Connective tissue graft applied to improve tissue quality, stabilized with a mini abutment.





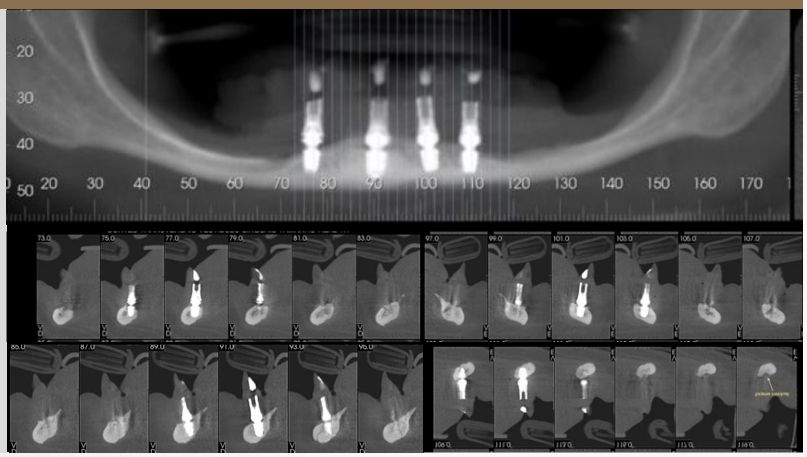
PROSTHETIC PHASE

Capture of the provisional cylinders using the multifunctional guide for prosthesis fabrication.



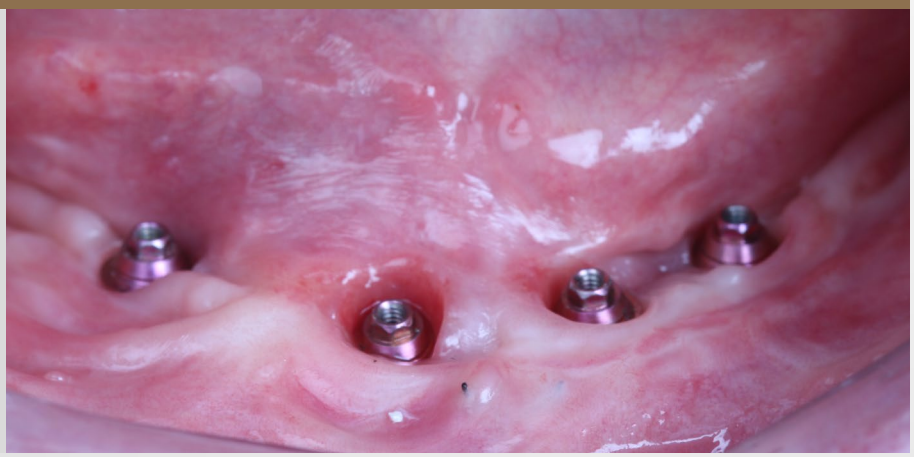
FINAL RADIOGRAPH

Tomography performed after 12 months of function. Implant positioning can be observed..

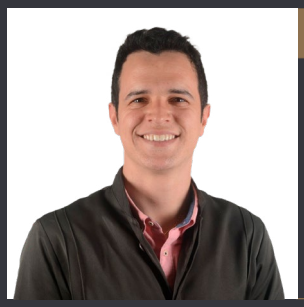


FINAL RESULT

Tissue condition showing keratinized tissue around the implants.



DOUBLE SLIM



BY DR. FELIPE MAXIMO

PhD in Materials Science; Master's degree and Specialist in Implant Dentistry; Specialist in Dental Prosthesis; S.I.N. Ambassador.

CASE INTRODUCTION

The patient presented with anodontia of the upper lateral teeth..

TREATMENT EXPLANATION

Two Unitite Slim implants were planned for the regions of teeth 12 and 22, followed by the fabrication of ceramic crowns.

PATIENT RECORD

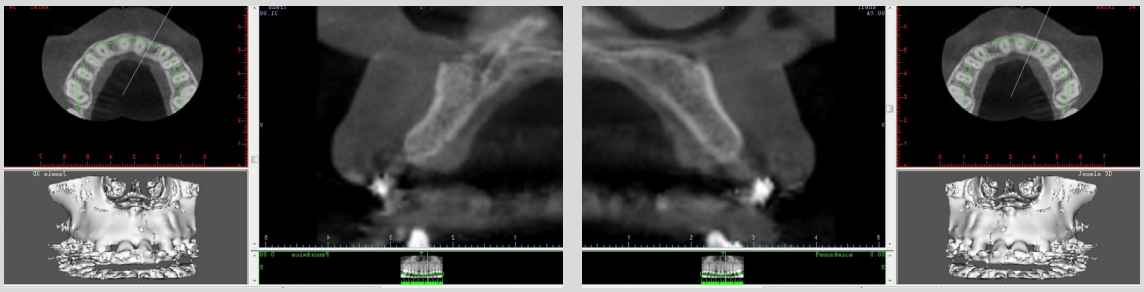
Female patient, 35 years old.
Chief Complaint: Absence of the upper lateral teeth.
Medical History: Young and healthy patient.
Treatment Plan: Placement: Placement of Unitite Slim implants in the regions of teeth 12 and 22.

BEFORE

Initial photos of the patient without the provisionals (teeth 31, 31 attached to the orthodontic appliance). A reduced prosthetic space can be observed due to the treatment of the upper lateral incisors and the patient's dental anatomy, suggesting the use of narrow-diameter implants.

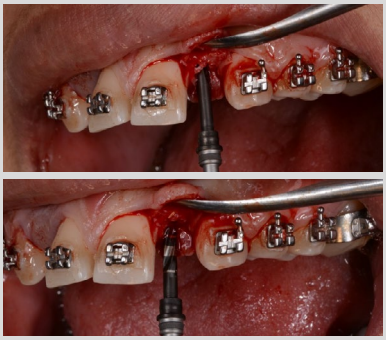
RADIOGRAPHY/CT SCAN

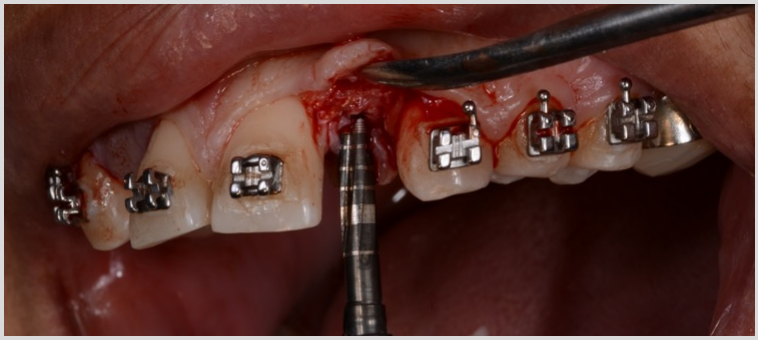
Initial CT scans of teeth 12 and 22 confirmed the clinical examination. The tomographic evaluation showed adequate bone volume for the placement of narrow-diameter implants, validating the treatment plan.



INTRAOPERATIVE

After a linear incision along the ridge crest and full-thickness flap elevation, the implant site was prepared using the drilling protocol specified by the manufacturer.





IMPLANT USED

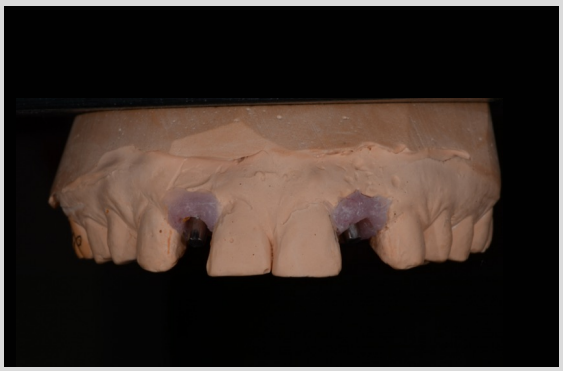
In both sites, **Unitite Slim** *implants measuring 2.9 mm in diameter and 11.5 mm in length were used (teeth 12 and 22).*

PROVISIONALIZATION

Immediate provisional placed in the mouth using acrylic resin.

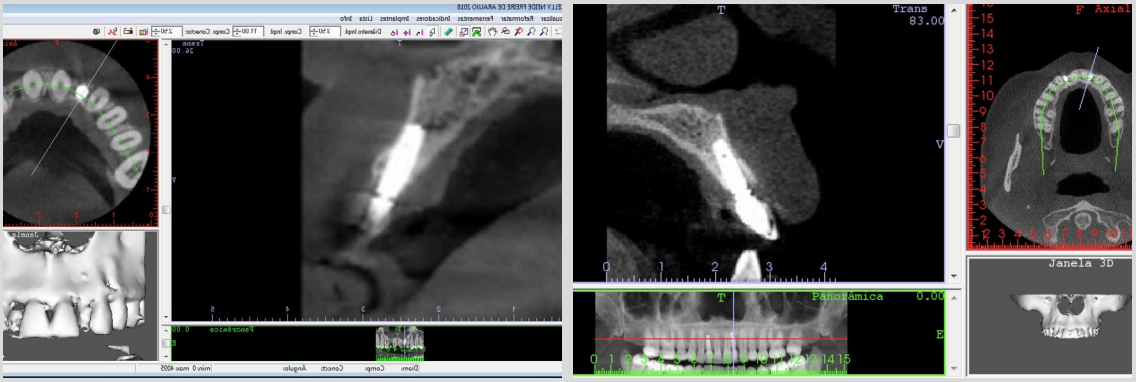
PROSTHETIC PHASE

Universal abutments were installed, impressions taken, and the working model fabricated in plaster.



FINAL X-RAY

Final tomography showing optimal buccolingual bone utilization without compromising implant angulation, resulting in excellent esthetics.



FINAL RESULT

Final result, with the prostheses installed preserving the soft tissue architecture, reflecting precise planning and the use of Unitite Slim implants, suitable for the prosthetic space of the upper lateral incisors that require a smaller diameter.

IMMEDIATE TISSUE RECONSTRUCTION IN THE LOWER CENTRAL INCISOR REGION

BY DR. FERNANDO HAYASHI

Master's and PhD in Periodontics from FOUSP; Professor of the Implant Dentistry specialization courses at FOUNIP Sorocaba and São Paulo; Master's in Implant Dentistry from USLM; Specialist in Implant Dentistry from FOUNIP São Paulo.

CASE INTRODUCTION

The patient presented with extensive bone loss around the lower right central incisor, with lingual gingival margin recession extending to the apical third of the root. Treatment involved the placement of an immediate implant with non-functional immediate loading. To correct the tissue defect, particulate bovine bone and a connective tissue graft were used. Fifteen months after replacing the provisional crown with the definitive crown, the results were satisfactory.

TREATMENT EXPLANATION

Surgical Phase: After anesthesia, an intrasulcular incision was made around the lower right central incisor (LR1). The LR1 was gently extracted, and the alveolus was curetted. A Unitite Slim implant (model UCMS 2913N) was placed in the site, achieving excellent primary stability with an insertion torque of 45 N/cm. A universal abutment (model AISITS 336025) was then installed at 20 N/cm, and a provisional crown was fabricated.

To address the soft tissue defect, vestibular and lingual tunnels were created using papilla micro-elevators and tunnelers through the LR1 alveolus and intrasulcular incisions on the adjacent teeth. VISTA incisions (vestibular incision subperiosteal tunnel access) were made both vestibularly and lingually to facilitate tunneling. Two connective tissue grafts were harvested from the palate and inserted vestibularly and lingually through the VISTA incisions

Prosthetic Phase: Three months after immediate loading, the final prosthetic phase began. An impression technique with a customized transfer was used, and a metal-free crown was fabricated and cemented.

Follow-Up: Fifteen months after the placement of the definitive crown, the patient showed apparent peri-implant health, with clinical and radiographic tissue stability.

PATIENT RECORD

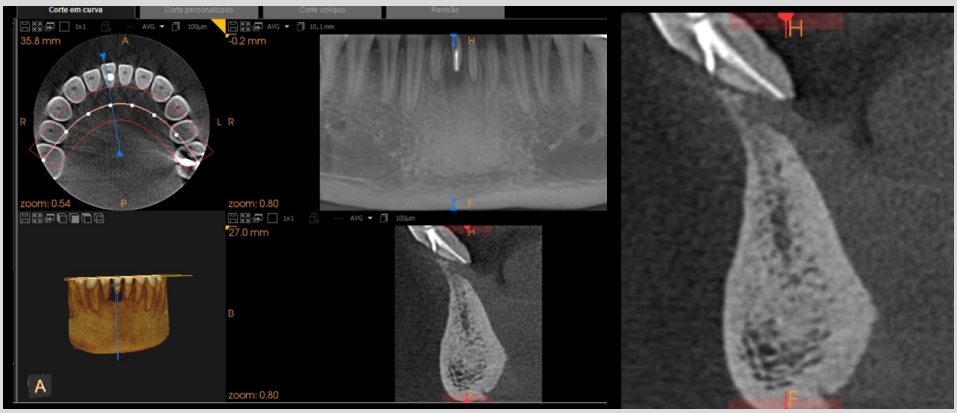
Chief Complaint: The patient was referred for evaluation for possible dental implant treatment to replace the lower right central incisor, which showed extensive visible tissue loss in the lingual region.
Medical History: he patient is in good health, with no contraindications for surgery.
Treatment Plan: Extraction followed by placement of an Immediate Implant (model UCMS 2913N) with the possibility of immediate loading if good stability is achieved. A vestibular connective tissue graft was performed to prevent tissue loss in this area, and a lingual connective tissue graft was done to treat the soft tissue defect in the region.

BEFORE

Initial photos.

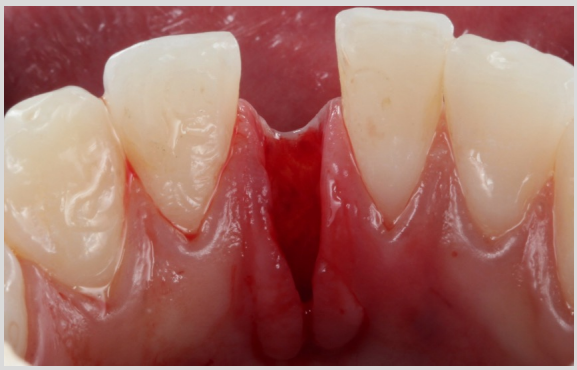
RADIOGRAPHY/CT SCAN

Tomography showing extensive bone destruction



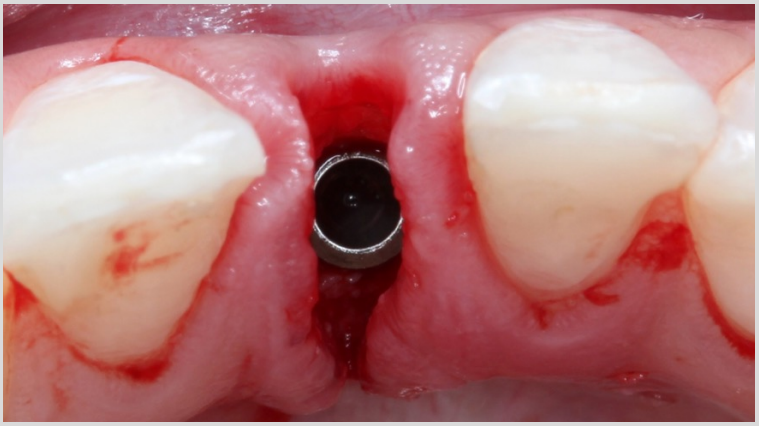
STEP-BY-STEP PROCEDURE

Appearance after tooth extraction.



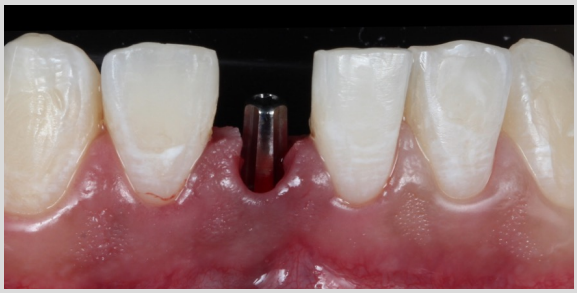
INTRAOPERATIVE

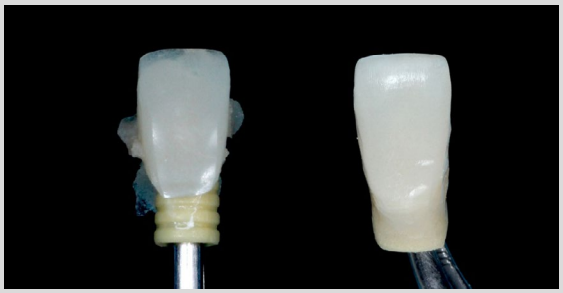
Instalação de um implante ***Unitite Slim*** *(UCMS 2913N)*



PROVISIONALIZATION

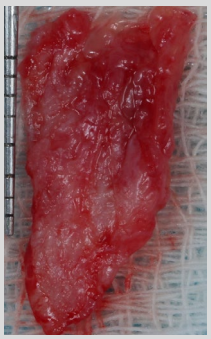
Universal abutment installed (model AISITS 336025) and fabrication of a provisional crown cemented on a provisional universal abutment cylinder (model CPSIT 3360). A stock tooth was veneered and attached to the cylinder using chemically activated resin in the mouth. After polymerization, the assembly was removed, additional resin applied, followed by further polymerization, reshaping, and finishing.

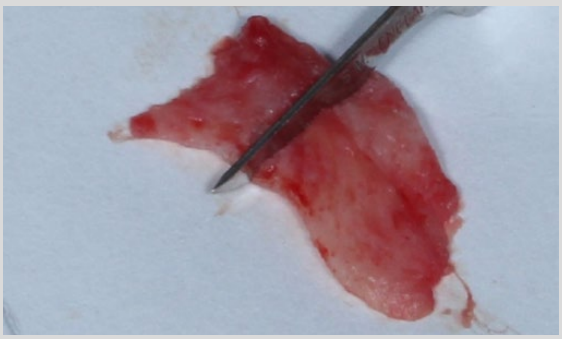


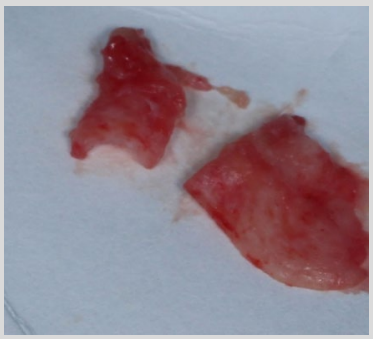


INTRAOPERATIVE

After the provisional was fabricated, a connective tissue graft was harvested from the palate and divided into two portions for use in the vestibular and lingual regions. The grafts were inserted using the tunneling technique combined with the VISTA incision.







INTRAOPERATIVE

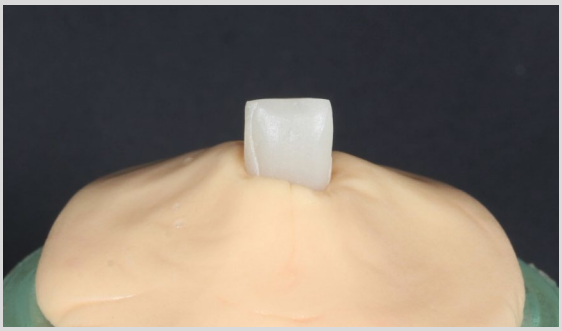
Final appearance after the insertion of the connective tissues and suturing to stabilize the grafts and the VISTA incisions.

PROSTHETIC PHASE

Three months after implant placement, the prosthetic phase began. The excellent tissue contour achieved through the provisionalization technique is notable. This contour information should be conveyed to the prosthetic laboratory using an impression with customized emergence profile.

PROSTHETIC PHASE

First, the provisional was removed and fitted onto an analog. This assembly was placed in a glass Dappen dish with heavy-body condensation silicone.

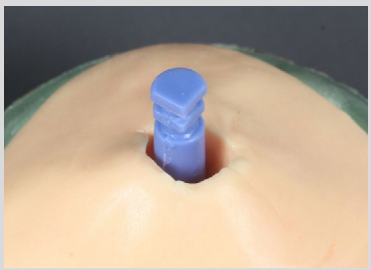


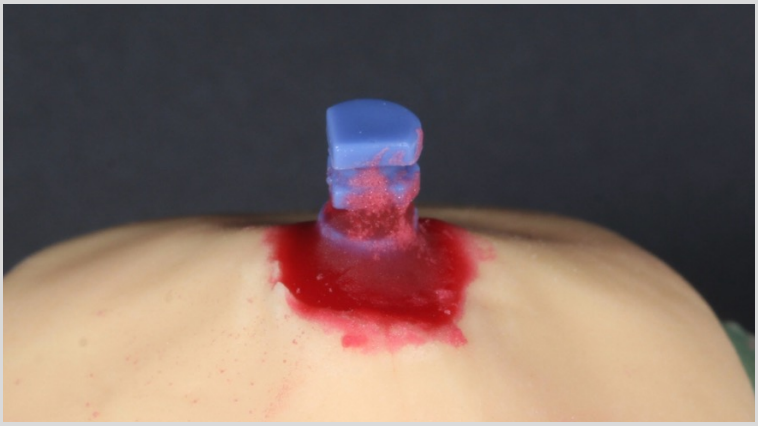
PROSTHETIC PHASE

After the silicone set, the provisional was removed. The contour of the provisional is visible in the silicone.

PROSTHETIC PHASE

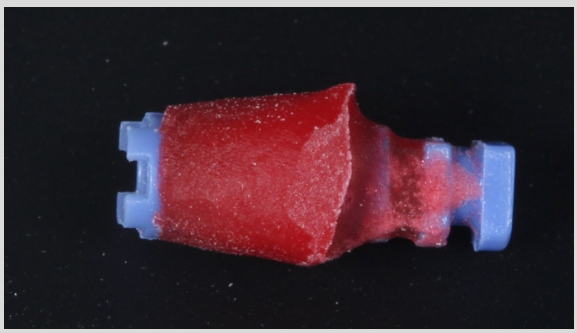
The universal abutment transfer coping was installed on the analog, and the space previously occupied by the provisional was filled with chemically activated resin.

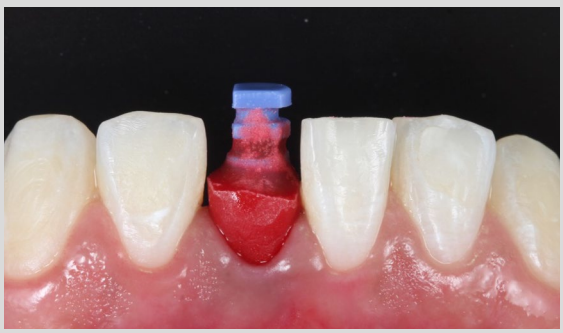




PROSTHETIC PHASE

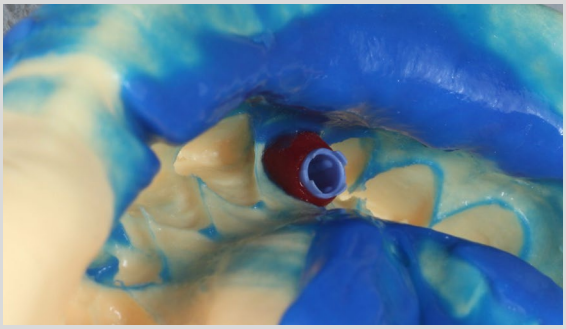
Appearance of the universal abutment transfer coping after resin finishing and placement on the universal abutment to allow the transfer impression.

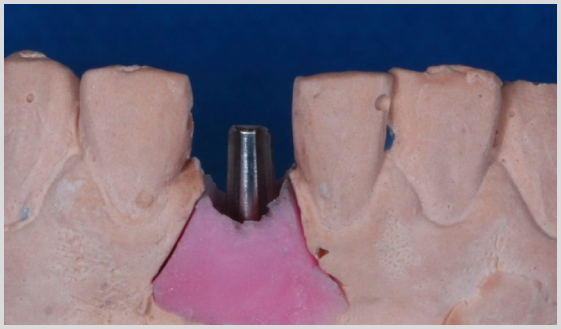




PROSTHETIC PHASE

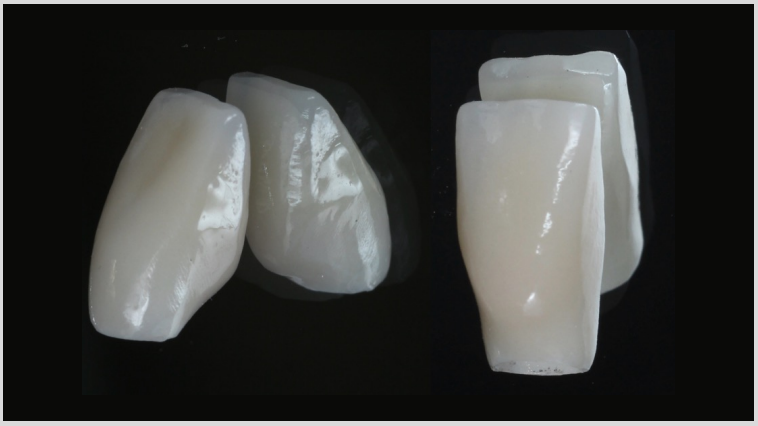
After the impression, note that the provisional's emergence profile was replicated on the model. This is crucial to ensure that the prosthesis respects the peri-implant contour.





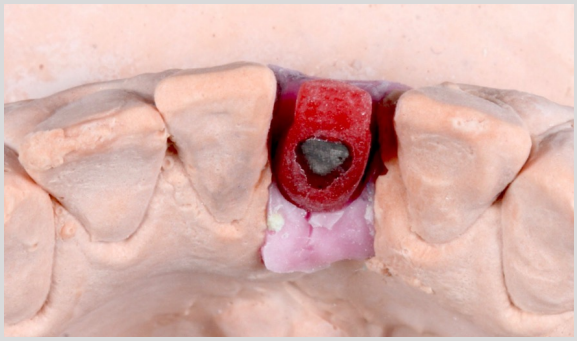
PROSTHETIC PHASE

A metal-free crown alongside a wear guide fabricated for the strategic reduction of the universal abutment, preventing excessive bulk at the crown's cingulum.



PROSTHETIC PHASE

Wear guide positioned on the model. When placed over the universal abutment, it allowed visualization of the necessary amount of reduction for the lingual area..



PROSTHETIC PHASE

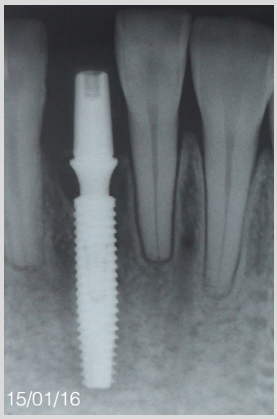
Appearance after reduction of the universal abutment using the wear guide.

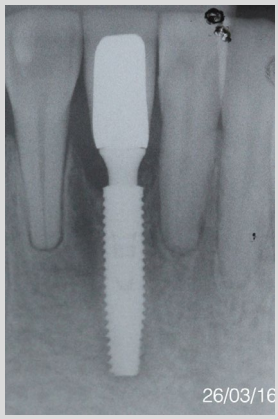
PROSTHETIC PHASE

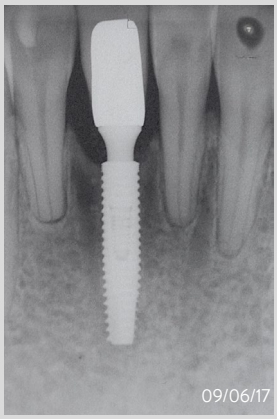
Appearance after placement of the definitive crown.

FINAL X-RAY

Radiographs showing the stability of the results: on the left, at the start of the prosthetic phase; in the center, at the time of cementation of the metal-free crown; on the right, control radiograph 15 months after cementation.







SHORT IMPLANTS AS A REHABILITATION TREATMENT OPTION – 7-YEAR FOLLOW-UP

BY DR. JACKSON LUIS BOTH

Specialist in Dental Prosthesis/Implant Dentistry.

CASE INTRODUCTION

Short implants represent a viable option in areas with limited bone height. In this case, we present an implant with seven years of follow-up, showing no marginal bone loss, no maxillary sinus complications, and maintaining an excellent gingival and esthetic profile.

TREATMENT EXPLANATION

After imaging exams, minimal bone height was observed, leading to the choice of a short implant (COMPACT model, 5×7 mm). The implant site was prepared using a piezoelectric device to preserve membrane integrity, minimize wear and heating, and reduce mechanical trauma in the prepared area.

PATIENT RECORD

Female patient, 47 years old.
Chief Complaint: The main complaint was the absence of tooth 27 and the resulting difficulties in chewing.
Medical History: ASA 1 patient, no parafunctional habits, non-smoker, and no continuous medication use. No history of clinical or systemic alterations, and no known allergies to anesthetics or similar substances. Cleared by a cardiologist
Treatment Plan: Placement of a short implant (5×7 mm) was planned, with a future abutment for a cemented fixed prosthesis.

BEFORE

Preoperative appearance, showing good tissue stability with a thick mucogingival biotype.

RADIOGRAPHY/CT SCAN

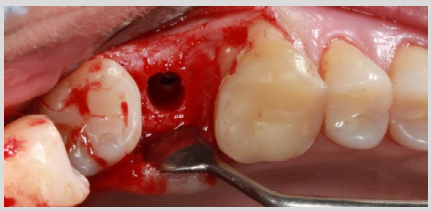
In the initial planning, limited bone height was observed, suggesting the placement of a short implant to reduce morbidity and treatment time.

INTRAOPERATIVE

A crestal incision was made with full-thickness flap elevation. Adequate thickness is observed for the placement of a wide-diameter short implant, aiming for greater stability and optimal use of the bone contact area.

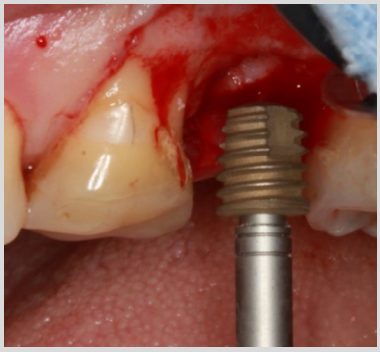
INTRAOPERATIVE

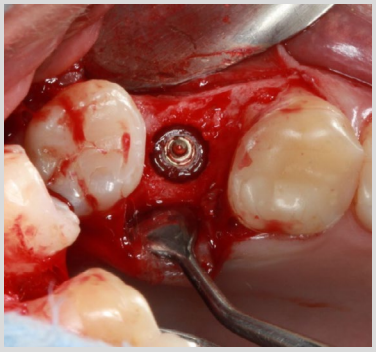
Alveolar site preparation using a piezoelectric device, aimed at minimizing local trauma, providing bio-stimulation, and preserving the sinus membrane.



USED IMPLANT

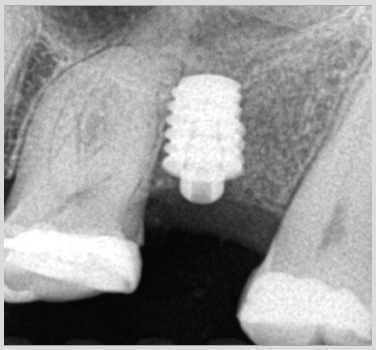
Placement of the Unitite **Compact implant** *(5×7 mm) according to the initial treatment plan.*

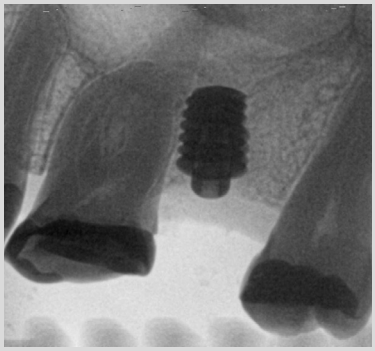




USED IMPLANT

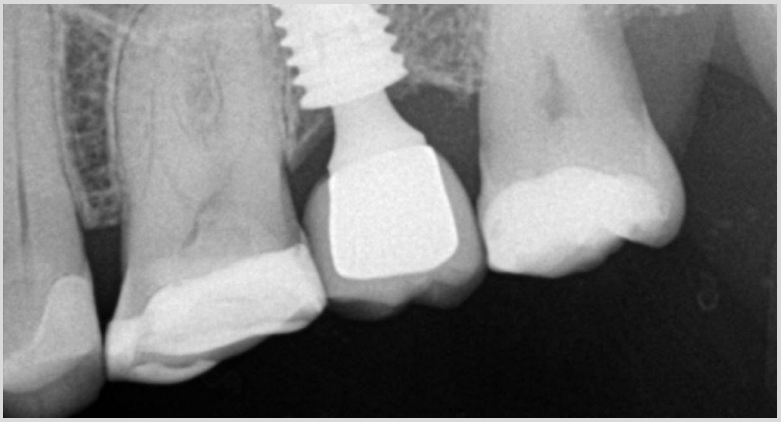
Final surgical and radiographic appearance.





FINAL X-RAY

After the osseointegration period, a universal abutment (4.5×4×2 mm) was placed for a cemented prosthesis, followed by the fabrication of the crown, as shown in the radiograph.

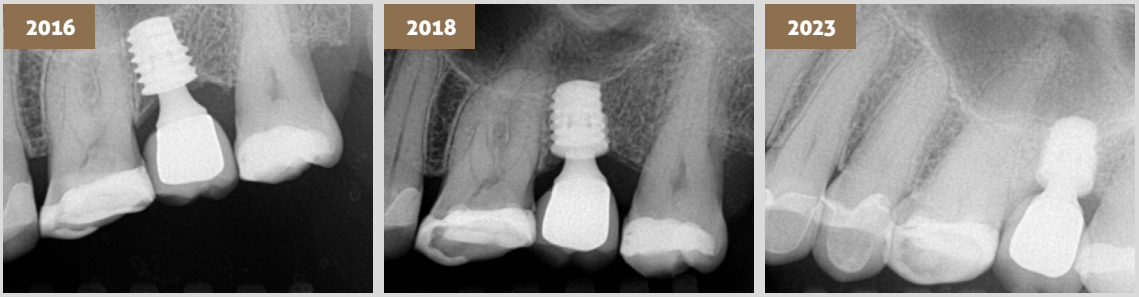


FINAL RESULT

The case was completed with the placement of the crown and occlusal adjustment.

FINAL X-RAY

Radiographic follow-up from 1 to 7 years.



FINAL RESULT

Clinical follow-up from 1 to 7 years.

REPLACEMENT OF A PREVIOUSLY INSTALLED IMPLANT AND ITS CHALLENGES

BY DR. UMBERTO DEMONER RAMOS

Dental degree from the Federal University of Espírito Santo; Specialization, Master's, and PhD in Periodontics from FORP-USP; Sandwich PhD at Augusta University; Visiting Researcher at the Adams School of Dentistry, University of North Carolina; International R\&D Scientific Consultant at S.I.N.

CASE INTRODUCTION

As implant dentistry evolves, there is a growing need to address issues in completed rehabilitations. These treatments range from prosthetic replacements and component adjustments to improve esthetics and fit, to maneuvers for soft tissue correction. In more severe cases, implant removal may be necessary due to peri-implant infections or inadequate three-dimensional implant positioning.

TREATMENT EXPLANATION

The patient presented to the clinic with a failed implant after two unsuccessful attempts to place a 3.5×10 mm implant, due to osseointegration failure. The non-integrated implant was removed, followed by guided bone regeneration and placement of a narrow implant to optimize the available bone site.

PATIENT RECORD

Male patient, 35 years old.
Chief Complaint: The implant appears not to have properly osseointegrated.
Medical History: Patient with diabetes.
Treatment Plan: followed by guided bone regeneration and placement of a Unitite Slim implant.

BEFORE

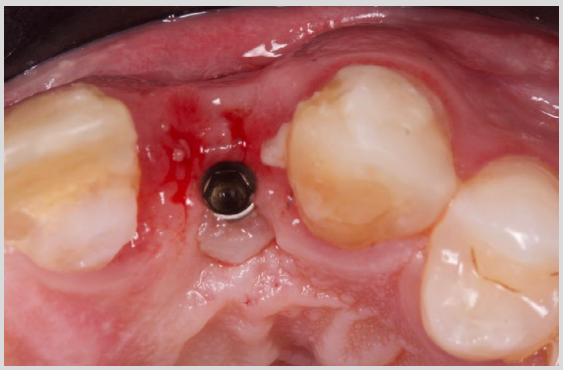
In the initial situation, an implant was lost. The patient reported a history of a failed immediate implant, followed by a second implantation attempt and a 3-month waiting period. During abutment placement, the patient experienced pain and sought care from another professional.

BEFORE

Occlusal clinical situation of the provisional: poor-quality construction with interferences in maximum habitual intercuspation (left side).

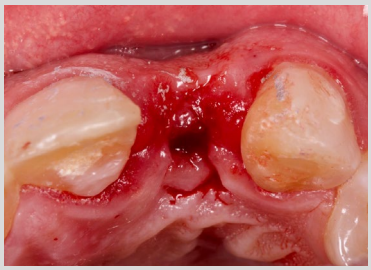
BEFORE

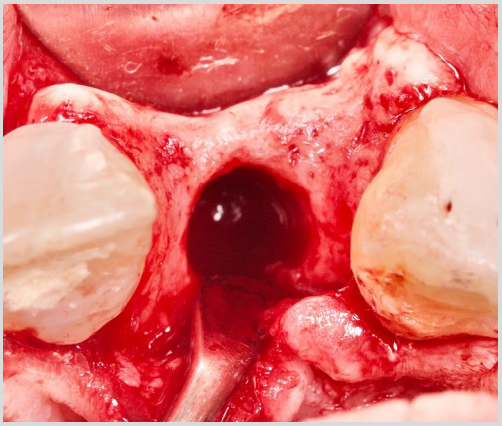
Occlusal view after removal of the provisional crown (left side). Provisional crown with the abutment (right side).



BEFORE

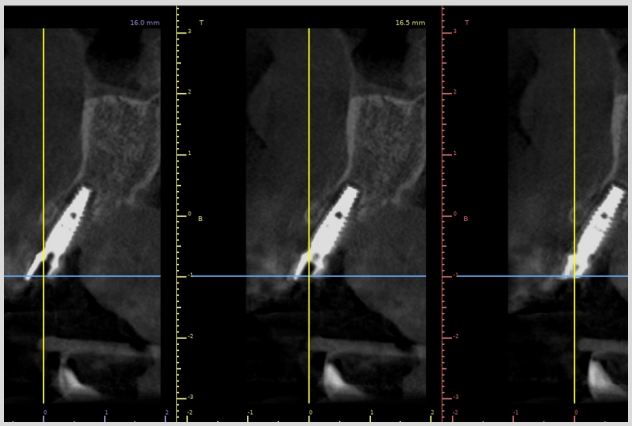
The implant was removed, the site was curetted, and the bone condition was evaluated. Guided bone regeneration was planned.

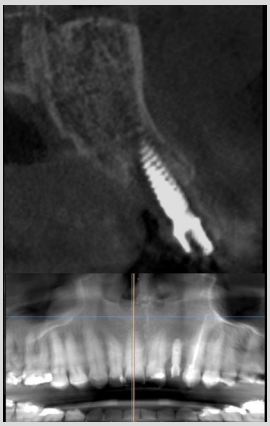




RADIOGRAPHY/CT SCAN

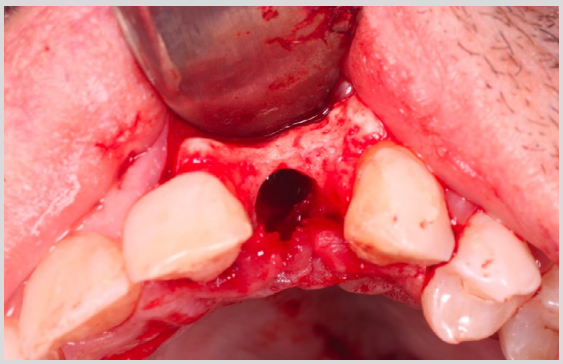
Tomography of the lost implant.

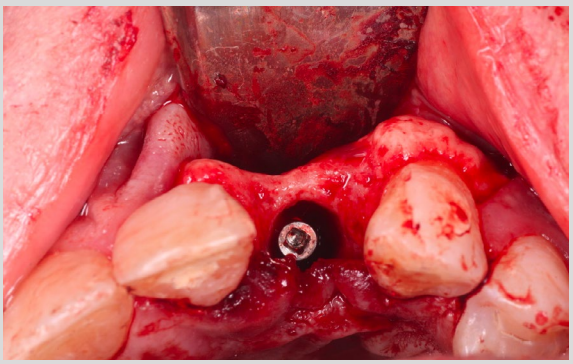




STEP-BY-STEP PROCEDURE

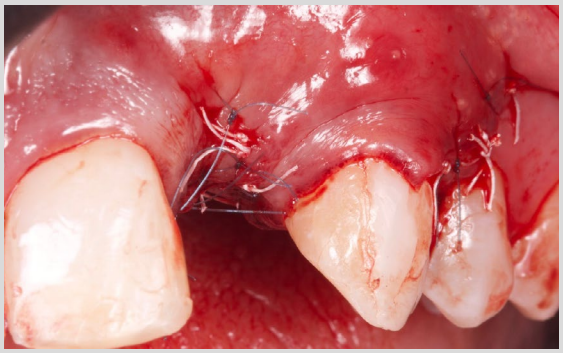
Full-thickness flap was performed, with placement of a cover screw.





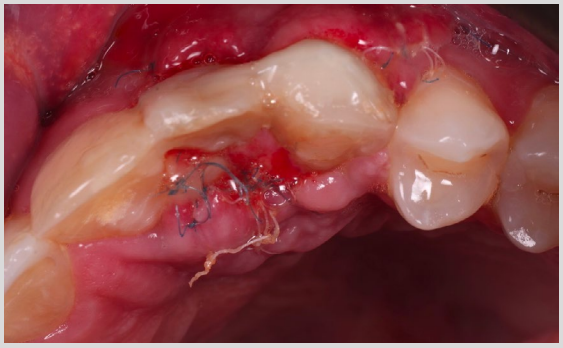
INTRAOPERATIVE

Flap sutured. Postoperative edema (72 hours).



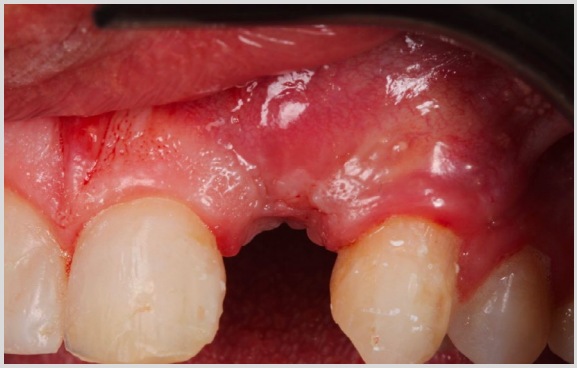
INTRAOPERATIVE

Clinical situation at suture removal, 14 days postoperatively.



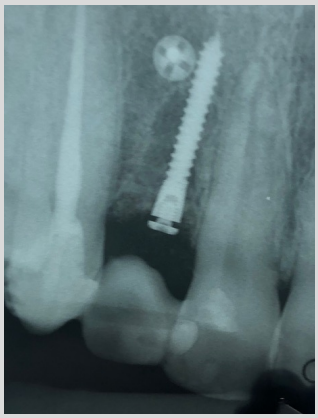
INTRAOPERATIVE

Clinical situation after 3 months of healing.



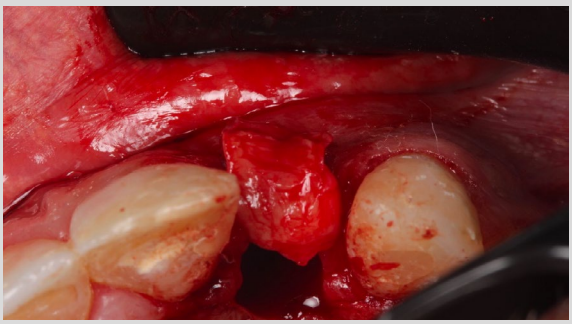
INTRAOPERATIVE

Periapical X-ray and clinical situation on the day of implant placement, showing coronal displacement of the mucogingival line.



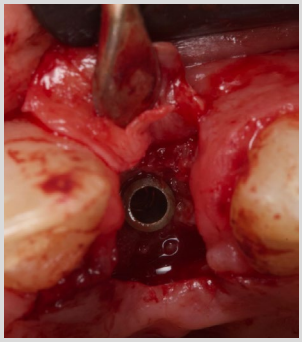
INTRAOPERATIVE

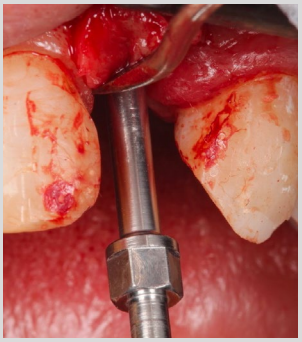
Clinical situation viewed occlusally. A roll flap was performed using palatal displacement of the incision and the division of a small flap involving connective tissue, submucosa, and periosteum.

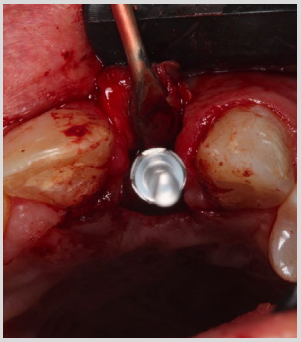


IMPLANT USED

Unitite Slim *implant placed with 40N torque. Due to the patient's diabetes, a 3-month healing period was observed before reentry.*

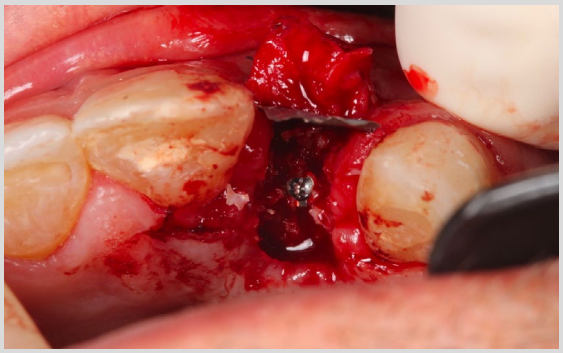


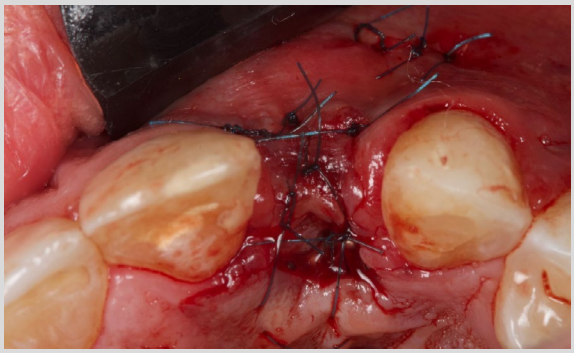




INTRAOPERATIVE

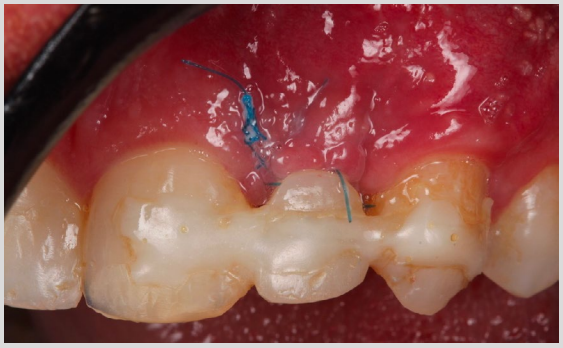
Placement of a titanium barrier and flap suturing.

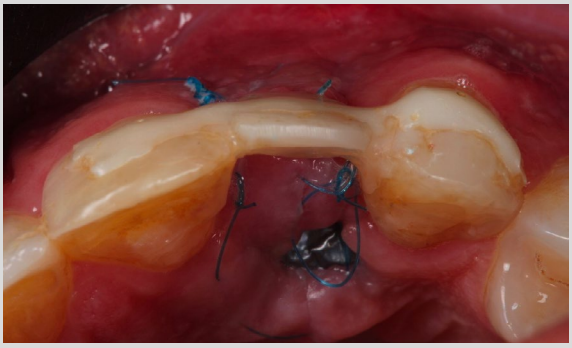




INTRAOPERATIVE

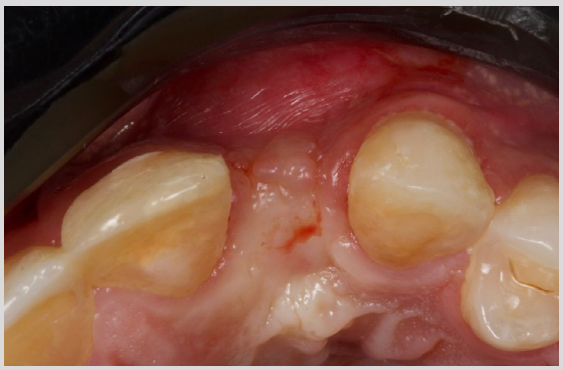
Fourteen days after the surgery, the titanium barrier was removed.





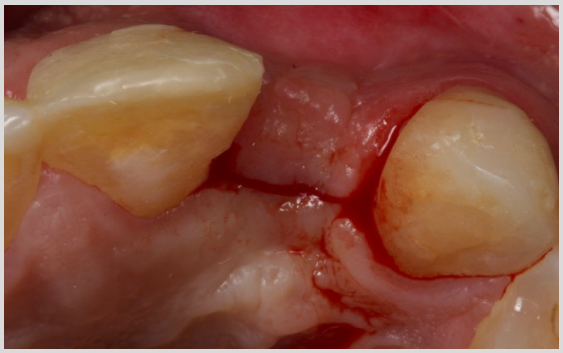
INTRAOPERATIVE

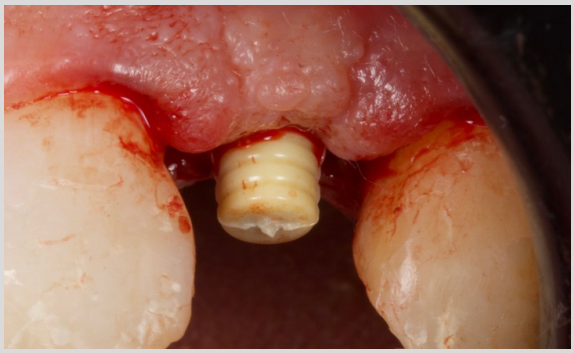
Occlusal and vestibular view after three months.



INTRAOPERATIVE

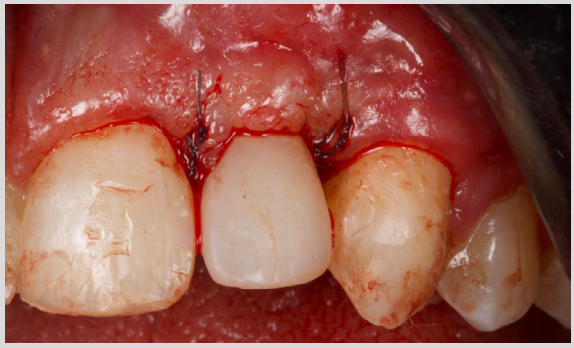
A palatal incision was made. The occlusal region of the flap was de-epithelialized, and a standard abutment with a provisional cylinder





INTRAOPERATIVE

Immediate postoperative clinical situation with an acrylic provisional placed on the abutment.

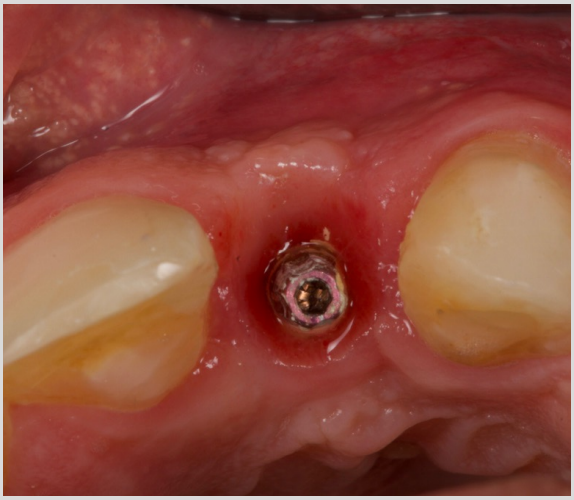


INTRAOPERATIVE

Periapical X-ray and clinical situation 14 days postoperatively.

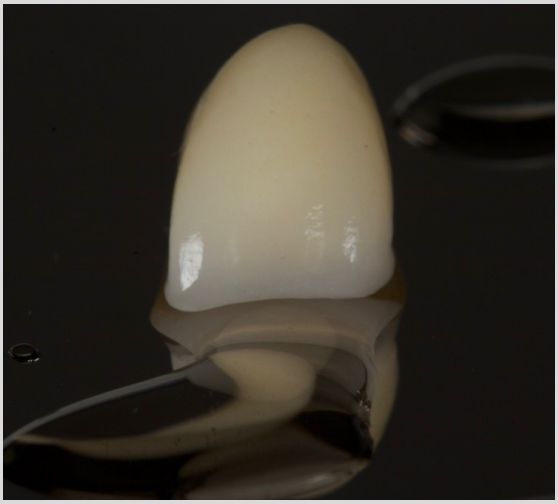
PROSTHETIC PHASE

Shade selection for the future prosthesis. Peri-implant mucosa shows excellent health, indicating good condition of the provisional, which facilitated local tissue regeneration.



PROSTHETIC PHASE

Crown fabricated in zirconia by the laboratory. Peri-implant tissue condition before cementation of the definitive prosthetic crown.



PROSTHETIC PHASE

Prosthesis installed. Tissue gain is evident compared to the initial situation, highlighting the meticulous handling of both bone and soft tissue, resulting in a natural final rehabilitation.

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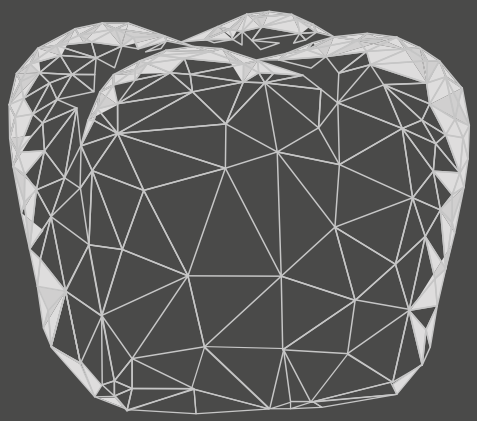

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