

Horizontal Ridge Augmentation in a Patient with Bilateral Anodontia of Lateral Incisors

A Case Study by Dr. Francisco Marchesani

At Dentsply Sirona Regenerative Solutions, we strive to provide you with the latest advancements and trends in guided bone regeneration and guided tissue regeneration (GBR/GTR). Learn from clinical case studies tailored for dental professionals like you and elevate your practice.

Background

A forty-year-old female patient arrived at the clinic for a consultation regarding a required aesthetic improvement of her anterior teeth due to anodontia of the upper lateral incisors.

An orthodontic treatment was recommended to create space for alveolar reconstruction and implant placement. The patient needed reconstruction before implant installation, along with soft tissue thickness enhancement.

Case Description

Horizontal ridge augmentation was performed with cortical particulate allograft and OSSIX® Plus as the barrier membranes. The membranes were stabilized with periosteal sutures. OSSIX® Volumax scaffolds were placed on the grafted area to improve soft tissue thickness before the implantation of the central incisors. After the osseointegration period, both implants were connected, and rehabilitation was performed.

The clinical and radiographic follow-up after three years of evolution is shown.



About the Clinician, Dr. Francisco Marchesani

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Dr. Marchesani completed his university studies at the University of Concepción, Chile, in 1986, where he received his bachelor's degree in dentistry and degree of a dental surgeon. In 1993, he contacted the Dexeus Center in Barcelona, Spain, and carried out implantology studies. Former Associate Professor of the University of Concepción and former professor of the Department of Pathology and Diagnosis.

Dr. Marchesani is an active member of the Chilean Implantology Society, the American Academy of Osseointegration, and the European Osseointegration Association.

Pre-Op



Horizontal defect



Horizontal defect

Three-Years Post-Op



Three years post-op

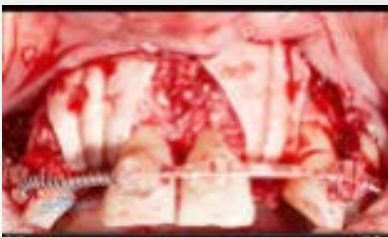


Primary closure with free tension



Three years post-op

Surgery



Horizontal guided bone regeneration:
periosteal suturing of OSSIX® Plus



Soft tissue thickness with OSSIX®
Volumax

Four-Month Post-Op



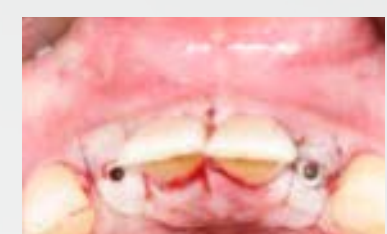
Four months post-op



Implants placement

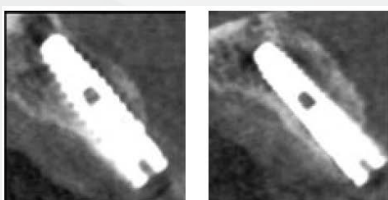
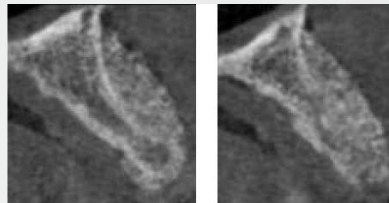


New formed bone



Implants connected with healing
abutments

Scans





OSSIX® Plus Barrier Redefined

OSSIX® Plus is a resilient resorbable collagen barrier membrane that maintains barrier functionality for 4-6 months¹. It is resistant to degradation when exposed for 3-5 weeks⁵ and has excellent handling properties, adapting and conforming to defects, and adhering well to tissue⁶. OSSIX® Plus maintains a high biocompatibility and has been observed to undergo ossification¹⁻⁵.



OSSIX® Volumax - Real Volume, Strong Infrastructure

The innovative OSSIX® Volumax scaffold is designed to add volume and promote ossification⁷. Ideal for guided bone and tissue regeneration, its 2mm thickness and expandable nature ensures optimal handling, contributing positively to hard and soft tissue quality⁷.

Reference

1. Zubery et al. (2007). Ossification of a novel cross-linked porcine collagen barrier in guided bone regeneration in dogs. J Periodontol 78:112- 121. • Zubery et al. (2008). Ossification of a collagen membrane cross-linked by sugar: a human case series. J Periodontol. 79:101-1107.
2. Tal H, Kozlovsky A, Artzi Z, Nemcovsky CE, Moses O. (2008) Long-term biodegradation of cross-linked and non-cross-linked collagen barriers in human guided bone regeneration. Clin Oral Implants Res. 19(3):295-30.
3. Capri G, Smukler H, Landi L. (2012) A less invasive approach to mandibular horizontal ridge augmentation using autogenous bone: A human histological case series. The Journal of Implants and Advanced Clinical Dentistry 4:27-36.
4. Artzi Z, Weinreb M, Carmeli G, Lev-Dor R, Dard M, Nemcovsky CE. (2008) Histomorphometric assessment of bone formation in sinus augmentation utilizing a combination of autogenous and hydroxyapatite/biphasic tricalcium phosphate graft materials: at 6 and 9 months in humans. Clin. Oral Impl. Res. 19; 686–692.
5. Heather R. Hong et al. (2018) Ridge preservation procedures revisited: A randomized controlled trial to evaluate dimensional changes with two different surgical protocols, Journal of Periodontology, Volume 90, Issue4.
6. Data on file.
7. Tavelli L, Barootchi S, Rodriguez MV, Meneghetti PC, Mendonça G, Wang HL. Volumetric Outcomes of Peri-implant Soft Tissue Augmentation with a Xenogeneic Cross-Linked Collagen Scaffold: A Comparative Clinical Study. Int J Periodontics Restorative Dent. 2023 Jul-Aug;43(4):415-422.

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