COMMENTARY

INDIRECT IMPLANT-SUPPORTED FIXED PROVISIONAL RESTORATION IN THE ESTHETIC ZONE: FABRICATION TECHNIQUE AND TREATMENT WORKFLOW

Greggory A. Kinzer, DDS, MSD*

The provisional restoration plays an integral part in the process of restoring implants in the esthetic zone. The purpose of which is to provide for the esthetic and functional substitution of the missing teeth prior to implant placement and during integration. Several types of provisional options are available, depending on the specific requirements of the case. These range from a removable appliance to a fixed restoration supported by the teeth or the implant. When restoring implants in the esthetic zone, one of the most important aspects of provisionalization is to preserve and/or shape the soft tissue. In order to manipulate the soft tissue and obtain the correct soft tissue architecture, a fixed implant-supported provisional is necessary. Drs. Shor, Schuler, and Goto did a wonderful job of illustrating the importance of soft tissue management during the treatment process using an implant-supported fixed provisional restoration, as well as outlining the treatment steps and sequence needed for provisional fabrication.

The treatment sequence described in Drs. Shor, Schuler, and Goto's case example utilizes an immediate implant placement protocol. Generally, two treatment options exist in order to preserve the soft tissue architecture following the extraction of the natural teeth and immediate implant placement. One option is the "immediate placement" of an implant-supported provisional restoration at the time of implant placement. Although this technique can be technically demanding, it is an ideal way to support and manage the soft tissue architecture. However, immediate provisional placement runs the risk of overloading the implants if the given occlusal scheme and resultant occlusal forces cannot be managed. In this situation, an alternate technique can be employed to support the soft tissues while minimizing the loading of the implants. The authors utilize the delayed implant loading approach and describe the technique of customizing the healing abutments with composite resin. The delayed implant loading approach combined with customized healing abutments typically affords the same support of the soft tissue that immediate provisionals provide, without the risk of overloading the implants.

The authors did a nice job of outlining the required technical steps for the "indirect" provisional fabrication process. Although the choice of materials can vary, their treatment approach is sound and predictable. The primary advantage of the "indirect" approach to provisional fabrication is that it provides the most controlled environment for the proper construction of the provisional. The wax-up that is completed is not only used to determine the proper external crown contours but, more importantly, it also helps to determine how the soft tissue contours on the model should be adjusted. The most critical step in the entire process is properly adjusting the free gingival margin and subgingival soft tissue contours on the model, as this will directly affect the emergence profile and subgingival contours of the provisional restoration. When the provisional restoration is taken to the mouth, it is this subgingival contour that will affect the soft tissue remodeling. In the treated case, the authors achieved an excellent result with the esthetics of the layered provisionals and the resultant soft tissue architecture (free gingival margin location and papillary heights).

The final aspect of the treatment process, accurately transferring the newly created soft tissue contours to the technician in the final impression, was clearly communicated by the authors. Once implant-supported provisional restorations are removed from the mouth and traditional impression copings are placed, the soft tissues immediately begin to collapse because of lack of support. To overcome this resultant collapse of the soft tissue, customized impression copings were fabricated. The fabrication of a customized impression coping is not time intensive but is critical to the final esthetic outcome, as it allows the final impression to transfer the exact soft tissue architecture that has remodeled around the provisionals.

DOI 10.1111/j.1708-8240.2008.00157.x

In summary, this article showed the treatment process of a case with one of the more difficult esthetic challenges (two adjacent implants in the esthetic zone) to clearly define the importance of the implant-supported provisional restoration and how to effectively manage the soft tissue during treatment. Drs. Shor, Schuler, and Goto provided the needed steps and a sound rationale for the fabrication sequence. All aspects of this case (surgical/restorative/technical) were competently managed, resulting in an exceptional final outcome.

*Affiliate assistant professor, University of Washington School of Dentistry, Seattle, WA