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TIPS FROM OUR READERS

A safe holder for adjusting indirect prostheses: The silicone cube technique

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Figure 1. Patient with provisionally cemented maxillary 3-unit ceramic (zirconia framework, layered veneering) FDP (right central to left lateral incisor) before and after implant placement in the pontic area. A, Initial condition. B, Silicone holder. C, Pontic area and prosthetic margins to be reduced. D, Modified prosthesis replaced temporarily for healing phase.

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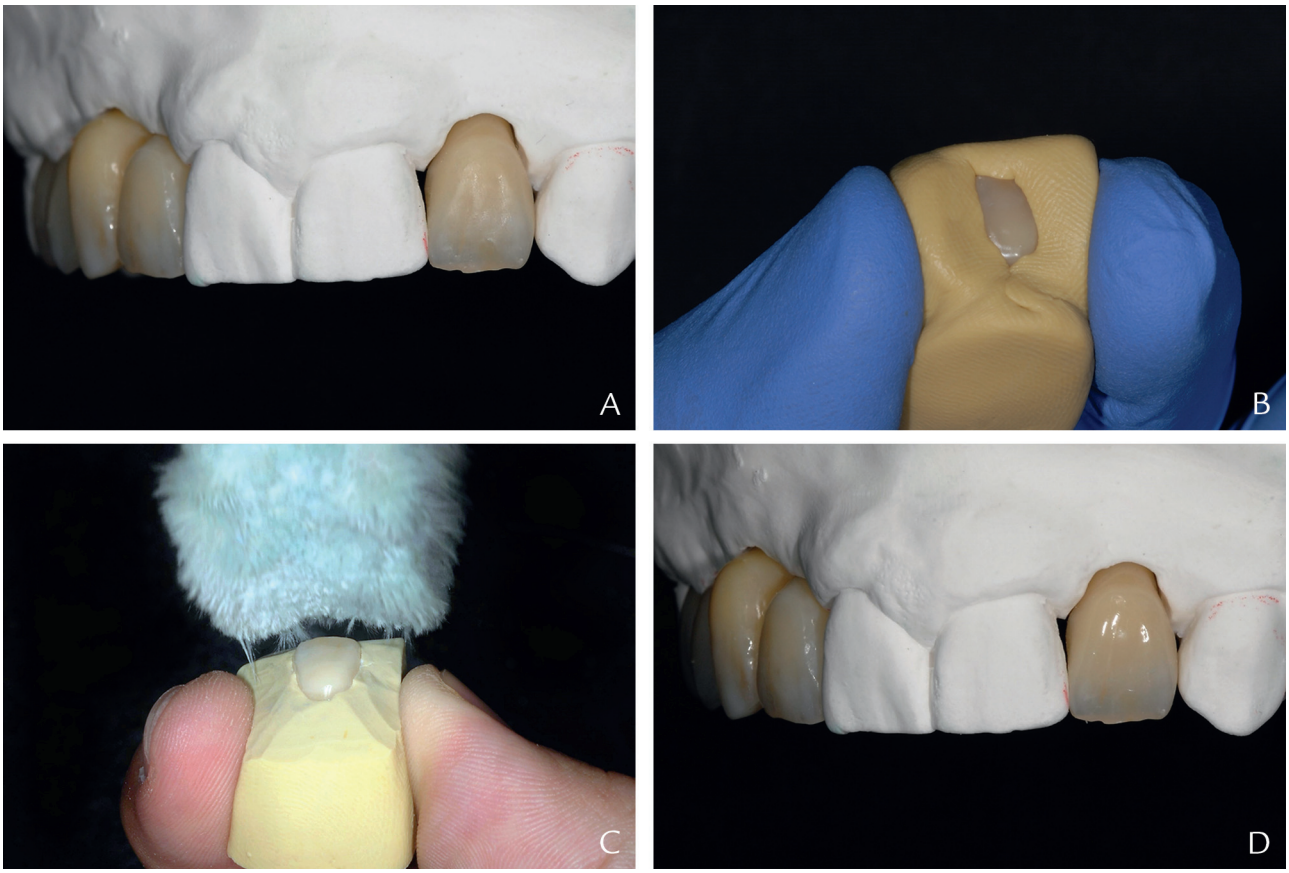

Figure 2. Two implant-retained maxillary interim prosthesis. A, Buccal surface of PMMA (polymethylmetacrylate) interim crown on maxillary left lateral incisor requires polishing. B, Silicone holder. C, Buccal aspect exposed for finishing and polishing. D, Polished interim prosthesis.

Small ceramic and interim restorations may be difficult to hold to adjust or polish, especially when wet. This technique uses polyvinyl siloxane to hold dental restorations securely during extraoral adjustments with rotary instruments.

A temporarily cemented maxillary 3-unit fixed partial denture with a zirconia framework and layered porcelain (Fig. 1A) required removal and adjustment in the course of implant placement in the pontic site. After fabrication of the silicone cube, the pontic area was reduced, and the margins were adjusted after coronally repositioned flap procedures. The modified prosthesis was adjusted[1-7] and temporarily seated immediately after the planned surgical procedures.

The second example is a maxillary PMMA (polymethylmetacrylate) interim prosthesis that lacked a well-polished facial surface (Fig. 2A). A silicone cube holder was fabricated for finishing and polishing this area with pumice and diamond polishing paste.[8]

PROCEDURE

1. Mix the polyvinyl siloxane (Sil-Tech Super; Ivoclar Vivadent AG, President Putty; Coltène) homogeneously according to the manufacturer's instructions; form a cube; and embed the restoration (Fig. 1B).
2. Ensure that the silicone material wraps around the restoration and exposes only the surface to be adjusted.
3. When the material has polymerized, cut and trim the polyvinyl siloxane excess with a scalpel (carbon steel scalpel blade #15; B. Braun Melsungen AG).
4. Upon completion of the adjustments (Figs. 1C, 2C), use the scalpel to gently remove the restoration from the silicone cube if necessary (Figs. 1D, 2D).

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Noteworthy Abstracts of the Current Literature

Analysis of endodontic complications following fixed prosthodontic rehabilitation

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Purpose. The aim of this study was to determine endodontic treatment needs and types of endodontic disease following fixed prosthodontic treatment 24 hours after tooth preparation, 1 week after tooth preparation, 1 month after placement, and 6 months after placement.

Material and methods. Study groups consisted of patients who attended a university dental hospital department of prosthodontics for fixed prosthodontic treatment from January 2011 to December 2013. All teeth were clinically and radiographically evaluated according to American Association of Endodontists evaluation criteria before preparation. Metal-ceramic fixed partial dentures were placed for all patients. A total of 1,633 abutment teeth were prepared with 1,100 pontics in 524 patients (214 female and 310 male). Participant age, sex, and tooth number were recorded. Endodontic treatment follow-up was scheduled for 24 hours after tooth preparation, 1 week after preparation, 1 month after placement, and 6 months after placement, and all teeth were evaluated after placement of FPDs according to a modified criteria.

Results. 2,733 retainers were placed with 624 FPDs. Of the FPDs, 332 (53%) were placed in the posterior and 196 (31.5%) in the anterior region. The remaining 96 FPDs (15.5%) were placed anteroposterior. The abutment/pontic ratio was 1.44:1. The number of retainers per FPD was 4.37. Of 1,633 abutment teeth, 103 were endodontically treated after placement of FPDs. Most observed endodontic disease was symptomatic irreversible pulpitis. There were statistically significant differences in terms of teeth regions ($P<.001$). When follow-up times of 24 hours, 1 week, 1 month, and 6 months were evaluated, there was no statistically significant difference among all teeth groups ($P>.05$).

Conclusions. A total of 2,733 retainers on 624 FPDs were evaluated over 6 months, and the mean endodontic treatment need ratio was 6.3%.