

CLINICIAN



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# SIMULTANEOUS MAXILLARY SINUS AUGMENTATION AND IMMEDIATE IMPLANT PLACEMENT

EXTRACTION SOCKET MANAGEMENT



CLINICIAN



Dr. Christopher Barwacz  
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“Our biomaterial of choice for the management of peri-implant gaps and maxillary sinus grafting is a slow-resorbing bone substitute with excellent osteoconductive properties, such as Geistlich Bio-Oss®”

SINUS FLOOR ELEVATION



Practitioners are often times presented with challenging clinical scenarios, that require a coordinated multidisciplinary team approach, in order to predictably meet patients’ expectations and to achieve long-term successful outcomes. Immediate implant placement following tooth extraction and maxillary sinus augmentation are two surgical modalities that are commonly indicated in the rehabilitation of edentulous patients.

It is crucial to select a bone grafting material with inherent properties that will allow for adequate management of the peri-implant gap that normally results from immediate implant placement, and to maximize the regenerative outcomes following maxillary sinus augmentation. Evidence in the literature has consistently shown that the use of Geistlich Bio-Oss®, alone or in combination with autogenous bone, is a safe and predictable choice to meet those therapeutic goals.<sup>1,2,3,4</sup>

Additionally, the application of an resorbable membrane, such as Geistlich Bio-Gide®, to cover the window in direct maxillary sinus augmentation procedures may contribute to maximize bone formation in the antral cavity by providing a barrier effect that prevents soft-tissue invasion into the osteogenic compartment.

## OBJECTIVES

- Maximize bone formation following maxillary sinus augmentation with simultaneous implant placement
- Minimize alveolar ridge remodeling following tooth extraction and immediate implant placement
- Achieve adequate implant osseointegration for the functional rehabilitation of the upper left sextant



Before extraction

## CONCLUSION

- Maxillary sinus augmentation, immediate implant placement and peri-implant bone grafting were combined for the successful management of a maxillary edentulous span in a patient exhibiting parafunctional habits
- Geistlich Bio-Oss® and Geistlich Bio-Gide® were utilized in conjunction to reduce the risk of morbidity associated with autogenous bone block harvesting and to maximize the regenerative outcome in a complex clinical scenario



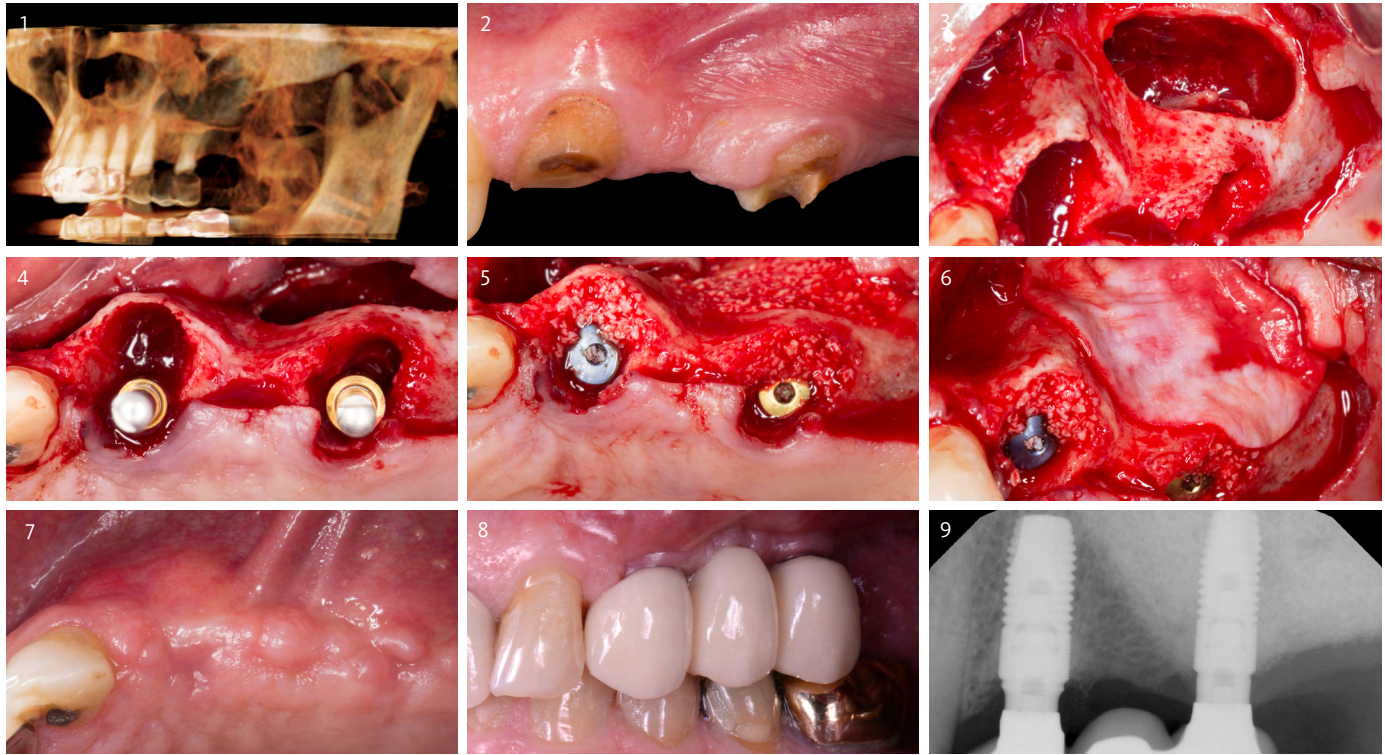
1 year after implant placement

1 von Arx et al., 2006  
2 Maiorana et al., 2005

3 Maiorana et al., 2011  
4 Cordaro et al., 2011

## CASE PRESENTATION

Jaw	Region	Restorative Status	Gingival Biotype
<input checked="" type="checkbox"/> Upper Jaw	<input type="checkbox"/> Anterior	<input type="checkbox"/> Tooth	<input type="checkbox"/> Thick
<input type="checkbox"/> Lower Jaw	<input checked="" type="checkbox"/> Posterior	<input checked="" type="checkbox"/> Implant	<input checked="" type="checkbox"/> Thin
<b>Material Technique</b>	<ul style="list-style-type: none"> <li>• Geistlich Bio-Oss®, Geistlich Bio-Gide®, Geistlich SmartScraper</li> <li>• Maxillary Sinus Augmentation / Peri-Implant Gap Management</li> </ul>		



- 1 Baseline volumetric reconstruction of the maxilla using CBCT technology
- 2 Buccal view of the area of interest
- 3 Schneiderian membrane was carefully elevated to prevent a perforation
- 4 Osteotomies to attempt immediate implant placement were performed on both alveolar sockets
- 5 Implants were placed with primary stability; Peri-implant gap and maxillary sinus cavity were grafted using Geistlich Bio-Oss®
- 6 Geistlich Bio-Gide® was trimmed and applied over the lateral window in order to maximize the regenerative response
- 7 Post-surgical occlusal view at 4 weeks
- 8 Buccal view of the final prosthesis, delivered at approximately 6 months following implant placement and maxillary sinus grafting
- 9 Periapical radiograph demonstrating stable marginal bone levels and consolidation of the grafting material at 1 year after implant placement

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

#### Indications:

Geistlich Bio-Oss® is indicated for the following uses: Augmentation or reconstructive treatment of the alveolar ridge; Filling of periodontal defects; Filling of defects after root resection, apicoectomy, and cystectomy; Filling of extraction sockets to enhance preservation of the alveolar ridge; Elevation of the maxillary sinus floor; Filling of periodontal defects in conjunction with products intended for Guided Tissue Regeneration (GTR) and Guided Bone Regeneration (GBR); and Filling of peri-implant defects in conjunction with products intended for GBR.

#### Warnings:

Possible complications which may occur with any surgery include swelling at the surgical site, flap sloughing, bleeding, local inflammation, bone loss, infection or pain.

#### Indications:

Geistlich Bio-Gide® is indicated for the following uses: Augmentation around implants placed in immediate and delayed extraction sockets; Localized ridge augmentation for later implantation; Alveolar ridge reconstruction for prosthetic treatment; Filling of bone defects after root resection, cystectomy, removal of retained teeth; GBR in dehiscence defects; and GTR procedures in periodontal defects.

#### Warnings:

As they are collagen products, allergic reactions may not be totally excluded. Possible complications which may occur with any surgery include swelling at the surgical site, flap sloughing, bleeding, dehiscence, hematoma, increased sensitivity and pain, bone loss, redness, and local inflammation.

For more information on contraindications, precautions, and directions for use, please refer to the Geistlich Bio-Oss® and Geistlich Bio-Gide® Instructions for Use at: [www.geistlich-na.com/ifu](http://www.geistlich-na.com/ifu)

## MATERIAL SELECTION

Geistlich Bio-Oss®

Geistlich Bio-Gide®

Geistlich SmartScraper

## FOR MORE INFORMATION

**Customer Care Toll-free 855-799-5500**

[www.geistlich-na.com](http://www.geistlich-na.com)

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