DENTIS OneQ-SL Clinical Report Vol.2



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Clinical Usefulness of DENTIS OneQ-SL Implant System in the Mandibular Posterior Region

Yun-Pyo Hong, Young-Wook Jung, Seung-Il Song, Jeong-Keun Lee Dept. of Oral & Maxillofacial Surgery, Ajou University School of Medicine

Placement Implant Area										
C.C.	,	Dentigerous cyst enlarged to #37 apex #37 mobility (++)								
Treatment Plan	Cyst enucleation 2. Implant instance - #37 implant in - GBR with auto 3. Gold crown of	1. Cyst enucleation Cyst enucleation and #37, #38 extraction 2. Implant installation - #37 implant installation after cyst enucleation in 6 months GBR with auto tooth bone graft material (AutoBT) 3. Gold crown delivery #37 gold crown was delivered at 5 months after implant installation.								
Material and	Tooth No. Product Fixture Size Torque GBR Bone Mate									
Methods	#37	OneQ-SL	Ø5.2X12mm	35N	0	Auto BT				

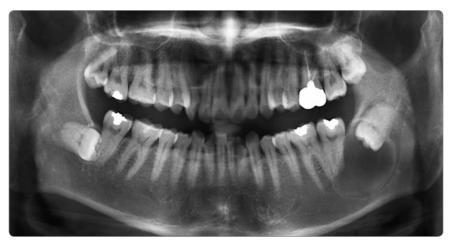


Fig1. Pre-op radiography



Fig2. After cyst enucleation and #37, #38 extraction radiography



Fig3. Pre-op intraoral photo

Intra-operation



Fig4. Drilling



Fig5. After drilling

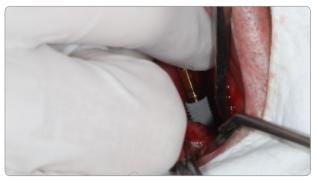


Fig6. Implant installation



Fig7. Healing



Fig8. GBR



Fig9. Suturing

Table 1. The torque and ISQ value of the implant fixture.

Placement Implant Area	Fixture Size	Torque	Immediate (buccal/lingual)	1 month (buccal/lingual)	3 months (buccal/lingual)
#37	Ø5.2X12mm	35N	68/69	58/69	69/69

The torque was measured immediately after implant 1 st surgery, The ISQ values were measured immediately, 1 month and 3 months after implant 1 st surgery.

Post-operation

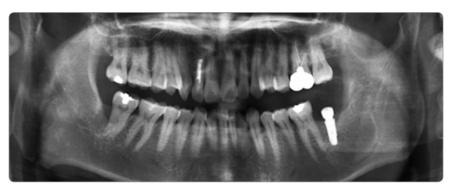


Fig10. Post-op radiography

Prosthesis Delivery



Fig11. Delivery prosthesis P.A. radiograph



Fig12. Delivery prosthesis intraoral photo

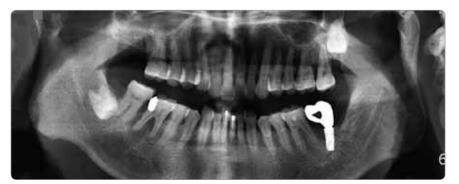


Fig13. Delivery prosthesis radiography

Conclusion

In this case, implant surgery was very successful treatment option. DENTIS OneQ implant system have good stability in unfavorable condition. The implant prosthesis show favorable state until now, after 23 months implant installation. DENTIS OneQ implant system will have quite good result so that the treatment can achieve the goal.

Clinical Usefulness of DENTIS OneQ-SL Implant System in the Maxillary Anterior Region

Yun-Pyo Hong, Young-Wook Jung, Seung-Il Song, Jeong-Keun Lee Dept. of Oral & Maxillofacial Surgery, Ajou University School of Medicine

Placement Implant Area		1 1 3	Age/Se	×x	le					
C.C.	Ridge atrophy of	#11-23 missing due to trauma (2 years ago) Ridge atrophy on #11-23 area Ridge width : 5~6mm								
Treatment Plan	2. Implant inst	 1. GBR GBR with AutoBT & Lt. ramal bone to supply insufficient width of alveolar bone. 2. Implant installation #11, #21, #23 implant install in 1 year after bone graft 								
	Tooth No.	Product	Fixture Size	Torque	GBR	Bone Graft Material				
Material and	#11	OneQ-SL	Ø4.2X10mm	17N	0	Auto BT				
Methods	#21	OneQ-SL	Ø4.2X10mm	18N	0	Auto BT				
	#23	OneQ-SL	Ø4.2X10mm	17N	0	Auto BT				

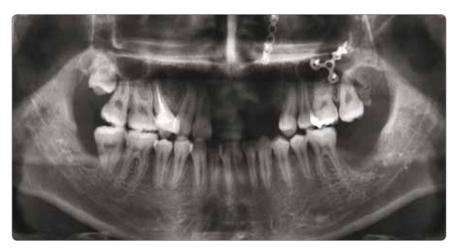


Fig1. Pre-op radiography







Intra-operation



Fig3. Drilling





Fig5. Implant installation



Fig6. Healing



Fig7. Suture

Table 1. The torque and ISQ value of the implant fixture.

Placement Implant Area	Fixture Size	Torque	Immediate (buccal/lingual)	1 month (buccal/lingual)	3 months (buccal/lingual)
#11	Ø4.2X10mm	17N	77/77	78/77	80/79
#21	Ø4.2X10mm	17N	64/63	69/69	69/69
#23	Ø4.2X10mm	17N	70/70	72/71	72/72

The torque was measured immediately after implant 1 st surgery, The ISQ values were measured immediately, 1 month and 3 months after implant 1 st surgery.

Post-operation



Fig8. Post-op radiography

Prosthesis Delivery



Fig9. Delivery prosthesis P.A. radiograph



Fig10. Delivery prosthesis intraoral photo

Conclusion

Aesthetic restoration of anterior teeth with implant is one of the most difficult procedures to execute. Measured torque value and ISQ value for stability of DENTIS OneQ-SL and had a good result.

Restoration of Posterior Tooth with DENTIS OneQ-SL Implant

Young-Wook Jung, Jeong-Keun Lee Dept. of Oral & Maxillofacial Surgery, Ajou University School of Medicine

7		Age/Sex	1ale						
Posterior teeth missing Non smoking, non specific history of a patient visited to the office. #16 Root rest, #47 missing									
1. #16 Bridge prosthesis delivery 2. #47 Implant installation Installed Ø5.2X10mm fixture of DENTIS OneQ-SL implant. There has no need to GBR. 3. Prosthesis delivery									
Material and Methods Tooth No. Product Fixture Size Torque One Q-SI Ø5 2X10mm 40N									
	Posterior teeth m Non smoking, nor #16 Root rest, #47 1. #16 Bridge pro 2. #47 Implant ins Installed Ø5.2X10 There has no need 3. Prosthesis deli After 5 months, de	Posterior teeth missing Non smoking, non specific history of #16 Root rest, #47 missing 1. #16 Bridge prosthesis delivery 2. #47 Implant installation Installed Ø5.2X10mm fixture of DEN There has no need to GBR. 3. Prosthesis delivery After 5 months, delivered the prosthesis delivery Tooth No. Product	Posterior teeth missing Non smoking, non specific history of a patient visit #16 Root rest, #47 missing 1. #16 Bridge prosthesis delivery 2. #47 Implant installation Installed Ø5.2X10mm fixture of DENTIS OneQ-SL in There has no need to GBR. 3. Prosthesis delivery After 5 months, delivered the prosthesis. Tooth No. Product Fixture Size	Posterior teeth missing Non smoking, non specific history of a patient visited to the office. #16 Root rest, #47 missing 1. #16 Bridge prosthesis delivery 2. #47 Implant installation Installed Ø5.2X10mm fixture of DENTIS OneQ-SL implant. There has no need to GBR. 3. Prosthesis delivery After 5 months, delivered the prosthesis. Tooth No. Product Fixture Size Torque					



Fig1. Pre-op radiography







Intra-operation





Fig3. Drilling

Fig4. Post-op intraoral photo

Table 1. The torque and ISQ value of the implant fixture.

Placement Implant Area	Fixture Size	Torque	Immediate (buccal/lingual)	1 month (buccal/lingual)	3 months (buccal/lingual)
#47	Ø5.2X10mm	40N	82/82	80/80	87/86

The torque was measured immediately after implant 1 st surgery, The ISQ values were measured immediately, 1 month and 3 months after implant 1 st surgery.

Post-operation



Fig5. Post-op radiography

Prosthesis Delivery





Fig6. Delivery prosthesis intraoral photo



Fig7. Delivery prosthesis radiography

Conclusion

At 3 months after the placement delivered the prosthesis, there has no specific bone absorbed at the radiography. On 2-year follow-up, there has no abnormal finding and maintain with stable condition. DENTIS OneQ-SL Implant has a taper-straight design for high initial stability and surface is S.L.A surface for faster osseintegration. S.L.A surface is already known as an excellent surface through experiments.

In this study also indicate high ISQ and Insertion torque value. And until now, there has no abnormal finding and maintain with stable condition.

But within the limitation of this study, only installed at the posterior mandible site. Therefore, I offer more variety clinical study in the future.

Restoration of Posterior Tooth with DENTIS OneQ-SL Implant

Young-Wook Jung, Jeong-Keun Lee Dept. of Oral & Maxillofacial Surgery, Ajou University School of Medicine

Placement Implant Area	7		Age/Se	ex	60Y/Fe	male				
C.C.	Posterior teeth missing Non smoking, non specific history of a patient visited to the office. #47 missing									
Treatment Plan	1.#47 GBR GBR with AutoBT & Bovine bone to supply insufficient width of alveolar bone. And covered with a resorbable collagen membrane 2.#47 Implant installation Installed Ø5.2X10mm fixture of DENTIS OneQ-SL implant after 5 months. There has no additional GBR. 3. Prosthesis delivery After 5 months, delivered the prosthesis.									
	Tooth No.	Product	Fixture Size	Torque	GBR	Bone Graft Material				
Material and Methods	#47	OneQ-SL	Ø5.2X10mm	35N	0	AutoBT, Bovine bone, Resorbable collagen membrane				

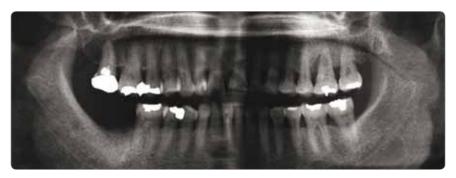


Fig1. Pre-op radiography

Intra-operation





Fig2. GBR

Table 1. The torque and ISQ value of the implant fixture.

Placement Implant Area	Fixture Size	Torque	Immediate (buccal/lingual)	1 month (buccal/lingual)	3 months (buccal/lingual)
#47	Ø5.2X10mm	35N	67/67	72/75	75/79

The torque was measured immediately after implant 1st surgery, The ISQ values were measured immediately, 1 month and 3 months after implant 1st surgery.

Post-operation



Fig3. Post-op radiography

Prosthesis Delivery





Fig4. Post-op intraoral photo

Conclusion

At 5 months after the implant placement delivered the prosthesis, there has no specific bone absorbed at the radiography after 2 months. On 2-year follow-up, there has no abnormal finding and maintain with stable condition. In this study also indicate high ISQ and Insertion torque value. And until now, there has no abnormal finding and maintain with stable condition.

Full Mouth Rehabilitation with Implant and Orthodontic Treatment

 $Young-Lin\,Cho^1, U-Ju\,Yang^2, Hye-Ju\,Kang^3, Jong-Chul\,Park^4$

Placement Implant Area	6 4 7	5 6	5 6 7		Age/Sex		49Y/Female		
C.C.	Tooth space due	to missing te	eth, Mi	ssing tee	th of	#16, #26,	#37, Root rest of #16, #47		
Treatment Plan	Patient had spaces on the anterior area and wanted overall treatment. And she also complained loss of masticatory function because of several posterior missing teeth. We made the treatment plan for masticatory function recovery, occlusion, and appearance improvement. 1 year after Implant Installation, orthodontic treatment was finished. Delivery #47 zrconia crown, #16 x 14 and #25, 26, 37 PFM crown and bridge								
	Tooth No.	Product	Fixtu	ure Size To		orque	Significant Content		
	#37	OneQ-SL	Ø3.7X10mm			50N	-		
	#14	OneQ-SL	Ø3.7	j3.7X8mm 50N		50N	Immediate Placement		
Material and Methods	#47	OneQ-SL	Ø4.2	X8mm		50N	Immediate Placement, BAOSFE		
Metrious	#16	OneQ-SL	Ø5.7	X8mm		50N	Immediate Placement, BAOSFE		
	#25	OneQ-SL	Ø7.0	X8mm		50N	Immediate Placement		
	#26	OneQ-SL	Ø4.2	Ø4.2X8mm 50			Lateral sinus elevation, Submerging		
						50N 50N	Lateral sinus elevation,		

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³ M.S.D. Director, Shinwoo Dental Clinic

⁴ Director, Withus Dental Clinic







Fig1. Pre-op extraoral photo



Fig2. Pre-op radiography











Fig3. Pre-op intraoral photo

Bracketing and Implant Installation











Fig4. 1.5 months after orthodontic treatment

Post-operation







Fig5. Post-op radiography

Prosthesis Delivery







Fig6. Final prosthesis delivery extraoral photo











 $\textbf{Fig7.} \ \mathsf{Final} \ \mathsf{prosthesis} \ \mathsf{delivery} \ \mathsf{intraoral} \ \mathsf{photo}$



Fig8. Final prosthesis delivery radiography

Conclusion

Patient was treated with immediate implant accompanied by sinus augmentation and orthodontic treatment. An implant of #16 was placed with crestal sinus lift, an Implant of #25 was immediately placed and accompanied by sinus lift, and an implant of #26 was placed with lateral sinus lift technic. If all procedures were successful, there are no prognosis differences among those surgical techniques. At the first panoramic x-ray, we can see the thickening of sinus membrane. But after the removing the tooth causing trouble and placing the implant, the sinus healed without other treatment.

Full Mouth Rehabilitation with Implant and Orthodontic Treatment

 $Young-Lin\,Cho^1, U-Ju\,Yang^2, Hye-Ju\,Kang^3, Jong-Chul\,Park^4$

Placement Implant Area	7 6 7 6 2	5 6	7	Age/Se	49Y/Fema		49Y/Female
C.C.	#33-43 Bridge,	Missing teeth	of #32	-43, 36, 45	, Crowd	ing	
Treatment Plan	Patient complained about bimaxillary protrusion, loss of masticatory function and crowding. 6 months after Implant Installation, delivery #17-16 PFM Bridge, #25-27 PFM Bridge. 11 months after Implant Installation, orthodontic treatment was finished. Delivery #4746 x zirconia bridge, #43 42 x x x x 34 PFM bridge, #35 x 37 zirconia bridge						
	Tooth No.	Product	Fixtu	ıre Size	Torq	ue	Significant Content
	#42	OneQ-SL	Ø2.0	X10mm	501	1	Immediate Placement
	#34	OneQ-SL	Ø4.2	X10mm	501	1	Immediate Placement
	#35	OneQ-SL	Ø4.7	7X8mm	501	1	-
	#37	OneQ-SL	Ø3.7	7X8mm	501	1	-
Material and	#46	OneQ-SL	Ø4.2	2X8mm	501	1	-
Methods	#47	OneQ-SL	Ø4.2	2X8mm	501	1	-
	#17	OneQ-SL	Ø4.7	7X8mm	501	1	OSFE, Submerging
	#16	OneQ-SL	Ø4.2	2X8mm	501	1	OSFE, Submerging
	#25	OneQ-SL	Ø3.7	′X8mm	501	١	Immediate Placement
	#26	OneQ-SL	Ø4.2	2X8mm	501	1	BAOSFE, Submerging
	#27	OneQ-SL	Ø3.7	7X8mm	m 50N BAOSFE, Submerging		
	<u></u>						

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Fig1. Pre-op extraoral photo



Fig2. Pre-op radiography

Mandibular Post-operation





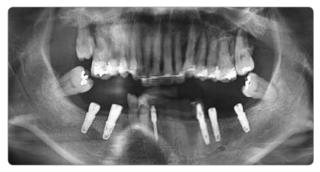


Fig3. Mandibular post-op radiography

Mandibular Prosthesis Delivery



Fig4. Mandibular temporary prosthesis delivery radiography



Fig5. Mandibular anterior temporary prosthesis delivery intraoral photo



Fig6. Mandibular final prosthesis delivery radiography











Fig7. Mandibular final prosthesis delivery intraoral photo

Maxillary Post-operation



Fig8. Maxillary post-op radiography



Maxillary Prosthesis Fabrication







 $\textbf{Fig9.} \, \textbf{Maxillary final prosthesis fabrication}$







Prosthesis Delivery











 $\textbf{Fig10.} \\ \textbf{Final prosthesis delivery intraoral photo} \\$



Fig11. Final prosthesis delivery radiography







Fig12. Final prosthesis delivery extraoral photo

Conclusion

Patient had overall periodontal disease and especially the lower jaw has decreased alveolar ridge and limited gingiva by edentulous state for a long time. Upper jaw has a very poor periodontal condition and needs full mouth rehabilitation. After upper posterior teeth extraction, During the orthodontic treatment, the lower teeth have restored. upper posterior area's first treatment plan was to implant accompanied by lateral sinus lift, but the plan was altered to crestal sinus lift with GBR because of improper operation view and difficulty to approach. In like this case, if proper treatment is performed, we look forward to the good prognosis through crestal approach procedure. And her appearance has improved and had stable occlusion.

Full Mouth Rehabilitation with Immediate Placement of Dental Implants

Young-Lin Cho¹, U-Ju Yang², Hye-Ju Kang³, Jong-Chul Park⁴

Placement Implant Area	6 4 3	3 5 6		Age/Sex	<	72Y/Male					
III ptalitza ca	7 5 2	3 5 6)								
C.C.	Root rest of #12-17, 22, 23, 27, 34-37, 45, Missing teeth of #24-26, 47										
Treatment Plan	A patient visited to consult about overall dental treatment. The patient's bite collapsed and periodontal condition was very poor. This case is treated with immediate placement of implant. #42 x x x 33 x 35 36 temporary bridge, 1 month after implant installation #42 x x x 33 x 35 36 PFM bridge delivery, 3 months after implant installation #16 x 14 zirconia bridge, 3 months after implant installation #47 x 45 zirconia bridge, 3 months after implant installation #13 x x x x 23 x 25 26 temporary bridge, 4 months after implant installation #13 x x x x 23 x 25 26 zirconia bridge, 6 months after implant installation										
Material and Methods	Tooth No.	Product	Fixtu	re Size	Torque	Significant Content					
	#42	OneQ-SL	Ø4.7X	(10mm	50N	Immediate Placement					
	#33	OneQ-SL	Ø4.2X	12mm	50N	Immediate Placement					
	#35	OneQ-SL	Ø4.7X	10mm	50N	Immediate Placement					
	#36	OneQ-SL	Ø4.2X	(10mm	50N	Immediate Placement					
	#25	OneQ-SL	Ø4.2X	10mm	50N	Immediate Placement					
	#26	OneQ-SL	Ø4.7	K7mm	50N	OSFE, submerging					
	#47	OneQ-SL	Ø4.7X	10mm	50N	Immediate Placement					
	#45	OneQ-SL	Ø4.2X	(10mm	50N	Immediate Placement					
	#16	OneQ-SL	Ø4.2	K8mm	50N	Immediate Placement					
	#14	OneQ-SL	Ø4.2X	12mm	50N	Immediate Placement					
	#13	OneQ-SL	Ø4.2X	12mm	50N	Immediate Placement					
	#23	OneQ-SL	Ø4.2X	(12mm	50N	Immediate Placement, Submerging					

¹ Ph.D., Director, Withus Dental Clinic

² Director, Yonsei Bon Dental Clinic

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⁴ Director, Withus Dental Clinic







Fig1. Pre-op extraoral photo



Fig2. Pre-op radiography











 $\textbf{Fig3.} \, \mathsf{Pre-op} \, \mathsf{intraoral} \, \mathsf{photo}$

Intra-operation



Fig4. Mandibular incisor implant installation





Fig5. Mandibular left side immediately implant installation after extraction

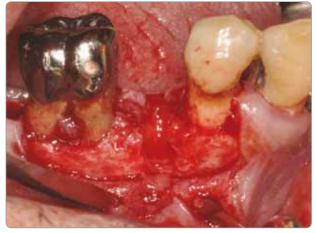


Fig6. #45, #47 root rest extraction

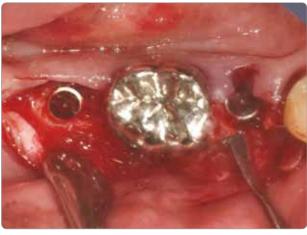


Fig7. #45, #47 implant installation



Fig8. #45 GBR



Fig9. #45 membrane



Fig10.#45,#47 Suture



Fig12. #25, #26 Implant Installation



Fig11.#26 Extraction



Fig13. #25, #26 Suture

Post-operation



Fig 14. Upper right side immediately implant installation after extraction



Fig16. Healing period



Fig15. Post-op radiography



Prosthesis Delivery











Fig17. Provisional temporary prosthesis delivery











Fig18. Final prosthesis delivery







Fig19. Final prosthesis delivery extraoral photo



Fig20. Final prosthesis delivery radiography

Conclusion

A patient visited the office to consult about overall dental treatment. This patient's overall bite collapsed and periodontal condition was also very poor. It'll be very long time consuming to implant into healed ridge after extraction teeth. So, with the judgement that immediate implant after extraction causes no trouble and reduces the treatment period remarkably, we made a plan for full mouth rehabilitation using immediate placement and loading of implant. After treatment, the patient had generally harmonious jaw relationship.

As a result, we reduced the treatment period remarkably and minimized the loss of dental esthetics and function for the patient. Consequently, dentist and patient were satisfied with treatment result. In this way, immediate placement and loading of implant accompanied by properly performed bone graft is thought to be worth treatment option which is fully predictable.

Still, There are many different opinions about immediate placement of implant into fresh extraction site. But based from my 15-year-long experience of immediate implant surgery after extraction, It has showed good result without big problem. Of course, I'm not suggesting applying it to all cases but selectively applied, it is fully predictable and worth of choosing treatment option.

Restorative Driven Implant Placement with SIMPLE GUIDE

Marco Tulio Alzaga Vega Director GDIA Mexico

Placement Implant Area	x x x	X X	A	ge/Sex		50Y/Fe	male				
C.C.	The Patient found it uncomfortable to eat by her lower denture. Excessive pressure was placed in the area of the mental foramen. Radiographs reflected loss of the majority of her bone structure.										
Treatment Plan	It was decided to place 5 implants in the area between both metal foramens to secure for a mandibular implant supported screw retained prosthesis. During this guided surgical process, we followed the "SIMPLE GUIDE Protocol". 1. Scanning Stage: 1) Fabricate Scan Appliance (Using wax) 2) CT scan the patient while wearing the scan appliance. 3) Model scanning for the model with the scan appliance. 4) Model scanning for the model without the scan appliance. 2. Planning Stage: 1) Loading 3 of CT and model scanning data on the BlueSkyPlan 2) Combing 3 of data 3) Designing 3. Printing Stage: 1) Printing Guide Stent 4. Surgical Operation Stage: 1) Wearing Guide Stent 2) Drilling with SIMPLE GUIDE Kits 3) Removed Guide Stent 4) Drilling with OneQ Kits 5) Implant Installation										
Material and Methods	Tooth No.	Product	Fixture Size	Torque	Guide System	GBR	Bone Graft Material				
	Mandibular All-on-five	OneQ-SL	Ø3.7X10mm	45N	SIMPLE GUIDE	0	Allograft, Berkeley, Collagen membrane, Rapiderm				





Fig1. Pre-op extraoral photo

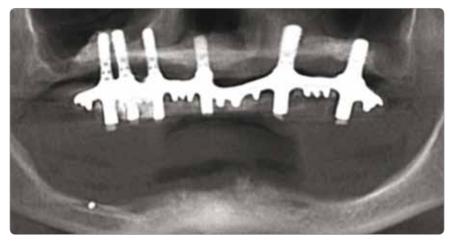


Fig2. Pre-op radiography



Fig3. Pre-op intraoral photo



Fig4. Try-in of provisional restoration

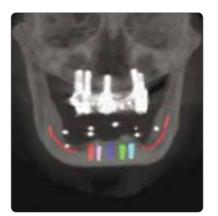
Guide Stent Fabrication Procedure

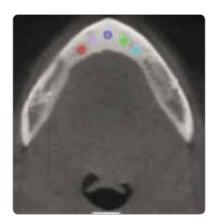


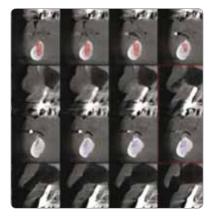
Fig5. Impressions are taken and a master model is obtained



Fig6. A diagnostic wax-up created with 6-8 fiducial markers in place.







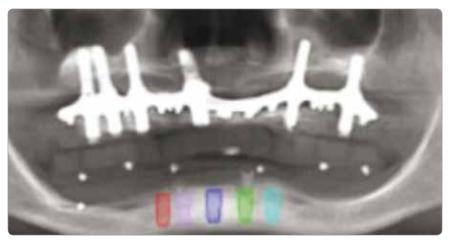


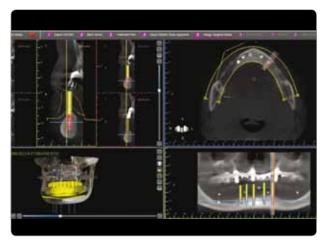
Fig7. CBCT of the patient with the scan appliance



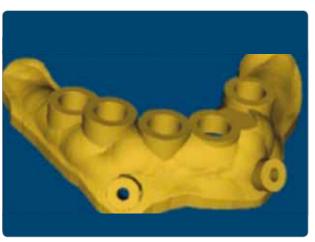
Fig8. Optical scan of model without scan appliance.



Fig9. Optical scan of model with scan appliance.



 $\label{eq:Fig10.Digital} \textbf{Fig10.} \ \textbf{Digital planning (BlueSky Software) combines CT imaging and model scans.}$



 $\textbf{Fig11.} \ \mathsf{Digitalimage} \ \mathsf{of} \ \mathsf{the} \ \mathsf{guide}$



Fig12.3D printed guide stent with open metallic sleeves.



Fig13. Guide stent in place

Intra-operation



Fig14. Mid-crestal incision



Fig15. Using a piezo to clean the ridge after extractions.



Fig16. Drilling of the anchor screw.



Fig17. Anchor screws stabilize the guide into place.



Fig18. Drilling sequence with the guide in place.



Fig19. Implants in place obtaining over 45Ncm Torque



 $\textbf{Fig20.} \, \texttt{OneQ-SL} \, \emptyset 3.7 \, \texttt{X} \, \texttt{10mm} \, \texttt{were place on all five osteotomy}$

Conclusion

Choose the system with the appropriate surgical and prosthetic options necessary for each case. Various systems of guided surgery are available, all producing favorable results. The SIMPLE GUIDE protocol is an efficient and predictable method, providing the operator with the option to select the most appropriate implant system necessary for specific surgical or prosthetic concerns.

Implant Placement with just Two Drilling

Hyeon-Min Kim¹, Jae-Young Lyu¹, Jin-Young Cho¹, Sung-Won Yang², Woo-Yul Lee²

Placement Implant Area	6		Age/Se	х	45Y/Male	9	
C.C.	The patient feels discomfort at chewing. And he complaints about caries of #17, mobility of #46 tooth.						
	1. Preparation stage for implant installation 1) Ext. of #46						
	2. Surgical planning stage1) Analysis of bone width & height in CBCT2) Decision of implant diameter, length, path						
Treatment Plan	3. Operation stage 1) 1st surgery: implant installation(#46) 2) 2nd surgery: healing abutment(#46)						
	4. Prosthetic stage 1) Impression: transfer imp. (#46) 2) Coping try-in(#46) 3) Temp. setting(#46) 4) Final setting(#46)						
Material and	Tooth No.	Product	Fixture Size	Torque	1st OPISQ	2 nd OP ISQ	
Methods	#46	OneQ-SL	Ø4.7X10mm	}30 Ncm	75	76	

¹ Prof., Dept. OMFS, Gil Medical Center, Gachon University

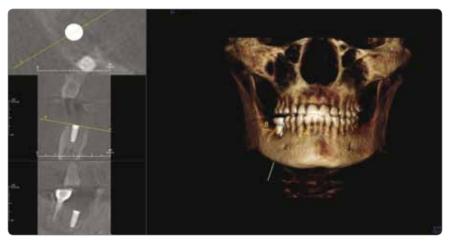
² DDS, Dept. OMFS, Gil Medical Center, Gachon University



Fig1. Pre-op intraoral photo. Gingival healing state after #46 ext. was identified.



Fig2. Pre-op radiography. Bony healing state after #46 ext. is identified.



 $\textbf{Fig3.} \ \ \text{Diameter, length and path of implant were considered using 3D implant simulation}.$

Implant 1st surgery



Fig4. Crestal and distal vertical incision were performed. And the flap was elevated.



Fig5. Just two drilling(initial and final drill) was done. #46 implant installation was performed.



Fig6. Primary stability could be abstained.



Fig7. Implant installation

Post-Implant 1st surgery



 $\textbf{Fig8.} \ \ \text{Diameter, length and path of implant were considered using 3D implant simulation}.$

Implant 2nd surgery



Fig9. Pre-2nd op intraoral photo. Good gingival healing after 1st op.



Fig 10. Implant 2nd surgery on #46 area after crestal incision(#46 ext. site) and flap elevation were done.



Fig11. Healing abutment was tightened.

Post-Implant 2nd surgery



Fig12. Post-2nd op (#46) radiography

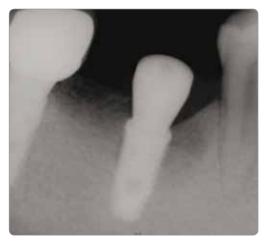


Fig13. Healing abutment was tightened on #46 fixture.

Prosthesis Delivery



Fig14. Impression taking was done after 2weeks (#46)



Fig15. Coping(#46) Check



Fig16. Final Restoration (#46)



Conclusion

The aim of this case report was the evaluation of usefulness of implant stability after skipped drill order. All the procedure was same with common implant procedure except 1^{st} surgery. The results showed good implant stability at both 1^{st} and 2^{nd} surgery stage.

Computer Guided Implant and Immediate Restoration Using SIMPLE GUIDE System

Jin-yong Cho

Clinical assistant professor, Department of oral and maxillofacial surgery, Gachon University Gil Medical Center

Placement Implant Area	3	Age/Sex	50Y/Female		
C.C.	Prolonged retained primary tooth and its mobility				
Treatment Plan	In this report, we would present a patient that was treated by implant and immediate restoration using SIMPLE GUIDE System, i.e. simple and minimal-cost computer guided implant system.				
Material and Methods	 #53 primary tooth was dropped out spontaneously Preoperative scan data and simulation of #53 extraction using Meshmixer software Planning and guide design using Blue sky plan III software. Surgical guide printed with ZENITH 3D printer and temporary crown fabrication in the dental model which was made using surgical guide. Application of surgical guide and implant installation with OneQ-SL Ø3.7 X 10mm Guided system, SIMPLE GUIDE Kits 				



Fig1. Pre-op radiography. It showed #13 ectopic impaction and prolonged retained primary tooth on #53. Narrowing inter-root distance between #12 and #14 was noted.





Fig2. Pre-op intraoral photo. #53 primary tooth was dropped out spontaneously between initial visit and operation day.

Guide Stent Fabrication Procedure





Fig3. Preoperative scan data (Lt) and simulation of #53 extraction using Meshmixer software. (Rt)

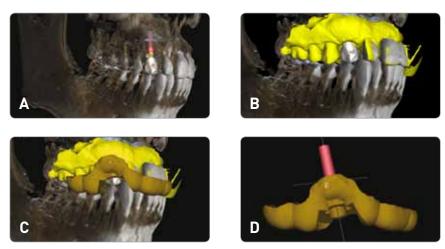


Fig4. Planning and guide design using Blue sky plan III software. A. Decide the implant position corresponding ideal prosthesis. B Merge the CT and intraoral scan data. C. Design the guide outline. D. Automatically fabricated surgical guide.

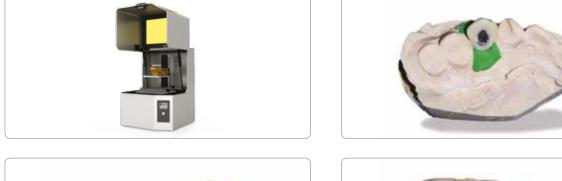




Fig5. Surgical guide printed with ZENITH 3D printer and temporary crown fabrication in the dental model which was made using surgical guide.

Intra-operation



Fig6. Application of surgical guide and implant installation.

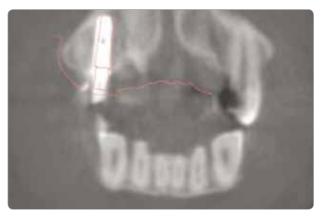


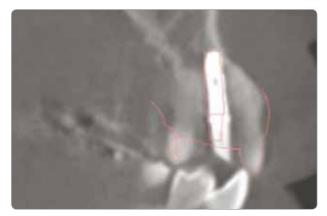
Prosthesis Delivery



Fig7. Immediate temporary crown is restored with favorable suitability.







 $\textbf{Fig8.} \ \ \text{Difference between planning (red line) and actual installed implant. Coronal view (Lt) and axial view (Rt).}$

Table 1. Accuracy of guided implant. Coordinate the planning implant and actual installed implant at the center of top and bottom. Calculate the difference between two coordinates.

 Top
 Bottom

 d-x
 0.49
 0.42

 d-y
 0.81
 0.38

 d-z
 0.65
 0.13

	degree
	Axis difference
3D	1.79
2D	1.8

Conclusion

In this case, implant and immediate restoration in the maxillary anterior zone using SIMPLE GUIDE system is considered as simple and reliable method with high accuracy and low-cost.

OneQ-SL Implantation with Lateral Sinus Window Bone Graft

Jong-Hun Jeong Light Dental Office, Gyeongju, Republic of Korea

Placement Implant Area			7	Sex		Femal	e
C.C.	Pain on upper left molar area						
P.I.	1. #26 and #27 old bridge 2. Peri-implant radiolucency seen at tooth #27.						
Treatment Plan	1. Removal of #26 and #27 old bridge 2. Extraction of #27 3. Extract #27 and waiting 2 months for delayed implantation. 4. Implantation using GBR via a lateral sinus window with vertical bone augmentation.						
1. The lateral sinus window is opened. 2. Bone grafting within the sinus with Xeno-bone. 3. Placement completed, using an OneQ-SL Ø4.7 X 10mm implant. 4. Perform vertical bone augmentation with autogenous bone in the gap between the implant fixture and the remaining extraction socket. 5. Schedule secondary patient visit. 6. A final restoration is placed after loading the provisional restoration.					between the		
	Tooth No.	Product	Fixture	e Size	Torque	Sinus OP	Bone Graft Material
	#27	OneQ-SL	Ø4.7X1	0mm	30 Ncm	0	Xeno-bone



Fig1. Pre-op #27 P.A. radiography



Fig2. Post extraction P.A. radiography



Fig2. Pre-op radiography



Fig3. Pre-op intraoral photo

Implant 1st surgery



Fig5. Lateral sinus window opening

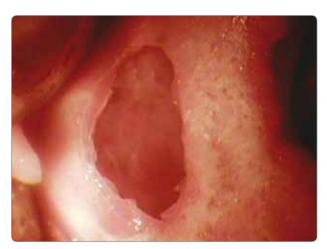


Fig6. Sinus floor elevation



Fig7. Sinus bone grafted



Fig8. Sinus window closed with lateral bone wall



Fig9. #27 implantation : OneQ-SL Ø4.7x10mm (11Ncm)

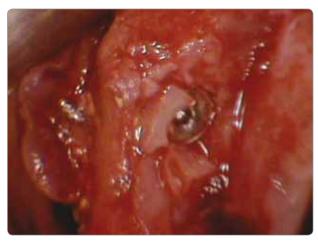


Fig10. Bone augmentation with autogenous bone

Post-Implant 1st surgery



Fig11. Post-op radiography



Fig12. Post-op P.A. radiography after 2 weeks



Fig13. Post-op intraoral photo after 2 weeks



 $\textbf{Fig14.} \ \mathsf{Post-op} \ \mathsf{P.A.} \ \mathsf{radiography} \ \mathsf{after} \ \mathsf{4} \ \mathsf{months}$



Fig15. Post-op intraoral photo after 4 months

Implant 2nd surgery



Fig16. 2nd op intraoral photo



Fig17. Healing abutment setting after 2nd op

Post-Implant 2nd surgery



Fig18. P.A. radiography after setting a healing abutment



Fig19. Abutment setting and loading P.A. radiography after 22 weeks

Conclusion

In this situation, we sought to achieve early stability using under drilling techniques. It was expected that the OneQ-SL implant fixture's thread design and great surface treatment of SLA would allow for bone augmentation into the sinus and implantation of the implants to be performed simultaniously. OneQ-SL implant fixture's strong thread, tapered design allowed it to fit securely into the bone, achieving an early fixed torque. Optimal osseointegration was seen during the second appointment, 18weeks later. 22 weeks after the surgery, 30Ncm of force was used when connecting the abutment and loading of theed provisional restoration. No challenges were found when applying enough torque force. Radiographically, osseointegration condition between the thread of the implant fixture looked optimal, along with satisfactory marginal bone conditions. Overall, the SLA surface's osseointegration capabilities were satisfactory.

OneQ-SL Implantation with Alveolar Ridge Splitting and GBR

Jong-Hun Jeong Light Dental Office, Gyeongju, Republic of Korea

Placement Implant Area	6 7	Sex	Female		
C.C.	Prothodontic rehabilitation on lower	left molar ar	ea		
P.I.	1. Vertical eruption of #26 and #27 due to missed #36 and #37 2. Narrow alveolar ridge on #36 and #37 area				
Treatment Plan	 #26, #27: 2 unit bridge after Endo Tx. Ridge splitting and GBR – resorbable membrane Submerged implantation Need to 2nd OP after 2-4 months on implantation (Consider APF flap if need) Final restoration after loading of provisional restoration 				
Material and Methods	1. Submerged implantation on #36 and #37 area with OneQ-SL Ø4.2x10mm 2. Ridge splitting and GBR with resorbable membrane				



Fig1. Pre-op radiography



Fig2. Pre-op intraoral photo

Implant 1st surgery



Fig3. Alveolar ridge splitting (Bone sawing and initial hole formation)



Fig4. Alveolar ridge bone splitting and spreading



Fig5. Hole formation for implantation



Fig6. #36 Implantation OneQ-SL Ø4.2x10mm (10Ncm)

Post-Implant 1st surgery



Fig7. Post-op radiography



Fig8. Post-op P.A. radiography



 $\textbf{Fig9.} \ \, \mathsf{Post-op}\, 11\, \mathsf{weeks}\, \mathsf{ridge}\, \mathsf{foam}$

Implant 2nd surgery



Fig10. 2nd op intraoral photo



Fig11. Suture

Post-Implant 2nd surgery



Fig12. 2nd op P.A. radiography after op 11 weeks

Prosthesis Delivery



Fig13. Abutment setting (Provisional restoration / Loading) P.A. radiography after op 14 weeks



Fig14. Final restoration P.A. radiography after op 19 weeks

Conclusion

Here, implantation was performed using alveolar ridge splitting and GBR. During installation of implants, initial stability is key, especially when ridge splitting occurs during immediate implantation following an extraction. On the radiograph, osseointegration condition between the thread of the implant fixture were optimal, with satisfactory marginal bone conditions. Overall, SLA surfaces' osseointegration capabilities are extremely satisfactory, even with initial ridge splitting occurring.

OneQ-SL Implantation with Vertical and Horizontal Bone Augmentation

Jong-Hun Jeong Light Dental Office, Gyeongju, Republic of Korea

Placement Implant Area	6 7	Sex	Female			
C.C.	Pain on upper left molar area					
P.I.	A periodontal lesion is noted radiographically surrounding the root of tooth #27, which is found to be in a floating state.					
Treatment Plan	 Recommended removal of bridge and extraction of -#25 and #27. Delayed implantation and vertical bone augmentation (GBR) in area of #27. Submerged implantation at #26 and #27. Schedule patient for secondary visit. 					
Material and Methods	 Wait 2-3 months following extraction of #27. Delayed submerged implantation at #26 and #27. Vertical augmentation (GBR) with autogenous bone and non-resorbable membrane 2nd OP scheduled in 4 months. 					

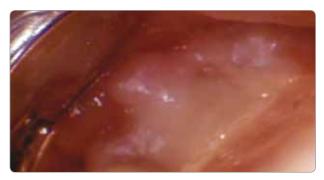


Fig1. Pre-op #26-27 P.A. radiography. Observation widely bone loss #27 periimplant.



Fig2. Postextraction of #27 10 weeks. Observed that #27 extraction socket remain widely. And need a vertical bone augmentation

Implant 1st surgery



 $\textbf{Fig3.} \, \text{After extraction 10} \, \text{weeks.} \, \text{Observation soft tissue healed well} \,$

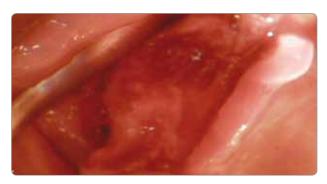


Fig4. . Wide bone defect on #27 extraction socket area



Fig5. Hole formation for implantation (under drilling and bone condensation with osteotome)



Fig6. Implant placement #26 OneQ-SL Ø4.7x12 (55Ncm), #27 OneQ-SL Ø4.7x12 (42Ncm)



Fig7. Bone defect at buccal observation



Fig8. Bone defect at palatal observation

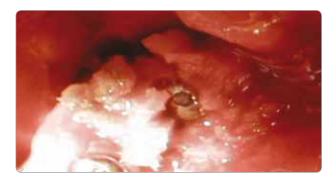
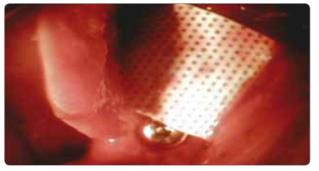


Fig9. GBR



 $\textbf{Fig10.} \ \mathsf{Non-resorbable} \ \mathsf{membrane} \ \mathsf{coverage}$

Post-Implant 1st surgery

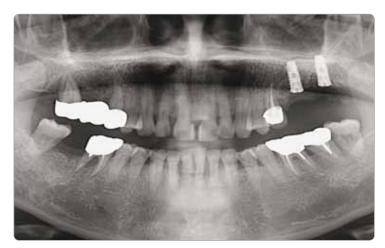


Fig11. Post-op radiography

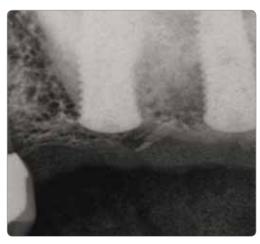


Fig12. Post-op P.A. radiography



Fig13. Post-op after 10 weeks

Implant 2nd surgery



 $\textbf{Fig15.} \ \textbf{Bone filled between the implant fixture thread}$



 $\textbf{Fig16.} \, \textbf{Observed bone formation well} \\$

Post-Implant 2nd surgery



Fig14. Post-op P.A. radiography after 2nd op 14 weeks

Prosthesis Delivery



Fig17. Post-op 5 months (Loading). Setting Abutment (30Ncm). Loading by provisional restoration

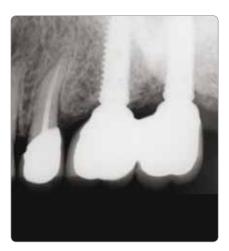


Fig18. Final restoration P.A. radiography



Fig19. Final restoration intraoral photo

Conclusion

With enough time for osseointegration given for the area of bone augmentation, there was concern that bone quality might be reduced. A provisional restoration was loaded with adequate torque achieved during connection. Radiographically, osseointegration conditions between the implant thread and bone (along with marginal bone conditions) appeared to be satisfactory.

OneQ-SL Immediate Implantation after Tooth Extraction

Jong-Hun Jeong Light Dental Office, Gyeongju, Republic of Korea

Placement Implant Area	4 5 6	Sex	Female			
C.C.	Pain on lower left molar area					
P.I.	1. #34-36 distal cantilever bridge (#36 pontic) 2. #34 – horizonal tooth fracture #35 – severe dental caries and root rest #36 – missing					
Treatment Plan	Inmediate implantation after #34 and #35 extraction and implantation on #36 area Bone augmentation (GBR) on gap between implant fixture and extraction socket Non-submerged OP with healing abutment connection					
Material and Methods	1. Extraction of #34 and #35 2. Immediate implantation on #34-36 area 3. Bone augmentation (GBR) was performed using autogenous bone in the area between the implant fixture and residual extraction socket. 4. Healing abutment connection					



Fig1. Pre-op radiography



Fig2. #34-36 Distal cantilever bridge



Fig3. #34 Horizontal Fx.

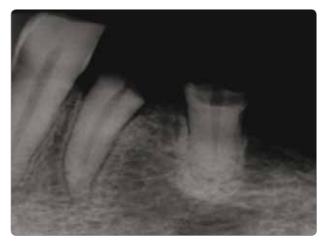


Fig2. #35 Severe dental caries (Root rest)

Intra-operation



Fig5. Extraction socket on #34-35



Fig6. Hole formation for immediate implantation



Fig7. #34 Ø4.2x12mm (21Ncm), #35 Ø4.2x12mm (25Ncm), #36 Ø4.2x10mm (27Ncm)

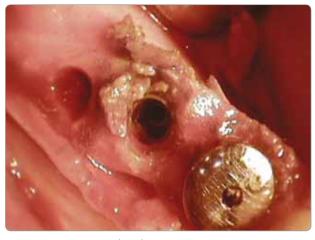


Fig8. Bone augmentation (GBR). Autogenous bone placed in space between implant fixture and extraction socket.



 $\textbf{Fig9.} \texttt{GBR} \, (\texttt{unused membrane})$



Fig10. Suture

Post-operation



Fig11. Post-op radiography



 $\textbf{Fig12.} \ \mathsf{Post-op} \ \mathsf{P.A.} \ \mathsf{radiography}$

Prosthesis Delivery

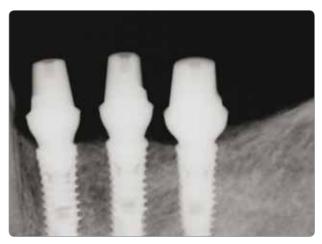


Fig13. Post-op 3 months after abutment connection (30Ncm)



Fig14. Final restoration P.A. radiography





Fig15. Final prosthesis delivery after 14 weeks intraoral photo

Conclusion

In this case, a provisional restoration was loaded first, with adequate torque force on the connecting abutment. Radiographically, osseointegration conditions between the implant's SLA-treated threading surfaces and marginal bone were satisfactory.

OneQ-SL Implantation with Lateral Sinus Window Graft

Jong-Hun Jeong Light Dental Office, Gyeongju, Republic of Korea

Placement Implant Area	5 6	Sex	Female		
C.C.	Prothodontic rehabilitation on upper molar missed dentition				
P.I.	1. Missed tooth of #16, #17, #25, #26 2. Floaying tooth of #14 and #15 3. Severe rhematization of both sinus floors.				
Treatment Plan	 Extraction of #14 and #15 – delayed implantation with GBR Implantation at #15 and #16 was accessed via lateral sinus window grafting with Xeno-bone. Delayed implantation at #14 and #16 via lateral sinus window grafting with Xeno-bone and vertical bone augmentation using Allobone and membrane. 				
Material and Methods	Prosedure on #25 and #26 area 1. Lateral sinus window opening 2. Sinus bone grafting with Xeno-bone 3. Final restoration after provisional restoration				



Fig1. Pre-op radiography

Intra-operation



Fig2. Lateral sinus window opening

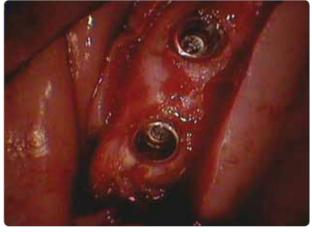




 $\textbf{Fig3.} \ \textbf{Closed sinus window with bone wall after sinus bone graft}$



Fig4. Hole formation for implantation



 $\begin{tabular}{ll} \textbf{Fig5.} One Q-SL implant implantation, $\#25 \emptyset 4.2x10mm (21Ncm), \\ $\#26 \emptyset 4.2x10mm (21Ncm). \\ \end{tabular}$



Fig6. Suture

Post-operation

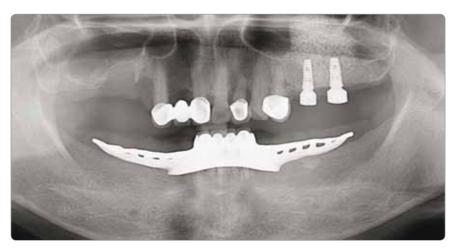


Fig7. Post-op radiography

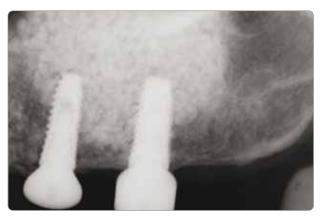


Fig8. Post-op P.A. radiography after 5 months

Prosthesis Delivery

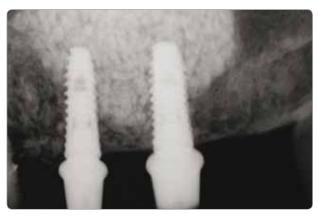


Fig9. Connected abutment P.A. radiography



Fig10. Temporary Crown setting



Implant Installation and Simultaneous Horizontal Bone Graft with Hard Mesh and OneQ-SL

Dae-Sung Kim
DDS, MSD.Ph.D, Director, MediPlant D.C/MEDI Academy of Implant Dentistry

Patient Information

Placement Implant Area	7 6		Age/Sex	48Y/Female			
C.C.	Long term edentulous posterior region						
Treatment Plan	Implant installation and simultaneous horizontal bone graft with hard Mesh						
Material and Methods	Tooth No.	Product	Fixture Size	GBR	Bone Graft Material		
	#46	OneQ-SL	Ø4.2X12mm	0	Cerasorb M Titanium Mesh		
	#47	OneQ-SL	Ø4.2X12mm	0	Cerasorb M Titanium Mesh		

Pre-operation

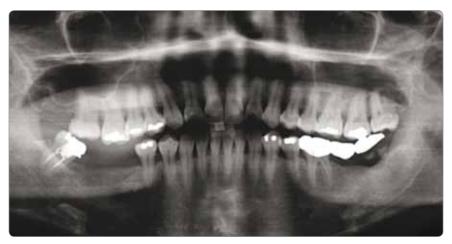


Fig1. Pre-op radiography



Fig2. Pre-op intraoral photo

Implant 1st surgery



Fig3. After drilling, drilling path was checked by paralleling pines

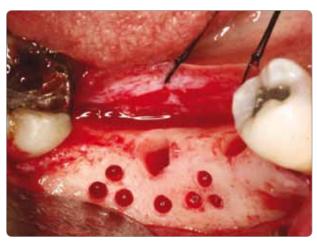


Fig4. Drilling



 $\textbf{Fig5.} \\ \textbf{Implant Installation with OneQ-SL \emptyset 4.2 X 12mm}$



 $\textbf{Fig6.} \ \mathsf{Non\text{-}resorbable} \ \mathsf{barrier} \ \mathsf{membrane} \ \mathsf{coverage}$



Fig7. Suture

Implant 2nd surgery

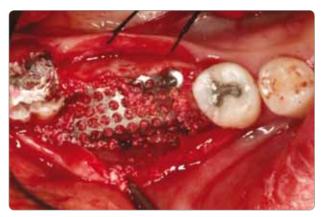


Fig8. Flap reflection for 2nd OP



Fig9. Healing abutment connection

Prosthesis Delivery



Fig10. Connected abutment



 $\textbf{Fig11.} \ \mathsf{Delivery} \ \mathsf{prosthesis} \ \mathsf{intraoral} \ \mathsf{photo}$



Fig12. Delivery prosthesis radiography





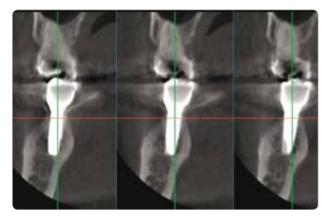


Fig10. Delivery prosthesis CT

Conclusion

Here, we attempted to find out if GBR with Mesh using horizontal augmentation was possible using only a synthetic bone graft. Most augmentations can be performed using any bone material with no concerns if placed under the mesh. However, many dentists still express concern using synthetic bone grafts. In this case, synthetic material was used, along with mesh and a DENTIS OneQ-SL Implant Maxillary posterior restoration was performed along with sinus elevation and simultaneous implant installation of the DENTIS OneQ-SL implant. No problems were noted following the final delivery of the prosthesis.

This case exhibited successful sinus elevation with simultaneous implant installation. No concerns were noted after delivery of the prosthesis.

Maxillary Posterior Restoration with Sinus Elevation and Simultaneous Implant Installation

Dae-Sung Kim
DDS, MSD.Ph.D, Director, MediPlant D.C / MEDI Academy of Implant Dentistry

Patient Information

Placement Implant Area		6 7	Age/Sex	52Y/Male			
C.C.	Chronic periodontits Loss of posterior teeth						
Treatment Plan	Sinus elevation and simultaneous implant installation						
Material and Methods	Tooth No.	Product	Fixture Size	Sinus OP	Bone Graft Material		
	#26	OneQ-SL	Ø4.8X10mm	0	80% Cerasorb M +20% Bioss		
	#27	OneQ-SL	Ø4.8X10mm	0	80% Cerasorb M +20% Bioss		

Pre-operation



Fig1. Radiography before extraction



 $\textbf{Fig2.} \ \mathsf{Pre-op}\ \mathsf{radiography}$

Intra-operation



Fig3. Sinus lateral window open for sinus augmentation



Fig4. Filled the bone material to the sinus after implant placement



 $\textbf{Fig5.} \, \textbf{Cover with the cover screw}$



 $\textbf{Fig6.} \ Resorbable \ barrier \ membrane \ coverage$



Fig7. Suture

Post-operation



Fig8. Post-op radiography



Fig9. Connected abutment



Fig10. Delivery prosthesis radiography

Conclusion

Maxillary posterior restoration by sinus elevation and simultaneous implant installation with DENTIS OneQ-SL. And still has no problem after delivery final prosthesis.

Sinus Elevation and Simultaneous Implant Installation with OneQ-SL

Dae-Sung Kim
DDS, MSD.Ph.D, Director, MediPlant D.C/MEDI Academy of Implant Dentistry

Patient Information

Placement Implant Area		6	Age/Sex	54Y/Male		
C.C.	Chronic periodontitis and bone destruction					
Treatment Plan	Sinus elevation and simultaneous implant installation					
Material and Methods	Tooth No.	Product	Fixture Size	Sinus OP	Bone Graft Material	
	#26	OneQ-SL	Ø5.2X10mm	0	Cerasorb M	

Pre-operation



Fig1. Radiography before extraction



 $\textbf{Fig2.} \ \mathsf{Pre-op}\ \mathsf{radiography}$

Intra-operation



Fig3. Implant placement and outlining sinus lateral window



Fig4. Fill the bone material



Fig5. Resorbable barrier membrane coverage



Fig6. Suture

Post-operation



 $\textbf{Fig7.} \ \mathsf{Post-op}\ \mathsf{radiography}\ \mathsf{OneQ-SL}\ \emptyset\ 5.2\ \mathsf{X}\ \mathsf{10mm}$

Prosthesis Delivery



Fig8. Delivery prosthesis radiography



Fig9. Connected abutment



Fig10. Delivery prosthesis intraoral photo

Conclusion

This is a sinus elevation and simultaneous implant installation case. After delivery prosthesis, there has no problem.

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