

LEADING REGENERATION

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BioBrief

Soft-Tissue Regeneration

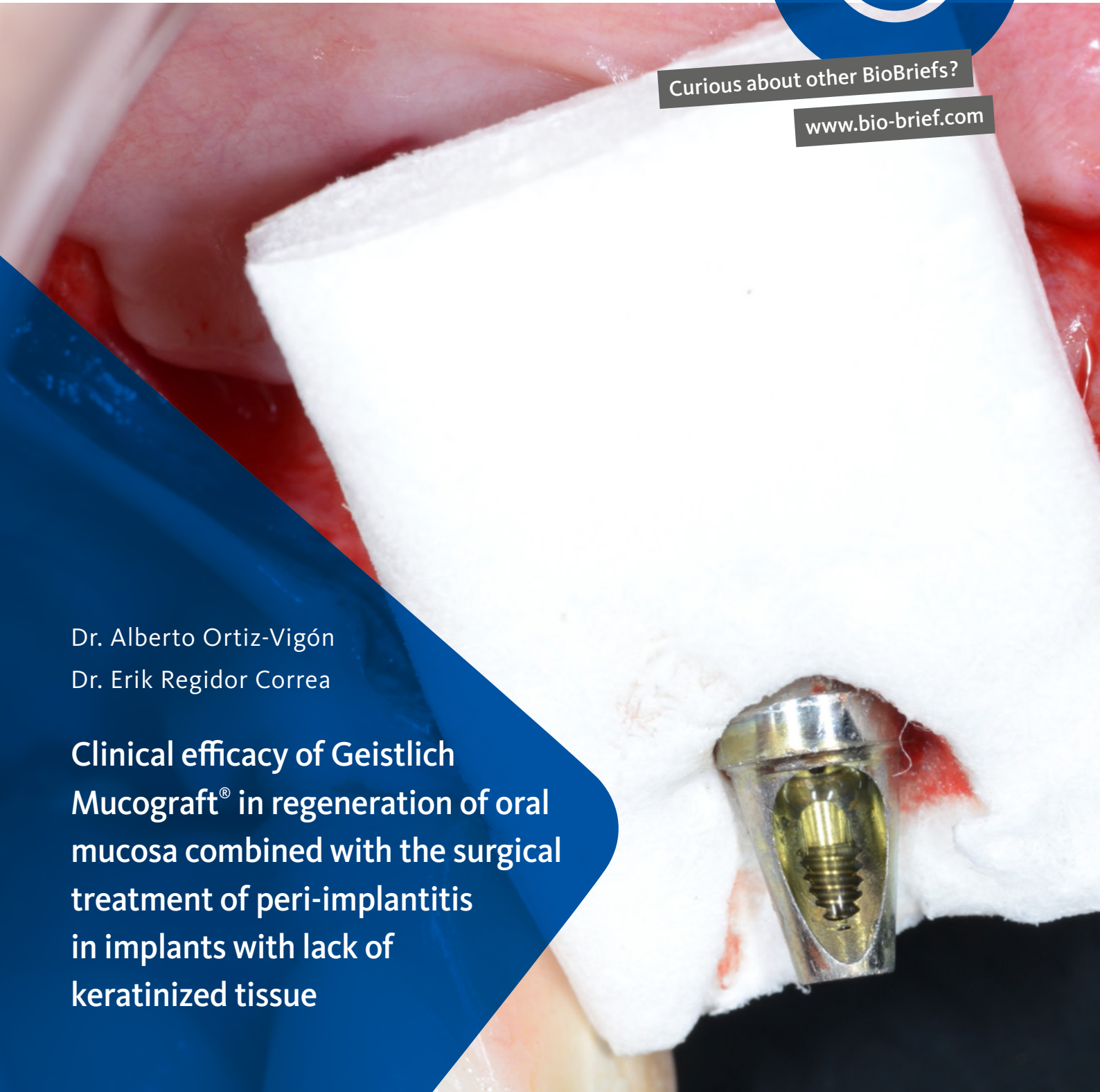


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Dr. Alberto Ortiz-Vigón
Dr. Erik Regidor Correa

**Clinical efficacy of Geistlich
Mucograft® in regeneration of oral
mucosa combined with the surgical
treatment of peri-implantitis
in implants with lack of
keratinized tissue**



The Situation

Adult patient, non-smoker and without relevant systemic history, attends to clinic referring peri-implant tissue inflammation, bleeding and brushing discomfort around her implant in the upper jaw. Clinically peri-implant pocket depth

> 5 mm, bleeding and suppuration on probing were observed. Furthermore, the implant presented < 2 mm of keratinized mucosa and radiographic horizontal bone loss.

The Risk Profile

	Low Risk	Medium Risk	High Risk
Patient's health	Intact immune system Non-smoker	Light smoker	Impaired immune system Heavy smoker
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 sight	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		Restored
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

Absence of > 2 mm of keratinized mucosa was associated with peri-implant soft-tissue inflammation, bleeding and discomfort on brushing



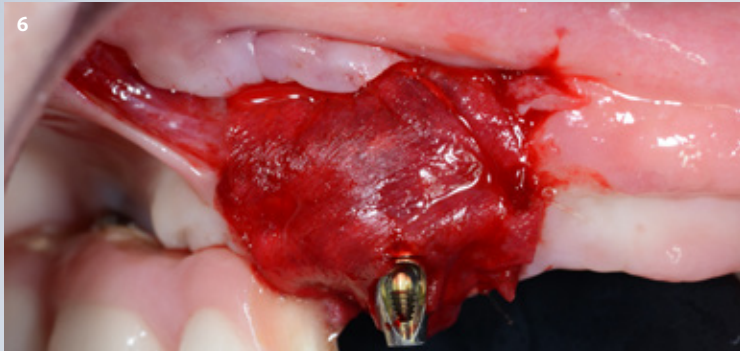
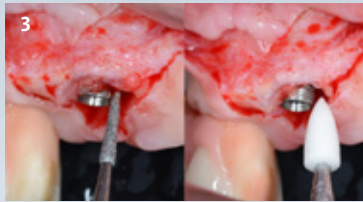
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The Approach

Intrasulcular incision was made and a mucosal partial thickness flap was raised. The recipient site was prepared by sharp dissection in order to create a periosteal bed free of any muscle attachment. Peri-implant granulation tissue was removed and implantoplasty was performed. Finally, Geistlich Mucograft® was used to support gain of keratinized tissue. Thus, the collagen matrix was sutured with the resulting flap apically at the base of the newly created vestibulum.

The Outcome

After two years follow-up, the successful outcome can be observed in terms of clinical peri-implant parameters, gain of keratinized mucosa without significant graft shrinkage and stability of vertical position of the mucosal margin.

| 1 Pathological peri-implant pocket depth combined with bleeding on probing. | 2 Partial thickness flap in order to create a periosteal bed free of any muscle attachment and apically positioned. | 3 Implantoplasty of the exposed rough implant surface using burs and silicon carbide polishers. | 4 Xenogeneic collagen matrix structure (Geistlich Mucograft®). | 5 Future position of the xenogeneic collagen matrix facilitated by prosthetic abutment. | 6 Suture of xenogeneic collagen matrix around the abutment and over the recipient bed. | 7 Buccal view of xenogeneic collagen matrix and apically positioned flap. | 8 Occlusal view of xenogeneic collagen matrix and apically positioned flap. | 9 Lateral view of xenogeneic collagen matrix and apically positioned flap. | 10 Peri-implant tissue health and maintenance of keratinized tissue after one year of surgical treatment. | 11 Peri-implant tissue health and maintenance of keratinized tissue after 2 years of surgical treatment.



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Keys to Success

Flap design

Implant surface modification and polishing

Adaptation of soft-tissue substitute

Apical positioning of the partial thickness flap

Peri-implant supportive therapy



The use of Geistlich Mucograft® xenogeneic collagen matrix for regeneration of oral mucosa, combined with the surgical resective approach to peri-implantitis provides an improvement in clinical parameters and increase of the peri-implant keratinized mucosa minimizing the risk of recession in the esthetic area.



The use of soft-tissue substitutes may play an important role in patient perception and satisfaction without jeopardizing the final clinical outcome.

Dr. Erik Regidor Correa & Dr. Alberto Ortiz-Vigón



DISCOVER MORE INFORMATION BELOW

- 1 Lorenzo R, García V, Orsini M, Martin C, Sanz M. Clinical efficacy of a xenogeneic collagen matrix in augmenting keratinized mucosa around implants: a randomized controlled prospective clinical trial. Clin. Oral Impl. Res. 23, 2012, 316–324.
- 2 Solonko M, Regidor E, Ortiz-Vigón A, Montero E, Vilchez B, Sanz M. Efficacy of keratinized mucosal augmentation with a collagen matrix concomitant to the surgical treatment of peri-implantitis. A dual-centre randomized clinical trial. Clin. Oral. Impl. Res. 2021 Oct 15