Louis Button Manual

User Manual V.1

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Roles of Attached Gingiva

1. Esthetics
2. Resistance to peri-implantitis
3. Resistance to gingival recession
4. Easier plaque control

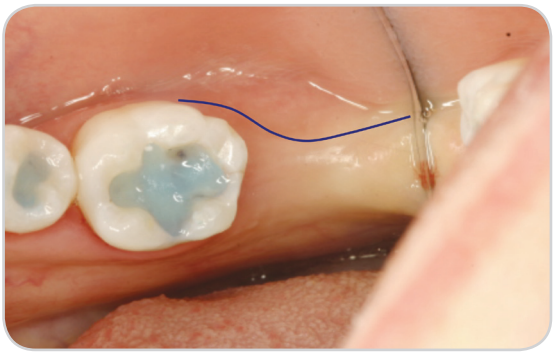
When Keratinized Mucosa is Inadequate

· Partial Thickness Apically Positioned Flap(pAPF)
· Free Gingival Graft(FGG)

Problem
· Additional surgery
· Technique sensitive
· Discomfort

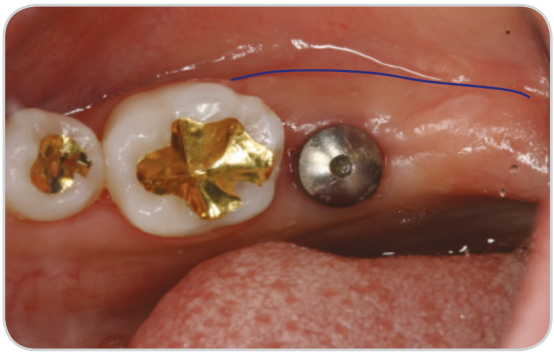
Role of the Louis Button

When keratinized mucosa is inadequate, the Louis Button can secure it instead of relying on additional surgeries.



Pre-op

After 5 weeks



After 5 weeks using Louis Button

Advantages

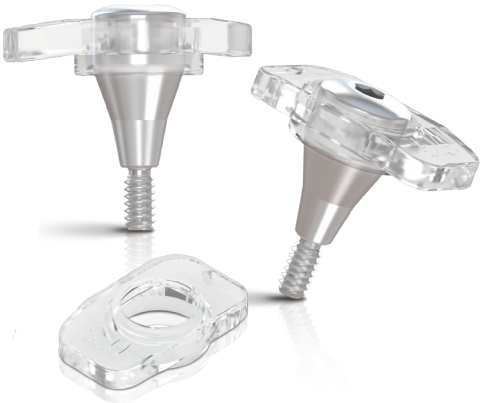
1. Simple and easy to use
2. Naturally increases the volume of attached gingiva
3. No need for sutures ➞ Shorter procedure time
4. No additional surgeries required to improve keratinized tissues

Directions

1. The Louis Button can be used after connecting the healing abutment to the fixture, regardless of when the connection placed.
2. Use a lingually placed crestal incision within the attached keratinized mucosa if possible.
3. Push the Louis Button onto the healing abutment.
– The Louis Button is really effective when the healing abutment height is 4–5mm(Submerged type implant or external type implant) or 2–3mm (ITI tissue level type implant.)
4. With one finger, press the center of Louis Button to attach it to the healing abutment.
– Apply only slight pressure to the flap. The swelling flap will apply pressure to itself as healing occurs.
– Applying too much pressure onto the flap will cause patient discomfort.
– In most cases, no suturing is necessary.
5. Warn patients to avoid purposefully touching the Louis Button with their tongue or fingers.
6. Remove the Louis Button 7–10 days after surgery, by pulling directly upward on the button.

Post–op with Louis Button

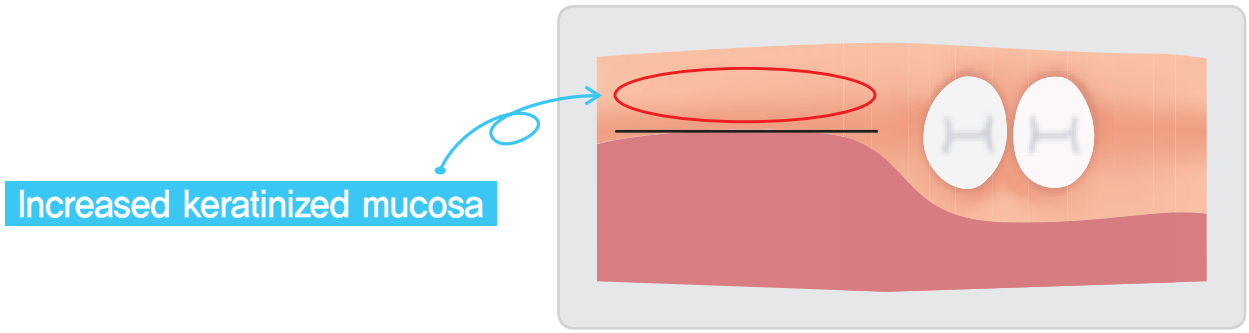
The More Powerful, Louis Button II



√ Aggressive adjustment of tissues thanks to an 8° wing angle.
√ Stopper function prevents sinking.
√ Higher compatibility thanks to enhanced tension.

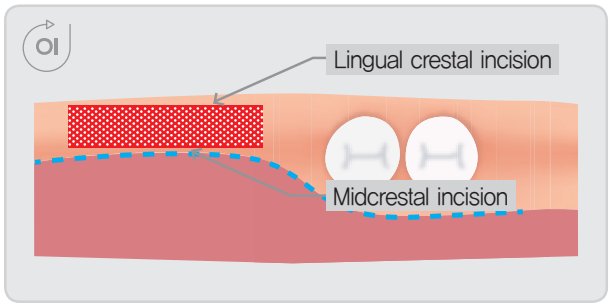
The Concept Behind the Louis Button

· During crestal incisions within the edentulous area, keratinized mucosa exists lingually behind the midcrestal incision point.

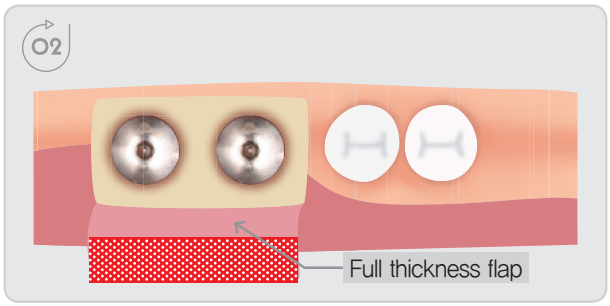


· A Full Thickness Apically Positioned Flap (fAPF) with lingual crestal incision is performed to make use of improved, lingually placed keratinized mucosa.

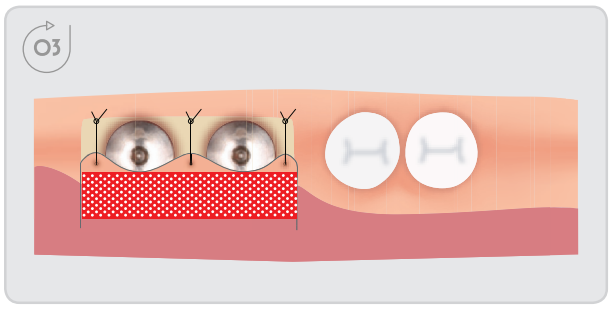
Full Thickness Apically Positioned Flap(fAPF) with Lingual Crestal Incision Surgery Procedure



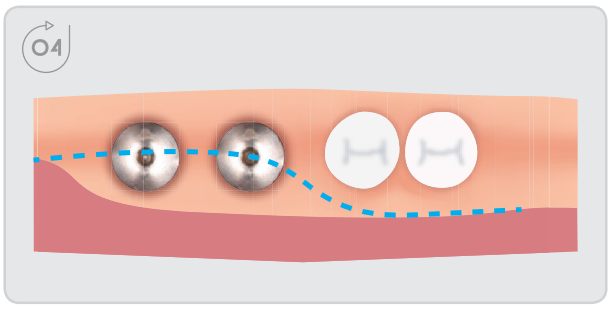
Make a lingual crestal incision (instead of a midcrestal incision) for better access to keratinized mucosa.



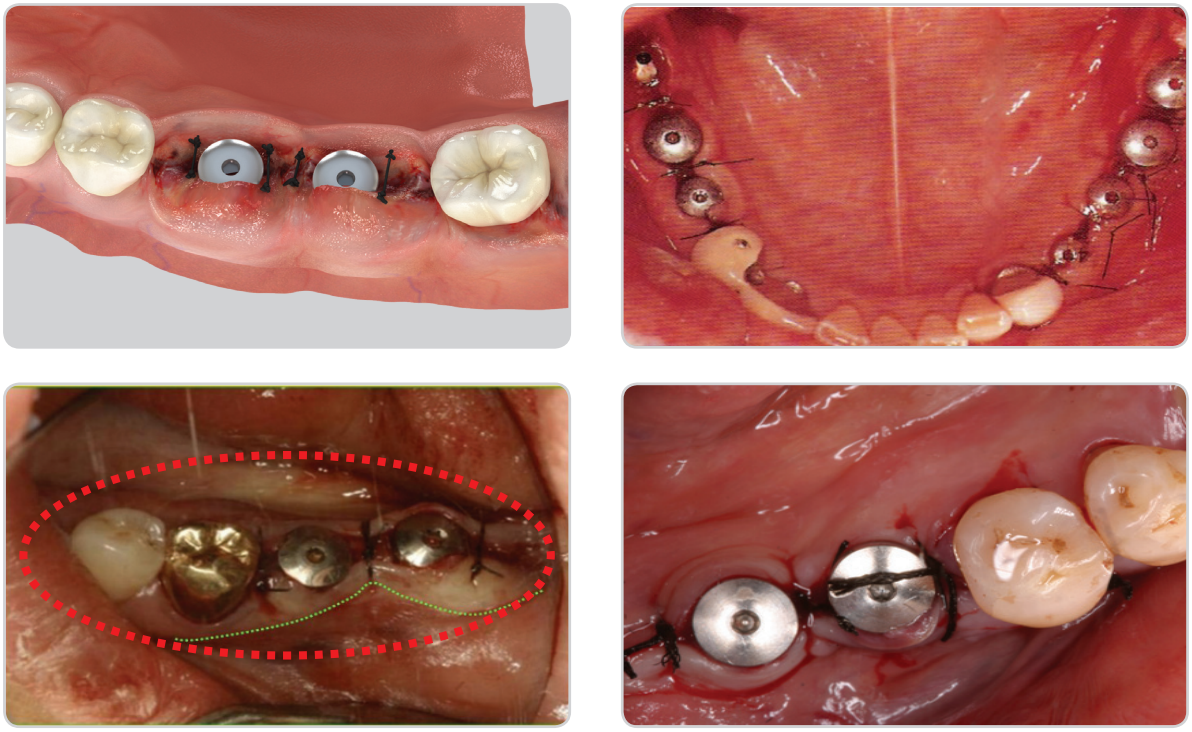
Create a full thickness or partial thickness flap (full thickness is preferred.)



Proximal site - secondary healing of loose sutures.



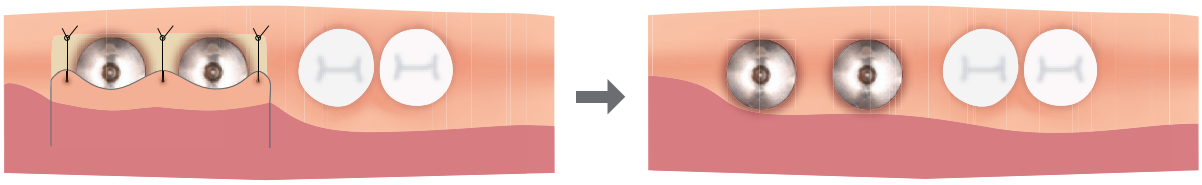
Suture Drawbacks



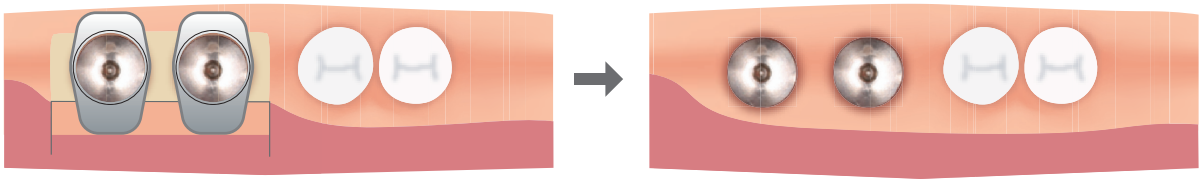
When using fAPF with a lingual crestal incision, some keratinized mucosa is lost during suturing. Due to the tension of sutures, some of the keratinized mucosa will move occlusally preventing attachment to the alveolar bone. The total amount of attached keratinized mucosa expected to be gained from this procedure is reduced.

Prevent Drawbacks Caused by Suturing

- Suturing



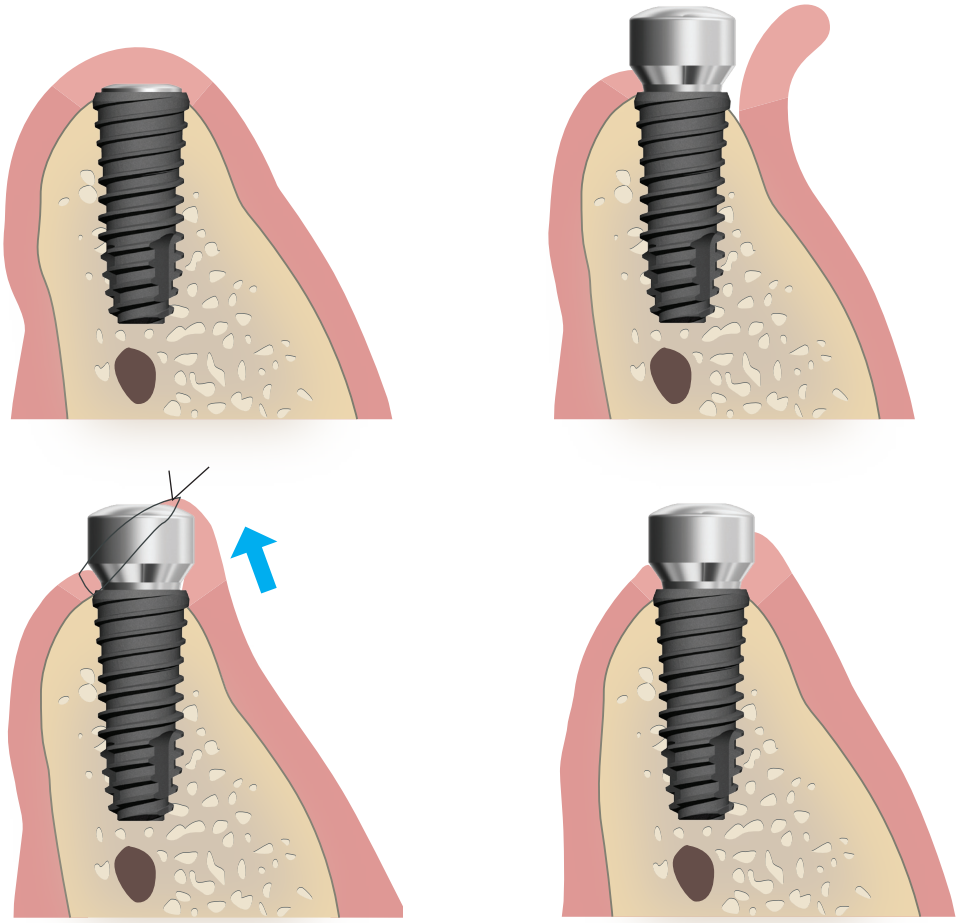
- Louis Button

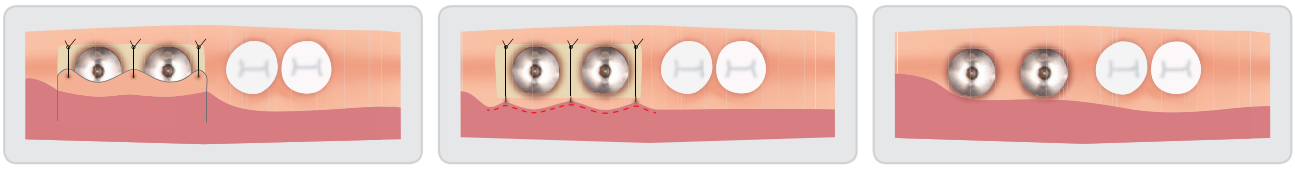


The Louis Button depresses any keratinized mucosa gained from the lingual crestal incision, encouraging attachment with the alveolar bone. This prevents the loss of keratinized mucosa as free gingiva.

Comparison of Suture and the Louis Button Methods

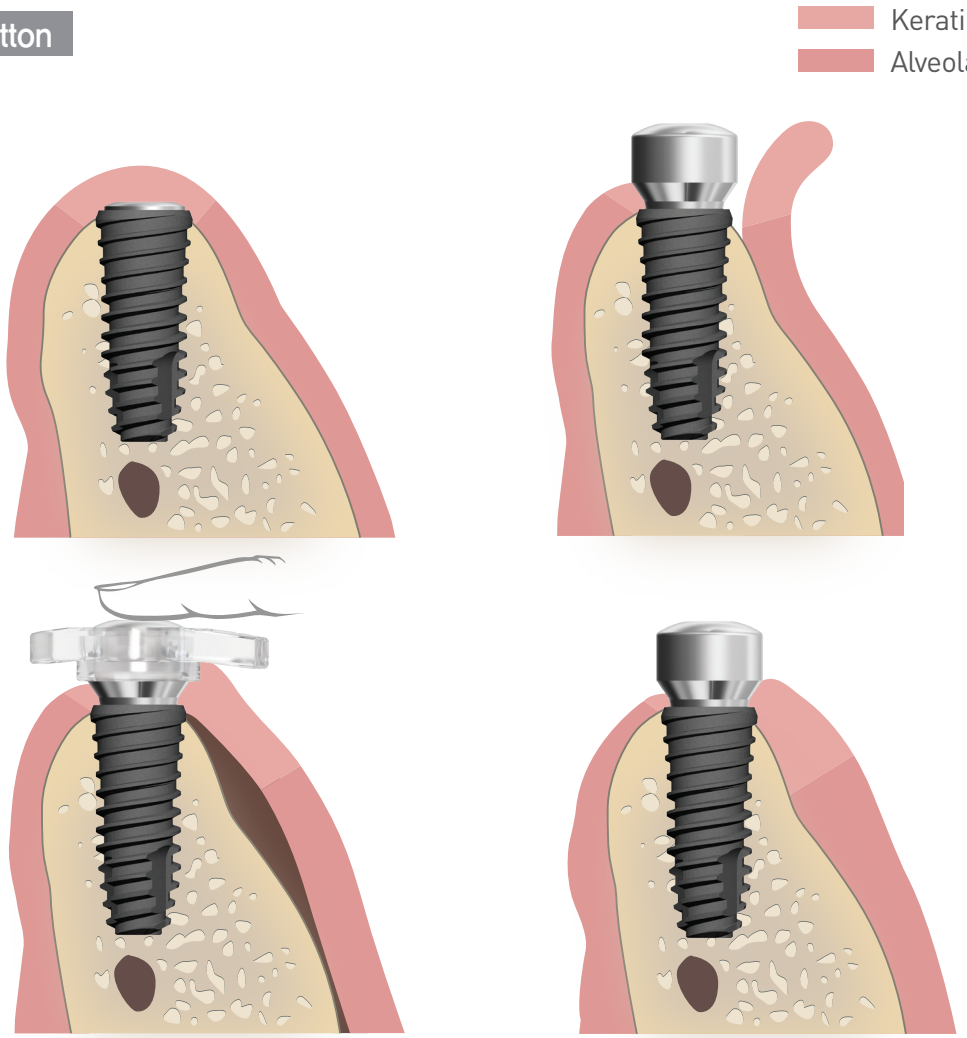
Suturing

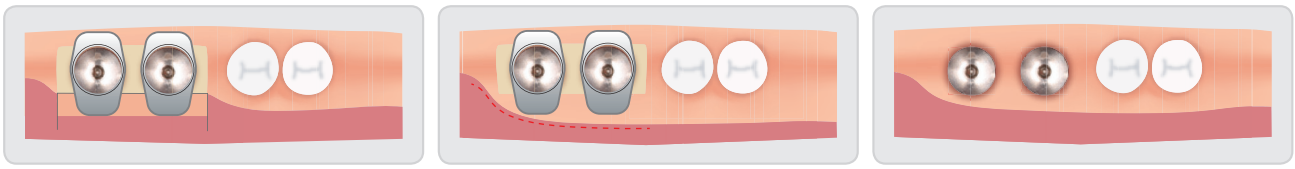




When assessing cross-section of suture methods, it is possible to see the drawback of using sutures with a lingual crestal incision. Because the crestal incision is lingually located, the flap length is longer. Consequently, even the slightest tension of the suture can pull the long flap upwards towards the healing abutment. All keratinized mucosa moved onto the healing abutment instead of attaching to alveolar bone will be lost as free gingiva.

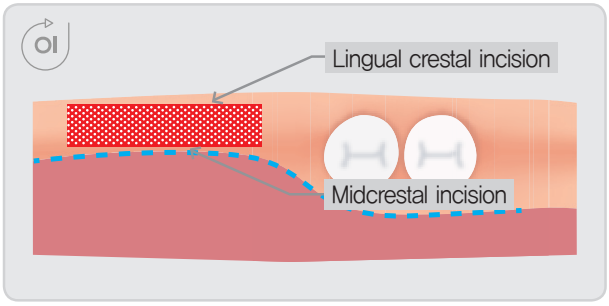
Louis Button



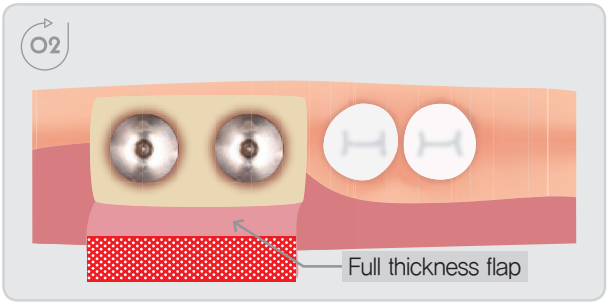


In contrast, the Louis Button pushes the flap downward, preventing keratinized mucosa from moving up onto the healing abutment. The majority of keratinized mucosa will attach to the alveolar bone and become attached keratinized mucosa.

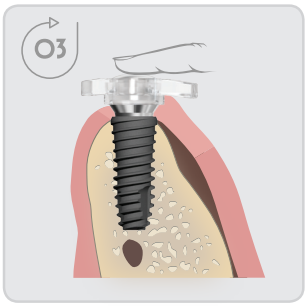
General Procedure Recommendations of the Louis Button II

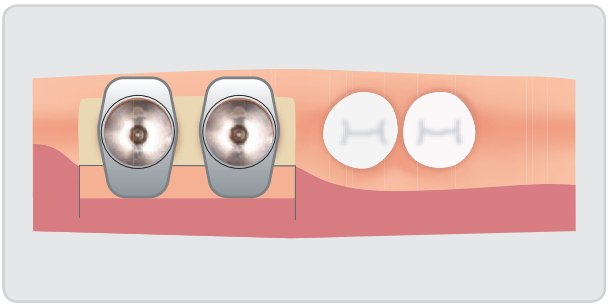


Make a lingual crestal incision to encourage greater mucosa keratinization.

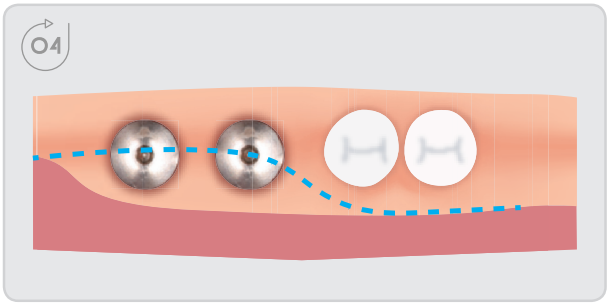


Make a full thickness flap and connect the healing abutment to the fixture.





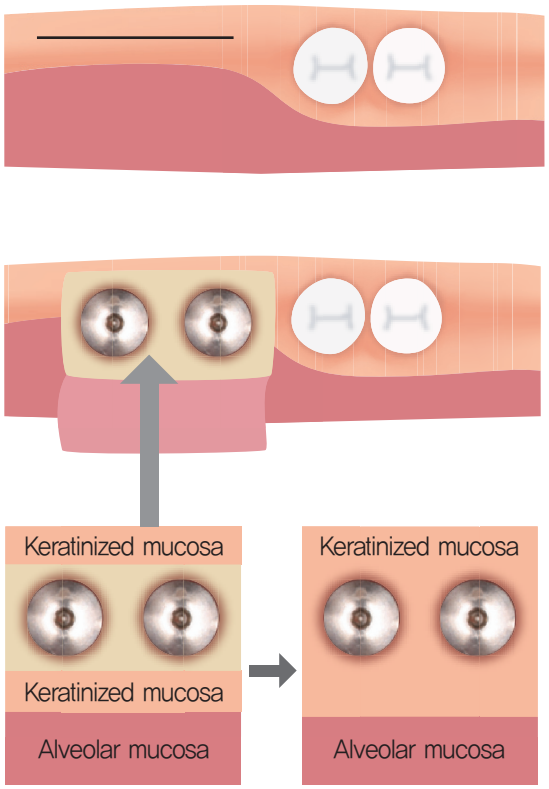
Place the Louis Button it onto the healing abutment and using one finger, press firmly in the center until it snaps into place.



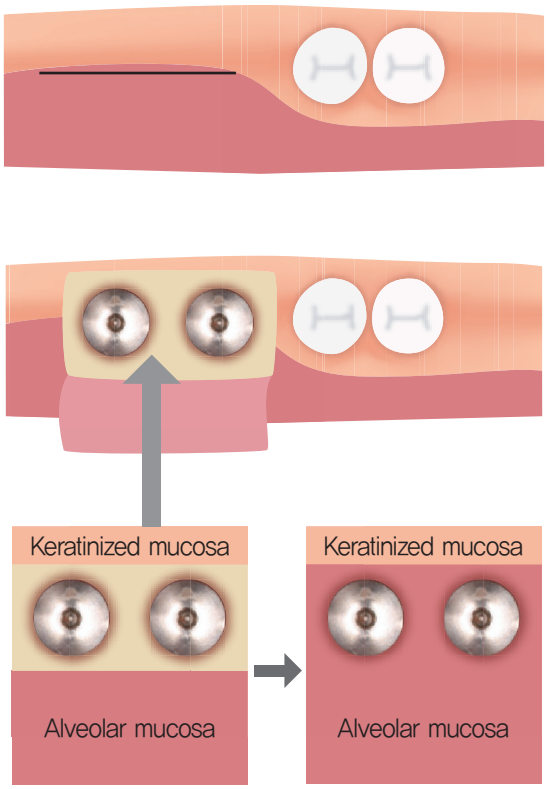
Remove the Louis Button 7–10 days after surgery by pulling directly upward.

The Difference in Flap Design

A Crestal Incision Made Within Keratinized Mucosa

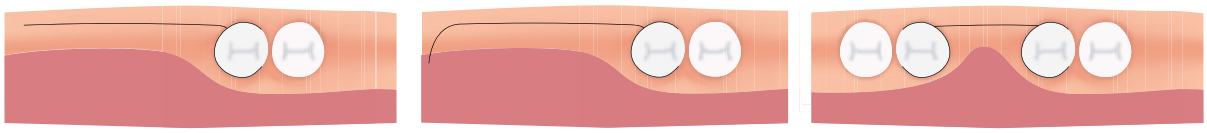


A Crestal Incision Made Outside of Keratinized Mucosa



For exposed proximal bone to fill with keratinized mucosa, both margins of the lingual and buccal flap needs to be keratinized. For this to occur, the crestal incision must be placed inside of keratinized mucosa.

Recommended Flap Design



Effect of the Use of a Ready – Made Plastic Stent on the Peri–implant Soft Tissue

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Objective	This study compared the effect of the use of a ready-made plastic stent on the width of peri-implant keratinized mucosa with that of conventional methods and examined the effects of a plastic stent on peri-implant soft tissue.
Materials and Methods	Five young-adult beagle dogs were used. Forty titanium implants were placed in the mandibular alveolar ridge. Stage 2 surgery was performed 8 weeks after implant installation. Each dog received a full-thickness, apically positioned flap (fAPF) with a lingual crestal incision using a suture material in the control group (n = 20) and a ready-made plastic stent in the test group (n = 20). The keratinized mucosa width after stage 2 surgery was measured in each group. The pocket depth, length of connective-tissue contact and biological width were measuredin the tissue samples. A student's t-test was used to test the differences between the groups (95% confidence level).
Results	The width of the keratinized mucosa was significantly higher and the distance from the top of the implant platform to the mucogingival junction was significantly longer in the test group than the control group. Histometric observations revealed the pocket depth and biological width to besignificantly lower in the test group than the control group.
Conclusion	The use of a fAPF with a lingual crestal incision using a ready-made plastic stent can effectively preserve or enhance the width of the keratinized mucosa and might restore a more optimal biological environment at the early soft-tissue healing stage.

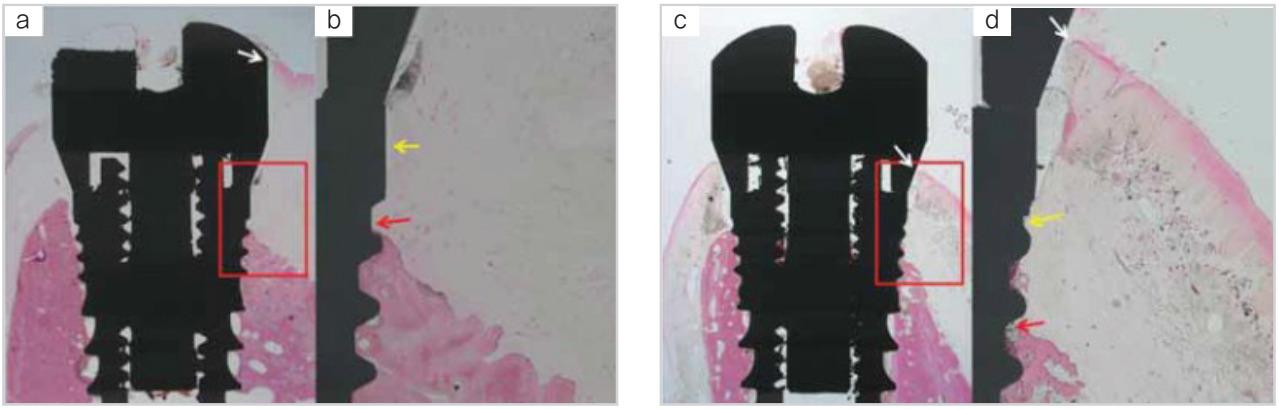
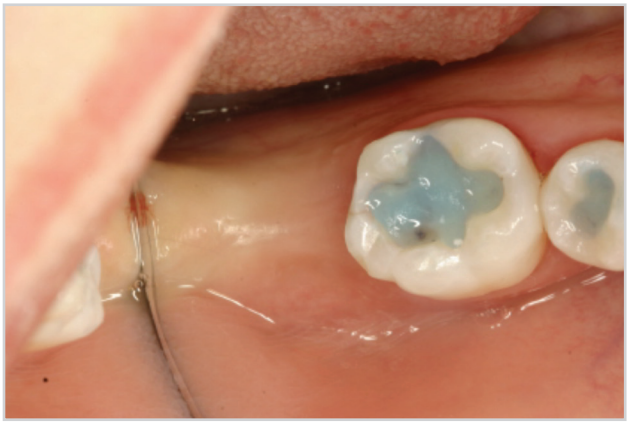


Figure 1. Buccal aspect of the histology section (hematoxylin and eosin stain). (a) Histology section in the buccolingual direction in the control group (12.5); (b) High-power view of the apical extension of the peri-implant epithelium in the control group (40). (c) Histology section of a sample obtained from the test group (12.5). (d) Histology section of a sample obtained from the test group (40). Pocket depth and biological width were lower in the test group than in the control group. (White arrow: marginal portion of mucosa, yellow arrow: apical portion of the juctional epithelium, red arrow: first bone-implant contact.)

Case I

Before & After



Before

After

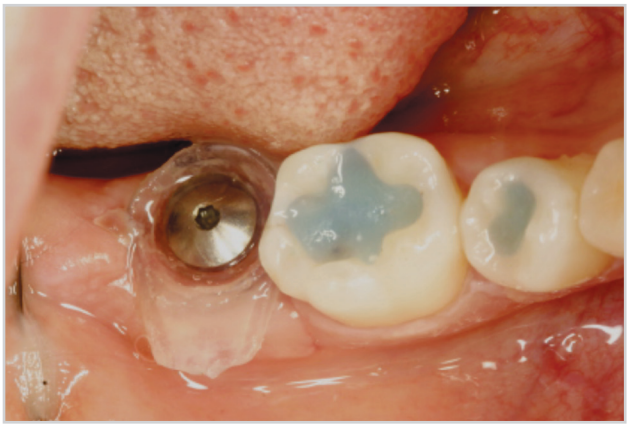


Fig1. 1 day after implant installation

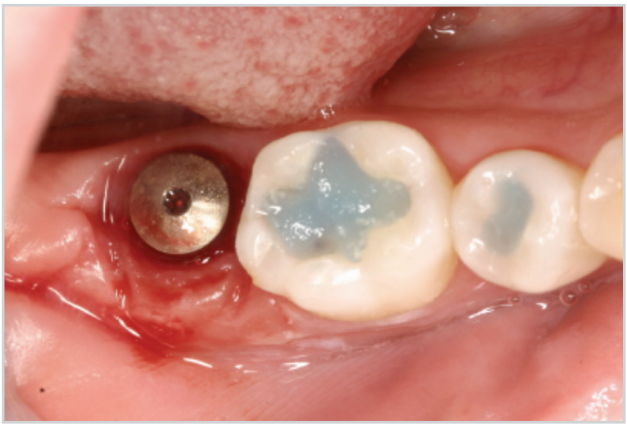


Fig2. Removing Louis Button after 1 week

Fig3. 5min. after removing Louis Button

Fig4. 5 weeks after implant installation

Case II

Before & After

Before

After

Procedure

Fig1. Pre-op intraoral photo

Fig2. Wearing a Louis Button

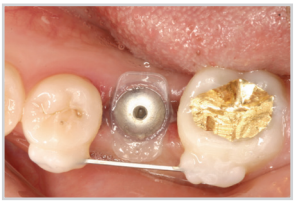


Fig3. 1 day after implant installation

Fig4. After 3 days implant installation adjusted lingual side of Louis Button

Fig5. 1 week after implant installation

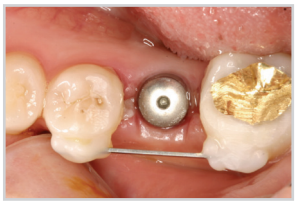


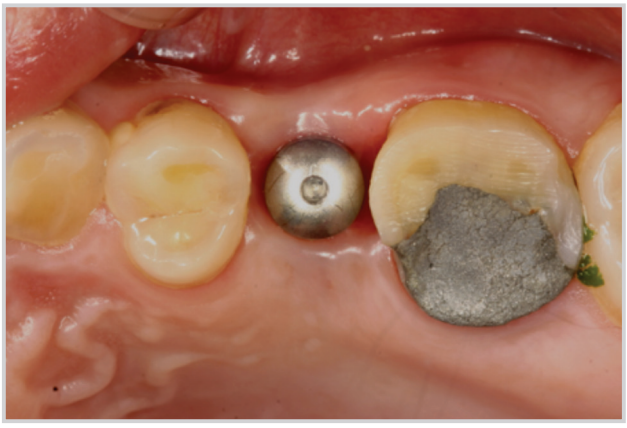
Fig6. Removing Louis Button after 1 week

Fig7. 4 weeks after implant installation

Case III

Before & After

Before



After

Procedure

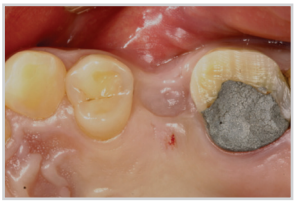


Fig1. Pre-op intraoral photo

Fig2. Implant Installation

Fig3. Wearing a Louis Button

Fig4. 1 week after implant installation

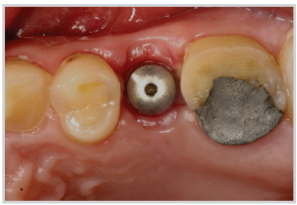


Fig5. Removing Louis Button after 1 week

Fig6. 4 weeks after implant installation

Case Ⅳ

Before & After

Before

After

Procedure

Fig1. Pre-op intraoral photo

Fig2. Wearing a Louis Button

Fig3. 3 days after implant installation

Fig4. 1 week after implant installation

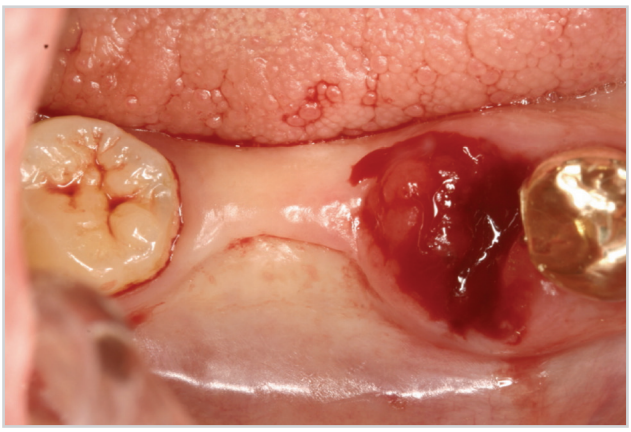
Fig5. Removing Louis Button after 1 week

Fig6. 4 weeks after implant installation

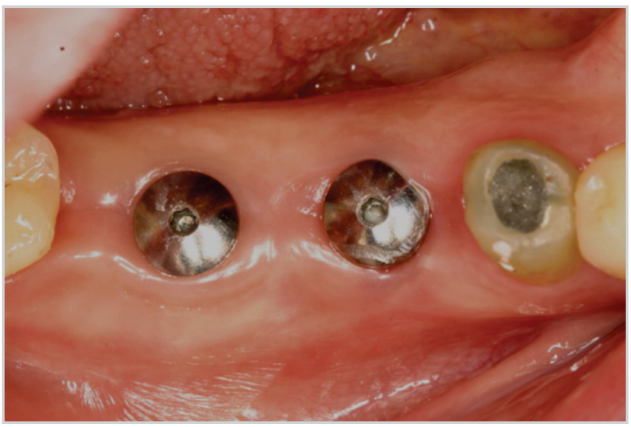
Fig7. 8 weeks after implant installation

Case V

Before & After



Before



After

Procedure

Fig1. Pre-op radiography

Fig2. Pre-op intraoral photo

Fig3. Post-op radiography

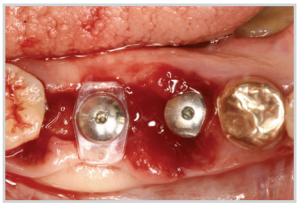


Fig4. Wearing a Louis Button

Fig5. 1 day after implant installation

Fig6. 1 week after implant installation

Fig7. Removing Louis Button after 1 week

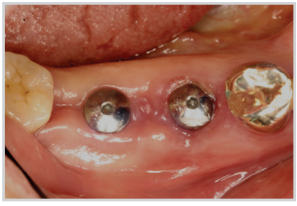


Fig8. 2 weeks after implant installation

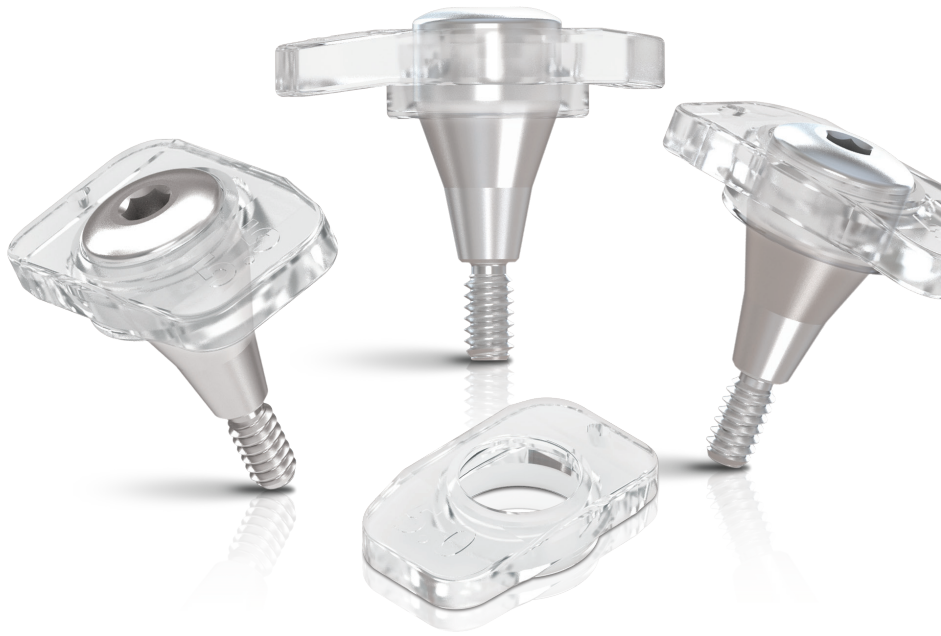
Fig9. 3 months after implant installation

Louis Button II

Specification of Louis Button II

Code. No	Diameter
Ø4.0	DLB2T40
Ø4.5	DLB2T45
Ø5.0	DLB2T50
Ø5.5	DLB2T55
Ø6.0	DLB2T60
Ø6.5	DLB2T65
Ø7.5	DLB2T75

1Box = 10EA



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