

TIPS FROM OUR READERS

A technique for registering the peri-implant soft-tissue profile with an interim restoration



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Creation of a pleasing peri-implant soft-tissue architecture in an esthetic zone is a challenging task. To develop a predictable gingival architecture during the healing process, the contours of the implant-supported fixed interim restoration requires careful modification.¹ Once an appropriate gingival profile has been achieved, it must be recorded in the definitive impression. Different techniques have been proposed to replicate the peri-implant soft-tissue profile by using a custom impression coping,² by inserting autopolymerizing acrylic resin into the sulcus,^{3,4} and by using an interim restoration transfer protocol.⁵ A custom impression coping technique² requires an additional laboratory step, and placement of acrylic resin into the sulcus may cause thermal and chemical irritation of the soft tissue.^{3,4} Attard and Barzilay⁵ described a transfer (or a closed-tray) impression technique using the interim restorations. The present technique is a modification of their technique⁵ with the pickup of the interim restoration by using the open tray

impression technique. The interim restorations are stabilized with impression coping screws while making the impression, allowing more predictable recording of the gingival architecture.

This technique is less time-consuming as it only requires a change from the interim restoration screws to impression coping screws. This technique can be used to fabricate single- or multiple-unit fixed implant restorations, including complete arch restorations. Limitations of the technique include that it can only be used with an implant system that allows the interchangeability of interim abutment screws and impression coping screws to fix the interim restorations during the impression procedure.

PROCEDURE

The procedure is demonstrated on a patient with a completely edentulous maxillary arch restored with a fixed restoration supported by 7 implants.

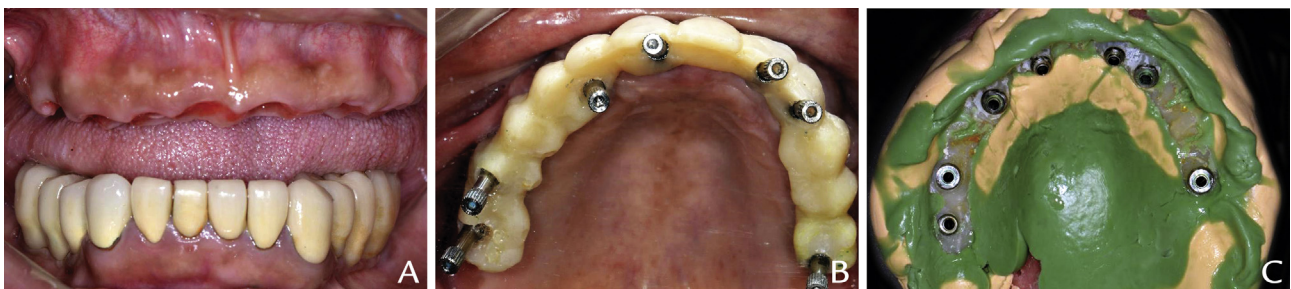


Figure 1. A, Frontal view showing peri-implant soft-tissue profile developed by using interim restoration. B, Impression coping screws in place to secure interim restorations. Note longer impression coping screws. C, Interim restoration picked up in polyvinyl siloxane impression.

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Figure 2. A, Emergence profile recorded in definitive cast. B, Esthetic emergence profile from interim restoration replicated in definitive restoration.

1. Shape the intaglio surface of the interim implant restoration to provide optimal peri-implant soft-tissue architecture to achieve an esthetic emergence profile (Fig. 1A).
2. Identify and open the screw access channels of the screw-retained interim restorations.
3. Remove the interim abutment screws and replace them with the open-tray impression coping screws of the corresponding implant system (BioHorizons) to attach the interim restorations to the implants (Fig. 1B).
4. Make a definitive impression with polyvinyl siloxane (Affinis; Coltène) by using an open tray. Note that the interim restoration has automatically been picked up in the impression (Fig. 1C). Alternatively, a polyether impression material (Impregum; 3M ESPE) can be used.
5. Seat and tighten laboratory analogs of the corresponding implant system and size.
6. Pour a resilient gingival mask liner (Gingifast; Zhermack) around the implant and pour the remaining impression with Type 3 gypsum product (Buff Stone; Whip Mix Corp) to prepare a soft-tissue cast (Fig. 2A).
7. Use this definitive cast to fabricate a suitable definitive implant-supported fixed restoration.

Note that the soft-tissue profile can be reproduced and that a desired esthetic emergence profile can be achieved in the definitive restoration (Fig. 2B).

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