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COMMENTARY

PROSTHETIC DESIGN CONSIDERATIONS FOR ANTERIOR SINGLE-IMPLANT RESTORATIONS

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The authors have outlined an innovative technique modification for a single-tooth implant restoration. This approach is drawn from the understanding that a machined metallic interface of the same metal (titanium) provides for an optimum fit and preload of the abutment screw. With all implant manufacturers making machined titanium abutments for single-tooth use and few manufacturers making ceramic or machined gold abutments, this technique has a practical application. In fact, the first generation of single-tooth abutments produced for the US market was designed for cementation outside the mouth and then intraoral placement and abutment screw retention. The technique outlined in this article is an update of that concept. The current authors do acknowledge that this technique will not be applicable in all instances.

Cemented crowns on implant abutments present clinical challenges, all of which have been outlined nicely in this article. The authors are correct in stating that a cemented technique allows the implant placement to be situated ideally within the confines of the intended tooth replacement when the implant long axis is directed toward the incisal edge or slightly toward the labial aspect. Even an implant with a long axis directed toward the cingulum can be restored with a cemented restoration if the proximal walls are of adequate length. However, of the three possible implant positions, only the latter could be restored with this technique because a lingual screw chamber is a prerequisite. Although this would limit the application of this technique in some practices, it should be placed on the list of available protocols in any practice.

The real advantage of this technique seems to be minimization of the metal abutment collar without concern for the effects of cementation, as these are mitigated by the extraoral approach. This would permit ideal subgingival contours in ceramics and would place less emphasis on an ideal abutment margin preparation relative to the free gingival margin. Ceramic crown contours occasionally need to be modified by the addition of contour. This is not possible with a precontoured metallic abutment.

The modification of the screwdriver will not affect its function or ability to apply torque; therefore, this is not a technique concern. The only possible frustration would be the placement of the screw into the abutment before cementation as this procedure needs to be carefully monitored to prevent cement infiltration beside the screw head. In addition, the seating of the crown-abutment complex should be tried before cementation, especially by inexperienced hands, to evaluate interproximal tooth contacts as a source of interference with complete screw torque.

In summary, this technique should be one of many that complete a repertoire for every restorative dentist performing single-tooth implant restorations.

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