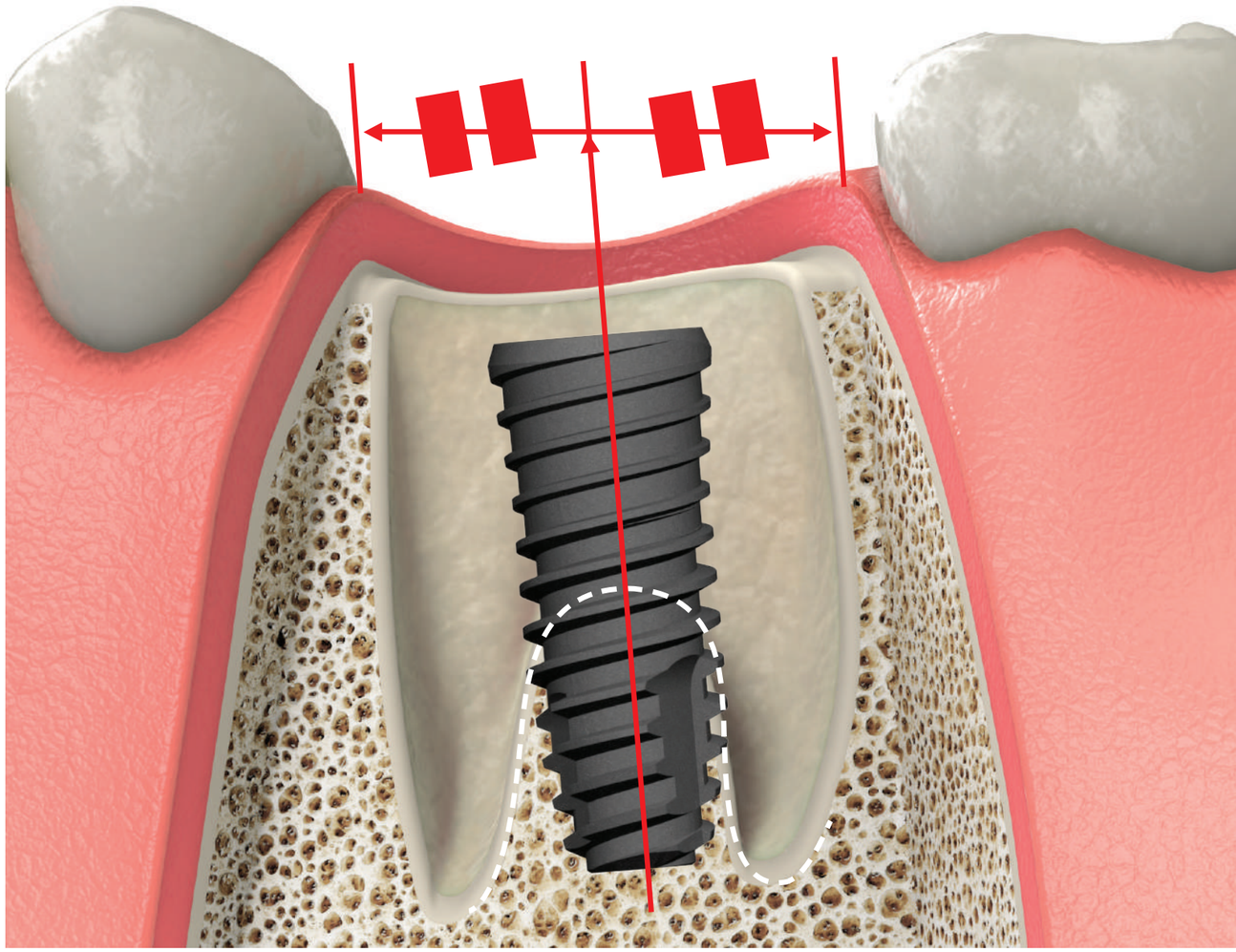
For education

SAVE
SEPTUM DRILL KIT

User Manual Ver.01



www.**dentisimplant**.co.kr

DENTIS Service center 1899-2804

D-M-SSDK-V1-201902-ENG

DENTIS

CONTENTS

I. Overview

1. Classification and Descriptive Terms for Timing of Implant Placement after Tooth Extraction

Classification	Period of implant placement	Descriptive terminology
Immediate Loading	0 day	Implant placement right after extraction
Early Loading	6–8 weeks	Early placement with soft tissue healing
Delayed Loading	After 12 weeks	Partial bone healing or fully healing

2. Pros and Cons of Immediate Implantation

1) Pros

① Shortening of treatment time.
② Fabrication of prosthesis is easier because installation is done on ideal location of natural tooth.
③ Loss of alveolar bone and gingival tissue is prevented.
④ Since healing ability of extraction socket is used, healing is fast.

2) Cons

① Complete coverage of soft tissue on top of the implant is difficult.
② There are some cases where it is difficult to obtain initial stability of the implant.
③ By trying forceful primary closure, loss of buccal vestibule or keratinized gingiva could occur.

3. Indications and Contraindications of the Immediate Implant Placement

1) Indications

① Trauma without alveolar bone damage.
② In the case where tooth is lost due to simple caries without exudation and cellulitis.
③ Tooth that is difficult to be treated periodontally or endodontically.
④ When there is a severe alveolar bone loss without purulent exudation.
⑤ When there is healthy and sufficient amount of soft tissue.
⑥ When there is an appropriate amount of bone at the tip of extraction socket for stability of implant.
⑦ When the tooth that has been extracted for planned restoration exists on an appropriate location.

2) Contraindications

① Extraction of the tooth with purulent exudation or the one that could be a source of serious inflammation.
② When cellulitis of adjacent soft tissue or granulation tissue exists.
③ Severe bone resorption before or after extraction.
④ When there is an insufficient amount of bone at the tip of extraction socket that hinders stability of implant.
⑤ When anatomically important structure exists where there is anomaly.
⑥ Remaining bone that hinders prosthesis or anomaly of anatomical form of the part where implant will be located.

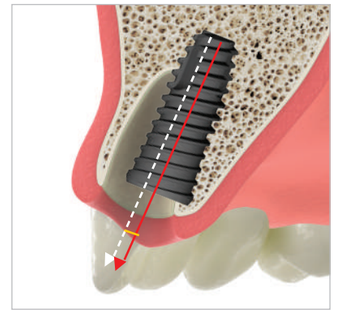
4. Criteria of Insertion Location in Immediate Implantation

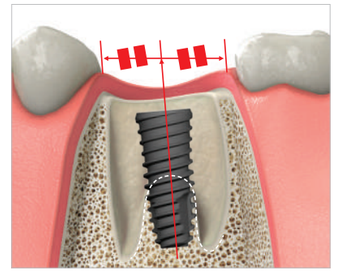
1) Anterior and Premolar

Installation is done a little lingually tilted from the center of extraction socket.

2) Molar

To gain initial stability, it is located in the middle of the septal bone in terms of mesiodistal insertion location.
(It coincides with long axis of mesial natural tooth.)





II. Product Overview

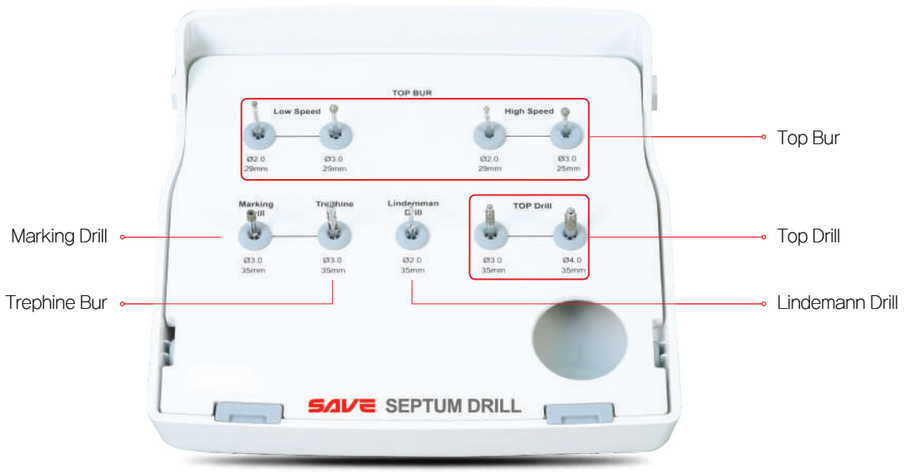
1. Introduction

SAVE SEPTUM DRILL KIT is very effective for placement of implants into extraction site.
Even when the septal bone is sharp, implant insertion hole is formed along with the septal bone accurately without slippage.

2. Precautions on the Use of Product

① This product is a medical device that must be used for proper use and purpose.
② The product with defective appearance must be returned before removing the package.
③ Carefully handle the product to avoid damage or deformation.
④ Handle the blade part of the drills carefully to avoid damage because they are fine and sharp.
⑤ Be sure to sterilize it before use.
⑥ Be well aware of the use method of the tool before use.

3. KIT



KIT Code : DSSDK

III. Specifications

1. Components

Top Bur

- Remove residual soft tissue at extracted cavity.
- Two type of bur : High speed and (for engine) low speed bur
- Drill diameter : Ø 2.0, Ø 3.0
- Recommendation RPM of the low speed bur : 800~1,200 RPM

Type	High Speed		Low Speed	
Diameter	Ø2.0	Ø3.0	Ø2.0	Ø3.0
Code	DH-2.0	DH-3.0	DL-2.0	DL-3.0
Image				

Lindemann Drill

- Drill to make hole at angled site without movement.
- Lindemann drill is not slipping even on the slope.
- Disk diameter : Ø 2.0
- Recommendation RPM : 800~1,200 RPM

Diameter	Code
Ø2.0	DLD-2.0

Marking Drill

- Drill for precise marking at septum.
- Marking drill is coated diamond surface helpful for prevent movement in septum.
- Drill diameter : Ø 3.0
- Recommendation RPM : 800~1,200 RPM

Diameter	Code
Ø3.0	DMD-3.0

Trephine Bur

- Put trephine bur on the marking drilling hole and remove septal bone.
- To form initial hole with bone harvesting.
- Drill diameter : Ø 2.0, Ø 3.0
- Recommendation RPM : 800~1,200 RPM

Diameter	Code
Ø3.0	DTB-3.0


Ø3.0

Top Drill

- Along with drilling hole, lindemann drill or trephine bur is used in order to widen the upper part of the septum bone. It is helpful for prevent slipping when the final drill used.
- Drill diameter : Ø 3.0, Ø 4.0
- Recommendation RPM : 800~1,200 RPM

Diameter	Code
Ø3.0	DTD-3.0
Ø4.0	DTD-4.0


Ø3.0

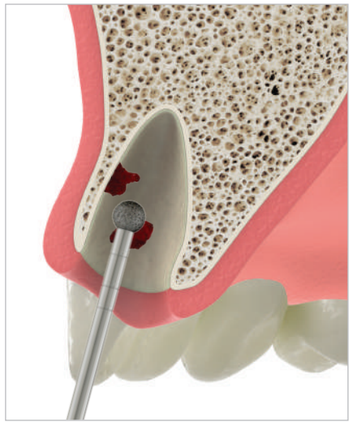
Ⅳ. How to Use

1. Anterior Surgical Procedure

1) Extraction

Atraumatic extraction

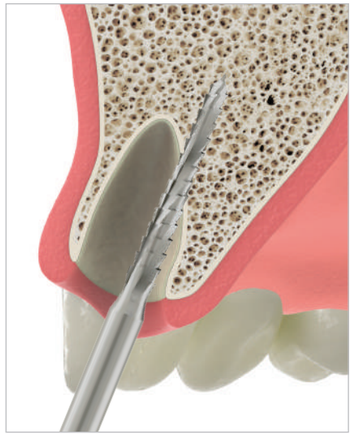
2) Remove residual soft tissue




Top-bur

Connect high speed handpiece or low speed contra angle handpiece with Ø 2.0 or Ø 3.0 size Top-bur and remove residual soft tissue at extracted cavity.

3) Initial drilling

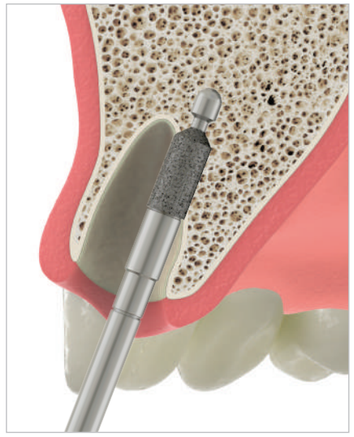


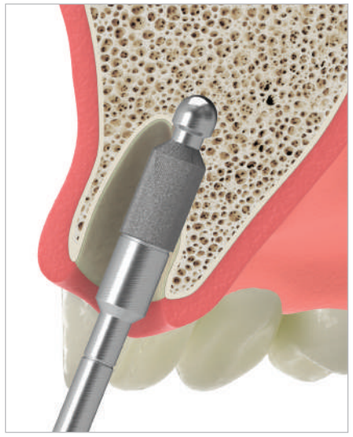
Lindemann Drill

By using Ø 2.0 lindemann drill with side cutting function, form a basic hole on palatal side of the extraction socket.

Notice When using lindemann drill, use it while pressuring towards palatal side.

4) Enlarge initial drilling





Top Drill

Along with initial drilling hole of palatal side, Ø 3.0 and Ø 4.0 drill are used with 800~1,200 RPM in order to gradually widen the upper part.

5) Final drilling

Surgical Drill

Perform drilling in accordance with the method recommended by the manufacture's fixture drilling sequence.

Tip For fixture drilling, under drilling is recommended.

6) Implant placement

(Machined) Mount Driver

(Ratchet) Mount Driver

Fixture

By using the fixture driver, install the fixture along with palatal wall.

7) Bone grafting (Optional)

Ovis Bone Graft

Ovis Bone BCP
Alloplastic Material

- Osteoconductive synthetic bone graft with higher β–TCP content
- Excellent wettability
- Easy manipulation
- Biocompatibility and great bioactivity
- Well–formed Marco/Micro porous
- Porosity : 70%

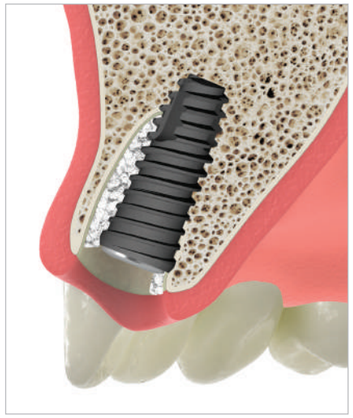
Ovis XENO
Xenogenic Material

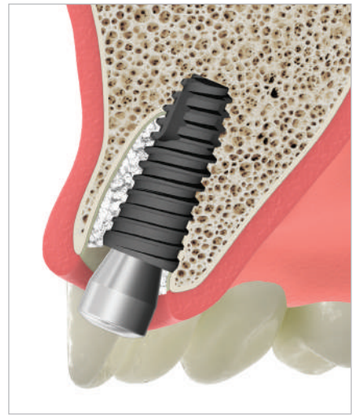
- Bovine bone grafting material of natural mineral cancellous bone composed of double coated Ca–P
- Natural mineral bone obtained through strict manufacturing process
- No immunologic rejection
- Biocompatibility and great bioactivity
- Easy revascularization of the bone graft site
- Well–formed Macro/Micro porous similar to human's cancellous bone

Ovis XENO-P
Xenogenic Material

- 100% cancellous swine bone that has been deproteinized.
- Safety from mad cow disease or Creutzfeldt–Jakob disease and so on.
- The most similar void fraction to that of human bone.
- Excellent hydrophilicity and transparency
- Biocompatible and excellent bone regeneration ability.
- Surface void form of natural bone is maintained due to special processing technique.

8) Connect cover screw or healing abutment





Cover Screw

Healing abutment

Hex Driver

9) Membrane application (Optional)

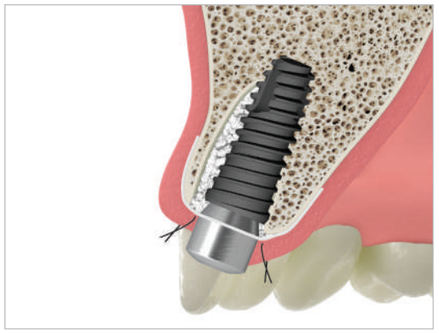
Ovis Membrane

Ovis TRM

SAVE GBR KIT

Depending on whether there is bony defect or not, absorbable or non–absorbable membrane is applied.
When using long absorbable membrane, use SAVE GBR KIT for fixation.

10) Suture

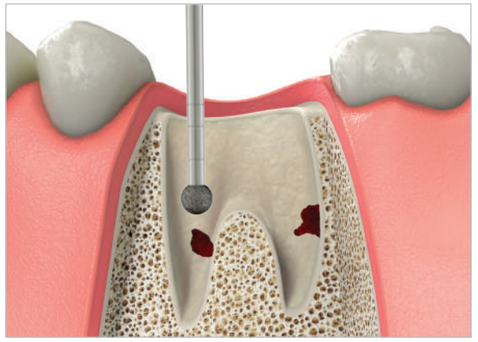


2. Posterior Surgical Procedure

1) Extraction

Atraumatic extraction

2) Remove residual soft tissue



Top-bur

Connect high speed handpiece or low speed contra angle handpiece with Ø 2.0 or Ø3.0 size Top-bur and remove residual soft tissue at extracted cavity.

3) Marking on the septal bone

Marking Drill

Mark the location of the inter-radicular septum with the Ø 3.0 marking drill.

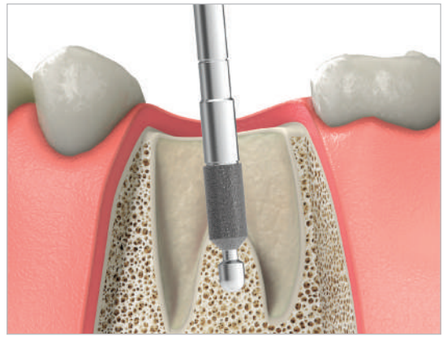
4) Initial drilling

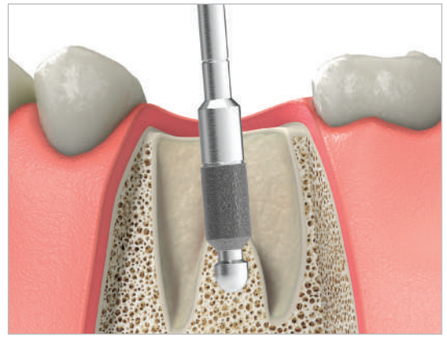
Trephine Bur

Using the trephine bur, make an initial hole while harvesting bone on the location marked by the marking drill.

Tip Autogenous bone obtained by trephine bur could be used as graft material.

5) Enlarge initial drilling hole

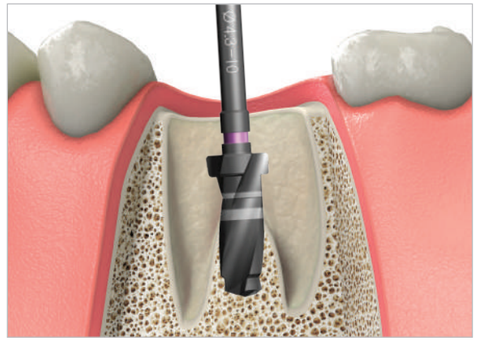




Top Drill

Along with the hole formed by trephine bur, use Ø 3.0 and Ø 4.0 top drill in order to gradually widen the upper part.

6) Final drilling



Surgical Drill

Perform drilling in accordance with the method recommended by the manufacture's fixture drilling sequence.

7) Implant placement

(Machined)
Mount Driver

(Ratchet)
Mount Driver

Fixture

Install the fixture along with septal bone.

8) Bone grafting (Optional)

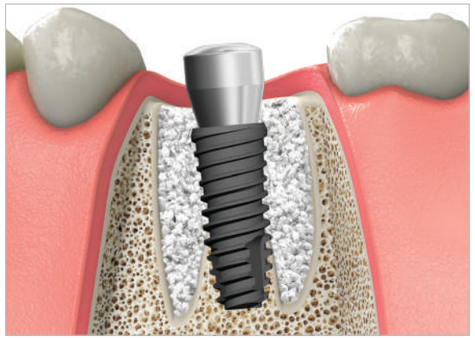
Ovis Bone Graft

9) Connect cover screw or healing abutment


Cover Screw


Healing abutment


Hex Driver



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Ovis Membrane


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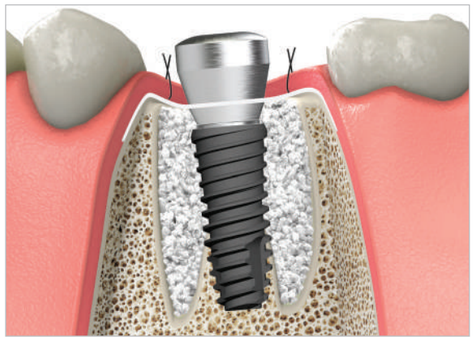
When using long absorbable membrane, use SAVE GBR KIT for fixation.

11) Suture



3. Maintenance

1) Cleaning and Disinfection of the KIT

① Thoroughly pre-rinse blood stain or foreign body on the instruments after using the kit by using a cleaning brush on the surface in distilled water or 30 ~ 40℃ running water for 20 seconds.

② Pre-rinse it by immersing it in disinfectant liquid for 10 minutes.

③ Cleanse additionally by using ultrasonic cleanser.

④ After cleansing it by using detergent and cleaning brush, wash it in running water thoroughly.

⑤ Either 100% naturally dry the cleansed instruments or use a clean cloth to directly remove wetness.

⑥ Reposition the dried instruments in accordance with the mark of base plate of the kit.

⑦ Wrap the kit with sterilization wrap.

⑧ Mark the sterilization date after attaching sterilization tape on sterilization wrap.

⑨ Place the wrapped kit into the sterilization device and proceed sterilization.

2) Method for Storage of the KIT

① Store it in room temperature on uncontaminated area.

② Check the marked sterilization date, and if it has not been used within 3 ~ 4 days, re-sterilize it before using it for surgery.

V. Clinical Cases

Immediate implant placement using SAVE SEPTUM DRILL KIT

Dr. Kim, Yongjin | Ilsan Apsun Dental Clinic

Patient Information

Placement Implant Area	6	**Sex / Age**	Female / 35
C.C.	Chronic pain on right lower 1st molar		
Treatment Plan	Extraction and immediate implant placement		
Materials and Methods	1. #46 extraction 2. Septal bone drilling with SAVE SEPTUM DRILL KIT 3. Implant placement 4. Connect healing abutment		

Pre-operation

Fig.1 Pre-op panorama

Fig.2 Pre-op clinical view

Fig.3a-b #46 extraction. Sound septal bone was seen

Treatment

Fig.4 Remove residual granulation tissue with high speed Top-bur

Fig.5 Top bur and trephine bur were used to remove coronal portion of septal bone

Fig.6 Top Drill. Enlarge the initial drilling hole with diamond drills (Ø3.0 and Ø4.0) following initial drilling

Fig.7 Final drilling was done

Fig.8 Implant placement. Implant could be placed within the septal bone

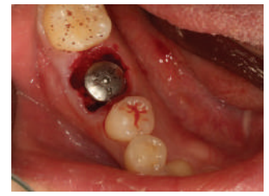


Fig.9 Healing abutment connection

Post-operation

Fig.10 Post-op panorama

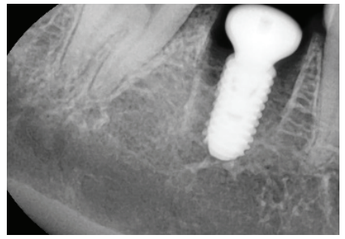


Fig.11 Post-op P.A

Conclusion

By using SAVE SEPTUM DRILL KIT, an implant could be placed in proper position along the septum.

Upper posterior immediate implant placement with DENTIS fixture

Dr. Kim, Yongjin | Ilsan Apsun Dental Clinic

Patient Information

Placement Implant Area	6	Sex / Age	Male / 35
C.C.	Presenting severe caries of #16		
Treatment Plan	#16 extraction and immediate implant placement		
Materials and Methods	1. #16 extraction 2. Septal bone drilling with SAVE SEPTUM DRILL KIT 3. Implant placement 4. Connect healing abutment		

Pre-operation

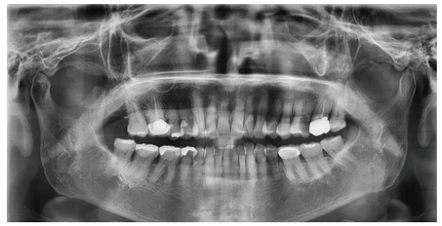


Fig.1 Pre-op panorama

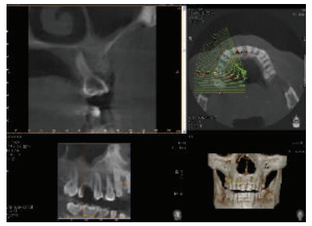


Fig.2 Pre-op CT

Fig.3 Pre-op clinical views

Fig.4 Tooth separation

Fig.5 Extraction

Treatment

Fig.6a-b Marking drill was used first to make initial indentation on the septal bone

Fig.7a-c Trephine drill was used to remove coronal portion of septal bone

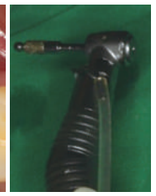


Fig.8a-b Top drill was used to enlarge the coronal portion of initial drilling hole made by marking drill and trephine drill

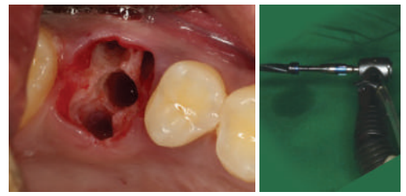


Fig.9a-b Drilling for implant placement

Fig.10 SQ 5.0X10 implant placement

Post-operation

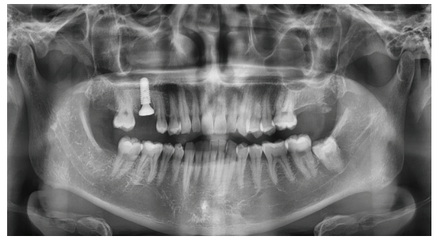


Fig.11 Post-op panorama

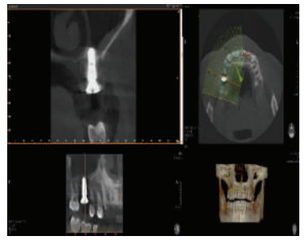


Fig.12 Post-op CT

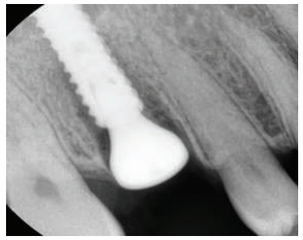


Fig.13 Post-op P.A.

Conclusion

By using SAVE SEPTUM DRILL KIT, an implant could be placed in proper position.
In addition, Initial stability of implant was enough by engaging the septal bone.