

TIPS FROM OUR READERS

A technique for facilitating open-tray implant impressions



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Conventional implant impressions are still commonly used, particularly for the fabrication of implant-supported complete-arch prostheses.¹⁻⁵ The goal is to obtain an optimal cast with the accurate transfer of the oral structures and the position of implants.⁶ The accuracy of definitive restorations mostly depends on the techniques and materials used during impression making.⁷

Open- and closed-tray impression techniques have been commonly used for implant impressions.⁷⁻⁹ The open-tray impression technique is recommended for the passive incorporation of the impression posts.^{8,9} A tray with openings that correspond to the implant locations is prepared so that the impression post can be unscrewed in the polymerized impression. Despite its advantages, the technique presents difficulties.¹⁰ The screw access hole may not be easily accessible because elastomeric impression materials such as polyvinyl siloxane (PVS) or polyether may flow outside the tray through the impression post openings and cover the screw head during the seating of the tray. In this situation, the clinician may have difficulty locating the covered screw head and will need to act quickly to remove excess impression material.

This report describes a technique for facilitating the open-tray impression procedure by minimizing the coverage of the impression post screw head with impression material during seating of the impression tray. Two different situations are presented: a single implant impression and a multiple implant impression for an edentulous arch. When this technique is used, because the opening for the impression post and its screw head become smaller than the tray opening, excess impression material flowing through the opening is minimized. This makes the screw head accessible to the

clinician when the impression material is polymerized and the tray is ready to be removed from the mouth. This technique can be used with any implant system with an open-tray impression post, any tray material that would allow the occlusal indicator wax to adhere, and any impression material indicated for the definitive impression of implants.¹¹

TECHNIQUE

1. Screw the open-tray impression post on the implant and evaluate the custom tray in the mouth to make sure that it seats passively with a proper amount of opening around the impression coping when it projects through the holes in the tray (Fig. 1).
2. Remove the tray from the mouth and apply an occlusal indicator wax sheet (Kerr Dental; Kerr

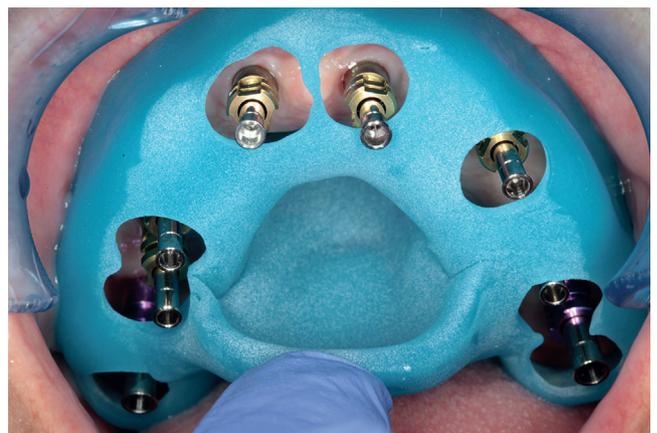


Figure 1. Tray seated with impression posts projecting through holes (Printed with kind permission of Quintessence Publishing).¹¹

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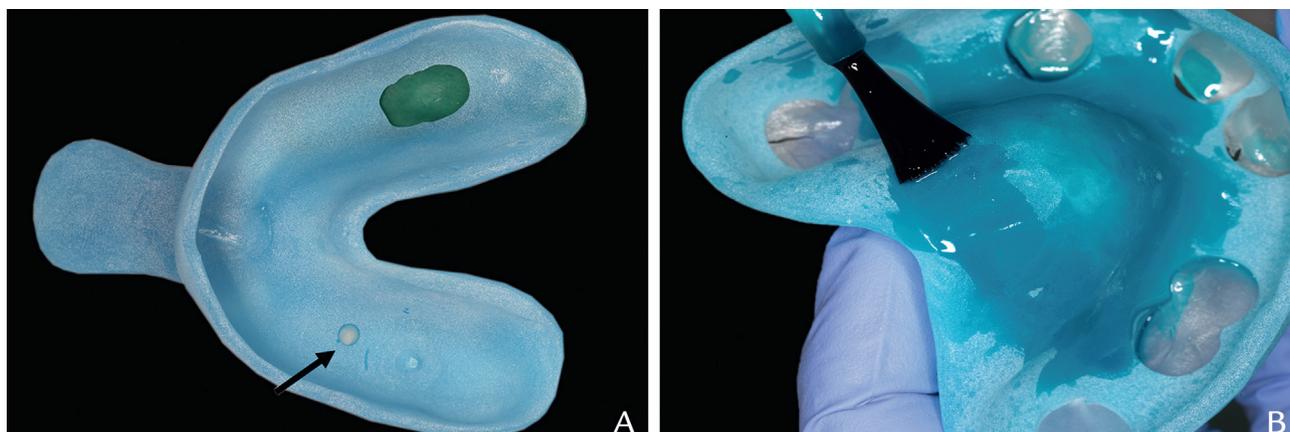


Figure 2. Occlusal indicator wax applied to custom tray A, For single implant crown. Arrow points to added composite resin cone to act as additional vertical stop. B, For multiple unit situation. Tray coated with adhesive before impression making (Printed with kind permission of Quintessence Publishing).¹¹

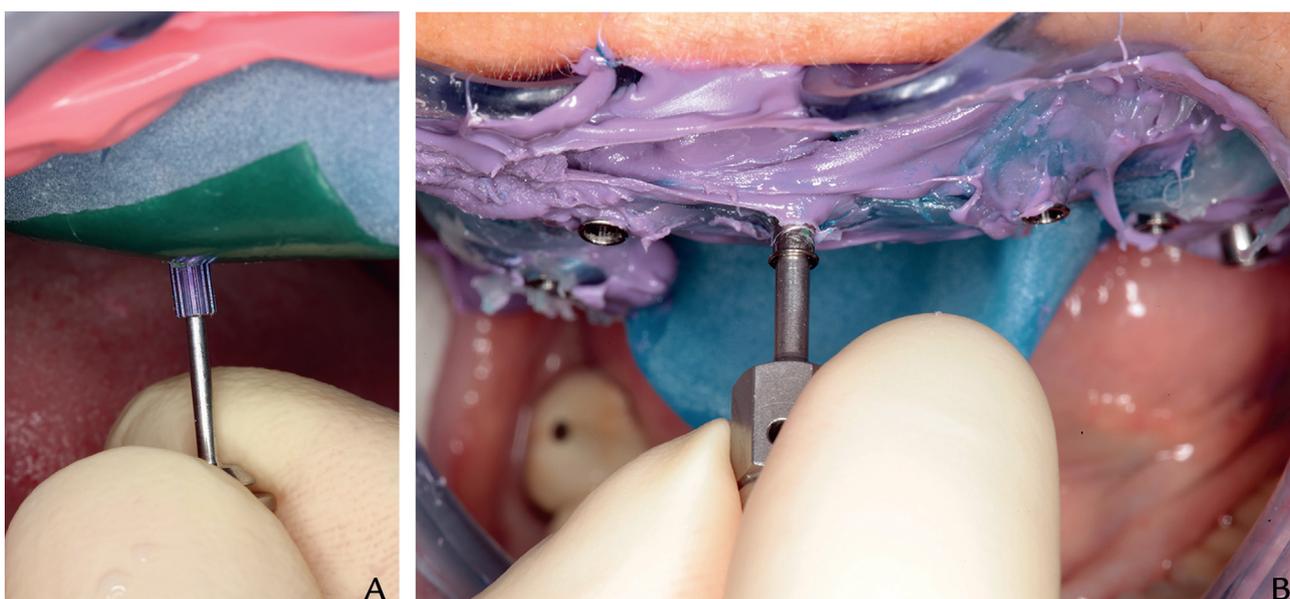


Figure 3. Impression post screw accessible. A, No excess impression material in single-unit situation. B, Minimal excess impression material in multiple unit situation.

Corp) where the tray opening is to cover the opening completely. Be sure that the wax sticks to the tray so that it will remain intact and stable during the impression making. In a situation when vertical stops for tray are inadequate, apply cone-shaped stops with composite resin where appropriate. This ensures sufficient material thickness in the occlusal area (Fig. 2).

3. Inject a light-bodied impression material around the impression post while the tray is being filled with the heavy-bodied impression material.
4. Place the impression tray in the mouth, making sure that it is positioned properly to correspond to the implant position with the tray opening. When the

tray is being accurately positioned in the mouth, observe the impression post screw head penetrating through the occlusal indicator wax. Little to no impression material will flow through the hole and around the screw heads, allowing easy access to the screw heads.

5. Make sure the tray remains stable and in place until the impression material polymerizes. Once the impression material polymerizes, unscrew the screws by using a screwdriver and remove the tray from the mouth (Figs. 3, 4).
6. Attach the impression post to the implant analogs, apply a silicone gingiva replicating material around the analog, and pour the impression in stone.

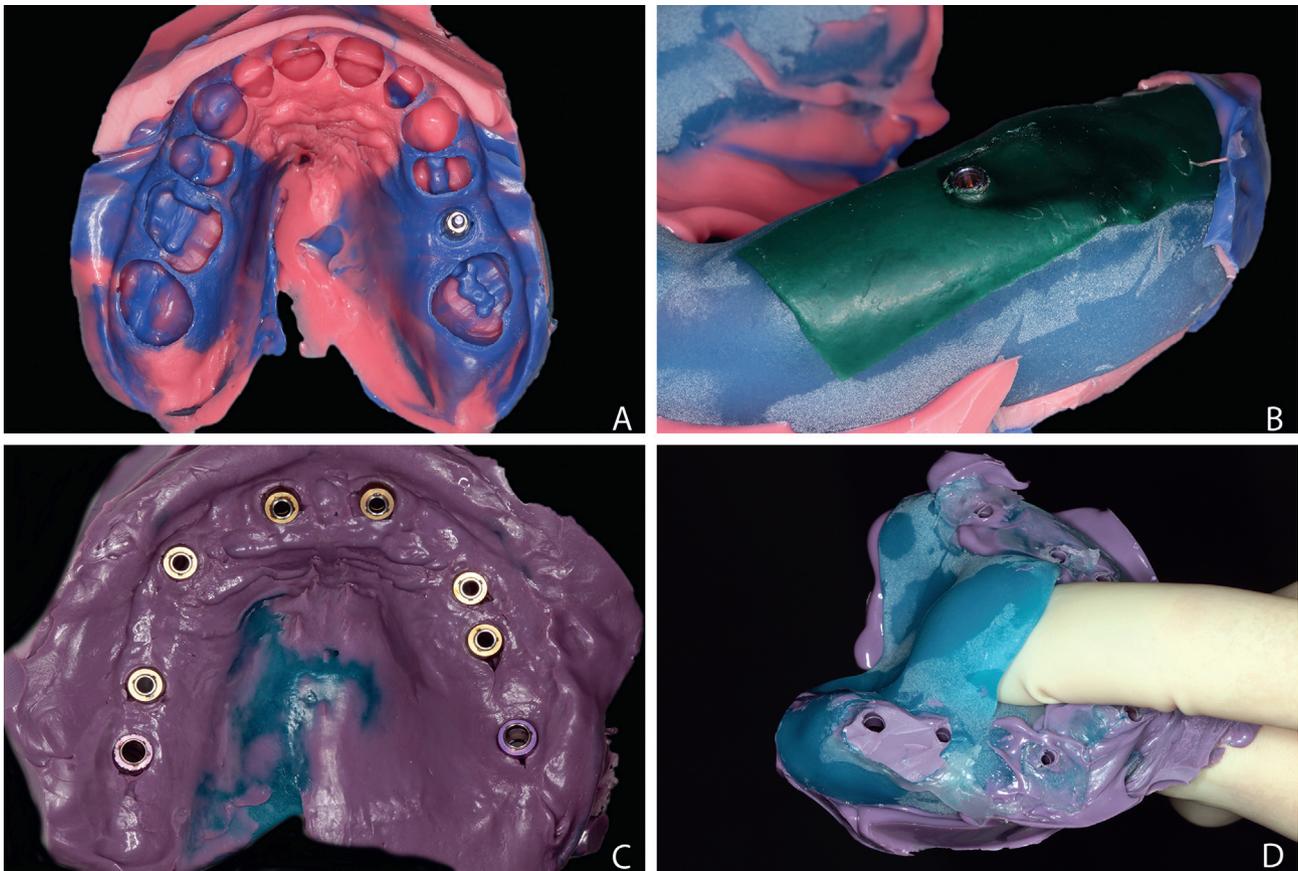


Figure 4. Impression posts incorporated in impression; A, B, For single implant-supported crown. C, D, For multiple implants (Printed with kind permission of Quintessence Publishing).¹¹

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<https://doi.org/10.1016/j.prosdent.2019.06.017>