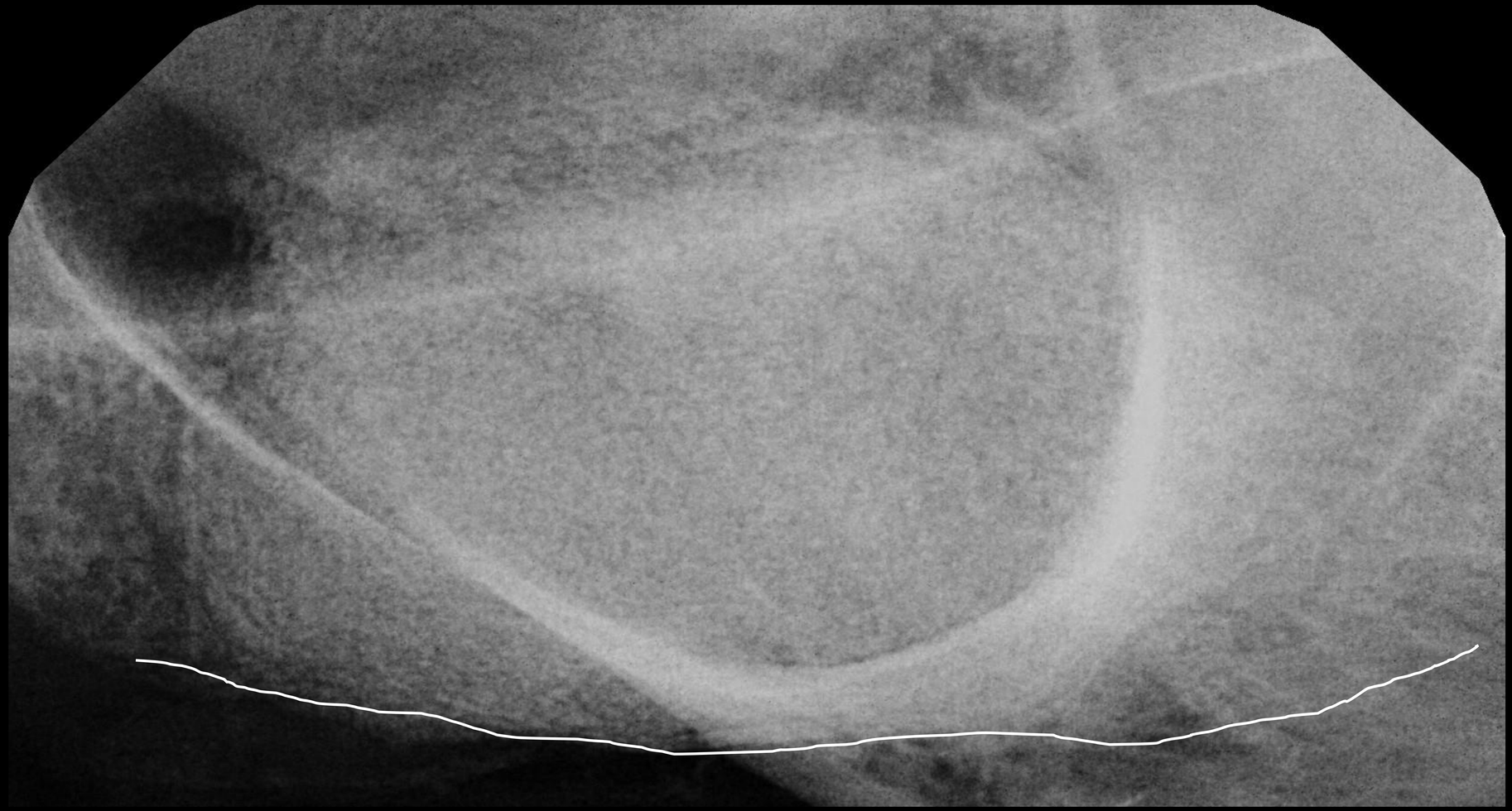
Academy of Osseointegration

Osseodensified Crestal Sinus Window : A Replacement Technique For The Lateral Window Approach

Presenter: Nilesh Salgar DDS **Private Practice:** Montreal, Canada



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Introduction:

A novel transcrestal window sinus lift technique (osseodensification) offers a safe, effective alternative to traditional transalveolar augmentation, achieving bone height gains comparable to lateral window approaches while avoiding their limitations.

Methods:

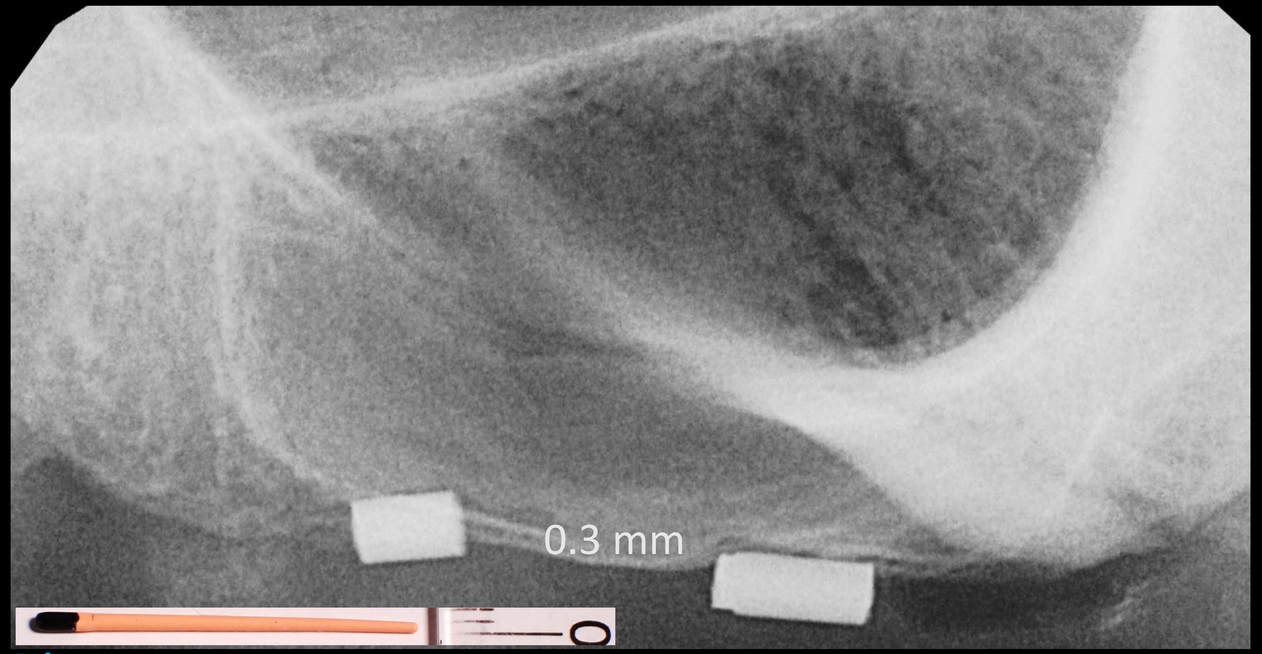
A healthy patient presented with an edentulous posterior maxilla with large pneumatized maxillary sinus. Preoperative radiographs and 3D CBCT imaging determined bone volume and ruled out sinus pathology prior to surgery. The sinus floor & sinus membrane were found to be perforated.
Two osteotomy positions were confirmed with gutta percha markers. Two 5.0-mm osteotomy sites were made through the sinus floor with Osseodensification burs diameter 3.0, 4.0, and 5.0. mm. The Schneiderian membrane was sealed with a long-lasting collagen membrane. The osteotomy sites were filled with hydrated mineralized cancellous allograft. Osseodensification Bur Ø 5.0 mm was used counterclockwise at low speed (150 RPM) and no irrigation to gently propel the allograft into the sinus under the sinus membrane.
Digital radiographs during the procedure verified intact Schneiderian membrane fully containing allograft graft volume.

Results:

Healing was rapid and uneventful, with minimal discomfort, bleeding, and no swelling. No Schneiderian sinus membrane perforation or surgical complications occurred.
The initial (pre-op) bone height was 0.5 mm. The final (post-op) vertical bone gain was 17 mm.

Discussion:

The lateral window has been the surgical technique of choice in cases where the remaining bone height under the sinus (RBH) is less than 5 mm. The osseodensified crestal sinus window technique may be proposed as a possible alternative or replacement procedure for maxillary sinus bone augmentation.
The safety and effectiveness of this procedure depends on cautious planning as well as the skill and advanced training of the dental surgeon.
Further studies will be required to determine the statistical effectiveness of this procedure in relation to the vertical gain success rate of the traditional lateral sinus window technique.



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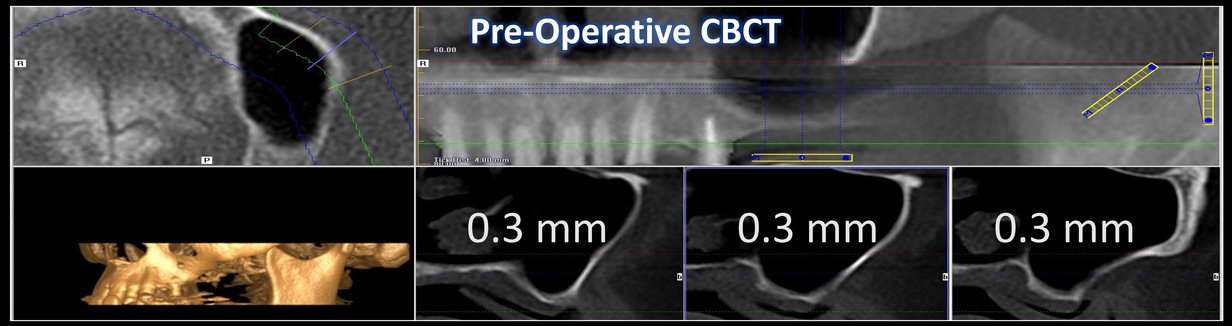

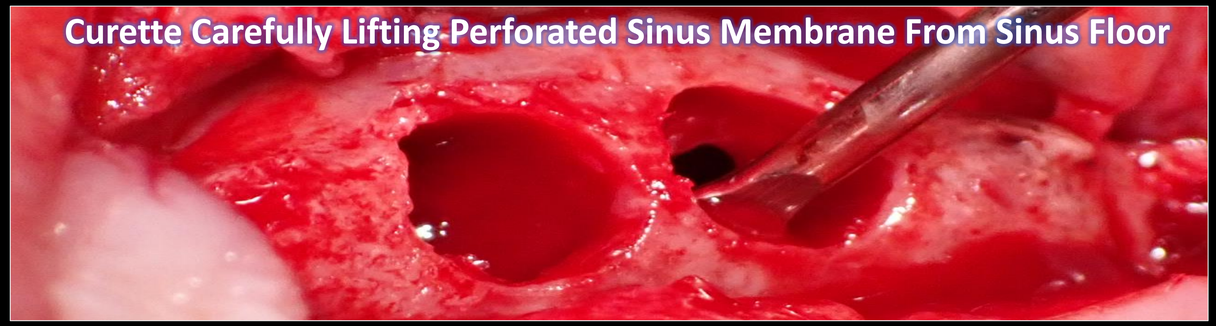

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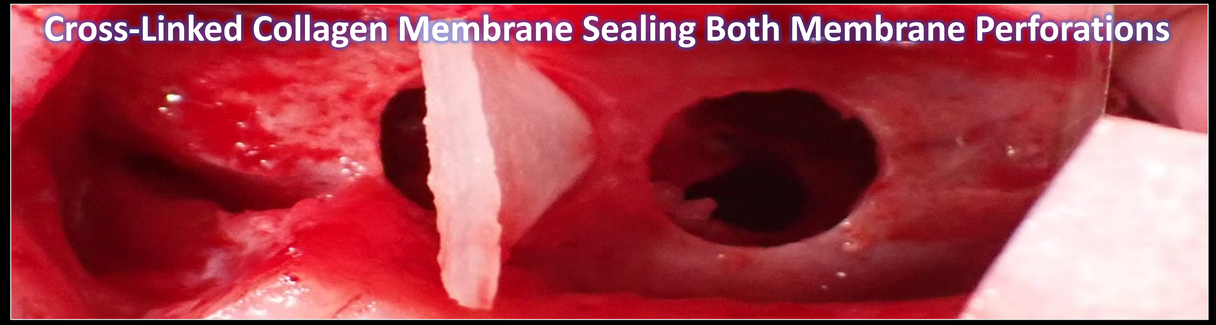

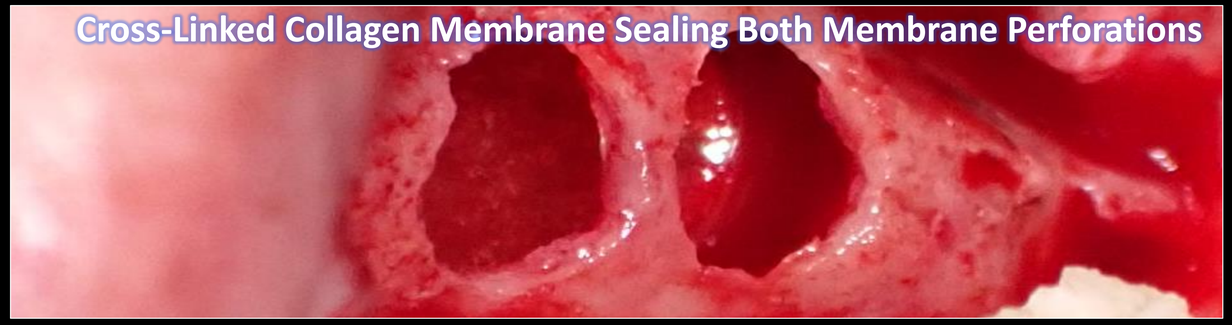

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