Management of two implants in the esthetic zone

By Saghi Parham, DDS

A medically and periodontally stable 24-year-old woman presented with two failing root canals on teeth #8 and #9. Her dental records indicated both teeth were endodontically treated twice before. The first root canals were performed when she was 18 years old due to a trauma incident and again six years later.

Two weeks prior to presenting at our office, the patient stated she had another accident causing trauma to her two maxillary centrals. A new series of radiographs revealed apical infections on both teeth (Fig. 1). Both teeth were deemed restoratively hopeless (Fig. 2).

Treatment plan
The patient was given the option to have a removable partial denture, fixed partial denture or implants. The following treatment was performed:

• Extraction of teeth #8 and #9, and maxillary periodontal esthetic osseous surgery.
• Temporization with a resin-bonded fixed partial denture during healing period.
• Placement of implants for #8 and #9.
• Six-month healing period.
• Placement of final implant crowns.
• Extraction and socket preservation.

The teeth were extracted followed by a thorough degranulation and debridement of the extraction sites. No dehiscence or fenestration was detected, and no graft material was placed in the extraction sites. The space was then temporized with a resin-bonded fixed partial denture (Fig. 5).

Esthetic periodontal osseous surgery
The primary goal for this procedure was to eliminate the “gummy smile.” Osteoplasty was followed by approximately 1 to 1.5 mm of osteotomy. The flap was repositioned apically (Figs. 4 and 5).

Implant placement
After osteotomy preparation, two internal-hex implants with S.L.A. (sand-blasted with large grit and acid etching) surfaces were placed (Fig. 6).

A 3.8 mm x 12 mm implant was placed into site #8 and a 3.4 mm x 12 mm implant was placed into site #9 (Implantium S.L.A. implant by Dentium USA, Cypress, Calif.). Primary stability was achieved, and healing abutments were placed. The site was re-temporized using the same...
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resin-bonded fixed partial denture that was used during the first healing phase.

Final prosthetics

Final restoration of both #8 and #9 implants was performed at six months. The marginal height and contours of both implants matched, and a periapical radiograph revealed sufficient bone height around the fixtures (Figure 7).

The patient was happy with the functional and esthetic results (Figure 8).

Fig. 3: Temporary resin-bonded fixed partial denture.
Fig. 4: Esthetic periodontal osseous surgery.
Fig. 5: Results of esthetic gum lift.
Fig. 6: Radiograph showing placement of two implants in spaces #8 and #9.
Fig. 7: Radiograph showing finalized implant prosthetics.

Fig. 8: Final smile.

About the author

Dr. Saghi Parham received a bachelor of science degree with a major in biology from the University of California, Los Angeles. She received her doctor of dental surgery degree from the University of Southern California, School of Dentistry.