



GBR in the Esthetic Zone: Site Development for Prosthetically-Driven Implant Placement

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Presentation

A 50-year-old male presented with a buccal soft tissue abscess to #7. Clinical & radiographic exam revealed a vertical root fracture at the apical extension of the post causing complete loss of the buccal plate of bone. The shattered tooth remnants were removed and the area aggressively curetted to remove all granulation tissue. The area was allowed to heal for six weeks before the GBR procedure was performed. GBR therapy using Regenaform allograft paste was completed and six months was allowed for healing. A Straumann implant was then placed and an additional three months was allowed prior to commencing with the prosthetic phase of treatment. The patient is presently in an alternating maintenance frequency with his periodontal & restorative offices at three month intervals.



FIG. 1: Pre-treatment presentation of tooth #7 with buccal abscess present.



FIG. 2: Periapical x-ray at presentation.



FIG. 3: Extracted tooth remnants.



FIG. 4: Six weeks post-extraction. Note proximal recession of #6 mesial and #8 distal due to periodontal attachment loss from untreated root fracture and periodontal disease locally.



FIG. 5: Incisal view of GBR surgery. Note concavity in area mid-buccal #7 due to complete buccal plate loss.



FIG. 6: Flapped view of extraction site buccal defect.



FIG. 7: Intramarrow penetration to allow for multi-pluripotential cells to enter area. 7mm tenting screw (Lorenz Surgical) in place. Head of screw is placed to desired horizontal position of final bone healing.



FIG. 8: 0.5cc of Regenaform moldable allograft paste in place. Emdogain® was placed over the Regenaform, proximal root surfaces and flap margins as well as suture lines to aid in soft and hard tissue healing and to preserve the soft tissue attachment.



FIG. 9: A collagen membrane placed over Regenaform moldable allograft paste; Emdogain is placed over the collagen membrane.



FIG. 10: Tension-free closure of surgical site after sub-periosteal release of buccal flap enabling coronal positioning of the flap & primary soft tissue closure.



FIG. 11: Six month post-operative healing.



FIG. 12: Re-entry day of implant surgery. Six month post op.

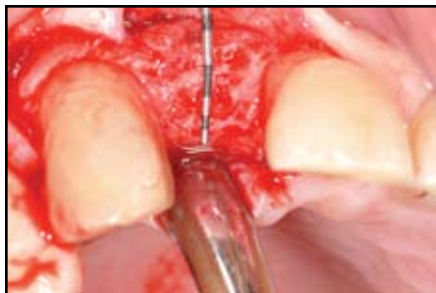


FIG. 13: Horizontal bone reconstruction noted. (Type 3 bone)



FIG. 14: A narrow neck Straumann implant placed in prosthetic position with aid of a surgical guide template.



FIG. 15: Completed crown #7. Note minimal additional recession of adjacent teeth & reconstruction of the mid-buccal soft tissues via underlying hard tissue reconstruction which was accomplished. (Restoration completed by Dr. Morris Rosen, Philadelphia, PA.)



FIG. 16: Final PA #7.