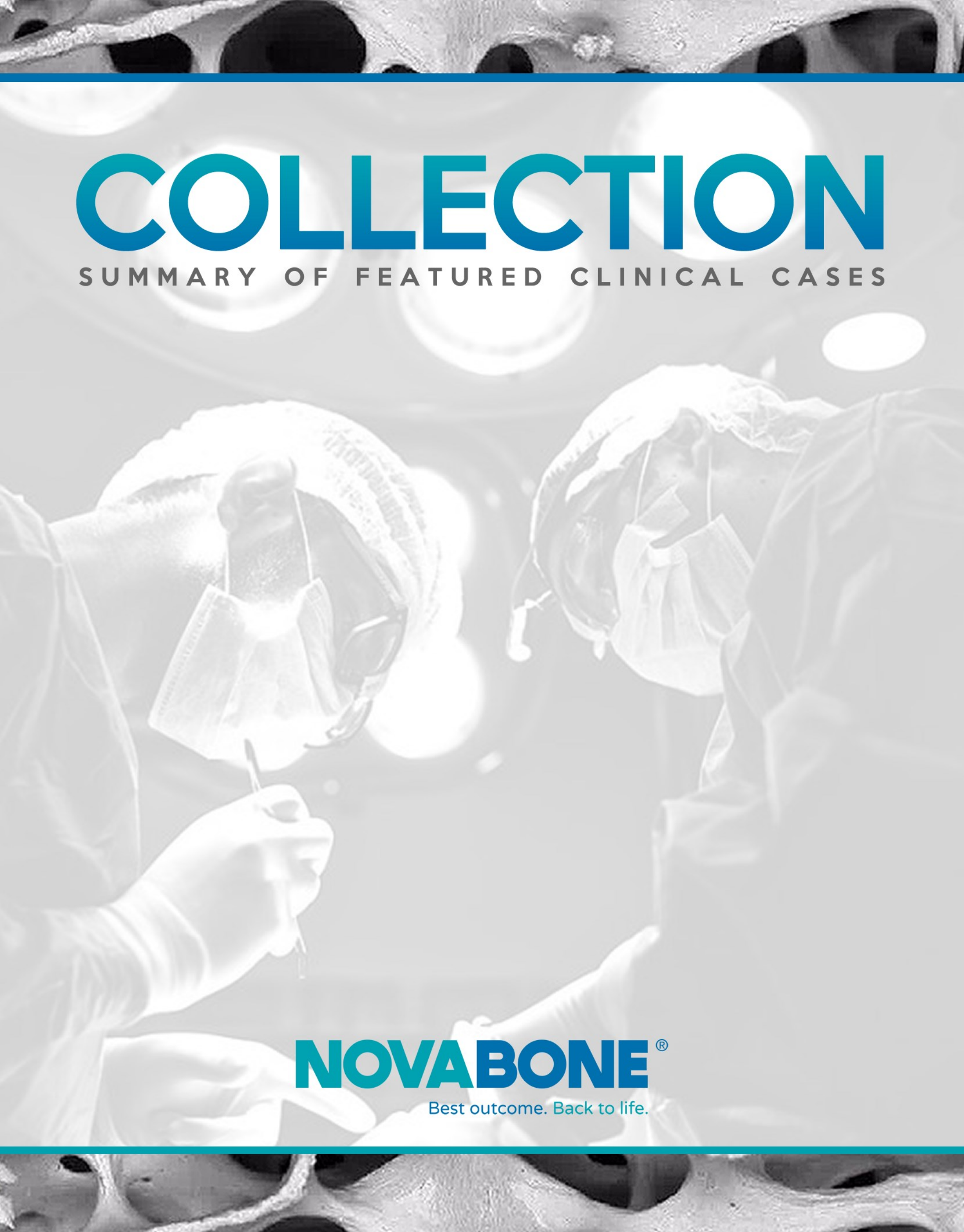




COLLECTION

SUMMARY OF FEATURED CLINICAL CASES

NOVABONE®

Best outcome. Back to life.



NOVABONE[®]
Best outcome. Back to life.



Educational Disclaimer

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It is crucial for readers to recognize the potential risks associated with incorporating unfamiliar techniques and procedures into their practices. Treatment decisions ultimately rest with individual surgeons, who exercise their professional judgment in each unique situation. We recommend that readers seek professional advice from their colleagues and advisors.

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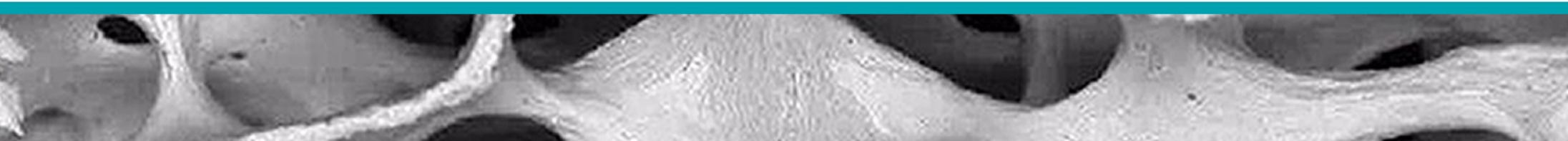


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- 

PERI-IMPLANTITIS REGENERATIVE TREATMENT GUIDE



Steps 1 - 2

Remove the crown to assess whether or not cement residues are present on the implant surface. If present, there is a 75% chance for successful treatment using this protocol.¹

If possible to retrieve the crown, primary closure is preferable for regeneration. Replace the crown with a sterile (not a sterilized or re-used) cover screw to aid in gingival augmentation.² This is a critical step for ensuring there is enough tissue growth after 3-4 weeks to achieve passive primary closure. If the cover screw is exposed during healing, immediately replace with a healing abutment or the replaced crown using a second stage procedure to avoid food impaction and infections.

Step 3

Mechanical contact non-abrasive (e.g. nylon brushes) and mechanical non-contact (e.g.

Use a solution of 1 part NaOCl (Sodium Hypochlorite) to 5 parts sterile water only in areas where the titanium surface is exposed in the sulcus. Applied with gentle burnishing with a gauze, NaOCl has a minor surface oxide alteration effect but it does not kill osteoprogenitor cells.⁴

CAUTION: Using titanium brushes or curettes on implant areas that will be grafted is not advised. Metal to titanium contact results in permanent removal of the passivation layer and causes the loss of cytocompatibility.⁵ Chlorhexidine is not recommended for use on implant surfaces because it prevents the cells from reattaching which results in failed regeneration.

Step 4

Apply ample irrigation followed by grafting of the area with an Osteostimulative (NovaBone® Morsels) or Osteoinductive biomaterial⁶, which is then covered with a collagen membrane (Zmatrix™, Osteogenics).

Primary closure should be achieved relatively easily as the site was previously prepped with a soft tissue augmentation. If the crown was not removed, proceed with secure closure by adding a sling suture around the crown for increased clot stabilization.

Step 5

Allow 4-6 months for healing without probing. Recommend water irrigation with a waterpik for home care after initial healing (4 weeks), then assess radiographically. If the site in question is regenerated, replace the restoration, and complete oral hygiene without the use of Fluoride. Fluoride is electronegative and can corrode titanium.

1. The positive relationship between excess cement and peri-implant disease: a prospective clinical endoscopic study. J Periodontol. 2009 Sep;80(9):1388-92. 2. Spontaneous in situ gingival augmentation. Langer B. Int J Periodontics Restorative Dent. 1994 Dec;14(6):524-35. 3. Strategies for implant surface decontamination in peri-implantitis therapy. Int J Oral Implantol (Berl). 2022 Sep 9;15(3):213-248. Monje A, Amerio E, Kook Cha J, Kotsakis G, Pons R, Renvert S, Sanz-Martin I, Schwarz F, Sculean A, Stavropoulos A, Tarnow D, Wang HL. 4. Increased Levels of Dissolved Titanium Are Associated With Peri-Implantitis - A Cross-Sectional Study. Saffoti LM, Kotsakis GA, Pozhitkov AE, Chung WO, Daubert DM. J Periodontol. 2017 May;88(5):436-442. 5. Antimicrobial Agents Used in the Treatment of Peri-Implantitis Alter the Physicochemistry and Cytocompatibility of Titanium Surfaces. Kotsakis GA, Lan C, Barbosa J, Lill K, Chen R, Rudney J, Aparicio C. J Periodontol. 2016 Jul;87(7):809-19. 6. Osteostimulative calcium phosphosilicate biomaterials partially restore the cytocompatibility of decontaminated titanium surfaces in a peri-implantitis model. Karoussis IK, Kyriakidou K, Papaparaskevas J, Vrotsos IA, Simopoulou M, Kotsakis GA. J Biomed Mater Res B Appl Biomater. 2018 Oct;106(7):2645-2652

Featured Products:

► NovaBone® Dental Morsels ► Zmatrix™



Intraoral scan images prior to crown removal (Fig. 1 - see access hole created with a diamond bur), and 3 weeks after healing with substantial increase in keratinized tissue over the cover screw



Implant surface decontamination - the most critical part of the entire procedure. Implant-specific cleaning approach



Membrane tacked into place for stability then packed with 0.5cc NovaBone® Morsels

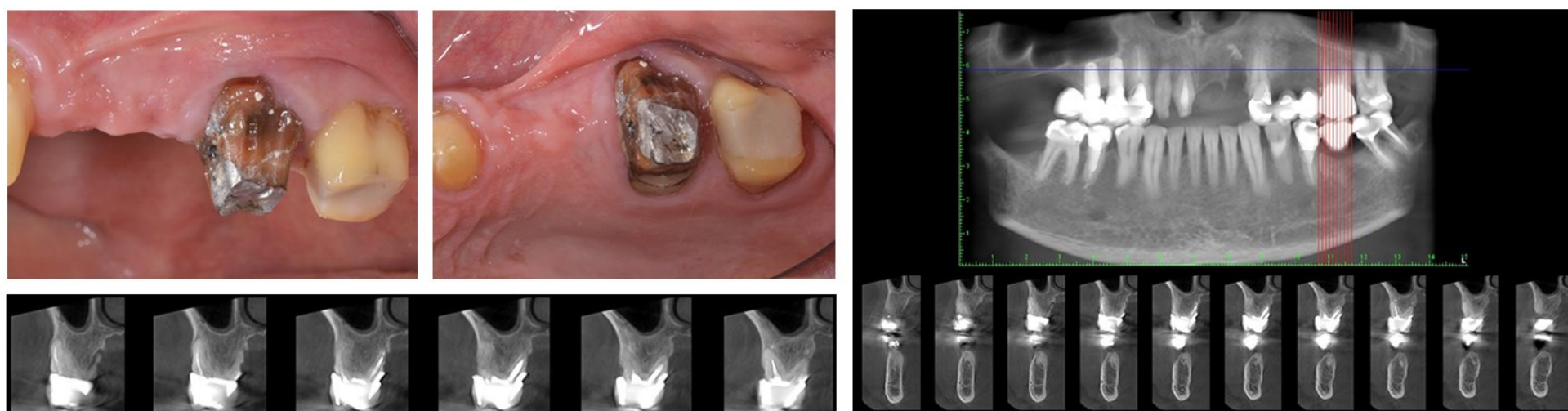


Membrane secured

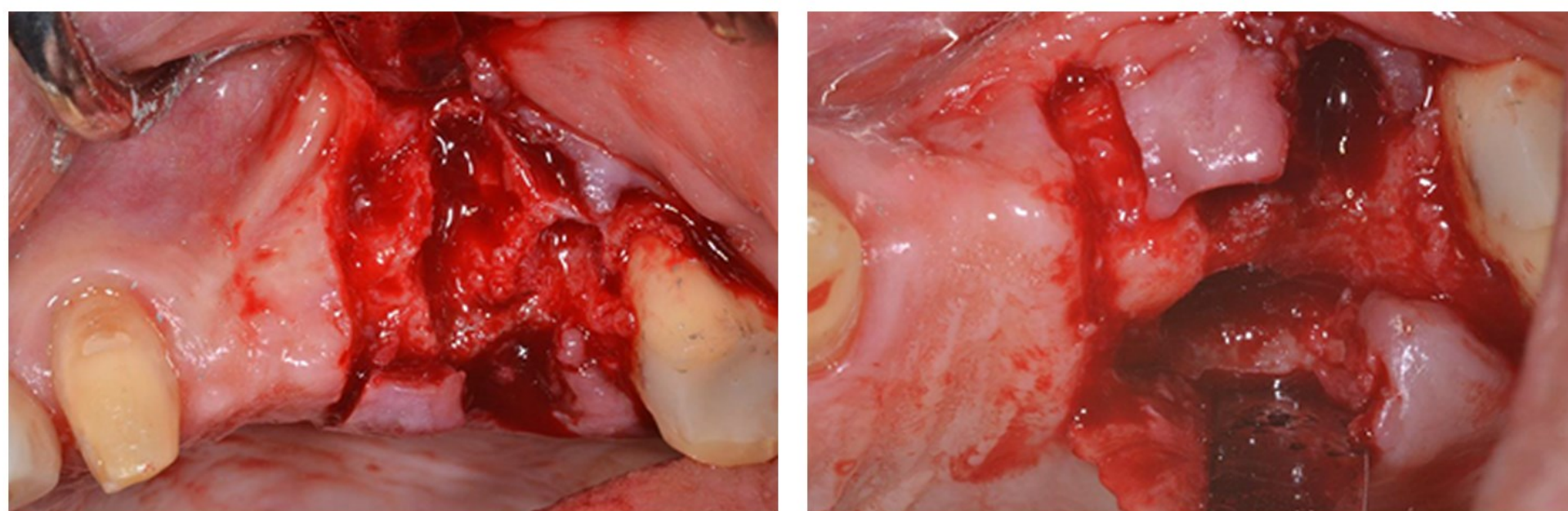


Replaced and recontoured restorations to allow proper hygiene in place at 4-months post-healing. The tissue is now healthier with probing depths < 5 mm.

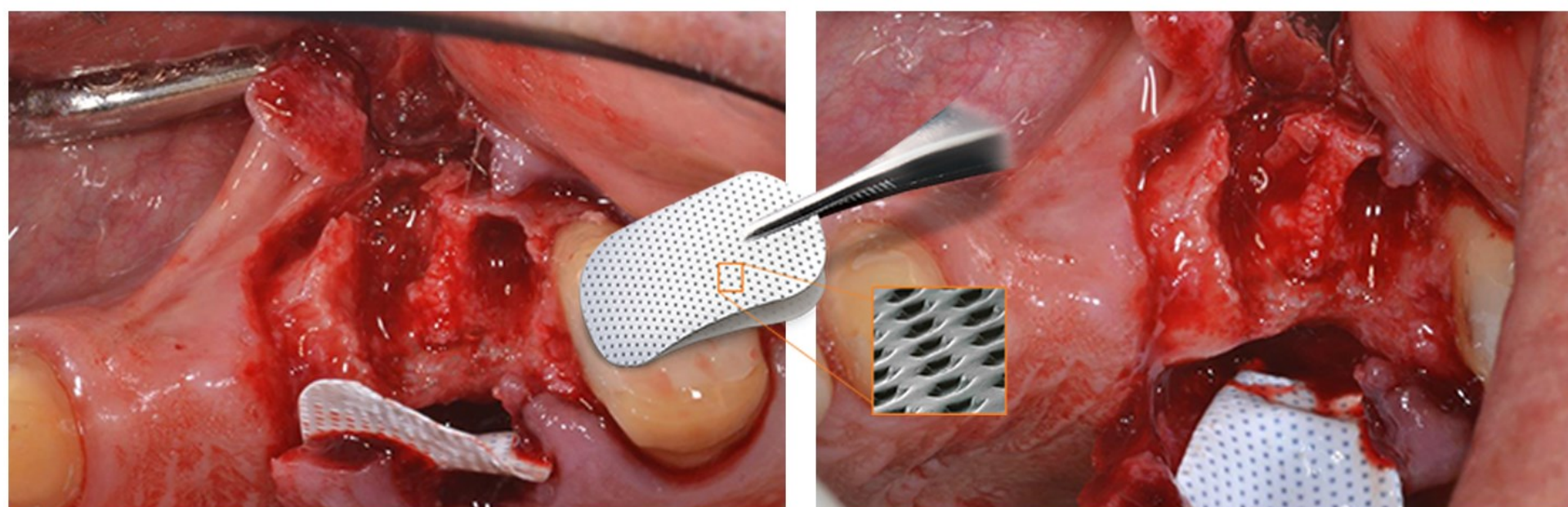
CLINICAL CASE: SOCKET AUGMENTATION UPPER MOLAR WITH NOVABONE



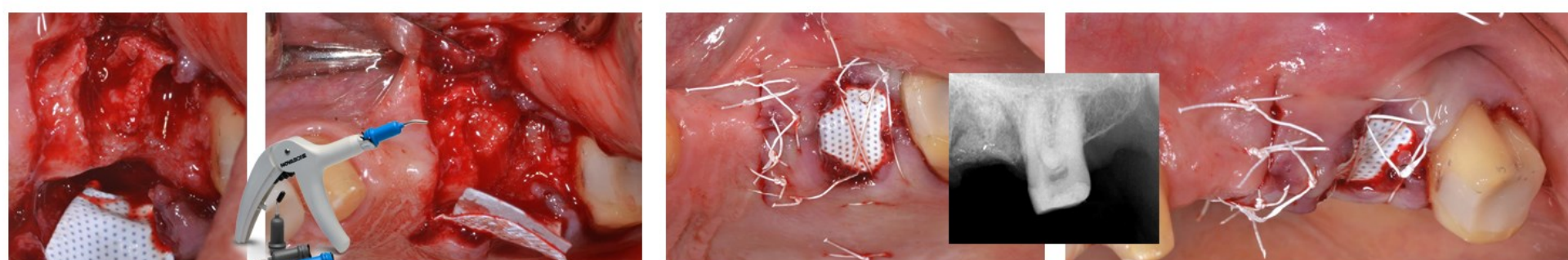
Complete palatal socket wall resorption Partial buccal socket wall resorption.



Complete resorption of the palatal wall and mesio vestibular

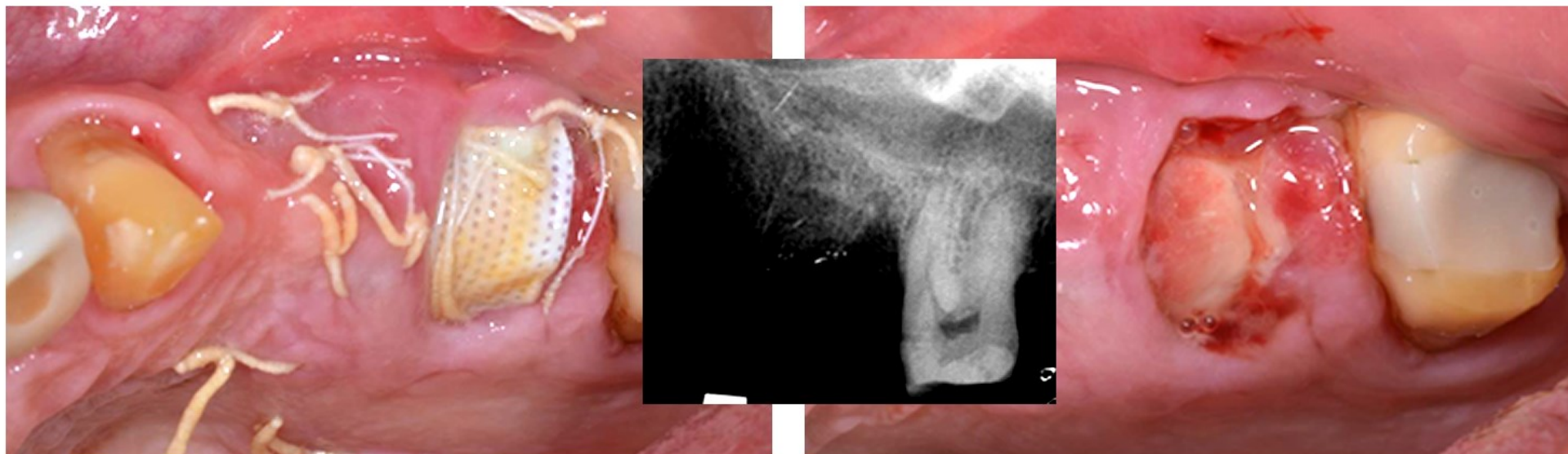


Cytoplast TXT 20012x24 membrane stabilized with a suture to the palatal flap

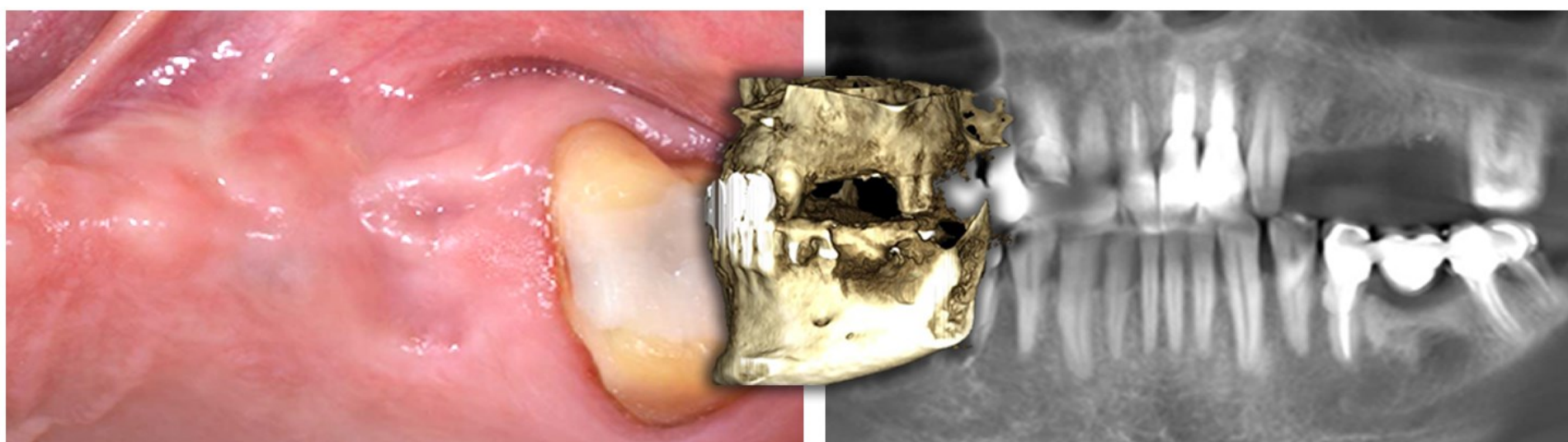


Since the bone defect was so extensive, a second membrane (Vitala 20x30) was inserted below the PTFE one, to cover the NovaBone dental Putty graft along the entire defect (buccal, coronal, palatal. Only the PTFE membrane remained exposed

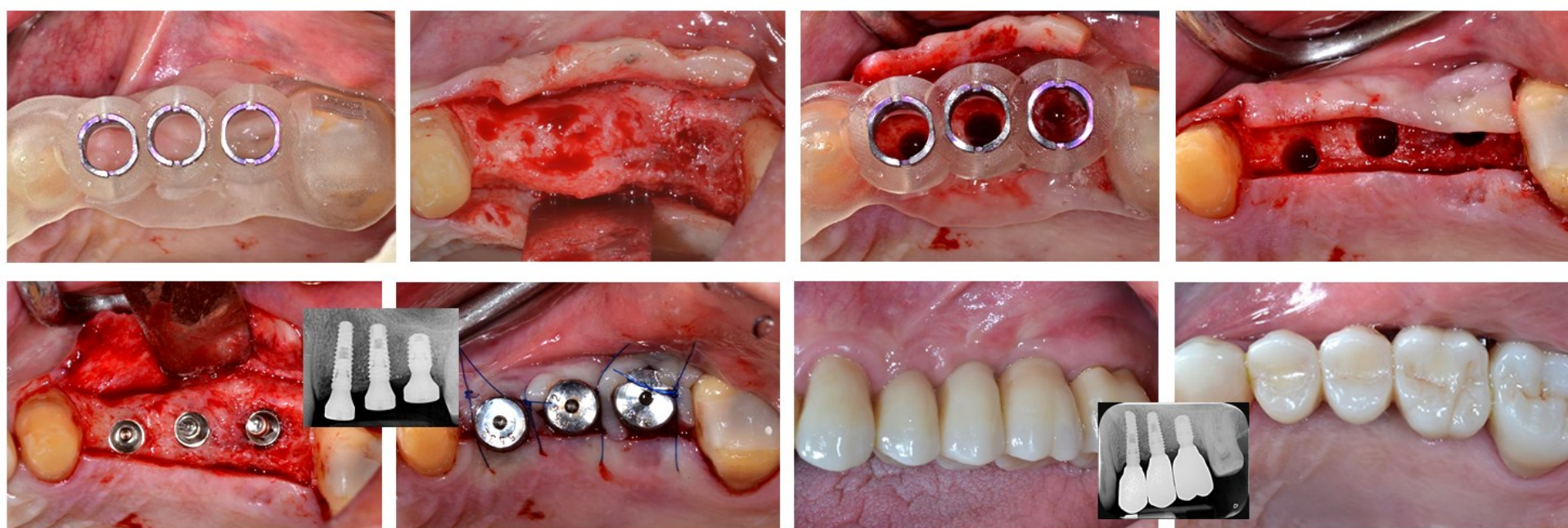
CLINICAL CASE: SOCKET AUGMENTATION UPPER MOLAR WITH NOVABONE



3 weeks. The PTFE membrane was removed and the Vitala membrane was visible.



6 months later, the tissue is completely healed 3 weeks. The PTFE membrane was removed and the Vitala membrane was visible.
6 months later, the tissue is completely healed



Implants placed trough guided surgery.

Final Restorations. Prosthetics by Dr. Mattei. Fondi, Italy

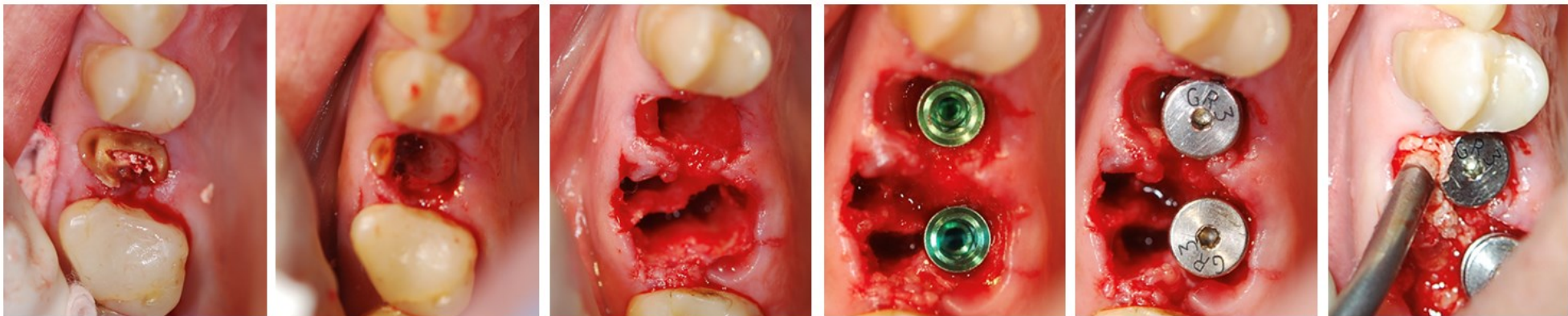


Dr. Fabrizio Belleggia, DDS

Dentistry and Dental Prosthesis,
Catholic University of Sacred Heart. Rome, Italy
Post graduate degree in oral surgery.
University of Rome "Tor Vergata"



CLINICAL CASE: SOCKET SHIELD TECHNIQUE

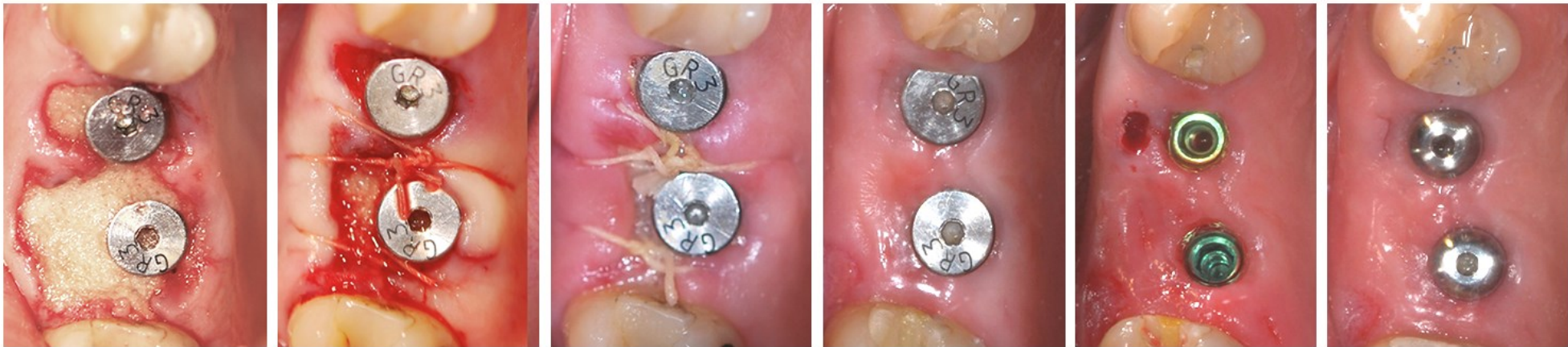


Initial situation

Socket Shield Technique

Implant placement

Novabone Putty



Suture

One week control

Two weeks control

Healing abutments



Initial situation



Final situation



12 month control

24 month control

36 month control



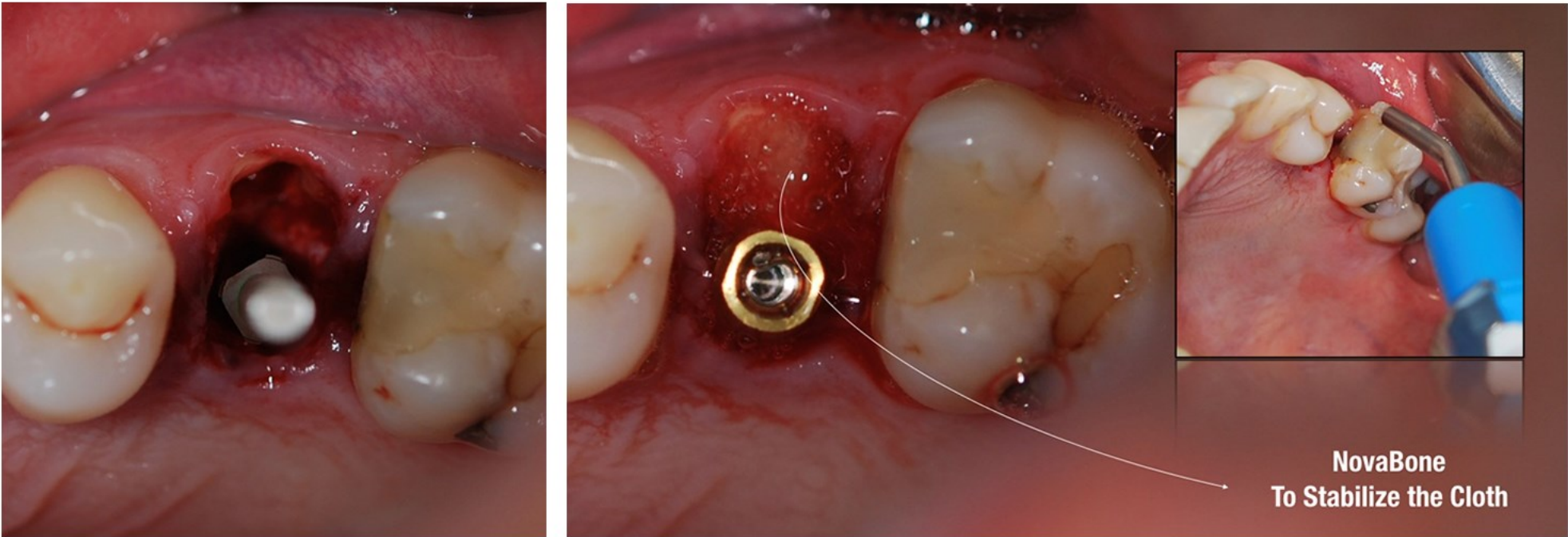
Dr. Marcelo Ferrer, DDS
Periodontist and Implantology Specialist
Postgraduated Program Director
San Sebastian University



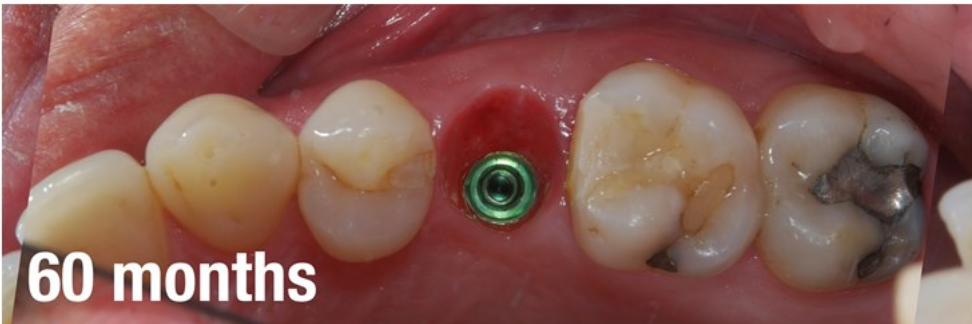
CLINICAL CASE: FOLLOW UP 6 YEARS WITH NOVABONE



Initial Situation



NovaBone
To Stabilize the Cloth



CLINICAL CASE: FOLLOW UP 6 YEARS WITH NOVABONE



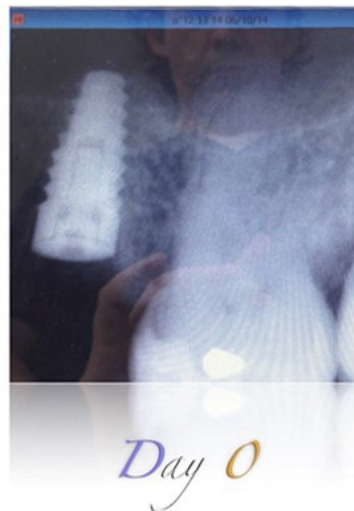
2014

2014

2015

2018

2019

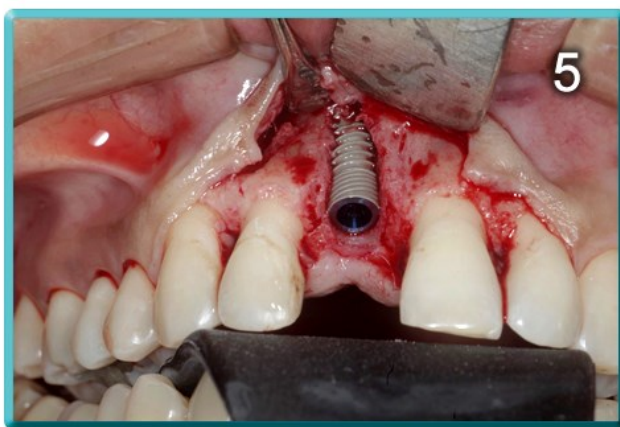


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Periodontist and Implantology Specialist
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CLINICAL CASE: BONE REGENERATION IN IMPLANT THERAPY

42 years old female heavy smoker with a root fracture in tooth number 1.1 (Fig 1). The root was extracted and implant was placed post extraction (Fig 2). The implant fail two months after surgery and a large defect in the hard and soft tissue appear (Fig 3). After the flap was opened and a big bone deficiency was found (Fig 4). At Dynamix Conical implant (Cortex Dental IND.) was inserted in the residual bone (Fig 5), a complementary bone regeneration procedure was done using Morsels (NovaBone Products, Fig 6) and a collagen membrane (3Biomat Inc, Fig 7). After 5 months the site was re-opened. the implant was loaded with a temporary restoration and a connective tissue graft was done to improve the soft tissue (Fig 8, 9, 10 and 11). After 3 months a final Crown was placed (Fig 12).



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Associate Professor Faculty of Dentistry - University of Antioquia.

Active Member Colombian Association of Periodontal and Osseointegration.

Author of scientific articles in Prosthodontics, Periodontics and Dental Implants.

International lecturer.

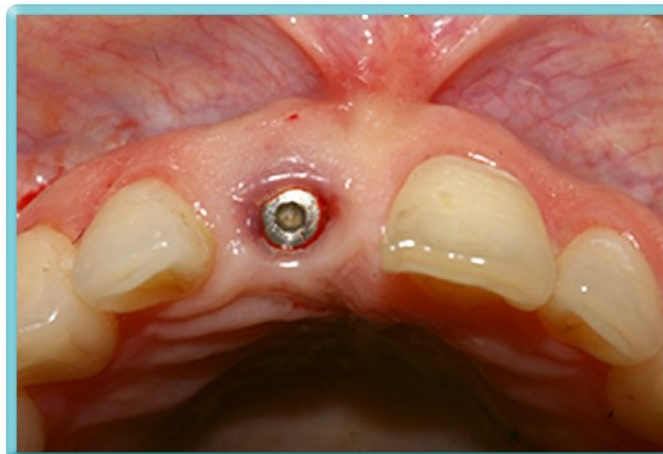


CLINICAL CASE : POST IMPLANT EXTRACTION BONE GRAFT

A 46 years old female with non medical pre-existing condition was referred for implant management in tooth 11 due to a non-restorable root fracture. A immediate implant was placed in palatal position.



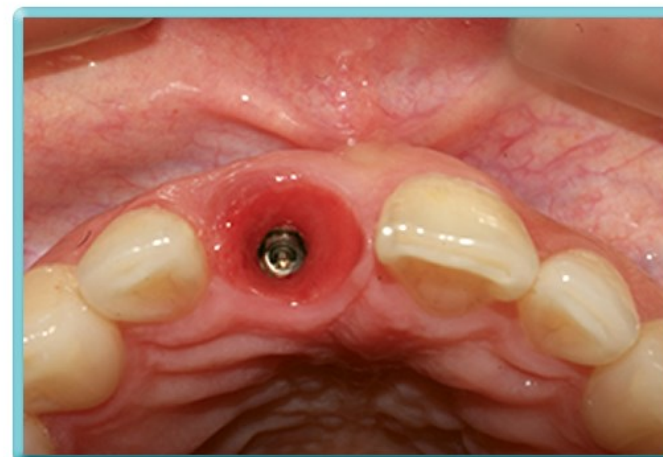
1. The gap between buccal plate and the implant surface was filled with novabone Morsels to preserve the dimensions of the ridge and the profile of the soft tissue



2. A 3 mm healing cap was used to seal the socket



3. Vestibular view



4. The soft tissue profile was managed using a temporary crown



5. Vestibular view



6. The case ready for final restoration three years after the implant was placed



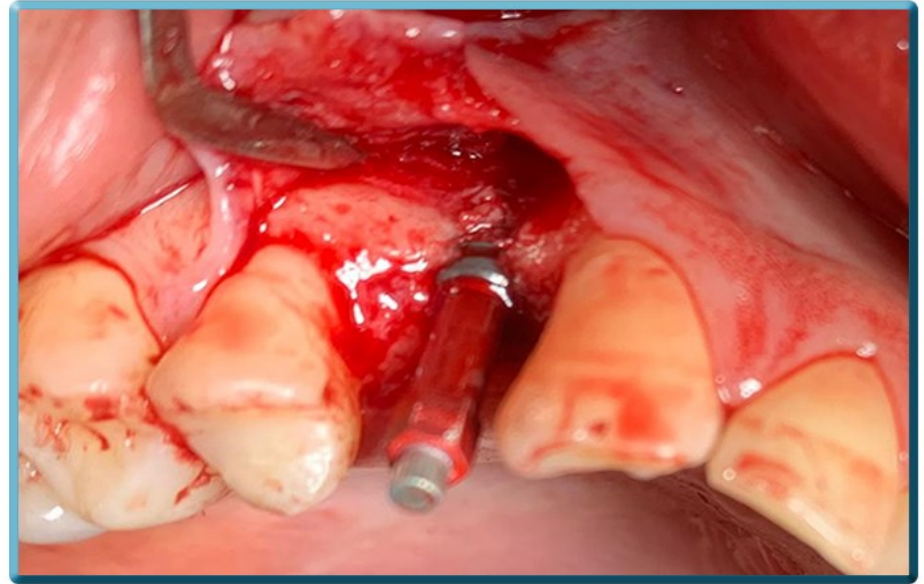
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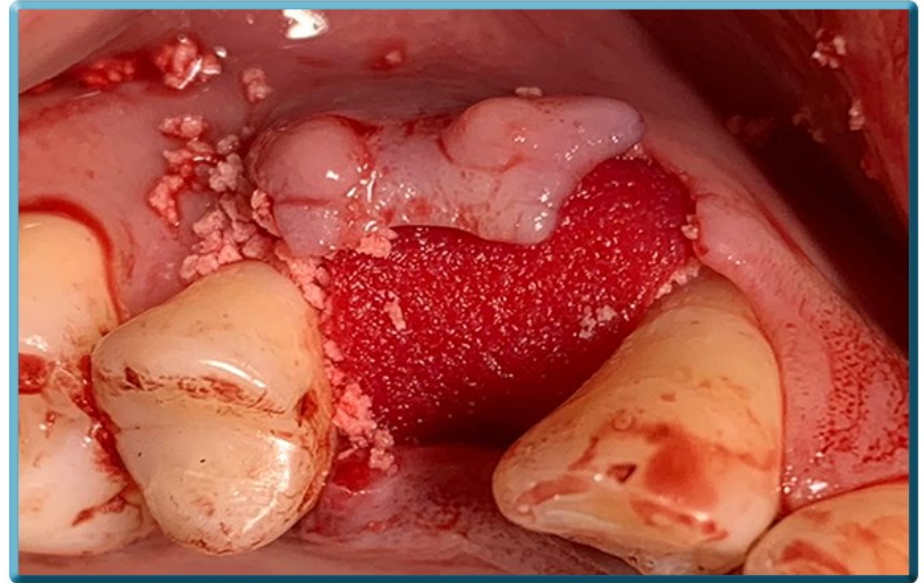
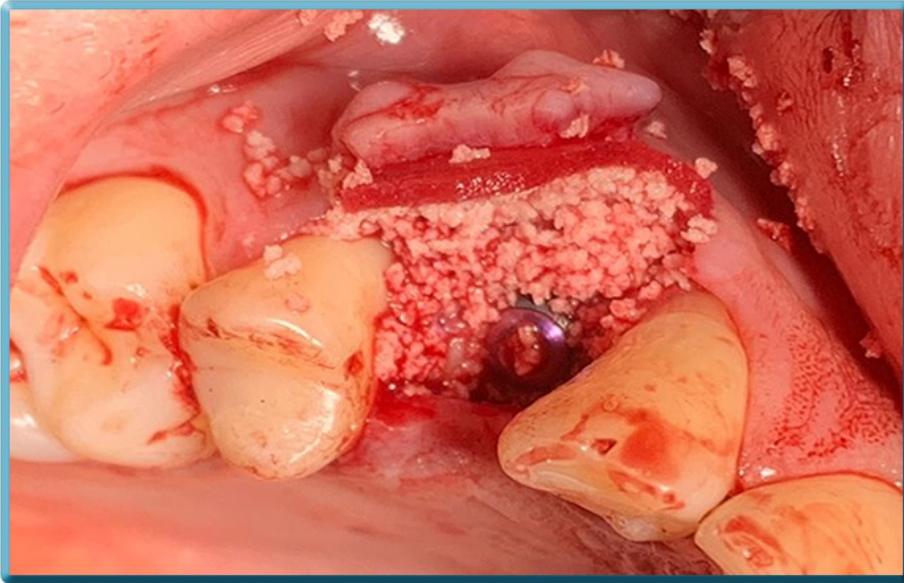


CLINICAL CASE: NOVABONE MORSELS ON IMPLANT PLACEMENT

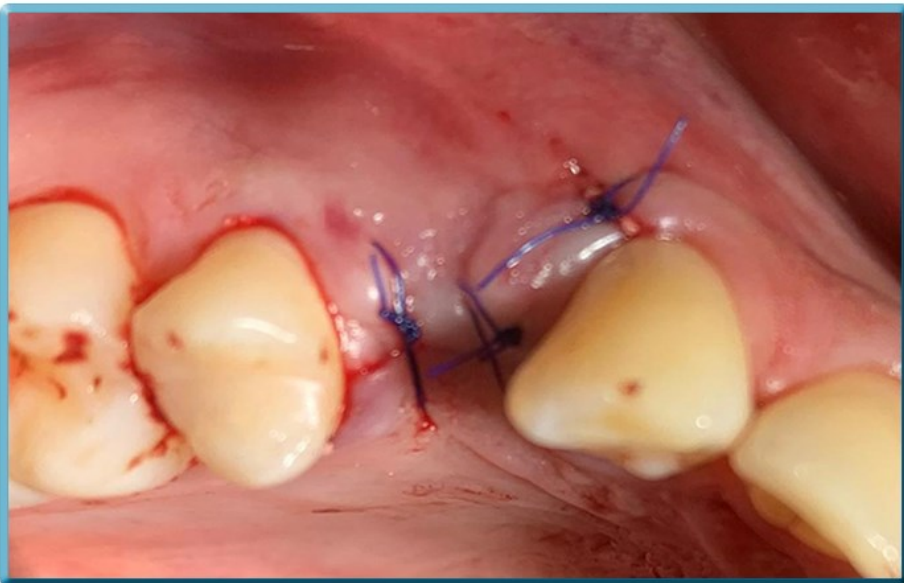
Initial situation



Implant placement (Megagen Blue Diamond)



The ridge is too narrow, so a GBR with NovaBone Morsels was made.



Suturing and control



Radiographic follow up

**Dr. Maarten J. Boogaard, DMD**

Dental Medical Degree University of Amsterdam
Masters of Periodontology University of Alabama (UAB)
Private practice in Amsterdam and Amstelveen,
The Netherlands, where he specializes in Implantology.



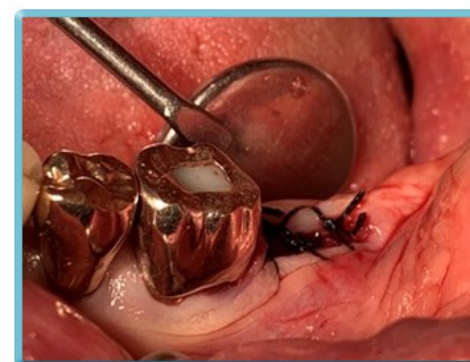
CLINICAL CASE: IMPLANT PLACEMENT WITH NOVABONE PUTTY



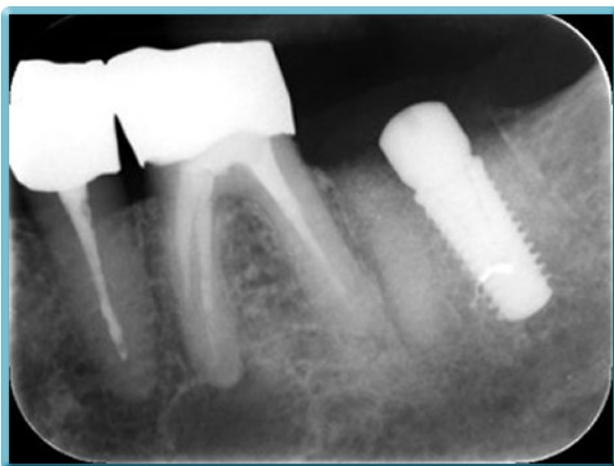
Initial Situation



Implant preparation through molar up to drill 5.0 mm Separation of the mesial and lingual root, and molar extracted. The socket walls were excavated.



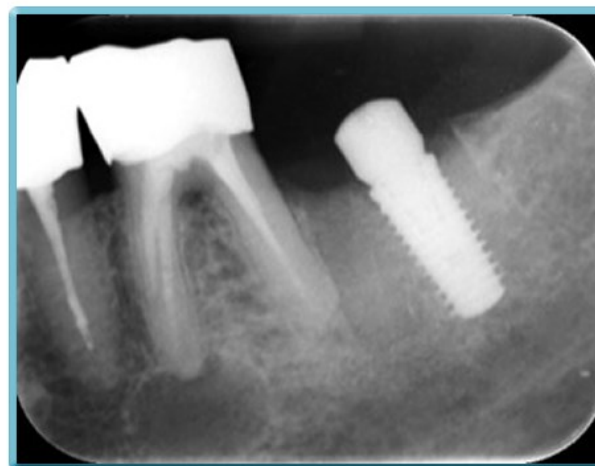
After implant placement NovaBone putty was applied to fill the jumping gap between the implant and the socket walls. A Osseoguard flex (15mm x 20mm) has been placed over the implant. Even though the initial stability was great, because of the large defect I decided to place the implant 2-phase. (Sutures, 3-0, Ethicon PERMA-Hand)



Placement of healing abutment



3 months follow up



Crown placement and RCT done

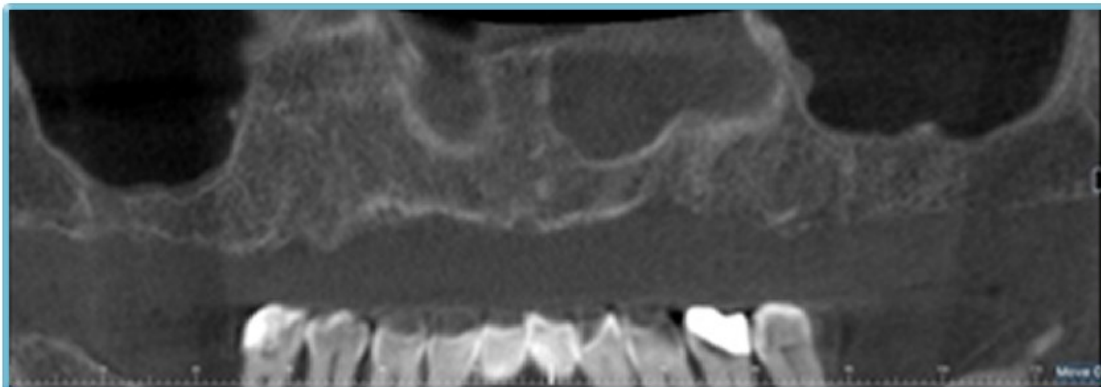


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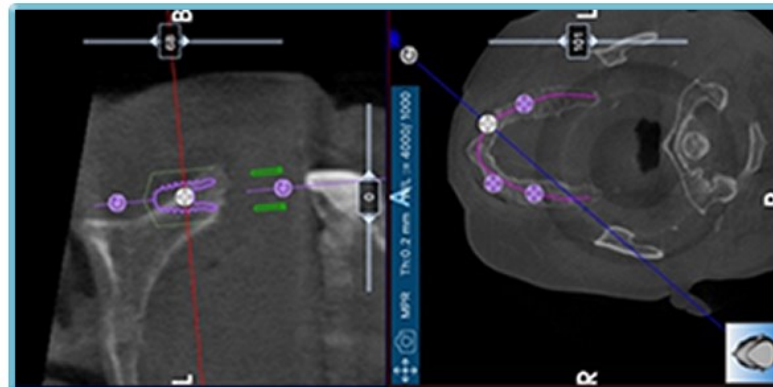


CLINICAL CASE: IMPLANT-SUPPORTED PROSTHESIS WITH DOUBLE BAR

This 61-year-old healthy woman has had a history with periodontitis, and she lost all her upperteeth. She was not happy with her prosthesis and wanted a better solution.



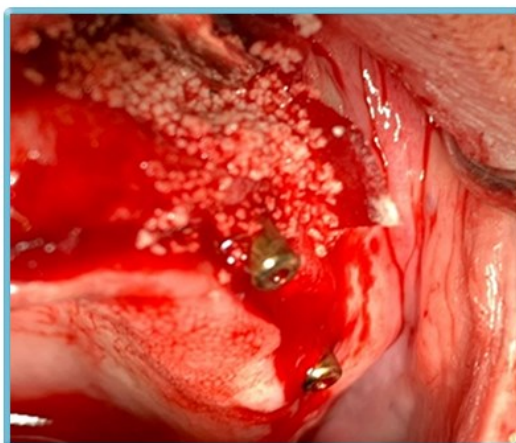
CBCT of upper jaw.



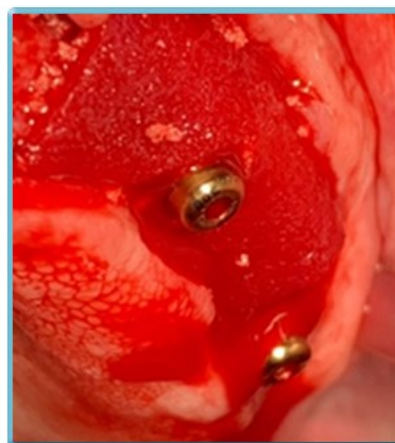
To get a parallel implant placement, the cbt shows there is to little bone buccally



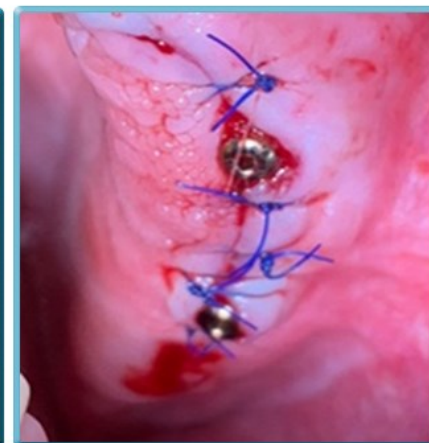
Situation after implant placement (Blue diamond 3.3mm diameter NC 10mm length)



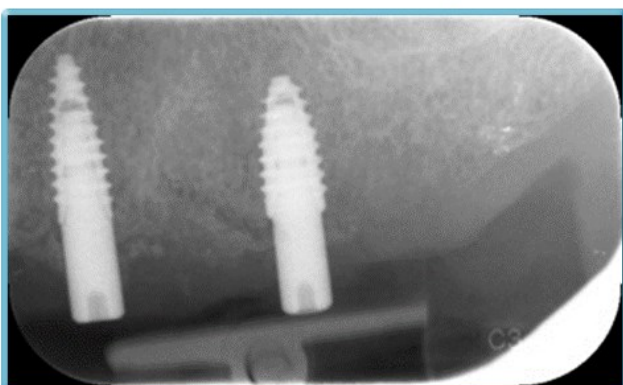
GBR using Novabone Morsels



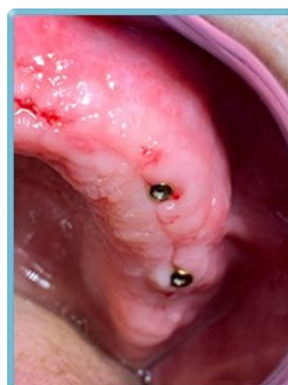
Placement of Osseoguard membrane Biomet 3i



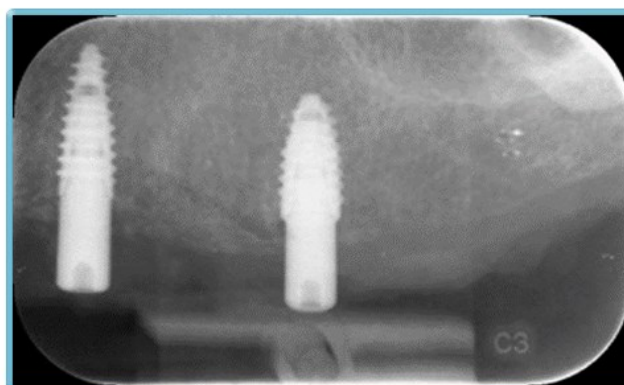
Clinical situation after suturing



X Ray of implants after placement



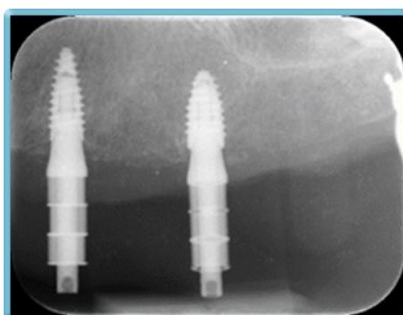
Situation after two weeks, sutures removed



Xray after three months



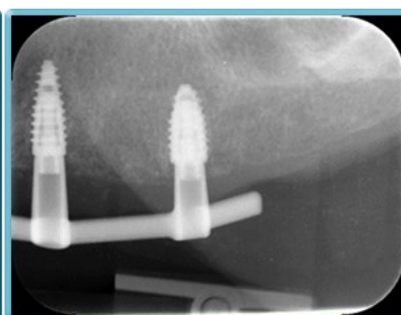
Situation after three months, ISQ measurement 73



Xray checking if impression posts are fitted correctly



Impression posts in place



Xray of bar placed



Bars placed



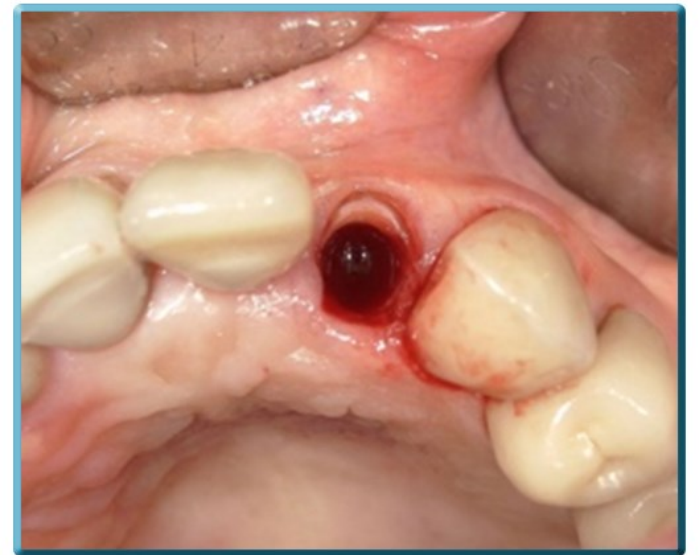
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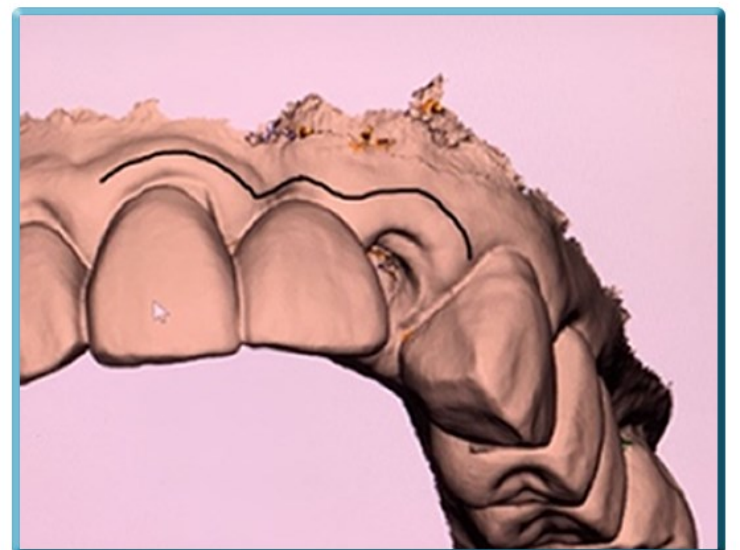
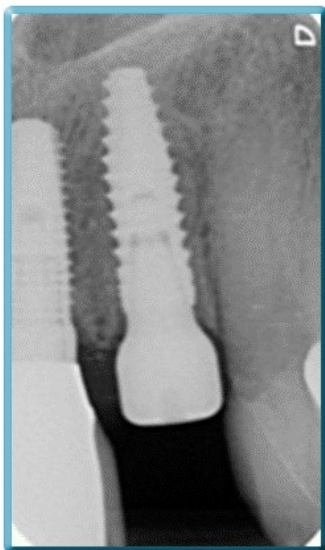
CLINICAL CASE: SOCKET SHIELD IN COMBINATION WITH NOVABONE

A woman in her sixties came with a broken tooth. There was not enough ferrule to build a crown on, so decide was to place an implant in combination with the socket shield technique, according to the protocol of Howard Gluckman.



Situation/ xray before treatment

Socket shield and implant placement. NovaBone was applied in between the shield and the implant.



She did not want any immediate crown since she already had a partial prosthesis. A conelog progressive line implant was placed. A scan was made with a trios 3d scanner. Here it shows how the buccal plate and shape is still in contact. Especially if you look at the defect at tooth #21. This implant was placed over 10 years ago and shows significantly resorption of the buccal plate.



End result. The Crown on the 3d printed model, the X Ray after placement and intra oral, showing nice healthy pink tissue

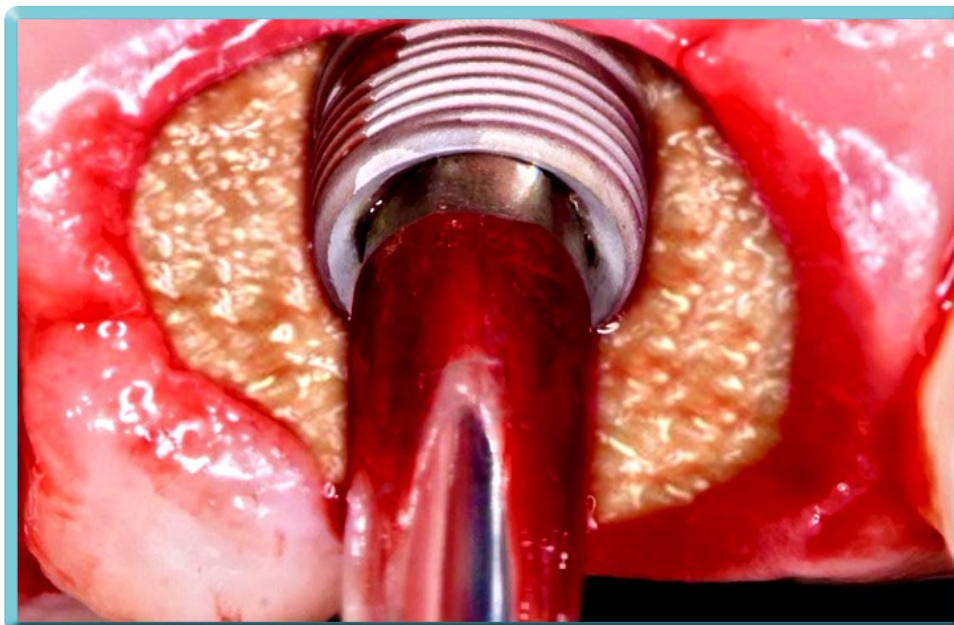
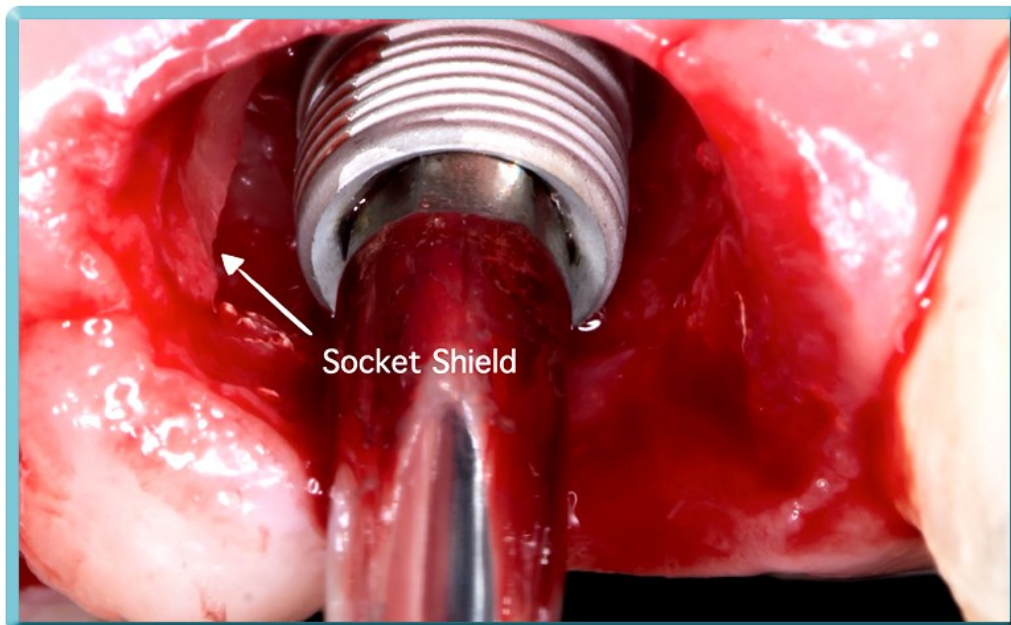


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CLINICAL CASE: SOCKET SHIELD WITH NOVABONE

Patient presented with a Maxillary Central Incisor with recurrent caries apical to the existing crown limit. A Socket Shield approach was performed for the extraction and immediate implant placement.



Final crowns placed five months after implant placement are shown as well.



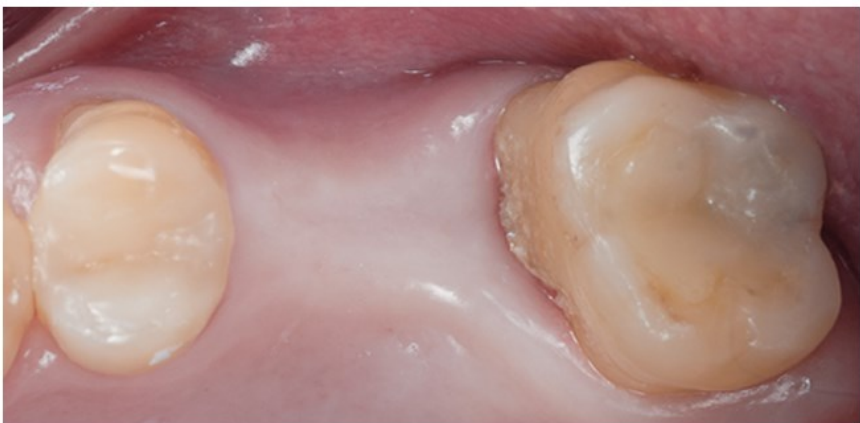
Manuel de la Rosa - Garza, DDS, MS, FID
Implantology Fellowship
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Graduate Periodontology and Oral Implantology
University of Texas at Houston Dental Branch



NOVABONE®

CLINICAL CASE: MINIMALLY INVASIVE TRANSCRESTAL SINUS LIFT

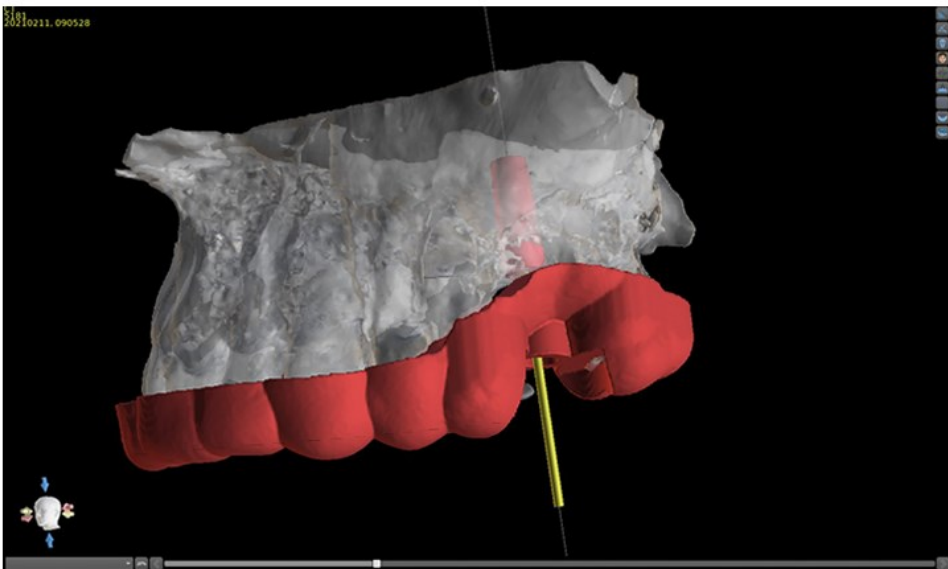
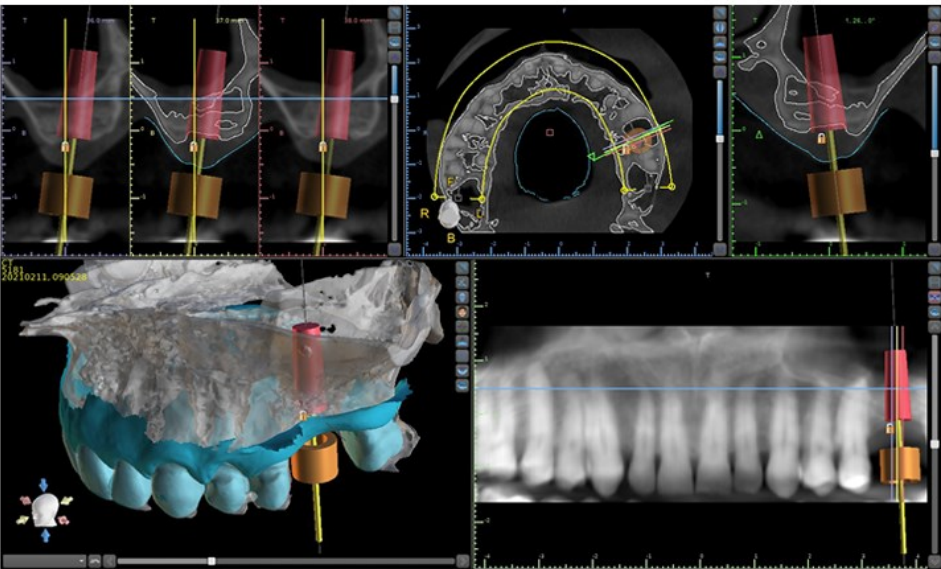
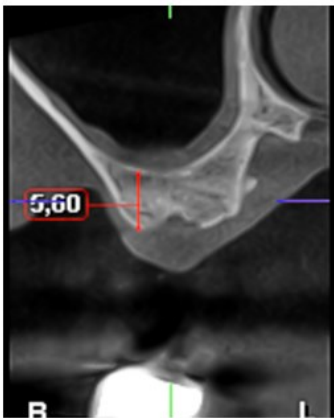
With osseodensification, calcium phosphosilicate and simultaneous placement of the Progressive-Line implant with guided surgery.



Initial situation



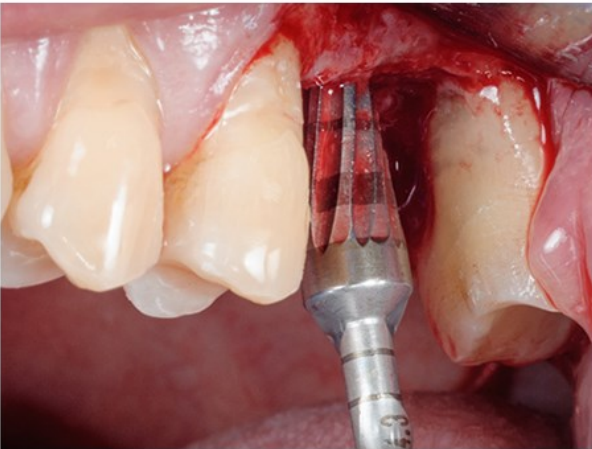
CBCT Initial Situation



Overlapped the DICOM and STL files using a planning software implants that allow us to place virtually the implant in the ideal three-dimensional situation with a suitable emergency prosthodontic profile



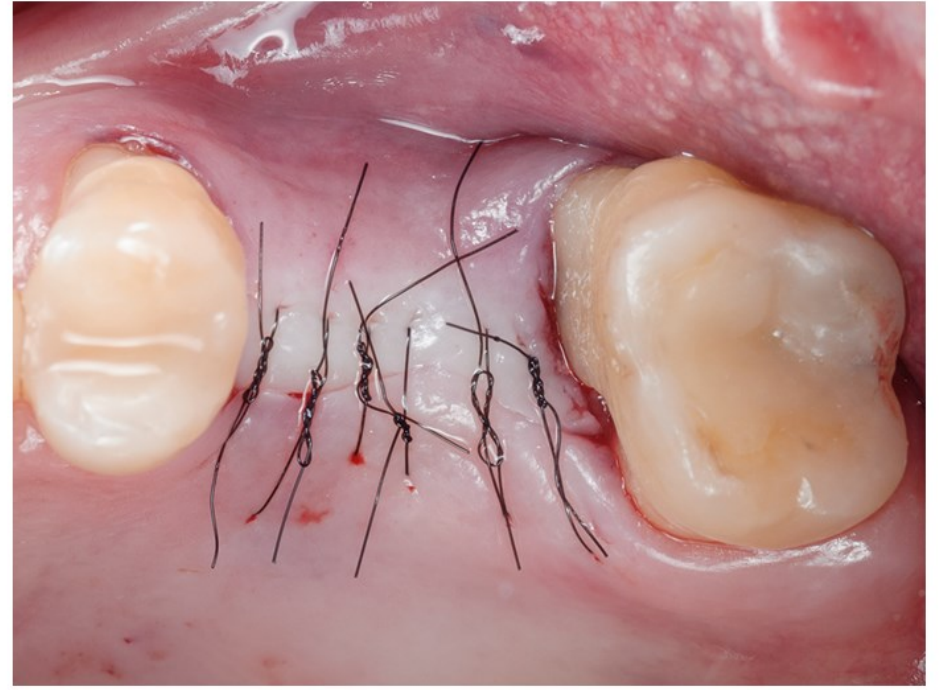
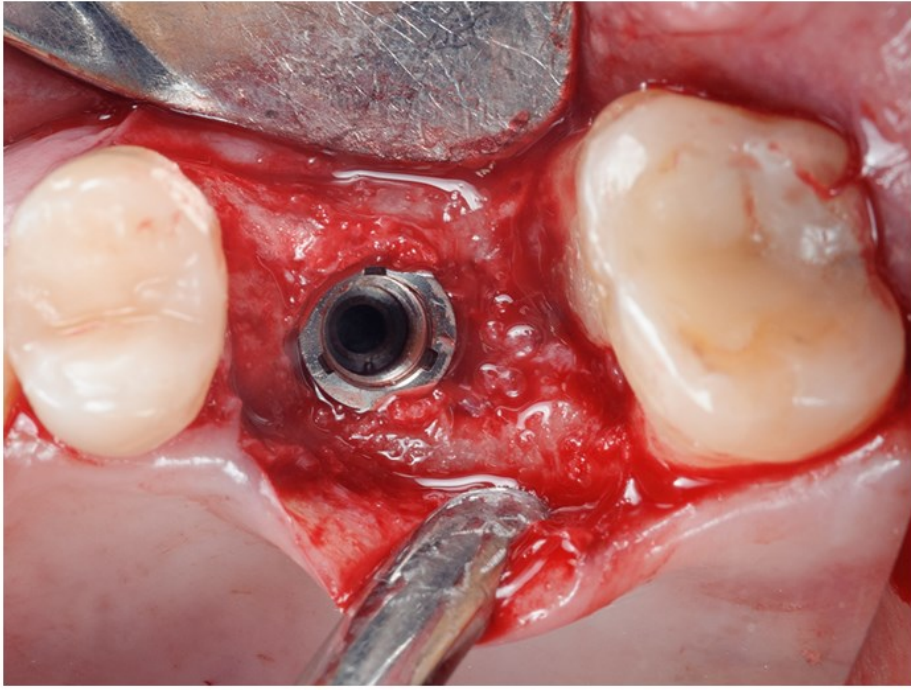
Finally a surgical guide is designed and printed to execute the sinus lift and implant surgery



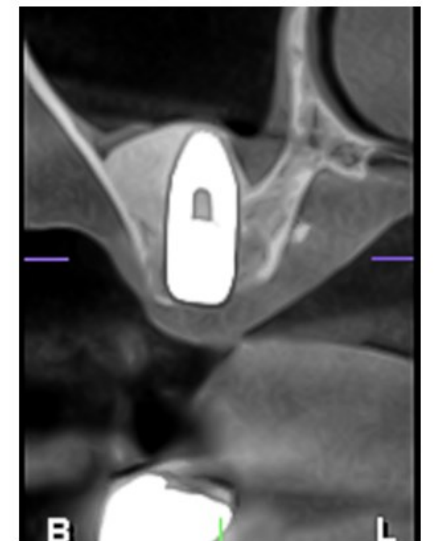
Calcium phosphosilicate paste is injected and comming up next the implant bed and compacts in an apical direction, achieving partial filling of the sinus cavity with said biomaterial

CLINICAL CASE: MINIMALLY INVASIVE TRANSCRESTAL SINUS LIFT

With osseodensification, calcium phosphosilicate and simultaneous placement of the Progressive-Line implant with guided surgery.



A Camlog Progressive-Line implant 5x13 mm, obtaining a high primary stability above of 35 Ncm and closes microsurgically without any tension with polyamide 6-0mm.



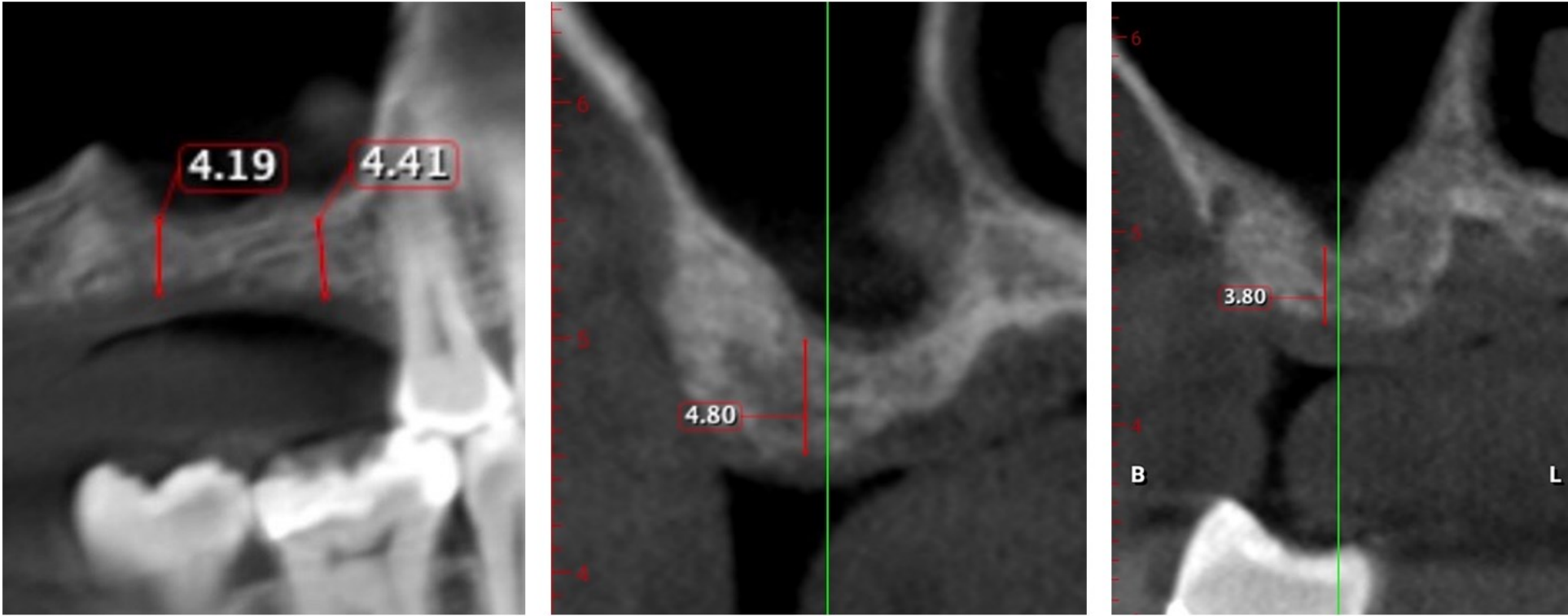
Osseodensification as a protocol for transcresal sinus floor elevation shaped maxilla It is a safe, efficient and predictable for placement implants in the posterior sector of the upper jaw with low height residual bone. Osseodensification preserves the bone of the implant bed and improves the primary stability of the implant in areas with reduced quantity and quality of bone. The Progressive-Line implant elevates even more insertion torque thanks to the design of its body and its aggressive spirals that allow underprepare the bed for so self-screwing the implant in locations with insufficient Bone density. The combined paste calcium phosphosilicate with osseodensification promotes bone regeneration in the maxillary sinus, and its radiopacity allows easy radiographic control indicating to the clinician its position end and therefore the integrity of Schneider's membrane and finally the technique success.



Ramón Gómez Meda, DDS
Dental Degree University of
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Periodontist and Implantologist



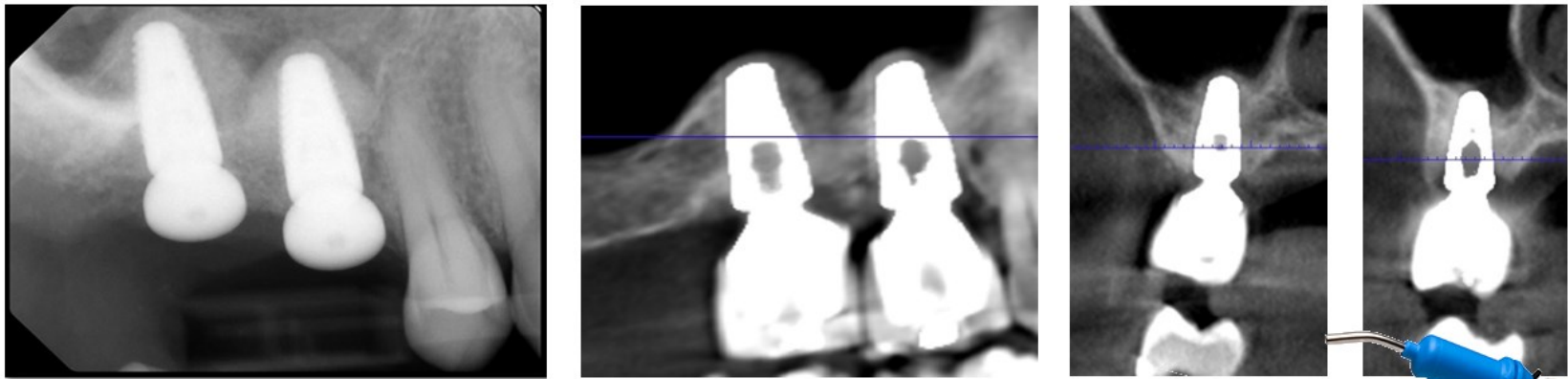
CLINICAL CASE SINUS LIFT AND IMPLANT PLACEMENT WITH NOVABONE PUTTY



CBCT initial situation



Combined use of Novabone Putty and Versah sistem for osseodensification for the sinus lift and implant placement final result



CBCT follow up final situation



Israel Puterman, DMD, MSD
Periodontist
Implants DC Private Practice

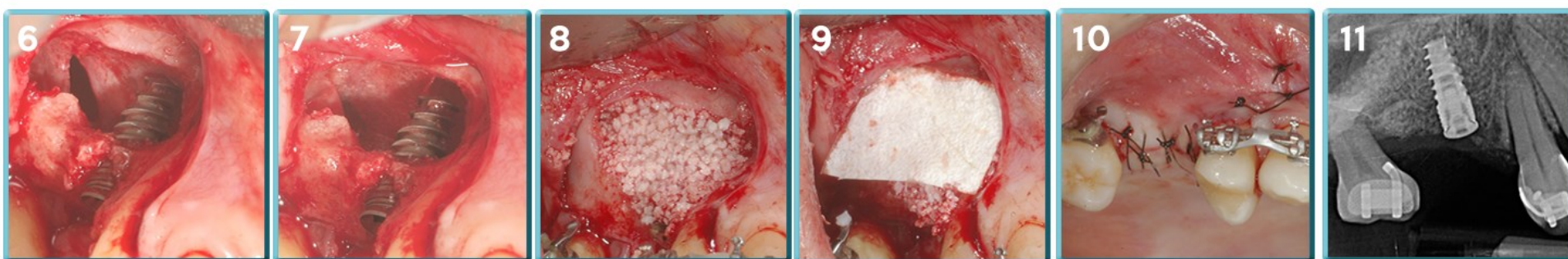


CLINICAL CASE: SINUS LIFT AND BONE GRAFT

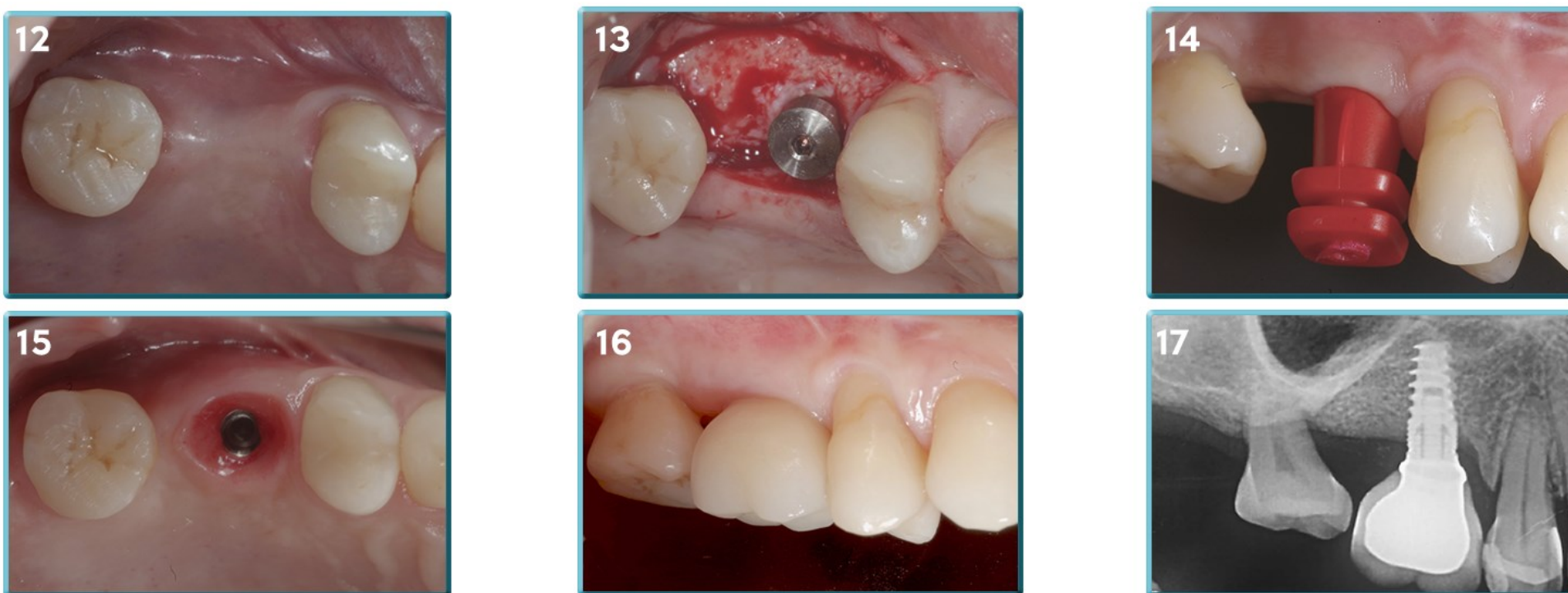
51 years old female patient lost tooth number 15 for endodontic and periodontal reasons (Fig 1, 2, and 3). Two months after extraction and implant placement, sinus lift was performed (Fig 4). The implant treatment failed after 4 months. The site was cleaned, the patient waited for two months to repeat the treatment (Fig 5). Orthodontic treatment was executed to distribute the spaces and to improve the occlusion.



The site was reopened, but the membrane was perforated on the sinus lift procedure. One Dynamix Implant (Cortex Dental Ind.) was placed and stabilized using autologous bone graft (fig 6). The membrane was repaired with a collagen membrane (Fig 7) and Novabone Morsels (NovaBone Products) for bone regeneration (Fig 8). A collagen membrane (3Biomat Inc.) was placed to protect the bone. The flap was sutured (Fig 9 and 10). X ray control image (Fig 11).



After the healing time was complete, the site was re opened and a 3 mm healing cap was placed (Fig 12 and 13). An impression was taken using the snap technique (Fig 14) and the tissue profile was created with a temporary restoration (fig 15). Final restoration and X ray control image after two years follow-up (Fig 16 and 17).



Oscar Ramón, DDS

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Audiovisual Pedagogy Specialist - El Bosque University.

Master in Comprehensive Adult Dentistry (Prosthodontics-Periodontics) - University of Antioquia.

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Active Member Colombian Association of Periodontal and Osseointegration.

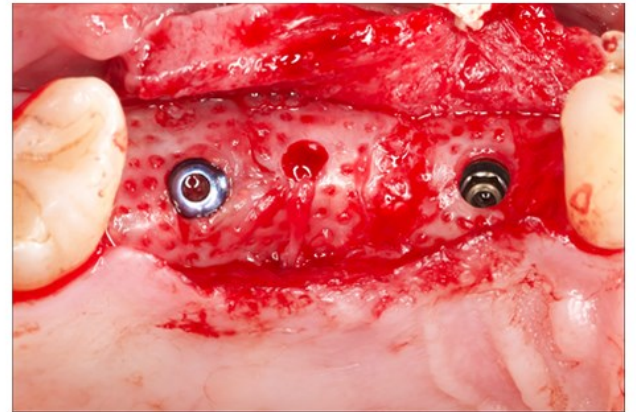
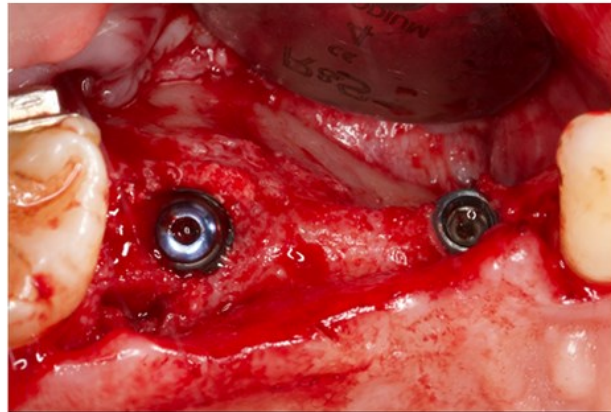
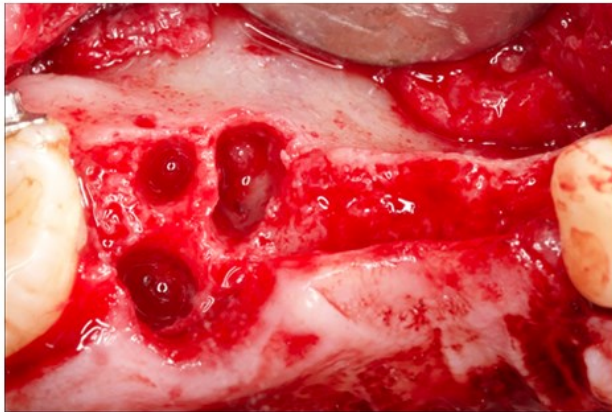
Author of scientific articles in Prosthodontics, Periodontics and Dental Implants.

International lecturer.

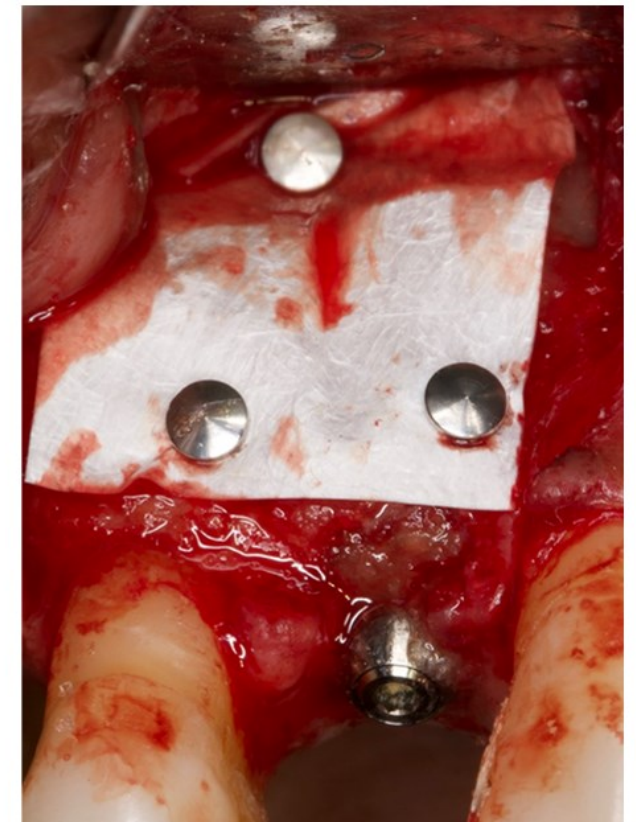
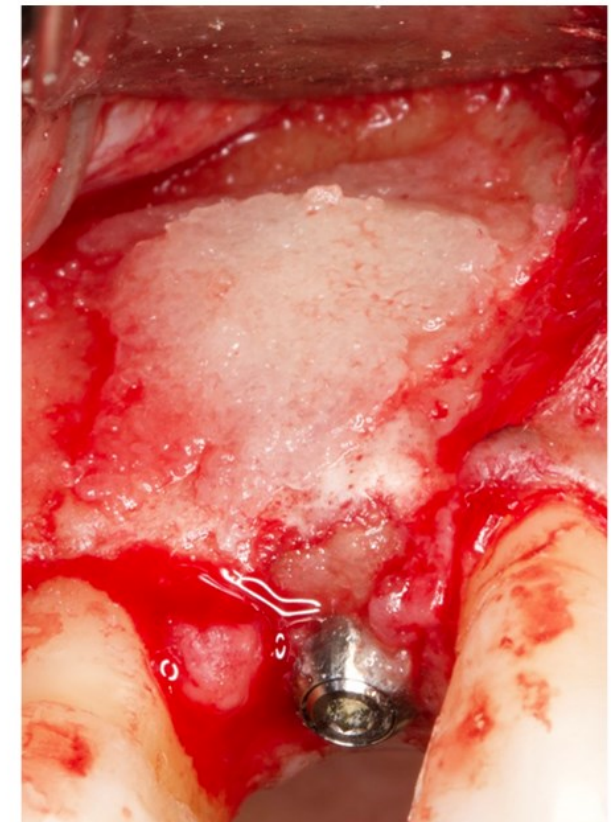
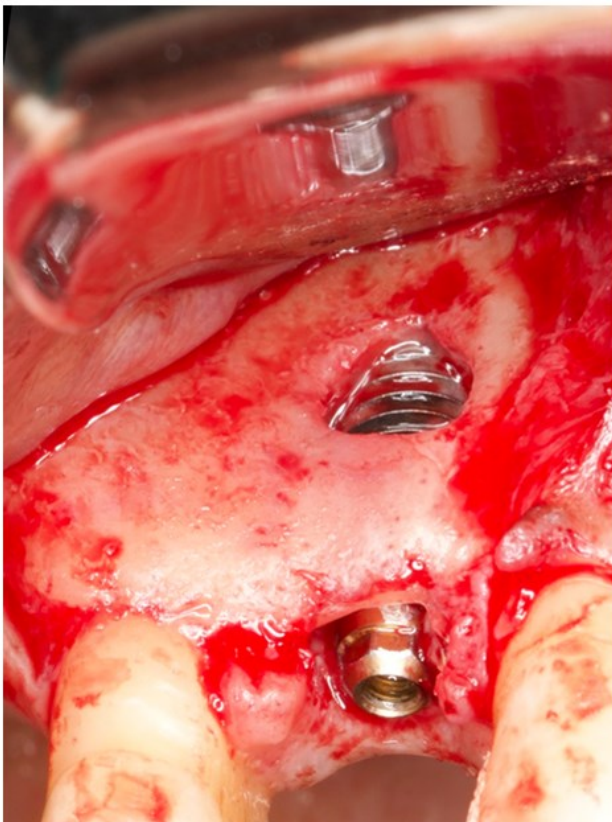
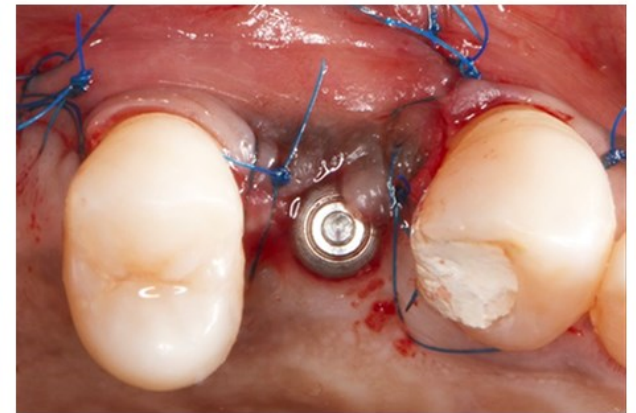
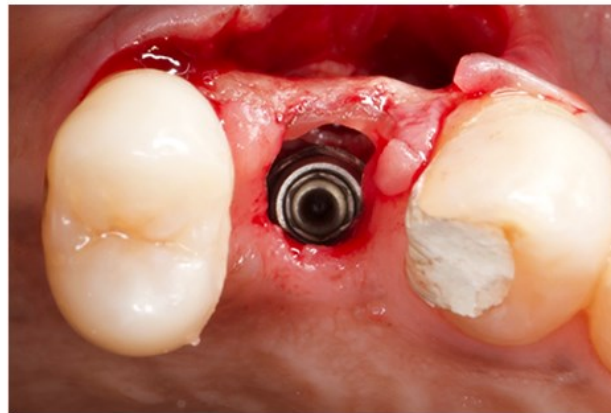
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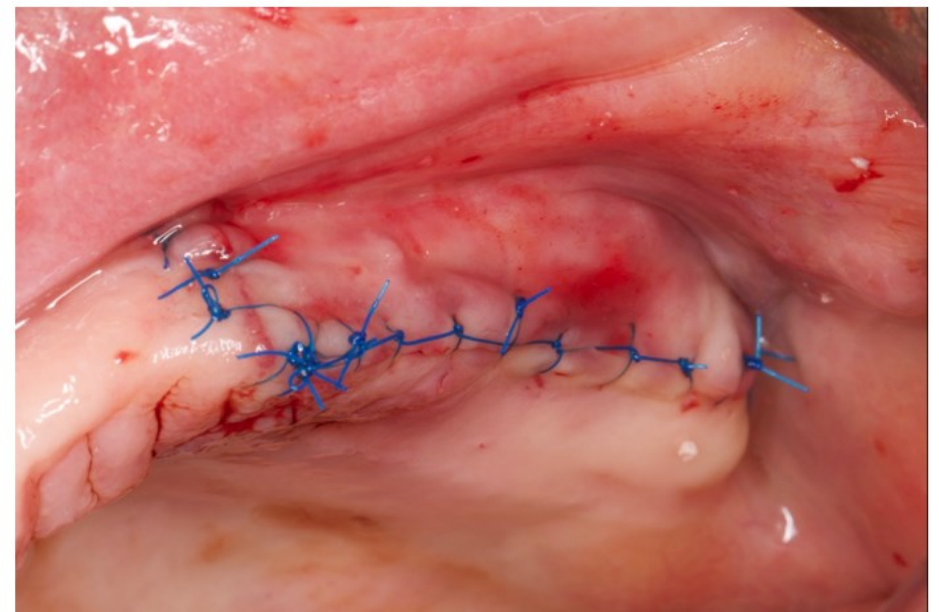
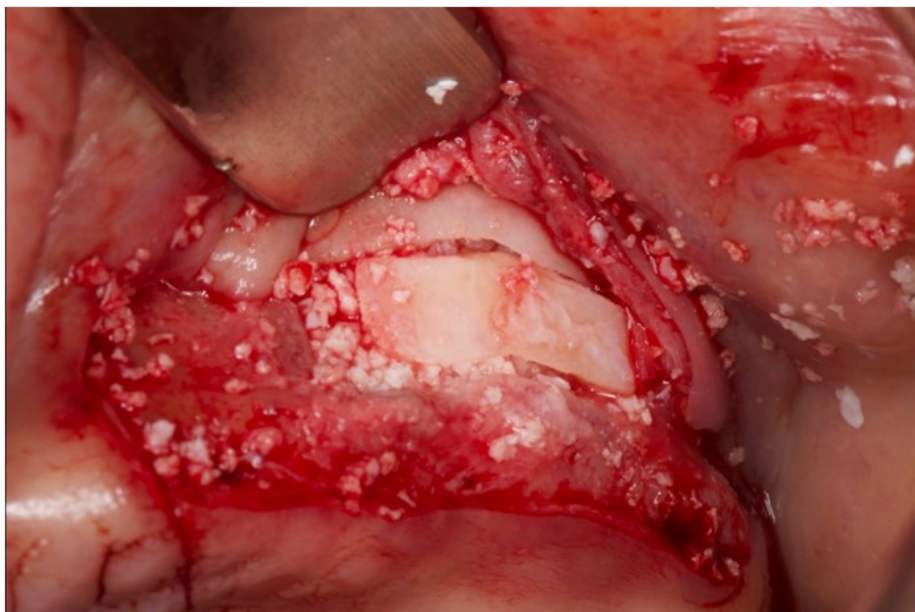
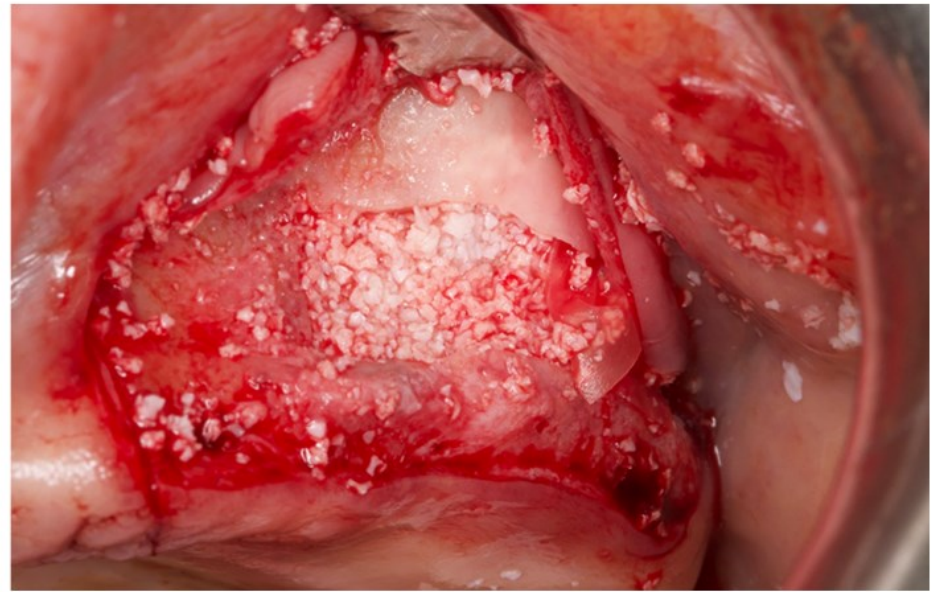
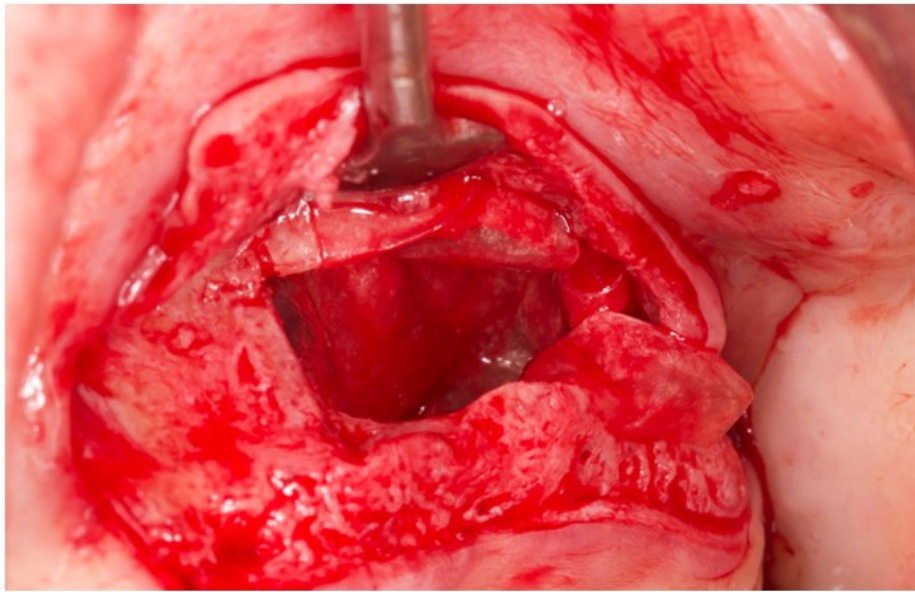
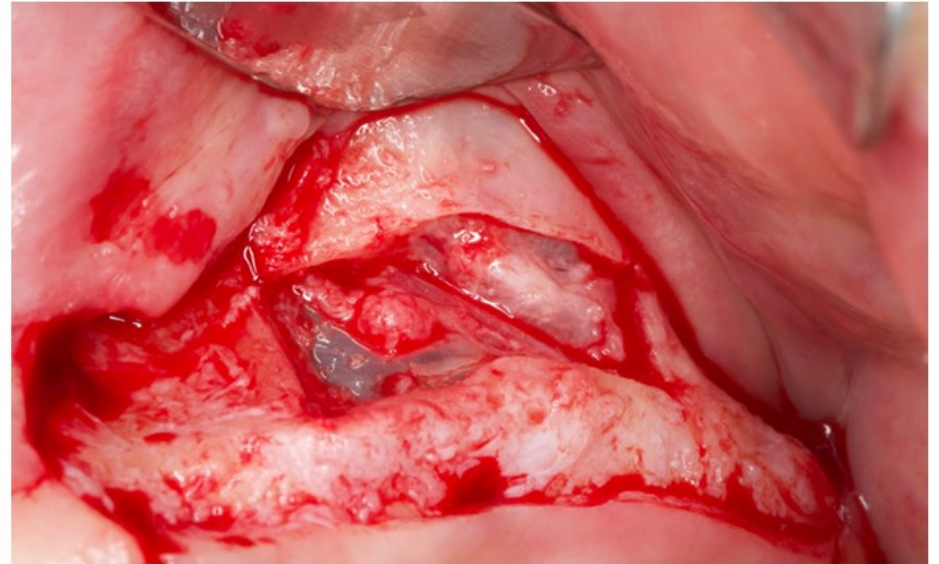
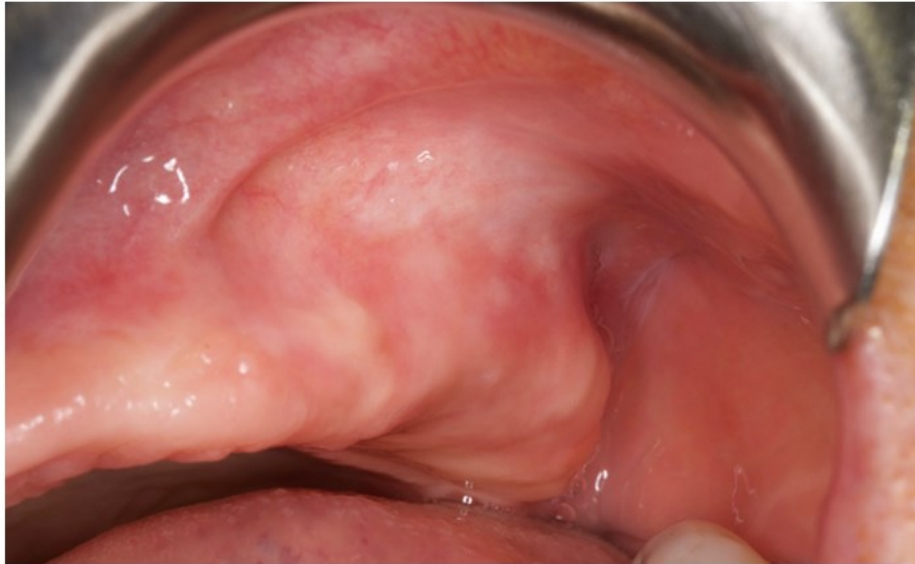


CASE RESOLUTION POSSIBILITIES WITH NOVABONE IN DIFFERENT SITUATIONS

Ti Mesh & NovaBone Morcels in horizontal bone regeneration



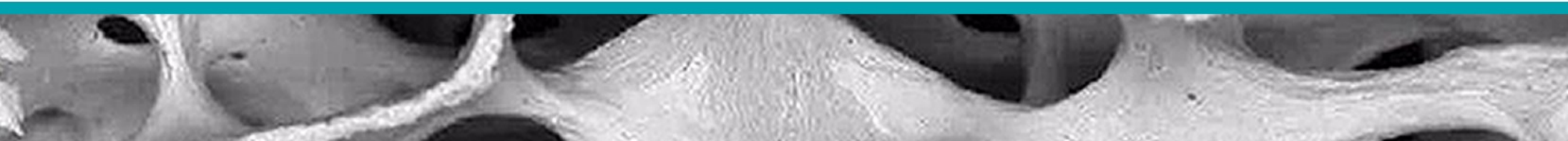
SS Complication management with NovaBone Putty and collagen membrane

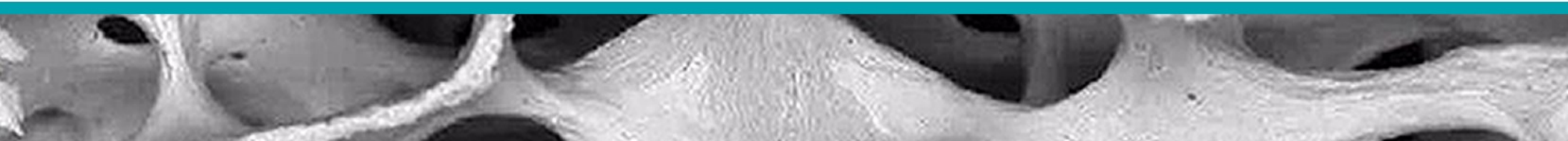
CASE RESOLUTION POSSIBILITIES WITH NOVABONE IN DIFFERENT SITUATIONS

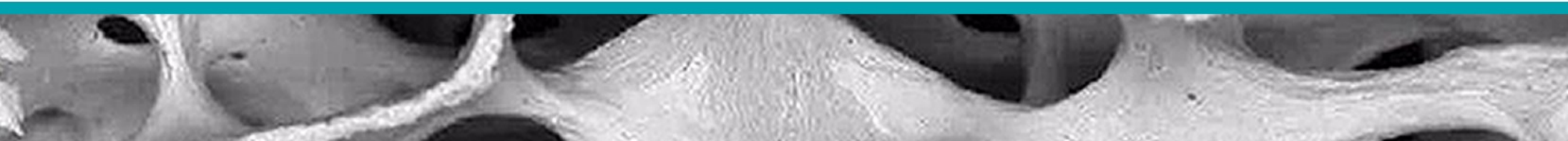
Caldwell Luc sinus lift with NovaBone Morsels

Dr. Bernardo de Mira Correa. DDS, DMD

Obtained his DDS and DMD from the University of Porto in Portugal. He currently lectures in the BTI's advanced oral implantology courses. He is CEO of the Clínica Mira Corrêa, an implantology and oral rehabilitation centre in Oporto, Portugal.

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