CLINICAL CASE BOOK

Grand Morse® Implant System

NEODENT®
A Straumann Group Brand

Single cases

NeoArch® cases

GM HELIX implant with Immediate Loading in lower molar.

Summary of Medical History

Female patient, aged 48, leucoderma, ASA 1, without systemic complications for dental implant surgery, missing teeth 36 and 37 for 5 years.

MARCELO FONTES TEIXEIRA
mfonttes@uol.com.br
BRASIL

Masters degree in Implantology;
Specialist in Periodontology, Orthodontology and TMD;
Coord. Spec. Implantology (UniFOA - VR / RJ - Brazil);
Scientific Reviewer, JOMI/EJOI - Brazil;
Scientific Consultant for NEODENT.

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Planejamento

Single.
Position 36 of Mandible.
Immediate Loading.
Access Technique With flap.

Surgery

After opening the flap, the surgical drilling sequence was initiated using the drills from the Grand Morse surgical kit to place the implant. Instrumentation was done as far as drill 4.0, without the use of pilot drill 4.0 and drill 4.0+, since less bone density was found in the area than expected, in order to allow good primary stability of the implant, permitting Immediate Loading technique. Placement began with the surgical contra-angle and finished with the torque wrench (final torque: 40Ncm).

Conclusion

The GM HELIX implant proved highly favorable for performing the immediate loading technique, offering great versatility in the instrumentation technique, according to the available bone density, due to the various drill options in its Surgical Kit. Extremely easy capture is one of its great benefits, in addition to providing a range of prosthetic options similar to the Neodent Cone Morse implants. The click coping for temporary restoration is also a great improvement for the immediate loading technique since it facilitates intraoral capture of provisional crowns.

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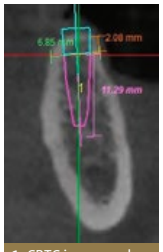
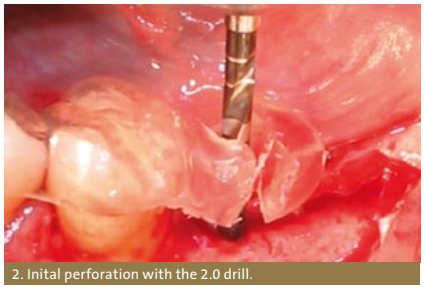
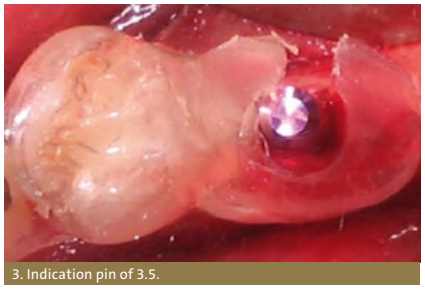
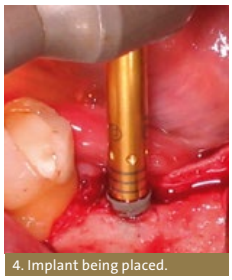
GM HELIX implant with Immediate Loading in lower molar.

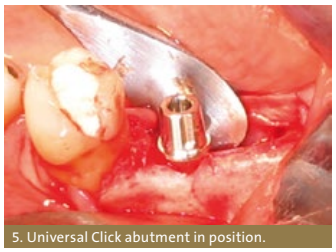


1. CBTC image and implant planning.


2. Inital perforation with the 2.0 drill.


3. Indication pin of 3.5.


4. Implant being placed.


5. Universal Click abutment in position.


6. Occlusal view from the temporary crown.


7. Initial X ray imediately after surgery.


8. Temporary restoration.


9. Click Impression coping for Universal abutment.


10. Universal Click abutment analogue.


11. Final porcelain restoration.


12. Clinical view of the final restoration.


13. Occlusal view of the final restoration.


14. Final periapical X ray with the porcelain.

Single Immediate Loading with GM Helix Implant.

Patient's Medical History

Patient aged 34, with no systemic alterations and non-smoker. History of agenesis of the second lower left premolar with indication for implant-supported rehabilitation.

Planning

Single Case.
Position 35 of the Mandible (FDI System).
Immediate Loading Protocol.
With Flap Access Technique.

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Description of the procedure

Terminal infiltration anesthesia, buccal and lingual, incision over the ridge with sulcular extension on adjacent teeth and mucoperiosteal detachment. Instrumentation with drill sequence for GM Helix 4.3x10 implant. Sub-instrumentation performed due to bone quality (bone type III) with the conical 4.0 drill the last to be used. Placement of the implant with subcrestal placement and final torque of 45 Ncm. Selection of the transmucosal abutment height using the GM depth measurer. Temporary placement of the healing abutment and suture.

Prosthetic Description

Provisional prosthetic rehabilitation with immediate loading using GM Pro Peek Abutment. Placement of Transfer Exact closed-tray impression coping, transfer impression coping, placement of implant analog and obtaining of mock-up. Customization of the Pro Peek abutment and fabrication and placement of the provisional prosthesis without occlusal contact.

Result description and/or conclusion

GM Helix implant provides good stability even in bone type III, allowing rehabilitation with immediate loading.
The surgical kit of the GM implant facilitates sub-instrumentation for implants with 4.3 diameter due to option of conical drills 3.75 and 4.0.
Pro Peek Abutment is an excellent provisional crown for allowing customization.

DR. FRANCINE BALDIN ABLE
franable@gmail.com

BRASIL

Degree in Dentistry from UFPR (2008); Specialist in Periodontology from Profis (2013); Masters degree in Implantology from ILAPEO (2015); PhD student in Integrated Clinical Practice at UEPG.

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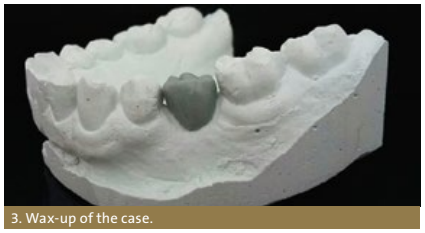
Single Immediate Loading with GM Helix Implant.


1. Intraoral photo of the edentulous space.

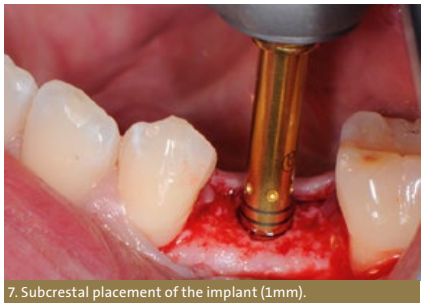

2. Panoramic x-ray.

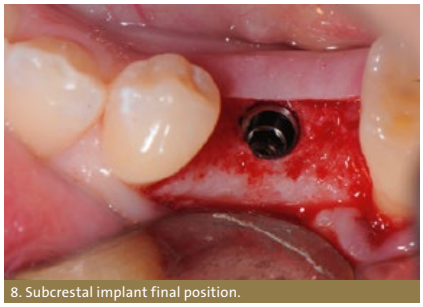

3. Wax-up of the case.

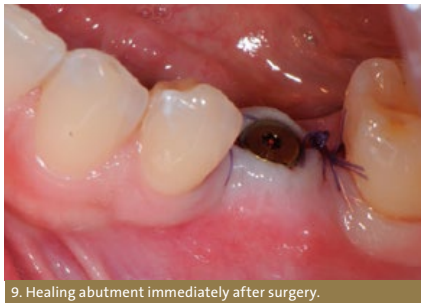

4. Full flap.


5. Osteotomy until conical drill 4.0

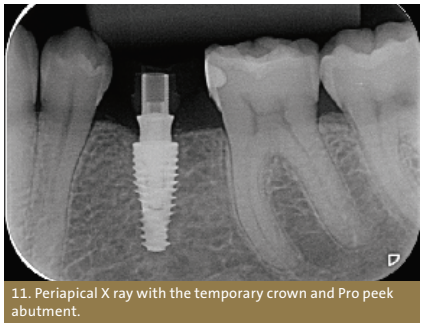

6. Placement of hydrophilic Acqua implant.


7. Subcrestal placement of the implant (1mm).


8. Subcrestal implant final position.


9. Healing abutment immediately after surgery.


10. Pro peek abutment and Neo screwdriver.


11. Periapical X ray with the temporary crown and Pro peek abutment.


12. Final ceramic restoration.

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GM HELIX Implant with Immediate Loading in Upper Canine.

Patient's Medical History

Male patient, aged 18, leucoderma, ASA 1, without systemic complications for dental implant surgery, with tooth 23 included and impacted.

MARCELO FONTES TEIXEIRA

mfonttes@uol.com.br

BRASIL

Masters degree in Implantology;
Specialist in Periodontology, Orthodontology and TMD;
Spec. Coord. Implantology (UniFOA - VR / RJ - Brazil);
Scientific Reviewer, JOMI/EJOI - Brazil;
Scientific Consultant for NEODENT.

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Planning

Single Case.
Position 23 of the Maxilla and 33 of the Mandible (FDI System).
Immediate Loading Protocol.
With Flap Access Technique.

Description of the procedure

After opening the flap, surgical instrumentation was initiated using the drills from the Grand Morse surgical kit to place the implants. Instrumentation was done until drill 3.75 without the use of the drills 3.75+ and pilot 3.75 due to low bone density found in the area during drilling for good primary stability of the implant, allowing immediate loading technique. Placement began with the surgical contra angle and finished with the torque wrench (final torque: 45Ncm).

Prosthetic Description

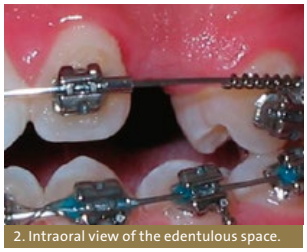
The GM Exact Universal Click abutment 3.3x6x3.5 was placed (torque: 20Ncm). The Click Provisional coping was positioned. A full provisional crown was milled in-house, filled with autopolymerizing acrylic resin and placed in the mouth over the provisional coping 3.3x6. After capture, the provisional crown was removed, with the Provisional coping inside it. After the final adjustments, the crown was cemented with Rely X Temp (3M) cement, remaining infraocclusion.

Result description and/or conclusion

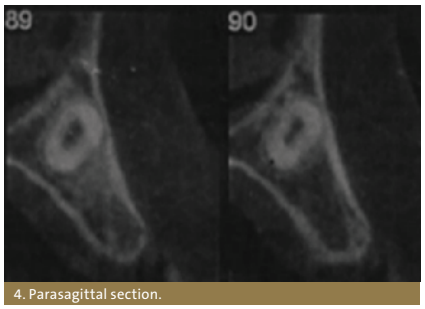
The GM HELIX implant proved highly favorable for performing the immediate loading technique, offering great versatility in the instrumentation technique according to the available bone density, due to the various drills options in its Surgical Kit. The extremely easy capture is one of its great benefits, in addition to the range of similar prosthetic options to the Neodent Cone Morse implants. The provisional click coping is also a great improvement for the immediate loading technique since it facilitates intraoral capture of provisional crowns.

GM HELIX Implant with Immediate Loading in Upper Canine.


1. Frontal clinical photo.


2. Intraoral view of the edentulous space.

3. Tomographic section of the edentolous space.

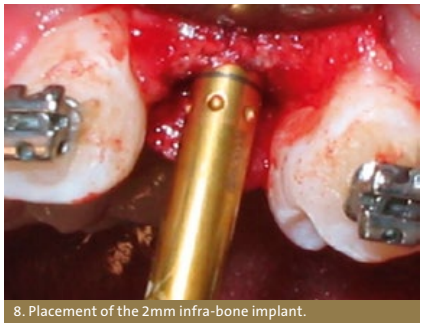


4. Parasagittal section.

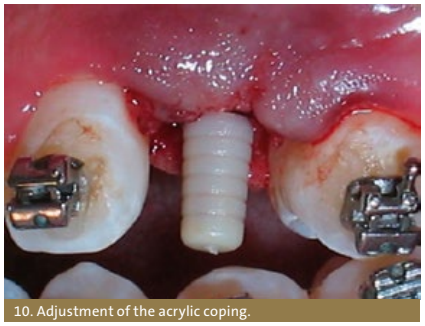

5. Osteotomy with conical drills.


6. Surgical direction indicator.


7. Implant placement.

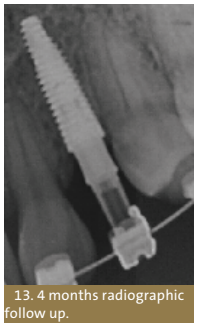

8. Placement of the 2mm infra-bone implant.


9. Placement of the universal click abutment.


10. Adjustment of the acrylic coping.


11. Provisional crown with immediate loading.


12. Periapical immediately after surgery.


13. 4 months radiographic follow up.

Implant with Immediate Loading and Gingival Graft.

Patient's Medical History

Patient is aged between 18 and 30 years old, female gender. Reports good health, no allergies. Patient is non-smoker and has no infectious or contagious disease. Does not take any continuous medication. First appointment was scheduled in the 19th of june 2017.

Planning

Single Case.
Position 21 of the Maxilla (FDI System).
Immediate Loading Protocol.
No Flap Access Technique.

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Description of the procedure

1 - Atraumatic extraction.
2 - Curettage and inspection of the socket.
3 - Start of drilling using Prototype Guide and Start Kit.
4 - Drilling up to drill 3.75.
5 - Placement of Implant 3.75 x 13mm.
6 - Placement and customization of the Abutment.
7 - Fabrication of the provisional crown.

Prosthetic Description

Provisional prosthesis made with stock tooth and rebased with acrylic resin. Screw-retained provisional technique with a Universal abutment torqued at 20 Ncm.

Result description and/or conclusion

Patient was clinically assessed at 15 days, x-rayed in the same period. Reported excellent post-operative condition and satisfaction with the result obtained.

DR. ELCIO MARCANTONIO JUNIOR

junior.elcio@gmail.com
BRASIL

Professor of Periodontology and Implantology at the School of Dentistry of Araraquara - UNESP; Coordinator of the Specialization Course in Implantology Araraquara - UNESP; Professor at the Faculdade ILAPEO.

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Implant with Immediate Loading and Gingival Graft.

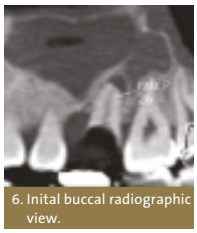

1. Initial


2. Placement of the Grand Morse Helix Implant.

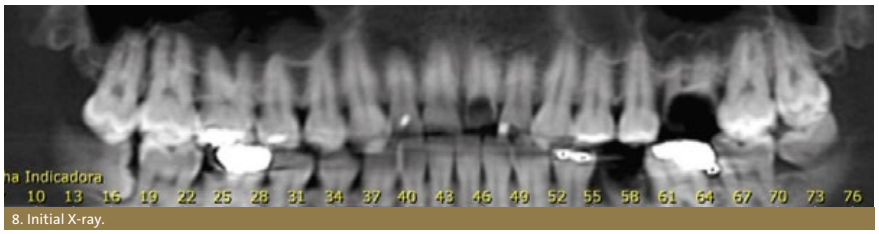

3. Final.


4. Initial clinical view with the antagonist arch.

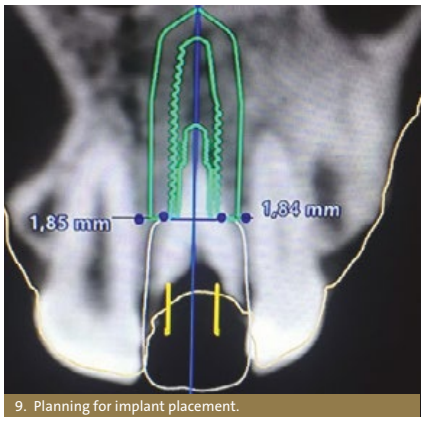

5. Initial buccal view.


6. Inital buccal radiographic view.

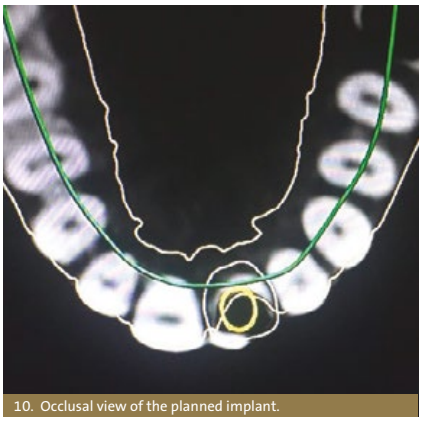

7. CBCT slice of the tooth.



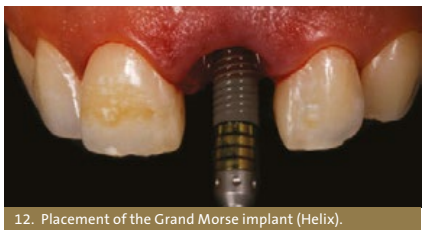
8. Initial X-ray.



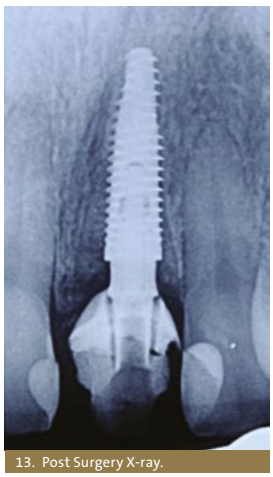
9. Planning for implant placement.


10. Occlusal view of the planned implant.


11. Placement of the Grand Morse Helix Implant.


12. Placement of the Grand Morse implant (Helix).


15. Connective Tissue Graft


13. Post Surgery X-ray.


14. Final temporary restoration.

Immediate implant with GM immediate loading.

Patient's Medical History

Patient ASA 1, with no prior history of systemic involvement. The patient showed prior oral rehabilitation with some implants and crowns on teeth and radicular fracture of tooth 15.

Planning

Single Case.
Position 15 of the Maxilla (FDI System).
Immediate Loading Protocol.
No Flap Access Technique..

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Description of the procedure

The surgical procedure was performed using virtual guided surgery (Neodent Guided Surgery) after removing a fractured root with the least possible trauma using the Neodent dental extractor. After extraction, vigorous curettage of the surgical socket was performed and placement of the GM Helix implant after guided osteotomy. After placement, the gap between the implant and buccal wall was filled with biomaterial (bovine origin) and then, since the implant achieved excellent initial torque, an universal abutment and provisional crown were placed.

Prosthetic Description

The provisional prosthetic solution was made in a conventional way with an acrylic resin crown rebased on the provisional coping of the selected universal abutment. After 30 days of healing the universal abutment was molded with the transfer impression coping of the universal abutment and a zirconia coping was used made of CAD/CAM technology.

Result description and/or conclusion

The final result was highly satisfactory with maintenance of bone volume and buccal contour around the implant. The peri-implant tissue reacted well with healthy appearance of gingival tissue. The definitive crown made in just over 30 days from implant placement, using the concept of "one abutment, one time", was only possible thanks to the primary stability of the Helix implant and the bone healing potential of the Acqua surface, allowing predictability in the success of the implant submitted to full occlusal loading in a short time.

DR. GLAUCO VELLOSO
glaucovelloso@uol.com.br

BRASIL

Specialist in Periodontology; Specialist and Masters degree in Implantology; PhD in Dentistry; Professor of implantology at Universidade Federal Fluminense / RJ; Scientific Consultant for Neodent .

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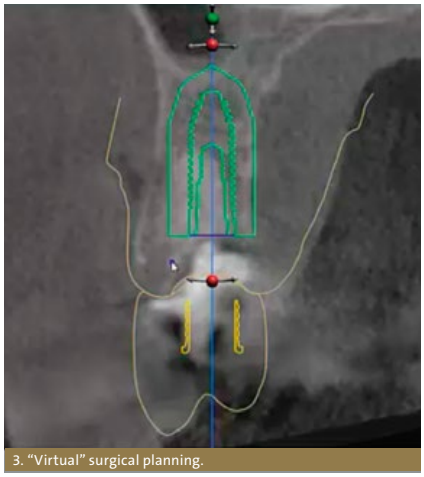
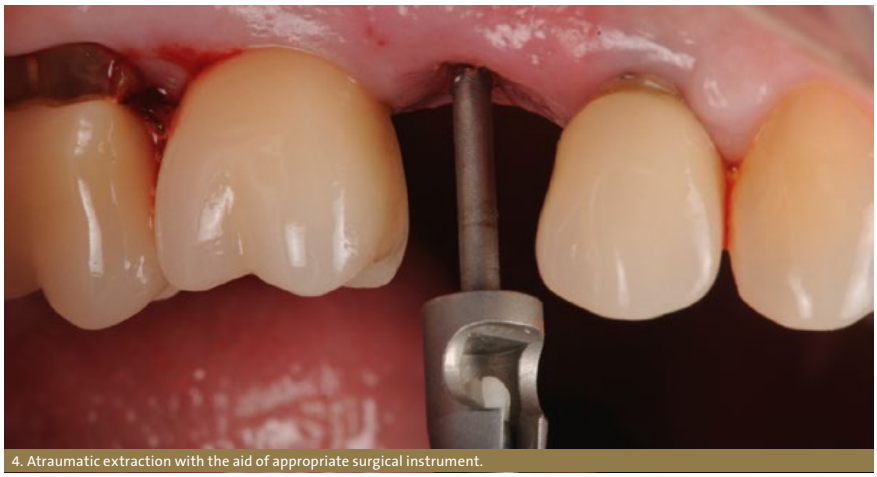
Immediate implant with GM immediate loading.

1. Intraoral clinical appearance.

2. Intraoral clinical occlusal view.

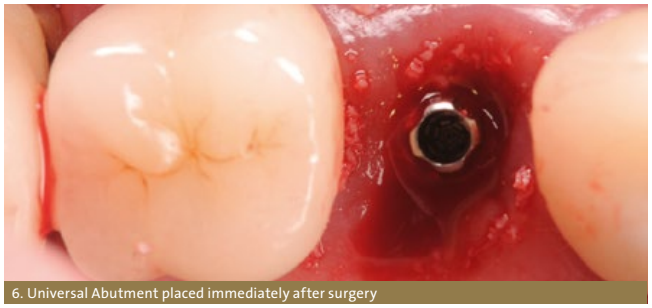


3. "Virtual" surgical planning.

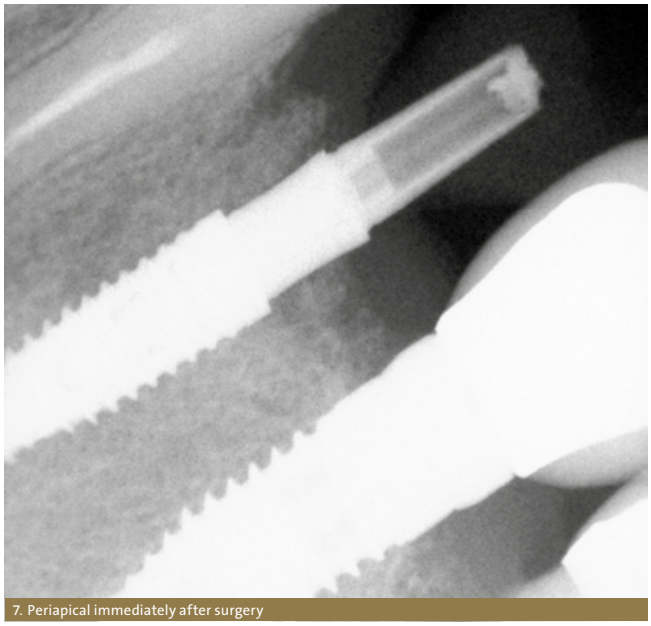


4. Atraumatic extraction with the aid of appropriate surgical instrument.

5. Hydrophilic Acqua implant.



6. Universal Abutment placed immediately after surgery



7. Periapical immediately after surgery

8. Provisional crown made immediately after surgery

Single replacement with GM implant.

Patient's Medical History
Patient in orthodontic treatment, referred for implant and prosthesis placement in the region 46.

Planning
Single Case.
Position 46 of the Mandible (FDI System).
Immediate Loading Protocol.
No Flap Access Technique..

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Description of the procedure
A flap opening was made and drilling done to place a Grand Morse Helix implant of 3.75x 11.5. The drilling was done up to 13mm so that the final position would be subcrestal. Since the bone quality proved to be more medullar, the conical contour drill was not used.

Prosthetic Description
Once the implant was placed, a Universal Exact Click abutment of 4.5x4x3.5 was adapted. After application of torque (32Ncm), one coping was placed and the provisional crown made directly in the mouth, using a stock tooth.
The crown was cemented after using the technique of removing the excess cement in the analog. Suturing was done after the crown was cemented..

Result description and/or conclusion
The implant used for rehabilitation of the missing tooth proved highly efficient. The primary stability obtained was good, allowing immediate placement of the crown, which pleased the patient.

DR. IVETE A. DE MATTIAS SARTORI
ivetesartori@uol.com.br

BRASIL

Masters and PhD in Oral Rehabilitation- FORP-USP.
Professor of Specialization Courses (Fundecto-USP-SP and Profis-Bauru) and Implantology Skills (Mollaris-Portugal and COESP-João Pessoa).

Other doctors that participated in the procedure:
DR. ELISA MATTIAS SARTORI

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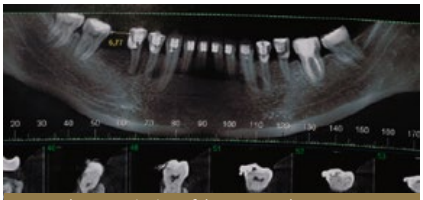
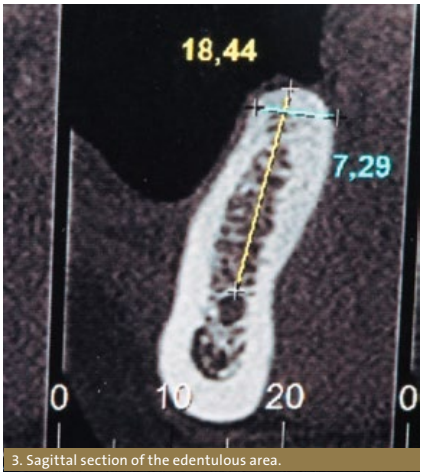
Single replacement with GM implant.

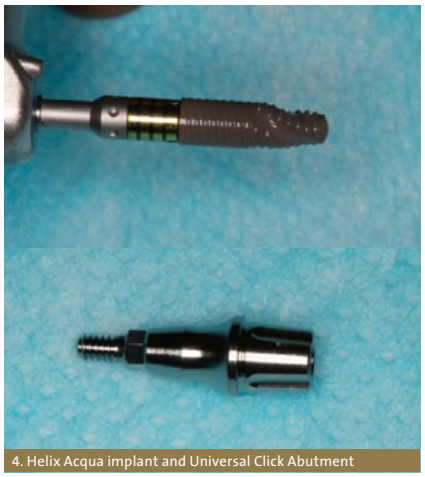
1. Occlusal view of the edentulous space



2. Frontal panoramic view of the tomography before implant installation

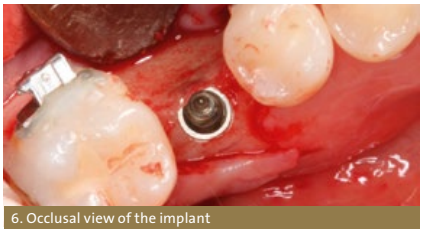


3. Sagittal section of the edentulous area.



4. Helix Acqua implant and Universal Click Abutment

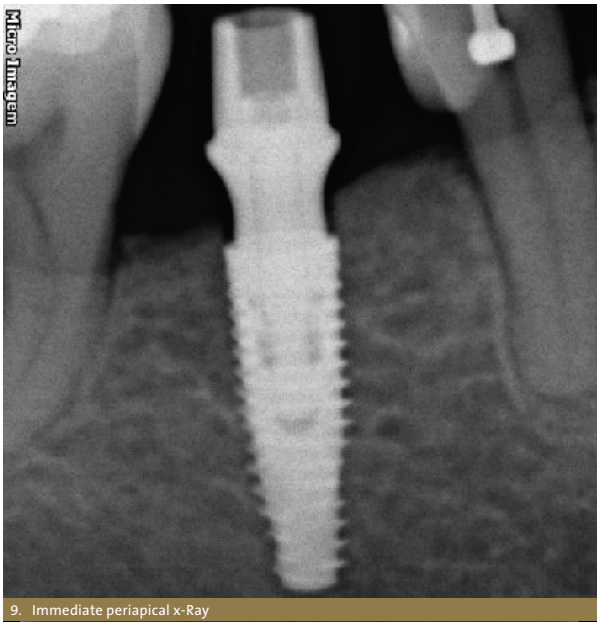
5. Subcrestal placement of the Acqua hydrofilic implant at 1mm



6. Occlusal view of the implant

7. GM Universal Click Abutment placed with the restoration margin, respecting the necessary minimum biological spaces

8. Vista oclusal da coroa provisória com carga imediata.



9. Immediate periapical x-Ray

Neodent GM Helix Acqua implant in the aesthetic zone.

Patient's Medical History

Patient is female, aged 55, and has a clear medical history.

Planning

Single Case.
Position 12 of the Maxilla (FDI System).
Conventional Loading Protocol.
With Flap Access Technique.

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Description of the procedure

1. Full Mucoperiostal flap, denudung of the bone surface with small perforations to improve the blood supply to receive the allograft block. The block was secured with one fixation screw then carnally and apically xenograft and autogenous chips were placed. This was covered with a slow resorbing collage membrane;
2. Re-entry at 6 months for implant placement well away from the labial plate and planned for screw retained prosthesis. Transmucosal healing abutment place and sutured to also move the much-gingival line more apically;
3. Transfer impressions with an open tray technique taken 3 months later;
4. Day of fit of the screw retained implant Emax crown on a Ti-base abutment. The tissues have yet to mature.

Result description and/or conclusion

To review for mucosal tissue maturity and possible future connective tissue graft to assess if further vertical tissue
augmentation could be gained. The patient is very happy and was aware from the start that the clinical crown would be longer than the contra lateral counterpart due to the original bone peaks f the adjacent teeth of the site prior to any surgical procedures.

DR. SANJAY SETHI
sanjsmdc7@gmail.com

UNITED KINGDOM

Sanjay Sethi qualified from Guy's Hospital in 1993 with BDS. He is in private practice in London and has a special interest in aesthetics and implants in dentistry.
He has lectured extensively internationally. He is a full member and Past President of the British Academy of Aesthetic Dentistry, an active member of the European Academy of Esthetic Dentistry and is also a member of the ADI.

Other doctors that participated in the procedure:
DR. RICHARD O'BRIEN

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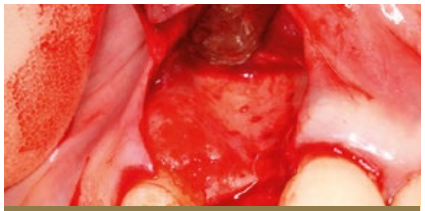
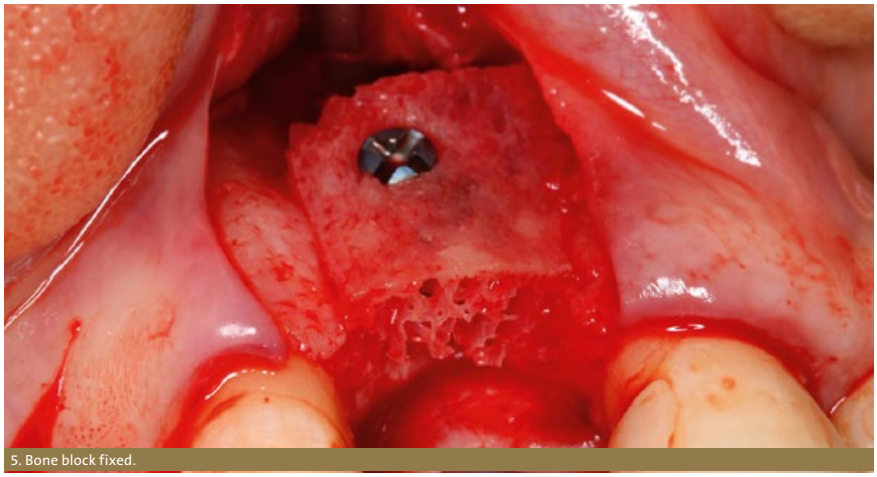
Neodent GM Helix Acqua implant in the aesthetic zone.


1. Initial extra oral clinical image.


2. Initial intra oral clinical image (buccal).


3. Initial intra oral clinical image (occlusal).


4. Raising the flap for bone augmentation (block).

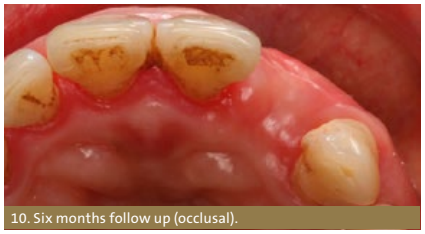

5. Bone block fixed.


6. Bone block fixed and covered with a membrane.

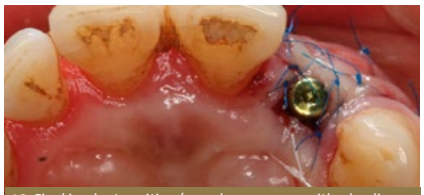

7. Final view of the bone grafting surgery.

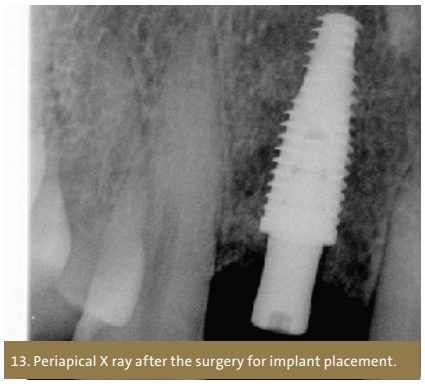

8. Suture removal.


9. Six months follow up (buccal)


10. Six months follow up (occlusal).


11. Parallel pin indicating osteotomy direction.


12. Final implant position (one phase surgery with a healing abutment)


13. Periapical X ray after the surgery for implant placement.

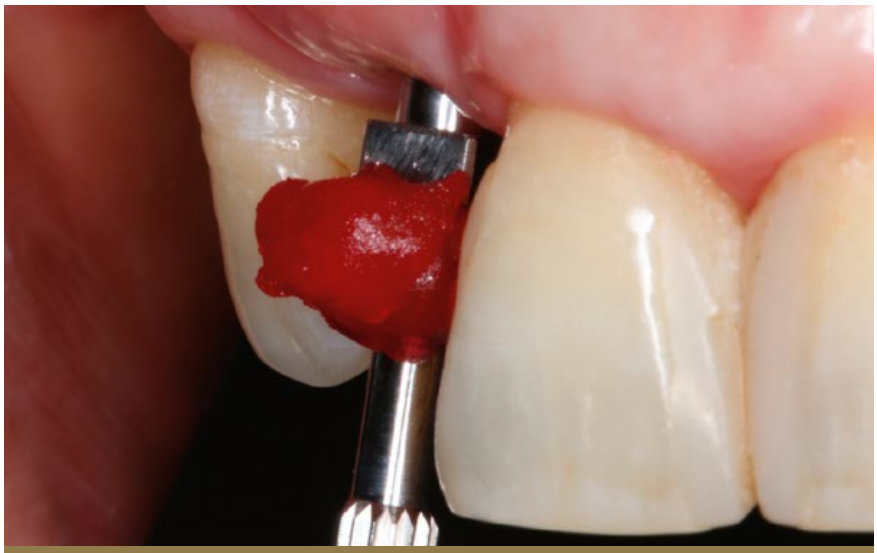

14. Ten weeks after the implant surgery


15. Occlusal view 10 weeks after the implant surgery (without the healing abutment.

Neodent GM Helix Acqua implant in the aesthetic zone.

16. Open tray impression at the implant level.

18. Implant impression.



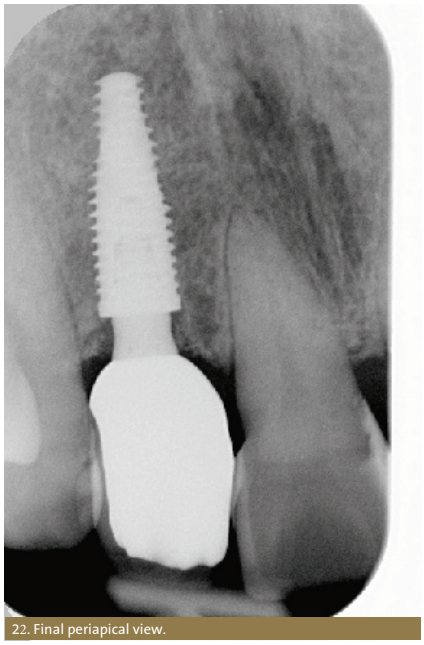
17. Open tray impression coping with resin

18. Ceramic restoration positioned with a lab index.

19. Occlusal view of the final restoration.

20. Buccal view of the final ceramic restoration.

21. Final occlusal view of the restoration with the screw acess restored.



22. Final periapical view.

Neodent Grand Morse

Immediate implant with aesthetic area immediate loading.

Patient's Medical History

Patient ASA1, not on any ongoing medication, non-smoker.
Main complaint: mobility in tooth 12.
Clinical exam and x-ray revealed presence of radicular fracture and periapical lesion.

Planning

Single Case.
Position 12 of the Maxilla (FDI System).
Immediate Loading Protocol.
No Flap Access Technique.

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Description of the procedure

The surgery was performed under local anesthesia, starting with syndesmotomy of tooth 12 and minimally traumatic extraction using a dental extractor. Drilling was then completed with 2 and 3.5mm drills, without opening up a flap (flapless). The GM Acqua Helix 3.5x16 mm was placed 2mm subcrestal and a progressive torque of 45N.cm was obtained. The gap in the buccal region was filled with an alloplastic graft. The Ti base and the zirconia base were then placed and the immediate provisional crown fabricated.

Prosthetic Description

The Ti base 3.5x4x2.5 component was placed and the zirconia base cemented over it. The immediate provisional crowns were fabricated and cemented with temporary cement.
After 10 months of monitoring, the final prosthesis was planned. For the transfer impressions, a retraction cord was inserted around the component followed by the closed-tray impression with addition silicone.
A Lithium disilicate crown was then fabricated, and after being tested and adjusted (proximal and occlusal contacts) it was cemented with resinous cement.

Result description and/or conclusion

The result obtained in 1 year of monitoring were excellent behavior of the bone tissue and soft tissue, taking into account the area in question (aesthetic area), the patient's big smile and a cleverly resolved case.

DR. GENINHO THOMÉ

ltrojan@neodent.com.br

BRASIL

Master's and PhD in Implantology;
Scientific Chairman for Neodent;
Chairman of Neodent's Board of Directors.

Other doctors that participated in the procedure:

Sérgio Bernardes;
Mary Stella Dias Vitório;.
Carolina Accorsi Cartelli;
Larissa Trojan.

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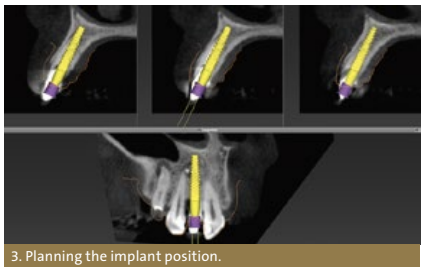
Immediate implant with aesthetic area immediate loading.

1. Initial photo of smile.

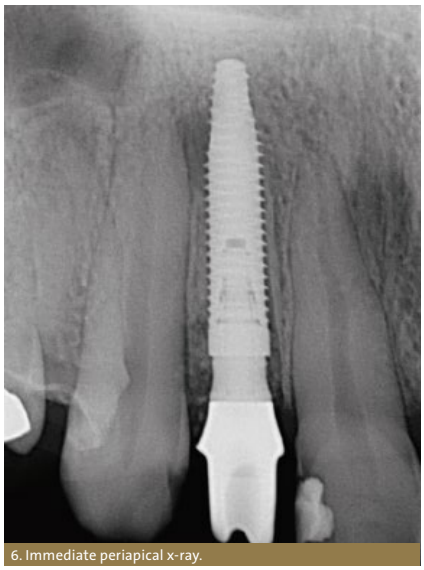
2. Initial CT scan of tooth 12.



3. Planning the implant position.

4. Helix Grand Morse Implant.

5. Immediate post-operative photo.



6. Immediate periapical x-ray.

7. 1-year monitoring (CBTC).

8. 1-year monitoring photo.

Single implant in the posterior mandible under immediate loading.

Patient's Medical History

Patient ASA 1, not on any ongoing medication, non-smoker.
Main complaint: absence of tooth 36.

Planning

Single Case.
Position 36 of the Mandible (FDI System).
Immediate Loading Protocol.
No Flap Access Technique.

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Description of the procedure

The surgery was performed under local infiltration anesthesia in the region, without nerve block. Drilling was then completed with the 2mm, 3.5mm and 4.3mm drills, without opening up a flap (flapless). The GM Acqua Helix 4.3x11.5 mm implant was then placed approximately 2mm subcrestal and a progressive torque of 60Ncm was obtained.
The 4.5x4x3.5 abutment was selected and placed with 32Ncm. The provisional crown was then fabricated, using the acrylic coping, and provisionally cemented.

Prosthetic Description

The provisional crown was fabricated conventionally over the abutment to apply immediate loading. Once the peri-implant tissue had regenerated, the transfer impression was taken in order to fabricate the metal coping. Since the coping had been tested and a periapical x-ray was taken to confirm adaptation, a transfer impression was made to apply the ceramic. The metal ceramic prosthesis was then screwed in and the screw channel sealed with Teflon and resin-based composite.

Result description and/or conclusion

In the 1st year of monitoring, excellent behavior of the bone tissue and soft tissue was observed, with no complications in the implant or prosthesis.

DR. GENINHO THOMÉ
ltrojan@neodent.com.br

BRASIL

Master's and PhD in Implantology;
Scientific Chairman for Neodent;
Chairman of Neodent's Board of Directors.

Other doctors that participated in the procedure:

Sérgio Rocha Bernardes;
Mary Stella Dias Vitório;.
Carolina Accorsi Cartelli;
Larissa Trojan.

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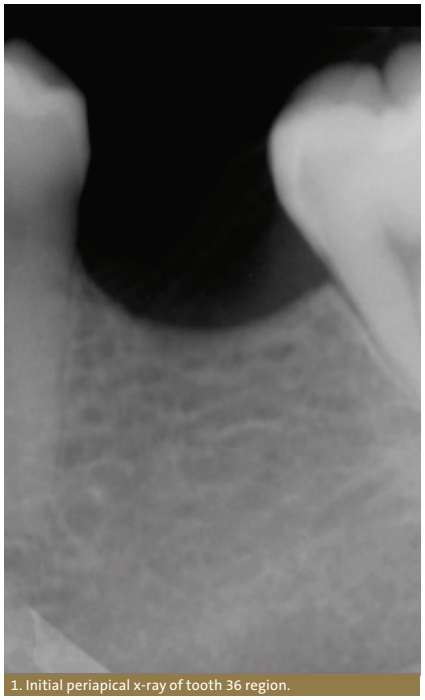
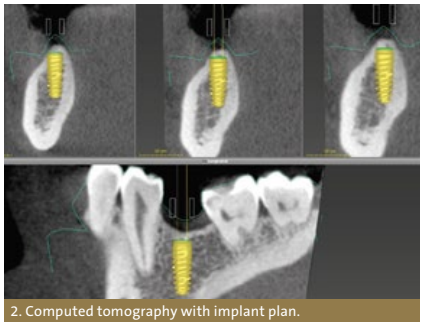
Single implant in the posterior mandible under immediate loading.

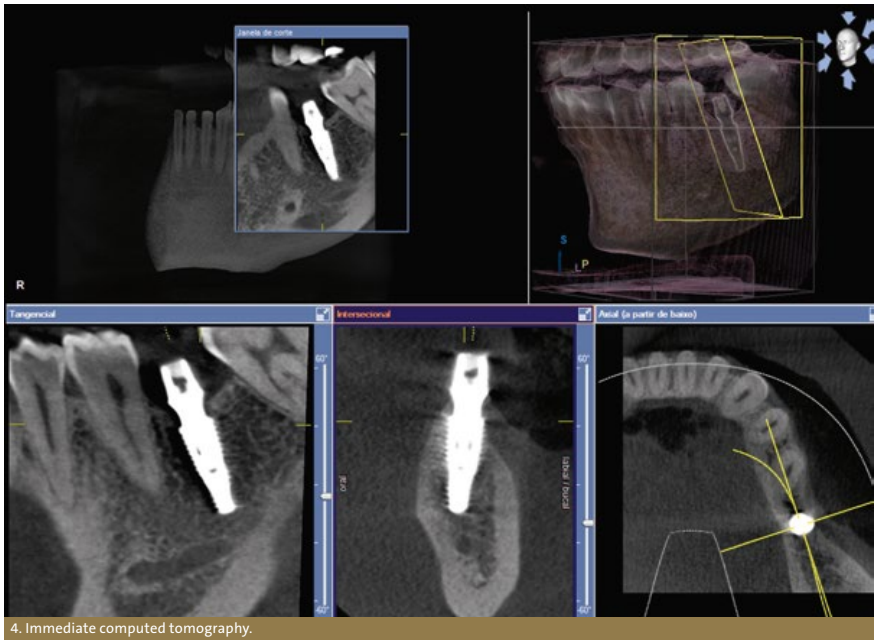


1. Initial periapical x-ray of tooth 36 region.

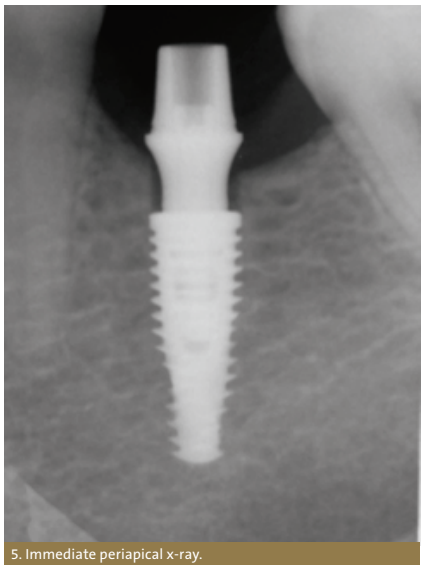


2. Computed tomography with implant plan.

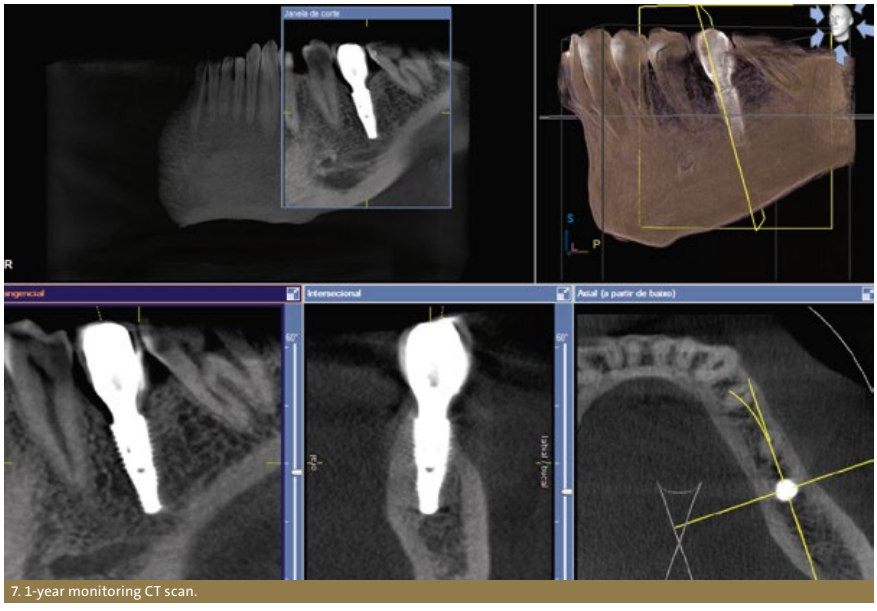
3. Immediate post-operation.



4. Immediate computed tomography.



5. Immediate periapical x-ray.



7. 1-year monitoring CT scan.

6. 1-year monitoring.

Neodent Grand Morse

GM HELIX immediate implant with immediate loading.

Patient's Medical History

Female patient, aged 52, leucoderma, ASA 1, without systemic complications for dental implant surgery, with tooth 15 presenting a longitudinal crack, with constant loosening of the crown and of the intraradicular pin, with indication for extraction and immediate implant.

Planning

Single Case.
Position 21 of the Maxilla (FDI System).
Immediate Loading Protocol.
No Flap Access Technique.

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Descripton of the procedure

Grand Morse surgical kit for placement of a Helix GM 4.3x13 implant. Drilling sequence was followed until drill 3.5, without the use of drill 4.3 or pilot drill 4.3, to optimize primary stability of the implant by undersizing osteotomy, taking into consideration the low bone density found in the area during initial drilling, allowing use of the immediate loading technique. Placement began with the surgical contra-angle and finished with the torque wrench (final torque: 50N.cm).

Prosthetic Description

The GM click exact universal abutment 3.3x6x2.5 was placed (torque 20N. cm). The click provisional coping was positioned. A full provisional crown was milled in-house, filled with autopolymerizing acrylic resin and placed in the mouth over the provisional click coping 3.3x6. After capture, the provisional crown was removed, with the provisional coping inside it. After the final adjustments, the crown was fixed just with the click effect of the provisional coping, remaining under occlusion.

Result description and/or conclusion

The GM Helix implant is highly suitable for the immediate implant technique with immediate loading, especially when the sub-instrumentation technique is used, even with little bone density. Extremely easy capture of the implant is one of its great benefits. The connection between the GM exact click universal abutment and the click provisional coping makes the immediate loading technique simple, quick and predictable, reducing treatment time and optimizing the immediate aesthetic results.

MARCELO FONTES TEIXEIRA

mfonttes@uol.com.br
BRASIL

Masters degree in Implantology;
Specialist in Periodontology, Orthodontology and TMD;
Coord. Spec. Implantology (UniFOA - VR / RJ - Brazil);
Scientific Reviewer, JOMI/EJOI - Brazil;
Scientific Consultant for NEODENT.

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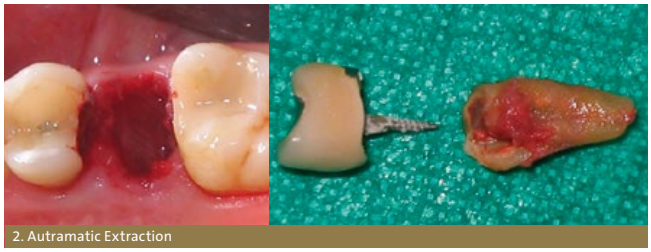
GM HELIX immediate implant with immediate loading.

1. Initial Case



2. Autramatic Extraction

3. Surgical Drilling and checking implant positioning.

4. Implant Placement

5. GM Exact Universal Click Abutment 3.3x6x2.5

6. GM Exact Universal Click Abutment 3.3x6x2.5

7. Total Provisional Crown and Periapical X-Ray

Neodent® Grand Morse®

Immediate loading with provisional crown of a fractured central incisor.

Patient's Medical History

Female patient with 53 years-old, no systemic alterations. Presenting mucositis at the implants region on the maxillary arch and a complete prosthesis fracture on posterior region.

Planning
Position 21.
Immediate Loading Protocol.
Tooth Socket Access Technique.

©neodent

Descripton of the procedure

Central incisor with a vertical fracture on the buccal side was extrected after infiltrative anesthesia administered in anterior of the maxilla. Immediate post-extraction was performed with 3mm subcrestal on a conventional bone drilling sequence and direction indicators instruments to prepare bone site for the anterior maxilla region. Note the bed preparation supported on the lingual site of the bone. This technique and the Helix® design will promote a high primary stability.

Prosthetic Description

GM Abutment and Neo Abutment Titanium Coping using the Neo Screwdriver Torque Connection were orally installed, and the single provisional crown was made with acrylic resin and stock tooth.

Result description and/or conclusion

Final view and radiography of temporary screw-retained crown with satisfactory emergency profile and primary stability achieved for immediate loading in a aesthetic region.

JOSÉ VALLEJO DDS

drvallejo@bnbimplanteam.com

SPAIN

Specialist in Prosthodontics and Implantology;

Other doctors that participated in the procedure:

Arantza Rodriguez.

www.neodent.com.br/grandmorse

Neodent® Grand Morse®

Immediate loading with provisional crown of a fractured central incisor.

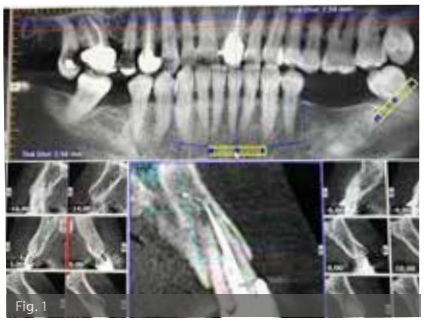


Fig. 1


Fig. 2


Fig. 3


Fig. 4


Fig. 5


Fig. 6


Fig. 7


Fig. 8


Fig. 9


Fig. 10


Fig. 11


Fig. 12

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Neodent Grand Morse

Immediate Load Double Arch.

Patient's Medical History

Female, age 39.

Recovered drug addict, long term smoker, poor compliance and poor nutrition. Heart disease, heart attack, cardiac stent, clopidogrel, mild arthritis, hay fever, allergic to tomatoes, binge drinking. Regular blood tests since rehab.

Planning

Full Arch.

Immediate Loading Protocol.

With Flap Access Technique.

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Description of the procedure

Local anaesthetic dental clearance, ridge reduction in areas of sockets, placement of upper and lower NeoArch using Titamax GM Acqua on lower and Titamax CM Acqua on upper. Lower posterior (35;45) 4x15mm with 30 degree miniconical abutments, lower anterior 4x11mm straigth miniconical abutments. Upper posterior (15) 3.5 x17 (25) 3.75 x15 with 30 degree miniconical abutments, Upper anterior 3.75 x11 with 17 degree abutments. All implants placed with motor driver at 45 Ncm and abutments placed at 15 Ncm. Immediate onto prefabricated acrylic bridges using titanium temporary copings at 10Ncm.

Prosthetic description

Surgery undertaken 12/01/2018. Two month integration check 26/02/2018. Final impressions due 26/03/2018. Createc bars, acrylic wrap following wax try-in.

Result description and/or conclusion

Double arch acrylic wrap.

DR ROBERT N HAYES

rnhayesbds@aol.com

UNITED KINGDOM

Dr Hayes is a Royal College of Surgeons accredited implant training mentor and holds the Certificate in Advanced Implant Dentistry. He has undertaken research on immediate loading of single implants and Quad Zygoma and was the first surgeon outside the USA to undertake an immediate load double arch in 2006 using the NobelGuide All-on-4 technique. Robert provides live surgery courses for Neodent UK and mentors surgeons at all levels in all aspects of implant dentistry and related surgery.

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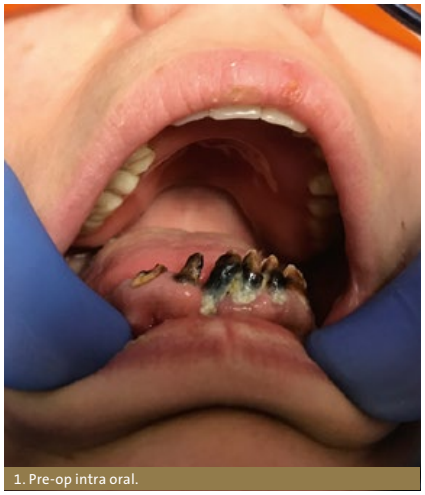
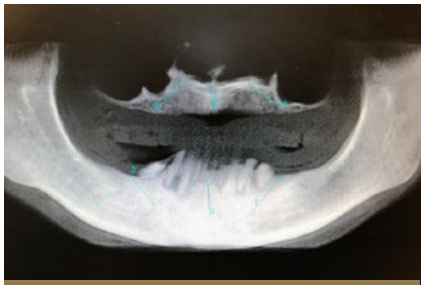
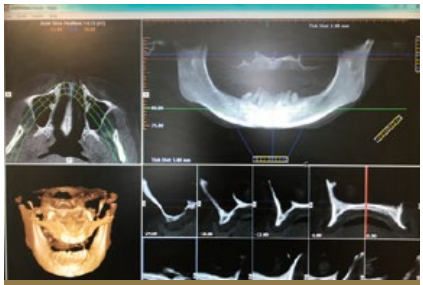
Immediate Load Double Arch.

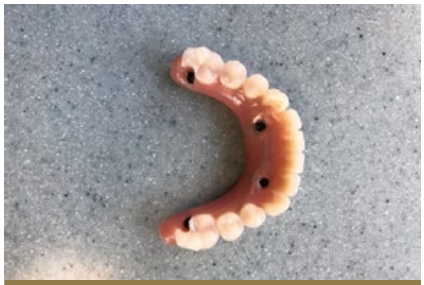

1. Pre-op intra oral.


2. Post op immediate smile.


3. Post op immediate lateral view.


4. Pre op CBCT panoramic view.


5. Advanced maxillary resorption.


6. Lower temporary bridge


7. Post op implant positioning and initial prosthetic connection.


8. Helix Grand Morse Implant.


9. Final extra oral photo

Rehabilitation with Grand Morse implants and digital flow.

Patient's Medical History

Patient ASA1, not on any continuous medication, smoker. Complains of mobility in fixed prosthesis in teeth 11- 21-22, which had already been re-stuck inadequately several times.

Planning

Parcial Arch.
Positions 21 and 22 of the Maxilla and 38 of the Mandible (FDI System).
Immediate Loading Protocol.
No Flap Access Technique..

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Description of the procedure

For ideal placement of the implant and prosthesis, the surgical guide was made according to the Neodent Guided Surgery protocol. This way, flapless surgery was performed under local anesthetic, starting with extraction of tooth 22 using tooth extractor, drilling in areas 21 and 22 and then placement of GM Helix Acqua 3.5x16mm infra-bone implants. Both obtained torques of more then 60 Ncm. The component selected was universal abutment 3.3x6x3.5 mm and the immediate provisional crowns were temporarily cemented.

Prosthetic Description

The provisional crowns were made conventionally over the abutments. Once the peri-implant tissue had regenerated and the preparations for the on-teeth prostheses were finalized, zirconia copings were made using CAD/CAM technology for the 4 teeth (11 and 12 over tooth/ 21 and 22 over abutment). After the copings had been tried and a periapical x-ray taken to confirm the placement, a transfer impression was made to apply the ceramic. The crowns were then adjusted and cemented with resinous cement.

Result description and/or conclusion

In the 1st year of monitoring, excellent behavior of the bone tissue and soft tissue was observed. Considering the area (anterior), the remaining available bone for implant placement and the patient's broad smile, the result obtained was highly satisfactory.

DR. GENINHO THOMÉ
ltrojan@neodent.com.br

BRASIL

Masters and PhD in Implantology.
Scientific Chairman Neodent.
Chairman of the Board of Directors of Neodent.

Other doctors that participated in the procedure:

Sérgio Bernardes;
Mary Stella Dias Vitório;.
Carolina Accorsi Cartelli;
Larissa Trojan.

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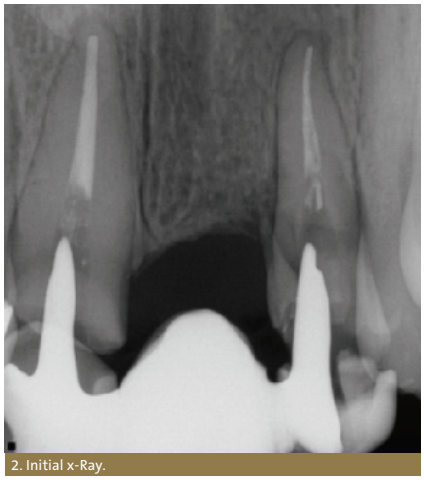
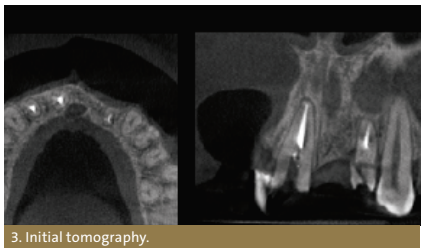
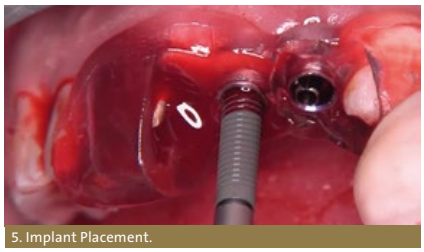
Rehabilitation with Grand Morse implants and digital flow.


1. Initial intra oral view.


2. Initial x-Ray.

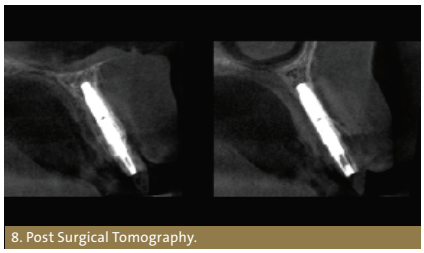

3. Initial tomography.


4. Planning.


5. Implant Placement.

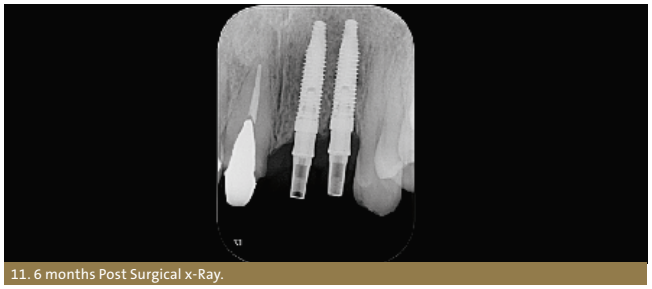
6. Immediate intra oral view after the surgery.

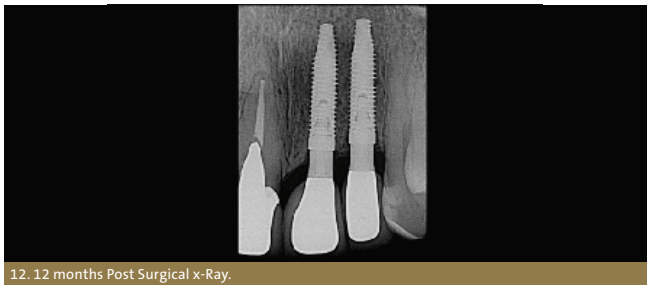

7. Immediate Post Surgical x-Ray.


8. Post Surgical Tomography.


9. Final retoration (intra oral view).


10. Provisional (intra oral view).


11. 6 months Post Surgical x-Ray.


12. 12 months Post Surgical x-Ray.

Full arch immediate fixed reconstruction.

Patient's Medical History
Patient is female, aged 58, and has a history with milgraines and antidepressants.

Planning
Full arch.
Immediate Loading Protocol.
With Flap Access Technique.

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Description of the procedure
1. Full upper arch clearance
2. Placement of tilted implants to avoid sinus augmentation.
3. Placement of multiunit mini conical abutments
4. Placement of impression copings (open tray)
5. Floss and pattern resin to secure a rigid matrix
6. Multifunctional appliance impression.
7. Placement of sutures.
8. Placement of healing caps.

Prosthetic Description:
Acrylic on a metal strengthener - Temporary prosthesis
Acrylic on PEEK - Final Prosthesis.

Result description and/or conclusion
In conclusion, the patient was extremely conscious of her upper teeth and smile; she wanted a "Hollywood" appearance smile.
The patient therefore chose a bleached tooth option for her final restoration and she wanted her new smile to be dramatically different from her original teeth. This patient was highly motivated and was delighted with the end result, which has given her a lot more self confidence.

PROF. JOE BHAT BDS FDS RCS MClinDent MRD RCSEd
drjoebhat@gmail.com

UNITED KINGDOM

Hon. Visiting Professor, Specialist Prosthodontist and Oral Surgeon, Director at Moor Park Specialist Dental Centre, ITI Fellow.

Other doctors that participated in the procedure:
DR CHANDNI PATTNI

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Full arch immediate fixed reconstruction.


1. Initial view of the patient.


2. Initial view of the patient's smile.

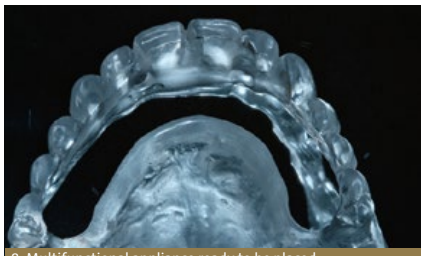

3. Initial intra oral clinical apperance.

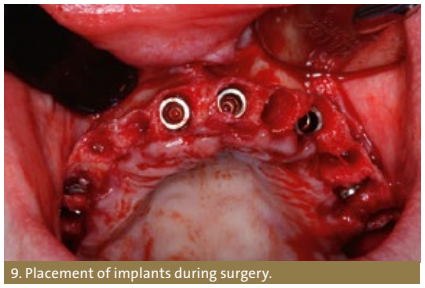

4. Initial treatment involved periodontal therapy of the lower jaw.

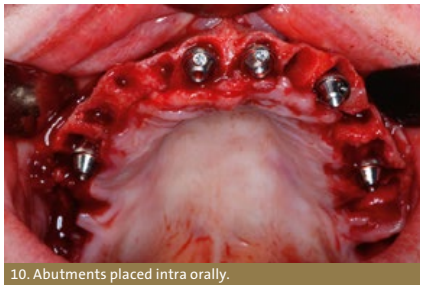

5. Initial treatment involved periodontal therapy of the upper jaw.

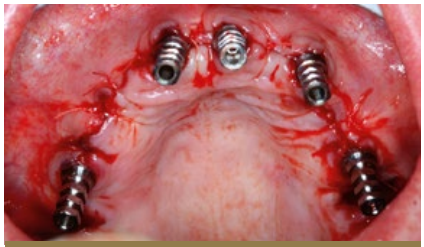

6. Wax mock up.

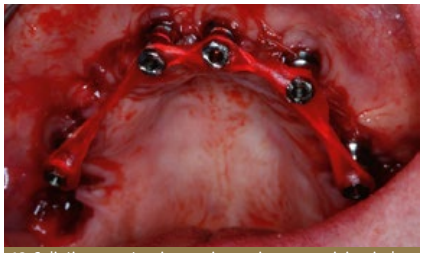

7. Wax mock up clinical try in.


8. Multifunctional appliance ready to be placed in the patients mouth


9. Placement of implants during surgery.


10. Abutments placed intra orally.

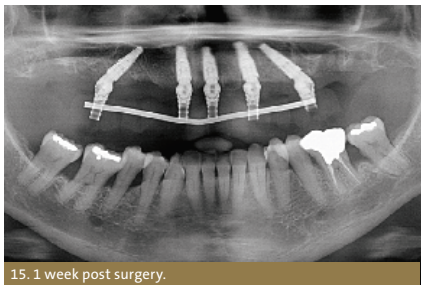

11. Sutures placed immediate post surgery with open transfers and short screws.


12. Splinting open tray impression copings over miniconical abutments.


13. Intra oral view of the abutments placed. Multifunctional appliance and master impression.


14. Multifunctional appliance and master impression sent to the lab technician..

Full arch immediate fixed reconstruction.



15. 1 week post surgery.

16. 1 week post surgey.

17. 1 week post surgery.

18. 1 week post surgery.

19. Final hybrid bridge.

20. Bleached teeth shade chosen at patients request for much lighter teeth.

21. Bleached teeth shade chosen at patients request for much lighter teeth.

Rehabilitation with Lower Denture Immediate Loading.

Patient's Medical History

Patient without systemic compromise, ASA1, not on any ongoing medication, total loss of teeth. Main complaint: Whole lower prosthesis loose.
Clinical and x-ray evaluation. First clinical consultation on 02/22/2016.

Planning

Full Lower Arch.
Immediate Loading Protocol.
With Flap Access Technique.

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Description of the procedure

For ideal placement of the implants and prosthesis, the multifunctional guide was fabricated according to a "reverse planning". The surgery was performed under local anesthetic in the inferior alveolar nerves and bilateral mental nerve. Supracrestal and oblique incision, flap detachment and smoothing of the ridge, followed by drilling. The GM Acqua Helix 4.3x13 mm implants were placed and all obtained a torque greater than 60Ncm. The GM mini conical abutments were then placed and continuous suture performed.

Prosthetic Description

The mini abutments were selected, placed and joined together and onto the multifunctional guide. The occlusal record was made, which was followed by the transfer impression made with condensation silicone. The transfers were unscrewed and the impression was removed and sent to the laboratory to fabricate the metal bar and assemble the denture using the passive-fit cementation technique.
The lower denture prostheses and full upper prosthesis were placed and adjusted according to the principles of balanced bilateral occlusion.

Result description and/or conclusion

In one year of monitoring, excellent behavior of the bone tissue and soft tissue was observed. The result obtained was highly satisfactory, with considerable improvement in the patient's masticatory function and quality of life.

DR. GENINHO THOMÉ
ltrojan@neodent.com.br

BRASIL

Master's and PhD in Implantology;
Scientific Chairman for Neodent;
Chairman of Neodent's Board of Directors.

Other doctors that participated in the procedure:

Sérgio Bernardes;
Mary Stella Dias Vitório;.
Carolina Accorsi Cartelli;
Larissa Trojan.

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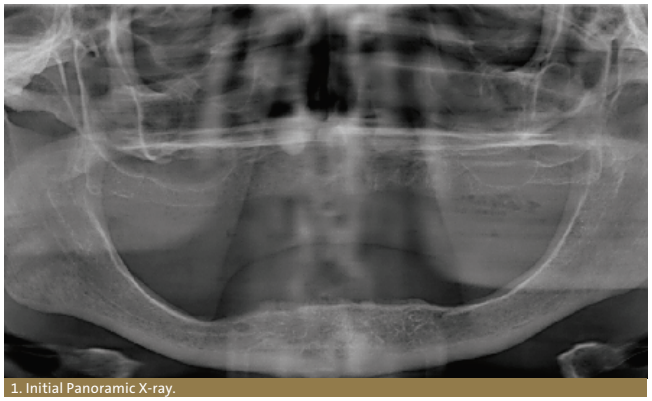
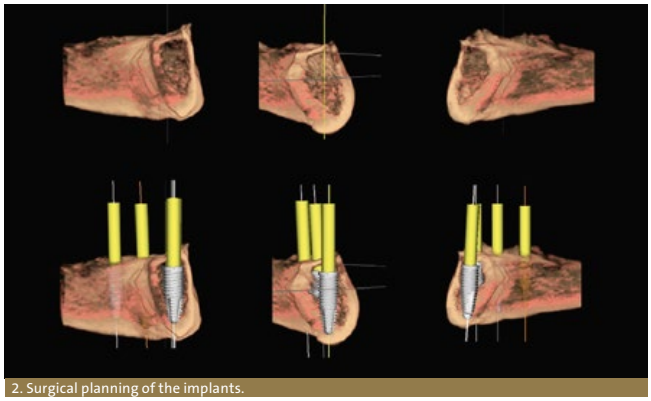
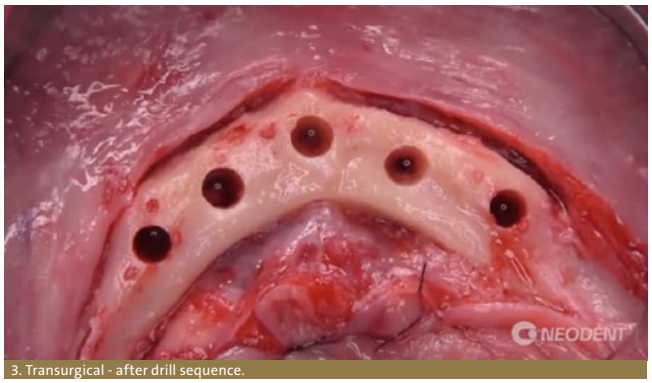
Rehabilitation with Lower Denture Immediate Loading.



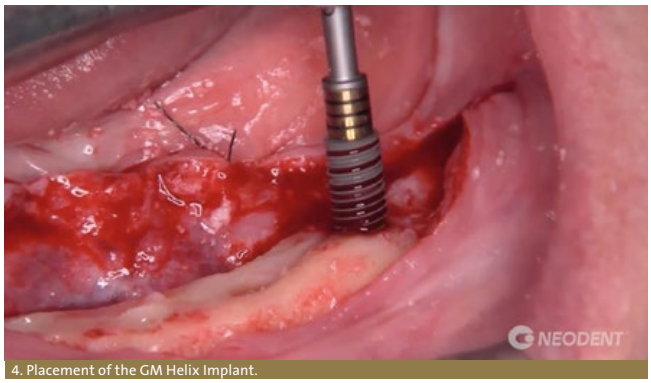
1. Initial Panoramic X-ray.



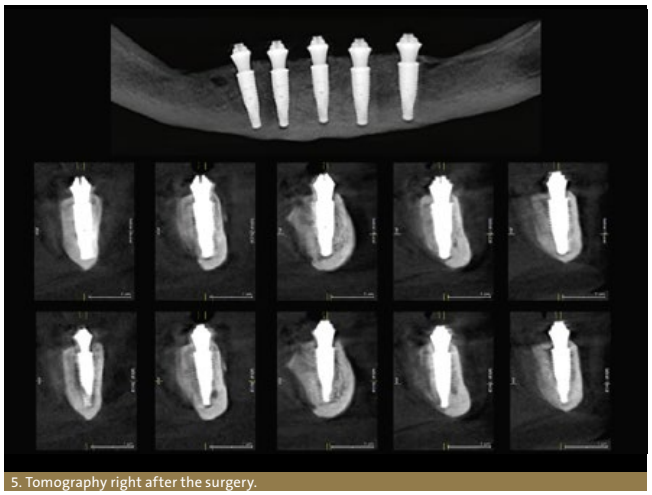
2. Surgical planning of the implants.



3. Transurgical - after drill sequence.

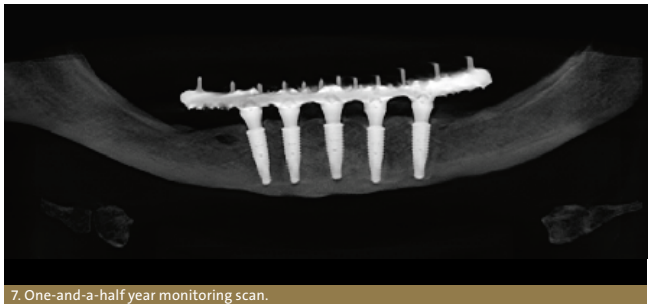


4. Placement of the GM Helix Implant.



5. Tomography right after the surgery.

6. View of the mini abutments after 1 year of monitoring.



7. One-and-a-half year monitoring scan.

Neodent Grand Morse

Double hybrid bridges under immediate loading.

Patient's Medical History

Patient without systemic compromise, ASA 1, not on any ongoing medication, total loss of upper and lower teeth. Main complaint: Full upper and lower prosthesis loose, difficulty in masticatory function and aesthetic dissatisfaction.

Planning

Full Arch.
Immediate Loading Protocol.
With Flap Access Technique.

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Description of the procedure

After local anesthesia, a supracrestal and oblique incision was made in both arches and the flap detached. Osteotomy due to the position of the teeth on the multifunctional guide. The surgery began in the maxilla, where 5 GM Helix Acqua implants were placed. 5 GM Helix Acqua implants were also placed in the mandible. All the implants obtained torque greater than 60N.cm. Mini abutments were selected and placed (torque of 32N.cm) for upper and lower transfer impression.

Prosthetic Description

The mini abutments were selected, placed and joined together and onto the multifunctional guide. The occlusal record was made, which was followed by the transfer impression made with condensation silicone. The copings were unscrewed and the impression was removed and sent to the laboratory to fabricate the metal bars and assemble the hybrids using the passive-fit cementation technique.
The lower and upper hybrid prostheses were placed and adjusted according to the principles of balanced bilateral occlusion.

Result description and/or conclusion

In the 1st year of monitoring, excellent behavior of the bone tissue and soft tissue was observed, and behavior of the implants and prostheses. Considering the evolution of the case, a patient with full upper and lower prostheses, who 2 days after implant placement receives definitive implant-supported prostheses, the result obtained was highly satisfactory.

DR. GENINHO THOMÉ

ltrojan@neodent.com.br

BRASIL

Master's and PhD in Implantology;
Scientific Chairman for Neodent;
Chairman of Neodent's Board of Directors.

Other doctors that participated in the procedure:

Sérgio Bernardes;
Mary Stella Dias Vitório;.
Carolina Accorsi Cartelli;
Larissa Trojan.

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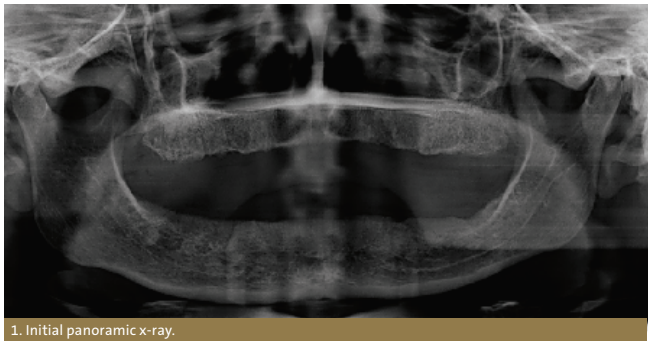
Double hybrid bridges under immediate loading.



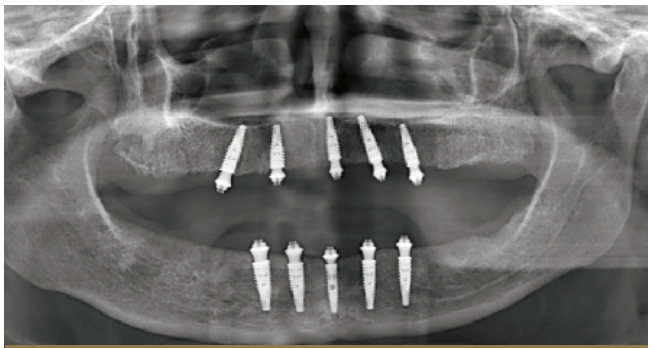
1. Initial panoramic x-ray.

2. Initial condition (intraoral).

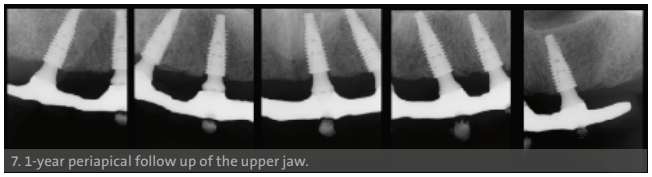
3. 1-month post-operative (Superior).

4. 1-month post-operative (Inferior).

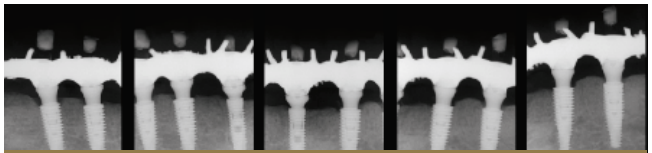
5. Prosthetic hybrids placed one day after the surgery (buccal view).



6. Immediate panoramic x-ray.



7. 1-year periapical follow up of the upper jaw.



8. 1-year periapical follow up of the lower jaw.

Inferior denture with narrow implants (3.5mm).

Patient's Medical History

Patient without systemic compromise, ASA1, not on any ongoing medication, presence only of teeth 42 and 43.

Complained of difficulty chewing, pain in the remaining teeth as well as dissatisfaction with aesthetics.

Planning

Full Arch.

Immediate Loading Protocol.

With Flap Access Technique.

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Descripton of the procedure

For ideal placement of the implants and prosthesis, a multifunctional guide was fabricated according to reverse planning. The surgery was performed under local anesthetic in the inferior alveolar nerves and bilateral mental nerve. Teeth 32 and 33 were then extracted, followed by supracrestal and oblique incision, flap detachment, smoothing of the ridge and drilling (drill GM 2 and 3.5). Five GM Acqua Helix 3.5x13 mm implants were placed in the intermentonian region and all obtained a torque greater than 60N.cm.

Prosthetic Description

The mini abutments were selected (5.5mm) and placed (torque of 32N.cm), then followed by continuous suture. The copings were fitted over the mini abutments and joined together and to the multifunctional guide, the occlusal record was made, followed by the transfer impression. The copings were unscrewed and the impression was removed and sent to the laboratory to fabricate the metal bar and assemble the inferior denture using the passive-fit cementation technique. The prostheses were then placed and an occlusal adjustment made.

Result description and/or conclusion

It was possible to conclude that in cases where patients require full lower arch rehabilitation and have little bone thickness in the intermentonian region, the use of 5 narrow implants is an excellent alternative. This case obtained a highly satisfactory result for hard and soft tissue with 1 year's monitoring, without complications for either the implant or the prosthesis.

DR. GENINHO THOMÉ

ltrojan@neodent.com.br

BRASIL

Master's and PhD in Implantology; Scientific Chairman for Neodent; Chairman of Neodent's Board of Directors.

Other doctors that participated in the procedure:

Sérgio Bernardes;
Mary Stella Dias Vitório;
Carolina Accorsi Cartelli;
Larissa Trojan.

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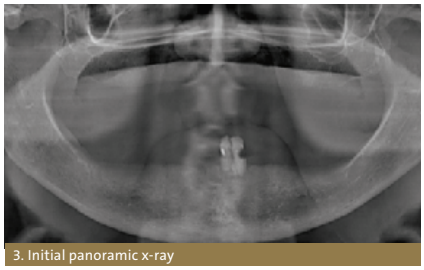
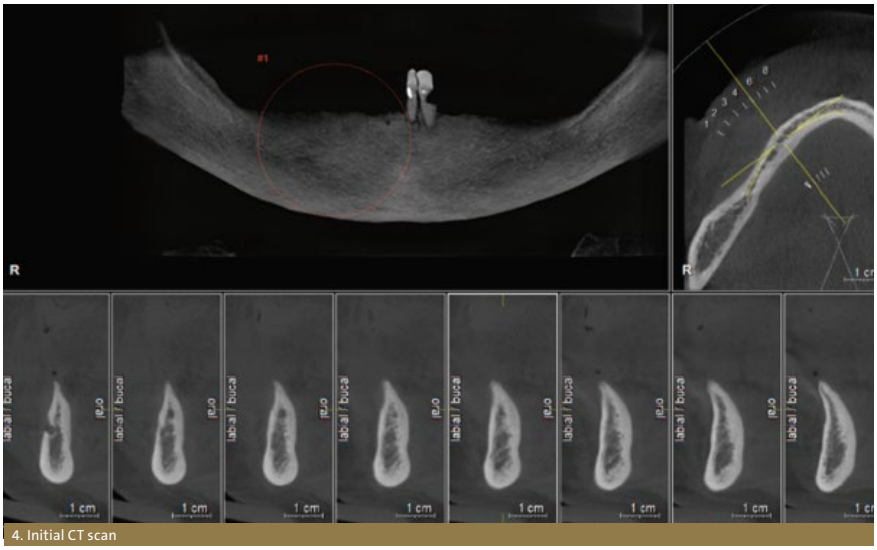
Inferior denture with narrow implants (3.5mm).


1. Initial (prostheses)


2. Inferior ridge (initial)


3. Initial panoramic x-ray


4. Initial CT scan


5. Implant Helix 3.5mm


6. 1-month monitoring


7. 1-year monitoring


8. 1-year monitoring CT scan

Total Inferior Rehabilitation with Grand Morse Implants.

Patient's Medical History

Patient has had full upper and lower prosthesis for over 50 years, came to the clinic due to lack of stability of full lower prosthesis and she was feeling twinges in the posterior region of the mandible on both sides when chewing and had great difficulty chewing.

Planning

Full Arch.
Immediate Loading Protocol.
With Flap Access Technique.

©neodent

Descripton of the procedure

Infiltrative anesthesia administered in the region of the mental foramen and lingual infiltration supplement on both sides L and R, marking in the proximity of the mental foramen on both sides with a copying pencil to limit the extension of the incision.
Total flap and detachment to locate the mental foramen on both sides L and R. Conventional bone drilling sequence, without sub-instrumentation. First, placement of inclined implants in the region of 34 and 44 and then implant placement in the region of 32 and 42.
All implants surgically placed with 45 N.cm
32 and 42 - GM Helix Acqua implants of 11.5 mm
34 and 44 - GM Helix Acqua implants of 13 mm

Prosthetic Description

Placement of GM Mini Conical Abutments of 3.5 mm and fitting with multifunctional guide joined to the impression components with pattern acrylic resin and added silicone.

Result description and/or conclusion

After 6 months of clinical and radiographic monitoring, the patient is satisfied and has recovered her masticatory function.

PROF. DR. EDILSON FERREIRA
dredilsonferreira50@gmail.com
BRASIL

Specialist in Implantology; Master's in Oral Rehabilitation; PhD in Implantology; Post-doctorate in Implantology.

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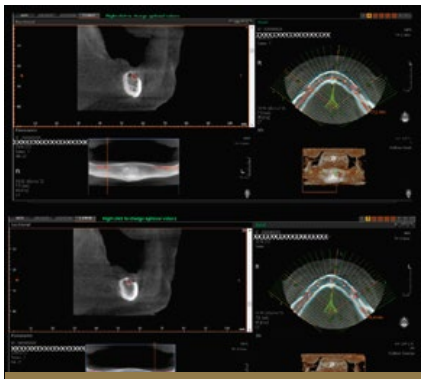
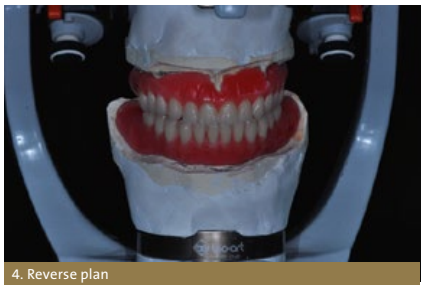
Total Inferior Rehabilitation with Grand Morse Implants.

1. Initial photo with Prostheses

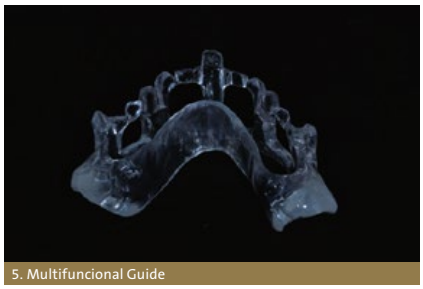
2. Initial photo without Prostheses



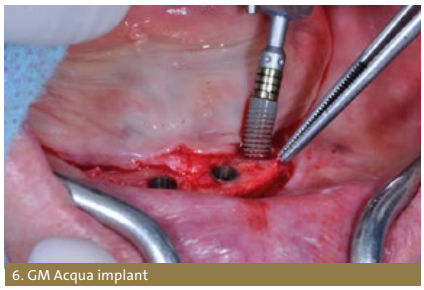
3. nitial scan of mandible showing emergence of the mental foramen on the ridge side L and R



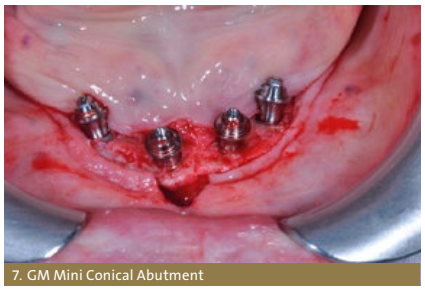
4. Reverse plan



5. Multifuncional Guide



6. GM Acqua implant

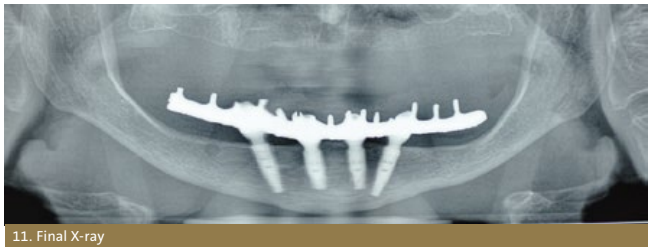


7. GM Mini Conical Abutment

8. Transfer impression

9. Immediate post-surgery

10. Final clinical view.



11. Final X-ray

Maxillary sinus tangential technique for prosthetic resolution.

Patient's Medical History

Patient has atypical chronic leukemia. Takes no medication that would prevent or increase the risk of implant placement. Has been a patient of this team since 1991 and has already placed five implants in different areas in the last 15 years.

Planning

Partial Arch.
Positions 25, 26, 27 of the Maxilla (FDI System).
Immediate Loading Protocol.
With Flap Access Technique.

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Descripton of the procedure

Incision in crest, from implant 25 to the distal area of 27, reflected flap, 12mm distal was measured to implant 25 and angled at 30 degrees (in relation to 25) in mesiodistal direction. Drilling with guide drill, to 15 mm (checked with direction indicator), followed by drills 3.5 and 3.75 from the GM Helix Acqua 3.75 x 13 mm, which was then placed. The torque greater than 60 N.cm allowed for immediate loading. Three days later the provisional was placed.

Prosthetic Description

A GM Angled Mini Abutment with a transmucosal height of 1.5mm and 30-degree angle, was screwed into the GM Helix implant placed tangentially to the maxillary sinus at the height of tooth 27. Another straight Mini Abutment, with a 1 mm band, was placed on the existing implant, rehabilitating 25. Both Mini Abutments received temporary resin-covered copings so as to build a provisional splint from 25 to 27 with 26 as the pontic.

Result description and/or conclusion

The work is still provisional, but illustrates a practical solution, with a reduction in cost, time and morbidity, in the treatment of posterior upper areas with bone height limitation. Obviously, there needs to be bone thickness in the part distal to the maxillary sinus and an implant or bone area compatible with placement in the anterior region, so as to allow splinting with the distal implant.

DR. FLÁVIO DOMINGUES DAS NEVES

flaviodominguesneves@gmail.com
BRASIL

Professor at the School of Dentistry of the Federal University of Uberlândia - UFU;
Prosthetic Specialist - UFU and Implantology USP - Bauru;
Master's and PhD in Oral Rehabilitation USP - Ribeirão Preto;
Scientific and Technical Internship in CAD/CAM - Chapel Hill - NC-USA.

Other doctors that participated in the procedure:

Flávio Domingues das Neves;
Célio Jesus do Prado;
Tiago Augusto Quirino Barbosa;
Tais Alves dos Reis.

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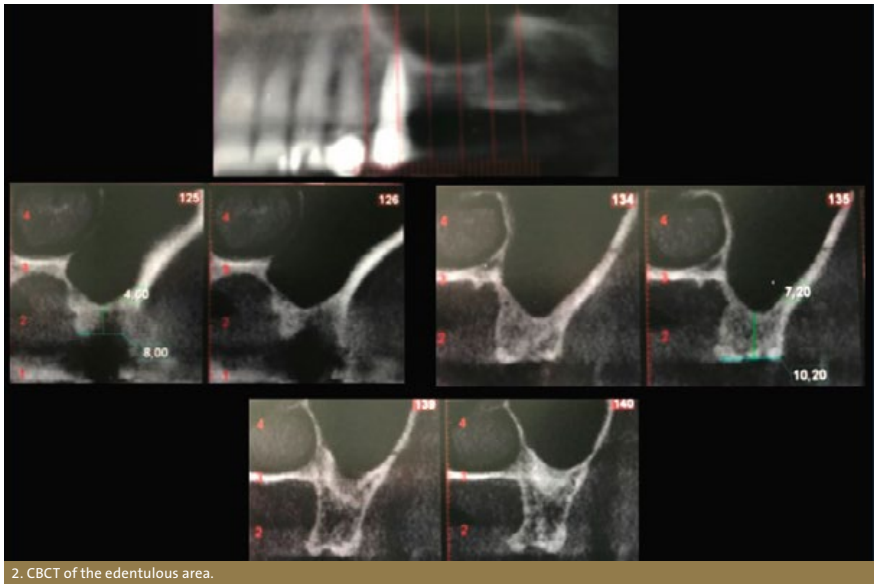
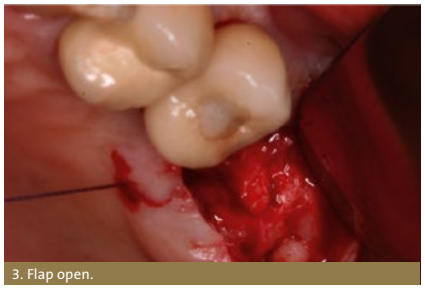
Maxillary sinus tangential technique for prosthetic resolution.

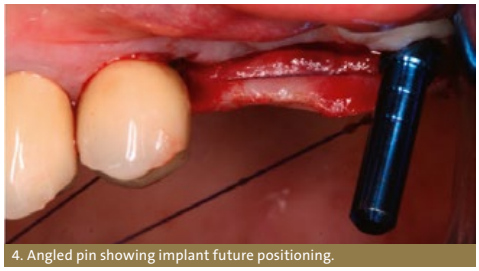
1. Initial periapical X Ray.



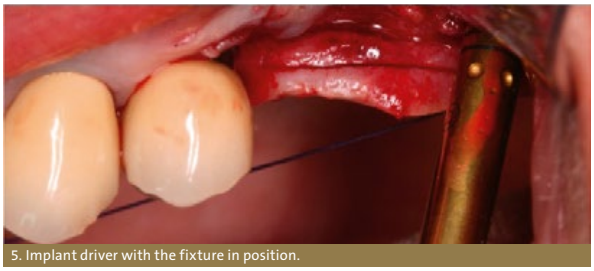
2. CBCT of the edentulous area.



3. Flap open.



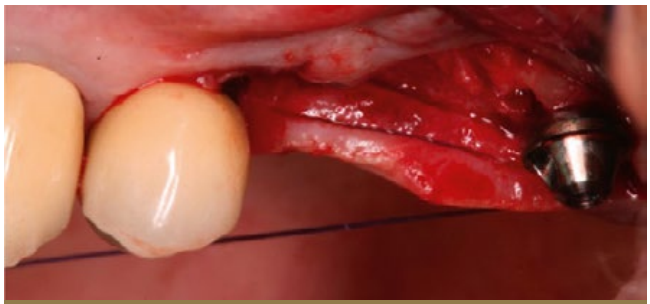
4. Angled pin showing implant future positioning.



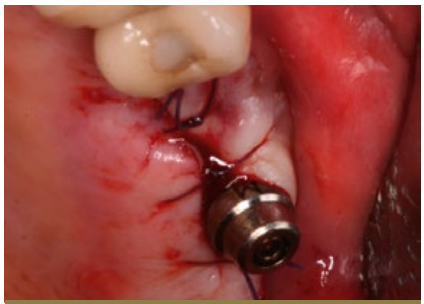
5. Implant driver with the fixture in position.

6. Acqua Helix GM implant.

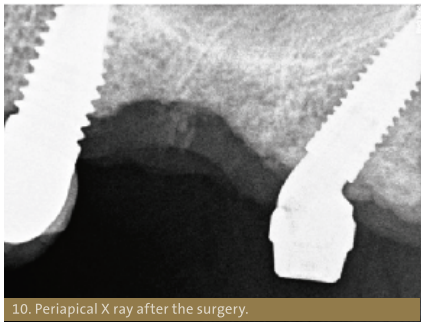
7. Angled abutment to be placed.



8. Abutment in positioning.



9. Immediate image of the surgery.



10. Periapical X ray after the surgery.

11. Removing the “old” crown.

12. Final view of the temporary prosthesis.

Neodent® Grand Morse®

GM Helix® implants in post extraction sites and immediately loading.

Patient's Medical History
Patient with 60 years-old, not on any continuous medication, and presenting severe damaged worn out teeth due to chronic bruxism.

Planning
Upper Full Arch
Immediate Loading Protocol.
Flapless technique

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Descripton of the procedure
Infiltrative anesthesia administered in maxilla extension, atraumatic extractions with a flapless technique. Conventional bone drilling sequence and placement of 3 straight and 3 tilted implants (HELIX® or DRIVE GM®) avoiding anatomical structures such as the nasal cavity and maxillary sinus. Implant site distribution through 12, 14, 16, 22, 24, 26 region.

Prosthetic Description
Selection of gingival height and placement of straight and angled GM Mini Conical Abutments. Subsequently, the installation of an immediate full arch acrylic provisional screw-retained prosthesis using Neo Mini Conical Abutment Titanium Coping by conventional workflow was prosecuted.

Result description and/or conclusion
Due to the Helix® and Drive® implant designs, post extractions installations present a very high stability with minimal drilling and trauma even for bone densities III and IV. The direction of the implants can be easily managed in order to create a proper emergency profile in the same day of surgery.
This case shows a provisional rehabilitation right after the implant placement and after 3 months of healing period, showing that the patient is satisfied and has recovered his masticatory function.

ENRIC PINTADO DDS
enricpintado@gmail.com
SPAIN

Specialist in Implant Surgery and Prosthetics;

DDS from UOD (Dominican Republic); Master's in Implant Surgery from NYU; Residency program in Prosthodontics from Seattle University.

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Neodent® Grand Morse®

GM Helix® implants in post extraction sites and immediately loading.


Fig. 1


Fig. 2

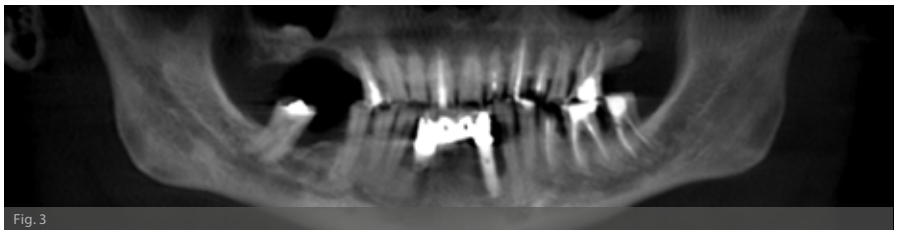
Fig. 3

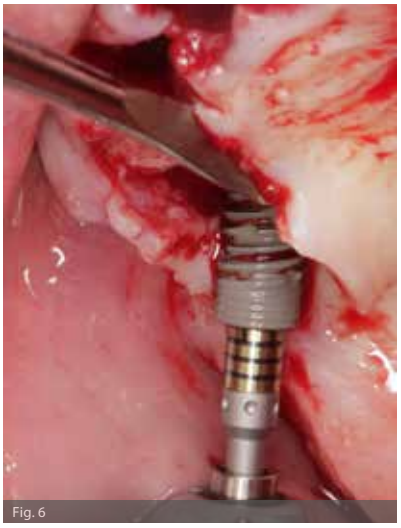
Fig. 6


Fig. 4


Fig. 5


Fig. 7

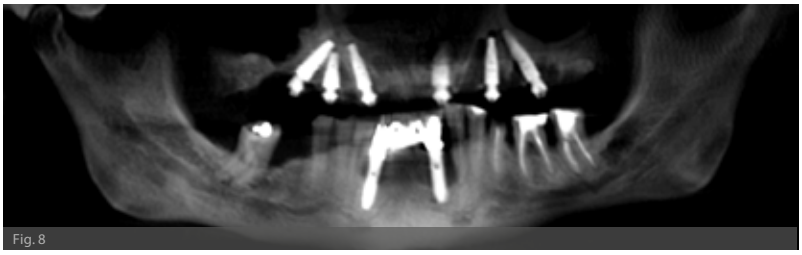
Fig. 8


Fig. 9


Fig. 10


Fig. 11

Neodent® Grand Morse®

GM Implants for an upper NeoArch® rehabilitation.

Patient's Medical History

Edentulous male patient with 37 years-old, not on any continuous medication, no systemic alterations, and, non-smoker.

Presenting mucositis at the implants region on the maxillary arch and a complete prosthesis fracture on posterior region.

Planning
Upper Full Arch
Immediate Loading Protocol.
Flap Access Technique

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Descripton of the procedure

For ideal placement of implants and prosthesis, the surgical guide was made according to Previous prosthetic planning. A Flap access technique was performed after infiltrative anesthesia administered in maxilla extension, where previous implants were removed from maxilla bone. Conventional bone drilling sequence and direction indicators instruments were used to prepare bone site for posterior placement of 2 GM HELIX® implants central straight bicortical implants and 2 tilted implants at 30o degrees, avoiding the anatomical structure of maxillary sinus.

Prosthetic Description

Selection of gingival height were taken using the GM Height Measure and the placement of straight and angled GM Mini Conical Abutments were performed. Multifunctional guide appliance impression using Mini Conical Abutment Open Tray Impression Coping by conventional workflow was prosecuted. Abutment Protection Cylinder were used for suture and wait for the definitive immediate prosthesis construction.

Result description and/or conclusion

Final aspect of implants can be seen at the panoramic radiography and clinical prosthetic final aspect is also shown, considering a reduced clinical time for the entire rehabilitation and high satisfaction of aesthetics and function. In the following year of monitoring, excellent behavior of the bone tissue and soft tissue was observed. In addition, the Helix® implant design present a very high stability even for bone densities III and IV.

ARANTZA RODRIGUEZ DDS

drarodriguez@bnbimplanteam.com

SPAIN

Specialist in Oral Surgery and Implantology;

Other doctors that participated in the procedure:

José Vallejo.

www.neodent.com.br/grandmorse

GM Implants for an upper NeoArch® rehabilitation.


Fig. 1


Fig. 2


Fig. 3

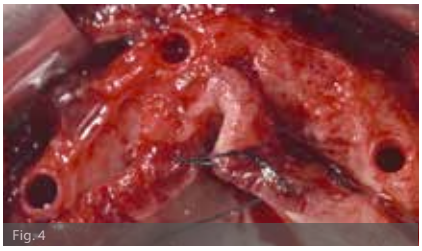
Fig. 4

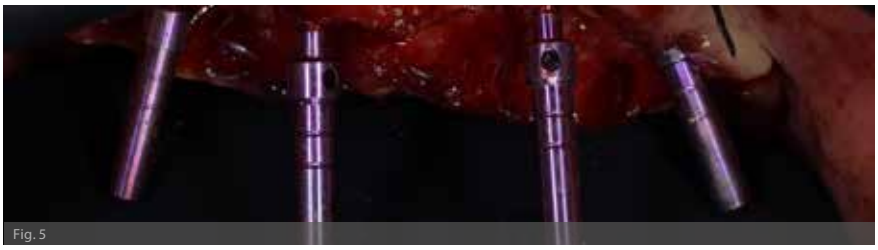
Fig. 5


Fig. 6


Fig. 7

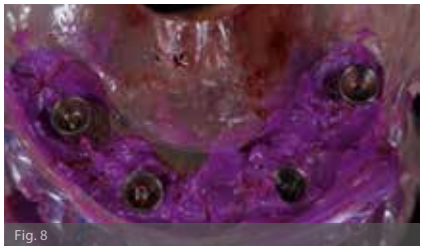
Fig. 8


Fig. 9


Fig. 10

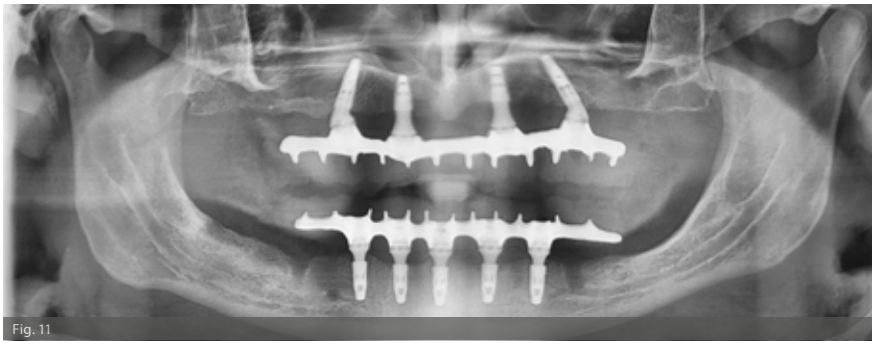
Fig. 11

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