Bridging the Gaps

By Lorin F. Berland, DDS

Cosmetic dentistry can mean many things. Too often, many dentists limit treatment to the latest and greatest in bonding and implant technology. They may tend to forget or neglect time-tested crown and bridge options, which are also significantly improving. Patients sometimes present with unique needs that require nonstandard yet rather conventional methods. My father-in-law (Figure 1) presented as an ideal candidate for such methods.

Figure 1. Full face, pretreatment.

Figure 2. Smile Vision work-up.

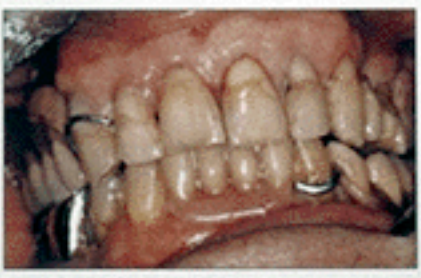

Figure 3. Retracted close-up, partial dentures in place.

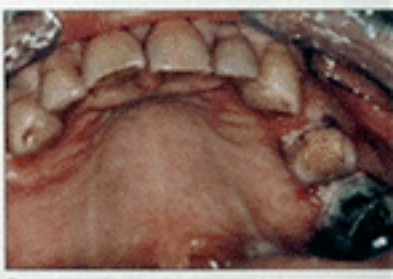

Figure 4. Maxillary arch.

CASE STUDY

A Smile Vision work-up was first completed (Figure 2).[1] Cosmetic imaging is invaluable for case diagnosis and increasing the patient's desire for and satisfaction with treatment. Treatment in this case was extensive. The patient's only maxillary teeth (Nos. 6 through 11, 13, and 15) were supporting a partial denture. His only mandibular teeth (Nos. 22 and 27 through 31) were supporting a lower partial denture (Figures 3 through 5).[2] The remaining teeth were riddled with caries and defective restorations, but they had stable periodontal support.[3] Teeth Nos. 15, 18, and 30 had a questionable prognosis.

The patient's removable partial dentures, while satisfactory in fit, suffered from inherent problems. They were uncomfortable, unaesthetic, and made talking and eating difficult. Due to his refusal to give up smoking, the lack of necessary bone support, and time constraints, implants were not a consideration. Only the maxillary and the mandibular multiple cantilever bridges would provide the solution to his dental needs.[4] The prosthesis had to be prepared and delivered within 10 days because the patient was returning to his home in Paris, France. To expedite matters, his dentist, Dr. Corrine Berenholc, had sent the diagnostic models and a bite registration 2 months before his trip to the United States.[5] Splinted wire-reinforced Biotemps (Glidewell) were fabricated with slight reduction (1 mm) before the patient's appointment (Figure 6).

TREATMENT

Teeth Nos. 28 and 29 were prepared for full-coverage crowns. Teeth Nos. 22 and 27 were not prepared until the maxillary teeth (except the upper cuspids) were prepared. This was done to maintain vertical dimension throughout treatment. The centric occlusion was then recorded with Regisil PB (Dentsply/Caulk) because of its extrahard set.

Teeth Nos. 7 through 10 a
were prepared for full-co
crowns with Axis bullet-shap
mond burs. Following carie
tection and removal (Caries De
UltraDent), abutments 7 thro

continued on

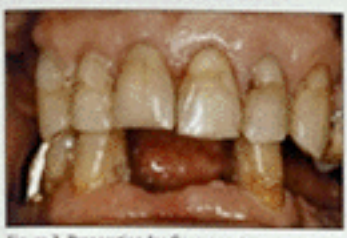

Figure 7. Preparation for Cosmopost.

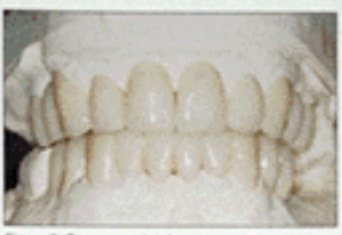

Figure 8. Cosmopost in place.

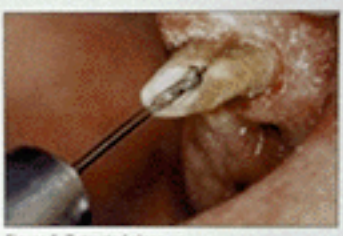

Figure 5. Retracted close-up.

Figure 6. Biotemp bridgework on working models.

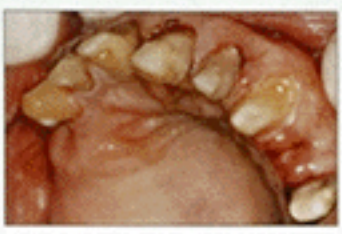

Figure 9. Final maxillary build-up and preparations.

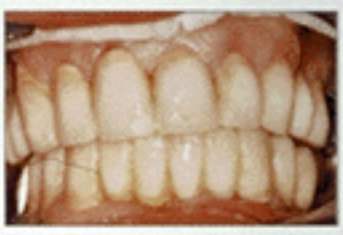

Figure 10. Biotemps in place.

Figure 11. Westbrook laboratory prescription.

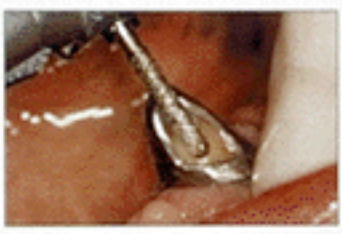

Figure 12. Trim copings in place; abutments prepared for predetermined line of draw.

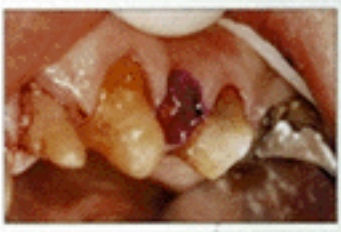

Figure 13. Spot marking for radiosurgery to create realistic gingival emergence for the pontic.

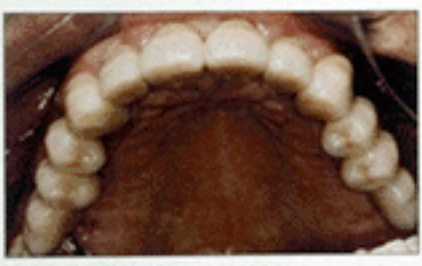

Figure 14. Maxillary arch, posttreatment.

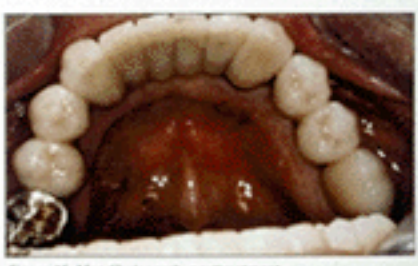

Figure 15. Mandibular arch, posttreatment.

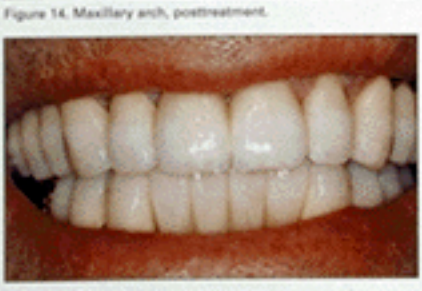

Figure 16. Front close-up, posttreatment.

Figure 17. Full face, posttreatment.