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IMPLANT BRIDGE RESTORATION

CASE PRESENTATION | 5

A 39-year-old female presented to the office with a chief complaint of “my lower left bridge is loose.” The patient had a medical history significant for anxiety and she was taking Effexor (Pfizer) with no known food or drug allergies. Her dental history included the placement of a large span fixed bridge from teeth Nos. 17 to 21 four years before the case presentation. Because of inadequate embrasure form, she was unable to keep her bridge clean and she developed recurrent decay under tooth No. 21.

My diagnosis was that teeth Nos. 17 and 21 were deemed restoratively hopeless and slated for extraction. In addition, a horizontal and vertical bony ridge defect existed because of longstanding edentulism in site Nos. 18, 19, and 20.

Clinical records were taken, including preoperative radiographs using DEXIS Digital X-Ray System (DEXIS) and a diagnostic wax up (Kuota Dental Labs). From the diagnostic wax up, a radiographic guide was created and the patient was sent for a mandibular CBCT scan. Based on that scan, the patient had 3 mm of residual horizontal crestal ridge with 6 mm of vertical height above the inferior alveolar nerve. In addition, the patient denied temporization with a removable appliance at any time during her treatment.

Treatment options were reviewed with the patient and the patient opted for a fixed restoration supported by implants (all restorative work done by Dr. Neil Cohen). The patient was treatment planned for ridge augmentation surgery with the placement of temporary implants for provisionalization. After guided bone regeneration was completed, 4 dentals implants were treatment planned with immediate provisionalization and load. The patient accepted this treatment because at no time during treatment was a removeable appliance scheduled for use. A 4-unit implant supported splinted porcelain-fused-to-metal bridge was fabricated to complete the restoration.

The patient was very happy with both the esthetics and function of this restoration.



Figure 1—A 39-year-old female presented to the office with a chief complaint of “my lower left bridge fell off.”



Figure 2—Using DEXIS X-Ray System, a radiograph of the patient’s lower left bridge showed teeth Nos. 17 to 20, with recurring decay present on tooth No. 20. The patient was later sent for a mandibular CBCT scan.

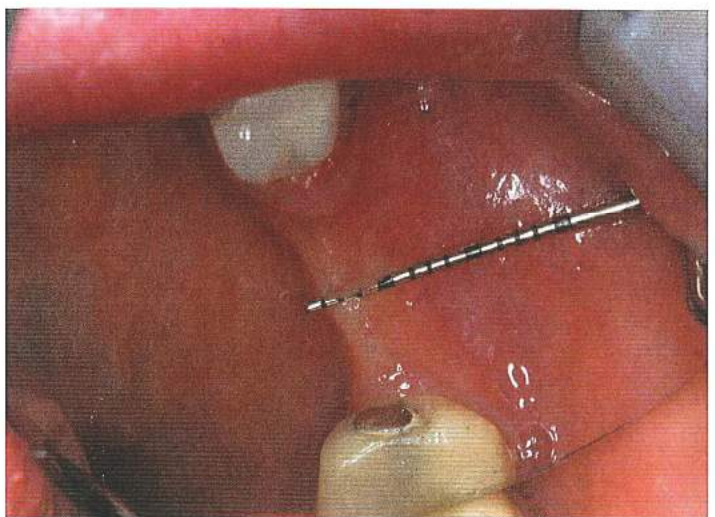


Figure 3—Based on that scan and clinical appearance, the patient had 3 mm or residual horizontal crestal ridge with 6 mm of vertical height above the inferior alveolar nerve.

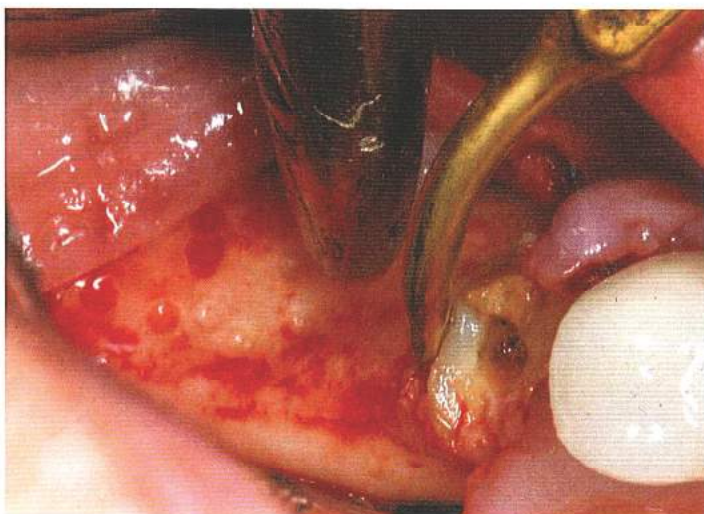


Figure 4—After local infiltration, a midcrestal incision split thickness flap was made with mesial and distal vertical releases. Teeth Nos. 17 and 21 were extracted carefully using Piezosurgery (Mectron). The buccal plate was decorticated using a #4 carbide bur and 3 temporary mini implants were placed in site Nos. 18, 19, and 20 using Anew (Dentatus).

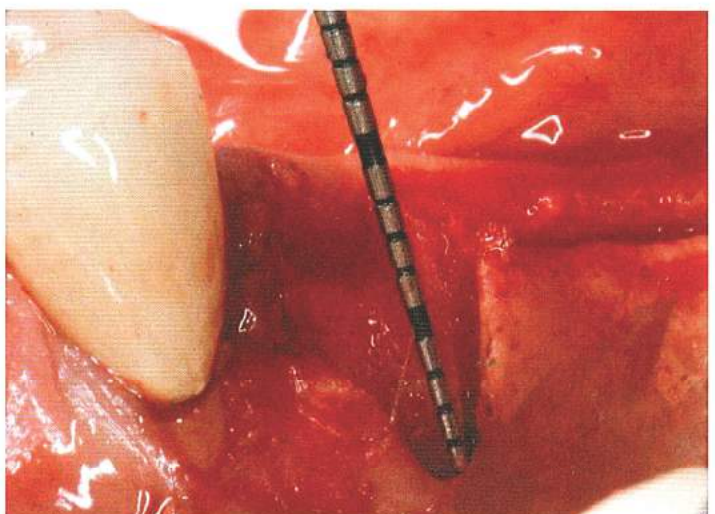


Figure 5—After extraction, a 7 mm buccal plate dehiscence was noted in site No. 21.

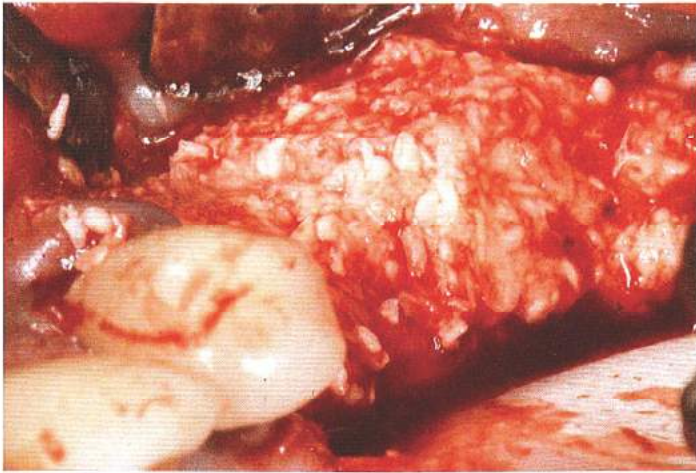


Figure 6—Guided bone regeneration of the area was accomplished using cancellous anorganic bovine bone (1-2 particle size Bio-oss from Osteohealth). Because the patient lacked adequate keratinized tissue, a soft-tissue xenograft using Mucograft (Osteohealth) was placed.

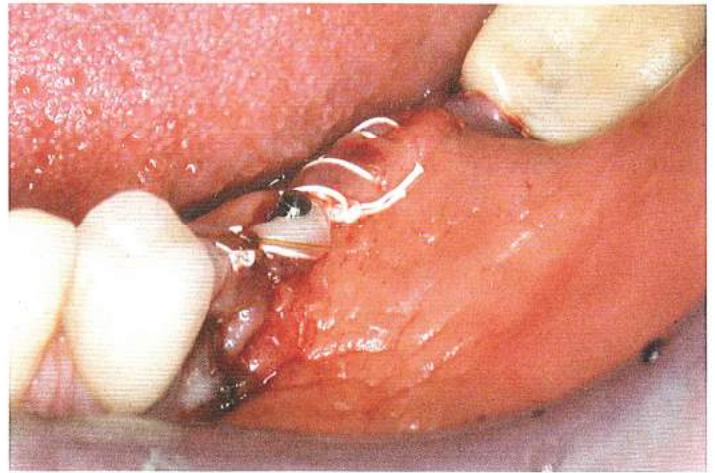


Figure 7—The mini implants protruded from the graft and act as tenting poles for stabilization. Primary closure was achieved with GORE-TEX Sutures (GORE-TEX).



Figure 8—The area was allowed to heal undisturbed for 6 weeks.



Figure 9—Mini abutments with a banded matrix were used with an omnivac matrix to create a splinted acrylic temporary bridge. Special attention was paid to the development of embrasure form and soft tissue development.



Figure 10—The mini implants were then loaded using an omnivac matrix and the fabrication of a 4-unit acrylic bridge for Nos. 18 to 21 with tooth No. 21 being a cantilevered pontic. The bridge was put into light occlusion with all excursive contacts removed.



Figure 11—Six months were given for healing and solidification of bone.

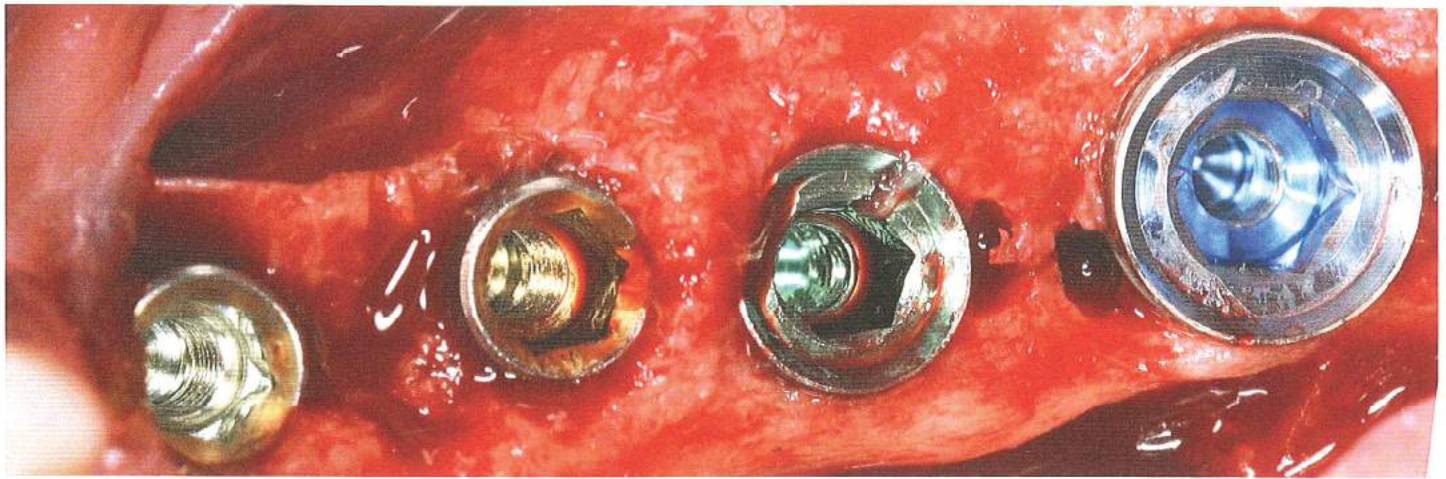


Figure 12—After healing the patient was scheduled to receive 4 dental implants. A surgical index was generated based on the diagnostic wax up. At the time of surgery, the mini-implants were removed and a midcrestal incision was performed with mesial and distal release. Four Tapered Interanal Implants (BioHorizons) were placed in site Nos. 18, 19, 20, and 21. The area was closed with 4.0 vicryl sutures.

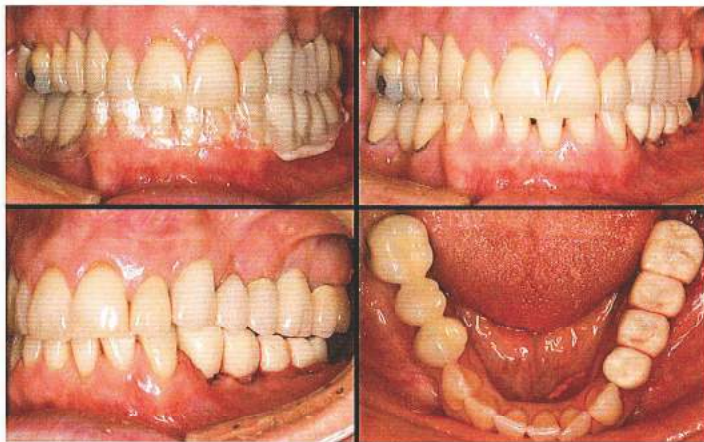


Figure 13—After the implants were placed with sufficient stability, stock abutments were used for immediate provisionalization. The abutments were used with an omnivac matrix to create a splinted acrylic temporary bridge. Luxatemp Ultra provisional material (DMG) was also used.



Figure 14—The patient was very happy with the esthetics and function of her 4 regular porcelain-fused-to-metal crowns and restoration (all restorative work done by Dr. Neil Cohen).

GO-TO PRODUCTS USED IN THIS CASE



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