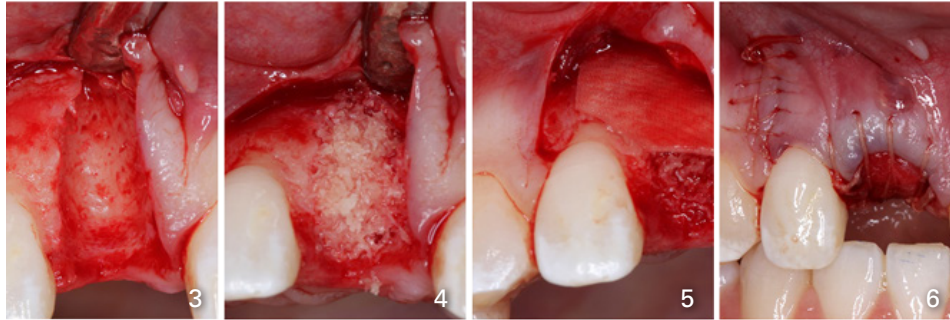
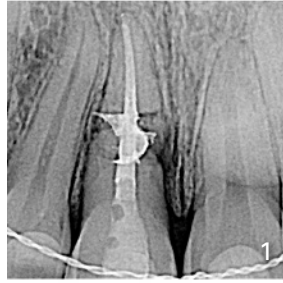


The patient, a medically-stable 20 year old female, presented with maxillary central incisor #8 completely horizontally fractured at the mid-root following endodontic treatment (Figure 1). A fistula was present on the buccal gingiva of #8 (Figure 2). #8 was deemed to be hopeless. The mucosal biotype was classified as thin with a highly scalloped contour, and the marginal bone was predicted to be very thin. The average thickness of the labial bone overlying a maxillary central incisor hovers around or slightly less than 1 mm.

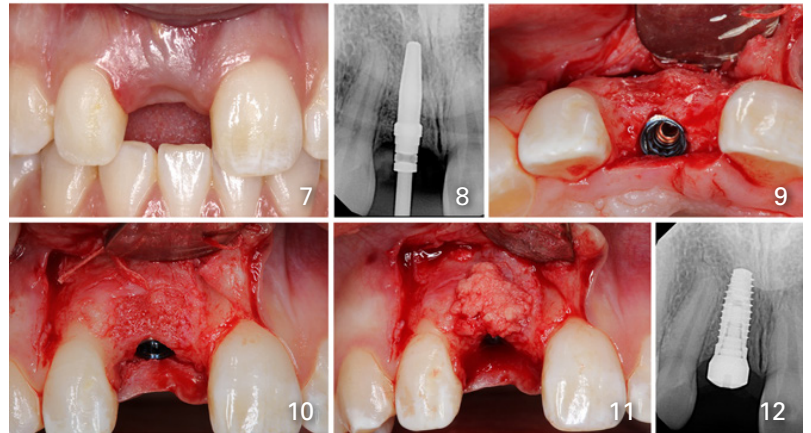


Tooth #8 was extracted as atraumatically as possible after elevating a labial full-thickness flap with a single vertical release made at the distal of tooth #7 (avoiding an incision bisecting the papilla or directly over root surface) to access the site completely; there was obvious severe buccal plate resorption due to the fracture and subsequent infection (Figure 3). Socket preservation with mineralized bone material (Puros® Cortical Particulate Allograft, Zimmer Biomet, Warsaw, Indiana) and an overlying absorbable

membrane (OsseoGuard®, Zimmer Biomet, Warsaw, Indiana) was performed to regenerate the ridge and maintain the height of bone to the interproximal level of the adjacent teeth (Figures 4,5 and 6).

The site healed for 4 months (Figure 7). The soft tissue profile at 4 months was well-contoured and amenable to an esthetic outcome (coronally-oriented). Papillae were present, and no detectable labial soft tissue recession was noted.

Implant placement proceeded without complication. A full thickness flap was created with one vertical release made at the distal of tooth #7 to permit visualization (Figure 8-9). Socket preservation created suitable bone for straightforward and optimal placement of a 4 mm diameter x 11.5 mm long implant (Osseotite™ Tapered Certain®, Zimmer Biomet, Warsaw, Indiana – Figure 10): 3 mm mesio-distally from the implant platform to each adjacent tooth, less than 3 mm apico-coronally from the platform to the cemento-enamel junctions of the adjacent teeth, and in the bucco-lingual dimension, slightly palatal positioning of the implant shoulder to the point of emergence of adjacent teeth (approximately 1-1.5 mm to the lingual) to accommodate a screw-retained provisional restoration (Figures 11-12)



Three weeks following second stage surgery, the soft tissue appeared to have grown over the healing abutment. (Figures above)

After three months of provisionalization, the patient received the final screw-retained lithium disilicate glass ceramic implant crown (IPS e.max®, Ivoclar Vivodent, Amherst, New York; laboratory fabrication via daVinci Dental Studios, West Hills, California) (Figure 13). The final restoration and mucosal morphology blended harmoniously with the natural dental and periodontal anatomy. The patient was highly satisfied with the masticatory and visual result of the maxillary central incisor. (Figure 14-15)



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