

Volume-Up™ Implant System

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CLINICAL CASES

PROTOCOL

VOLUME UP™ IMPANT SYSTEM



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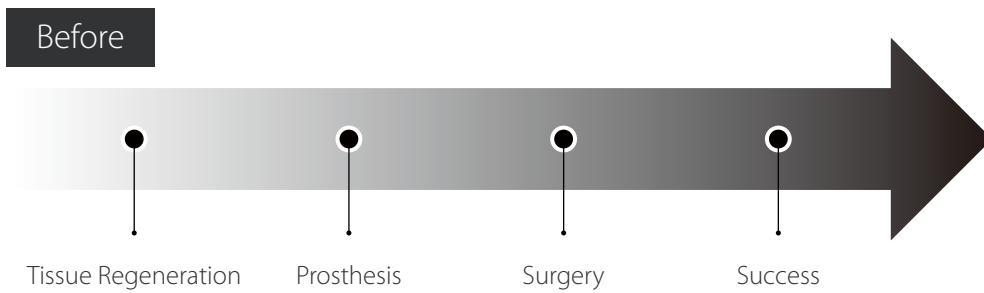
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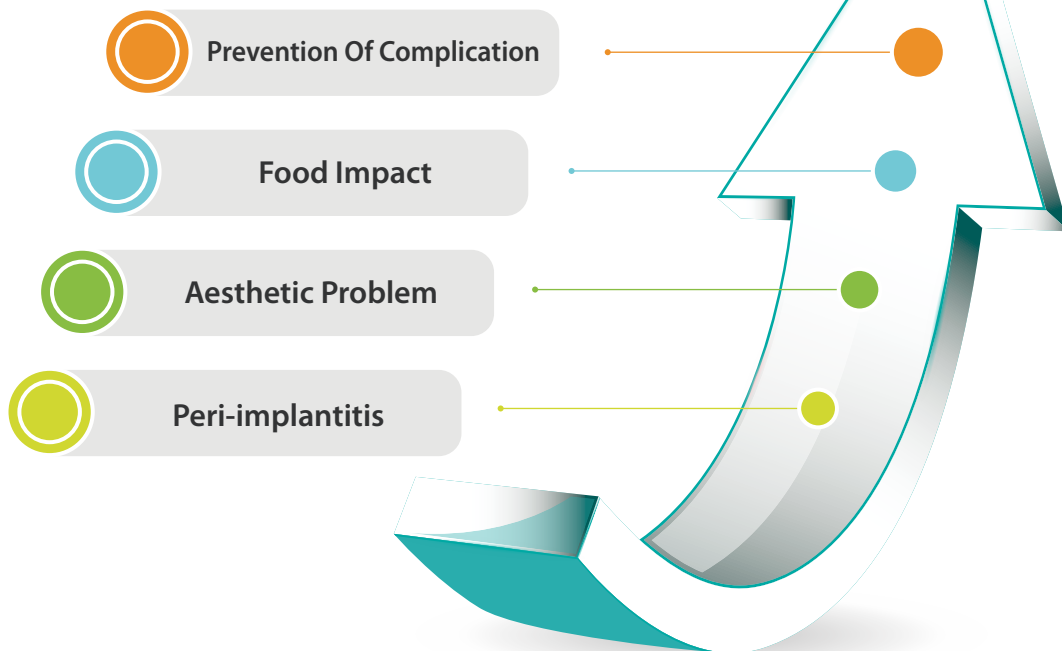
CLINICAL CASES

CWA
Cowellmedi Co., Ltd.

The pioneers in Dental Implant & E.rhBMP-2



Today



Changing Paradigm of Implant Dentistry

As the time changes, new epoch has emerged in the implant dentistry.

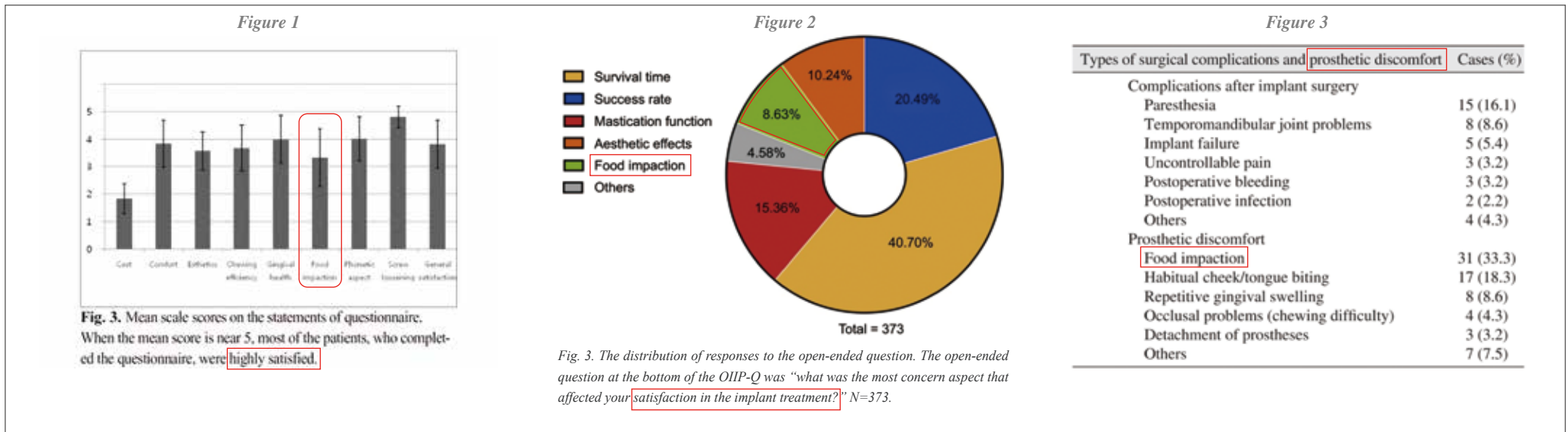
In the past, the treatment goal was mainly focused on the success only and less concerned about complication. However as technology develops, besides of focusing on success of the treatment, prevention of complication became more important and the main cause of determining whether the implant treatment ended well or not.

Therefore the patients begun to think that implant treatment will be successful under the assumption of an advancement of medical treatment, and they consider aesthetic and function first than any other factors.

Researches on Satisfaction/Discomfort of patients

Despite of development of distinguished treatments periodically, the patients still had discomfort. Some researches have been conducted to find the factors that influences patient discomfort. The food impact is the most discomfort factor among the direct discomfort factor after the treatment, as shown in the figures 1~3.

The factor of food impact is deeply related to tissue regeneration. The treatment without tissue regeneration leads to gingival depression then results food impaction and might even cause peri-implantitis.

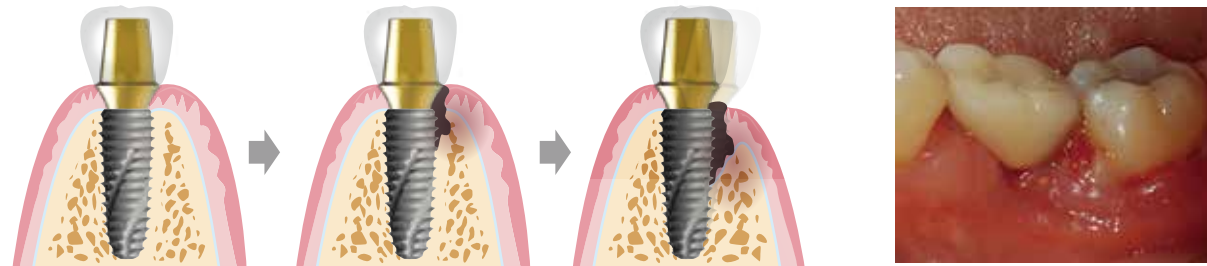


REFERENCES

- FIGURE 1** Yoon-Young Heo, Seong-Joo Heo. The patient's satisfaction following implant treatment. The Journal of Korean Academy of Prosthodontics 46(6). 2008. https://www.researchgate.net/publication/250370748_The_patients'_satisfaction_following_implant_treatment
- FIGURE 2** Heng Dong, Na Zhou. Satisfaction analysis of patients with single implant treatments based on a questionnaire survey. Dovepress Volume 2019: 2019. <https://europepmc.org/articles/pmc6519022>
- FIGURE 3** Young-Kyun Kim, Hyun-Suk Kim. Evaluation of subjective satisfaction of dental implant patients. J Korean Assoc Oral Maxillofac Surg. 2014; 40(3): 130-134. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4095807/>

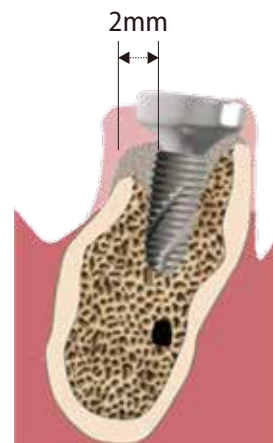
Concept

Peri-implant inflammations represent serious diseases after dental implant treatment, which affect both the surrounding hard and soft tissue.

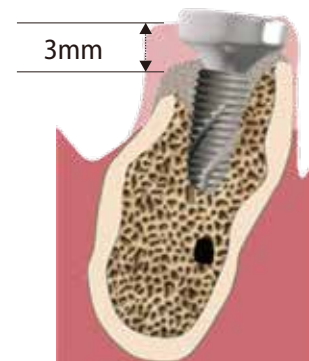


To achieve long term success of implant without complications like peri-implantitis, right position of fixture with min. 2mm of buccal bone width for buccal gingival regeneration and alveolar bone regeneration at min. 3mm lower position to maintain gingival height is extremely essential.

Min. 2mm of buccal bone regeneration to maintain having buccal gingiva.
(Int J Periodontics Restorative Dent 2005)



Alveolar bone regeneration at minimum 3mm lower position to maintain gingival height.
(Clin Oral Implants Res 2000;11: 1-11.)



The Volume Up™ Implant System helps to minimize the side effects found after the treatment such as food impaction, peri-implantitis and other factors shown in the previous page(p.4). As well the Volume Up™ Guide System helps place implant in the right position according to 2 abovementioned clinical factors and select right dimension of the Healing Abutment to be used as a scaffold while gingival forming.

Specification

Volume-Up™ Healing Abutment

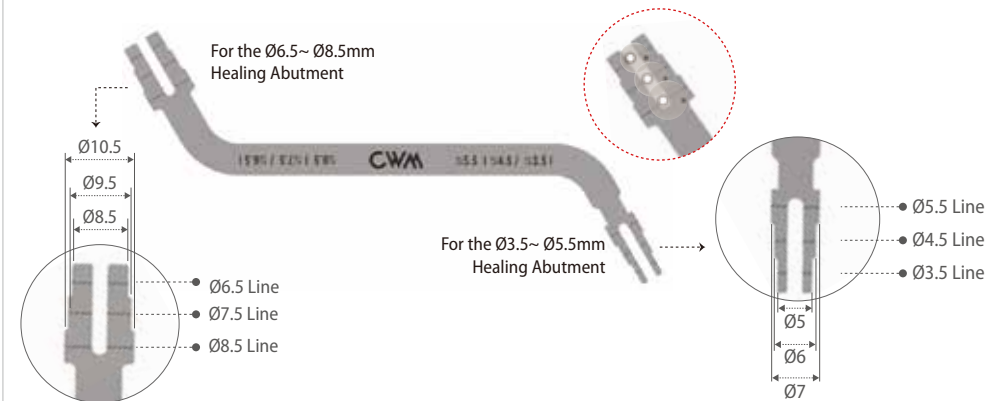


Diameter	Ø6.5	Ø7.5	Ø8.5
Length	2	2	2
Cuff	3	3	3
	VUHN6532	VUHN7532	VUHN8532

- Packing unit : 1 Abutment(Inbuilt Abutment Screw).
- Used for an implant procedure to form the gingival tissue and alveolar bone in the form of natural teeth and gums by prevention or minimizing the food penetration.
- Extremely effective when used with the COWELL® BMP.
- Recommended to use with the Volume up™ Guide System.
- Select according to gingival height and abutment type.
- Tightened with the 1.2 Hex Driver.
- Tightening torque force : 25~35 N.cm.



Volume-Up™ Gauge

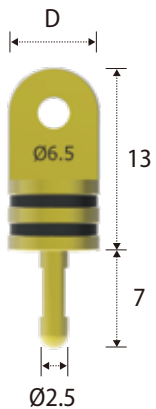


* Actual diameter is 2mm larger than the diameter marked on the Volume-Up™ Gauge.
(E.g. Ø6.5 marked on the Gauge is actually Ø8.5)

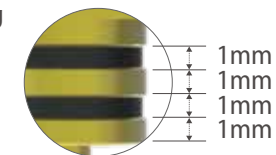
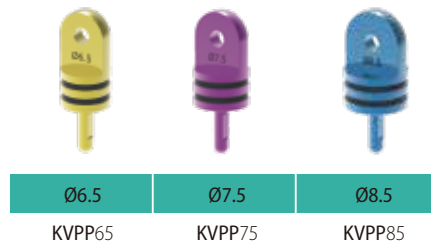
Code KHSG01

- Used to guide the position of implant placement and to guide the election of the Healing Abutment dimensions in order to keep the cervical portion of the implant prosthesis at the natural tooth width.
- Used with the Volume-Up™ Parallel Pin for multiple units or bridge.
- Used with point drill (Ø2.1mm or less).
- Laser marking identifiable from any position.

Volume-Up™ Parallel Pin



- Used for bridge or multiple units with the Volume-Up™ Gauge.
- For bridge or multiple units.
- For Ø3.5, Ø4.5 and Ø5.5, place the fixture and use the Healing Abutment instead of the Volume-Up™ Parallel Pin.



Volume Up™ Implant Treatment Protocol



Connect the inbuilt Screw of Volume Up™ Abutment to the Fixture.



Use the explorer tip on the hole to control the direction of the abutment when connecting the Screw.



Cover the hole with restorative composite such as Easy Seal etc.

*** Caution** Use when insertion torque value is over 25N.cm

Volume Up™ Guide System Protocol

I. Single Implant



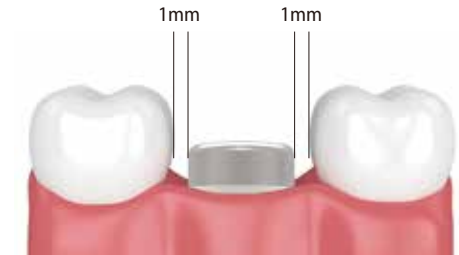
Set the Volume-Up™ Gauge on the implant site according to the diameter line marked on the Volume Up™ Gauge.



Position the Point Drill in the drill insertion groove of the Volume-Up™ Gauge.



Drill and place implant in accordance with the manufacturer's implantation sequence.



If implant placement torque is equal to or over 20~30N.cm, connect the Healing Abutment. If not, connect the Cover Screw and do primary closure.

II. Multiple Implants & Bridge



Set the Volume-Up™ Gauge and position the Point Drill.



Insert the Volume-Up™ Parallel Pin into the hole formed after point drilling.



Carry out the same as the previous step.

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Case 1 (Single Implant)



Pre-operative



Extraction



Extraction socket



Set the Volume-Up™ Gauge on the implant site according to the diameter line marked on the Volume-Up™ Gauge.



Position the Point Drill in the drill insertion groove of the Volume-Up™ Gauge.



Drill and place implant in accordance with the manufacturer's implantation sequence.



Implant placement



Volume-Up™ Healing Abutment connection



PostOP

CLINICAL CASES

Case 2 (Multiple implants & bridge)



Pre-OP



Pre-OP view of the healed ridge.



The Volume-Up™ Gauge was set to the Ø8.5 line.



The Point Drill was positioned in the drill insertion groove of the Volume-Up™ Gauge.



The Ø8.5 Volume-Up™ Parallel Pin was inserted to the hole formed by point drilling.



Subsequently, the Volume-Up™ Gauge was set to the Ø7.5 line for the adjacent posterior implant placement.



The Point Drill was positioned in the drill insertion groove of the Volume-Up™ Gauge.



The Ø7.5 Volume-Up™ Parallel Pin was inserted to the hole formed by point drilling.



Drill and place implant in accordance with the manufacturer's implantation sequence.



Volume-Up™ Healing Abutment was connected to the fixture.



The screw hole was filled with restorative composite resin such as Easy Seal etc.



PostOP

CLINICAL CASES

Case 3



Pre-OP



Socket defect



3.5 mm Vertical defect between implant and buccal bone crest



3.5 mm Horizontal defect between implant and buccal bone crest



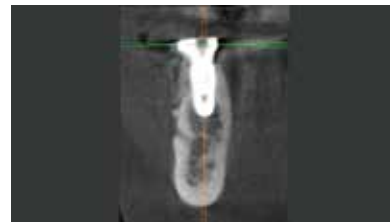
Cowell® BMP



Mega Derm Plus



Pre-operative



Post-operative



Post-operative



11 weeks healing



Removal of healing abutment



One piece cemented abutment



Zirconia bridge restoration



CBCT on 11 weeks after surgery



Final restoration

1. Gingival contour was preserved by Acentric healing abutment.
3. Dermal graft increased the width of attached gingiva.

2. Buccal bone was increased to 3.5 mm in horizontal dimension and 3.7 mm vertical dimension.
4. Volume Up™ Implant technique is effective and easy.

CLINICAL CASES

Case 4



Pre-operative



Cowell BMP graft



Mega Derm Plus



Primary closure



Deficient buccal attached gingiva



Apical repositioned flap



2 weeks healing period after Apical repositioned flap



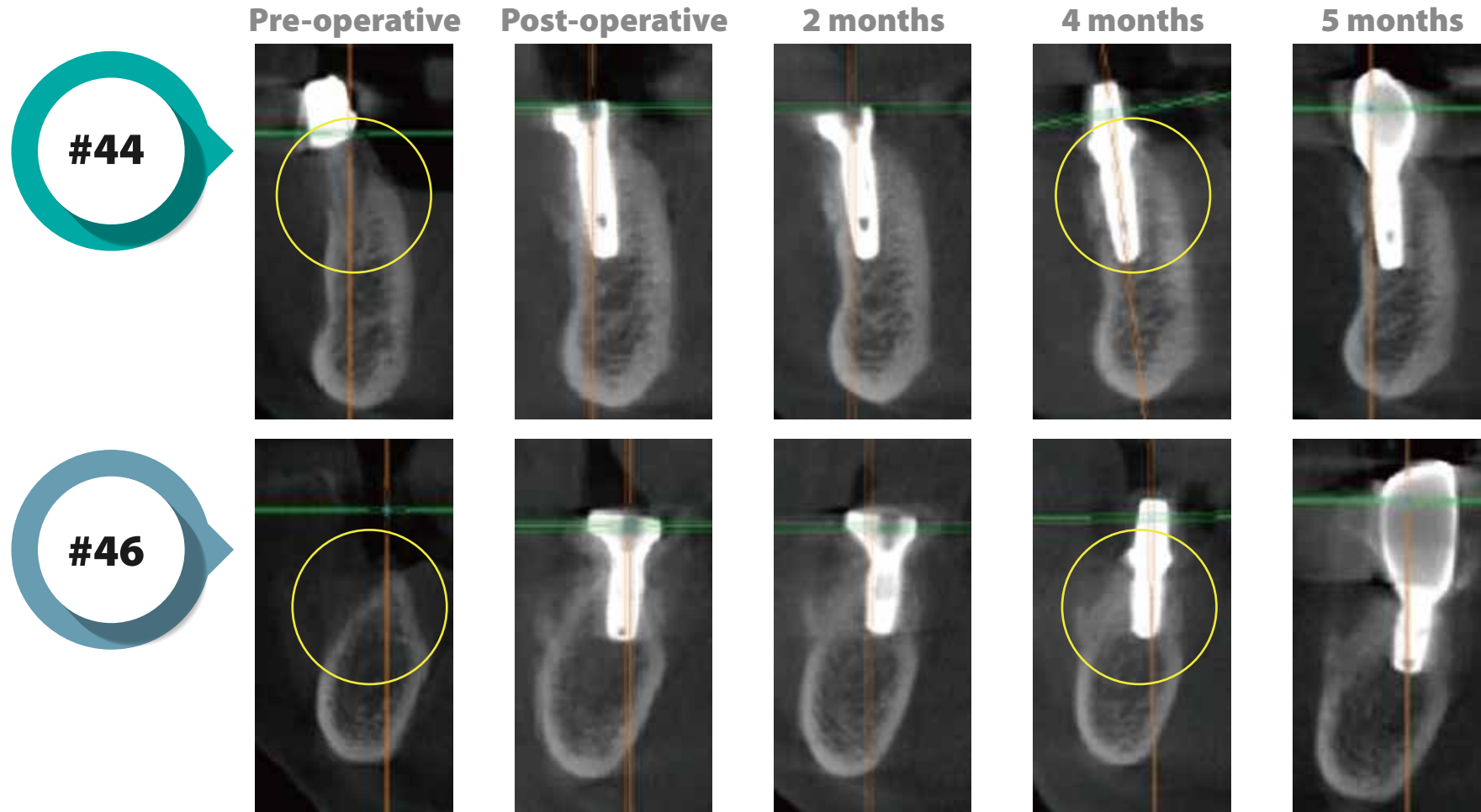
2 months healing period after Apical repositioned flap



Final restoration

CLINICAL CASES

Case 2



1. Volume Up™ Implant technique regenerates the bone in space supported by wide healing abutment on implant and bone graft with rhBMP-2.
2. Dermal graft makes the thick connective tissue which is used for apical positioned flap.
3. Within 2 months after bone graft operation, new bone volume was established.