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 in a block and plug form.

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

Indications of Use

InterOss® Collagen is recommended for:

- Reconstruction or augmentation of the alveolar ridge
- Filling of periodontal defects
- Filling of defects after root resection, apicectomy, 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)
- Filling of peri-implant defects in conjunction with products intended for guided bone regeneration (GBR)

Features & Benefits

Slow Degradation Time

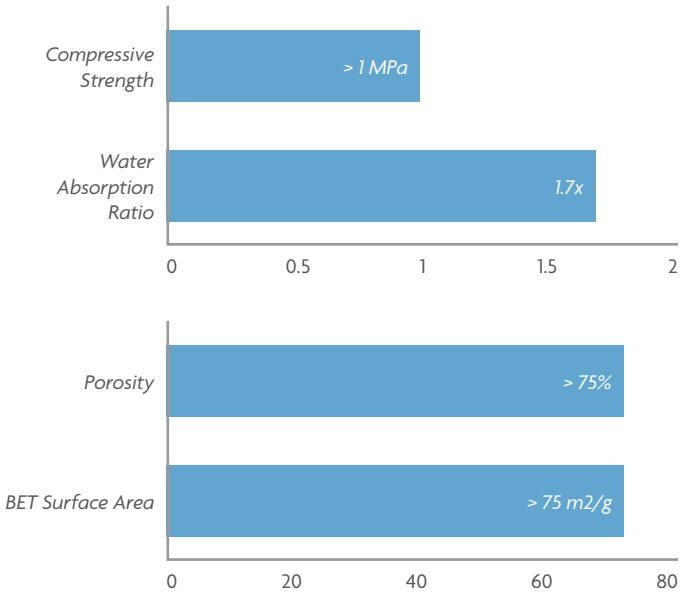
The collagen-hydroxyapatite composite is substantially resorbed by 12 weeks in a canine model with less than 10% article remained at the defect site.

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.



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

Available in the following options

Block

SKU	Weight
IOC-50	50 mg
IOC-100	100 mg
IOC-250	250 mg
IOC-350	350 mg
IOC-500	500 mg

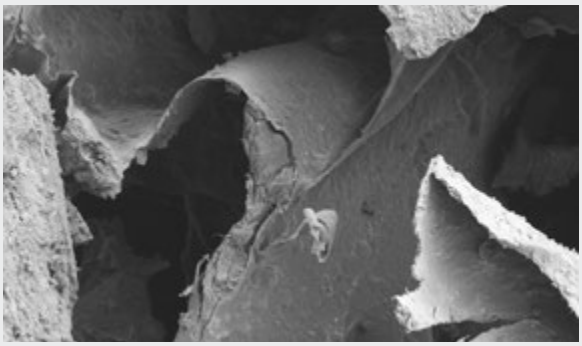
Plug

SKU	Weight
IOC-P150	150 mg
IOC-P250	250 mg
IOC-P400	400 mg
IOC-P450	450 mg

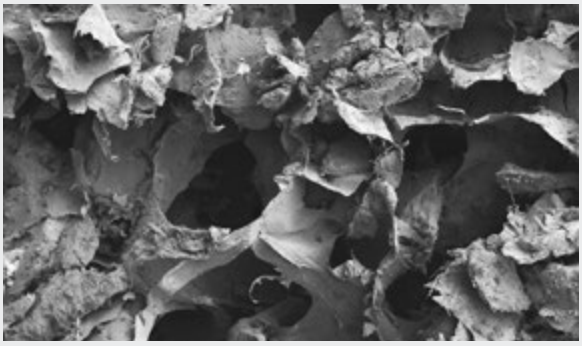
Properties

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.

Multi-porous matrix allows formation of dense bone matrix, facilitates nutrient exchange, nerve and blood vessel development.



50µm



500µm

Ankylosed Incisor Extraction and Socket Grafting

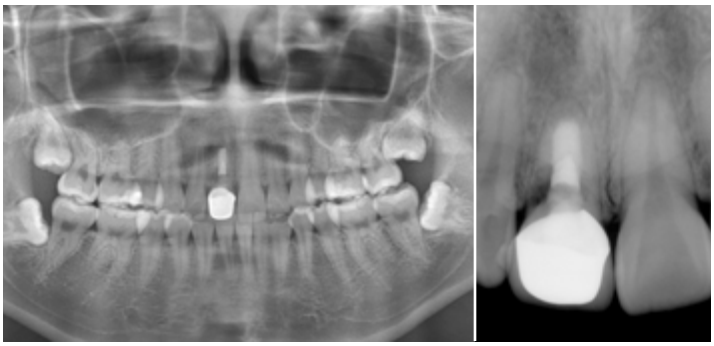
Dr. Yong Dae Kwon
Kyung Hee University, School of Dentistry
South Korea

Objective

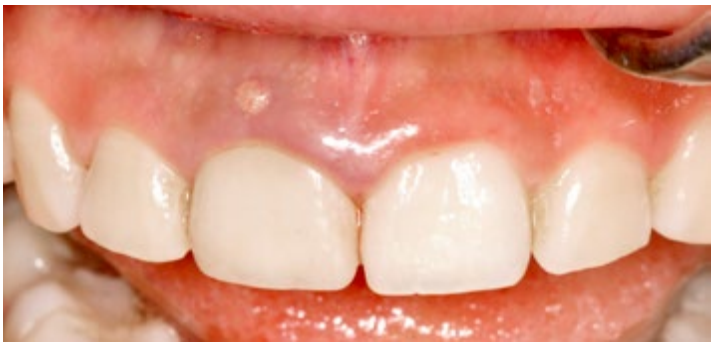
Maintaining the form of the socket post-extraction was necessary as the #11 tooth had been traumatized and internal resorption was seen in the long-term follow-up.

Conclusion

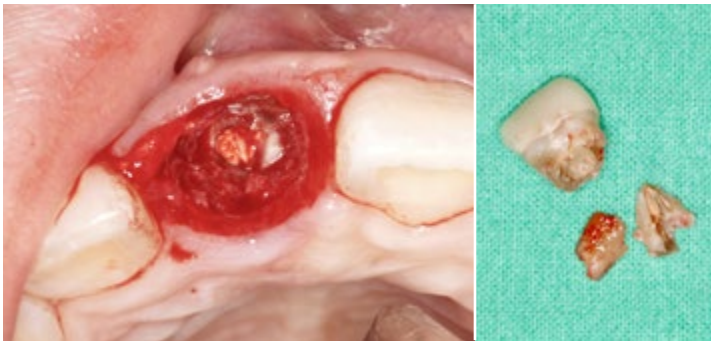
Two InterOss® Collagen blocks were inserted and an InterCollagen® Guide was applied to cover them. Although a chronic fistula was seen, a socket graft procedure can be performed as long as no acute inflammation nor suppuration were identified. The blocks were firm enough to maintain the socket form and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



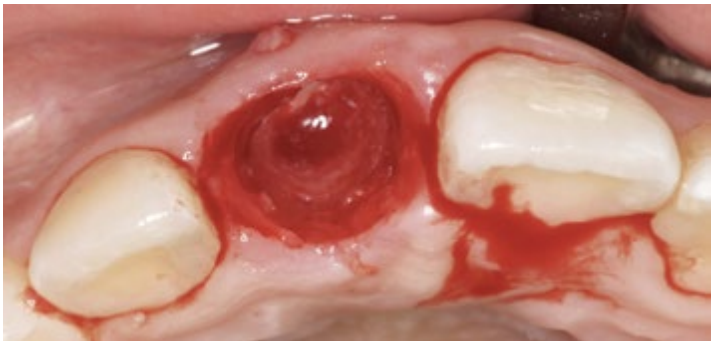
Pre-operative X-ray



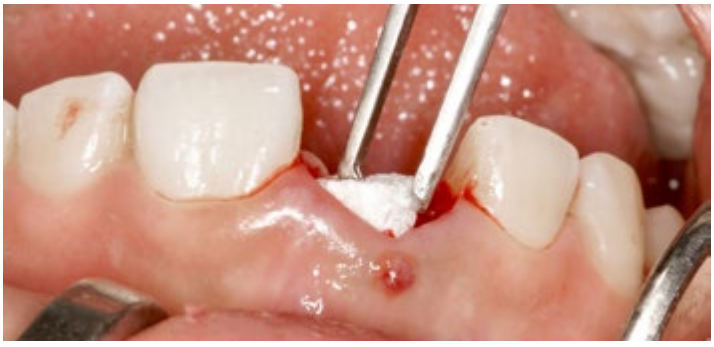
Chronic fistula near the affected tooth



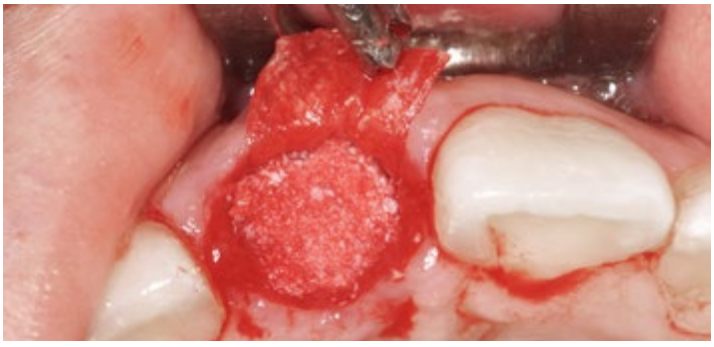
Extraction of ankylosed tooth



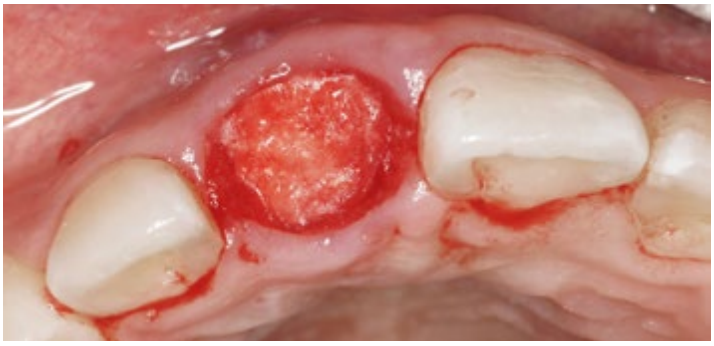
Empty socket post-extraction



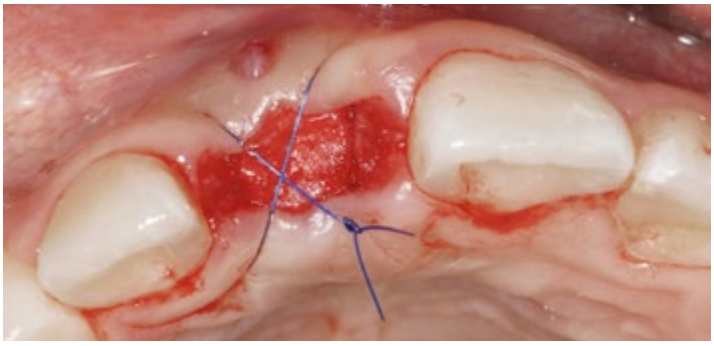
InterOss® Collagen placement



InterCollagen® Guide placement



InterCollagen® Guide applied over socket



Socket secured and sutured

Secondary Augmentation

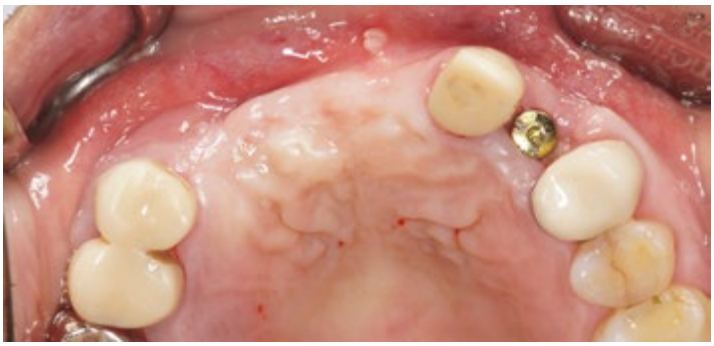
Dr. Yong Dae Kwon
Kyung Hee University, School of Dentistry
South Korea

Objective

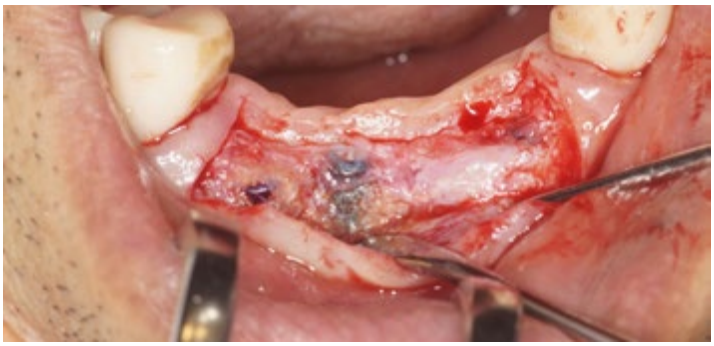
Local inflammation and compromised healing may cause focal loss of bone graft. To repair the loss, a secondary focal bone grafting can be done.

Conclusion

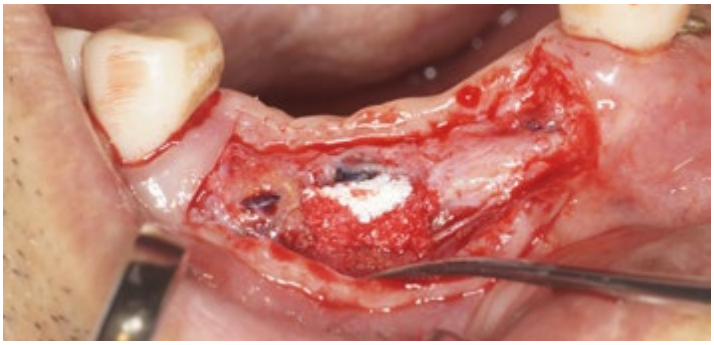
To maintain the additional bone substitute on the defected area, a malleable block-type of bone graft may be a good option rather than particulate-type. Coverage with an InterCollagen® Guide membrane can reduce soft tissue ingrowth.



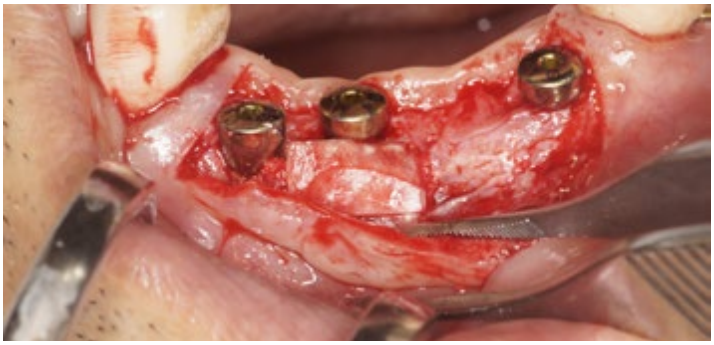
Post-operative view



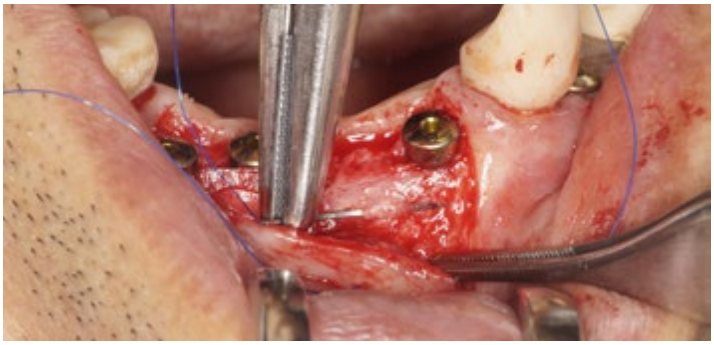
Loss of graft buccal side of one implant



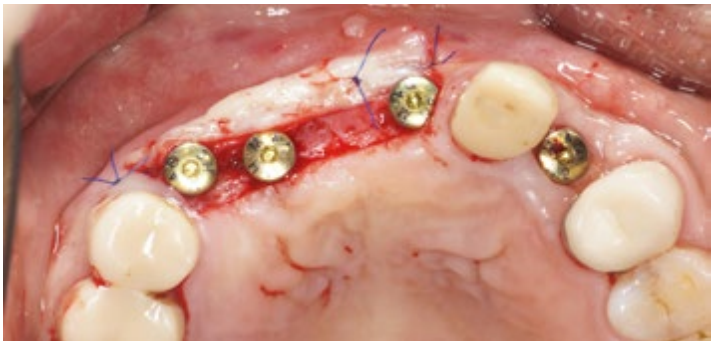
InterOss® Collagen placement



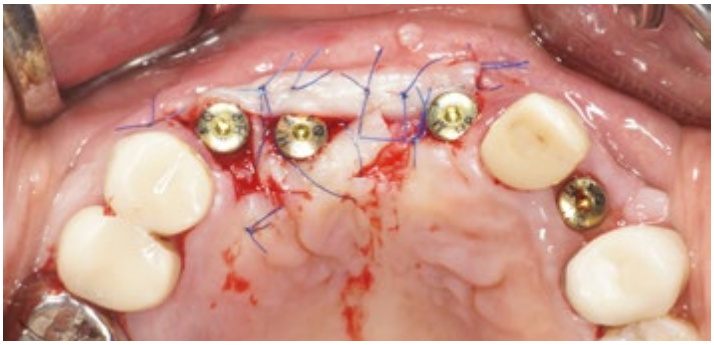
InterCollagen® Guide placement



Flap suture preparation



Apically positioned flap



Additional small transpositional flap from palate

Tooth Extraction and Socket Grafting

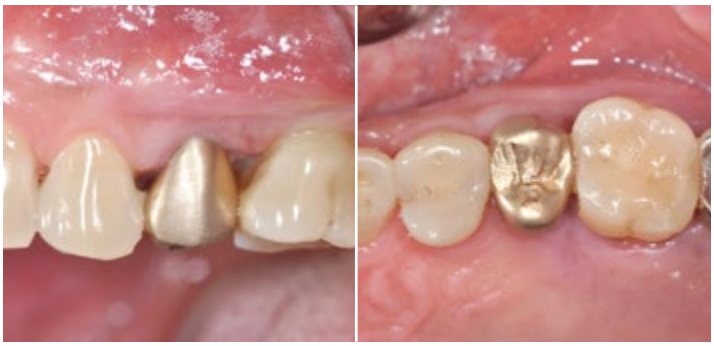
Kyung Hee University Study
South Korea

Objective

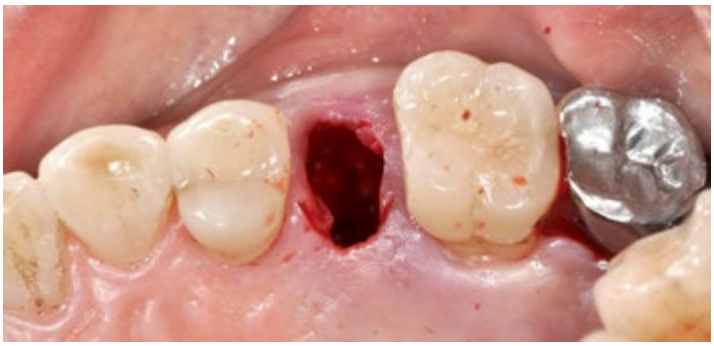
To minimize soft tissue shrinkage and the amount of bone graft used during the implant, socket grafting was indicated, and densely packed InterOss® Collagen blocks can fulfill these goals. The open wound can then be covered by a couple layers of InterCollagen® Guide.

Conclusion

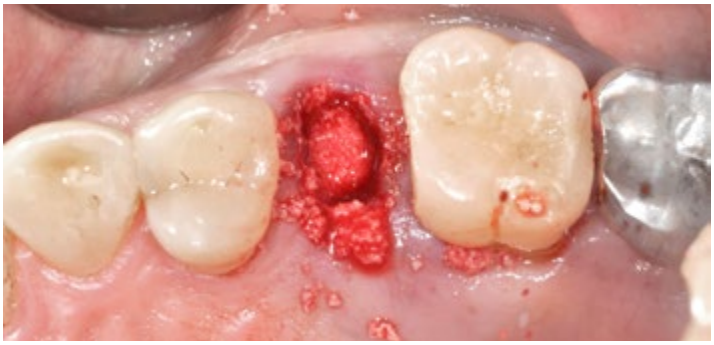
The extraction socket was successfully maintained by this simple procedure, reducing patient's morbidity by minimizing the extent of surgery at the time of implant placement. Chronic fistula should not pose any trouble as long as it does not have an active infection.



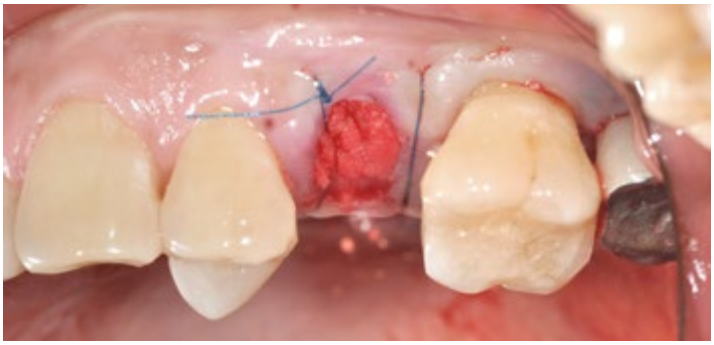
Post-operative view



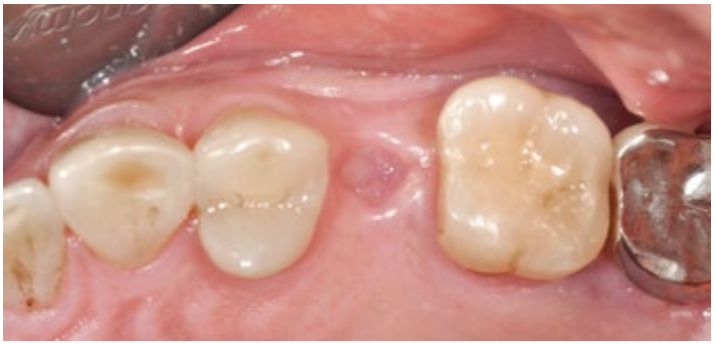
Empty socket post-extraction



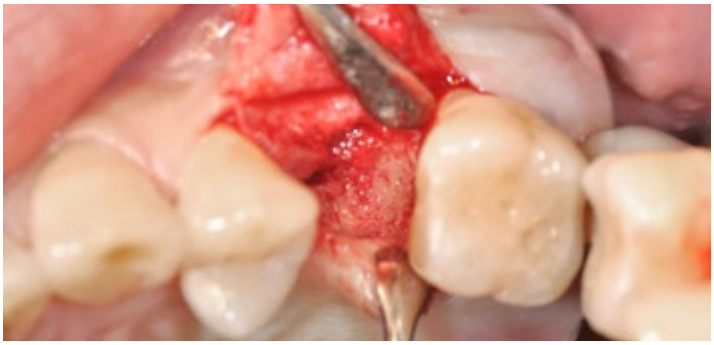
InterOss® Collagen placement



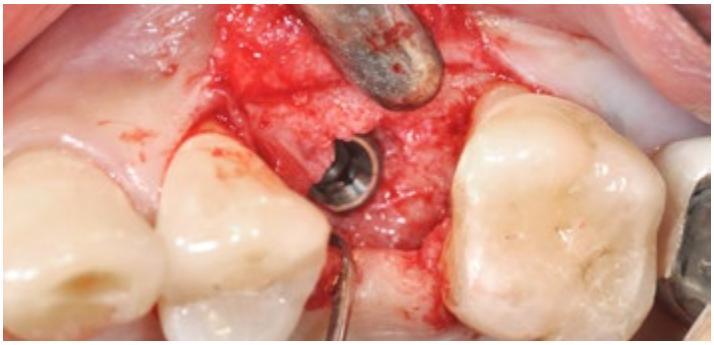
Immediate post-operative view



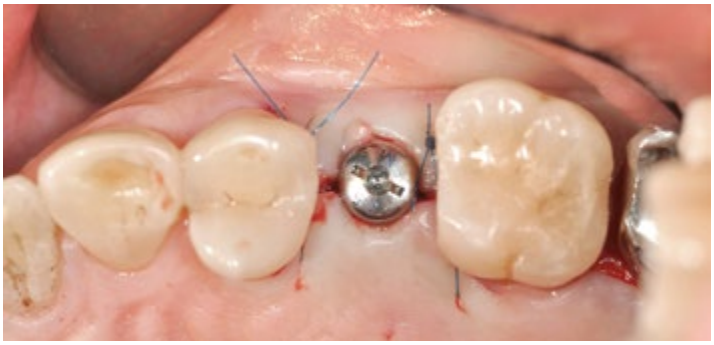
Pre-operative view 16 weeks after



New bone formation



Implant post placement



Post-operative view

Tooth Extraction and Socket Grafting

Kyung Hee University Study
South Korea

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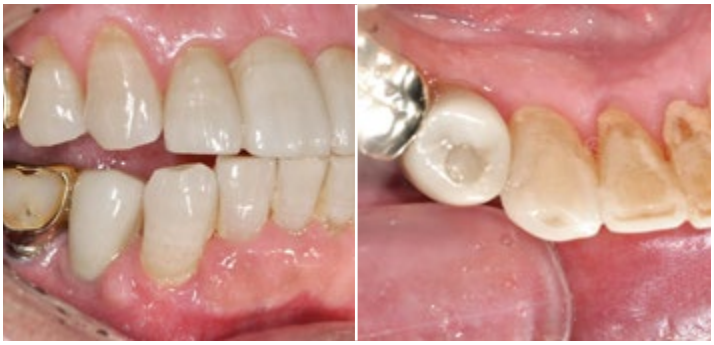
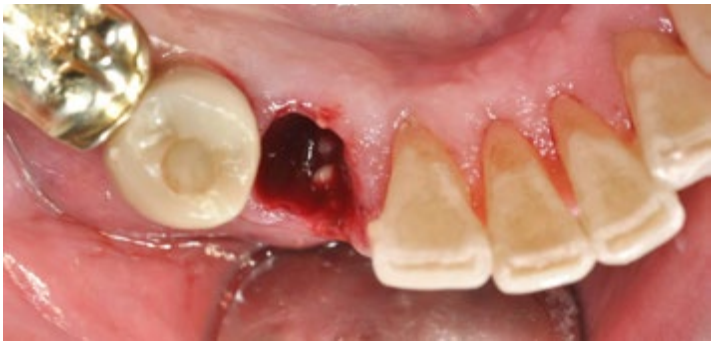
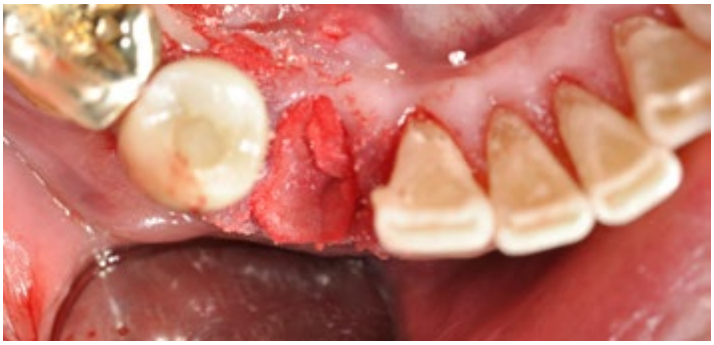


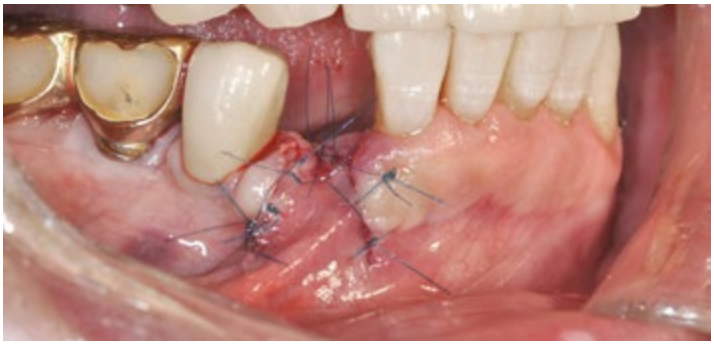
Post-operative view



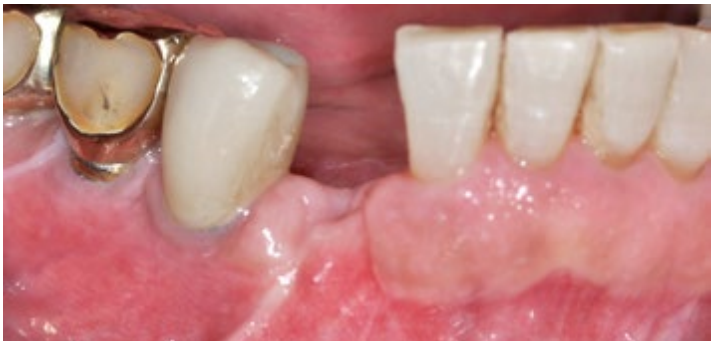
Empty socket post-extraction



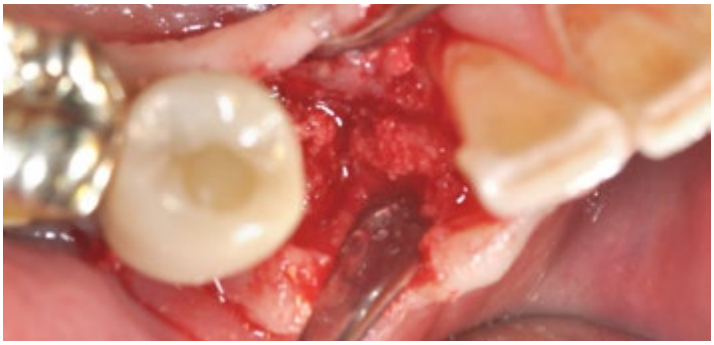
InterOss® Collagen placement



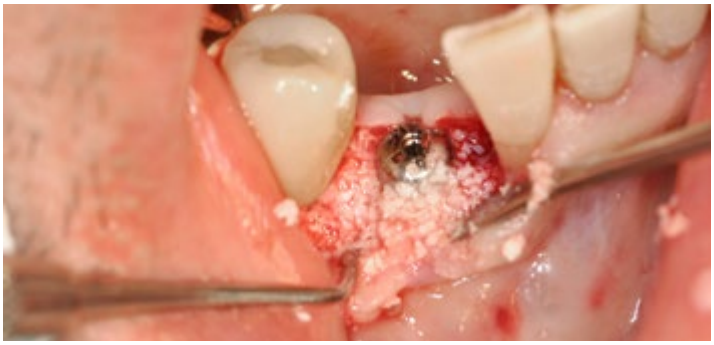
Immediate post-operative view



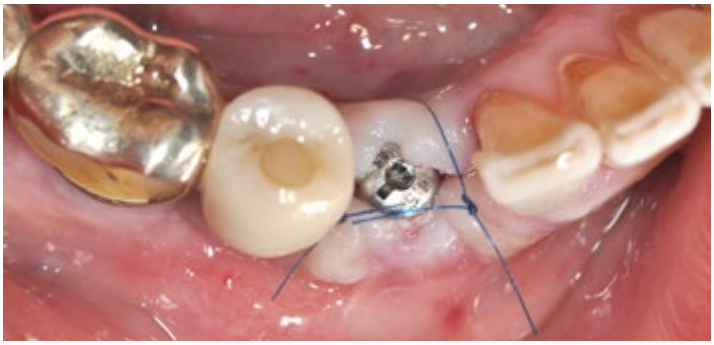
Pre-operative view 16 weeks after



New bone formation



InterOss® and implant post placement



Post-operative view

SigmaGraft

SCIENCE THAT NURTURES WELLNESS

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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