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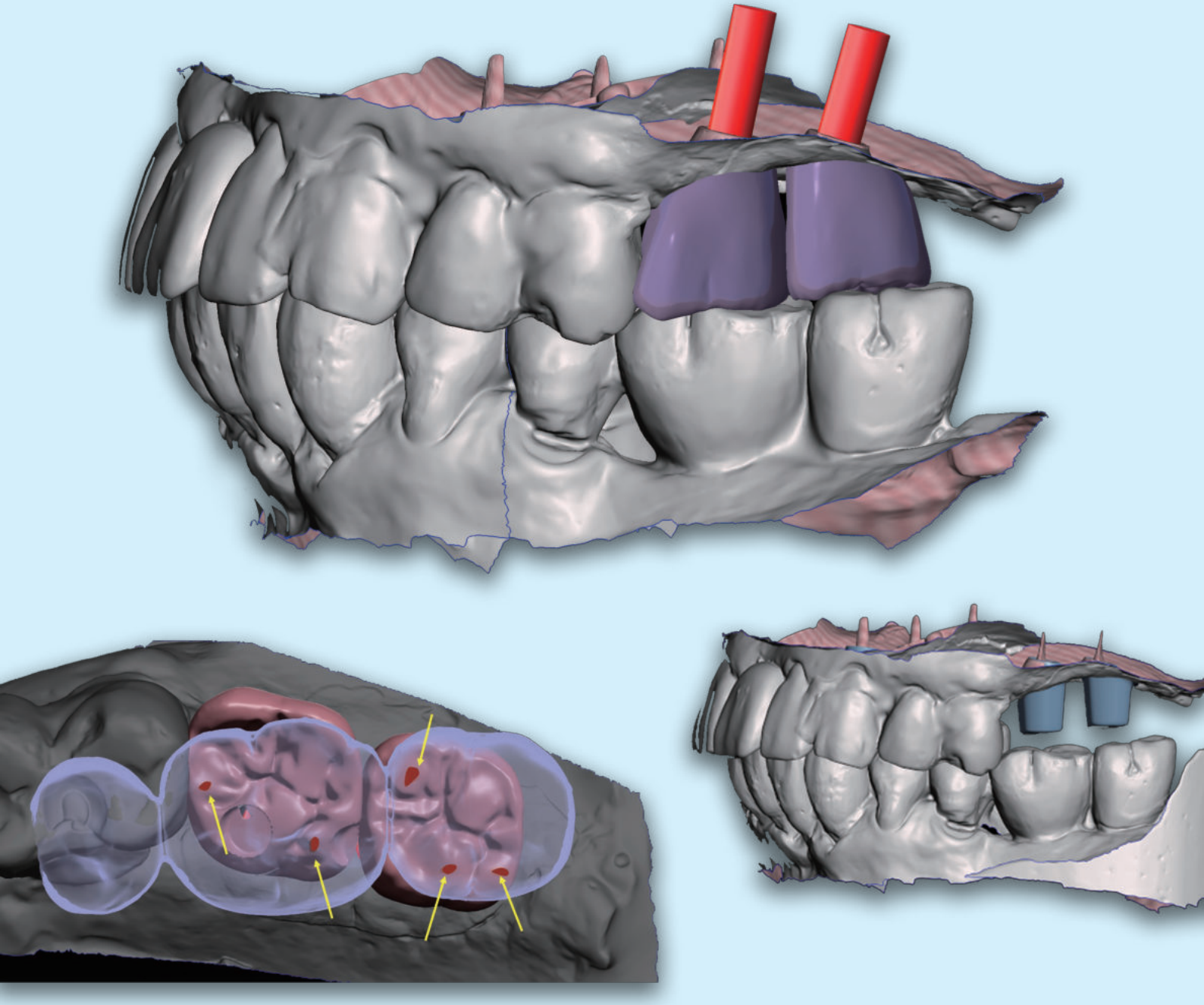
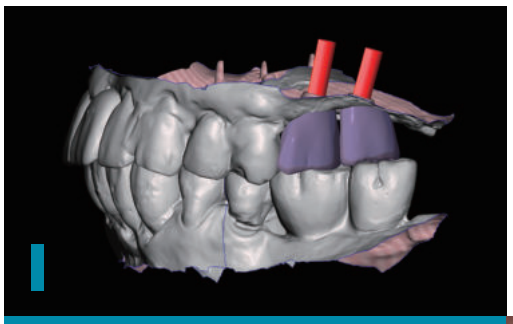
JCDD

Journal of Clinical & Digital Dentistry



Cover Images from Lee Hyeonjong (J Clin Digit Dent 2019;1(3):6-9)



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About the Journal

The Journal of Clinical and Digital Dentistry are published four times (March, June, September, and December) annually since May 2019. The abbreviated title is "J Clin Digit Dent". In the journal, articles concerning any kind of clinical dentistry such as prosthodontics, orthodontics, periodontics, implant dentistry and digital dentistry are discussed and presented.

Aims and scope

This journal aims to convey scientific and clinical progress in the field of any kind of clinical and digital dentistry.

This journal publishes

- Original research data and high scientific merit in the field of clinical and digital dentistry.
- Review articles.
- Case reports in implant dentistry including GBR, digital dentistry, 3D printing, and prosthodontics.
- Short communications if they provide or document new technique and clinical tips.

About the Journal

Editorial Board

Editorial

Now is the 4D era

When I was young, time went by so fast during I read comic books. Pretending to study while reading a comic book under the textbook was thrilling and fun. Every month, I waited for the comics in the comic magazine, and when a new book came out, I used to look back with my friends and wait for the next month.

Unlike comic books, Disney animations and Japanese animations from TV showed me new world. I couldn't stop watching TV because these animations. I felt cartoon characters seemed to be alive.
With the appearance of Pixar films in 1995, the first time I saw Toy Story with my son, It was really amazing to me. This is because I've never seen anything that moves as if it weren't just an animation. Woody and his friends seemed alive. I saw Toy Story more than a hundred times. Every Pixar's animation has since succeeded.
I recently saw a new Lion King animation. This is not a three-dimensional animation of the past, but the real animals and the real nature of the image was transferred to this movie. It was fun to watch rather than developing.

The world is changing. The same thing happens in dentistry. Dentistry is changing. The change is huge and fast.

Amalgam as a restorative material is now almost gone from the clinic, and the ZPC used for crown cementation is disappearing. In fact, my clinic has no amalgam and no ZPC. Gold crown and PFM crown are same. Zirconia crown takes its place.

Current dentistry is now a digital world. Every specialty involves digital such as Surgcal guide for implants placement, Custom abutment, Zirconia crown, 3D printing denture, Clear aligner orthodontics, CAD-CAM milling provisional crowns, Splints etc. My clinic is the same. I have an intraoral scanner, CAD softwares, 3D printers, Milling machine.

Just as people in the 2D age live in the 3D and now in 4D era, I think digital dentistry is the 4D era to dentists. We have to prepare for new digital dental era. JCDD helps and supports your preparing for 4D era.

Wongun Chang, DDS MS PhD

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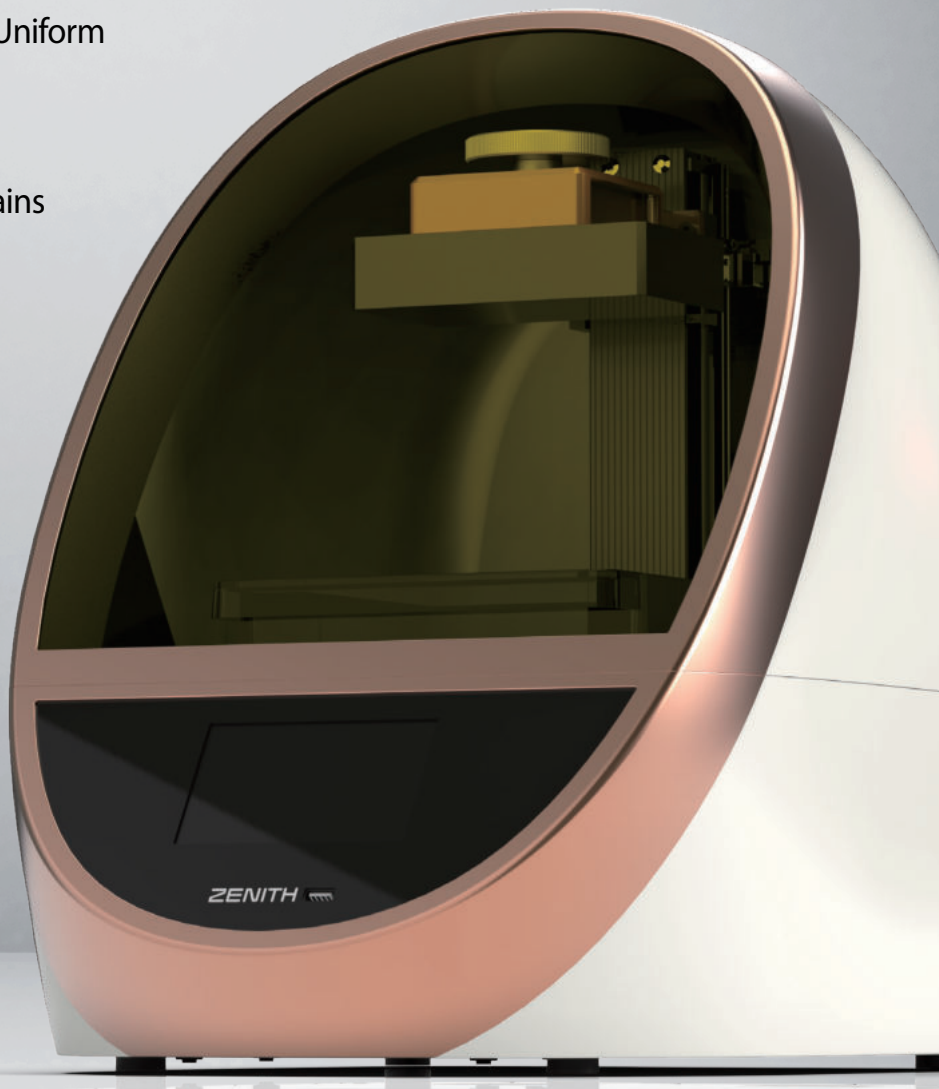

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Implant Restoration Design With Stress Optimization Using Digital Vector Analysis: A Case Report

Hyeonjong Lee, DMD, MSD, PhD

Introduction

Implant restorations have been successfully used since a long time. Advances in surface treatment technology have led to the development of sandblasted and acid-etched surface implants from the earlier machined-surface implants, while also expediting osseointegration from a biological standpoint. There have been significant advances in the prosthetic aspects as well. Porcelain chipping, one of the most common prosthetic complications, has virtually disappeared in clinical practice owing to the development of monolithic zirconia crowns.

However, complications, such as screw loosening, abutment fracture, and implant fracture, continue to occur in clinical practice.[1,2] Jörn et al. conducted a micro-CT and finite element analysis to investigate the changes that occur on the implant-abutment interface when lateral force is applied to the implant prosthesis. They also identified the formation of gaps with a width of ≥ 10 microns under the oblique load of 200 N through a simulation.[3] In addition, Zipprich et al. examined the patterns that are found in the implant-abutment connection when dynamic loading is applied to various types of implant prostheses. They found that implants with various connections showed different degrees of gaps due to micromovements. Moreover, they reported that these gaps could cause a pumping effect in the microorganisms surrounding the implant.[4] Lee et al. applied a load to implants with four different connections under the same conditions and analyzed the stress distribution generated in the connection areas. They reported that there were differences in stress of up to 2 times owing to the different connections used, as well as differences of up to 3.5 times depending on whether the forces were applied vertically or diagonally.[5]

The force applied to implant crowns could not only cause screw loosening and mechanical failure, but also negative biological consequences. Considering the studies mentioned above, it is believed that minimizing the micromovements at the implant-abutment connection by controlling the forces applied on the occlusal surface of the implant crown could reduce various adverse effects. In this digital age, information regarding the three-dimensional positions and morphologies of the antagonist tooth, implant connection, and occlusal surfaces could be acquired using a computer-aided design (CAD) software during the implant crown fabrication process. In the process of designing the occlusal surface of the implant crown, the lever effect, stress, and micromovements could be minimized by calculating the mean vector of the occlusal points to direct them toward the center of the implant connection, considering the position of the implant connection.

Hyeonjong Lee

Prof. Hyeonjong Lee graduated from Dental College, Kyung Hee University in 2008. He completed a 4-year intern & resident program in the Dept. of Prosthodontics, Kyung Hee University and obtained a Master of Science in 2012. He worked as a Clinical Instructor & Clinical Assistant Professor Kyung Hee Univ. for three years and finished his Ph.D. in 2017. He studied in the Dept. of Fixed Prosthodontics & Biomaterials in Univ. of Geneva. for 1 year as an ITI Scholar. He is currently an Assistant Professor at the School of Dentistry, Pusan National University.

Occlusal Forces and the Direction of Applied Force

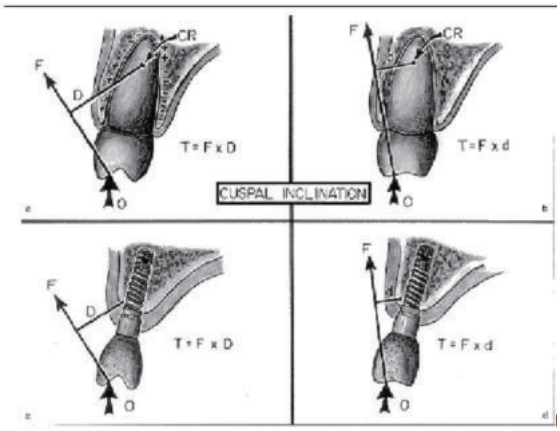

Fig. 1. Schematic of the direction of applied force and the lever effect in implants. (Weinberg et al., 1993)

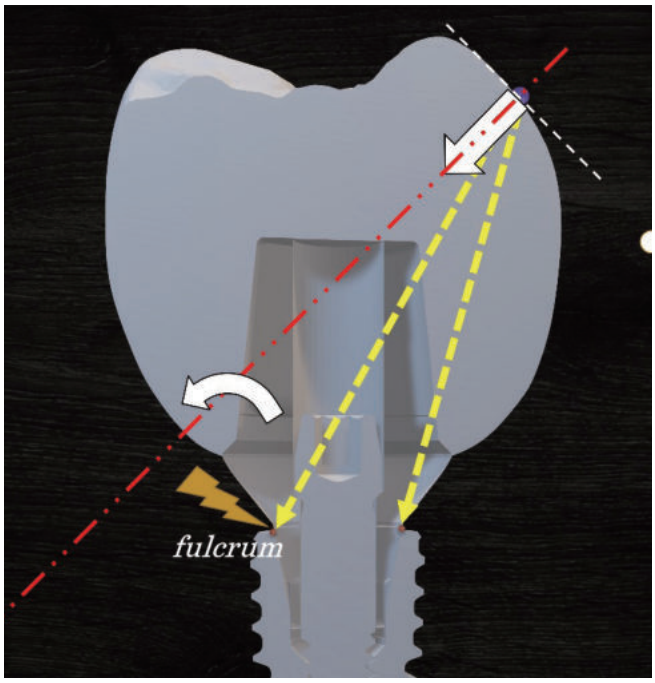

Fig. 2. Direction of the applied force in a perpendicular direction to the tangent of the occlusal point in a three-dimensional space. Here, more lever effect occurs as the occlusal force is directed further outwards from the connection.

In 1993, Weinberg explained that an occlusal force is directed perpendicularly to the tangent of the occlusal point, regardless of the direction from which the force is being applied (Figure 1). The explanation given by Weinberg could be considered mechanically sound in a simplified schematic, but in reality, the direction of forces is three-dimensional and more complex. Recent advances in digital dentistry have made it easier to access 3D design files and use them to mathematically calculate the mean values of 3D occlusal points and vectors (Figure 2).

Clinical Case

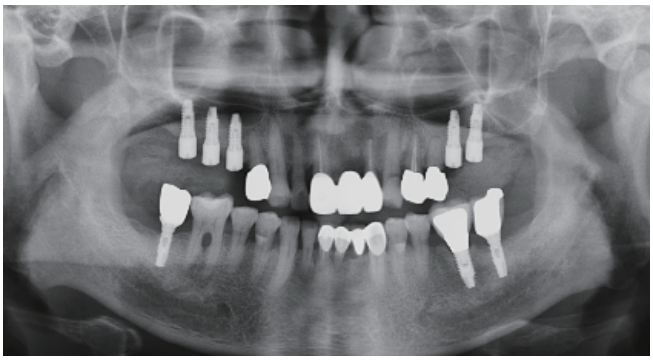

Fig. 3. Panoramic radiograph of a patient who visited the Department of Prosthetics after the placement of implants #15, 16, 17, 26, and 27.

A 65-year-old male patient visited the Department of Prosthetics after the placement of three implants in the maxillary right molar region and two implants in the maxillary left molar region (Figure 3).

After making the model through pick up impression coping using a silicone impression material and an individual tray and after installing the scan body, the model was scanned in the laboratory to obtain the 3D data. After designing the customized titanium abutment and zirconia crown of teeth #26 and 27 using a dental CAD software (Dental CAD, 3Shape, Denmark), the relationship between the position of the abutment platform and the mean vector generated at the occlusal points was checked (Figures 4-8).

Vector analysis was performed using a software with pre-prepared analysis code (Matlab 2019, Mathwork, Natick, MA, USA) and using the designed crown and abutment files, along with the antagonist teeth scan files.

The results of the initial vector analysis were favorable regarding the buccolingual direction of the mean vector of the occlusal points pointing toward the inner part of the platform (Figure 8). However, the mesiodistal direction was tilted to the mesial side (Figure 7A). The occlusal design was adjusted accordingly to change the mean occlusal vector to a more favorable direction (Figure 7B).
Finally, after completing the vector analysis on the direction that could minimize the lever effect on the implant, the occlusal points of the designed crown were finalized (Figure 9) and the zirconia crown was fabricated.
After installing crowns #26 and 27 inside the mouth, occlusal adjustments were made to create occlusal points, as intended, based on the previous vector analysis.
Even if the optimal occlusal points were determined based on the result of the vector analysis, the crown may still not be formed as intended when the crown is installed in reality in the oral cavity because of various errors.

However, even in such cases, as the favorable occlusal points are already determined, further occlusal adjustments could easily be made by referencing such results.

As mentioned above, it is determined that if the lever effect on the crown could be minimized by controlling the direction of the occlusal forces, then the micromovement and stress between the implant and the abutment could be minimized.

In the future, easier and faster vector analysis during the crown design process is expected owing to the integration of the automated vector analysis program and the dental CAD software.

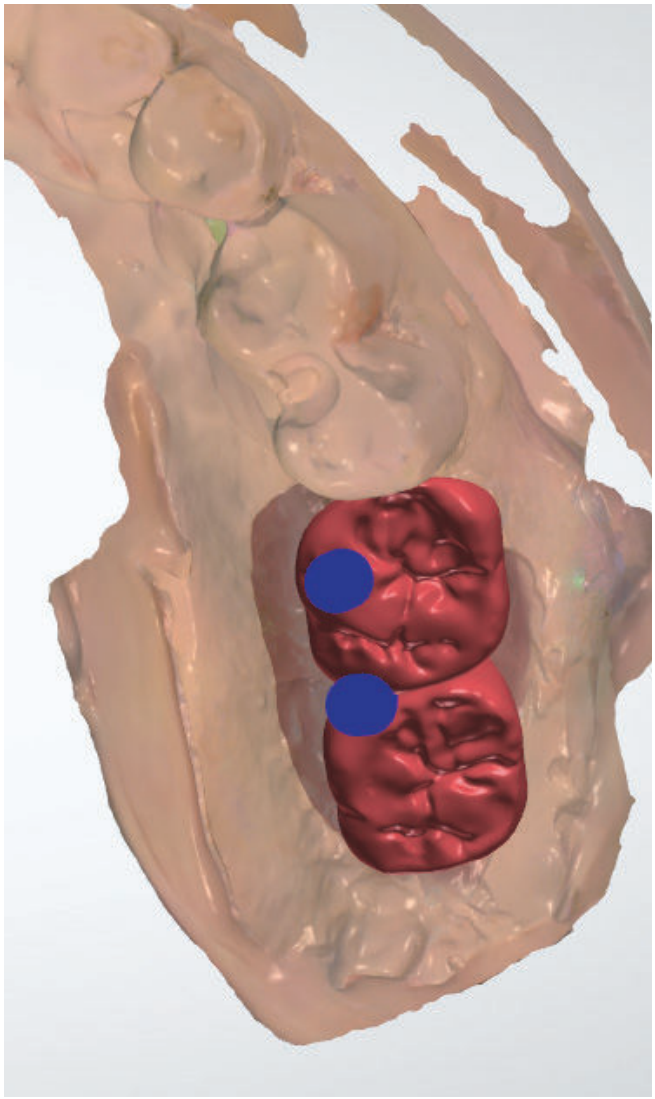

Fig. 4. Considerable lingual positioning of the implant when viewed from the occlusal surface due to buccal bone defect. In this case, more in-depth considerations of the occlusal forces are required.

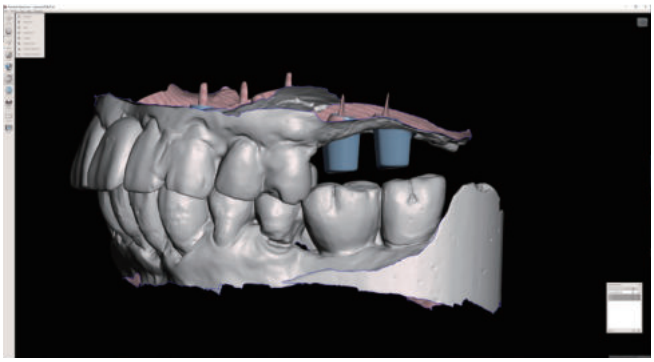

Fig. 5. Abutment design.

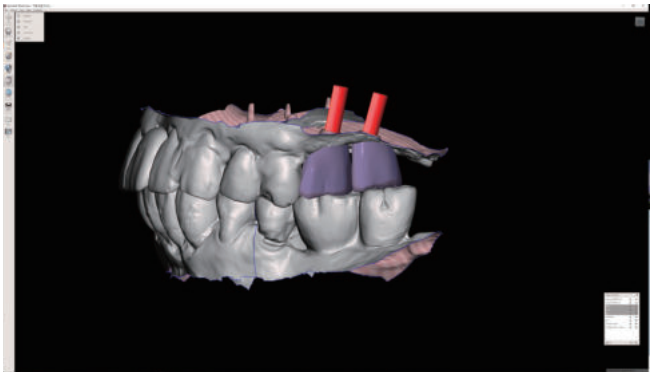

Fig. 6. Mesial tilting of the implant from the buccal view.

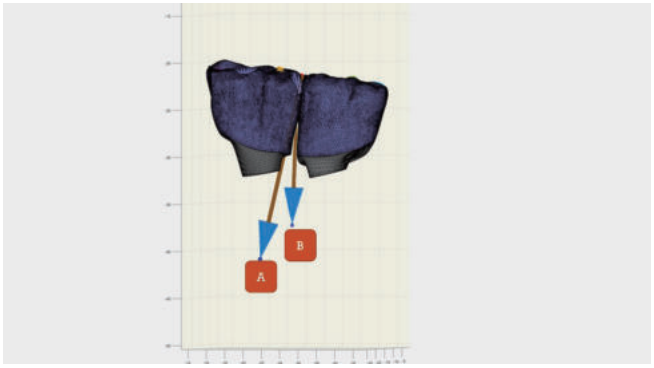

Fig. 7. Mean vector of the occlusal points from the buccal view.
A : Mean vector using information regarding the designed occlusal surface and the antagonist teeth. The direction of the mean vector is tilted toward the mesial side. B: Reanalysis of the mean vector after modifying the shape of the occlusal surface to change the positions of the occlusal points. The direction of the mean vector that showed mesial tilt was changed to a direction similar to the implant axis.

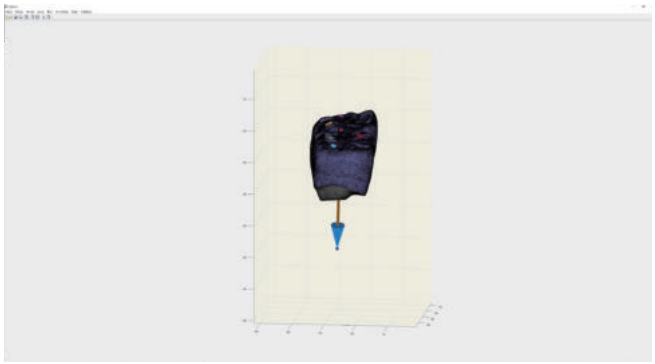

Fig. 8. Direction of the mean vector from the distal view. The direction is similar to the implant axis and is directed buccolingually toward the inside of the platform.

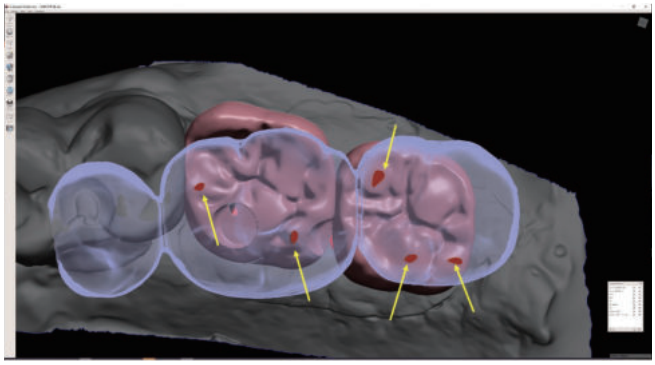

Fig. 9. Positions of the occlusal points formed with vector analysis.

Fig. 10. Positions of the occlusal points identified in the oral cavity after placement of the crowns.

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The references were checked for consistency.

Please change the font color back to black before using your paper for any purposes.

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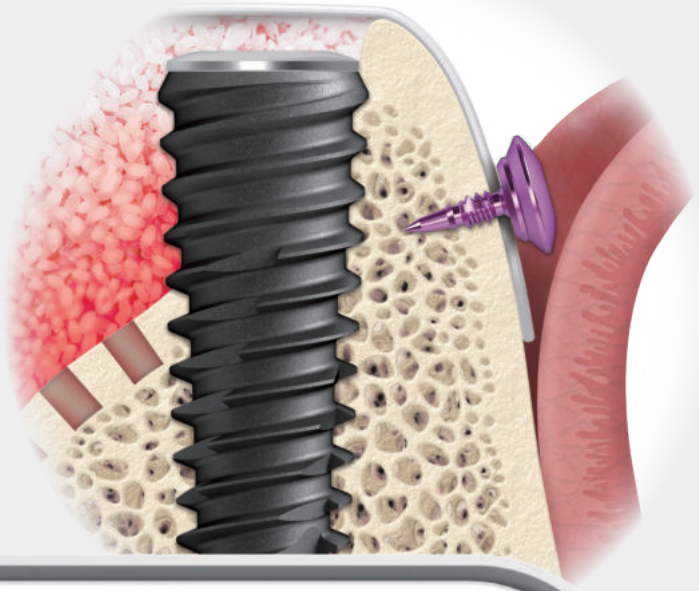

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Upper anterior implant immediate loading for pink esthetics : Case reports

Jaeyoon Kim, DDS, PhD

Introduction

Since 1965, dental implants have been used to replace extracted areas. (1) Currently, the 10-year implant survival rate is 90%–95%. (2) However, implant survival does not mean implant success, especially with regard to the upper anterior area.

Dental implants in this area need to satisfy patients' esthetic demand, and functional loading. Delayed gingival recession and abutment exposure due to bone and soft tissue resorption are common forms of esthetic failure of upper anterior implants. (Fig 1. a, b)

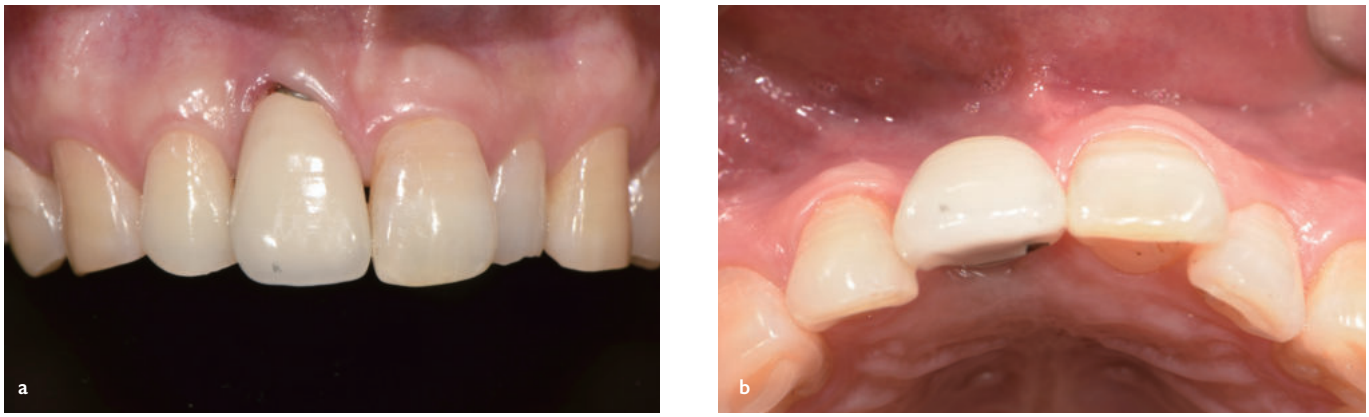


Fig. 1a-b. Intraoral clinical views. (a)Frontal view (b)Occlusal view

It is well documented that labial bundle bone resorption can follow tooth extraction in the upper anterior area. (3) With labial bone resorption, the regeneration procedure becomes difficult and may sometimes be impossible. To prevent labial bone resorption, extraction should be followed either by socket preservation or by immediate implant placement with bone graft. (4)

For better results with upper anterior implants, the author suggests immediate implant placement with bone graft.

and immediate loading. Immediate loading is a difficult procedure and raises the implant failure rate, as it can result in osseointegration failure. However, immediate provisional restoration prevents labial gingival recession and papilla recession. With these case reports, the author presents the esthetic results of upper anterior area immediate implant placement and immediate loading.

Jaeyoon Kim

Dr. Jaeyoon kim has graduated from Seoul National University, School of Dentistry in 2009. He trained at the department of Periodontics, Seoul National University. He gained a Master of Science in Dentistry and a Ph. D in alma mater. He is a speaker of DentalBean, DENTIS and Osstem. He maintains a private clinic in Incheon, Republic of Korea.

Case Presentation

Case 1

The first case is a 63-year-old man who presented with the chief complaint of #21 fracture due to trauma (Fig. 2 and Fig. 3). The bone quality was D3.

The treatment plan consisted of #21 extraction (Fig. 4), immediate implant placement (Fig. 5; SQ Implant, DENTIS, Daegu, Korea), guided bone regeneration (GBR; Ovis XENO-P, DENTIS, Daegu, Korea), and immediate loading.

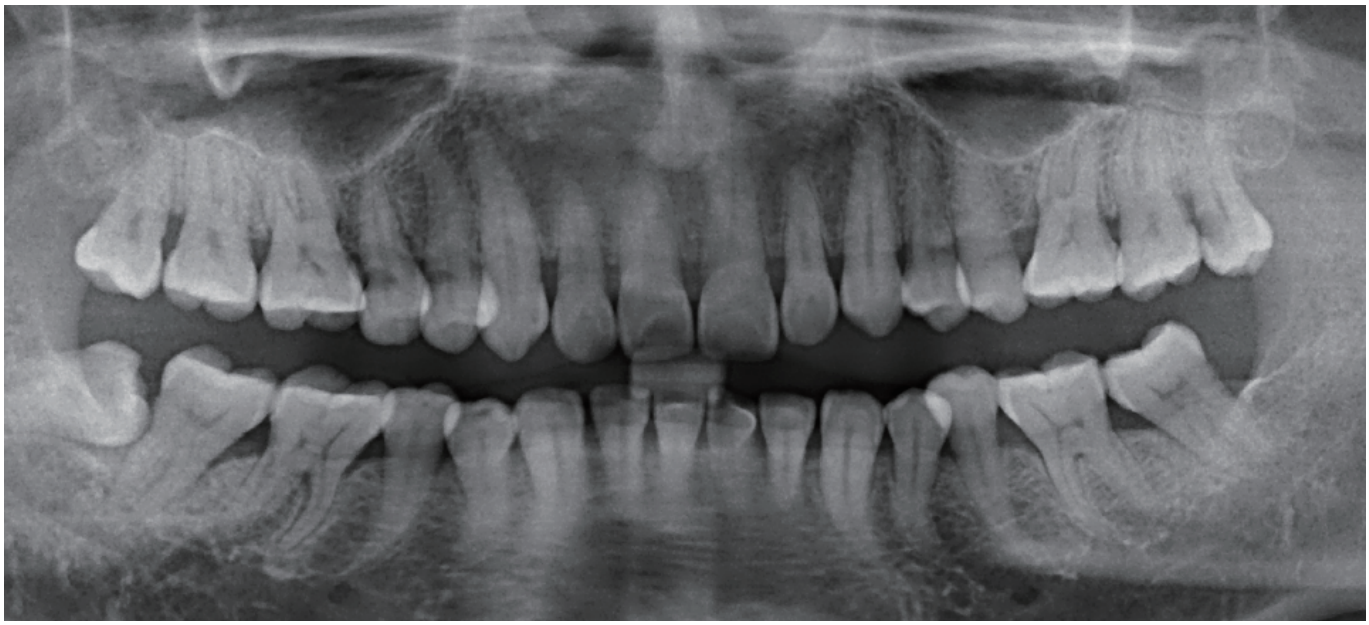


Fig. 2. Pre-op panoramic x-ray.

Fig. 3a-d. Pre-op clinical views.

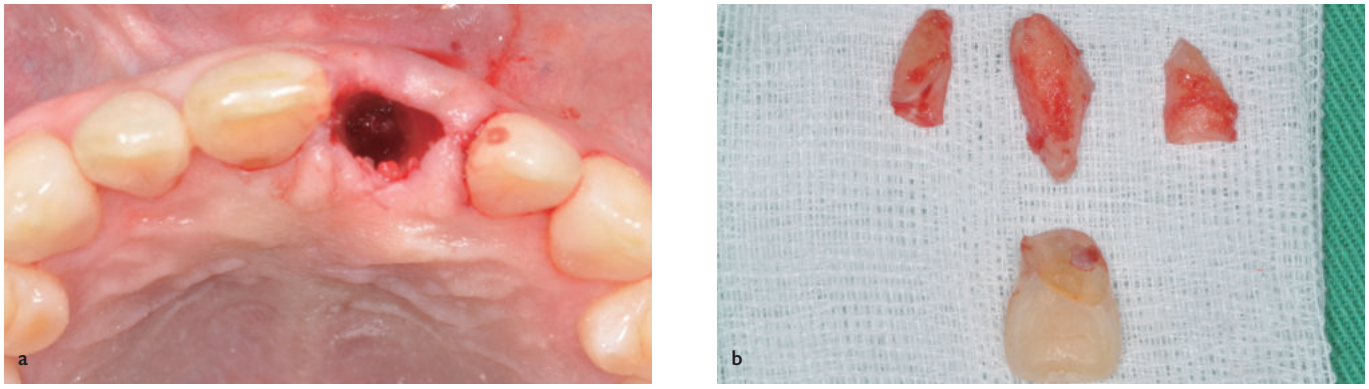


Fig. 4a-b. Extraction of #21.

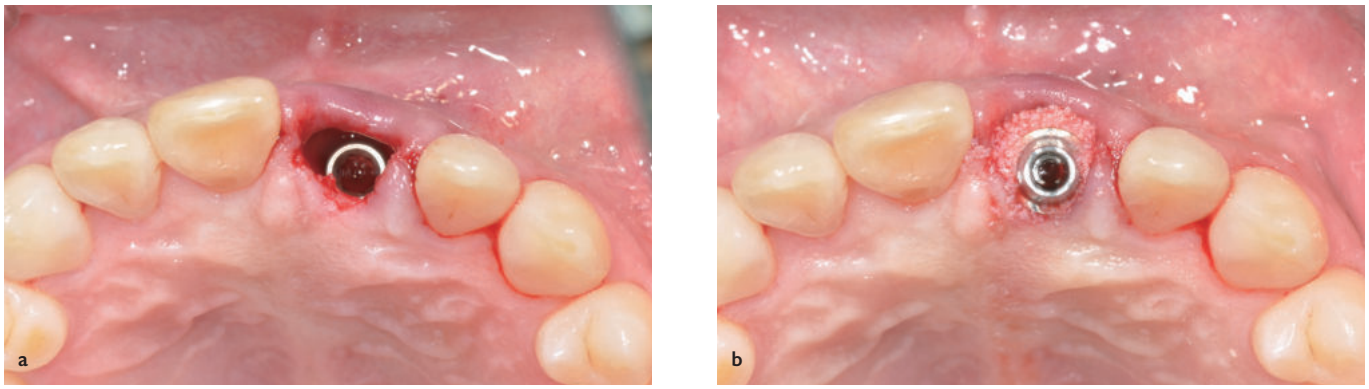


Fig. 5. Implant placement.

Fig. 6. Placement of bone graft material inside the labial bone socket after connecting the couple abutment.

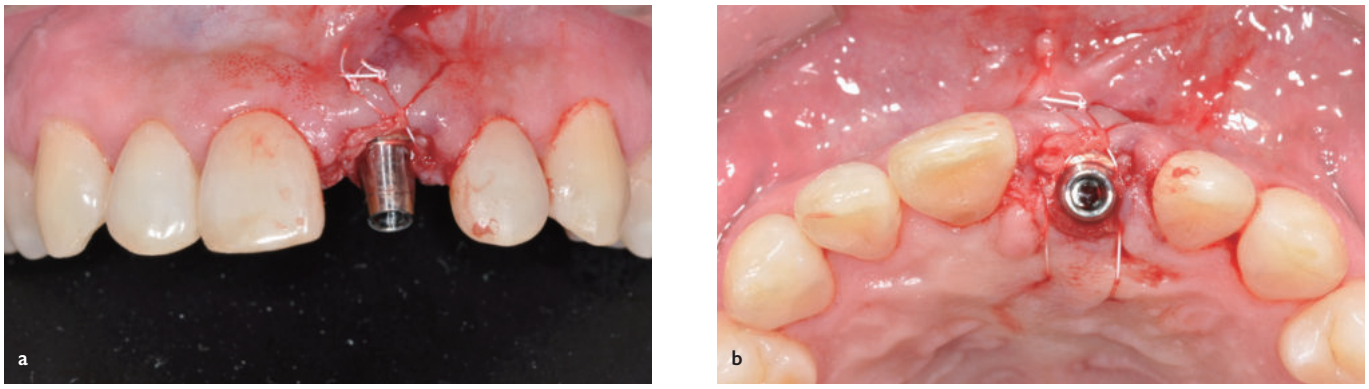


Fig. 7a-b. Suture placement.

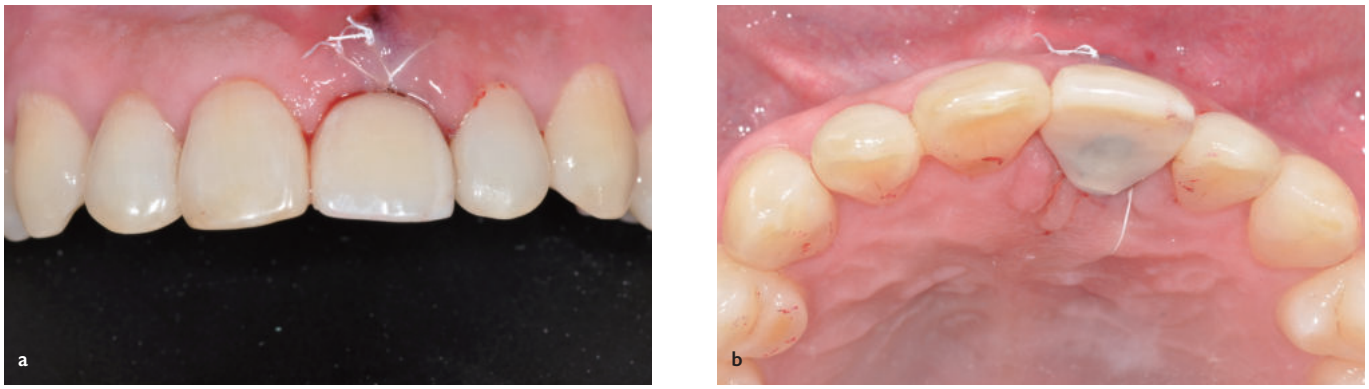


Fig. 8a-b. Immediate delivery of the provisional restoration.

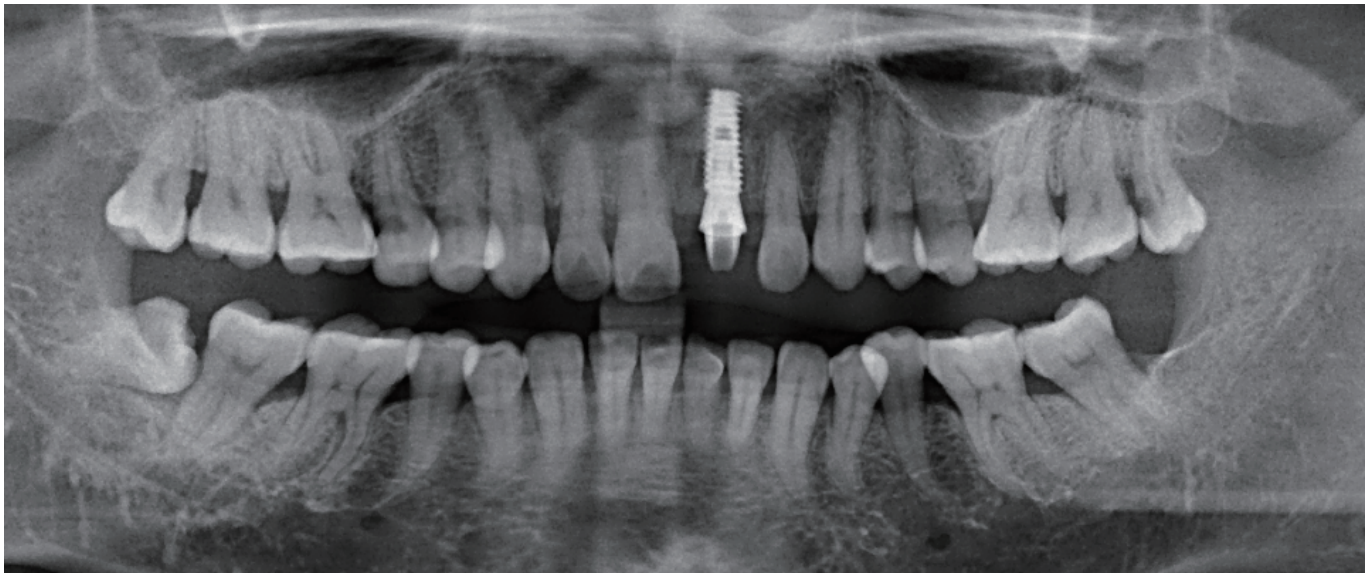


Fig. 9. Post-op panoramic x-ray.

Fig. 10a-c. Post-op check up. After (a) 1 Week (b) 2 Weeks (c) 7 Weeks.

Fig. 11a-d. Post-op check-up after six months, when the final prosthetic was delivered.

Fig. 12 a-d. Post-op check-up after 12 months.

Case 2

The second case is a 76-year-old woman who presented with the chief complaint of a fractured anterior tooth (Fig. 13 and Fig. 14). The bone quality was D3.

Treatment entailed extracting the #12 retained root rest (Fig. 15), followed by immediate implant placement (Fig. 17 and Fig. 18; SQ Implant, DENTIS, Daegu, Korea), GBR (Ovis XENO-P, DENTIS, Daegu, Korea), and immediate provisional loading (Fig. 14).

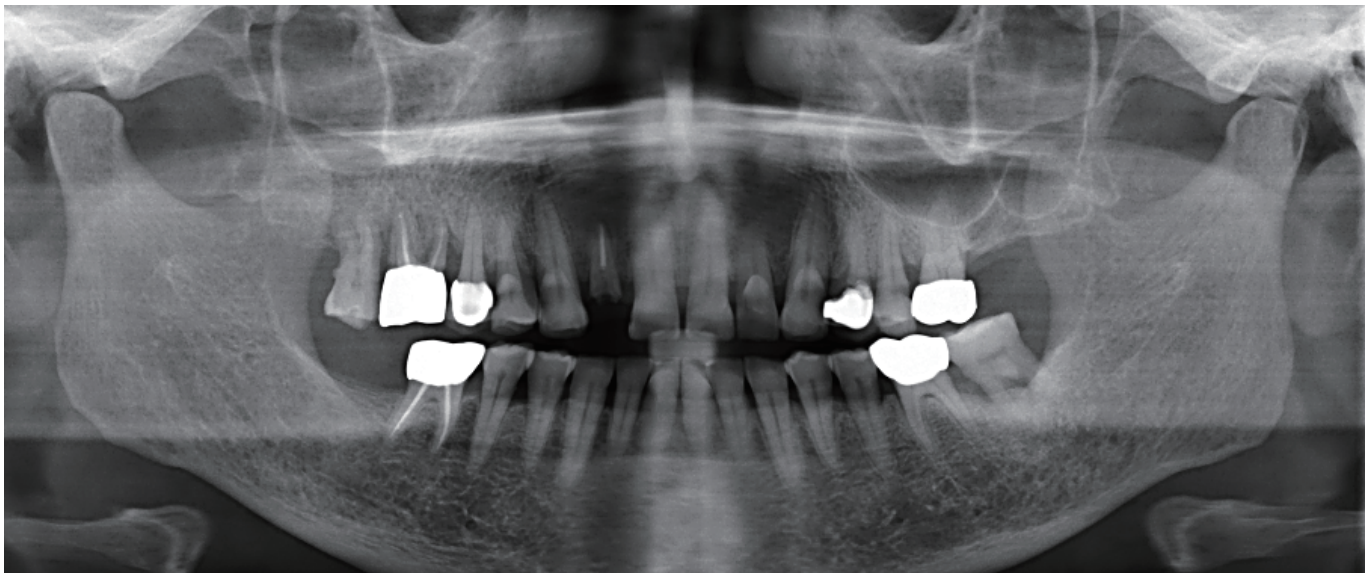


Fig. 13. Pre-op panoramic x-ray.

Fig. 14a-d. Pre-op clinical views.

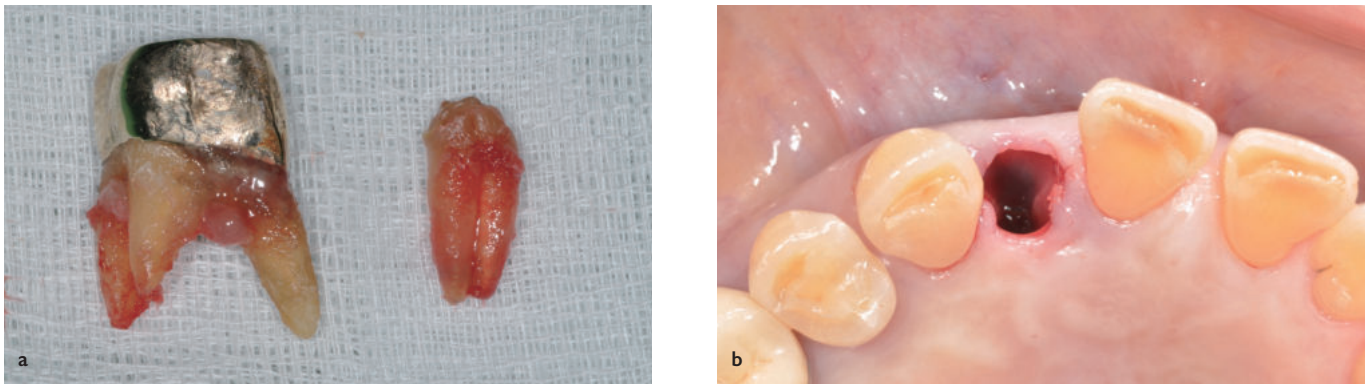


Fig. 15a-b. Extraction of the #12 root rest.

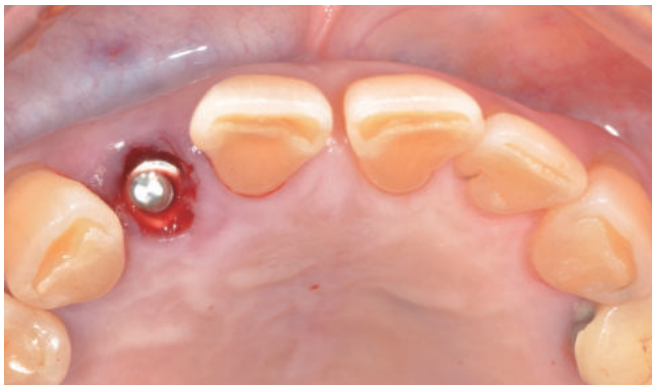


Fig. 16. Path check with a parallel pin.

Fig. 17. Placement of the DENTIS Ø 3.5 X 12mm SQ implant.

Fig. 18. Placement of the implant.

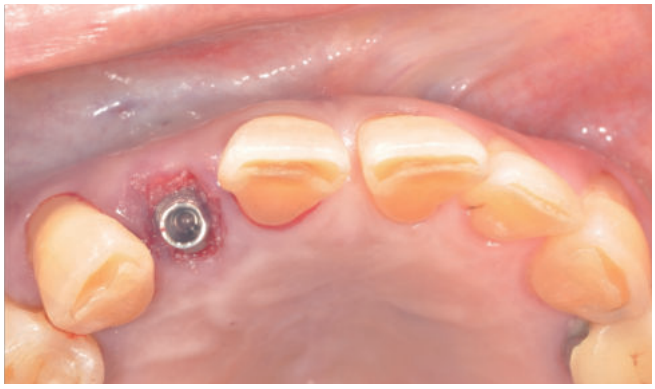
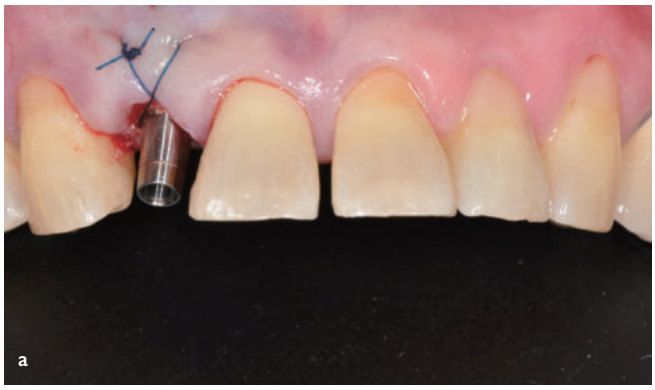


Fig. 19. Connection of the couple abutment, and placement of bone material, platelet rich fibrin and concentrated growth factor in the labial bone socket.



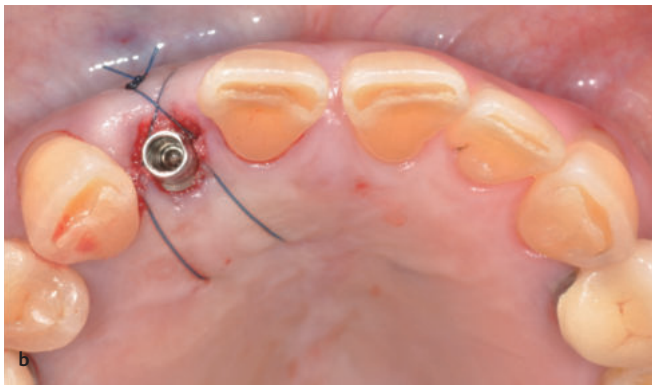


Fig. 20a-b. Suture placement.

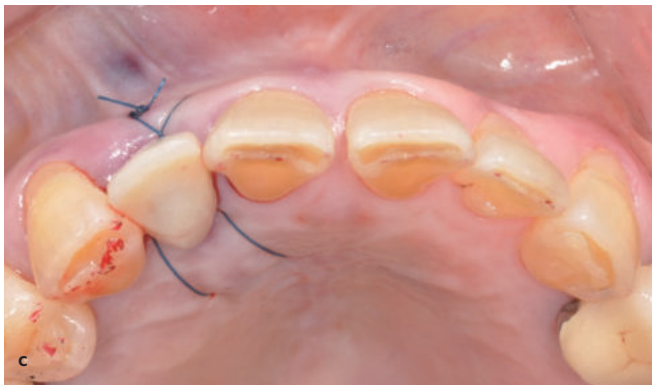


Fig. 21a-d. Immediate loading of the provisional restoration.

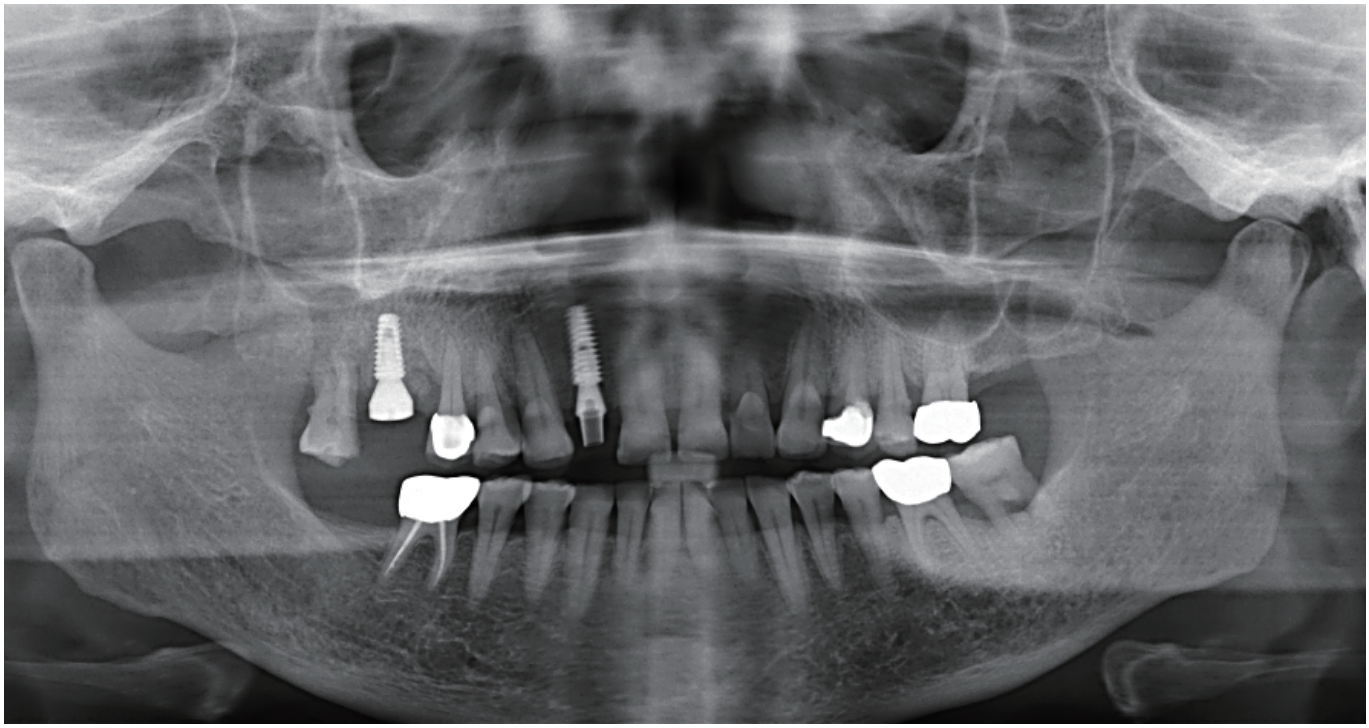


Fig. 22. Pre-op panoramic x-ray..

Fig. 23a-d. Post-op check-up after 2 weeks.

Fig. 24a-d. Post-op check-up after 6 months, with delivery of the final prosthetic.

Case 3

The third case was a 46-year-old woman who presented with the chief complaint of upper anterior pain (Fig.25 and Fig 26). The bone quality was D3.

Treatment consisted of #12, 21 immediate implant placement (Fig. 27 and Fig. 28; SQ Implant, DENTIS, Daegu, Korea), GBR (Ovis XENO & Ovis Collagen Membrane, DENTIS, Daegu, Korea), and immediate provisional restoration loading.

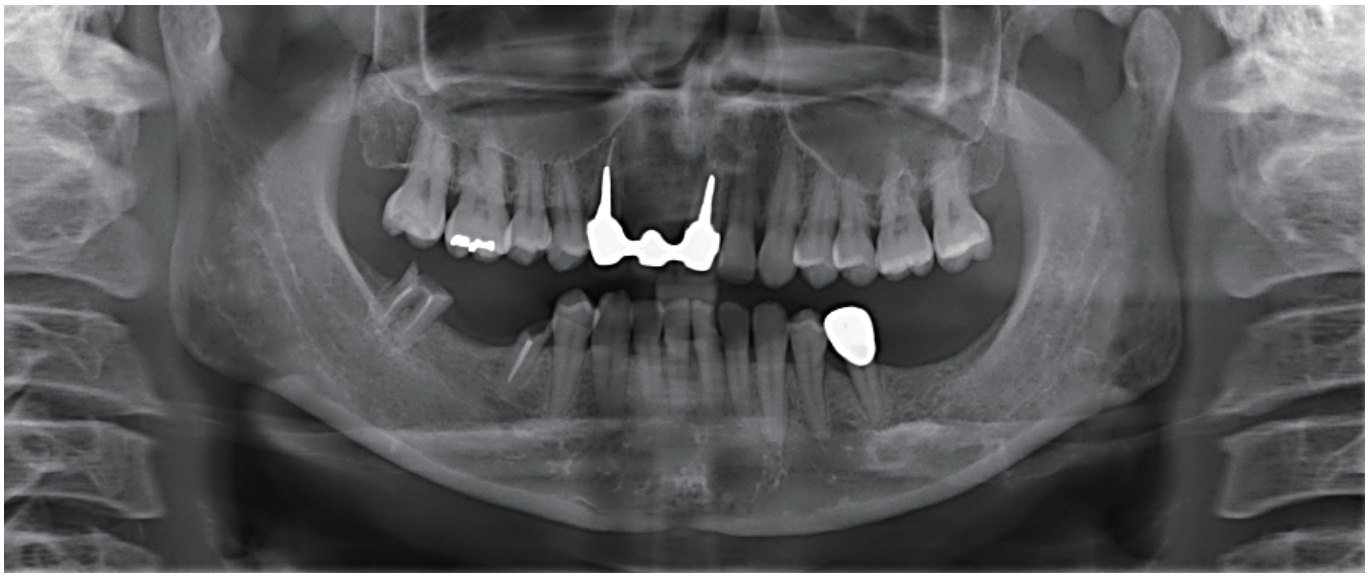


Fig. 25. Pre-op panoramic x-ray.

Fig. 26a-b. Pre-op clinical views.

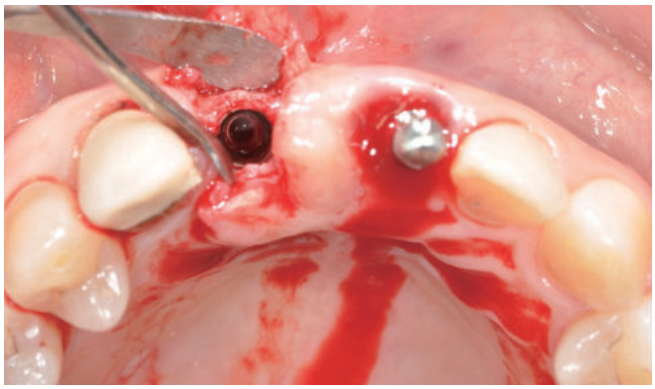


Fig. 27. #11 implant placement and #21 path check with a parallel pin.

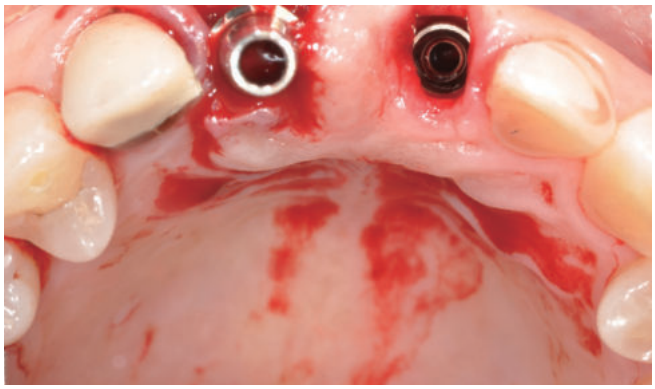


Fig. 28. #11 couple abutment connection and #21 implant placement.

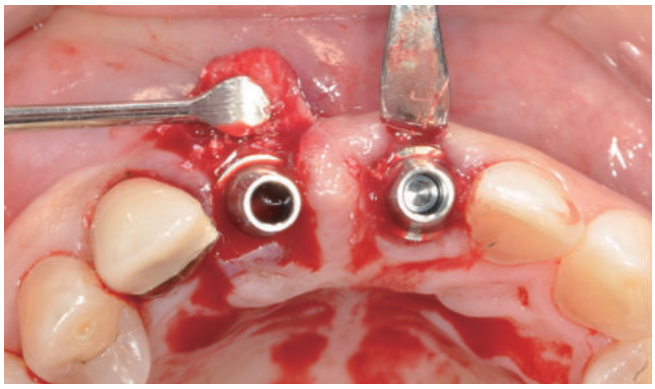


Fig. 29. Couple abutment connection, and bone graft on the outer surface of the #11 labial bone and the #21 labial socket.

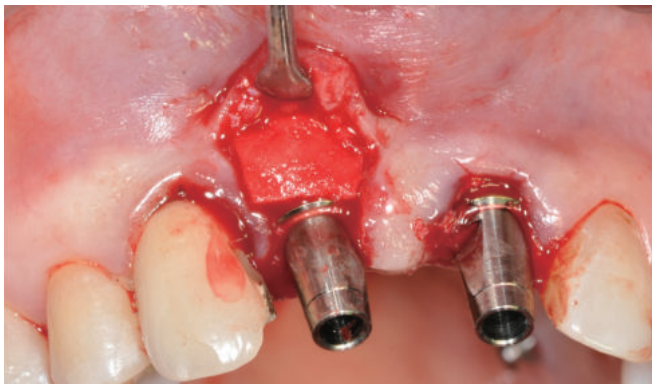


Fig. 30. Covering the collagen membrane at the #11 GBR site.

Fig. 31a-b. Suture placement.

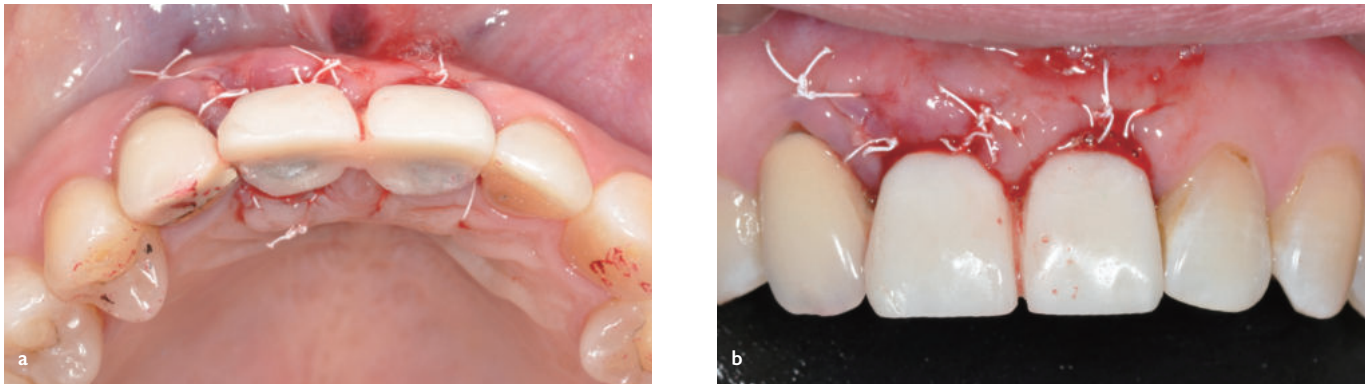


Fig. 32a-b. Immediate loading of the provisional restoration.

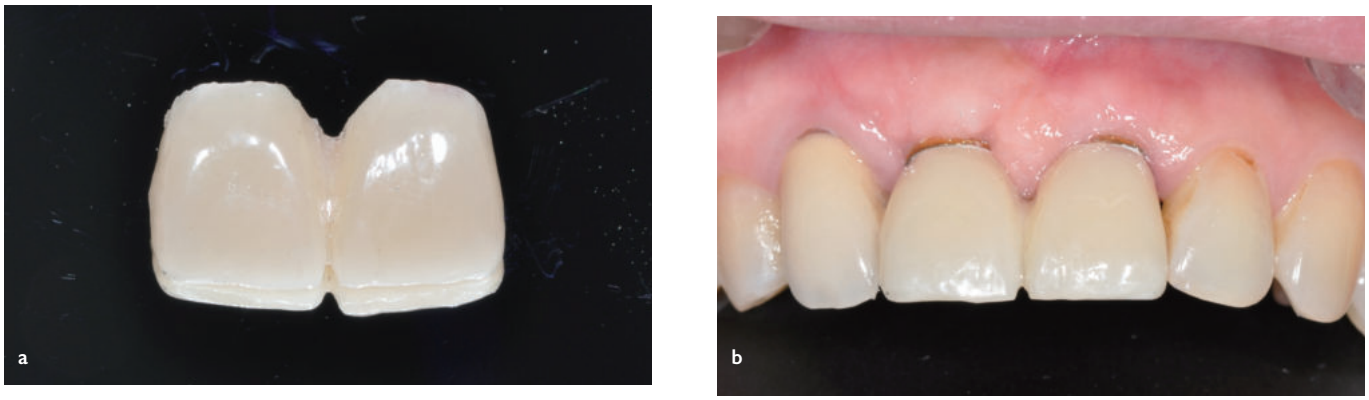


Fig. 33a-b. Post-op check-up after 2 months, with addition of flowable resin on the provisional restoration.

Fig. 34a-d. Post-op check-up after 6 months, with delivery of the final prosthesis.

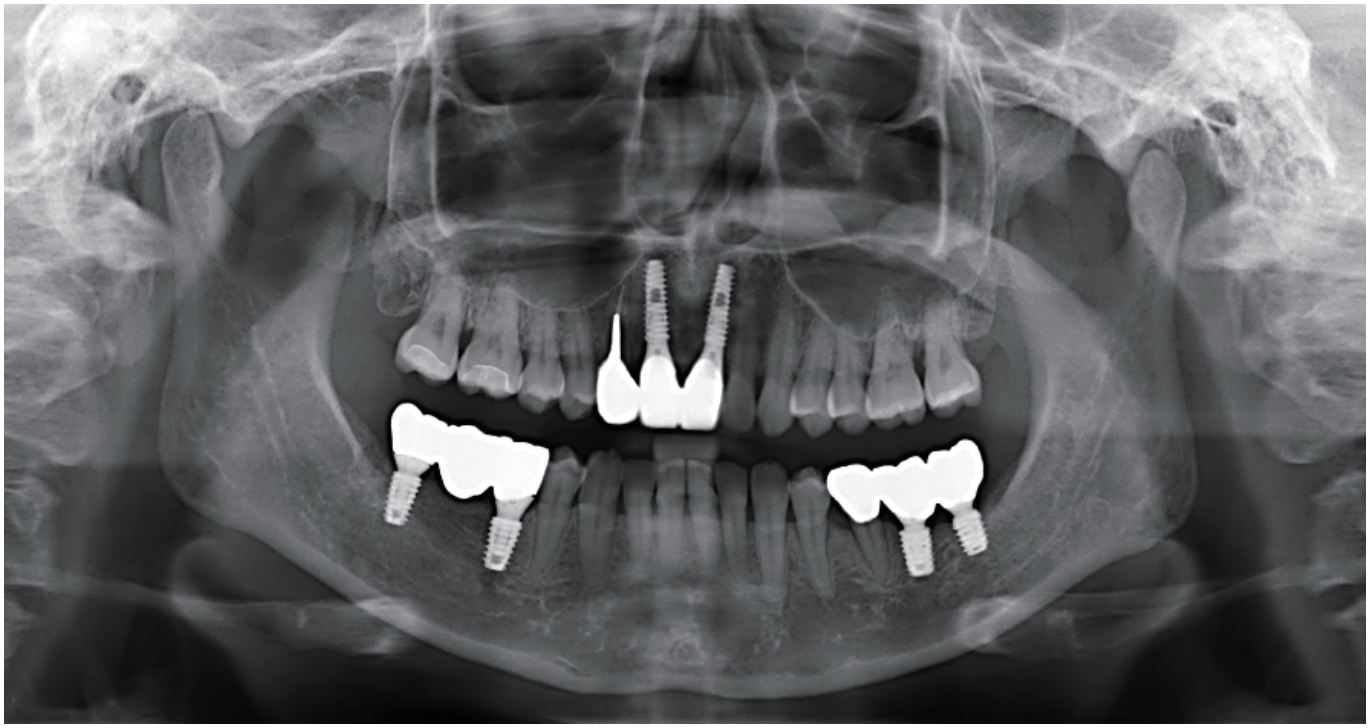


Fig. 35. Post-op panoramic x-ray after 11 months.

Fig. 36a-d. Post-op check-up after 11 months.

Discussion

Every case finished with esthetic result with immediate implant placement and immediate loading. Author suggests following protocol to increase success of immediate loading on upper anterior implants.

1. Fixture path should be center of mesial and distal and between incisal edge to cingulum of neighbor teeth for esthetic result
2. 1 or 2 step under- drill to increase initial stability
3. Fixture initial stability is more than 30N and ISQ value should be more than 70
4. Accurate abutment connection to fixture without micro-mobility
5. Use final cement for provisional restoration

First protocol is not for immediate loading but for esthetic result of upper anterior prosthetic procedure. Accurate position of fixture makes esthetic prosthetic result, moreover, advanced labial tilted path of fixture result in delayed labial gingival recession. Therefore, mesial distal center position and labial path of fixture should be between incisal edge to cingulum of neighbor teeth make better esthetic and long-term good results.

Second and third protocol is about implant drilling. Drilling is one of the most important procedure during implant placement. Immediate loading procedure need no micro-mobility on fixture, initial stability should be more than 30N. However, more than 30N of initial stability do not always conform success of immediate loading. Some point or surface stuck could make 30N of initial stability. During bone remodeling procedure, this point or surface could loosen and loss of stability could make immediate loading failure. Accurate drilling point and path during all drilling procedure make perfect fit of fixture into drilling hole. With this accurate drilling and more than 30N of initial stability make immediate loading success.

Abutment connection is also very important procedure for immediate loading, because inaccurate connection could make micro-mobility. Before abutment connection, bone contouring sometimes need. Abutment should connected to fixture with 30N without getting caught by bone.

Provisional restoration is also cemented with final cementation into the abutment. Temporary cementation on provisional restoration cause micro-mobility on abutment and fixture, make risk of failure.

From bone to fixture, abutment and provisional restoration are solidly connected and there is no micro-mobility make immediate loading success. After extraction, soft tissue shrinkage could prevented by support of gingival portion of abutment and provisional restoration. To prevent labial bone loss, fixture should placed on palatal portion of extraction socket and labial gap should be filled with xenogenic bone graft material. In case with headed ridge, almost every case of upper anterior implant needs GBR procedure on outer surface of labial bone. With this procedure, make perfect pink esthetic for implant prosthetics.

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1. Acta Orthop Scand. 1981;52(2):155-70. Osseointegrated titanium implants. Requirements for ensuring a long-lasting, direct bone-to-implant anchorage in man. Albrektsson T, Brånemark, Hansson HA, Lindström J. PI

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How to cite this article: Kim JY. Upper anterior implant immediate loading for pink esthetics : Case reports. *J Clin Digit Dent.* 2019;1(3):11-23. www.jcdd.org

SQ GUIDE

DENTIS Digital GUIDE System for SQ IMPLANT

Application of Irrigation

Reduce bone heating with innovative irrigation-type drill design

Fixture Placement is Possible with Only Three Drillings

Application of multi-pass drilling makes 2-point fixation possible with increased accuracy due to minimal tolerance

Sleeve with Biocompatible Material

Increased stability with titanium sleeve

Stress Free! Use SQ Implant

DENTIS SQ implant with strong initial fixation

DENTIS

Head Office (Korea)
Tel +82 53 589 3528 E·mail colin@dentis.co.kr Web·site www.dentis.co.kr/eng

DWS
2019 DENTIS & GT-MEDICAL
World Implant Symposium

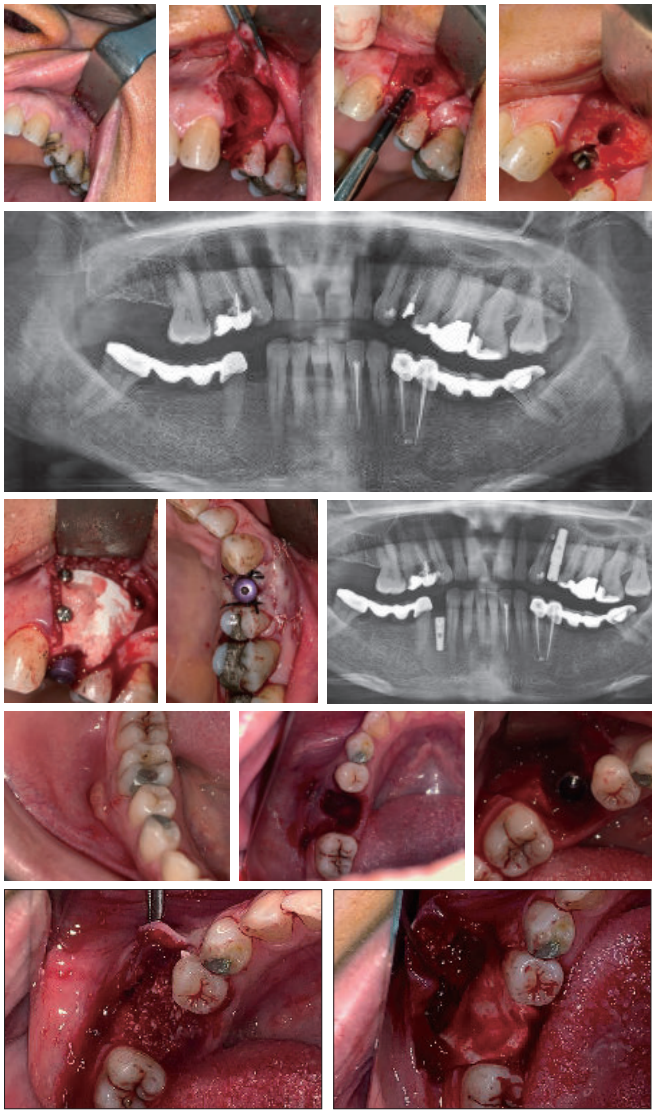
Evaluation of Immediate Implant Placement in Periapical Infected or Non-Infected Sites: 1 Year Follow-Up

Sancar Şimşek / DDS,PhD

Mersin Idealdent,Turkey

Object

Our main aim in this study is to apply the immediate implant at the same time of tooth extraction in infected or non-infected areas and to evaluate the success of the implant with ostell device and measure to implant-bone level with radiography at 0., 3., 6., 12. months.



Materials and Methods

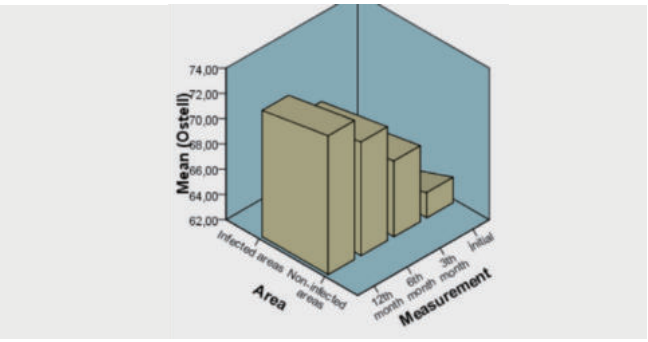
Forty consecutive patients and 76 implants were included this study. All implants in this study were Dentis OneQ implants. Half of all treated teeth demonstrated radiographic signs of chronic periapical periodontitis. Preliminary diagnostic procedures consisted of a panoramic radiographic evaluation supplemented with periapical radiographs.

Patients were randomly allocated (computer random- ization program) to an immediate placement infected or non-infected placement protocol.In the infected immediate implant group, implant surgical procedure was immediately performed after extraction of the involved tooth and thorough degranulation of the socket.

After completion of site preparation, Dentis OneQ implant was placed with a minimal torque of 25 Ncm by using a torque controller. Selection of implant diameter was based on both primary stability and fill of the socket. The implant was placed 2 mm below the cervical junction of the adjacent teeth. Because of the apical infection, part of the buccal plate had been lost, and bone augmentation utilizing allografts and autogenous bone was harvested. The bone grafts placed buccally to totally cover the implant. After adaptation of the mucoperiosteal flap to achieve tension-free wound closure, a bioresorbable collagen membrane (Bio-GideÒ, Geistlich AG, Wolhausen, Switzerland) was placed and the wound was closed. The following variables were recorded: ISQ at 3,6,12 months, implant success or failure at 6 months after implant placement, and marginal radiographic bone level, mid-buccal gingival level, and papilla level at 1 year.

Results

Ostell means were higher in the non-infected area group for initial, 3rd, 6th and 12th month measurements with statistically insignificant differences ($p>0.05$). Bone loose means were higher in the infected area group for initial, 3rd, 6th and 12th month measurements with statistically insignificant differences ($p>0.05$).



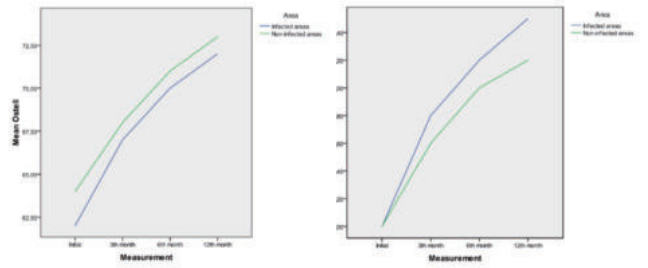


Table 1. Ostell and Bone loss at initial, 3rd, 6th and 12th months between infected and non-infected areas

	Infected area	Non-Infected area	p
Ostell			
Initial	62.00	64.00	0.317[a]
3rd month	67.00	68.00	0.317[a]
6th month	70.00	71.00	0.317[a]
12th month	72.00	73.00	0.317[a]
Bone lose			
Initial	-	-	>0.05
3rd month	0.80	0.60	>0.05
6th month	1.20	1.00	>0.05
12th month	1.50	1.20	>0.05

Conclusions

Within the limits of the present study, immediate placement of single tooth implants for replacement of teeth with periapical lesions was a predictable treat- ment. Implant success, mean ISQ, and radiographic bone level at 1-year follow-up; there is no significant difference was found between immediate implant surgery in the infected area and the non-infected area.

How to cite this article: Sancar Şimşek. Evaluation of Immediate Implant Placement in Periapical Infected or Non-Infected Sites: 1 Year Follow-Up. *J Clin Digit Dent.* 2019;1(3):25-26. www.jcdd.org

Poster Awards 2nd PRIZE

DWS
2019 DENTIS & GT-MEDICAL
World Implant Symposium

DIGITAL FLOW IN FULL MAXILAR REHABILITATION WITH IMMEDIATE LOADING IMPLANTS

Moreno Pérez, Jesús
Clinca Orgaz Dental

Introduction

The digital dental flow in is an advance technology that provides improvements for our patients and for our work to improve the aesthetics, function and oral health of our patients. We can reduce the number of appointments and shorten times by combining the Digital flow with immediate implantology. The objective is to reflect the use of flow digital in a clinical case.

Case review

A clinical case of a 67-year-old male patient with remains is presented maxillary roots and poor periodontal condition. After performing treatment conservative and periodontal, we proceeded to take digital records with scanner intraoral (3Shape) and request proof of runners on the root remains, it took a vertical dimension and a printed tooth test was requiredon the root remains. Since the maxillarybone remnant was adequate it raised the possibility of immediate loading to the patient, for which commissioned the technician a provisional milling with palatal supports and drilled in the abutment teeth, this serving as a prosthetic guided splint, following the technique described by Gallucci in 2004. In the intervention the extraction was performed of the root remains, implant placement (16, 13, 11, 21, 23, 25), connection of transepithelialpillars and overflow of the prosthesis, achieving a aesthetics and immediate function. After four months, a pre-scan wasperformed of the patient's prosthesis, implant scanning along with the profiles of emergency using GT medical scanbodys, antagonist and occlusion, requesting and from the laboratory a test of sintered structure, being correct and passive, proof of cake, occlusion was adjusted and after glaze it was placed in the mouth.

Patient Information

Age 65Y
Sex Male
C.C 16, 15, 14, 13, 12, 11, 21, 22, 23, 24, 25, 26, 27 craked

Fig. 1. Pre-op Extraoral Photo

Fig. 2. Pre-op Intraoral Photo

Fig. 3. Pre-op Radiography

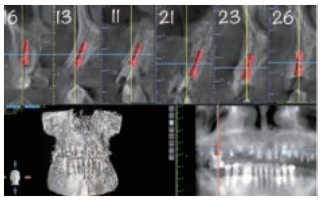


Fig. 4. Pre-op CT

Treatment Procedure

1. Prothesis design

Fig. 5. Smile design

Fig. 6. Prothesis design

2. Implant installation & immediate loading

Tooth No.	Product	Fixture Size	Torque	Significant content
#11	ETK	Ø4x12mm	35N	Immediate
#21	ETK	Ø4x12mm	20N	Immediate
#13	ETK	Ø4'5x12mm	45N	Immediate
#23	ETK	Ø4'5x12mm	45N	Immediate
#16	ETK	Ø4'5x12mm	35N	Immediate
#25	ETK	Ø4'5x12mm	15N	Immediate

Fig. 7. Post-op Delivery Photo

Fig. 8. Pick up technique

Fig. 9. Post-op Delivery Photo

Fig. 10. Post-op Extraoral Photo

3. Maxillar Crown Delivery

Fig. 11. Shape Impresion

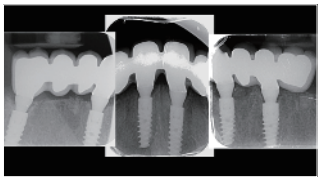


Fig. 12. Final prothesis

Fig. 13. Post-op Extraoral photo

Fig. 14. Pink & white esthetics

Fig. 15. Post-op Intraoral Photo

Fig. 16. Post-op Intraoral Photo

Discussion

After 5 months of treatment, it was possible to return the aesthetic, function and oral health to a patient who had lost it, performing a multidisciplinary treatment and without need to take analogic models.

References

Gallucci G,Bernard J, Med P, Bertosa M, Berlser U. Immediate Loading with Fixed Scre-Retained Provisional Restorations in Edentulous Jaws: The Pickup Technique. Int J Oral Maxillodac Implants 2004; 19:524-533.

Conclusions

Digital dentistry is a reality, allowing to rehabilitate edentulous jaws without the need to take conventional measures.The Union of the digital flow and the immediate load manage to shorten the treatment times, making these complex treatments more bearable to the patient.

How to cite this article: Moreno Pérez, Jesús. DIGITAL FLOW IN FULL MAXILAR REHABILITATION WITH IMMEDIATE LOADING IMPLANTS. *J Clin Digit Dent.* 2019;1(3):27-28. www.jcdd.org

Poster Awards 3rd PRIZE

DWS 2019 DENTIS & GT-MEDICAL World Implant Symposium

The Vampire Sinus Lift Digital Restoration of OneQ implants placed in Autologoaus Sinus Augmentation

Dr. Irfan Qureshi

MSc Prosthodontics, King`s College London
Diplomate Implant Dentistry, Royal College of Surgeons, Edinburgh, Scotland

Case Report

- 45 Year old male patient, non smoker, non diabetic.
- Presented with painful swelling on both sides of upper jaw and complained of missing teeth.
- Posterior molar teeth were severely infected.
- Baseline tests INR, CBC, HbA1c.
- Tests revealed that he was diabetic HbA1c was 10.
- Patient was medicated with Amoxil and
- Metronidazole along with painkillers.
- Thorough examination, scaling, root planning was done, followed by referral to a specialist physician for diabetes.
- Surgery was scheduled 4 months later once the HbA1c had been brought down to 5.7.

Patient Information

Fig 1. re-op showing infected Upper right first and second molars which would be extracted

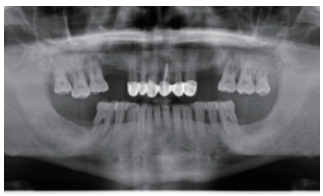


Fig. 2. OPG Showing missing teeth and infected maxillary molars with bone loss and periapical pathologies

Treatment Procedure

Harvesting Autologous tooth bone and Blood derived Growth Factors

Fig. 3. Extracted teeth cleaned of external debris and decay

Fig. 4. Prepared teeth Placed in the Dentin Grinder

Fig. 5. Strained particulate graft

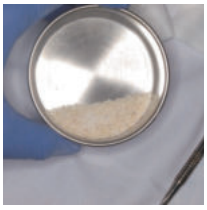


Fig. 6. Sieved particulate graft

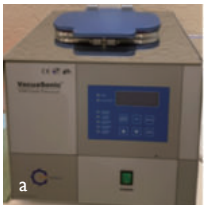
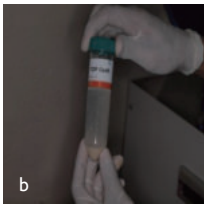


Fig. 7a-b. Autologous tooth bone processor unit



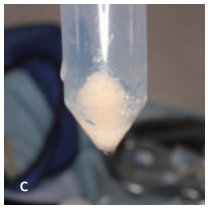


Fig. 8a-c. The Autologous Tooth Bone(ATB) is prepared after various cycles and conditioning

Fig. 9. Medifuge used to harvest blood derived growth factors

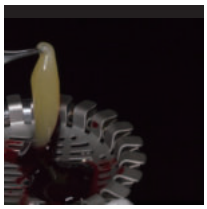


Fig. 10. Fibrin block derived from the blood using silica coated red test tube

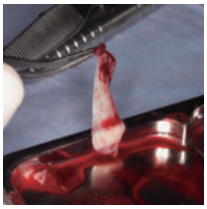


Fig. 11. Fibrin block pressed into a high tensile strength CGF membrane

Fig. 12. Autologous Fibrin Glue (AFG) in liquid form using the white test tube

Fig. 13. AFG being mixed with the Autologous Tooth Bone

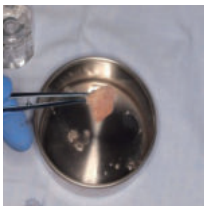


Fig. 14. Autologous ATB sticky bone (natural and organic)

Surgical procedure for lateral window sinus augmentation

Fig. 15. Two implants placed in the saddle area for upper premolars and lateral window created

Fig. 16. Following reflection of the sinus membrane, Autologous sticky tooth bone with CGF is grafted

Fig. 17. Same graft Placed in molar extraction Sockets

Fig. 18. The completed bone graft

Fig. 19. Resorbable collagen barrier membrane overlaid with CGF membrane

Fig. 20. Vicryl rapide sutures

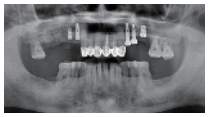


Fig. 21. 4 months post operative OPG

Fig. 22. Re-entry 4 months later

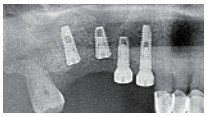


Fig. 23. Implants placed with high insertion torque

Digital restoration of OneQ Implants

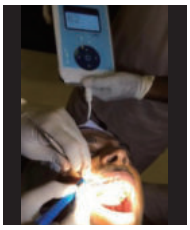


Fig. 24. 62 ISQ at the time of implant insertion at grafted site

Fig. 25. Scan Bodies for digital impression

Fig. 26. IOS used for digital impression

Fig. 27. Design stages for CAD CAM abutments and Zr Crowns

Fig. 28. Custom abutments torqued at 35 Ncm

Fig. 29. Zirconium crowns emented

Fig. 30. 2 years post op X-ray

Fig. 31. 2 years postoperative OPG

Conclusions

- Autologous tooth bone and growth factors provide great benefits documented in literature.
- CAD CAM custom abutments give greater surface area for retention and better contours.
- IOS with digital impressions is an exciting development
- Stable bone levels post treatment show the potential of using these new techniques.

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Poster Awards 3rd PRIZE

DWS 2019 DENTIS & GT-MEDICAL World Implant Symposium

Tooth and implant supported prosthetics of the patient with partial adentia and tooth abrasion

Dr. Vitaliy Danilenko / dentist orthopedist
Company «ASKAM», Krasnodar, Russian Federation
Co-author: dr. Roman Chebotarev, maxillofacial surgeon, implantologist.
OOO «ASKAM», Krasnodar, Russian Federation

Introduction

Often dental implantation allows to solve not only functional, but also aesthetic problems. The patient gets a feeling of satisfaction with his appearance and, as a result, self-confidence.

Case review

Patient Information

Age 57Y
Sex Female
C.C complains on the aesthetic aspect, oral cavity discomfort, difficulties chewing food. Diagnosis: partial adentia, chronical periodontitis.

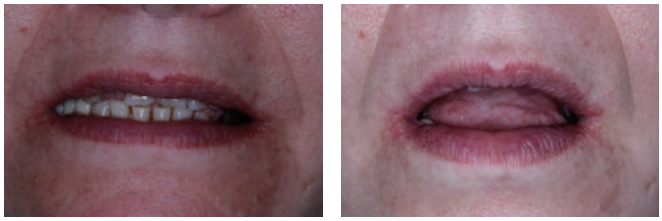


Fig. 1-2. Pre-op Extraoral Photo

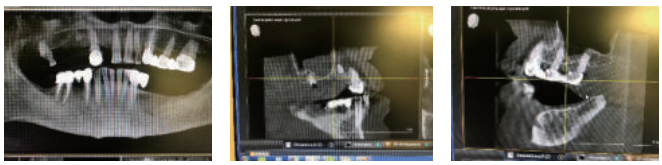


Fig. 3-5. Pre-op Radiography

Treatment Procedure

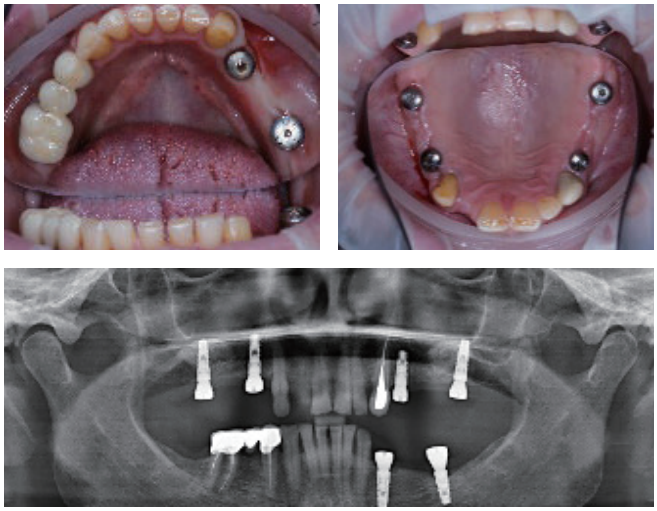
1. Extraction of 14, 17, 25, 27

2. Carrying out direct sinus lift procedure in the area of 16 and 26

3. Immediate Implant Installation, suturing

Tooth No.	Product	Fixture Size	Guide Wheel
#14	S-Clean Tapered I	4.1	12
#16	S-Clean Tapered I	4.1	12
#24	S-Clean Tapered I	3.7	10
#26	S-Clean Tapered I	4.3	12
#34	S-Clean Tapered I	3.7	12
#36	S-Clean Tapered I	4.3	10

6 months later
Implant exposure and healing abutment placement.



21 days later
Taking impressions for manufacturing dental prosthesis.
Centric bite registration. Provisionalization.

10 days later.
Fitting of zirconium dioxide dental prosthesis.

Dental prosthesis design: material – zirconium dioxide. Maxilla – implants (4) and tooth -supported combined model. Mandible– implants (2)-supported bridge.

Fig. 6. Post-op Delivery Radiography

Fig. 7-8. Post-op Oral Photo

Fig. 9. Post-op Extraoral Photo

Case review

The results of treatment exceeded all expectations – both, the doctor and the patient, are satisfied.
Treatment complications: immediate teeth extraction, bone grafting and implantation. Restorations on teeth and implants (combined model and cast)
Guideline, which is described above, was chosen to reducea number of surgical interventions and treatment time by 6 month. Successful result was guaranteed by experience in using implants of s-Clean line (from Dentis) and by their properties.

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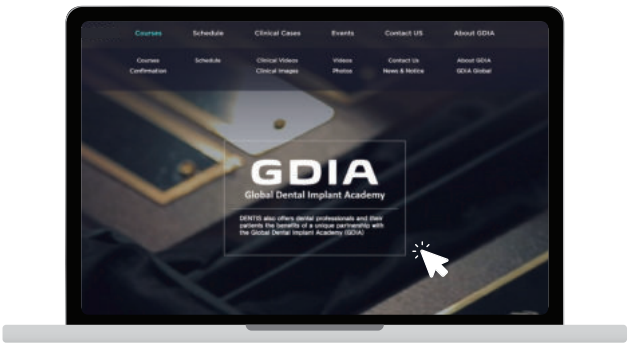
The First Half of 2020 DENTIS Seminar Schedule

DATE		EVENT		DIRECTOR	VENUE
Feb	1/2/15/16/29	Seminar	[DENTIS X DENTAL BEAN] Red Course - Start of Implant surgery and prosthetics	Yongseok Cho/Sewoung Kim	Seoul (Korea)
	2		[DENTIS]Opening Management dental clinic seminar	-	Seoul (Korea)
Mar	1/21/22		[DENTIS X DENTAL BEAN] Red Course - Start of Implant surgery and prosthetics	Yongseok Cho/Sewoung Kim	Seoul (Korea)
	7/8/22/23		[DENTIS]All IN ONE Course	Jeayoon Kim/ Kiwon Na	Seoul (Korea)
	14/15		[CTS Gold Course] Start of Implant surgery diagnosis and treatment plan	Wongun Chang/ Pil Lim/ Dohoon Kim/ Hyundong Kim	Seoul (Korea)
	15		[DENTIS X DENTAL BEAN] Suture Hands-on one day Course	Jeayoon Kim	Seoul (Korea)
Apr	11/12		[DENTIS X DENTAL BEAN] Red Course - Start of Implant surgery and prosthetics	Yongseok Cho/Sewoung Kim	Seoul (Korea)
	18/19		[CTS Gold Course] Molar Implant Surgery Hands-on (Single/Multiple)	Pil Lim/Dohoon Kim Donghoon Lee/ Yongkwan Choi	Seoul (Korea)
	26		[DENTIS]Complete mastery of Occlusal seminar	Wongun Chang	Busan(Korea)
May	2,3,16,17		[DENTIS X DENTAL BEAN] Black Course - All about Sinus lift surgery and maxillary molar treatment strategy	Insung Jeon/Sewoung Kim	Seoul (Korea)
	16/17		[CTS Gold Course] Implant 2nd surgery hands-on/ Implant Prosthetics and Overdenture hands-on	Pil Lim/Dohoon Kim Donghoon Lee/ Yongkwan Choi	Seoul (Korea)
Jun	6,7		[DENTIS X DENTAL BEAN]] Black Course - All about Sinus lift surgery and maxillary molar treatment strategy	Insung Jeon/Sewoung Kim	Seoul (Korea)
	13/14		[DENTIS X DENTAL BEAN] Red Course - Start of Implant surgery and prosthetics	Yongseok Cho/Sewoung Kim	Seoul (Korea)
	27/28		[CTS Gold Course] Anterior esthetic implant /Digital Guide surgery hands-on	Hyundong Kim/ Yongkwan Choi	Seoul (Korea)
	28		[DENTIS X DENTAL BEAN] Anterior implant Hands-on one day Course	Jeayoon Kim	Seoul (Korea)



For more detailed information about the seminar

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