



A CASE REPORT BY
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A Buccal Pedicle Flap for Peri-Implant Soft Tissue Volume





► The Situation

Patient presented with a fistula buccal on tooth #9 associated with a chronic peri-apical lesion and external root resorption. Also tooth #8 showed a chronic peri-apical lesion. Her chief complaint was the misalignment of her teeth. The clinical situation revealed the presence of bleeding upon probing and generalized moderate periodontal disease (Stage II, Grade I) as well as multiple endodontic failures.

► The Risk Profile

Esthetic Risk Factors	Low Risk	Medium Risk	High Risk
Patient's health	Intact immune system	Light smoker	Impaired immune system
Patient's esthetic requirements	Low	Medium	High
Height of smile line	Low	Medium	High
Gingival biotype	Thick - "low scalloped"	Medium - "medium scalloped"	Thin - "high scalloped"
Shape of dental crowns	Rectangular		Triangular
Infection at implant site	None	Chronic	Acute
Bone height at adjacent tooth site	≤ 5 mm from contact point	5.5 - 6.5 mm from contact point	≥ 7 mm from contact point
Restorative status of adjacent tooth	Intact		Compromised
Width of tooth gap	1 tooth (≥ 7 mm)	1 tooth (≤ 7 mm)	2 teeth or more
Soft tissue anatomy	Intact		Compromised
Bone anatomy of the alveolar ridge	No defect	Horizontal defect	Vertical defect

Note: request for reducing the healing time, long term maintenance

SPECIAL INTEREST

Periodontics
Implantology

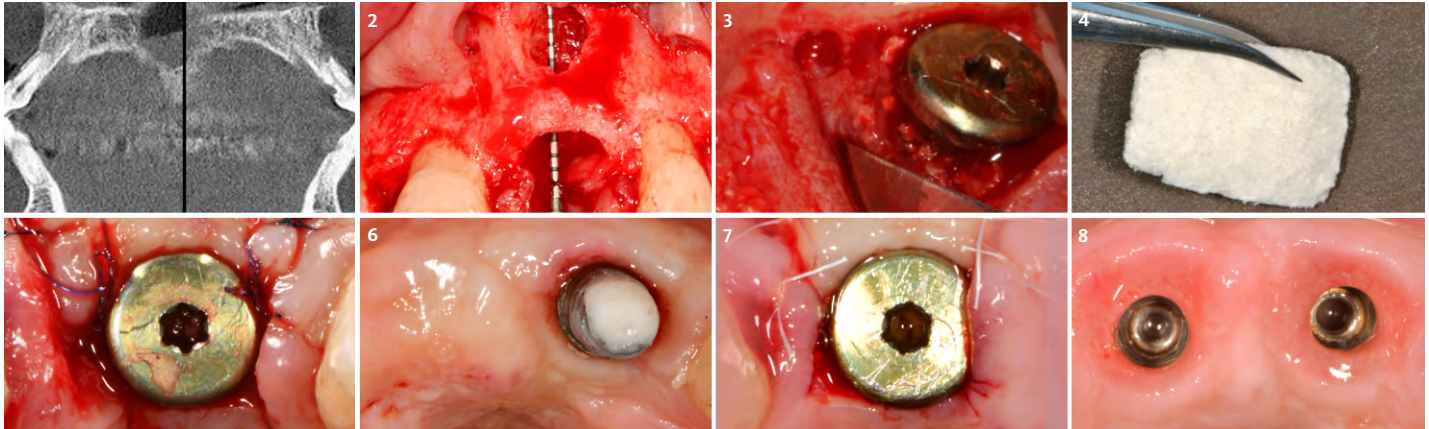
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Dr. Tabanella is a Diplomate of the American Board of Periodontology, an Active Member of the Italian Academy of Esthetic Dentistry and author of the book "Retreatment of Failures in Dental Medicine". He graduated from the University of Southern California, Los Angeles, USA where he obtained his Certificate in Periodontics as well as a Master of Science in Craniofacial Biology. He is Director of O.R.E.C. – Oral Reconstruction and Education Center (www.tabanellaorec.com), reviewer and author of original articles.

► The Approach

The aim of the treatment is to eradicate periodontal disease and restore esthetics and function. Treatment planning: non-surgical and surgical periodontal treatment, orthodontic alignment, extraction of both central incisors, immediate implant placement and Guided Bone Regeneration with Geistlich Bio-Oss®, peri-implant soft tissue boosting with a buccal pedicle flap and full ceramic CAD-CAM restorations.



- 1 The sagittal cuts show chronic peri-apical lesions on both central incisors and a thin buccal plate with minor vertical bone loss but a fenestration apical to tooth #9.
- 2 The intra-operative image is showing the bony defect, the buccal fenestration and the thin buccal plate.
- 3 After allowing the tissue to heal for 4 months, the first buccal pedicle flap was performed during the uncovering of the dental implant. Simultaneously, Geistlich Fibro-Gide® was inserted into the envelope created by the flap design.
- 4 Geistlich Fibro-Gide® is reduced to a thickness of 4 mm at its borders so that it is easier to adapt it to the recipient site, then trimmed so that the borders don't approach the vertical incisions of the buccal pedicle flap.
- 5 Polypropylene 6.0 sutures are used to compress Geistlich Fibro-Gide® underneath the flap thus creating the "wrinkles" on the mucosa, which are visible on the occlusal view. The mucogingival line is repositioned at its original level
- 6 Four months after immediate implant placement and GBR with Geistlich Bio-Oss® in tooth #8, a second buccal pedicle flap is performed to reduce the buccal concavity, increase the thickness as well as the band of the keratinized mucosa.
- 7 As in the previous surgery, Geistlich Fibro-Gide® is inserted underneath the buccal pedicle flap and stabilized with e-PTFE 6.0 sutures.
- 8 8 weeks post surgery, the occlusal view is showing a biomimetic countouring of the peri-implant mucosa.

SOFT TISSUE VOLUME

Geistlich Fibro-Gide® provides in improved soft tissue volume and pleasing esthetics



“Orthodontic treatment must be postponed because of the presence of periodontal disease. A thin biotype and a high smile line needs to be taken into consideration.”

► The Outcome

The final outcome at 8 weeks is showing pink esthetics as well as biomimetics and function. The use of the buccal pedicle flap allowed the increased volume of the peri-implant mucosa with a minimally invasive approach. The combination of Geistlich Fibro-Gide® and a buccal pedicle flap had the main advantage of reducing the morbidity generally associated with CT harvesting.

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Briefly Speaking

► Keys to Success

1. Prosthetic driven implant insertion
2. Good buccal bone volume after Guided Bone Regeneration
3. Peri-implant soft tissue management to increase thickness of the tissue
4. Allow time for soft tissue maturation

► My Biomaterials

Geistlich Bio-Oss® is a biocompatible bone substitute. Its osteo-conductive properties lead to effective and predictable bone regeneration.

Geistlich Fibro-Gide® is a volume-stable collagen matrix specifically designed for soft tissue regeneration. As an alternative to connective tissue grafts, it is ideally suited for augmentation around natural teeth and implants.



Geistlich Bio-Oss® provides long-term volume stability



Geistlich Fibro-Gide® provides soft tissue volume and long-term stability

CLINICIAN'S NOTE

The combination of the buccal pedicle flap and Geistlich Fibro-Gide® may help in minimally invasive approaches to soft tissue thickening and sculpting of the peri-implant pink esthetics.

This combination may also be relevant in reducing morbidity, as well as post-operative complications due to connective tissue harvesting.

▶ [Click here to view the webinar](#)

CAUTION: Federal law restricts these devices to sale by or on the order of a dentist or physician.

For more information on contraindications, precautions, and directions for use, please refer to the Geistlich Bio-Oss®, Geistlich Bio-Gide® and Geistlich Fibro-Gide® Instructions for Use at: dental.geistlich-na.com/ifu