

Immediate Implant Restoration

A Case Study by Dr. Sausha Toghranegar, DMD MS

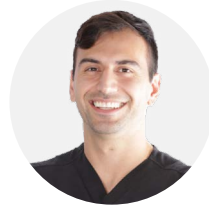
At Dentsply Sirona Regenerative Solutions, we strive to provide you with the latest advancements and trends in guided bone regeneration (GBR) and guided tissue regeneration (GTR). Learn from clinical case studies tailored for dental professionals like you and elevate your practice.

Background

A 24-year-old female patient, a non-smoker with no significant medical history or medications, presented with a congenital absence of tooth #4, adjacent tooth recession, and thin tissue. The assessment revealed sufficient crest width but thinning bone in the apical two-thirds, along with adequate keratinized gingiva. A space maintainer for tooth #4 caused inflammation due to gingival impingement, and tooth #5 exhibited noticeable recession.

Case Description

Radiography revealed suitable bone for implant placement, though there were concerns about buccal thinning and potential perforation in the apical two-thirds of tooth #4. The treatment plan included the removal of the space maintainer, debridement, ND Yag laser treatment, guided implant placement at tooth #4, facial contour grafting, and primary closure for the recession of tooth #5. OSSIX Agile™ (15x20) was used for bone regeneration, along with a particulate allograft (0.5cc) for bone support. A DS Prime Taper Implant (3.6x11) with a cover screw and healing abutment was placed. The approach resulted in successful implant placement, with significant bone gain observed in the CBCT scan four months post-op.



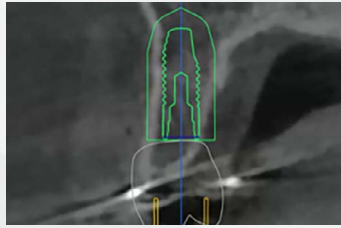
About the Clinician, Dr. Sausha Toghranegar, DMD MS

Dr. Sausha Toghranegar is originally from Tampa, FL where he currently practices. He graduated dental school from Nova Southeastern University. He then continued at Nova to pursue his Master's degree and complete his periodontal residency. Dr. Sausha focuses the majority of his practice on hard/soft tissue augmentation and implant dentistry. He emphasizes the use of digital tools and 3D technology to bring optimal and predictable care to his patients.

Pre-Op



Occlusal view pre-op



Planned implant position,
Noticeable thin bone volume on
the facial anticipated

Surgery



Occlusal view with depression noted at
apical third of ridge



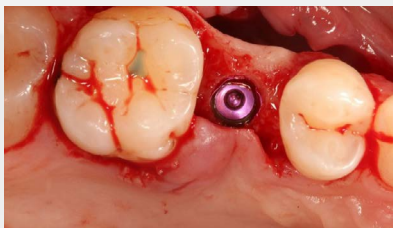
Facial view of the ridge



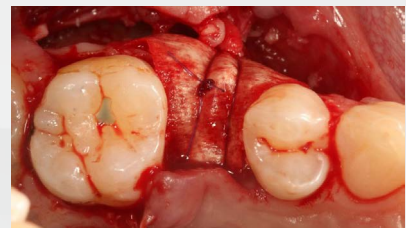
Facial view of osteotomy, decortications
for angiogenesis, and ND Yag laser
application to disinfect site



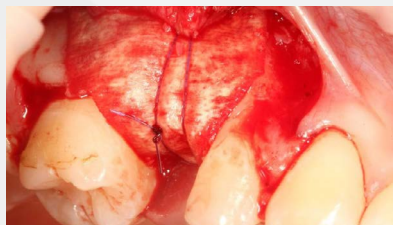
Occlusal view of DS PrimeTaper 3.6x11
implant placed through 3D printed guide



Occlusal view of implant placed



Occlusal view of OSSIX Agile™
membrane fixated over particulate
allograft. Periosteal sling sutures used to
initially secure membrane



Facial view of OSSIX Agile™ fixated
with periosteal sling suture



Primary closure achieved

Post-Op

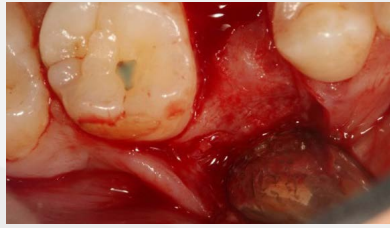


Early Post-Op - Post-op 2 weeks

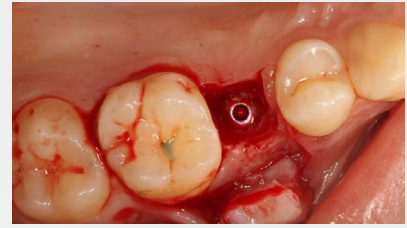
Uncovery, 5 Months



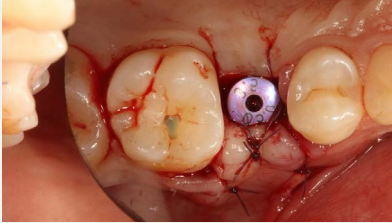
Occlusal View pre-op before uncover



Occlusal view, flapped site showing bone covering over implant



Occlusal view after implant cover screw is exposed after bone removal. Buccal bone regenerated



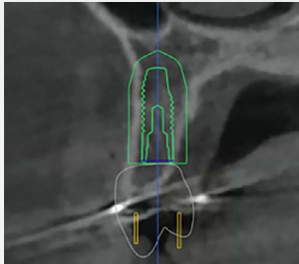
Healing abutment placed



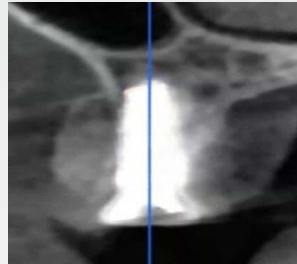
Peri apical Xray of implant with healing abutment

Summary

CBCT cross section showing pre and post surgery



Pre-op



4 Months Post-Op



2 Year Post-Op

Conclusion

After 2 years, the implant remains well-integrated, with maintained crestal bone levels and no radiographic signs of complications.



OSSIX Agile™ | Cross-Linked Pericardium Membrane



OSSIX Agile™ is a pericardium-based, bioresorbable¹ membrane powered by GLYMATRIX®² technology. The membrane maintains its barrier function for up to six months*. OSSIX Agile™ is stretchable and exhibits high tensile strength, attributed to the biomechanical properties of the pericardium³. Due to these properties, the membrane accommodates various fixation methods, including suturing, tacking, and screwing through the membrane⁴.

* Based on an animal study and does not necessarily translate to clinical results in humans.

References

1. Data on file (Preclinical Final Report, Evaluation of OSSIX Agile™ – Dental barrier)
2. Zubery et al. Ossification of a Collagen Membrane Cross-Linked by Sugar: A Human Case Series. Journal of Periodontology, June 2008; Volume 79, Number 6
3. Data on file (OSSIX Agile™ tensile strength determination)
4. Data on file (In Vitro Characterization of OSSIX Agile; evaluation of maximum load, suture pull test, and fixability)

*Dr. Sausha Toghranegar receives financial support from Dentsply Sirona

Warning

OSSIX Agile™ must not be used in patients with known collagen hypersensitivity, sensitivity to porcine-derived materials, or suffer from autoimmune diseases and connective tissue diseases. As the membrane is of a collagen origin, allergic reactions may not be entirely excluded.

Please read the [IFU](#) before use and for additional information on indications, contraindications, warnings, and precautions.

For more information on OSSIX® regenerative products and activities in your region: regenerative.dentsplysirona.com

MKT-0002609 ver 02