SigmaGraft

SCIENCE THAT NURTURES WELLNESS

InterOss® Collagen

Anorganic Bone-Collagen Composite

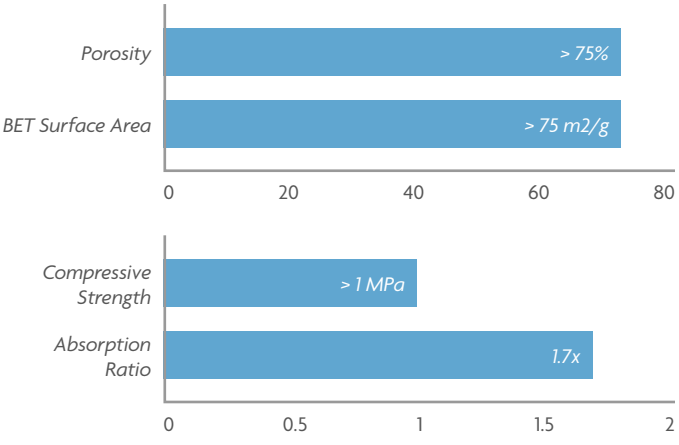
GRAFT BIOMATERIALS

InterOss® Collagen

Anorganic Bone-Collagen Composite

InterOss® Collagen is anorganic hydroxyapatite-collagen composite for use in periodontal, oral, and maxillofacial surgery. It is a combination of 90% bovine granules and 10% collagen fibers molded into a block and plug form.

InterOss® granules exhibits a natural mineralized bone structure, similar to human bone, and provides an osteoconductive environment for the ingrowth of the adjacent viable bone. Its excellent porosity allows the grafting material to act as a conduit for the exchange of body fluids and growth factors while allowing cells to guide bone formation. Highly purified collagen facilitates the adaptation of the these granules to the defect site, bringing about exceptional handling and ease of use.



Indications for Use

InterOss® Collagen is indicated for the filling of extraction sockets to enhance the preservation of the alveolar ridge. The product is recommended for:

- Filling of extraction sockets to enhance preservation of the alveolar ridge
- Filling of periodontal defects in conjunction with products intended for guided tissue regeneration (GTR) and guided bone regeneration (GBR)

Features & Benefits

Slow Degradation Time

The collagen-hydroxyapatite composite is substantially resorbed by 12 weeks in a canine model with less than 10% article remained at the defect site.

Easy Handling & Application

Superior absorption properties allowing easier handling and trimming.

Adaptable Shape

Cuboid and cylinderic shaped structure allows it to adapt to the defect site when wet.

Available in the following options

PLUG	Size	Weight
IOC-P150	6 x 10 mm	150 mg
IOC-P250	8 x 10 mm	250 mg

BLOCK	Size	Weight
IOC-50	6 x 6 x 3 mm	50 mg
IOC-100	6 x 6 x 6 mm	100 mg
IOC-250	7 x 8 x 9 mm	250 mg
IOC-350	8 x 9 x 10 mm	350 mg
IOC-500	9 x 10 x 12 mm	500 mg

Application & Handling

Hydration

InterOss® Collagen can be hydrated in blood or sterile saline solution.

Wound Closure

Ensure that the grafted site is securely closed with the soft tissue free of tension.

Healing Time and Re-entry

Healing time depends on the patient, nature and the size of the defect site and thus must be determined by the clinician based on the initial diagnosis. For a safe re-entry, it is recommended to let the surgical site heal for at least six months to ensure the graft material has been integrated properly.

For Use with Allograft

The long-term stability of InterOss® Collagen coupled with the biological potential of allograft may yield enhanced bone regeneration.

For Use with Autologous Bone

InterOss® Collagen helps achieve a natural biological activity due to the osteoinductivity and osteogenesis of autologous bone which in turn may encourage faster regeneration.

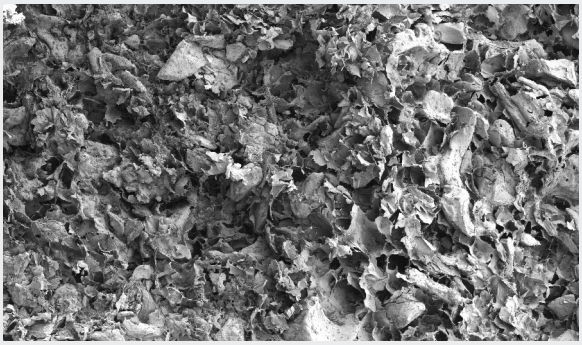
Application

- InterOss® Collagen can be trimmed to the desired dimensions both in a dry state or after hydration using forceps and a pair of scissors.
- For maximum results, the graft material should make sufficient contact with the bleeding bone surface to facilitate ingrowth of new blood vessels and bone forming cells.
- A resorbable membrane should be used in conjunction with the graft material by placing over it to minimize particulate migration

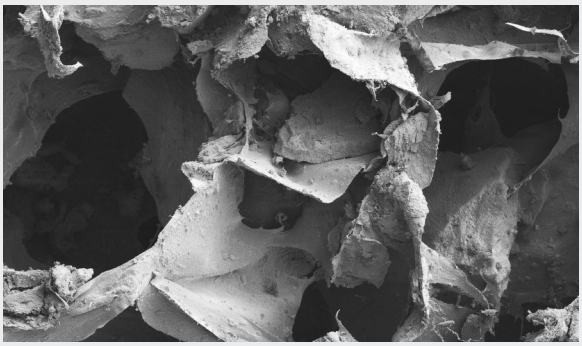
Properties

Attribute	Description
Composition	90% Calcium phosphate (100% pure hydroxyapatite, mineral phase) 10% Type I Collagen
Integration time	6 - 9 months (depending on defect)
Storage temperature	59 - 86 °F / 15 - 30 °C
Degradation profile	Bovine hydroxyapatite enclosed within a collagenous matrix enables slower degradation and enhanced osseo-integration of particles into a new bone.

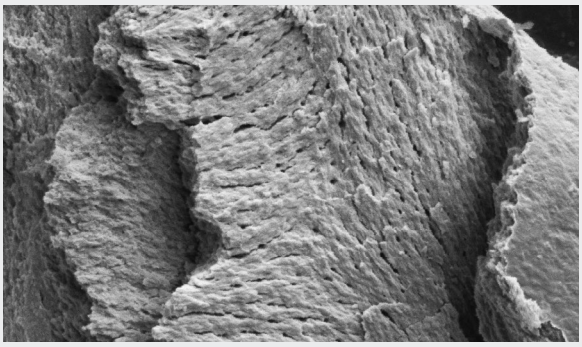
Its multi-porous matrix helps facilitate nutrient exchange and the development of nerve and blood vessel, allowing the formation of dense bone structure.



1 mm



200 µm



20 µm

Tooth extraction and socket preservation

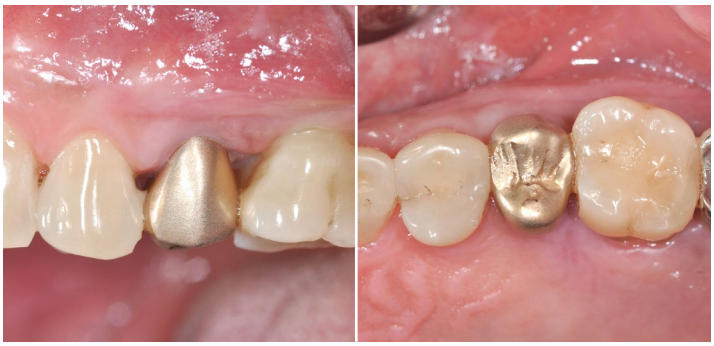
Kyung Hee University, School of Dentistry
South Korea

Objective

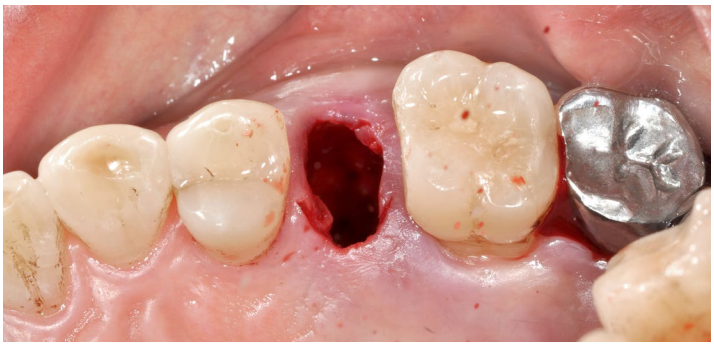
To minimize soft tissue shrinkage and the amount of bone graft used during the implant, socket grafting was indicated, and densely packed InterOss® Collagen blocks can fulfill these goals. The open wound can then be covered by a couple layers of InterCollagen® Guide.

Conclusion

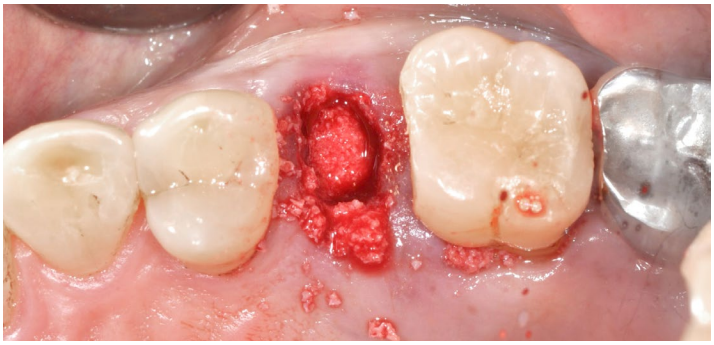
The extraction socket was successfully maintained by this simple procedure, reducing patient's morbidity by minimizing the extent of surgery at the time of implant placement. Chronic fistula should not pose any trouble as long as it does not have an active infection.



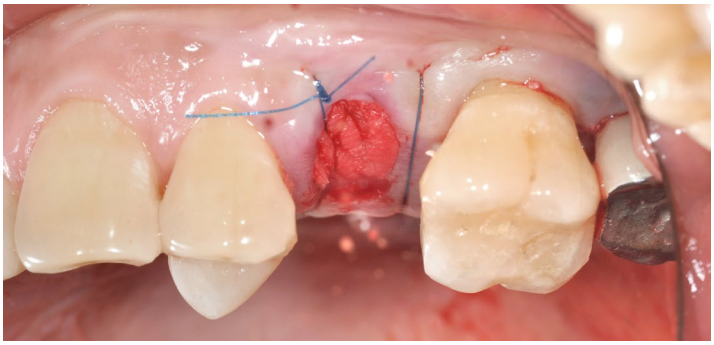
Post-operative view.



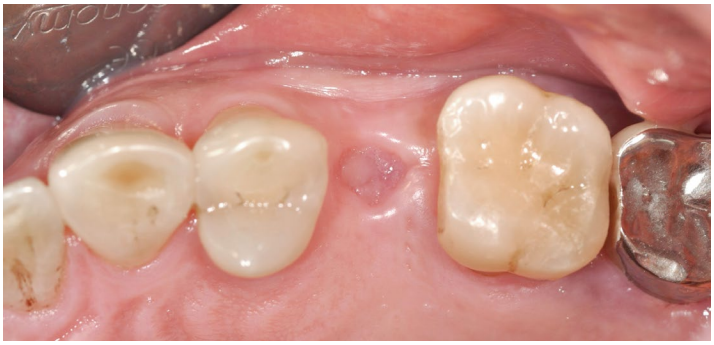
Post-extraction view.



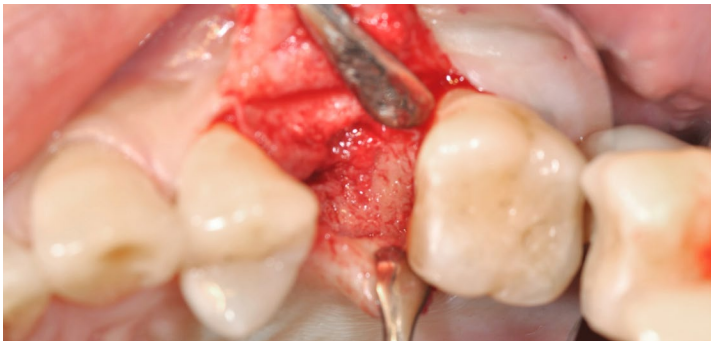
InterOss® Collagen placement.



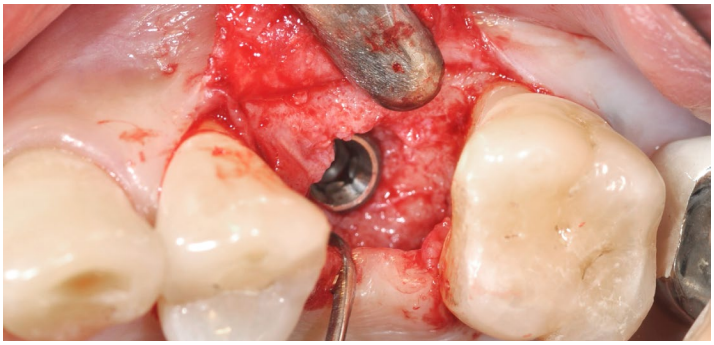
Immediate post-operative view.



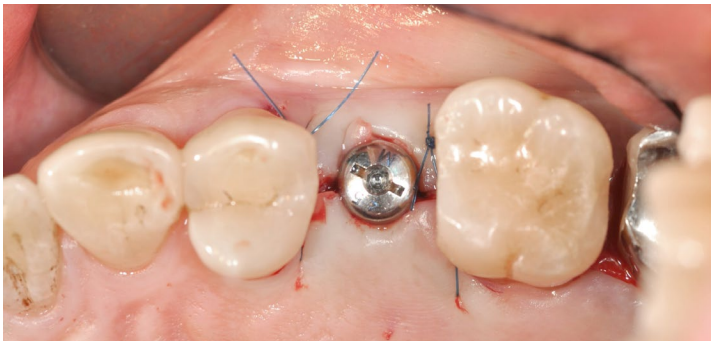
Post-operative view at 4 months.



View at re-entry.



Implant placement.



Immediate post-loading view.

Tooth extraction and socket preservation

Kyung Hee University, School of Dentistry
South Korea

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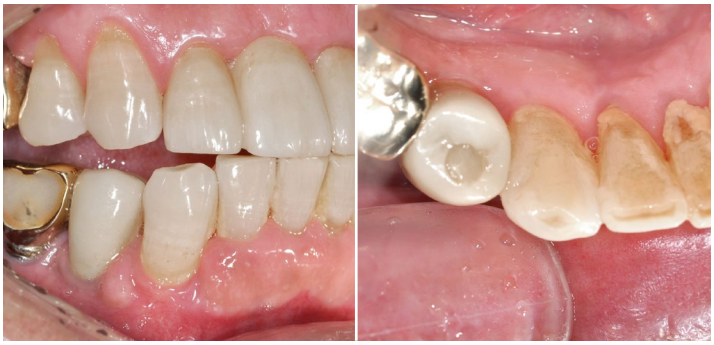
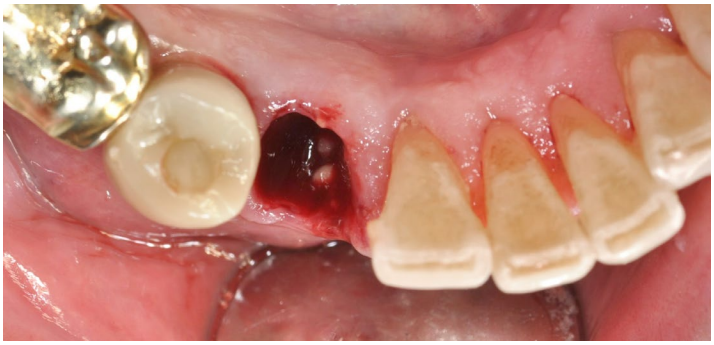
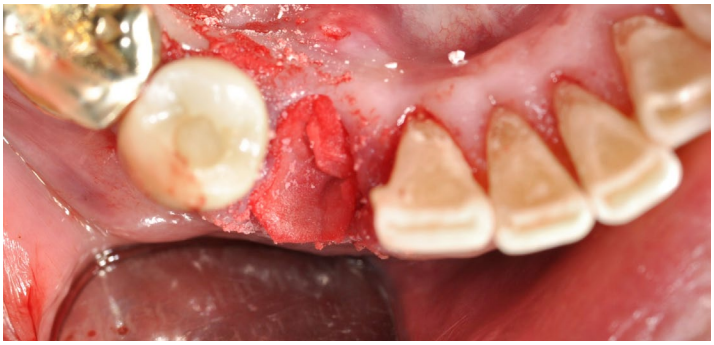


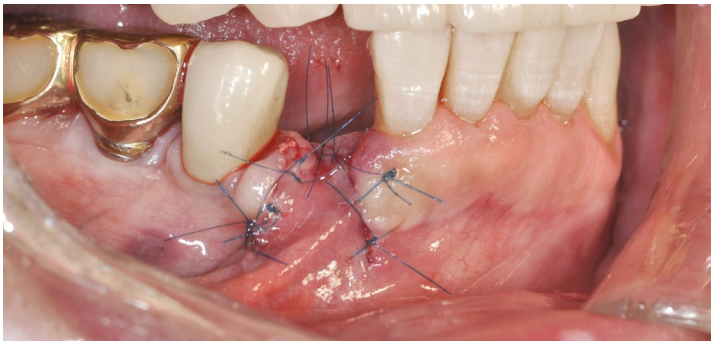
Post-operative view.



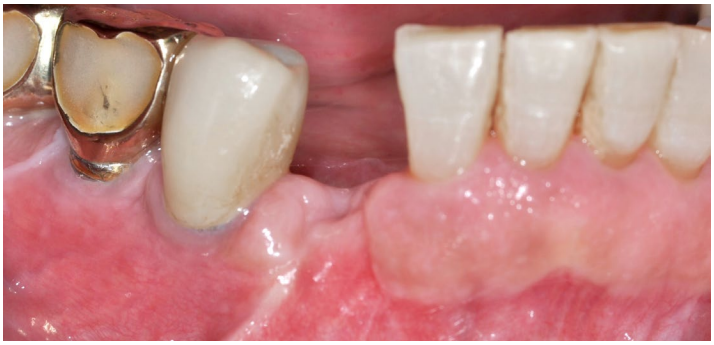
Post-extraction view.



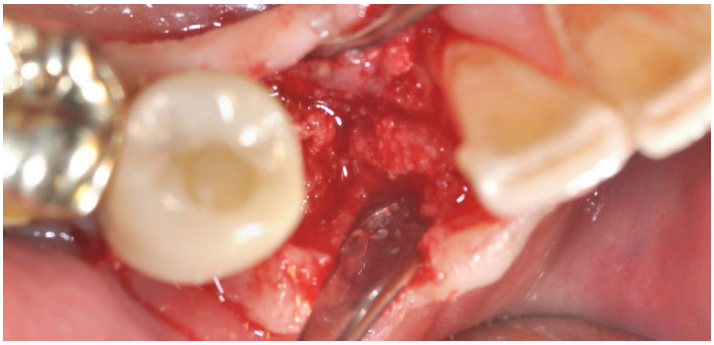
InterOss® Collagen placement.



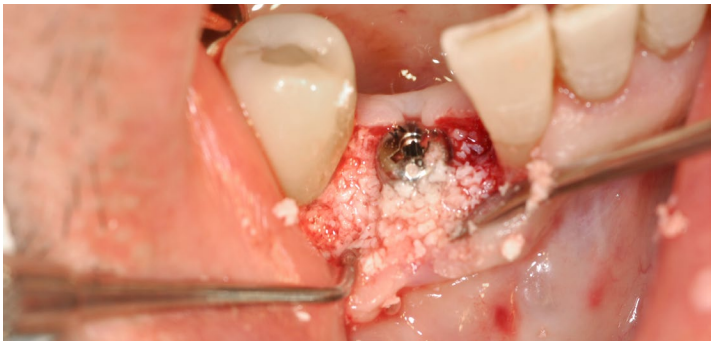
Immediate post-operative view.



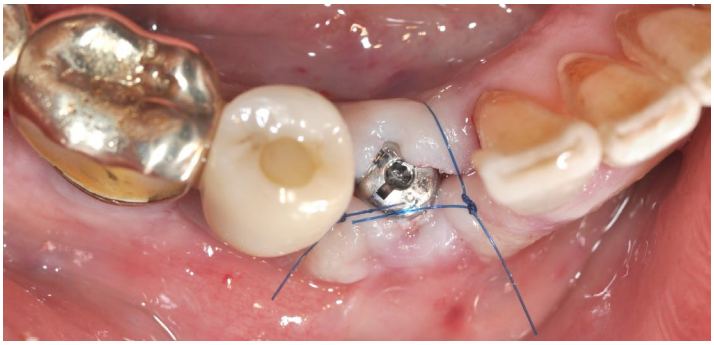
Post-operative view at 4 months.



View at re-entry.



InterOss® and implant placement.



Immediate post-loading view.

Ankylosed tooth extraction and socket preservation

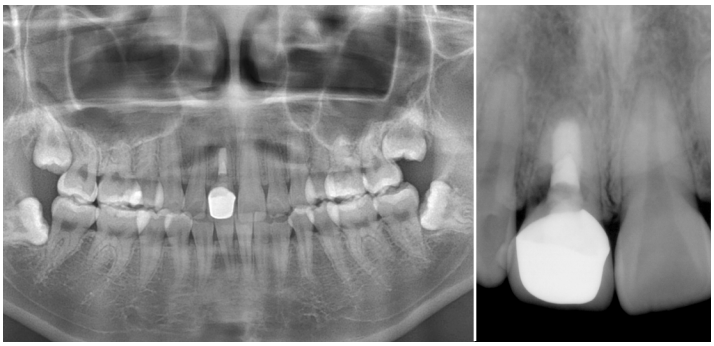
Dr. Yong Dae Kwon
Kyung Hee University, School of Dentistry
South Korea

Objective

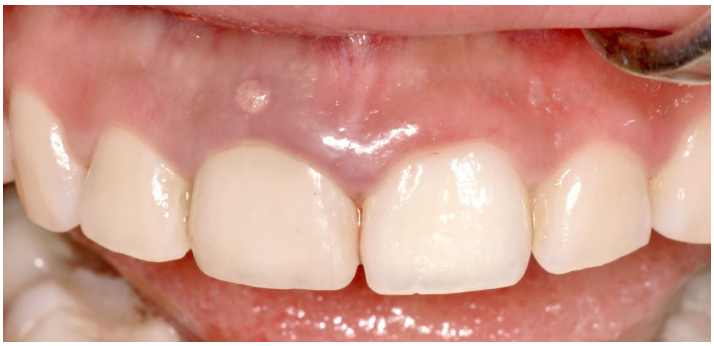
Maintaining the form of the socket post-extraction was necessary as the #11 tooth had been traumatized and internal resorption was seen in the long-term follow-up.

Conclusion

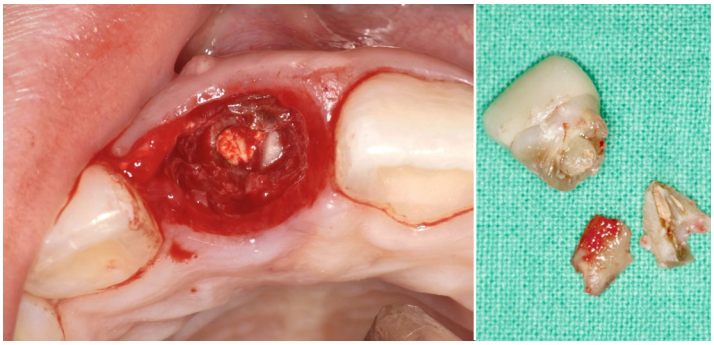
Two InterOss® Collagen blocks were inserted and an InterCollagen® Guide was applied to cover them. Although a chronic fistula was seen, a socket graft procedure can be performed as long as no acute inflammation nor suppuration were identified. The blocks were firm enough to maintain the socket form and were easy to handle and trim with a scalpel.



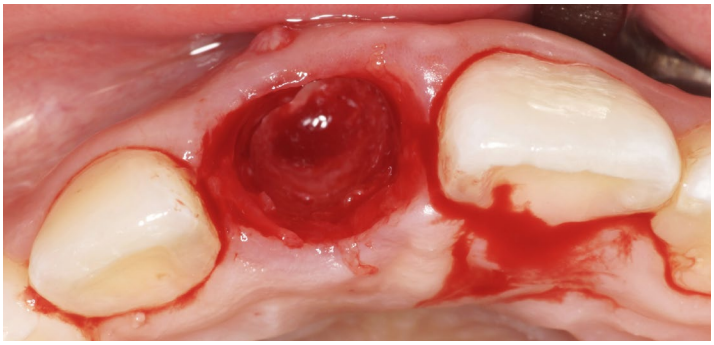
Pre-operative X-ray.



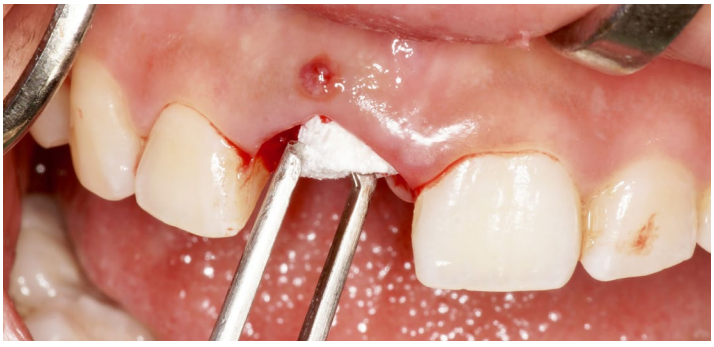
Chronic fistula detected near the affected tooth.



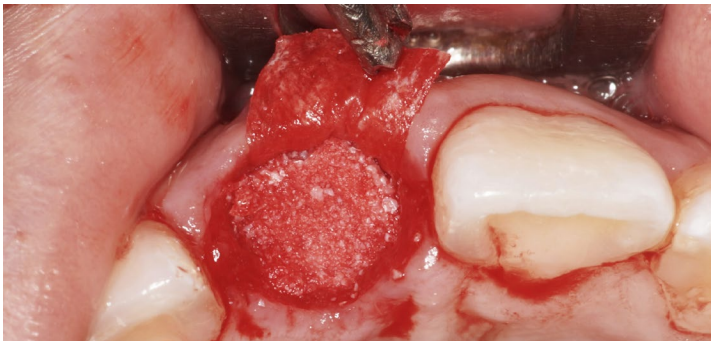
Extraction of ankylosed tooth.



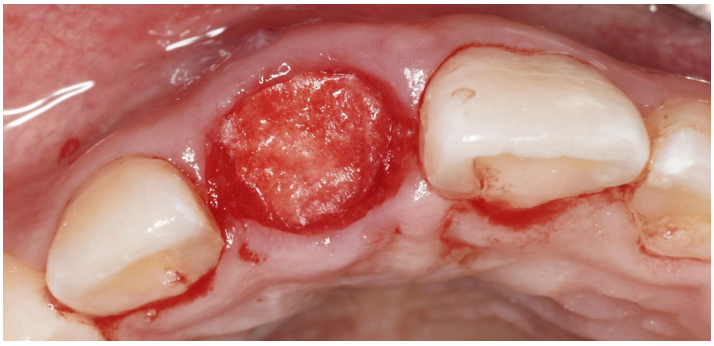
Post-extraction view.



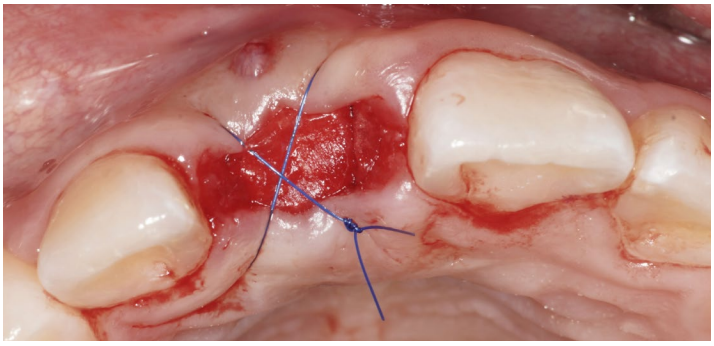
InterOss® Collagen placement.



InterCollagen® Guide placement.



InterCollagen® Guide wrapped over the block.



Immediate post-operative view.

Vertical ridge augmentation through sinus floor elevation

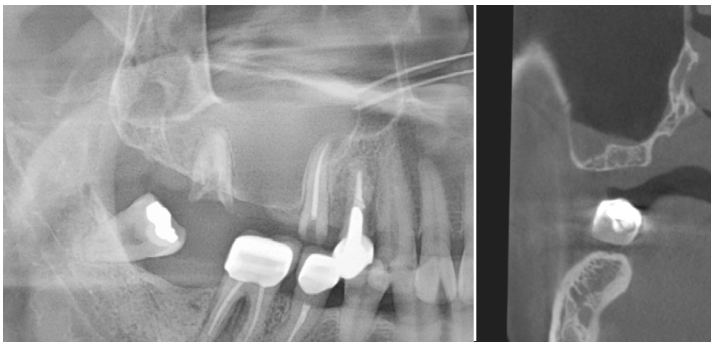
Dr. Yong Dae Kwon
Kyung Hee University, School of Dentistry
South Korea

Objective

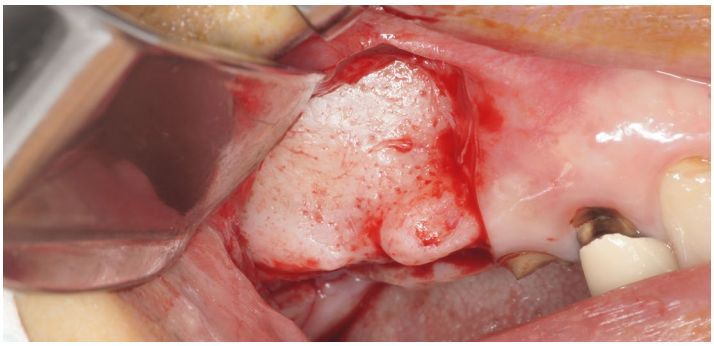
In order to reconstruct the missing teeth in the right posterior maxilla, a sinus lift surgery was planned via lateral window technique because of major loss of alveolar bone in the region.

Conclusion

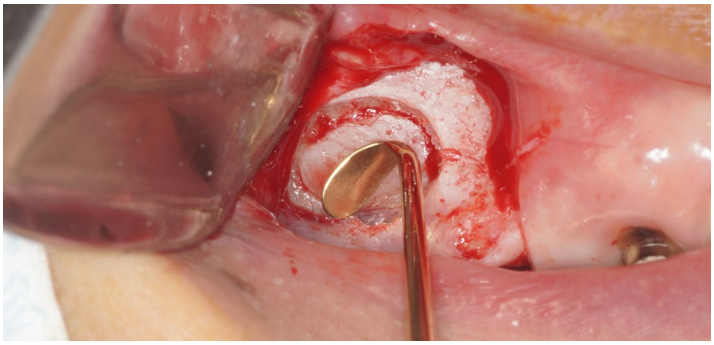
A lateral window sinus lift is a safe and predictable procedure, and InterOss® is a good bone substitute with good handling. To prevent the soft tissue ingrowth to the graft, the window in the lateral wall should be covered by an InterCollagen® Guide.



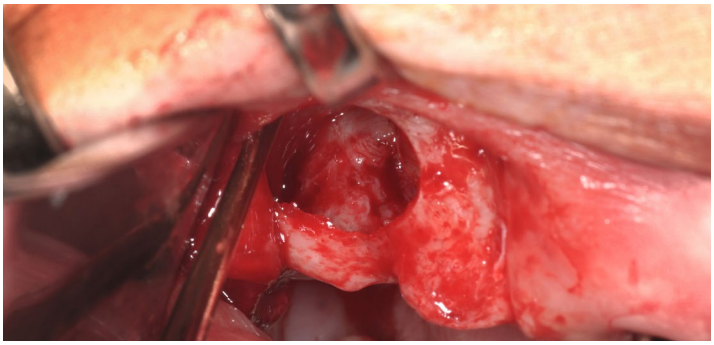
Pre-operative X-ray and CBCT scan.



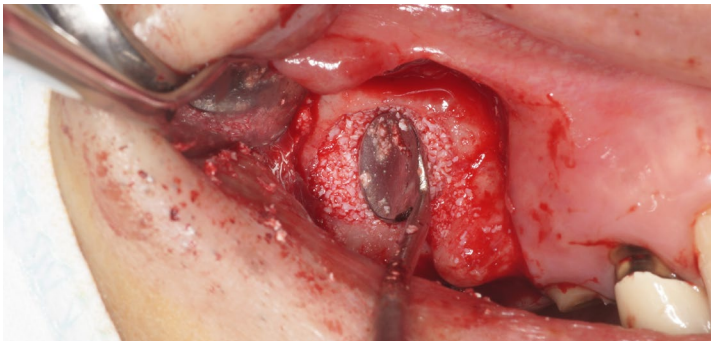
Exposure of the defect site.



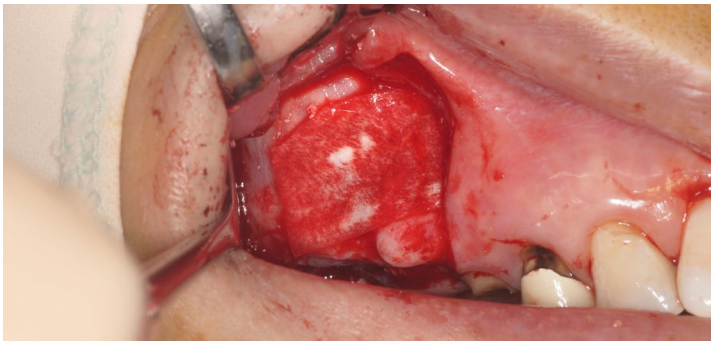
Lateral window preparation (continued).



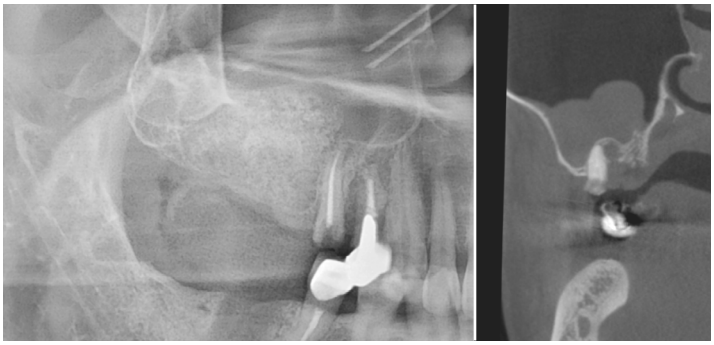
Exposure of the sinus cavity.



InterOss® placement.



InterCollagen® Guide placement.



Post-operative X-ray and CBCT scan.

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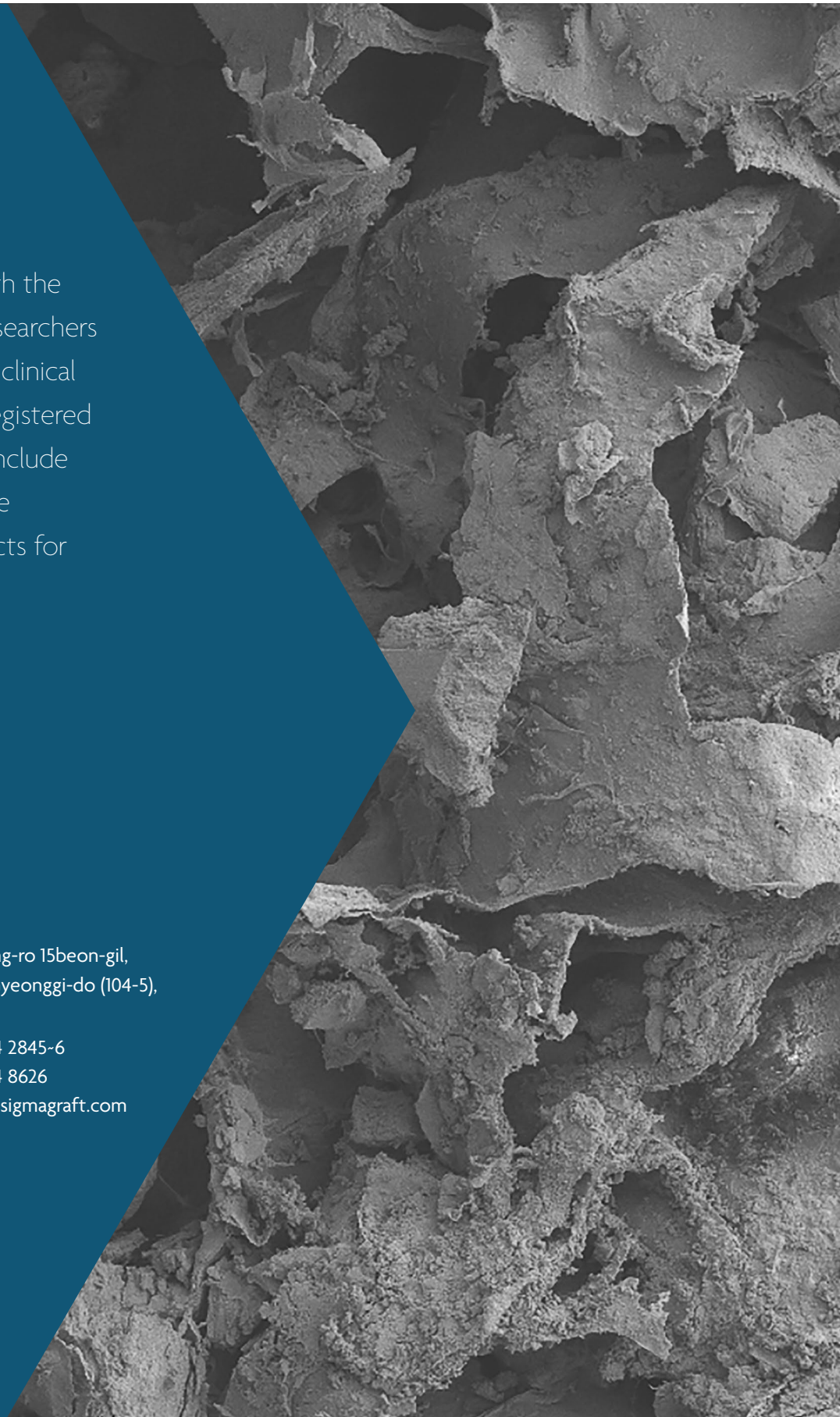

SigmaGraft®, based in Fullerton, California, USA, collaborates with the world's leading clinicians and researchers to innovate products and build clinical experience. Our products are registered and sold worldwide, and they include bone grafting products for bone regeneration, membrane products for tissue regeneration, and more.

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