mis

C1 CASES 2013

CASE 1

P. CARDELLI ITALY

C1 and BondBone in the Eshtetic Zone

Paolo Cardelli

C1 and BondBone

Initial

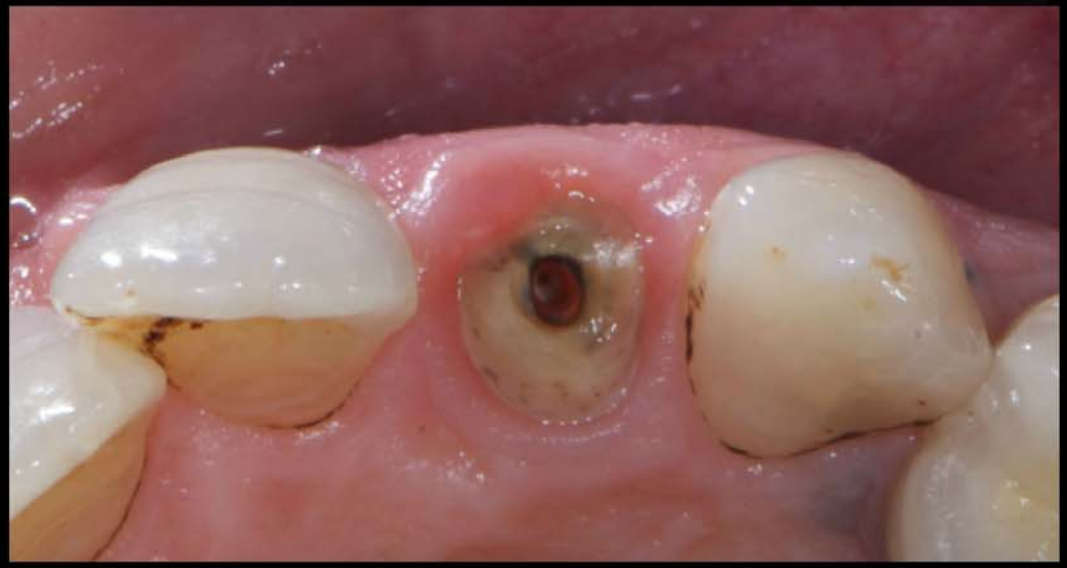
C1 and BondBone

Initial

SEVERE DEEP BITE

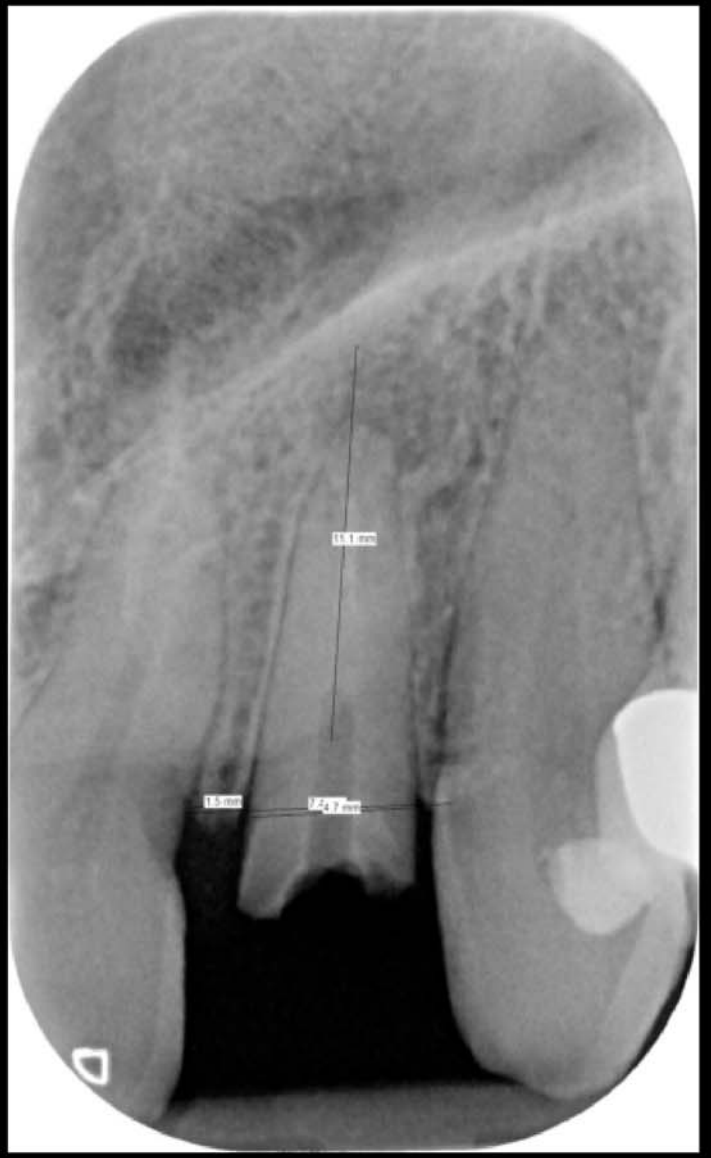
C1 and BondBone

Initial



C1 and BondBone

Initial



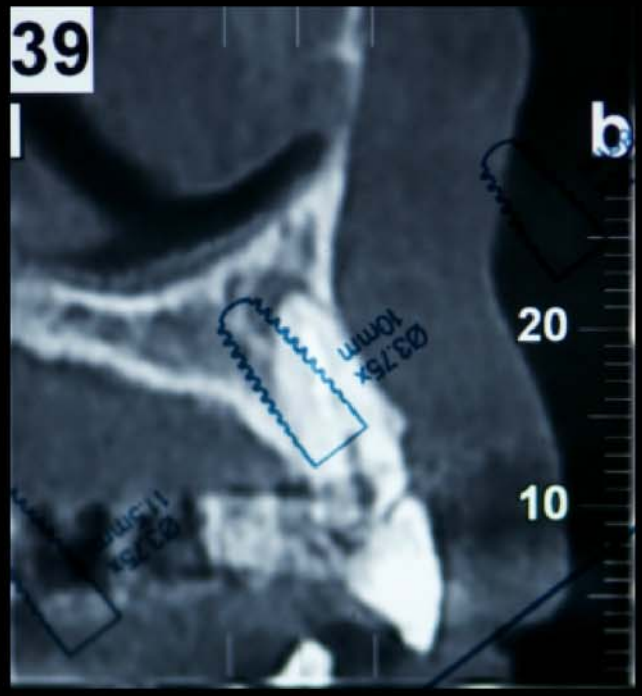
C1 and BondBone

CBCT template

C1 and BondBone

CBCT

BUCCAL BONE PLATE: < 1 MM



CEMENTED RESTORATION

C1 AND BONDBONE

EVALUATION

"Type 2" implant placement

Advantages:

Soft and hard tissue stability

Preservation of a buccal bony contour

Disadvantages:

2-3 surgical procedures: extraction-impiant-exposure?

provisional management (occlusion?)

Chen ST, Buser D.
Clinical and esthetic outcomes of implants placed in postextraction sites.
Int J Oral Maxillofac Implants. 2009;24 Suppl:186-217.

Buser D, Chappuis V, Bornstein MM, Wittneben JG, Frei M, Belser UC.
Long-Term Stability of Contour Augmentation With Early Implant Placement Following Single Tooth Extraction in the Esthetic Zone. A Prospective,Cross-Sectional Study in 41 Patients With a 5- to 9-Year Follow-Up.
J Periodontol. 2013 Jan 24. [Epub ahead of print]

C1 and BondBone

Evaluation

Type 1 vs Type 2 implant placement

Both treatment approaches appear to be appropriate, with the preferred treatment based on factors other than resultant soft tissue changes.

van Kesteren CJ, Schoolfield J, West J, Oates T.
A prospective randomized clinical study of changes in soft tissue position following immediate and delayed implant placement.
Int J Oral Maxillofac Implants. 2010 May-Jun;25(3):562-70.

C1 and BondBone

Evaluation

Type 1

Predictable technique

Treatment of choice in cases of single anterior tooth

Correct positioning of the implants

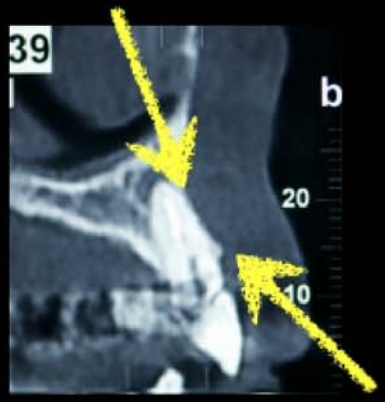
Maintaining the original condition of both bone and soft tissues around the tooth

Malchiodi L, Cucchi A, Ghensi P, Nocini PF. Evaluation of the Esthetic Results of 64 Nonfunctional Immediately Loaded Postextraction Implants in the Maxilla: Correlation between Interproximal Alveolar Crest and Soft Tissues at 3 Years of Follow-Up.
Clin Implant Dent Relat Res. 2013 Feb;15(1):130-142.

C1 and BondBone

Evaluation

Ridge alteration following tooth extraction:
Phase 1: Bundle bone --> woven bone substitution (mainly buccal wall) --> vertical reducion
Phase 2: resorption from the outer surfaces of both bone walls.



Esthetic outcome?

Araújo MG, Lindhe J.
Dimensional ridge alterations following tooth extraction. An experimental study in the dog.
J Clin Periodontol. 2005 Feb;32(2):212-8.

C1 and BondBone

Planning

Buccal plate augmentation

Even subtle postextraction buccal plate resorption may have significant clinical effects, particularly in the esthetic zone. Buccal plate augmentation consists of placement of bone graft material over an intact buccal plate, underneath the soft tissues in a surgically created pouch with an aim to maintain or augment the soft tissue esthetics of the region.

Caiazzo A, Brugnami F, Mehra P.
Buccal plate augmentation: a new alternative to socket preservation.
J Oral Maxillofac Surg. 2010 Oct;68(10):2503-6. doi: 10.1016/j.joms.2010.05.044.

C1 and BondBone

Planning

Single flap approach

"Type 1" implant placement

Buccal plate augmentation (composite)

Immediate provisional

Trombelli L, Farina R, Franceschetti G, Calura G.
Single-flap approach with buccal access in periodontal reconstructive procedures.
J Periodontol. 2009 Feb;80(2):353-60. doi: 10.1902/jop.2009.080420 .

Caiazzo A, Brugnami F, Mehra P.
Buccal plate augmentation: a new alternative to socket preservation.
J Oral Maxillofac Surg. 2010 Oct;68(10):2503-6. doi: 10.1016/j.joms.2010.05.044.

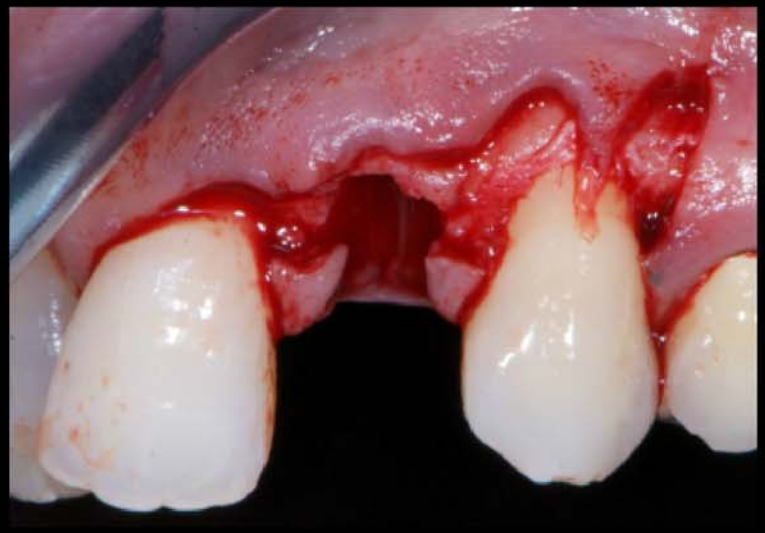
Casap N, Zeltser C, Wexler A, Tarazi E, Zeltser R.
Immediate placement of dental implants into debrided infected dentoalveolar sockets.
J Oral Maxillofac Surg. 2007 Mar;65(3):384-92.

C1 and BondBone

Surgery

Single flap approach

Atraumatic extraction

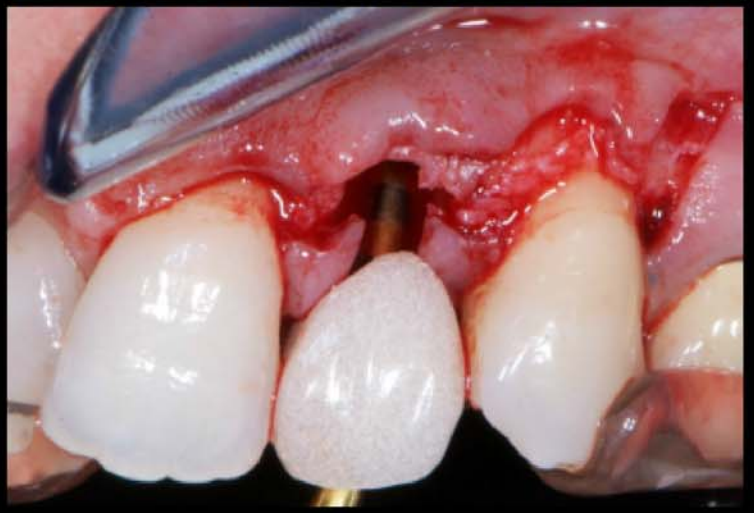


C1 and BondBone

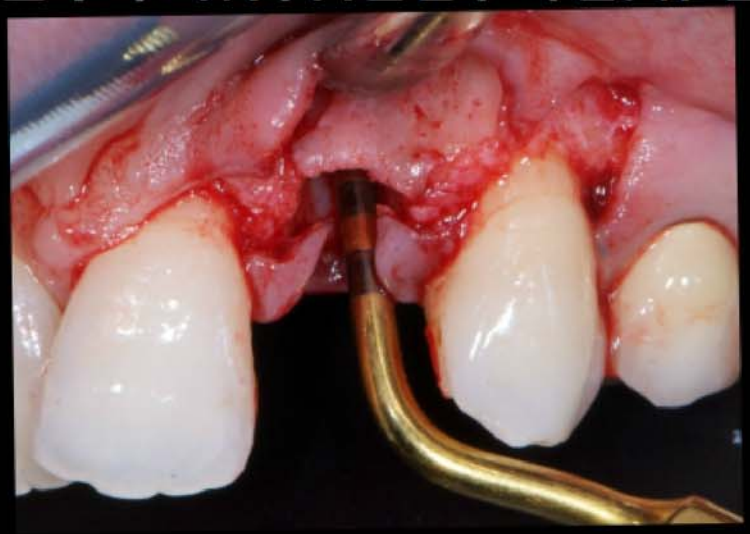
Surgery

2.4 twist drill

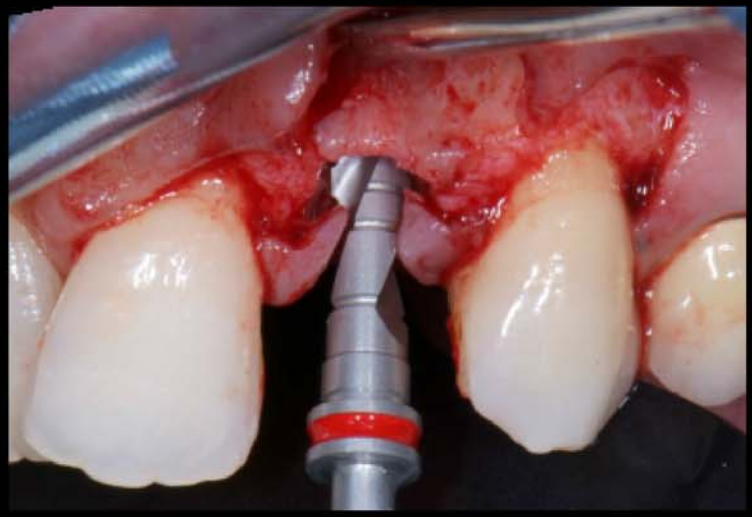
OT4 on the palatal wall



OT4 without template



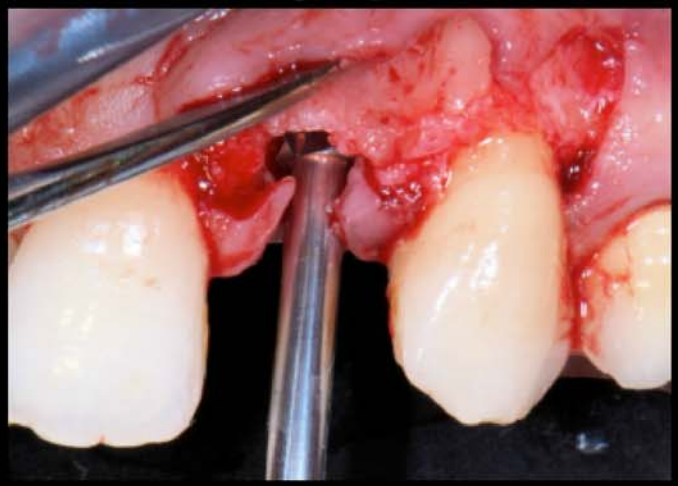
3.0 twist drill



C1 and BondBone

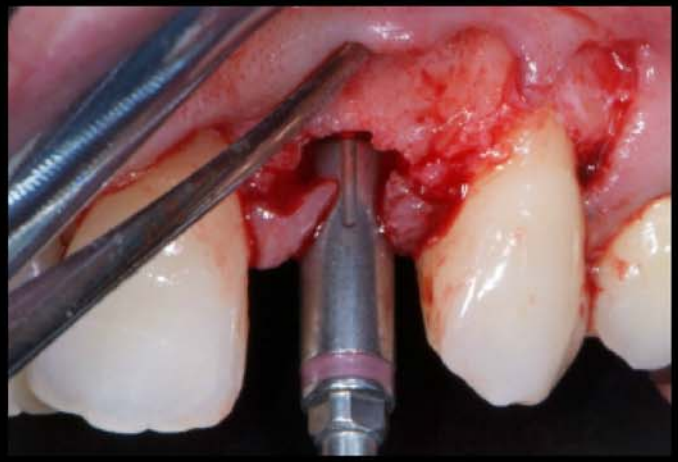
Surgery

Countersink

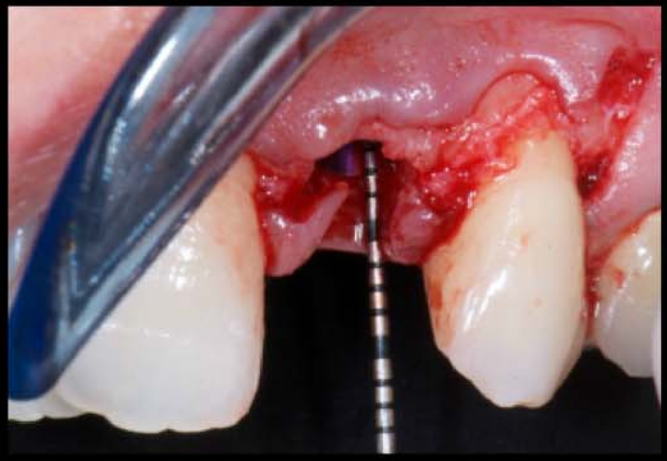


C1 3.75x10

Final position



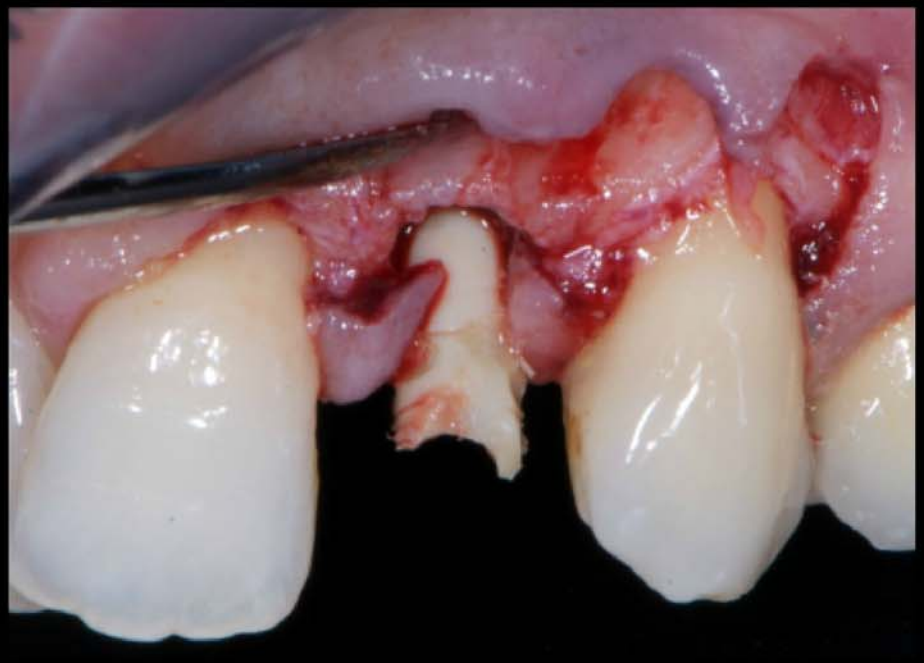
1 mm subcrestal



C1 and BondBone

Immediate provisional

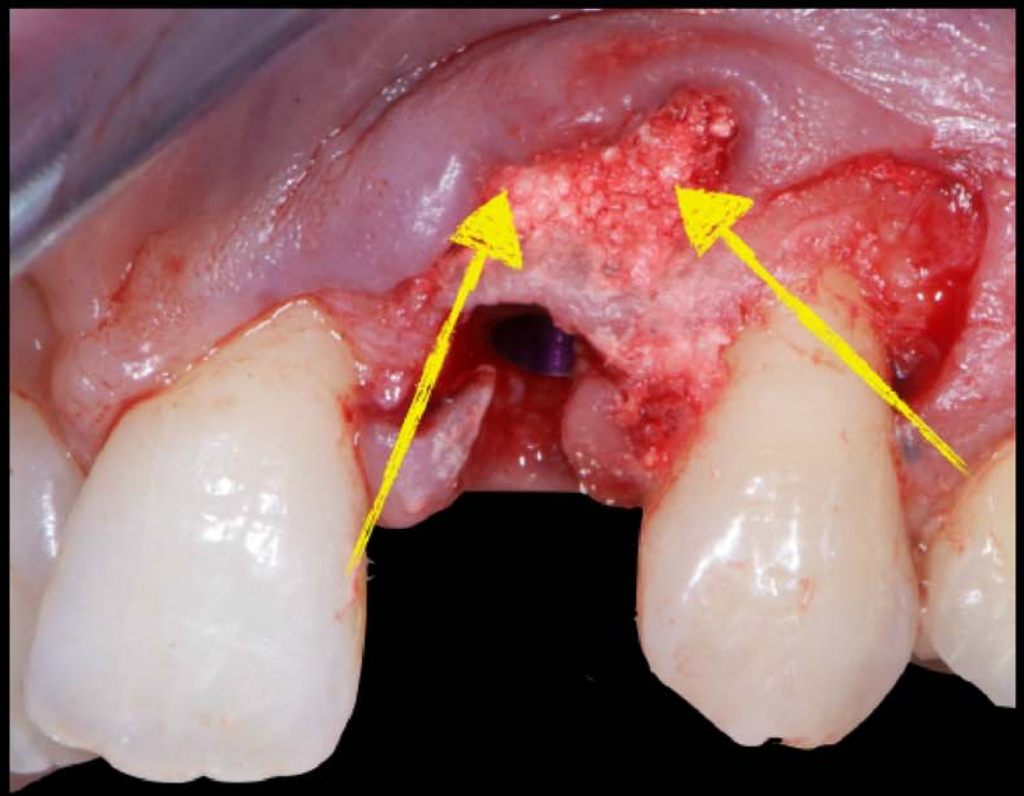
Immediate provisional from surgical template

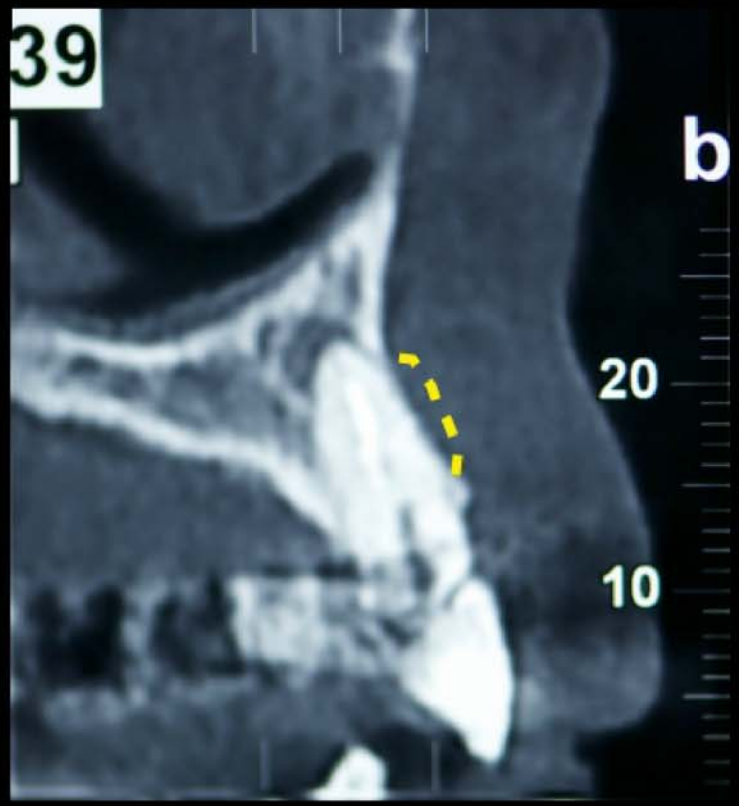


C1 and BondBone

Surgery

Composite graft: BondBone (50%) and β-TCP/HA (50%)

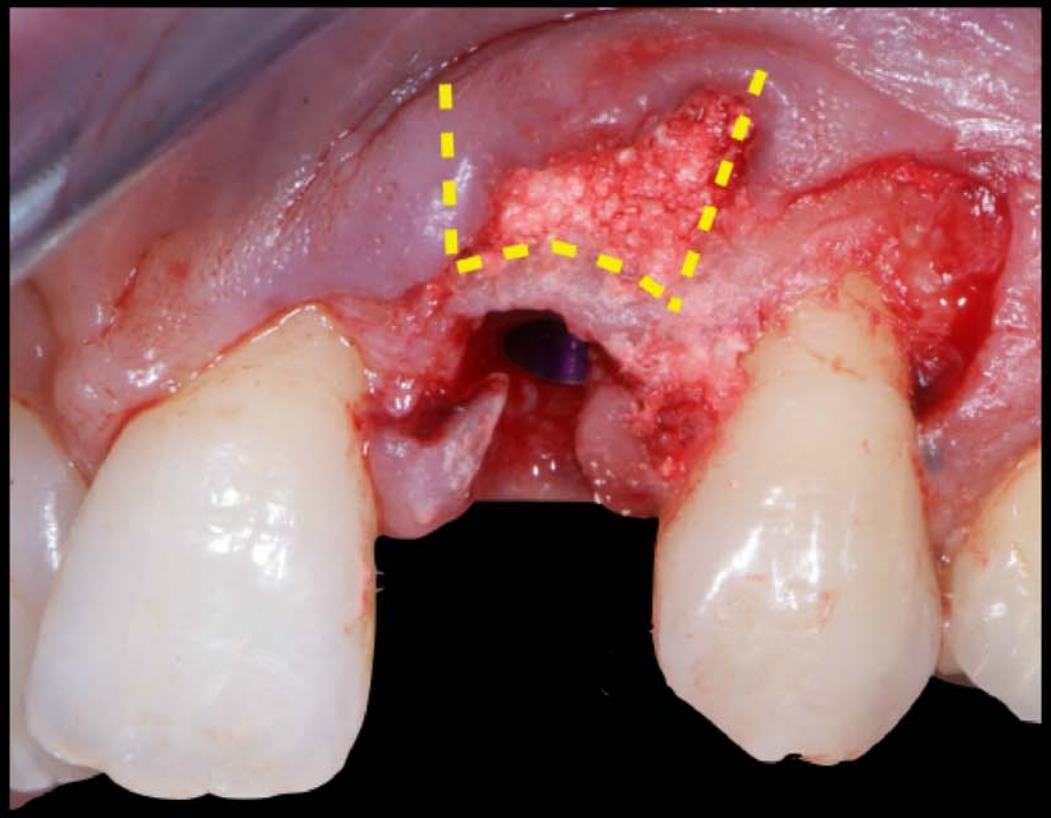


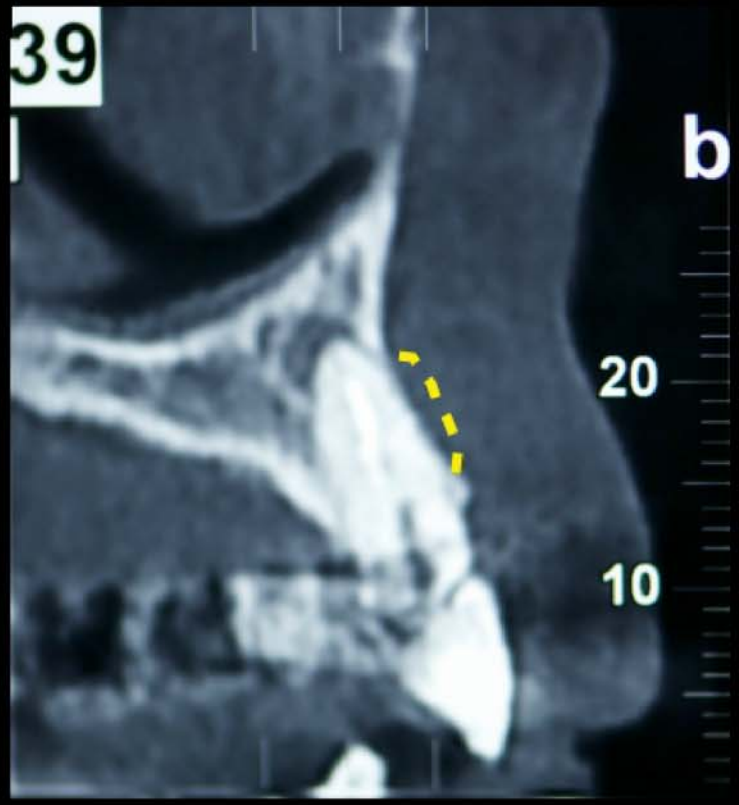


C1 and BondBone

Surgery

Composite graft: BondBone (50%) and β-TCP/HA (50%) without membrane





C1 and BondBone

Surgery

Provisional placement + bucca gap filling (β-TCP/HA)

suture PGA 6-0

palatal aspect

C1 and BondBone

Healing

2 weeks

1 month

2 months

2.5 months

C1 and BondBone

Impression (3 months)

Adequate buccal contour

C1 and BondBone

Impression (3 months)

Emergence profile acquisition

C1 and BondBone

Occlusal relationship

C1 base

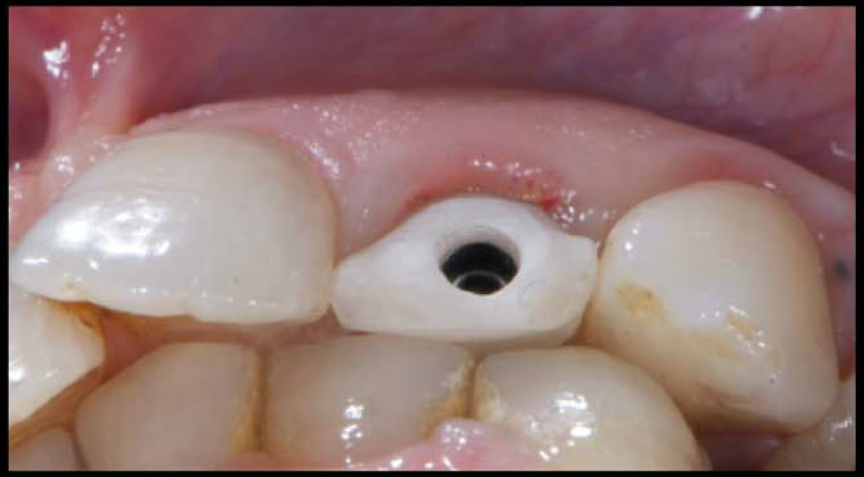
"veneer prepared" Lithium Disilicate abutment

C1 and BondBone

Abutment try-in

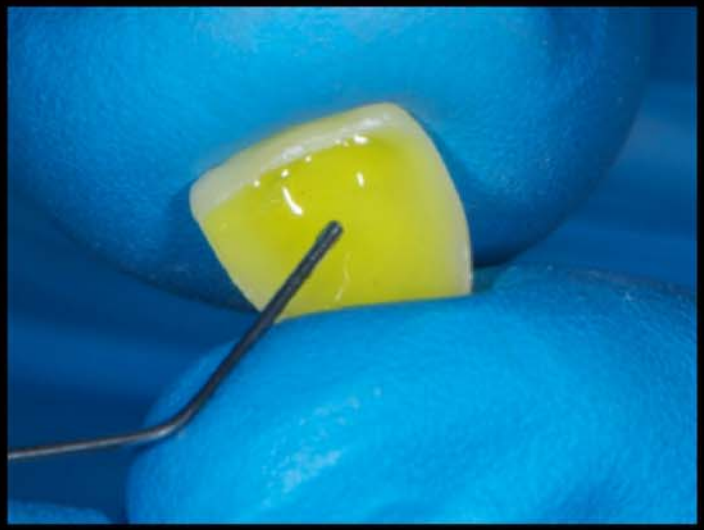
C1 and BondBone

Abutment final seating



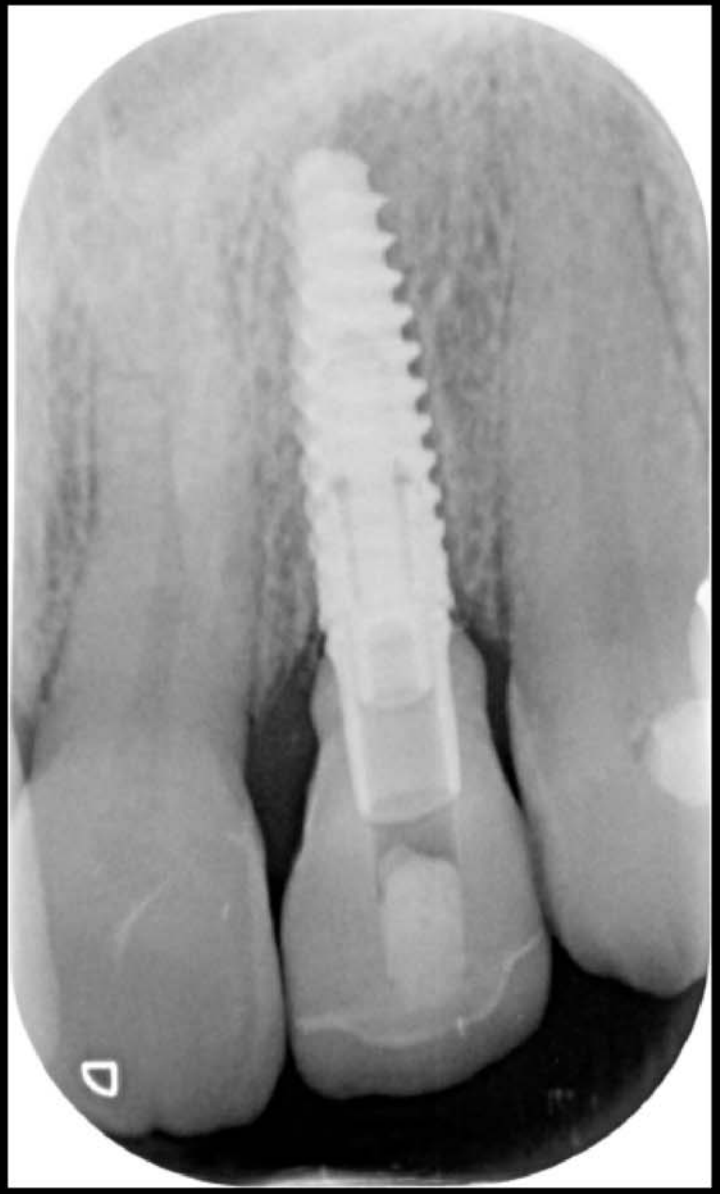
C1 and BondBone

Restoration delivery



C1 and BondBone

Final outcome

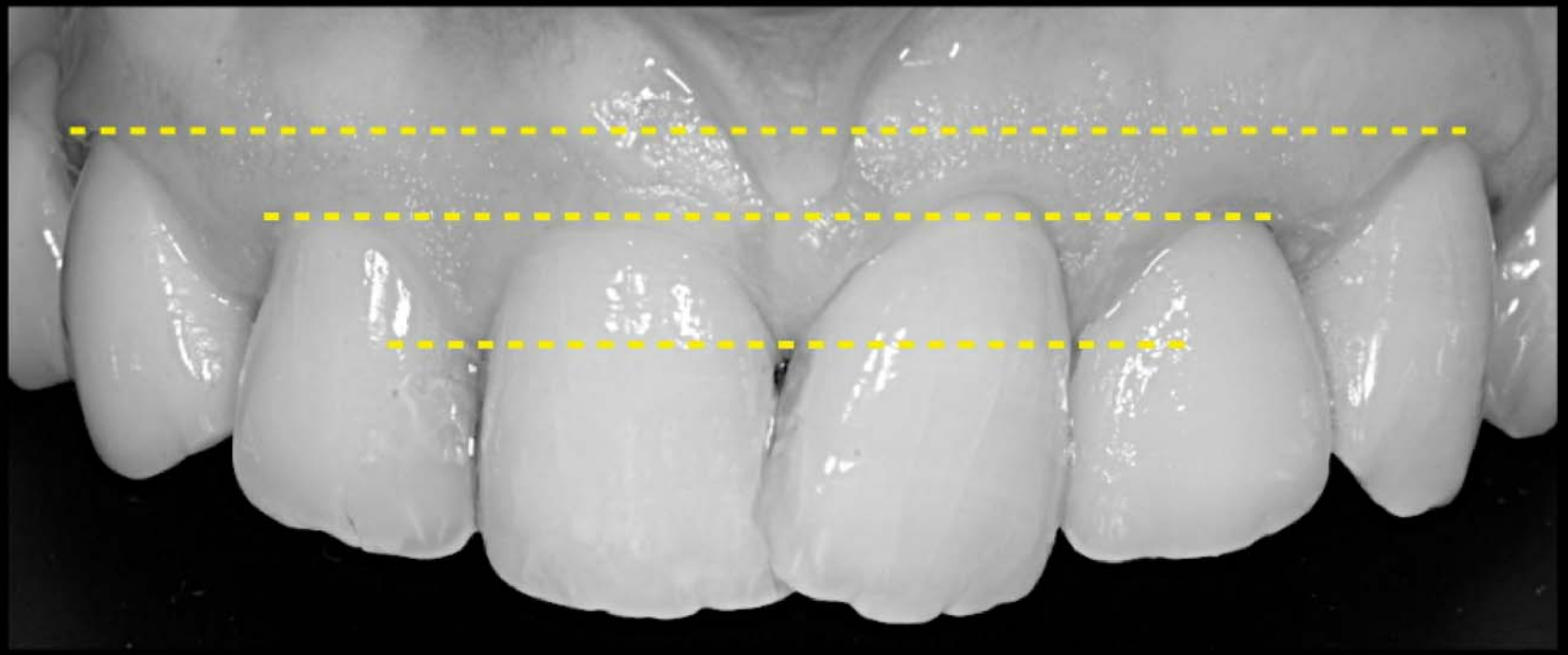


C1 and BondBone

Final outcome

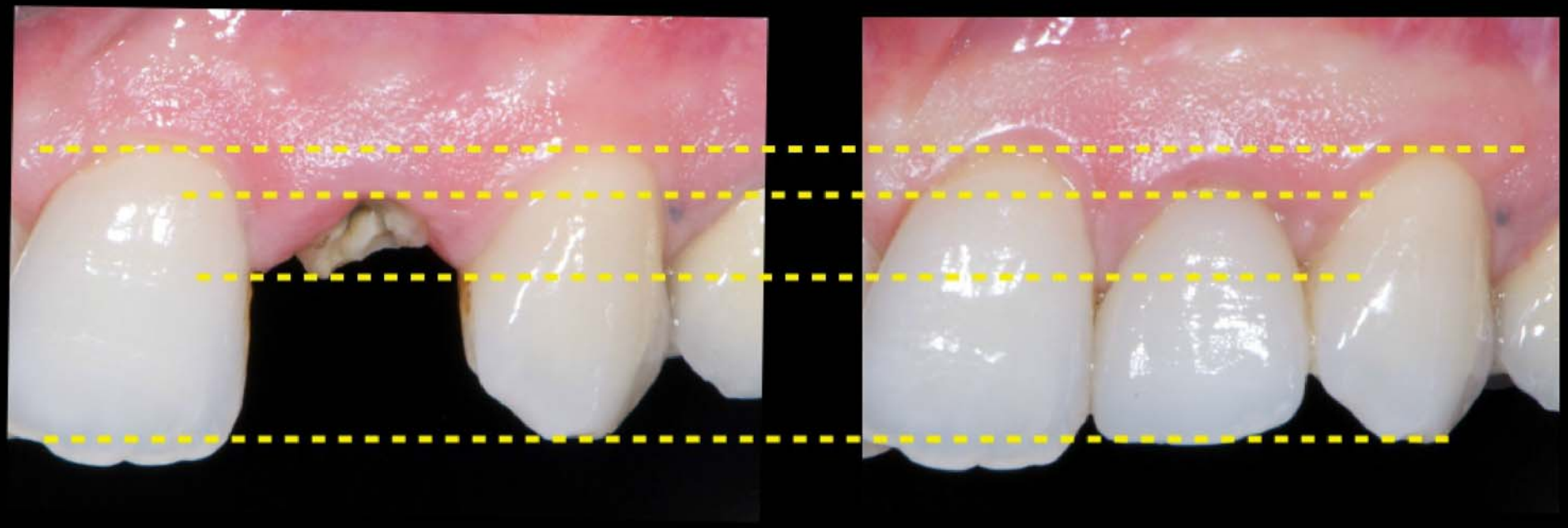
C1 and BondBone

Soft tissue contour comparison, right-left



C1 and BondBone

Soft tissue contour comparison, pre and post-op



CASE 2

J.ALVAREZ CANTONI ARGENTINA

FUNCTION & ESTETHIC

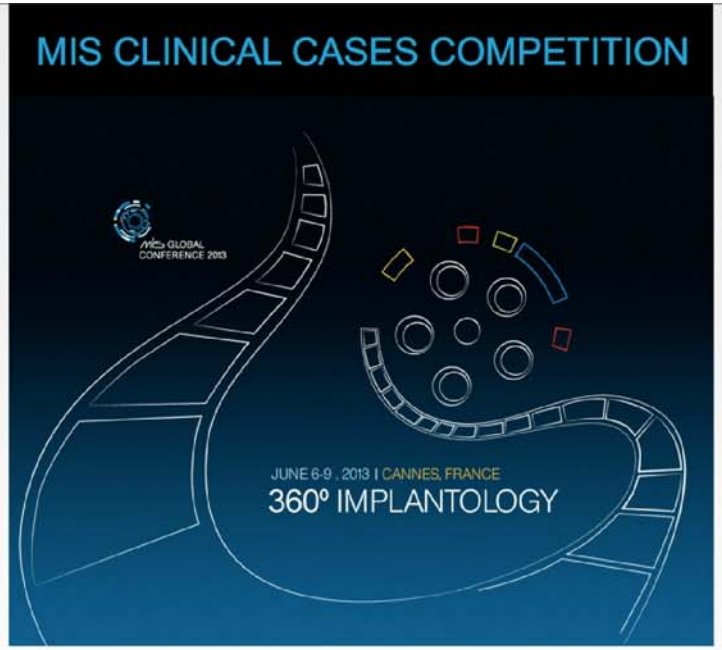
AN INTERDISCIPLINARY APPROACH

Topic: "The combined use of MIS' dental implants and BONDBONE for immediate procedures in the esthetic zone".

Author: Joile Alvarez Cantoni

ARGENTINA

MIS CLINICAL CASES COMPETITION



Topic: "The combined use of MIS' dental implants and BONDBONE for immediate procedures in the esthetic zone".

Author: Joile Alvarez Cantoni

ARGENTINA

FUNCTION & ESTETHIC
AN INTERDISCIPLINARY APPROACH

INTRODUCTION

The placement of dental implants in the esthetic zone is a real challenge for doctors because of patients demanding esthetics and difficult anatomic pre-existing terrain.

Potential causes of esthetics failures, pre-operative analysis, ideal implant 3D position and restorative aspects will be discussed in the beggining oh this clinical case presentation.

The esthetic zone can be defined as any area to be fixed that is visible in the patient's full smile. An esthetic implant prostheses is one that resembles a tooth in all aspects. The exact location in which the implant is placed is of extreme importance, it should have the correct location in all three dimensions: apicocoronally, mesiodistally and faciolingually. Any diversion from these position will have a negative effect in the final restoration

The esthetic zone

Over the past 15 years, dental esthetics has been and important issue in implant dentistry. In the esthetic zone, unsatisfactory treatment results can lead to devastating clinical situations that can only be restablished with the removal of the implant and the future sugical ridge and soft tissue augmentation.

In the kick-off of esthetic area implant therapy we should start understanding the patien's desires. In most cases the patients demands an esthetic tooth replacement providing a beatifull smile. It is our responsibility to have the knowledge of all treatment possibilities. Nowadays, implant supported restorations mayorly represents the best solution.

Hard tissue deficiencies mostly often needs guided bone regenaration to allow the three dimensionall correct implant placement, even we decide to use a simultaneous or staged approach.

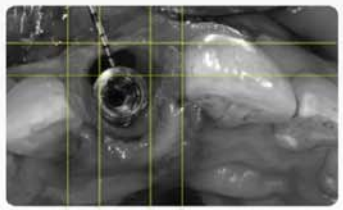
To succesfully meet the outcomes of esthetic implant therapy an interdisciplinary team approach is critical and highly recommended.

3-DIMENSIONAL POSITION OF THE IMPLANT

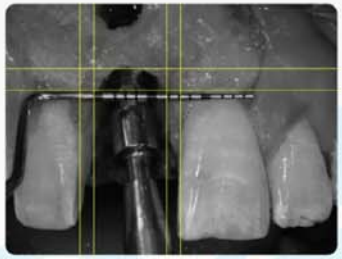
Placing the implants in a proper 3-dimensional position is a key to an esthetic outcome regardless of the implant system used.

Two anatomical structures have great importance: the bone height of the alveolar crest in the interproximal areas and the height and thickness of the facial bone wall, where the interproximal crest is the responsible of the absence or presence of peri-implant papillae.

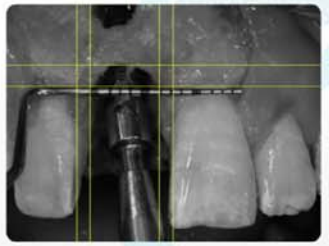
Several surgical techniques have been presented in the past 15 years to improve bone deffects at the facial aspects of implant sites, such as onlay grafting, GRB using barrier membranes, a combination of block bone grafts and barrier membranes, and distraction osteogenesis.



Correct implant position in the **orofacial** dimension, the implant shoulder is positioned 2 mm palatal to the buccal plate.



Correct implant position in the **mesiodistal** dimension, the implant shoulder should be positioned 1.5 mm off the neighboring tooth.



Correct implant position in the **apicocoronal** dimension, the implant shoulder should be positioned 1.5 2 mm apical to the Cement Enamel Junction (CEJ) of the contralateral tooth.

3-DIMENSIONAL POSITION OF THE IMPLANT
CAUSES OF ESTHETIC IMPLANT FAILURE

Iatrogenic factors: failures con be caused by inappropiate implant positioning or implant selection.



Compromised esthetic result in an adult patient. Clinical situation 1 year following implant restoration. The periapical radiograph clearly shows the cause of the esthetic failure: the implant shoulder was positioned too far apically and near the neighboring tooth, which led to the resorption of the buccal plate.

Disastrous result in the esthetic zone, clinical status 6 month following implant placement. The implant shoulders were positioned too facially and close to each other.



Compromised esthetic result in an young female patient. Clinical situation 2 years following implant restoration. The incorrect selection of a wide diameter implant evidences the cause oh the esthetic failure. The periapical radiograph clearly shows the resorption of the buccal plate and the interproximal bone.

CLINICAL TREATMENT PLANNING

CASE PRESENTATION

Age at inital presentation: 20 years

Inital presentation: October 2011

Active treatment completed: February 2013

INTRODUCTION & BACKGROUND

The patient is a 20-year-old laws student and was initially seen by his general dentist with the goal of a simple correction of her composite vennеers. She was encouraged to considered an interdisciplinary approach. It was then when she became aware of the need to improve her dental health and her dental esthetics for professional and social reasons, she was willing to accept a plan that would address all of her biological, functional and esthetics needs.

MEDICAL HISTORY

The patient was in excellent health

DIAGNOSTIC FINDINGS

Esthetics analysis: there was no significant alterations in the facial profile.

Incisal plane: convex.

Incisal profile: right maxillary incisor was markedly retrusive, both central incisors were in a protrusive position and the left lateral incisor was in a correct situation.

Incisal lenght: right lateral incisor 10 mm, right central incisor 10 mm, left central incisor 11.5 mm and left lateral incisor 9,5 mm.

Tooth proportion: non harmonious proportions between the maxillary incisors

Gingival plane: altered gingival plane, showing an asymetrical appearence in the six anterior maxillary dental elements.

Intraoral dental findings:

- Tooth # 1.7-1.6-2.7-2.6-3.7-3.6-4.7-4.6 Relapsed composite fillings.
- Tooth # 1.2 all-metal ceramic restoration.
- Tooth # 1.1-2.1-2.2 composite veneer.

CLINICAL TREATMENT PLANNING

PRETREATMENT



Auspicious facial analisys - Favorable low smile line - Great lip support

Incorrect gingival plane - Lack of keratinized gingiva - Inadequate restorations


Incorrect gingival plane - 5 mm probing between #2.1-2.2

CLINICAL TREATMENT PLANNING

Intraoral periodontal findings:

- Very good plaque control.
- Thin scalloped marginal periodontum
- Chronic gingival imflamation around the right lateral incisor due to marginal overhang
- Lack of keratinized gingiva on the facial aspect of teeth # 1.2-1.1-2.1-2.2.
- Probing depths of teeth # 1.2-1.1 within 3 mm
- Probing depth of tooth # 2.1: Facial 4.5 mm. Distal 6 mm.
- Probing depth of tooth # 2.2: Facial 3 mm. Mesial 5 mm.

Radiographic findings:

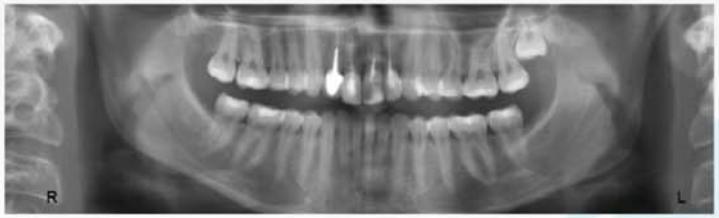
- Tooth # 1.2 endodontic failure, lack of gutapercha condensation. Cast post and core.
- Tooth # 1.1 endodontic failure showing apical radiolucency.
- Tooth # 2.1 endodontic failure showing external resorption.
- Tooth 2.2 endodontic failure showing apical radiolucency.

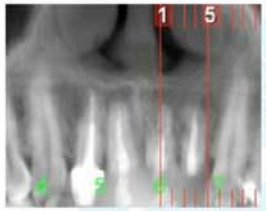

The periapical radiographs shows the endodontic failure of the four maxillary anterior tooth, apical radiolucency and external resorption of number 2.1. It can also be seen the lack of interproximal bone between # 2.1 and 2.2 delivering a critical resolution in the GBR augmentation and implant placement.

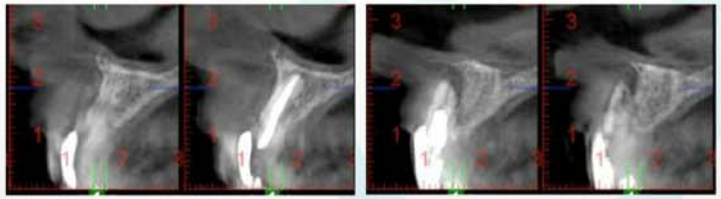
CLINICAL TREATMENT PLANNING

3D ct scans findings:

- Tooth # 1.2-2.1 apical radiolucency.
- Tooth # 2.1 absence of bone buccal plate, extreme protrusive position. Less than 1 mm of interproximal bone in its distal aspect.
- Tooth # 2.1 apical radiolucency and external resorption.
- Poor amount of apical bone on both central incisors.







Endodontic failure - Apical radiolucency - External resorption

CLINICAL TREATMENT PLANNING

PROPOSED TREATMENT PLANS

REVIEW OF TREATMENT GOALS

1. Harmonize all tooth proportions.
2. Enhance the biological and functional missituation of # 2.1.
3. Return the correct integration of the esthetic zone with the patient's smile.
4. Eliminate the peri-apical infections of #1.2, 1.1 and 2.2.
5. Improve gingival status of inflamation.
6. Upgrade the quality of the restorations.
7. Keep it as conservative as possible.

TREATMENT ALTERNATIVES

Option 1: Conservative treatment plan with extraction of # 2.1

Eliminate old restorations in # 1.2, 1.1, 2.1 and 2.2
Retreat root canals treatments of # 1.2, 1.1 and 2.2
Ridge augmentation in #2.1 zone
Implant placement in #2.1 zone
Conventional fixed prostheses on # 1.2, 1.1 and 2.2
Screw retained implant-supported restoration in # 2.1
Replace old composite restorations in # 1.6, 1.7, 2.6, 2.7, 3.6, 3.7, 4.6 and 4.7

Option 2: Conservative treatment plan with extraction of # 1.1 and 2.1

Eliminate old restorations in # 1.2, 1.1, 2.1 and 2.2
Retreat root canals treatments of # 1.2 and 2.2
Ridge augmentation in #1.1 and 2.1 zone
Implant placement in #1.1 and 2.1 zone
Conventional fixed prostheses on # 1.2, and 2.2
Screw retained implant-supported restoration in # 1.1 and 2.1
Replace old composite restorations in # 1.6, 1.7, 2.6, 2.7, 3.6, 3.7, 4.6 and 4.7

CLINICAL TREATMENT PLANNING

FINAL TREATMENT PLAN

One major goal driving the final plan was to keep it as conservative as possible. To that end, the following decisions were made:

Option 1: Conservative treatment plan with extraction of # 2.1.

Eliminate old restorations in # 1.2, 1.1, 2.1 and 2.2.

Retreat root canals treatments of # 1.2, 1.1 and 2.2.

Ridge augmentation in #2.1 zone.

Implant placement in #2.1 zone.

Conventional fixed prostheses on # 1.2, 1.1 and 2.2.

Screw retained implant-supported restoration in # 2.1.

Replace old composite restorations in # 1.6, 1.7, 2.6, 2.7, 3.6, 3.7, 4.6 and 4.7.

It was understood that this very conservative approach would result in several compromises:

There would be the possibility of failure of the root canals retreatments with its associated loss of the teeth involved. Also, #1.1 and it's lack of facial bone are an unpredictable scenario of evolution, however the patient's age and requirements lead us to opt for this conservative treatment plan.

Initial therapy:

Initial therapy included oral hygiene instructions, periodontal prophylaxis and maintenance.

ACTIVE CLINICAL TREATMENT

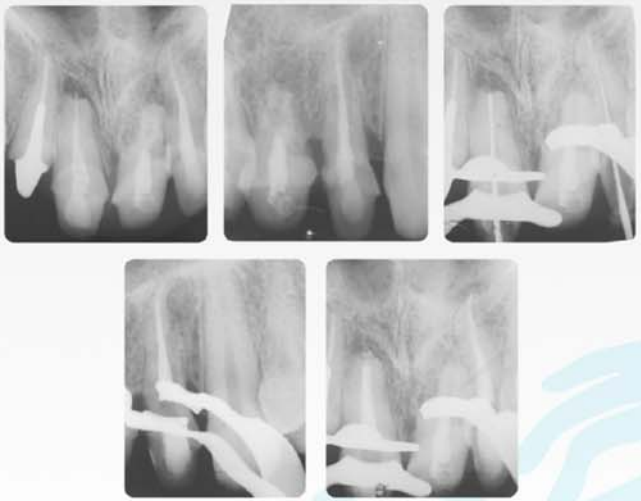
Pretreatment view showing # 1.2 full metal ceramic restoration. # 1.1, 2.1 and 2.2 relapsed composite veneers

Removal of the metal ceramic restoration, evidencing gingival imfalamtion and a non precious alloy post and core.

Removal of composite venners restoration, the image shows the minimum space between 2.1 and 2.2, This would be a critical issue in the future ridge agmentation, implant placement and restorative procedure.

Interim provisional restorations placed after the removal of relapsed restorations and beofre the surgical procedures.

ACTIVE CLINICAL TREATMENT



Secuence of periapical radiographs showing the root canal retreatment of the maxillary incisor. It is highly recomended to interlace all the related disciplines to reach the best biological and functional possible outcome.

Post-endodontic intra-canal posts.

ACTIVE CLINICAL TREATMENT

Surgical removal of the failing left central incisor. Note the absence of buccal plate due to the external resorption, and the lack of interproximal bone height between left and central incisors.

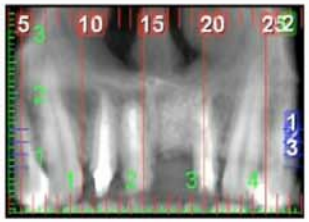
A large ridge defect is evident following the removal of the failing left central incisor. This scenario guide us to delay the implant placement and only proceed with the GBR with membrane barrier in this first surgical procedure.

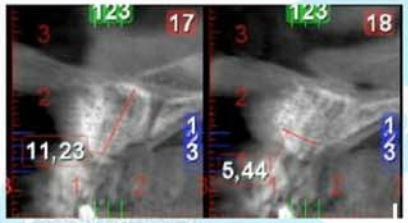
Periodontal probe showing the absence o interproximal bone sorrounding the mesial aspect of # 2.2

Horizontal and vertical ridge augmentation with 4BONE covered with a resorbable membrane.

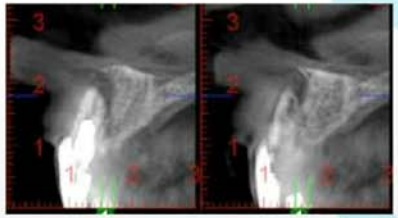
ACTIVE CLINICAL TREATMENT

Post surgical views 3 months following the GBR.





Post-surgical 3D ct scans after 7 months of graft healing



Pre-surgical 3D ct scans. Compare the volume succesfully augmented

ACTIVE CLINICAL TREATMENT

Set of photographs showing surgical procedure of the implant placement, implant selection MIS C1.
Succesfull orofacial ridge augmentation.
Good Interproximal bone in the distal aspect of the ridge.
Excellent interproximal bone in the mesial aspect of the ridge.
3-dimensional Ideal implant positioning.

One week post-surgical view.
Absence of distal peri-implant papillae
Lack of facial gingival tissue

ACTIVE CLINICAL TREATMENT

Occlusal views of the esthetic zone showing the lack of facial gingival volume. The team dediced to perform a new surgical procedure to gain soft tissue volume.

Soft tissue graft augmentation surgycal procedure.

Clinical status 2 month after soft tissue surgey. Now we hace the right scenario to proceed with the prsthetic restoration.

ACTIVE CLINICAL TREATMENT

Set of photographs showing the switch from old composite restorations to new operative restorations in #1.6 and 1.7. This procedure appears to be simple and tedious, but we strongly believe in a full integration treatment plan, also it is well known that a correct approach in operative dentistry is the best path of preventive dentistry. This restorative procedures were made in the healing process of the soft tissue graft.

ACTIVE CLINICAL TREATMENT

Set of photographs showing the switch from old composite restorations to new operative restorations in #2.6 and 2.7.

ACTIVE CLINICAL TREATMENT

Set of photographs showing the switch from old composite restorations to new operative restorations in #3.6 and 3.7.

ACTIVE CLINICAL TREATMENT

Set of photographs showing the switch from old composite restorations to new operative restorations in #4.6 and 4.7.

ACTIVE CLINICAL TREATMENT

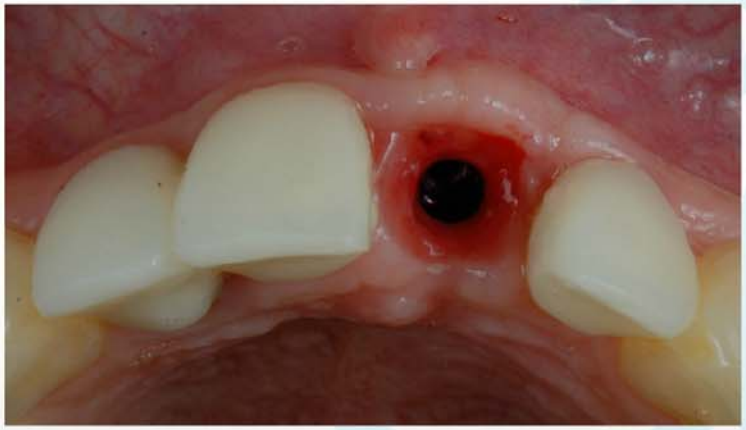
Provisionalization must be view as the non surgical refinement of the sof tissue architecture

New provisional restarations in place. Conventional fixed partial restorations in # 1.2 - 1.1 - 2.2.

Screw retained provisional restoration on implant in position of 2.1. The primary concerne is to assure accurate fit of the crown margin to the implant shoulder, with no inclussion of cement, this is the reason why it is preferable to use an screw retained fixed restoration. Therefore it is critical to achieve the correct three dimentional position in the implant placement procedure as it result in the possibility of having the emergence axis of the screw in palatal position (cingulum). This costumized provisional restoration has the responsability to shape the peri-implant gingival tissues. It is diffcult to fully seat a definitive restoration if the perii-implant tissues have not been shaped with emergence profile provisional restorations.

As a result, there must be a precise transfer of this information to the tehcnician about the clinician's ideal and the patient-approved soft tissue framework.

ACTIVE CLINICAL TREATMENT



Before ans after situation of peri-implant gingival tissue healing

ACTIVE CLINICAL TREATMENT

Photograph showing clinical situation after 2 manths of peri-implant gingival tissue management. Procedure of vital importance to ensure the right emergence profile of the future ceramic restoration.

Set of photographs detaling the simple and precise impression technique for the Mis C1 implant

It also shows the accurate impression of the prepared tooth. It is recomended for all ceramic restoration to finish the tooth preparation with a light charnfer.

ACTIVE CLINICAL TREATMENT

Zirconium copyings try-in

You can also notice an anatomic wax-up in the implanted zone, used to certified and approve the emergence profile.

Set of photographs showing 4 All ceramic restorations.

Final All ceramic restoration in full harmony with the patients smile

ACTIVE CLINICAL TREATMENT

Before ans after clinical situation 2 month installation.

CONCLUSION

From this clinical case discussion on implants ethetics, it is clear that significant preplanning and an understanding of the various implant placement approachs and relative procedurs have an important impact on minimazing negative hard and soft tissue contour changes from the moment oh tooth extraction. One of the most important intent of this clinical case presentation is the intention to emphasize that implant treatment in the anterior maxilla zone requires a great knowledge base in both surgical and prosthetic aspects of treatment to meet esthetic ideal. It also underscores the key role of refinement of our treatment procedures, using more precise preoperative planning tools such as 3D computed tomography, three dimensional planning programs, ultra conservative but technically demanding surgical procedures, and absolute accuracy in provisionalization strategies. The result is that the previously well-defined roles of the surgeon and the restoring dentist are now more uncertain, emphasizing the benefits of developing implantologists or an implant team, that is, dentist or group of dentists who posses the knowledge and skills that are applied beginning planning phase, that demand excellence in the surgical phase, and that are full filled with artistry in the final restoration.

ACKNOWLEDGEMENTS

I would like to recognize the artistry of our dental ceramis technician Mr Angel Pricolo the enormous involvement of my implant and restorative team, Dr Hector Alvarez Cantoni and Dr Mariela alvarez Cantoni.

Succes and reaching for the ´patient´s best´ is thanks to our combined efforts.

CURRICULUM VITAE OF THE AUTOR

Joile Alvarez Cantoni

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Private dentistry in Cerrito 782 8 floor, Buenos Aires, Argentina (phone 54 11 4371 2971)

REFERENCES

1. Buser D., Martin W, Belser UC. Optimizing esthetics for implant restorations in the anterior maxilla: Anatomic and surgical considerations. Int J Oral Maxillofac Implants 2004;19(supplement):43-61.

2. Schropp L, Wenzel A, Kostopoulos L, Karring T. Bone healing and soft tissue contour changes following single tooth extraction: A clinical and radiographic 12-month prospective study. Int J Periodontics Restorative Dent 2003;23:313-323.

3. Becker W, Goldstein M, Becker Be, Sennerby L. Minimally invasive flapless implant surgery: A prospective multicenter study. Clin Implant Dent Relat Res 2005;7 (supplement):S21-S27.

4. Bianchi AE, Sanfilippo F. Single tooth replacement by inmediate implant and connective tissue graft: A 1-9 year clinical evaluation. Clin Oral Implants Res 2005;15:269-277.

5. Kinsel RP, Lamb RE. Tissue directed placement of dental implants in the esthetic zone for long-term biologic synergy: A clinical report. Int J Oral Maxillofac Implants 2005; 20:913-922

6. Tarnow D, Elian N, Fletcher P, et al. Vertical distance from the crest of bone to the height of the interproximal papilla between adjacents implants. J Periodontol 2003;74:1785-1788.

7.Chen ST, Wilson Tj jr, Hammerle CHF. Inmediate or early placement of implants following tooth extraction: Review of biologic basis, Clinical procedures, and outcomes. Int Oral J Maxillofac 2004;19(supplement):12-25

PATIENT'S & DOCTOR'S CONSENT

CONSENT TO ALLOW THE USE OF IMAGES AND OTHER RELEVANT TREATMENT DATA FOR PUBLICATION AND EDUCAITONAL PURPOSES

Dear Dr./Madam/Sir:
Please read the following information carefully. You are asked to sign this form as part of your submission of a case to the MIS Meeting Case Competition.
This form should be signed by both the treating dentist and by the relevant patient. Only forms including both signatures (IN's and oDáreve will be accepted.
If you have any questions, please contact Ms. Michal Mollat at MIS Implant Technologies LTD. michal@mis-implants.com
Please scan or send the signed form to michal@mis-implants.com, and please keep a copy of the form for your records.

PURPOSE:
MIS Implant Technologies LTD is a company who manufactures and sells dental implants and other related components all over the world. As part of MIS's mission, the company aims to educate dentists and patients on the the benefits of dental implants. The company acts in different ways to publish its products and to educate dental professionals as for it products and on for ways to provide best treatments to patients.
In an attempt to enlarge our documented case library, MIS conducts a world-wide case competition, which will take place during MIS's Second Global Meeting in June 2013.

WHAT ARE YOU ASKED FOR?
Dentists: *You are being asked to allow MIS Implant Technologies LTD to use images and other relevant treatment data that you submit for publication and for other activities, aiming to educate dental professionals and the public as for treatment done with the use of dental implants. The data that may be published or be used, in addition to the submitted images and treatment data will include (but not limited to) your results, age and gender, relevant data related to your health condition (especially if you are healthy or not, and if you suffer any conditions that may alter the success and outcomes of implant related treatments), smoking history, dental history, treatment plan, provided treatment and processes and outcome of treatments and more.*
Patients: *You are being asked to allow MIS Implant Technologies LTD to use images and other relevant treatment data for publication and for other activities, aiming to educate dental professionals and the public as for treatment done with the use of dental implants. The data that may be published or be used, in addition to the submitted images and treatment data will include (but not limited to) your results, age and gender, relevant data related to your health condition (especially if you are healthy or not, and if you suffer any conditions that may alter the success and outcomes of implant related treatments), smoking history, dental history, treatment plan, provided treatment and processes and outcome of treatments and more.*
Although these images will be used without identifying information such as your name (other than your initials), and although measures will be taken to reduce or eliminate identifying features, the possibility remains that someone may recognize you.

PARTICIPANT STATEMENT

I (Dentist – Name and Identification number) JOSE PINUS ALVAREZ DNI 26200858
Address: CERRO PO 782 PISO 5, have read this consent form, and by signing this document I declare that:

1. I had an opportunity to ask questions, and if I did, I received answers that satisfied me completely.
2. I understand and that I allow MIS Implant Technologies LTD to use images, certain identifying information, and all other relevant submitted treatment data, for publication and for other activities, aiming to educate dental professionals and the public as for treatment done with the use of dental implants.
3. By signing this consent, I understand that I will not receive any direct or indirect compensation from MIS or any one of its representatives, in connection with this consent.

2-6-13
Date — Signature

I (Patient – Name and Identification number) MARIA JULIETA ALVAREZ DNI: 35.364.950
Address: HOUSSAY 3329 3°A, have read this consent form, and by signing this document I declare that:

1. I had an opportunity to ask questions, and if I did, I received answers that satisfied me completely.
2. I understand and that I allow MIS Implant Technologies LTD to use images, certain identifying information, medical information and all other relevant submitted treatment data, for publication and for other activities, aiming to educate dental professionals and the public as for treatment done with the use of dental implants.
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2-6-13
Date — Signature

CASE 3

EMILIO MATEO DOMINICANA

MINIMALLY INVASIVE SURGERY FOR POST-EXTRACTION IMMEDIATE IMPLANT C1 MIS WITH 4BONE GRAFT AND IMMEDIATE LOADING IN THE AESTHETIC ZONE.

Dr. Emilio Mateo

Specialist in Periodontics and Implant Dentistry

Universidad Iberoamericana

Dr. Emilio Mateo. Private Practice in Periodontology and Oral Implantology.
Urbanisation Mirador del Yaque, c / 2 # 17. Santiago, Dominican Republic.
Phone.: 1-829-640-6880. Email.: dr.emiliomr@gmail.com

MINIMALLY INVASIVE SURGERY
FOR POST-EXTRACTION IMMEDIATE IMPLANT C.I.M.S WITH 4BONE
GRAFT AND IMMEDIATE LOADING IN THE AESTHETIC ZONE.

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Universidad Iberoamericana

Consent and Release

CIMS

CONSENT TO ALLOW THE USE OF IMAGES AND OTHER RELEVANT TREATMENT DATA FOR PUBLICATION AND EDUCAITONAL PURPOSES

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Patients: *You are being asked to allow MIS Implant Technologies LTD to use images and other relevant treatment data for publication and for other activities, aiming to educate dental professionals and the public as for treatment done with the use of dental implants. The data that may be published or be used, in addition to the submitted images and treatment data will include (but not limited to) your initials, age and gender, relevant data related to your health condition (especially if you are healthy or not, and if you suffer any conditions that may alter the success and outcomes of implant related treatments), smoking history, dental history, treatment plan, provided treatment and processes and outcome of treatments and more.*
Although these images will be used without identifying information such as your name (other than your initials), and although measures will be taken to reduce or eliminate identifying features, the possibility remains that someone may recognize you.

PARTICIPANT STATEMENT

I (Dentist – Name and Identification number:) Emilio Matéo - 031-0467533-9
Address: Santiago Mirador de Jacque C/2 #17, have read this consent form, and by signing this document I declare that:

1. I had an opportunity to ask questions, and if I did, I received answers that satisfied me completely.
2. I understand and that I allow MIS Implant Technologies LTD to use images, certain identifying information, and all other relevant submitted treatment data, for publication and for other activities, aiming to educate dental professionals and the public as for treatment done with the use of dental implants.
3. By signing this consent, I understand that I will not receive any direct or indirect compensation from MIS or any one of its representatives, in connection with this consent.

15/11/12 Dr. Emilio Matéo
Date Signature

****

I (Patient – Name and Identification number:) Wendy M Bircan 001-1019391-9
Address: Santo Domingo Los Rios, have read this consent form, and by signing this document I declare that:

1. I had an opportunity to ask questions, and if I did, I received answers that satisfied me completely.
2. I understand and that I allow MIS Implant Technologies LTD to use images, certain identifying information, medical information and all other relevant submitted treatment data, for publication and for other activities, aiming to educate dental professionals and the public as for treatment done with the use of dental implants.
3. By signing this consent, I understand that I will not receive any direct or indirect compensation from MIS or any one of its representatives, in connection with this consent.

15/11/12 Wendy M Bircan
Date Signature

MINIMALLY INVASIVE SURGERY
FOR POST EXTRACTION IMMEDIATE IMPLANT C/ 1 MIS WITH 4BONE
GRAFT AND IMMEDIATE LOADING IN THE AESTHETIC ZONE.

Dr. Emilio Matéo
Specialist in Periodontics and Implant Dentistry
Universidad Iberoamericana

MINIMALLY INVASIVE SURGERY
FOR POST-EXTRACTION IMMEDIATE IMPLANT C.T.M.S WITH 4BONE
GRAFT AND IMMEDIATE LOADING IN THE AESTHETIC ZONE.

Dr. Emilio Mateo
Specialist in Periodontics and Implant Dentistry
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Preliminary Data

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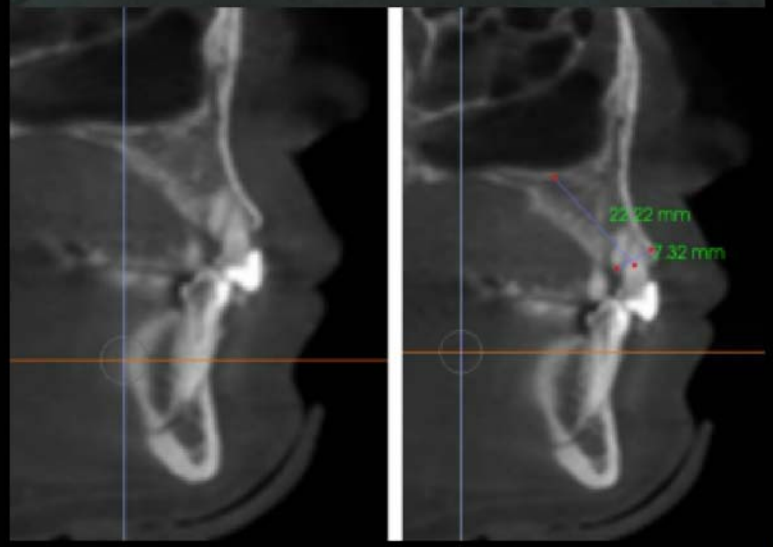
A FULL SET OF PRELIMINARY RADIOGRAPHS

Initial periapical RX.



Sagittal CT Scan

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Cone Beam CT

mis

PRELIMINARY PHOTOGRAPHS

Intraoral and extraoral photographs

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MIS

DETAILED SUMMARY OF DIAGNOSES

The clinical case corresponds to a 41-year-old patient, nonsmoker with no medical history of interest, who goes to the dental office by reference. After the clinical and radiological examination, it was diagnosed an agenesis of tooth # 23 with the presence of a composite restored primary canine. The patient reported that the restoration is often fractured, reason why she decided to find a most permanent solution. It was suggested upon her request an atraumatic extraction and immediate loading implant placement in the post-extraction socket.

TREATMENT OPTIONS

The options were:

-3-piece fixed bridge.

- Two phases Implant.

-Post-extraction Implant and Immediate Loading:

The last option was the chosen one the Post-extraction Implant and Immediate Loading, because the patient rejected the 3 piece fixed bridge because she did not want 'to sacrifice two healthy teeth" also she did not want two surgeries for the two phases implant.

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DETAILED TREATMENT PLAN

After an effective treatment plan and computed tomography evaluation, it was place an infiltrative anesthesia in the area, the atraumatic extraction was done using periotomes and the integrity of the vestibular and palatal cortical was tested, following the principles of minimally invasive surgery, avoiding to lift flap or "flapless surgery", in order to preserve the soft tissue and minimize the resorption bone process.

The MIS C1 3.75 mm x 11.5 mm implant was placed, due to its conical anti-rotational connection with six positions and a position indicator, as well as its adaptation to abutment and the excellent seal that reduces micro-movements. The implant protocol was follow and the milling is ajusted to a more palatal axis instead of following the socket axis, placing the implant in a more palatalized position, which favors the regenerative process and preserve the buccal wall of the socket. The conical connection implant with platform switch, intended by design, is placed 2mm subcrestal. It is more efficient preserving the crestal bone and having a better impact on the formation of the papilla, which favors the anterior aesthetic.

Once the milling is finished, was proceed to the implant insertion using the contra-angle handpiece at low speed, until the implant was place in the ideal position in the three directions space, obtaining a primary stability over 60 N, which is an indispensable condition for the realization of an immediate restoration as planned in this case.

Dr. Emilio Nieto
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Universidad Evangelica Boliviana

According to the current guidelines of the scientific evidence, we proceed to fill the GAP formed between the implant surface and the buccal wall of the socket, by the use of 4BONE, graft composed of 100% synthetic material, similar mineral human bone structure. The use of 60% hydroxyapatite with slow resorption rate and 40% of beta tricalcium phosphate with rapid resorption rate, guarantees a bone cell response in a manner similar to that caused by the bone, causing perfect balance. The 4BONE becomes a living bone with a new vascularization, due to angiogenic and osteogenic properties. This is introduced into the space using a syringe, taking care that the graft is not introduce in the implant interior using a healing screw.

For the temporary crown elaboration it was screwed a type PIK temporary abutment. From the confection of the diagnostic wax model, an acetate plate is made which was perforated through the acrylic provisional, it was adjusted without any contact and the acrylic crown made by the technician was filled with the autopolymerized acrylic.

Then the acetate matrix is removed where the provisional goes and the emerging profile of the crown was finishing and polishing, which is made in compliance with the dental organ dimensions, but eliminating the incisal edge to adjust occlusal surface and excursive movements to not induce micro-movements that could derail the implant osseointegration. This confirms that restoration contours that are in direct contact with the tissues most be fully polished, being placed the provisional prosthesis to the patient on the day of surgery.

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MINIMALLY INVASIVE SURGERY
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GRAFT AND IMMEDIATE LOADING IN THE AESTHETIC ZONE.

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Treatment

MIS

PHOTOGRAPHS

Preoperative image

Atraumatic extraction

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It verify if there are fenestration or dehiscence of the walls socket with a periodontal probe and locate the buccal ledge of the bone crest.

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Milling the socket, flapless

Parallelism PIN

Placing the implant

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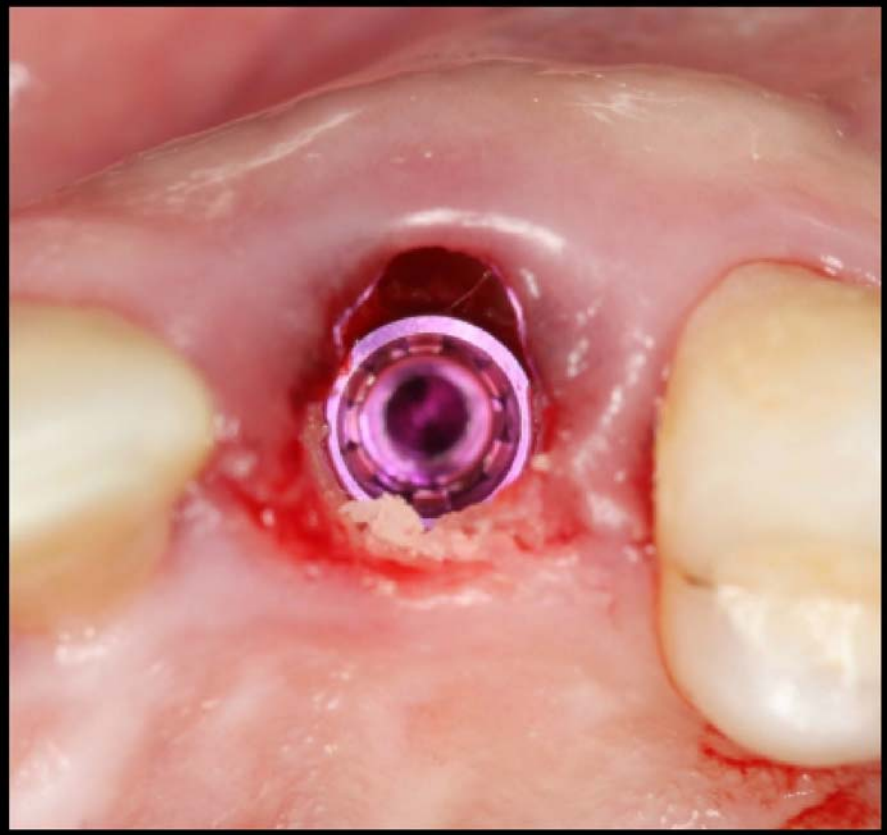

Implant placed in the socket in a slightly palatalized position

MIS C1, 3.75mm. x 11.5 mm.
Implant

MINIMALLY INVASIVE SURGERY
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Placement of inmediate temporary PIK

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GRAFT AND IMMEDIATE LOADING IN THE AESTHETIC ZONE.

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Confection of acrylic temporary crown by the prosthetist from diagnostic wax

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MINIMALLY INVASIVE SURGERY
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Inserting the healing screw for bone graft placement MIS 4BONE

MIS

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FOR POST EXTRACTION IMMEDIATE IMPLANT C.I. MIS WITH 4BONE
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Remove the healing screw for placement of the temporary crown.

MIS

MINIMALLY INVASIVE SURGERY
FOR POST EXTRACTION IMMEDIATE IMPLANT C.I. M5 WITH 4BONE
GRAFT AND IMMEDIATE LOADING IN THE AESTHETIC ZONE.

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Specialist in Periodontics and Implant Dentistry
Universidad Europea de Madrid

Temporary crown placed immediately after surgery, once removed the cement and the occlusion adjusted.

MIS

MINIMALLY INVASIVE SURGERY
FOR POST EXTRACTION IMMEDIATE IMPLANT C1 MS WITH 4BONE
GRAFT AND IMMEDIATE LOADING IN THE AESTHETIC ZONE.

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Immediate
post-surgical

One day after
post-surgical

7 days after
post-surgical

MIS

MINIMALLY INVASIVE SURGERY
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Universidad Iberoamericana

MIS

Final Outcome

SUMMARY OF THE CASE

After waiting 6 months for a good osseointegration process and after obtaining the main goals of an immediately post-extraction implant surgery with immediately loaded as: primary stabilit more than 60 N, the perfect balance to fill the gap with 4BONE graft and excellent adaptation of the gingival margin with the provisionally crown since the date of placement and without presenting any difficulty within the osseointegration period, we proceed to take the impression, with the open tray technique, often used in fixed prosthetic dentistry, with the double material technique with heavy and low to make the final crown.

The color was took with the VITA Easyshade because it allows a digital reading that facilitates the clinical and laboratory work due to the evolution of dental colorimetric technology from which measurements are obtained color fast, accurate and objective.

We made all procedures required, and then we proceed to the placement of the final crown with a structure of CAD-CAM 3M Lava zirconia and ceramic VITA VM 9. Also, the necessary occlusal adjustments were made and the cement remains were removed to prevent inflammatory reactions in peri-implant tissues. Thus ends the post-surgical treatment, establishing a clinical and radiological follow up regularly to ensure the success of the implant.

MINIMALLY INVASIVE SURGERY
FOR POST EXTRACTION IMMEDIATE IMPLANT C.I. MIS WITH 4BONE
GRAFT AND IMMEDIATE LOADING IN THE AESTHETIC ZONE.
Dr. Emilio Nieto
Specialist in Periodontics and Implant Dentistry
Universidad Europea de Canarias

SUMMARY OF THE PROPOSED CLINICAL PROTOCOL

Advances in implantology have grown as fast as the technology itself, reflected in planning atraumatic dental treatment and the use of precise guidelines that have led to the development of new techniques, allowing the insertion of dental implants and post-extraction minimally invasive surgery without the need of lifting a flap, with predictable results in function, aesthetics and patient comfort, keeping the original shape and thickness of the peri-implant tissues so that the post-surgical trauma and discomfort is minimizing compared to flap surgery, as long as these treatments accomplish the conditions and parameters for its realization.

That is why we propose a fully documented clinical case of a whole surgery with conical connection immediate implant and platform switch, the use of 4bone bone graft and immediately loaded in the esthetic zone, illustrating the alveolar bone preservation during and after extraction, which validates the atraumatic treatment advances and given evidence that this treatment is predictable.

MINIMALLY INVASIVE SURGERY FOR POST EXTRACTION IMMEDIATE IMPLANT C.I. MIS WITH 4BONE GRAFT AND IMMEDIATE LOADING IN THE AESTHETIC ZONE.

Dr. Emilio Nieto
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Universidad Europea de Madrid

RADIOGRAPHIC SEQUENCE

Initial Rx.

Parallelism PIN

Implant 2mm. subcrestal

Implant with temporal PIK

MINIMALLY INVASIVE SURGERY
FOR POST EXTRACTION IMMEDIATE IMPLANT C1 MIS WITH 4BONE
GRAFT AND IMMEDIATE LOADING IN THE AESTHETIC ZONE.

Dr. Emilio Nieto
Specialist in Periodontics and Implant Dentistry
Universidad Europea de Madrid

mis

MINIMALLY INVASIVE SURGERY
FOR POST EXTRACTION IMMEDIATE IMPLANT C1 MS WITH 4BONE
GRAFT AND IMMEDIATE LOADING IN THE AESTHETIC ZONE.

Dr. Emilio Nieto
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Universidad Europea de Canarias

Implant prosthetic attachment

Crown final

Crown final.
Higher contrast radiography

MIS

Axial CT scan
Post - surgical

Sagittal CT scan
Post - surgical

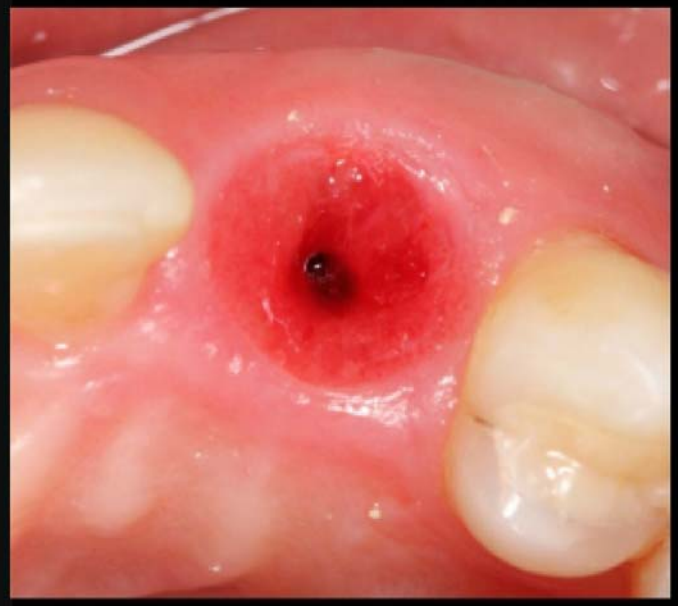
MINIMALLY INVASIVE SURGERY
FOR POST EXTRACTION IMMEDIATE IMPLANT C1 MS WITH 4BONE
GRAFT AND IMMEDIATE LOADING IN THE AESTHETIC ZONE.

Dr. Emilio Nieto
Specialist in Periodontics and Implant Dentistry
Universidad Europea de Madrid

MIS

Dr. Emilio Nevins
Specialist in Periodontics and Implant Dentistry
Universidad Europea de Madrid

FINAL PHOTOGRAPHS



After 6 months the provisional is removed for making the final crown

Place the impression coping for open tray

MIS

MINIMALLY INVASIVE SURGERY
FOR POST EXTRACTION IMMEDIATE IMPLANT C.I. MS WITH 4BONE
GRAFT AND IMMEDIATE LOADING IN THE AESTHETIC ZONE.

Dr. Emilio Nisticò
Specialist in Periodontics and Implant Dentistry
Universidad Europea de Madrid

Place resin flow to copy the profile emerging

Polymerizing the resin flow

Open tray technique

MIS

Dr. Emilio Nieto
Specialist in Periodontics and Implant Dentistry
Universidad Europea de Madrid

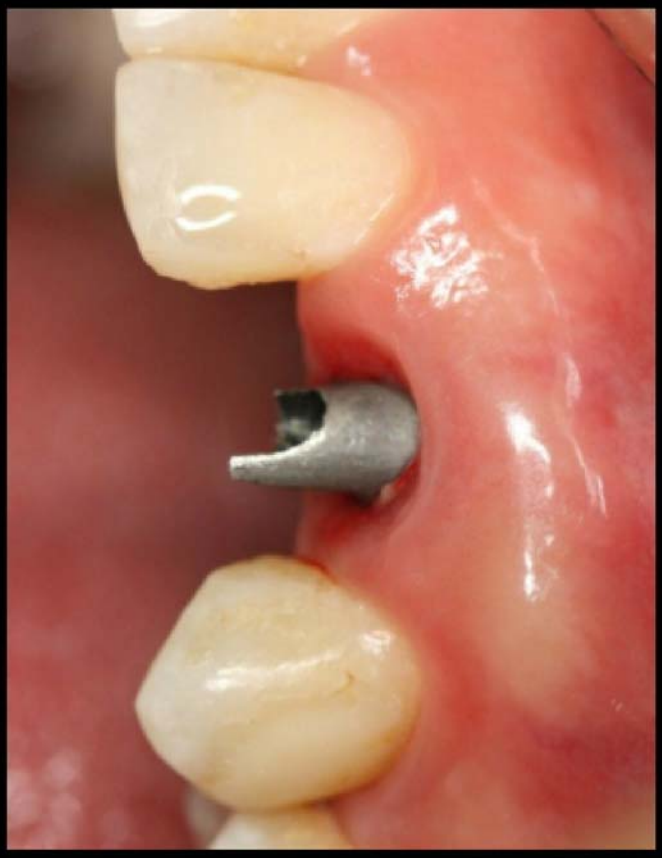
Printing technique of double material
heavy and silicone fluid

Replacing the analog

mis

MINIMALLY INVASIVE SURGERY
FOR POST-EXTRACTION IMMEDIATE IMPLANT C.1 MIS WITH 4BONE
GRAFT AND IMMEDIATE LOADING IN THE AESTHETIC ZONE.

Dr. Emilio Mateo
Specialist in Periodontics and Implant Dentistry
Universidad Iberoamericana



Attachment prosthetic

MINIMALLY INVASIVE SURGERY
FOR POST EXTRACTION IMMEDIATE IMPLANT C.I. MS WITH 4BONE
GRAFT AND IMMEDIATE LOADING IN THE AESTHETIC ZONE.

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It takes a new interim to improve the emergence profile of the canine area

Profile emerging after the placement of the new provisional

MIS

MINIMALLY INVASIVE SURGERY
FOR POST EXTRACTION IMMEDIATE IMPLANT C.I. MIS WITH 4BONE
GRAFT AND IMMEDIATE LOADING IN THE AESTHETIC ZONE.

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Structure in zirconium
3M LAVA CAD-CAM

MIS

MINIMALLY INVASIVE SURGERY
FOR POST-EXTRACTION IMMEDIATE IMPLANT C.1 MIS WITH 4BONE
GRAFT AND IMMEDIATE LOADING IN THE AESTHETIC ZONE.

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Universidad Iberoamericana

Structure in zirconium

MINIMALLY INVASIVE SURGERY
FOR POST-EXTRACTION IMMEDIATE IMPLANT C.1 MIS WITH 4BONE
GRAFT AND IMMEDIATE LOADING IN THE AESTHETIC ZONE.

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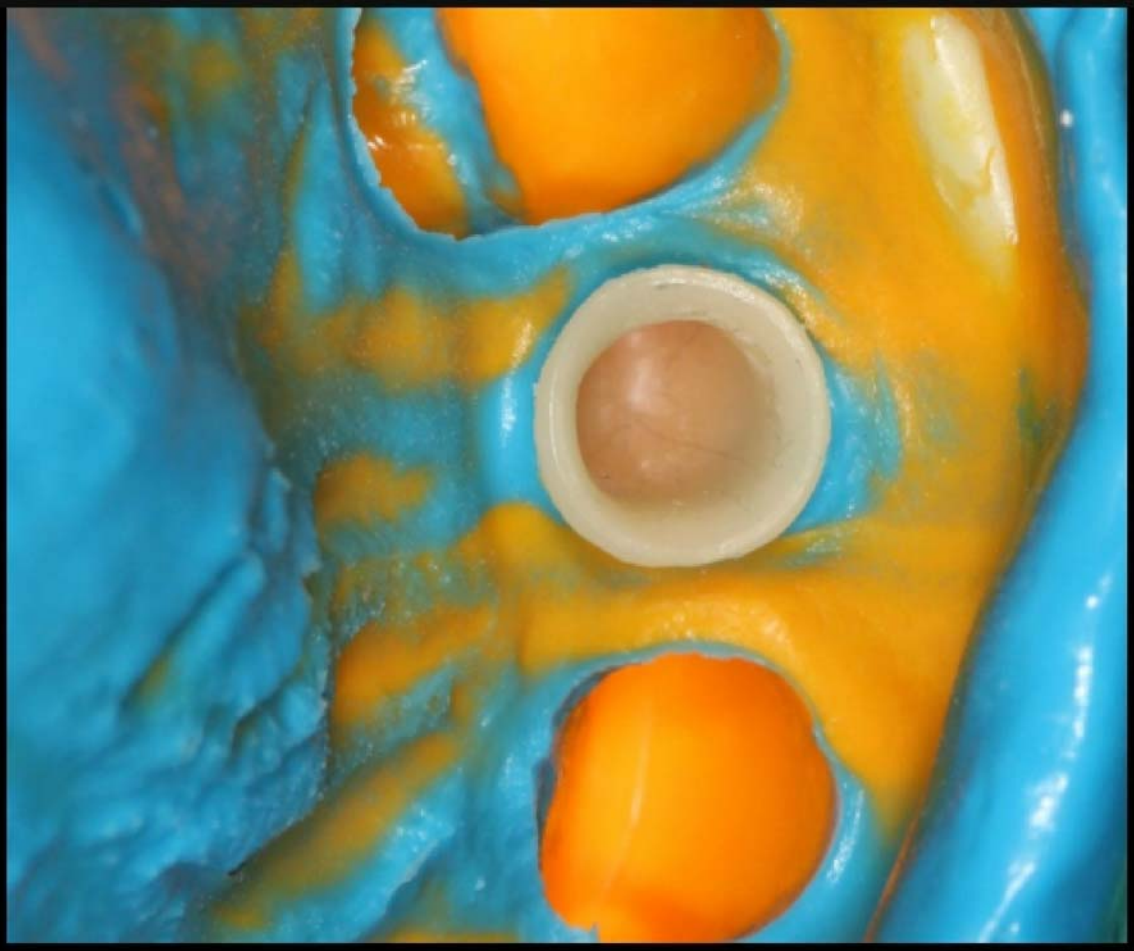

Printing drag

MINIMALLY INVASIVE SURGERY
FOR POST EXTRACTION IMMEDIATE IMPLANT C1 MS WITH 4BONE
GRAFT AND IMMEDIATE LOADING IN THE AESTHETIC ZONE.

Dr. Emilio Nagni
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Universidad Europea Madrid

Structured final
zirconium crown 3M
LAVA CAD-CAM
and ceramic VITA
VM 9

MIS

MINIMALLY INVASIVE SURGERY
FOR POST EXTRACTION IMMEDIATE IMPLANT C.I.M.S WITH 4BONE
GRAFT AND IMMEDIATE LOADING IN THE AESTHETIC ZONE.

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Torque the final attachment to 20 N, is placed Teflon and curing cement

mis

MINIMALLY INVASIVE SURGERY
FOR POST EXTRACTION IMMEDIATE IMPLANT C1 MS WITH 4BONE
GRAFT AND IMMEDIATE LOADING IN THE AESTHETIC ZONE.

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Intraoral photos the day of cementation

MIS

MINIMALLY INVASIVE SURGERY
FOR POST-EXTRACTION IMMEDIATE IMPLANT C.1 MIS WITH 4BONE
GRAFT AND IMMEDIATE LOADING IN THE AESTHETIC ZONE.

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Universidad Iberoamericana

Intraoral photos the day of cementation

MINIMALLY INVASIVE SURGERY
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GRAFT AND IMMEDIATE LOADING IN THE AESTHETIC ZONE.

Dr. Emilio Mateo
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Universidad Iberoamericana

Intraoral photos the day of cementation

Final photographs one month after of final restoration

Extraoral Photographs

CIRUGÍA MÍNIMAMENTE INVASIVA EN IMPLANTE INMEDIATO
POST-EXTRACCIÓN MIS C1 CON INSERTO ABIONE
Y CARGA INMEDIATA EN LA ZONA ESTÉTICA

Dr. Emilio Nieto
Especialista en Periodoncia e Implantología Oral
Universidad Iberoamericana

mis

CIRUGÍA MÍNIMAMENTE INVASIVA EN IMPLANTE INMEDIATO
POST-EXTRACCIÓN MIS C1 CON INJERTO 4BONE
Y CARGA INMEDIATA EN LA ZONA ESTÉTICA

Dr. Emilio Mateo
Especialista en Periodoncia e Implantología Oral
Universidad Iberoamericana

CIRUGÍA MÍNIMAMENTE INVASIVA EN IMPLANTE INMEDIATO
POST-EXTRACCIÓN MIS C1 CON INERTO 4BONE
Y CARGA INMEDIATA EN LA ZONA ESTÉTICA

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CIRUGÍA MÍNIMAMENTE INVASIVA EN IMPLANTE INMEDIATO
POST-EXTRACCIÓN MIS C1 CON INJERTO 4BONE
Y CARGA INMEDIATA EN LA ZONA ESTÉTICA

Dr. Emilio Mateo
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Intraoral Photographs

CIRUGÍA MÍNIMAMENTE INVASIVA EN IMPLANTE INMEDIATO
POST-EXTRACCIÓN MIS C1 CON INJERTO 4BONE
Y CARGA INMEDIATA EN LA ZONA ESTÉTICA

Dr. Emilio Mateo
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CIRUGÍA MÍNIMAMENTE INVASIVA EN IMPLANTE INMEDIATO POST-EXTRACCIÓN MIS C1 CON INJERTO 4BONE Y CARGA INMEDIATA EN LA ZONA ESTÉTICA

Dr. Emilio Mateo
Especialista en Periodoncia e Implantología Oral
Universidad Iberoamericana

CIRUGÍA MÍNIMAMENTE INVASIVA EN IMPLANTE INMEDIATO POST-EXTRACCIÓN MIS C1 CON INERTO 4BONE Y CARGA INMEDIATA EN LA ZONA ESTÉTICA

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Acknowledgements

MINIMALLY INVASIVE SURGERY
FOR POST EXTRACTION IMMEDIATE IMPLANT C1 MIS WITH 4BONE
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Dr. Emilio Nieto
Specialist in Periodontics and Implant Dentistry
Universidad Europea de Madrid

MIS

Dr. Emilio Mateo (Periodontist and Implantologist case)

Dentist, Pontificia Universidad Católica Madre y Maestra.

Periodontics and Implant Dentistry, Universidad Iberoamericana.

Dr. Dioracy Vicioso (Rehabilitator of the case)

Dentist, Universidad Iberoamericana

Periodontics and Implant Dentistry, University of Sao Paulo, Brazil.

Elvin Santos.

Dental Technician, Universidad Iberoamericana.

SOLDESA Dental Laboratory.

Dr. Emilio Mateo
Specialist in Periodontics and Implant Dentistry
Universidad Iberoamericana

Dr. Emilio Mateo

Specialist in Periodontics and Implant Dentistry
Universidad Iberoamericana

Dr. Emilio Mateo. Private Practice in Periodontology and Oral Implantology.
Urbanisation Mirador del Yaque, c / 2 # 17. Santiago, Dominican Republic.
Phone.: 1-829-640-6880. Email.: dr.emiliomr@gmail.com

MIS

CASE 4

JAMES COLLINS
DOMINICANA

Implant Placement in the Esthetic Zone. Surgical and Prosthetic Management. Clinical Case Report

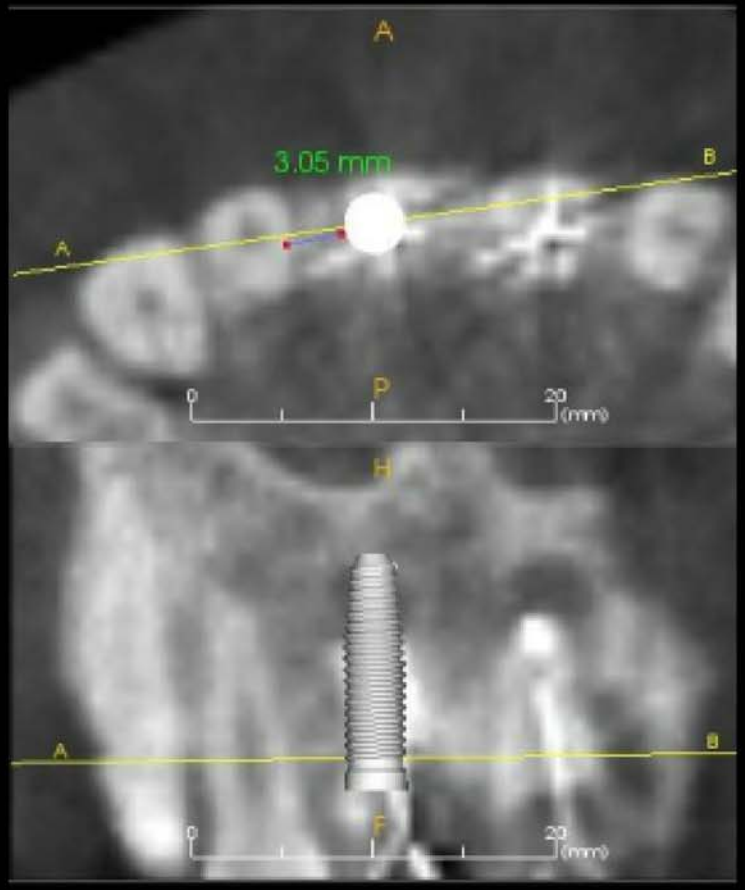
Dr. James R. Collins C

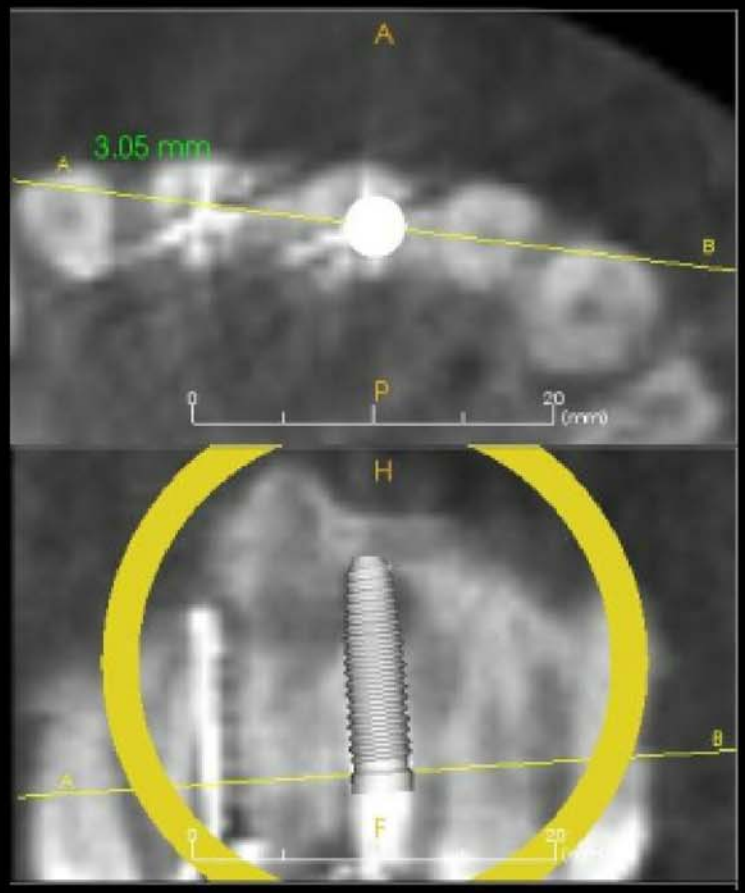
Dr. Rubén T. Polanco A

1- Before extaction (frontal aspect of teeth 8 and 9)

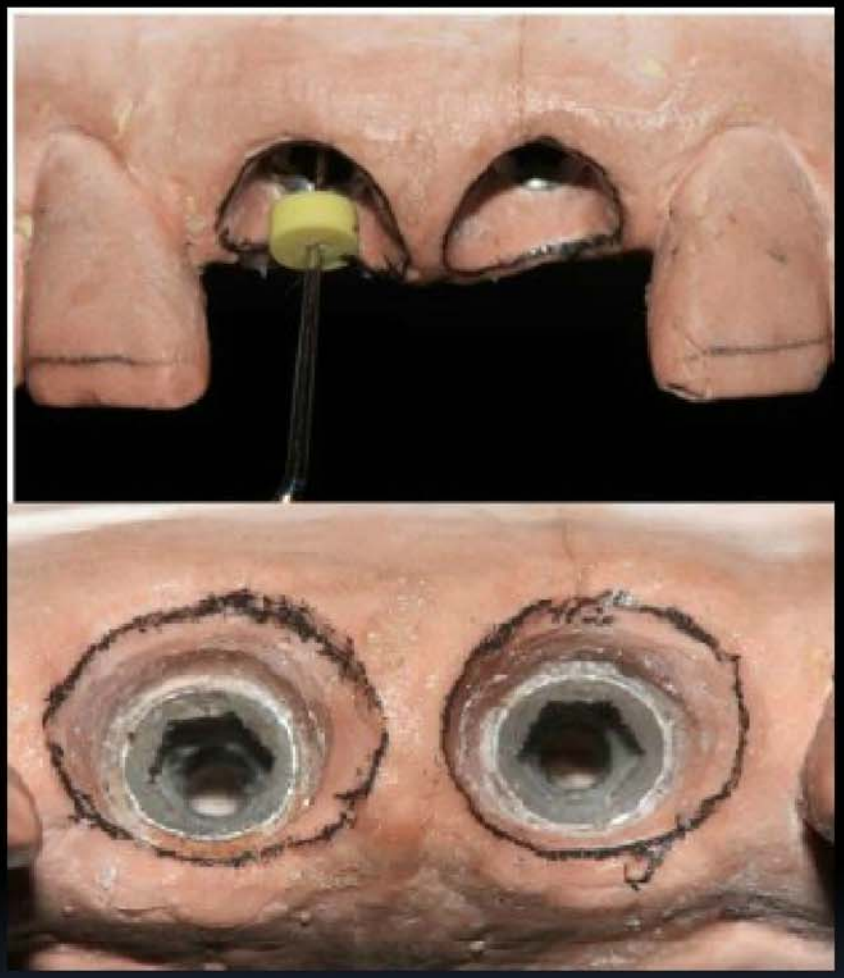
2- Acrylic temporary restoration

3- Initial x-rays



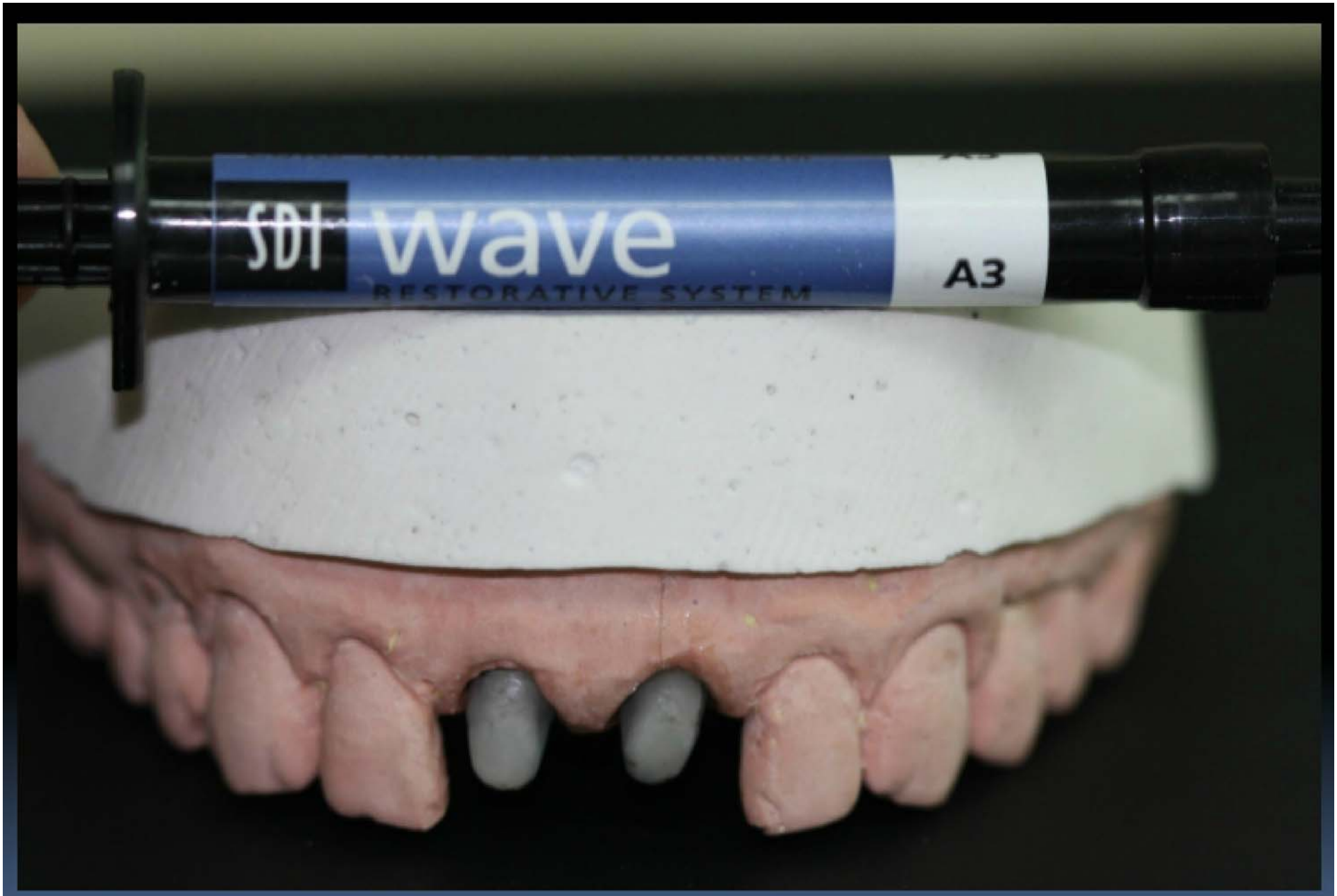


4- 3D planification

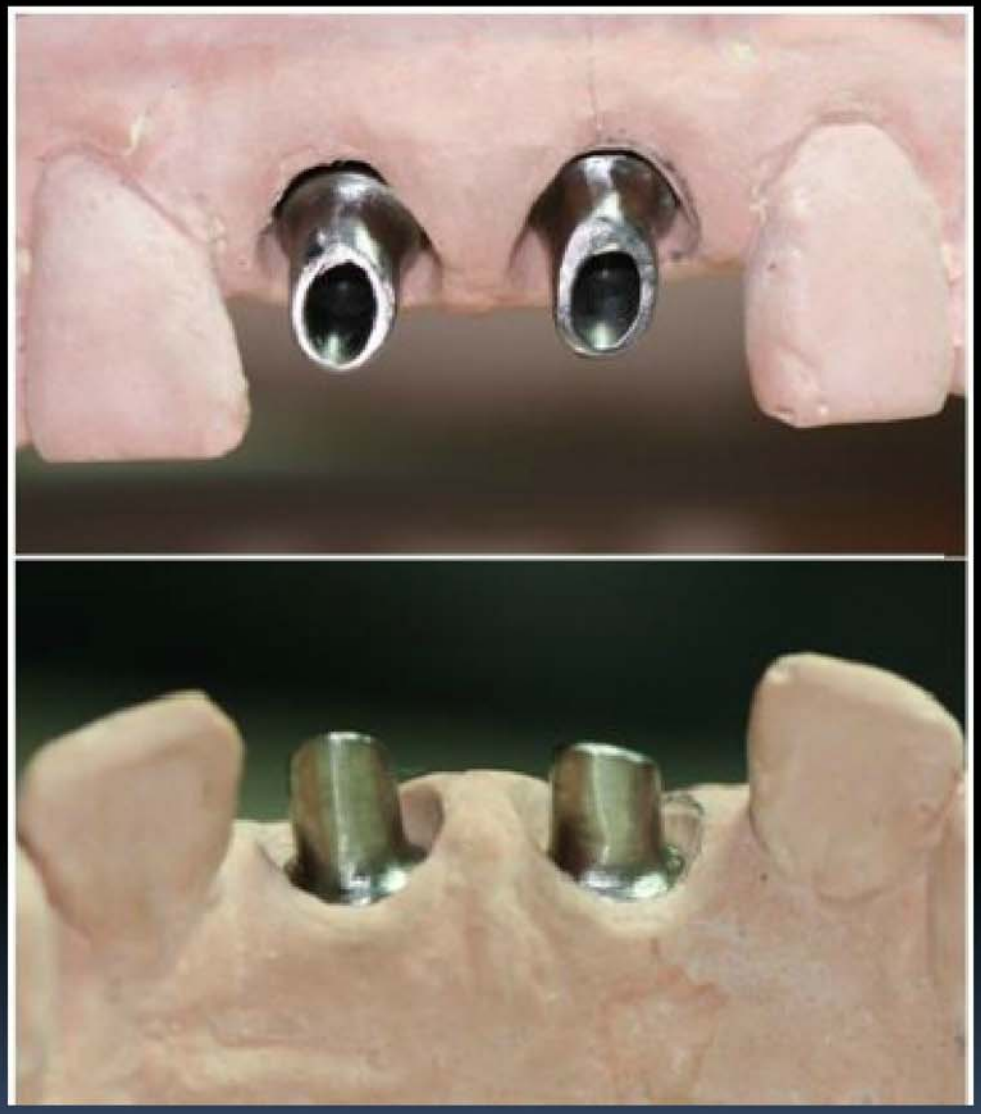


5- The planned position for the future emergence are marked in the model

6- Platform switch titanium abutments are used as provisional



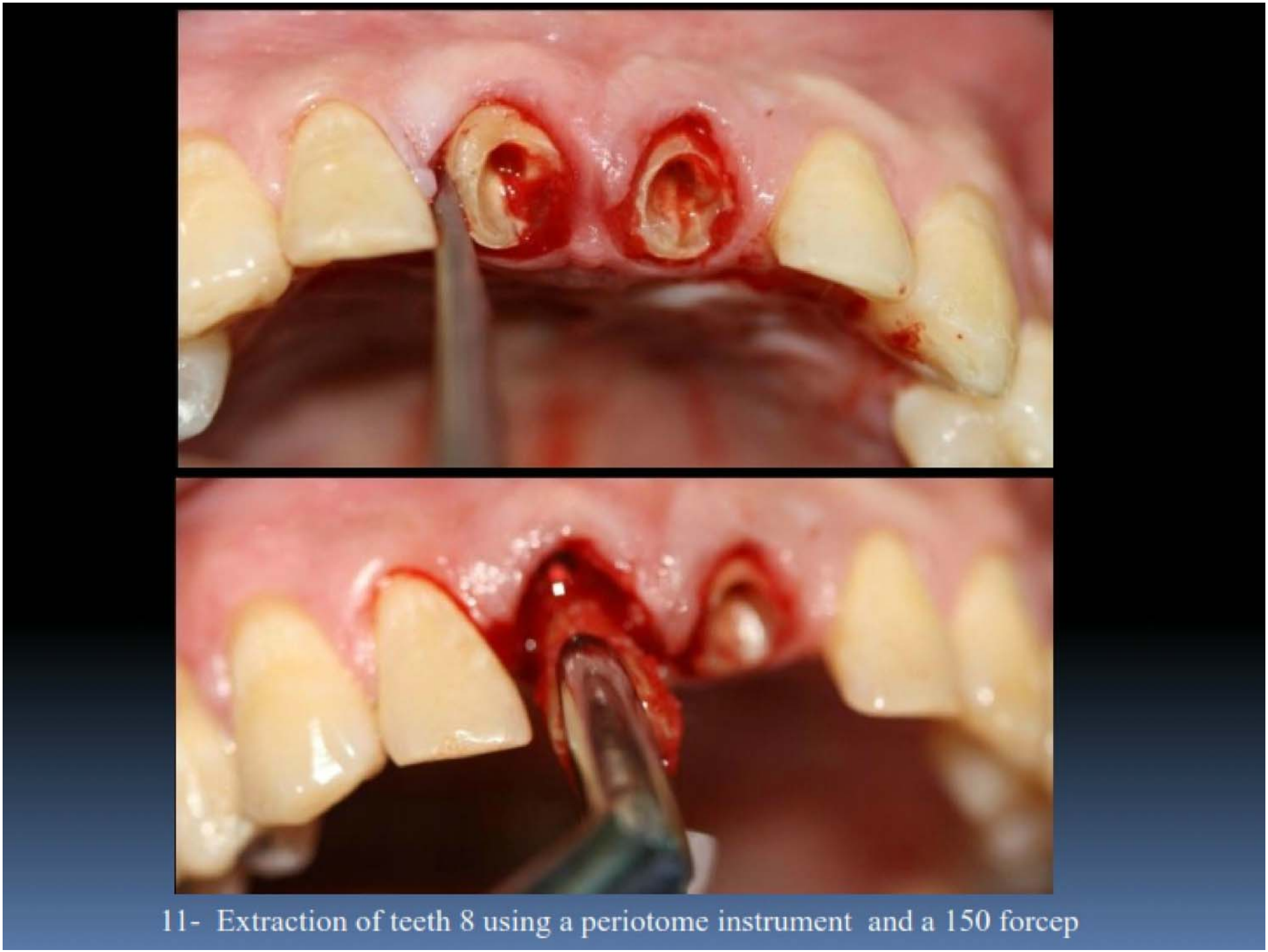
7- The titanium abutments are covered by resin



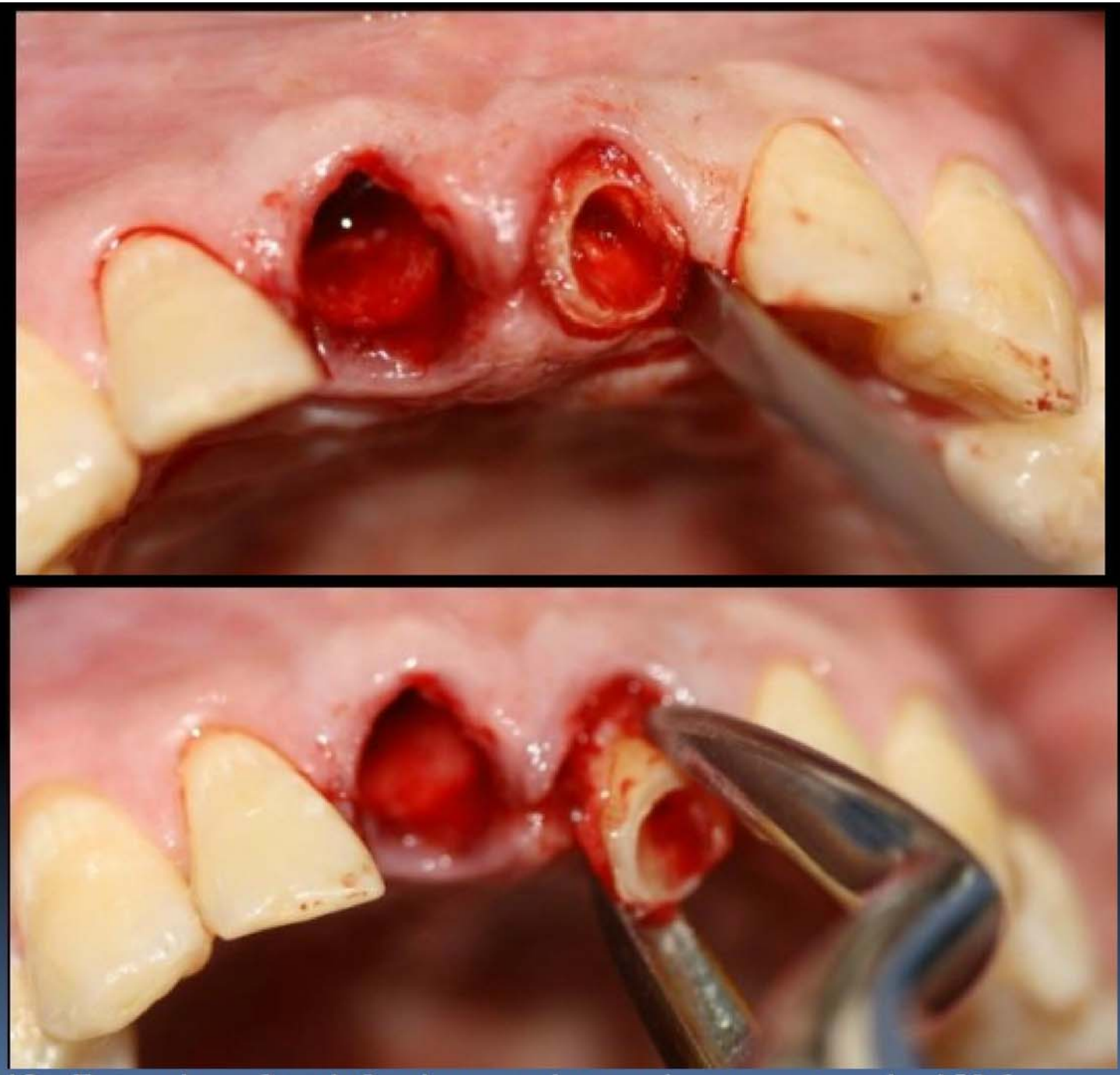
8- Peri implant area are also copy by composite

9- Acrylic temporary restoration finish before the surgery

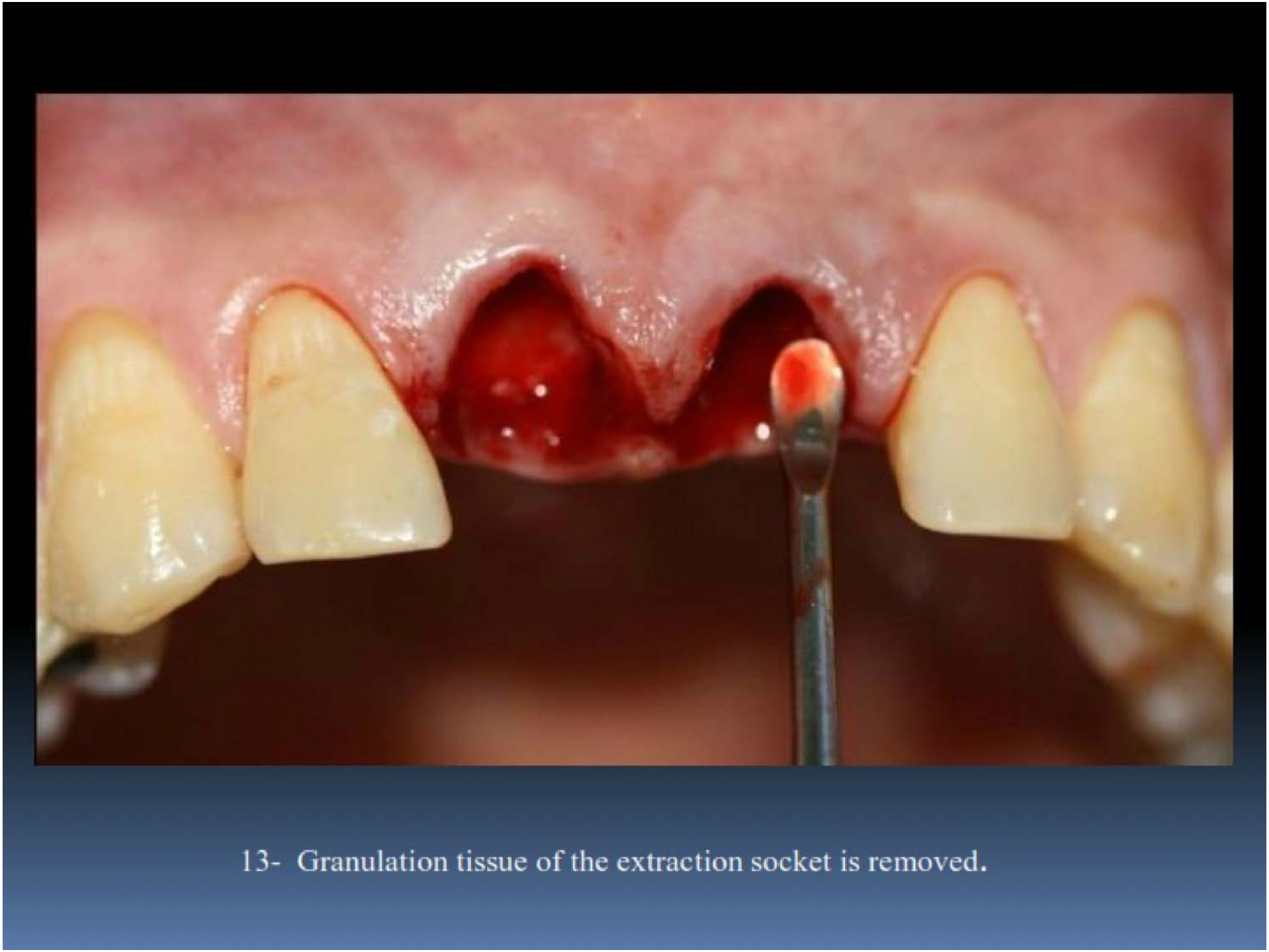
10- Periodontal sounding to confirm the level of bone crest around adyacent teeeth



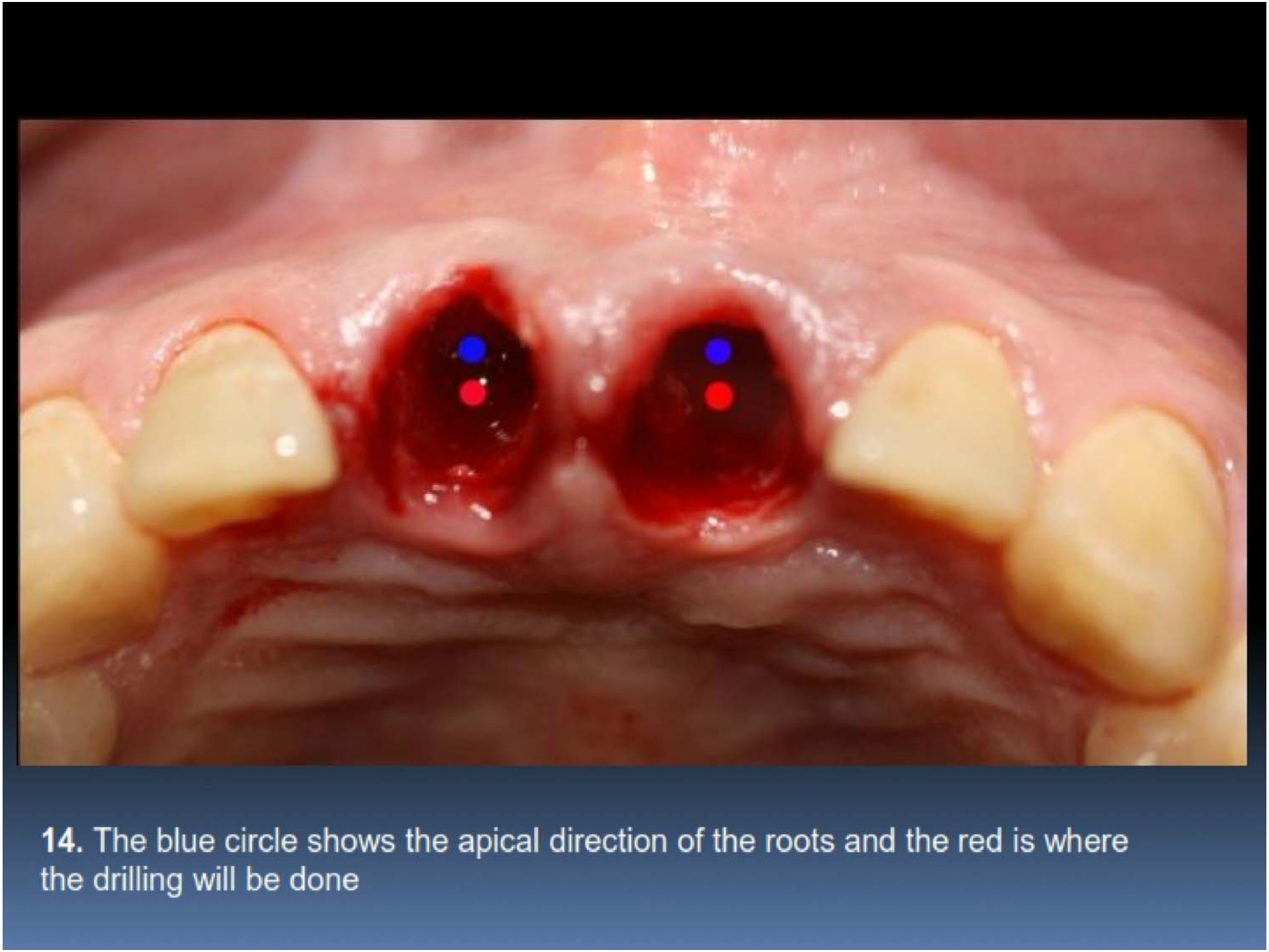
11- Extraction of teeth 8 using a periotome instrument and a 150 forcep



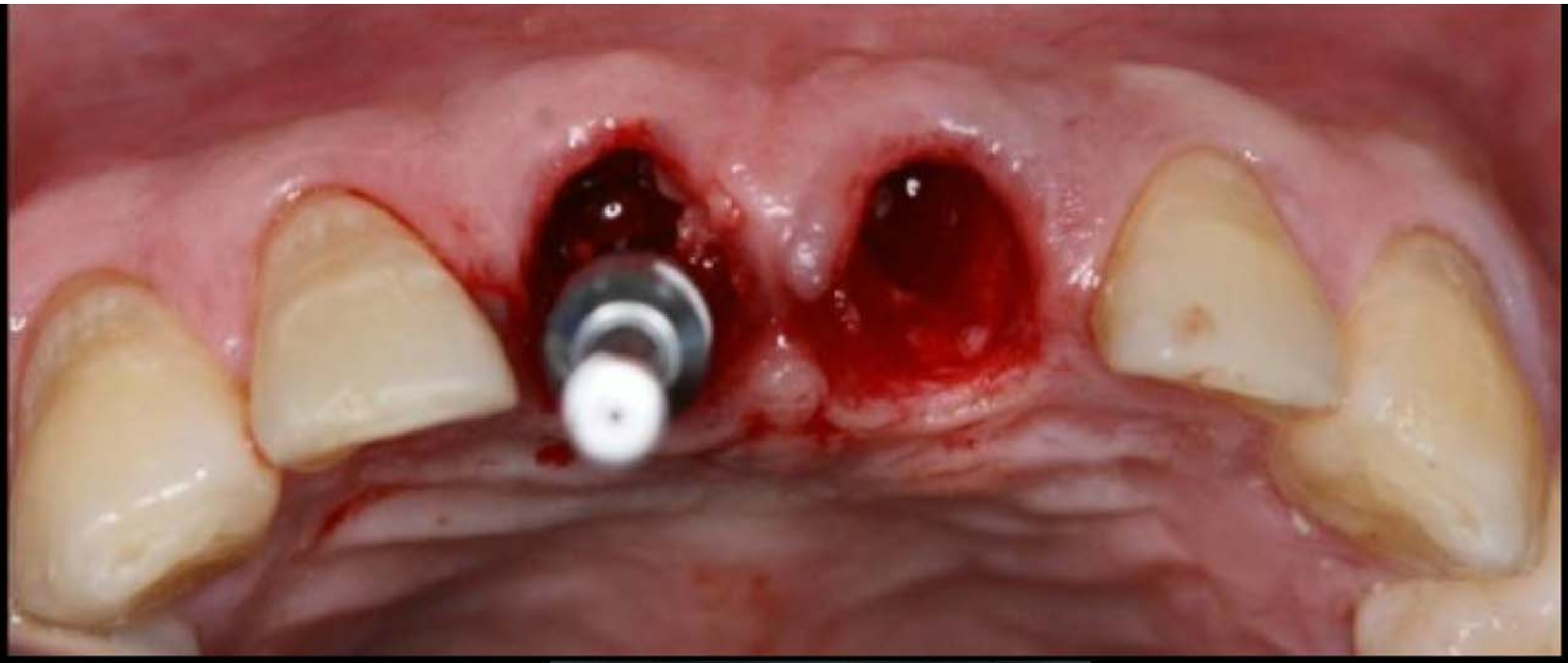
12- Extraction of teeth 9 using a periotome instrument and a 150 forcep



13- Granulation tissue of the extraction socket is removed.

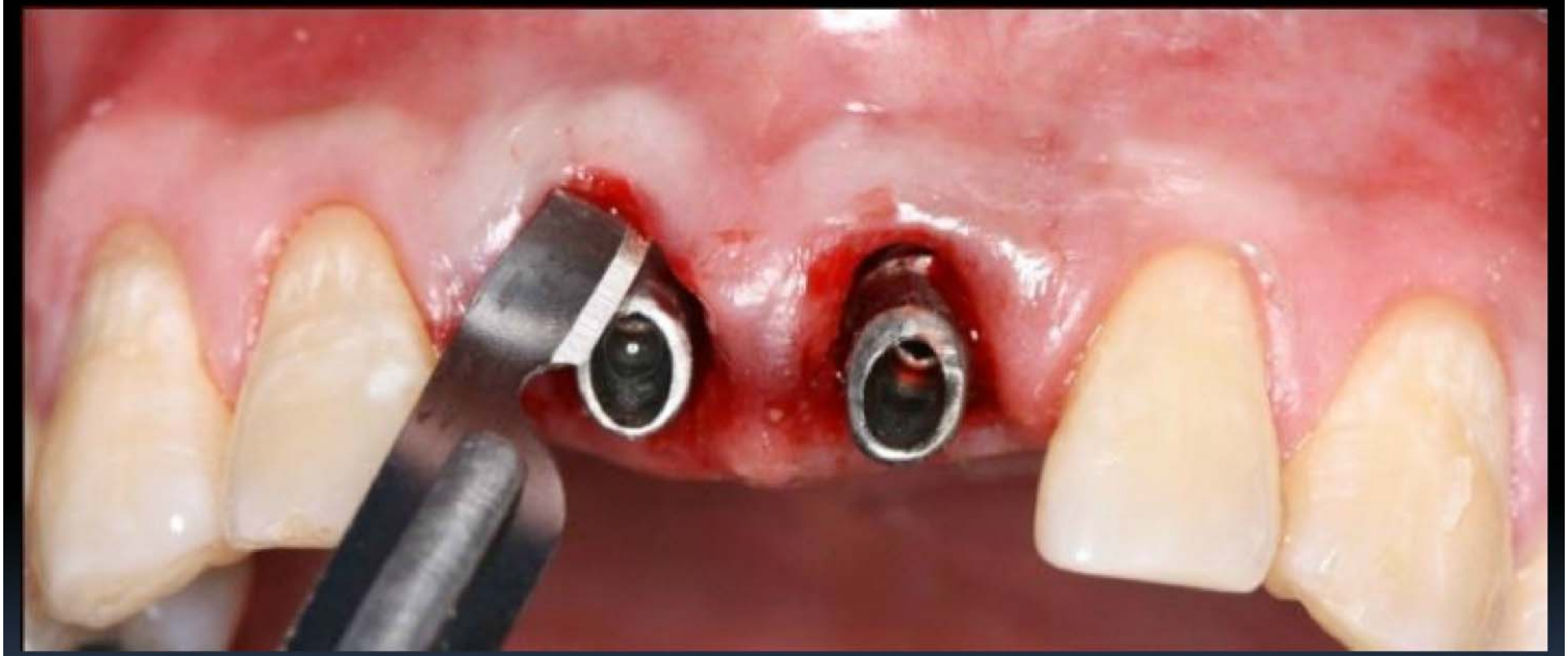


14. The blue circle shows the apical direction of the roots and the red is where the drilling will be done



15. The palatine inclination of the parallelism pins becomes clearly visible

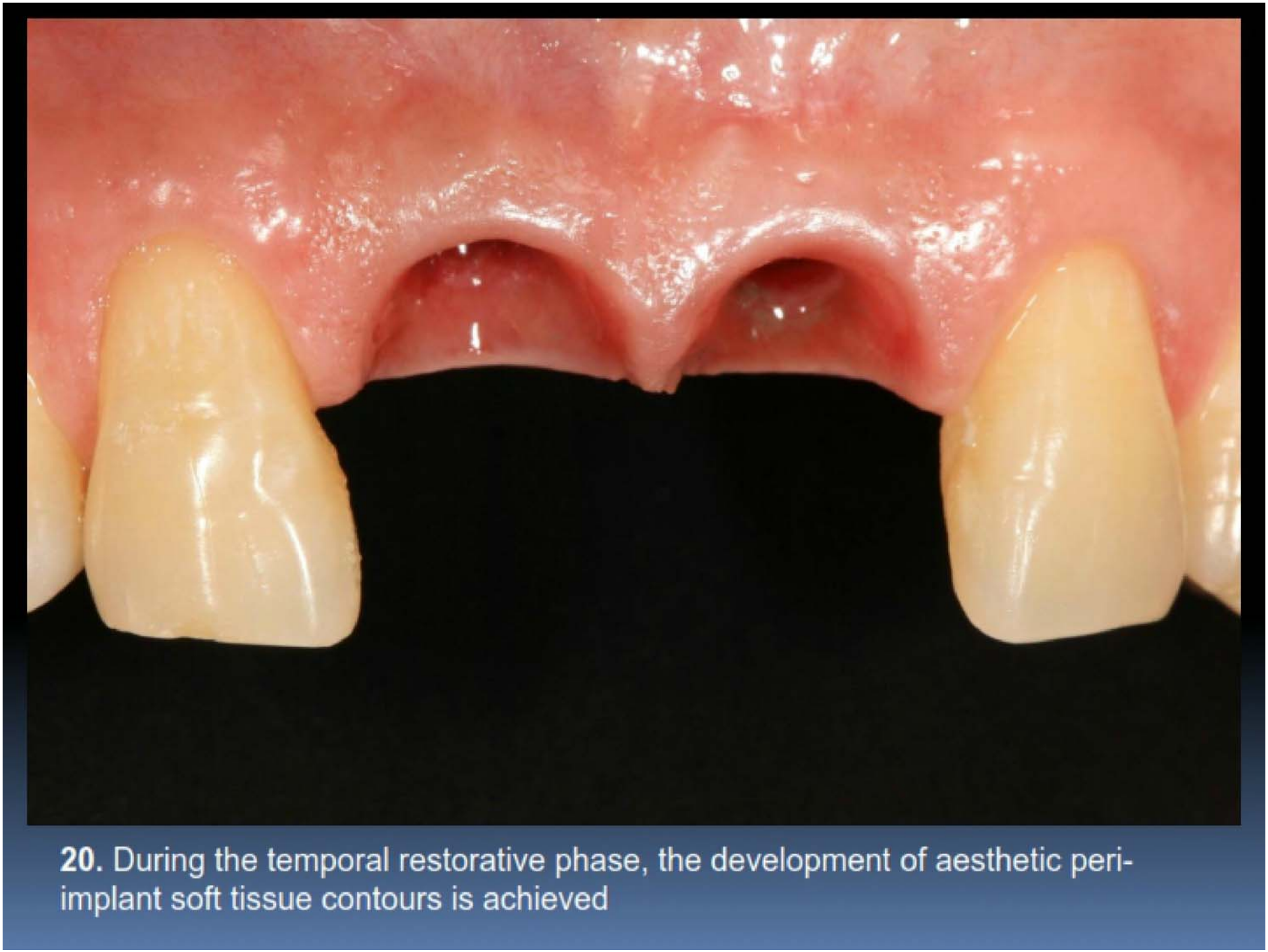
17. Immediate temporal implant restoration on 8 and 9.



16. **A sulcular incision is made with a no.15c blade**

18. 1 month after surgery, clinical and radiographical evaluation. Note the use of platform switch abutments

19. 2 month after surgery, clinical and radiographical evaluation reveal stable periimplant tissue condition



20. During the temporal restorative phase, the development of aesthetic peri-implant soft tissue contours is achieved

21. Impression coping for the master cast.

22. Master cast.

23. Esthetic Zirconia abutments on 8 and 9.

24. Final abutments

25. A frontal view with the suprastructures in place for final details

26. An aesthetically pleasing overall integration of the two anterior reconstructions becomes clearly visible after its final cementation.

27. Occlusal view of the final restoration on 8 and 9 in the anterior maxilla

28. Before and 1 year clinical follow up

29. An aesthetically pleasing overall integration of the two anterior reconstructions is underlined by a close up view of the patient's non-forced smile.

CASE 5

M. L. RAMOS OLTRAS
SPAIN

LATERAL INCISORS AGENESIS

MARÍA L. RAMOS OLTRA

DDS, MSc,PhD

Introduction

- Tooth agenesis is one of the most common developmental dental anomalies.[1] Patients with congenitally missing teeth may present with undeveloped alveolar bone morphology, making implant reconstruction a challenge.[2] When the space maxillary isn't enought, treatment consisted of initial orthodontic space management to obtain adequate space for missing lateral incisors. [3]

- Dental Implants have become a primary treatment option for replacement of these teeth. Many times in prosthodontic treatment planning a multidisciplinary approach is needed for a comprehensive out come. Prosthodontic treatment planning is needed prior to the patient's consultation and following treatment acceptance; the prosthodontist may need to coordinate treatment needs with other specialists, including an orthodontist and an implant surgeon.[1]

- The demand for optimal orthodontic and prosthetic treatment is high because the condition has an impact on facial aesthetic.[4]

[1] Krassnig M, Fickl S. Congenitally missing lateral incisors. A comparison between restorative, implant, and orthodontic approaches. Dent Clin North Am. 2011 Apr;55(2):283-99.

[2] Nissan J, Mardinger O, Strauss M, Peleg M, Sacco R, Chaushu G. Implant-supported restoration of congenitally missing teeth using cancellous bone block-allografts. Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2011 Mar;111(3):286-91.

[3] Patil PG, Karemore V, Chavan S, Nimbalkar-Patil SR, Kulkarni R. Multidisciplinary treatment approach with one piece implants for congenitally missing maxillary lateral incisors: a case report. Eur J Prosthodont Restor Dent. 2012 Jun;20(2):92-6.

[4] Robertsson S, Mohlin B, Thilander B. Aesthetic evaluation in subjects treated due to congenitally missing maxillary laterals. A comparison of perception in patients, parents and dentists. Swed Dent J. 2010;34(4):177-86.

Treatment plannig

- This case describes multidisciplinary management presenting thin spaced maxillary anteriors due to the congenitally missing lateral incisors.
- Single piece in 12 and 22 position, standard diameter implants (3,75 x 13mm C1 MIS®) were placed in edentulous spaces on both sides. During the surgery, ROG was made using MIS® 4BONE (Synthetic Bone Gratf 0,5cc, particula size 0,5-1mm) and Connective tissue graft in 22 position.
- Resin crows were given as provisional restorations.
- Metal-ceramic crowns were given as definitive restorations, resulting into an acceptable aesthetic outcome.

Conclusion

- In the rehabilitation of a single missing lateral maxillary incisor, no statistically significant difference was assessed between immediately and one-stage restored small-diameter implants with regard to implant survival, mean marginal bone loss, and probing depth. Narrow implants proved to be a predictable treatment option if a strict clinical protocol was followed.[5]

- Successful and satisfying dental treatment is always the goal for patients and dental practitioners, meaning that a patient's needs are solved in a functional and esthetic way. Patients and dentists have to find the best way to reach their common goal of satisfaction. Some authors introduces examples of different approaches to solve the problem of congenitally missing lateral incisors. In most cases, an interdisciplinary treatment plan has to be worked out and executed.[1]

[5] Degidi M, Nardi D, Piattelli A. Immediate versus one-stage restoration of small-diameter implants for a single missing maxillary lateral incisor: a 3-year randomized clinical trial. J Periodontol. 2009 Sep;80(9):1393-8.

[1] Krassnig M, Fickl S. Congenitally missing lateral incisors. A comparison between restorative, implant, and orthodontic approaches. Dent Clin North Am. 2011 Apr;55 (2):283-99.

Intraoral Analysis

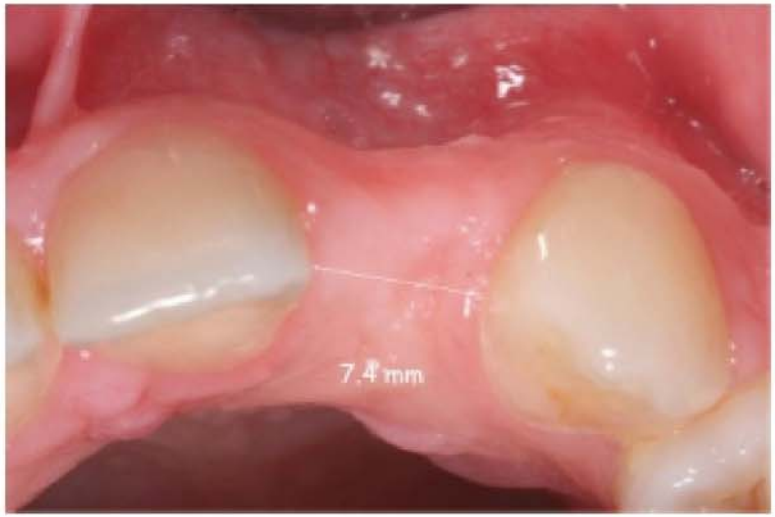
Sex: Female
Date of birth: 1992

June 2012

Intraoral Analysis

June 2012

Intraoral Analysis



June 2012

Intraoral Analysis

June 2012

Rx

CT scan

Risk Factors

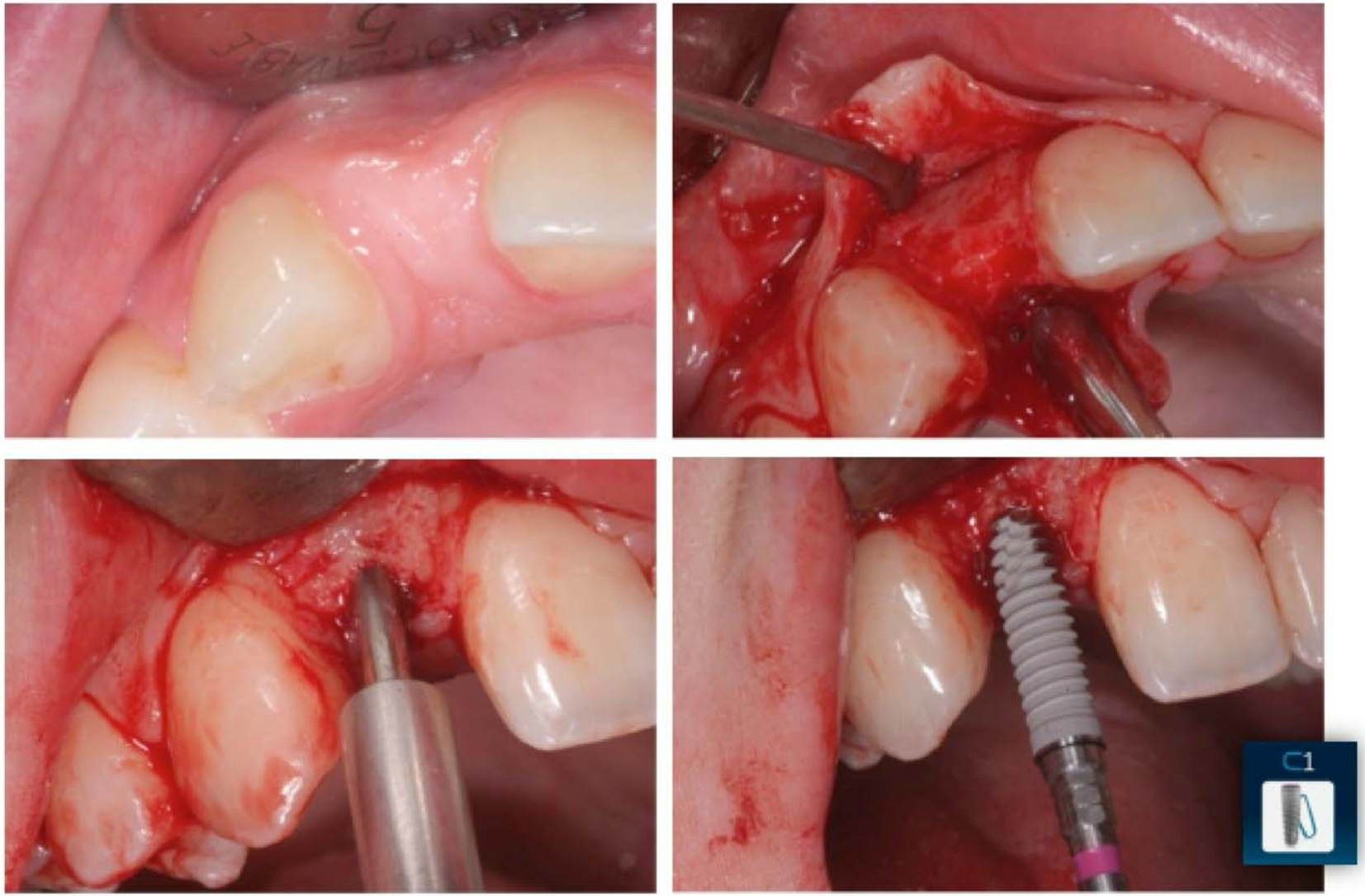
	DANGER	CAUTION	OKAY
GENERAL HEALTH			
			Good
PATIENT INTERROGATION			
Esthetic demands			
Motivation			
ETIOLOGY OF THE EDENTULISM			
			Agenesis
EXTRAORAL EXAMINATION			
Smile line		Medium	

June 2012

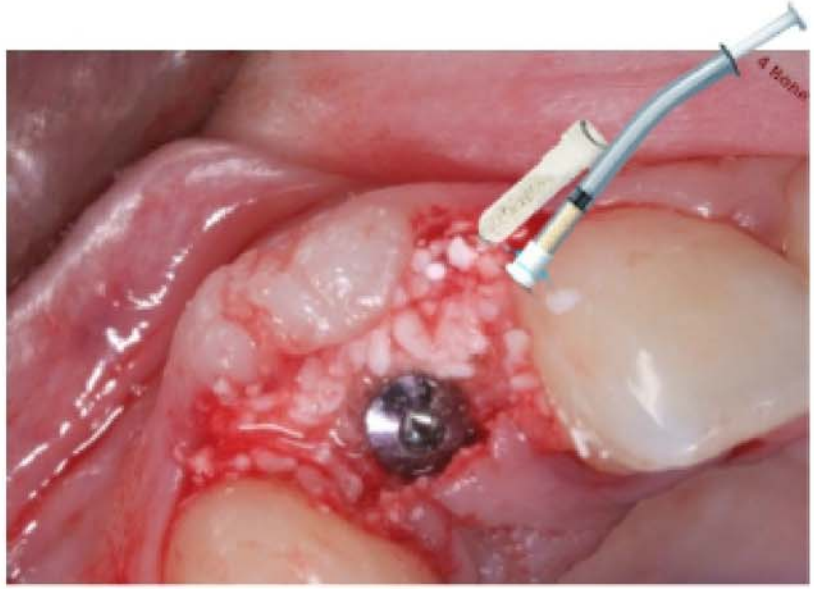
INTRAORAL EXAMINATION			
Jaw opening			Good
Hygiene			Good
Lesions, abscess			No
Vestibular concavity present			No
Discrepancy mx-mdb.			No
Intraoral palpation			Good
Vertical bone resorption			
Height between bone crest and opposing tooth			
Gum			
Papillae of adjacent teeth			
Dental risks factors			
Provisionalization	Inmediate		

FUNCTIONAL EVALUATION			
Bruxism/parafunction			No
Natural teeth participating in proprioception			Yes
Lateral contacts			
RADIOGRAPHIC EXAMINATION			
Chronic lesions close to the implant zone			No
PERIODONTAL EVALUATION			
Gingivitis			No
Treated periodontitis			No
Active periodontitis			No

Surgical Procedure 12i

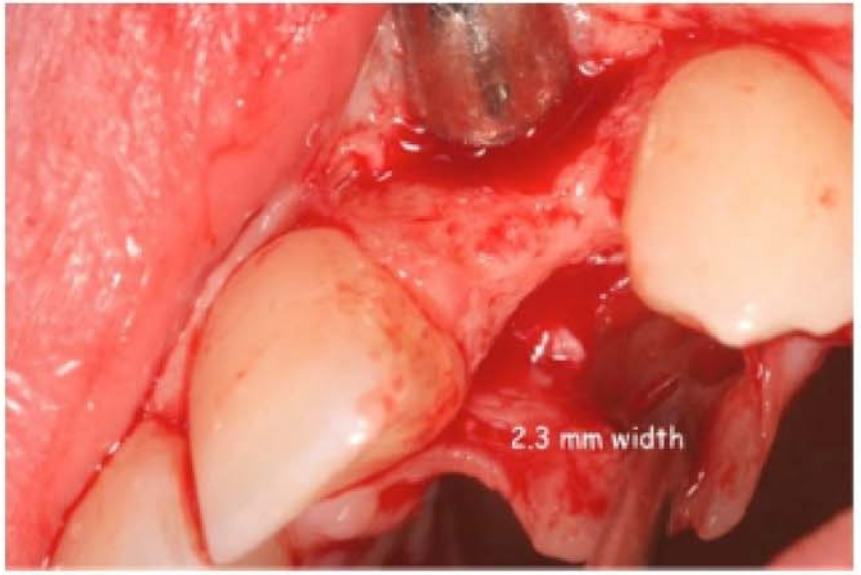


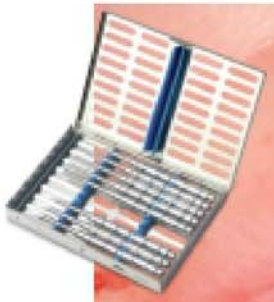
June 2012

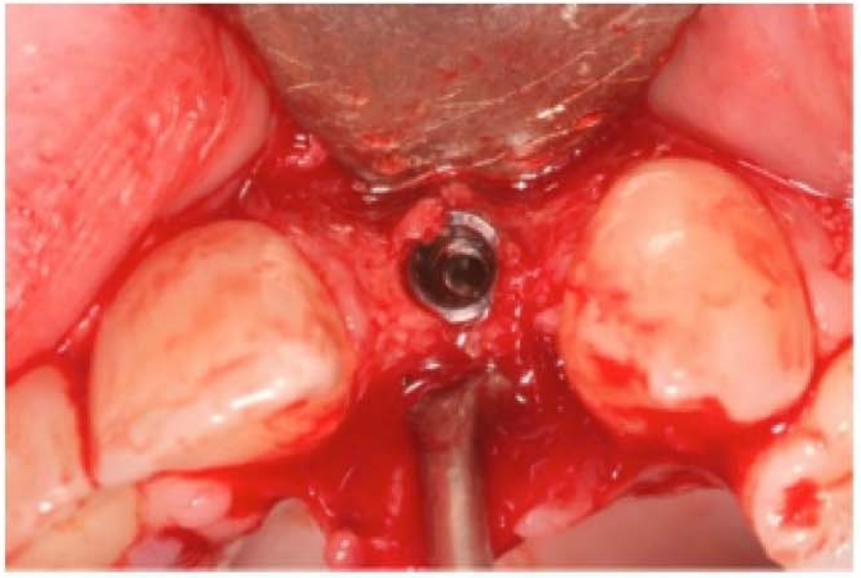


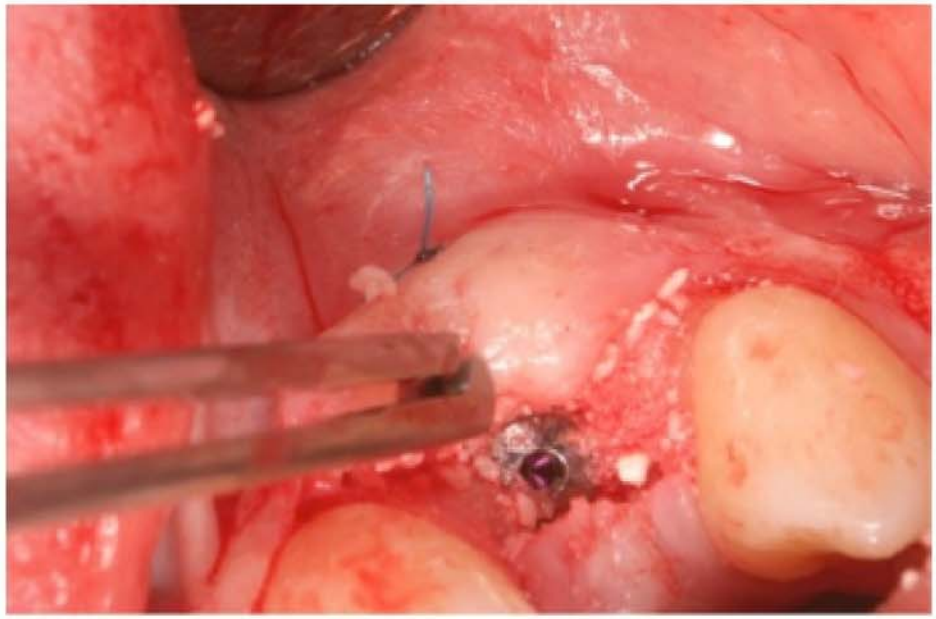
June 2012

Surgical Procedure 22i



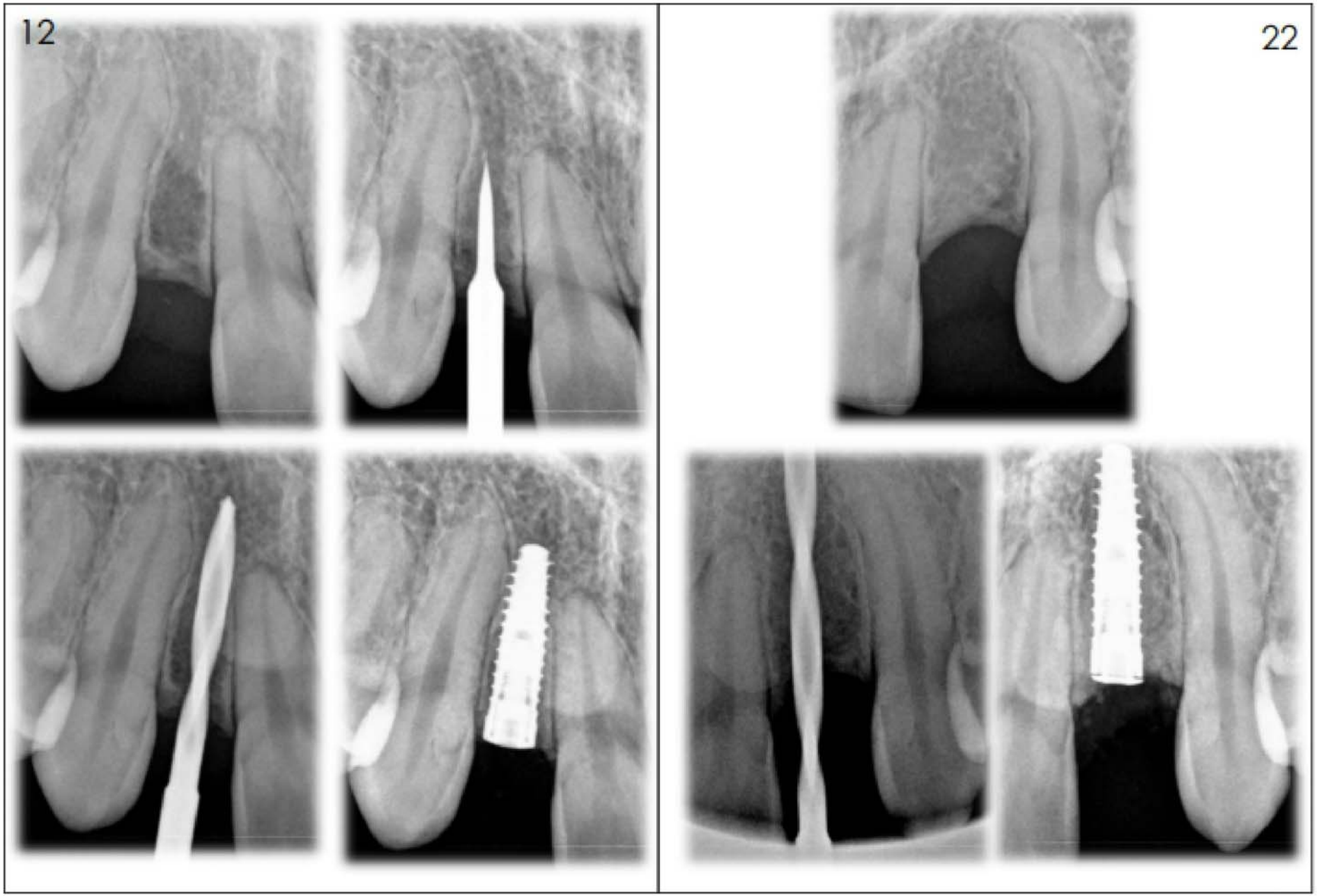




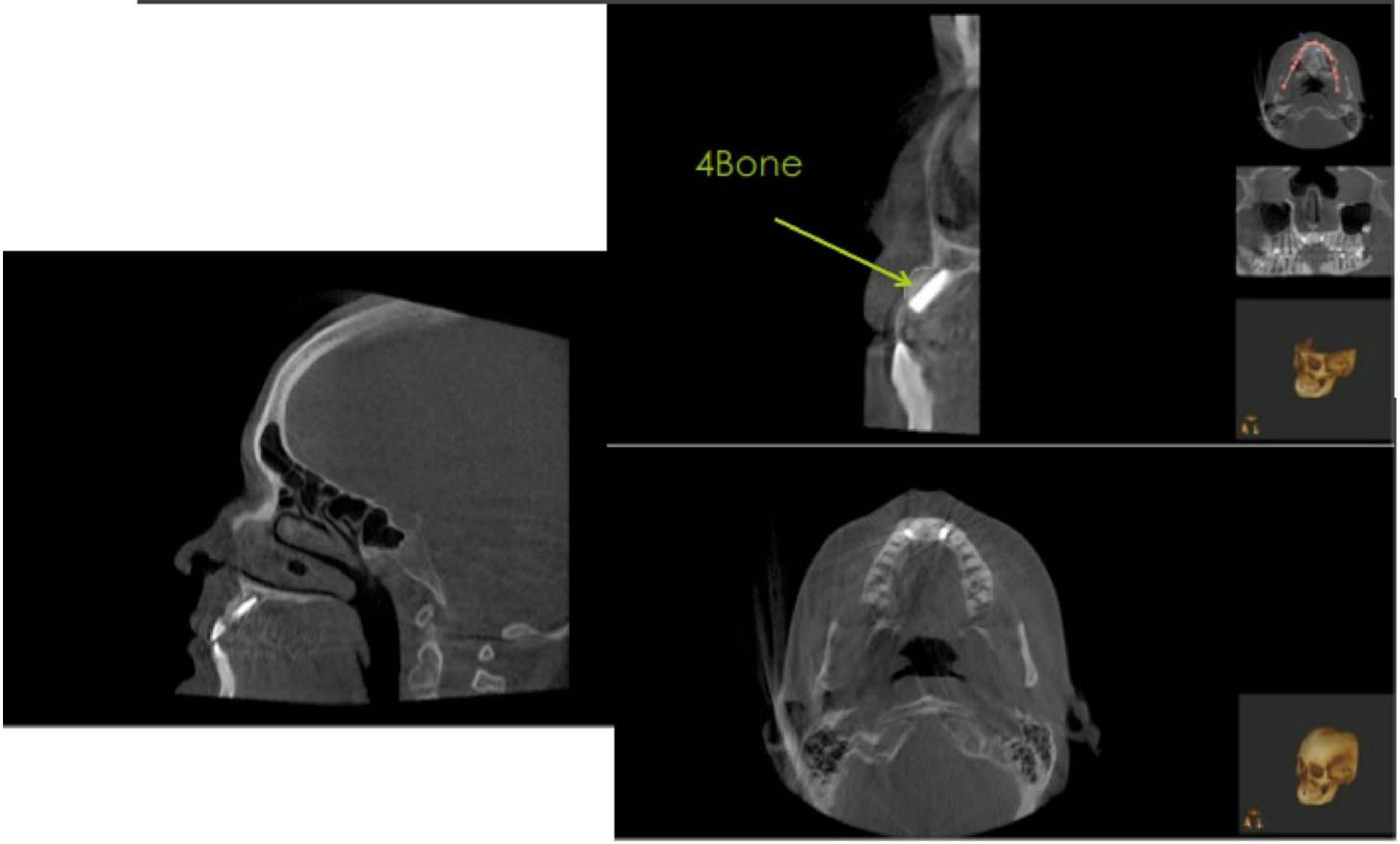


- ✓ Connective tissue graft

June 2012


12
22

CT scan



Provisionalization

July 2012

Final Crowns

Acknowledgements:

- Dental technician PACO CARRILLO (CLASSIC DENTAL, Murcia, SPAIN).
- Prof. JOSE LUIS CALVO GUIRADO. (Faculty of Dentistry,Murcia University, Murcia, SPAIN).

CASE 6

M. P. RAMÍREZ FERNÁNDEZ SPAIN

Concurso de Casos Clínicos Mis
II Congreso Cannes Francia 2013

Dra. María Piedad Ramírez Fernández Dds, Msc, Phd,

Universidad De Murcia

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Datos preliminares

Historia clínica

DATOS DE FILIACIÓN

Nombre: Joaquín Templado Gómez

Sexo: Varón

Edad: 59

Ocupación: Profesor

Domicilio: C/ Mesones, 10, 2º C (Cieza) Murcia

Estado Civil: Casado

ANTECEDENTES PERSONALES:

Intervenciones Quirúrgicas: Reducción de estómago

Alergias: No Conocidas

Hábitos: Fumador 20 cigarrillos /día

ANTECEDENTES FAMILIARES:

Familia Materna: Diabetes y Cáncer e Infarto de Miocardio.

ANAMNESIS

MOTIVO PRINCIPAL DE CONSULTA: Restaurar la dentición con implantes dentales.

EXÁMENES COMPLEMENTARIOS

-I cat vision

DIAGNÓSTICO

Paciente parcialmente edéntulo con dientes naturales remanentes a nivel anterior.

Caries múltiple a nivel radicular: 12, 11, 21, 22, 35, 34, 33, 43, 44.

Movilidad dentaria a nivel: 31, 32, 41, 42.

Múltiples restos radiculares: 14, 13, 23, 24, 25, 26, 27, 45

Ausencia 15, 16, 17, 18, 36, 37.

Quiste residual a nivel del 36, 37.

PLAN DE TRATAMIENTO

Plan de tratamiento A

-Exodoncias completa de piezas denarias de arcada superior e inferior.

-Extirpación de lesión quística y regeneración ósea del defecto.

-Colocación de 8 implantes en el maxilar superior y 8 en el maxilar inferior para realizar tratamiento con prótesis fija cementada sobre implantes.

Plan de tratamiento B

-Exodoncias completa de piezas denarias de arcada superior e inferior.

-Extirpación de lesión quística y regeneración ósea del defecto.

-Colocación de 6 implantes en maxilar superior (All on six) y 4 implantes en mandíbula (All on four) para una prótesis híbrida atornillada.

Plan de tratamiento C

-Exodoncias completa de piezas denarias de arcada superior e inferior.

-Extirpación de lesión quística y regeneración ósea del defecto.

-Colocación de 4 implantes en maxilar superior y 2 implantes en mandibula para realizar una rehabilitación con sobredentaduras.

PLAN DE TRATAMIENTNO ELEGIDO

Considerando la edad del paciente y las características del hueso remanente elegimos el plan de tratamiento A, el cual le permitía al paciente una mayor calidad de vida.

Tratamiento

1. Exodoncia completa de piezas dentales remanentes y restos radiculares.
2. Extirpación de quiste residual y regeneración ósea utilizando una mezcla de hueso Bond Bone y 4Bone para regenerar el defecto.
3. Colocación de Implantes dentales inmediatos post-extracción.
   MAXILAR SUPERIOR: 11,13, 15, 16, 21, 23, 25, 26 IMPLANTES C1- MIS
   MANDIBULAR: - 31, 33, 35, 36 IMPLANTES SEVEN-MIS
   - 41, 43, 45, 46 IMPLANTES C1- MIS
4. Colocación de 6 micro- implantes transicionales en maxilar superior y 4 micro-implantes transicionales en mandíbula para soportar los provisionales
5. Configuración de juego de provisionales en resina.
6. Radiografía de control
7. Pasados 5 meses de evolución, levantamos los provisionales
8. Retiramos los micro-implantes transicionales a excepción de los dos más posteriores del maxilar que servirán a la provisionalización.
9. Descrubrimiento de los implantes sumergidos.
10. Colocación de transfer de impresión
11. Ferulización con alambre de ortodoncia de los pilares
12. Sellado con resina autopolimerizable
13. Toma de impresión a cubeta abierta con silicona.
14. Colocación de pilares provisionales para provisionalización.
15. Registro de las relaciones craneomaxilares y toma de la dimensión vertical.
16. Prueba de los pilares en boca y ferulización con resina autopolimerizable
17. Colocación de los pilares definitivos.
18. Cementado de la estructura fija metal-porcelana.
19. Radiografía de control al mes de la colocación de prótesis definitiva

Ilustración 1. Imagen preoperatoria del paciente.

Ilustración 2. Radiología preoperatoria.

Ilustración 3. Exodoncias múltiples

Ilustración 4. Implantes C1- MIS

Ilustración 5. Implantes Seven-Mis

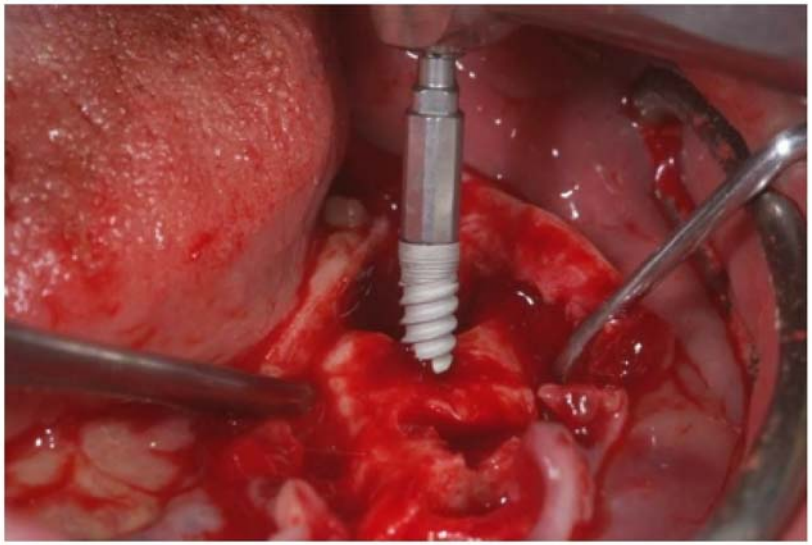


Ilustración 6. Colocación de 4 implantes seven lado izquierdo mandibular.

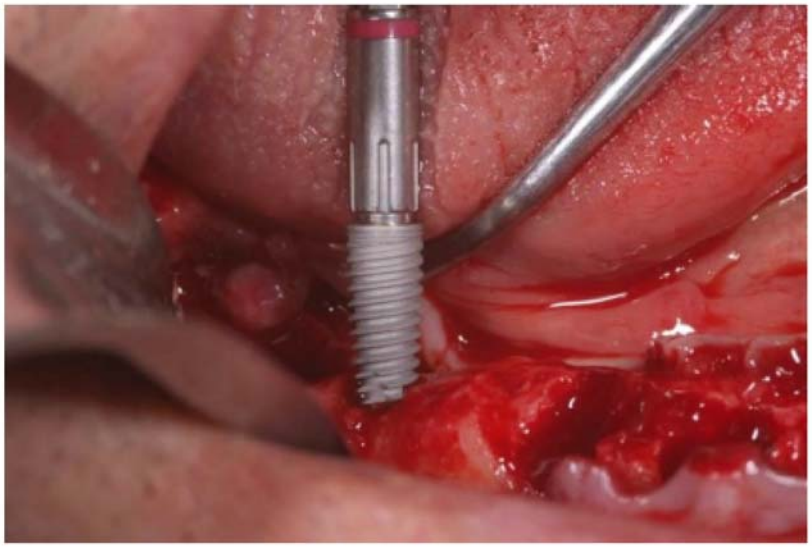


Ilustración 7. Colocación de 8 implantes C1 a nivel maxilar y 4 implantes C1 en la do derecho mandibular.

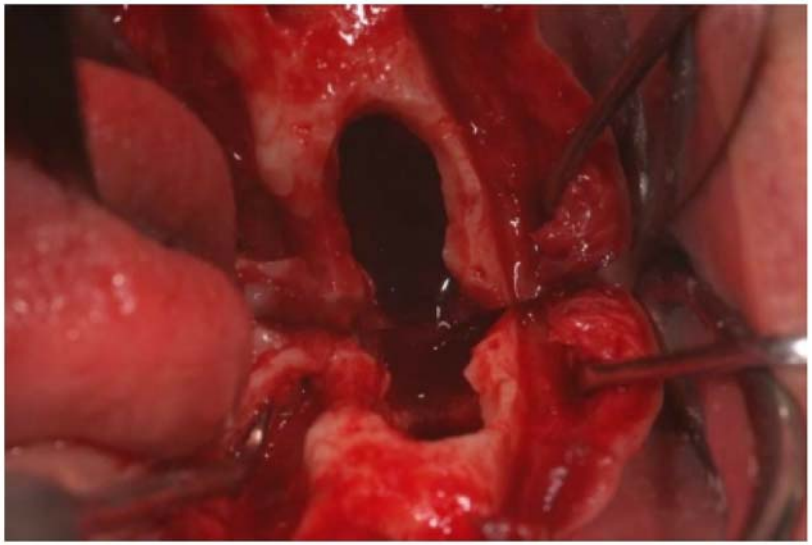
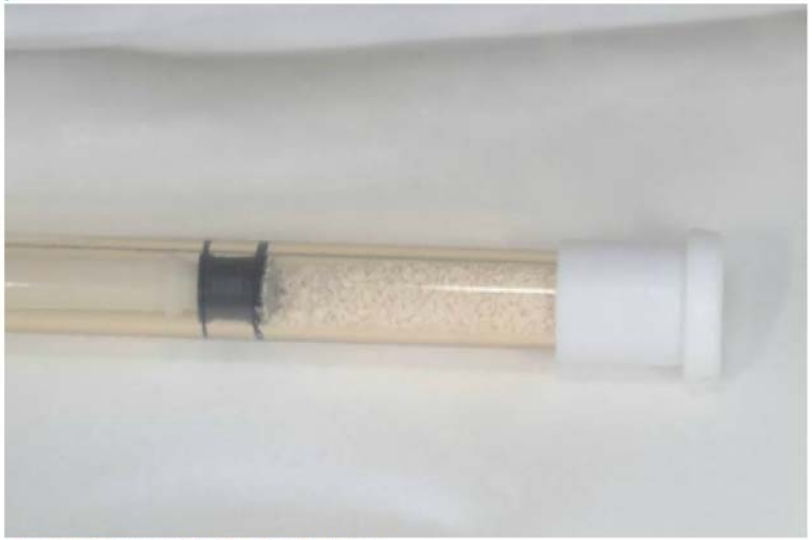


Ilustración 8 . Extirpación de Quiste Residual a nivel mandibular.

Ilustración 9. Bond Bone

Ilustración 10. 4 Bone

Ilustración 11. Mezcla de Bond- Bone y 4 Bone para regenerar el defecto óseo.



lustración 12. Preparación del rehidratado del 4 Bone

Ilustración 13.Relleno del defecto óseo y del gap en implantes inmediatos con una mezcla de Bond- Bone y 4 Bone.

Ilustración 14. Cierre completo de la cirugía con suturas dobles y simples.

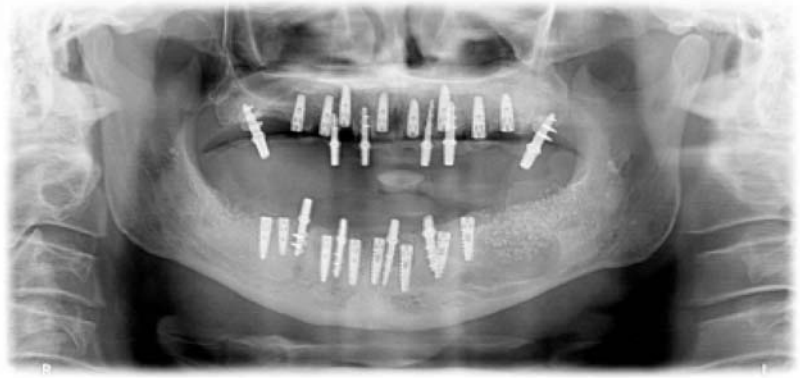


Ilustración 15. Radiografía de control de la cirugía.

Ilustración 16. Provisionalizacion inmediata .

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Ilustración 17. Imagen postoperatoria 5 meses de evolución.

Ilustración 18. A bordaje para configuración de la prótesis definitiva.

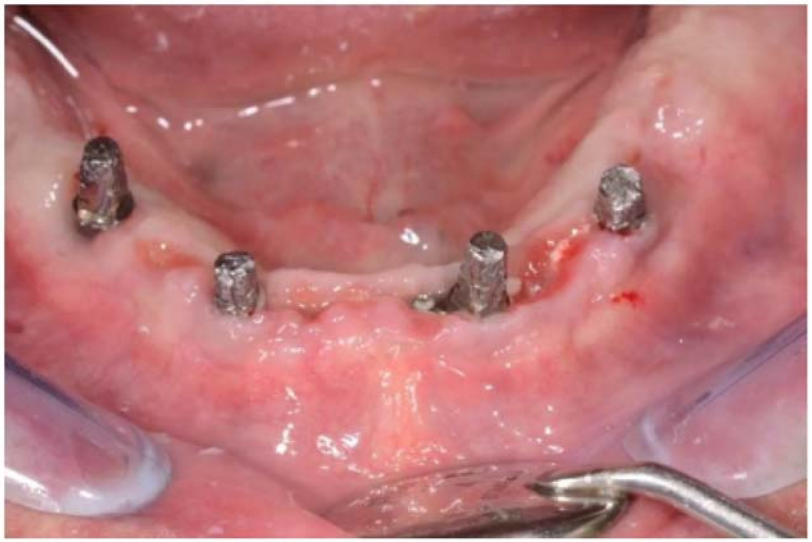

Ilustración 19. Implantes definitivos sumerigidos.

Ilustración 20. Retirada de microimplantes a nivel maxilar.

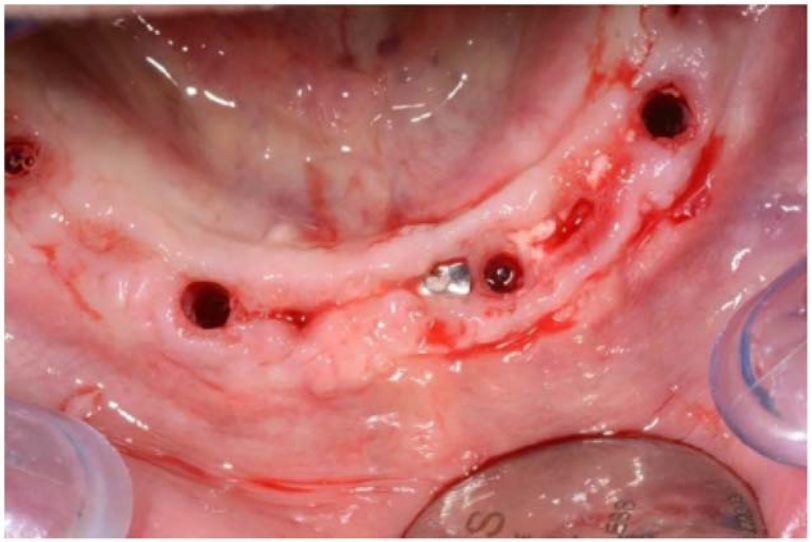

Ilustración 21. Retirada de mircroimplante en mandibula

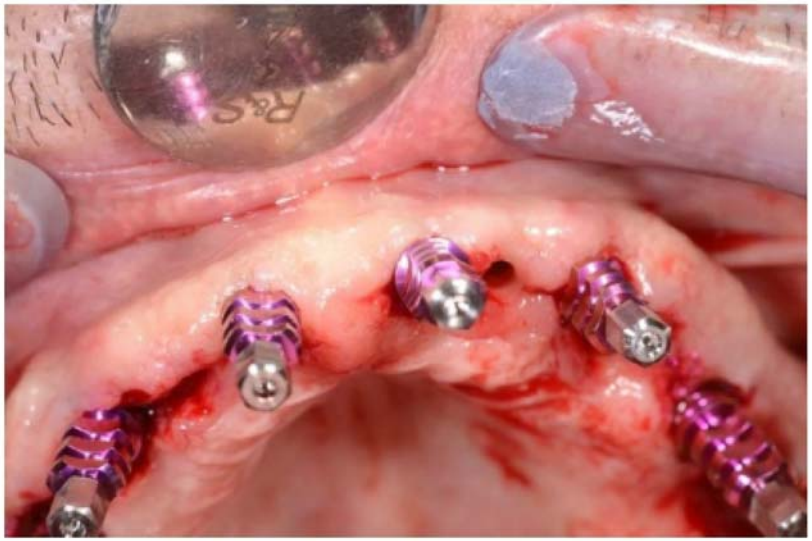

Ilustración 22. Descubrimiento de los implantes sumerigidos a nivel del maxilar. Colocación de pines de tranferencia implante C1 en maxilar.

Ilustración 23. Ferulizacion de pilares

Ilustración 24. Ferulización con resina

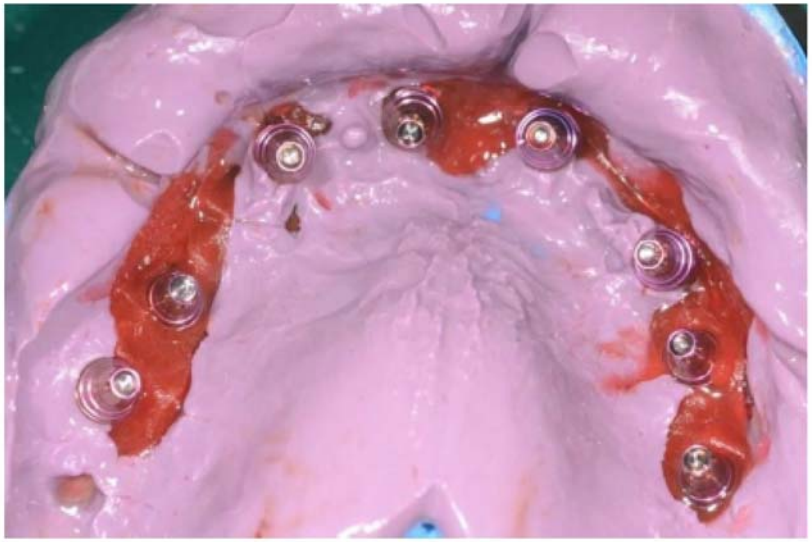

Ilustración 25. Toma de impresiones maxilar.

Ilustración 26. Colocación de transfer a nivel del maxilar inferior

Ilustración 27. Ferulización con resina

Ilustración 28. Pilares provisionales

Ilustración 29. Adaptación de los provisionales.

Ilustración 30. Control radiológico.

Ilustración 31. Toma de la dimensión vertical

Ilustración 32. Prueba de pilares definitivos pasados 15 dias de la toma de impresiones.

Ilustración 33. Ferulización de pilares defintivos.

Ilustración 34. Llaves de transferencia para la colocación de loas pilares definitivos.

Ilustración 35. Llave dinamométrica para realizar el atornillado definitivo de los pilares.

Ilustración 36. Colocación de pilares definitivos pasados 10 días de la prueba de pilares a nivel maxilar.

Ilustración 37. Colocación de pilares definitivos y cierre de las chimeneas pasados 10 días de la prueba de pilares a nivel mandibular.

Ilustración 38. Vista oclusal de la estructura metal-porcelana a nivel mandibular.

Ilustración 39. Vista dorsal de la estructura previa al cementado

4. Resultado Final

Ilustración 40. Vista panorámica de los resultados .

Ilustración 41. Vista frontal a mayor aumento

Ilustración 42. Vista del frente estético a nivel frontal.

Ilustración 43. Vista de la zona mucogingival.

Ilustración 44. Vista lateral de la zona estética.

Ilustración 45. Resulatdo final del caso clínico

Ilustración 46. Radiología de seguimiento al més de la colocación

5. Reconocimientos

Agradecemos la colaboración del taller de prótesis Clasic Dental en Murcia.

CASE 7

E. DUPERLY SANCHEZ COLOMBIA

Single tooth replacement and immediate loading at the esthetic zone with C1 MIS implant: a multidisciplinary approach.

Eduardo Duperly Sanchez D.D.S., Agnes Kristine Lanner D.D.S.**, Maria Lorena Yepes Sáenz D.D.S.****

Dental implants are a very good choice to replace a missing tooth, however sometimes there are not the optimal conditions to make a post extraction implantation. As a result, procedures like socket preservation or improvement and guided bone regeneration (GBR) become necessary.

A 38 year old male patient came complaining of pain in his tooth 9 (fig. 1), the clinical examination shows a palatal cervical inflammation. An increased probing depth of 12 mm on the palatal aspect was shown. At the periapical radiography was an apparent internal root resorption (fig. 2). He was referred to root canal where a communication between pulp space and the external portion of the root at the palatal aspect was evidenced. To get a more accurate diagnosis he was asked to make a CT scan, where a communication to the palatal aspect and an apparent line of fracture at the buccal medial third of the root appeared (fig. 3); three alternatives of treatment were proposed:

1. Extraction, socket preservation and implantation 6 months later with immediate loading,and a complete fixed orthodontic treatment.

2. Extraction, socket preservation and implantation 6 months later without immediate loading and a complete fixed orthodontic treatment.

3. Extraction, immediate implantation and GBR without immediate loading and a complete fixed orthodontic treatment.

The team decided the first treatment plan.

The patient was informed about all relevant aspects of the treatment. Based on this comprehensive information, he agreed the proposed treatment and gave a written informed consent.

The first treatment step was the careful extraction. This was carried out without flap elevation (fig. 4). The extraction socket was carefully debrided and filled with a 0.5 cc Puros Cancellous Particulate Allograft small particle (Zimmer®) and Socket Repair Membrane (Zimmer®, fig. 5). Once extracted, the tooth was sectioned horizontally at the crevical root level to get a closer look of the communication (fig. 6). In addition, The patient needed also an orthodontic treatment to improve occlusion and to make the clousure of some dental spaces that were left from a previous treatment. After that, fixed orthodontic appliances were put with two pourpuses:

1. To hold a temporary or pro-

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visional, and 2. To salve occlusal and esthetic problems.

Without making pressure on the soft tissues, the provisional was put "hanging" between the adjacent teeth. After a healing period of 6 months the clinical examination revealed uneventful healing of the extraction socket, and adecuate position of the teeth in terms of required space for implantation and restoration. The soft tissues were fully intact (fig. 7).

Preoperative analysis of the anatomical conditions was evaluated using a CT scan, and the prosthesic planification of the surgery and surgical guide was carefuly done (fig. 8, 9, 10).

The second procedure was performed pased 6 months with a fullthickness flap raised and a conical connection MIS implant C1 (3.75 x 13mm) was placed confirng a final torque of 40 Ncm (Fig. 11, 12). Special emphasis was placed on obtaining a correct three-dimensional position with the help of the surgical guide. Apical implant threads were exposed on the buccal surface. Mis Bond Bone™ was used to cover


Fig. 1 Initial situation


Fig. 2 Initial X ray

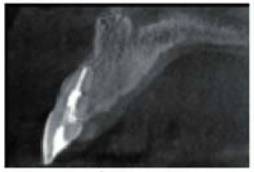
Fig. 3 Initial CT scan


Fig. 4 Probing after extraction


Fig. 5 Socket repair techinque


Fig. 6 Cross section of tooth


Fig. 7 6 months after extraction

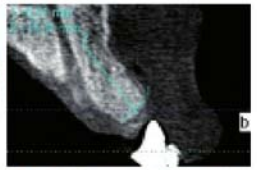
Fig. 8 CT scan pre implantation


Fig. 9 Wax up of toot


Fig. 10 Surgical guide


Fig. 11 Drilling


Fig. 12 C1 MIS implant ™


Fig. 13 Apical fenestration


Fig. 14 Bond Bone MIS™


Fig. 15 Bond Bone covering


Fig. 16 Peek post in position

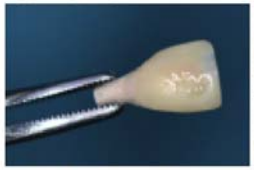
Fig. 17 Composite temp. crown


Fig. 18 Repositioned flap


Fig. 19 Gingival countoring


Fig. 20 After 4 months of healing

the exposed threads of the implant, offering the osteoconductive capability required to achieve regeneration of vital bone (Fig. 13, 14, 15).

With the implant in adecuate position, the temporary Peek post was used to make immediate provisionalization developing a smooth composite emergence profile of the incisor required to enhance gingival esthetics (Fig. 16, 17). Repositionary of the flap was achieved and tension free utilizing 6-0 Prolene Ethicon suture (Fig. 18).

After 4 months, once the case achieved the complete healing and tissue maturation, (Fig. 19, 20) impression was taken with polivinil siloxane impression material. A titanium base abutment was used to make a Prettau Zirconia cemented crown; final x ray control was taken. (Fig. 21, 22, 23).

The treatment of the case purposed from the beginning achieved its objectives, such as preservation of crestal bone and as a concequence, gingival esthetics.

Fig. 21 Final tissue profile

Fig. 22 Final restoration

Fig. 23 Final X ray control

REFERENCES

1.- Momen A. Atieh, Hadeel M. Ibrahim, and Ahmad H. Atieh "Platform Switching for Marginal Bone Preservation Around Dental Implants: A Systematic Review and Meta-Analysis". J Periodontol 2010;81:1350-1366

2.- Maria Bateli, DDS/Wael Att, DDS, Dr Med Dent Habil/Jörg R. Strub, DDS, Dr Med Dent, Dr hc, PhD. "Implant Neck Configurations for Preservation of Marginal Bone Level: A Systematic Review". Int J Oral Maxillofac Implants 2011; 26:290–303

3.- Nicolas Elian, DDS, Sang-Choon Cho, DDS, MS, Stuart Froum, DDS, Richard B. Smith, DDS, Dennis P. Tarnow, DDS. "Simplified Socket Classification and repair technique". Practical Procedures & Aesthetic Denetistry 2007; 19(2):99-104

4.- B. Shakibaie-M. "Socket and ridge preservation from the three-dimensional perspective". Sonderdruck Zeitschrift für Zahnärztliche Implantologie 25. Jahrgang / Heft 4/2009, Seiten 369–377

5.- Stephen L. Wheeler, DDS "Implant Complications in the Esthetic Zone". J Oral Maxillofac Surg 65:93-102, 2007, Suppl 1