

InterOss® Mediated GBR Preventing the Maxillary Sinus Augmentation Procedure

Dr. David M. Kim
Boston, MA
United States



Patient History

A 41-year-old healthy female patient presented with a fractured maxillary right first molar. Due to active infection, no alveolar ridge preservation was done on the same day.

Process & Conclusion

The infected tooth was extracted, followed by GBR using InterOss® and a collagen membrane. At 6 months, sufficient bone allowed implant placement, and 9-year follow-up showed stable bone and soft tissue, confirming long-term success.



Pre-operative X-ray.



Extracted tooth with recurrent decay, short roots, and infection around the tooth.



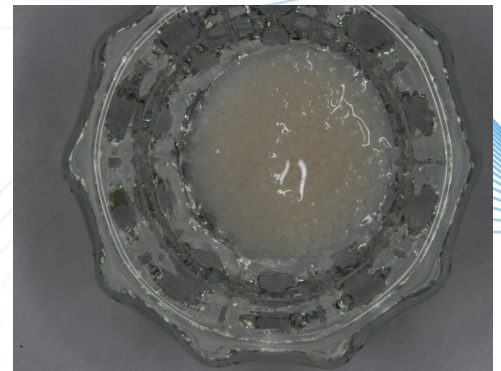
A clinical picture at 6 weeks displaying partial soft tissue healing at the extraction site.



A periapical (PA) radiograph at 6 weeks revealed incomplete socket healing and proximity to the sinus membrane if the crestal bone level is not maintained.



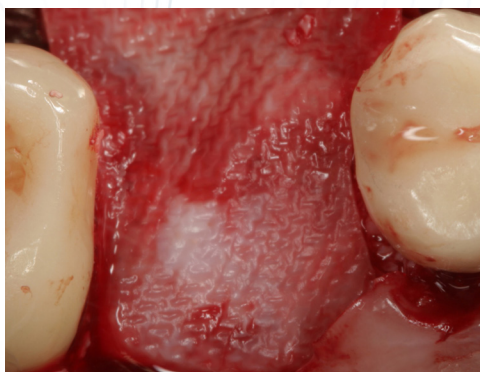
The buccal view of the extraction site revealed significant buccal bone destruction in addition to bone loss on the mesial aspect of the second molar.



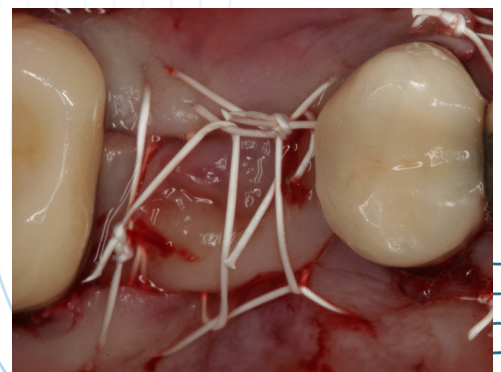
Guided bone regeneration (GBR) procedure was performed with InterOss® anorganic cancellous bone granules (0.25-1.0mm) that have been hydrated with the growth factor (rhPDGF-BB).



The InterOss® was packed into the extraction socket.



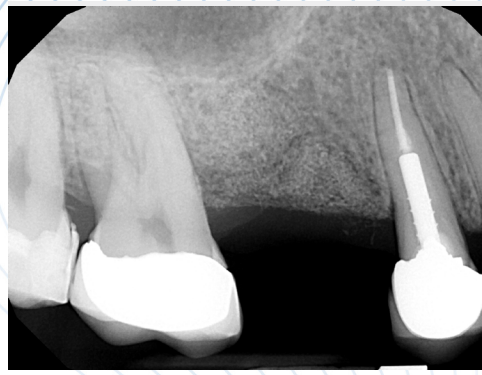
A cross-linked collagen barrier membrane was placed over the bone graft.



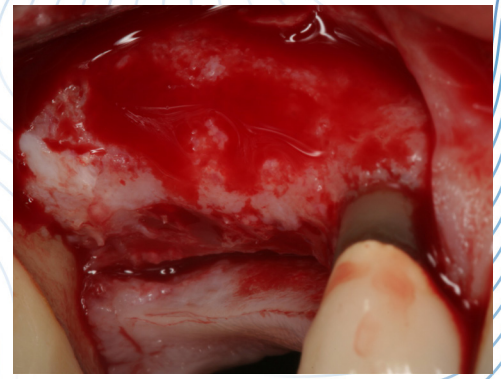
To maintain the vertical bone height, the primary flap closure was obtained.



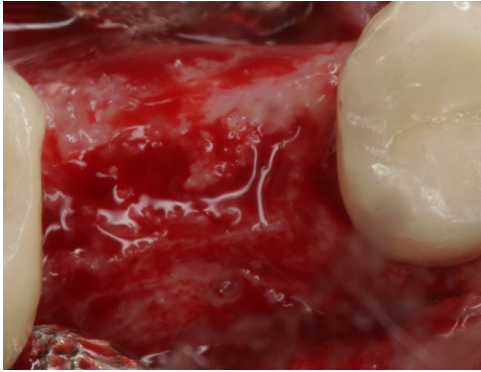
A PA was taken immediately after the GBR.



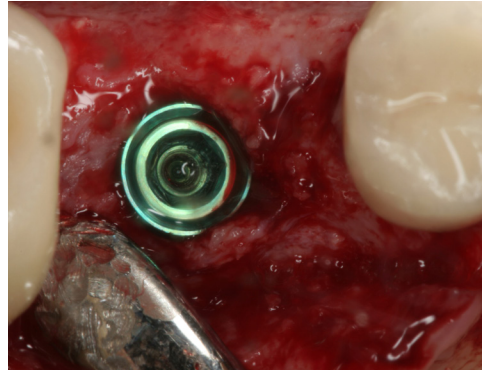
The new PA taken at 6 months revealed the maintenance of augmented vertical bone height.



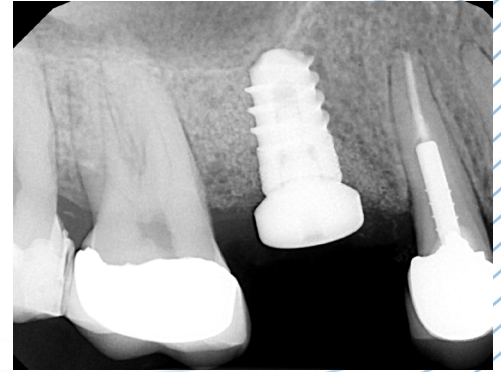
The full-thickness flap was elevated, and the regenerated bone appeared to be vital with a minimal amount of remnant graft particles, and the vertical bone height was restored.



The occlusal view demonstrating the maintenance of the ridge width with InterOss.



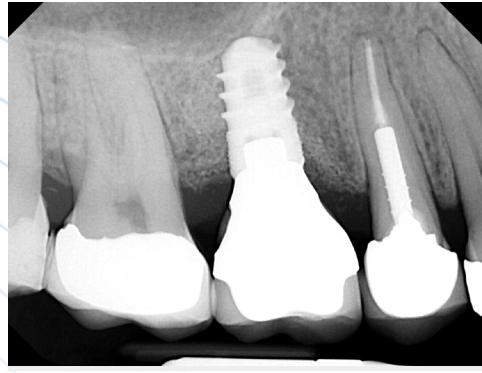
A dental implant was placed into the regenerated bone, achieving good primary stability.



A PA taken immediately after the surgery.



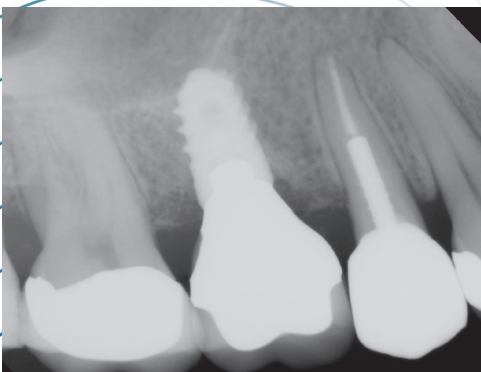
A clinical picture of the restored implant demonstrating good soft tissue support.



A PA taken after the implant restoration.



A clinical picture 9 years after the GBR, demonstrating healthy soft tissue support around the implant, while there was a gingival recession on the adjacent natural tooth.



A 9-year post-GBR PA demonstrating a stable long-term maintenance of the supporting bone around the implant.