THE JOURNAL OF PROSTHETIC DENTISTRY

TIPS FROM OUR READERS

An extended guide pin for a direct implant impression

Ju-Hyoung Lee, DDS[a] and In-Sook Park, DDS, PhD[b]

A precise implant impression is essential for the passive fit of an implant superstructure.[1-3] Although digital impressions are becoming more popular,[4,5] conventional impression techniques are still frequently used. A direct (pick-up) open tray impression technique uses a guide pin.[6] When an implant is deeply placed, the guide pin may not extend through the hole of the open tray.[7] Therefore, wiping off excessive impression materials through the hole with a gloved finger may be necessary.[8] However, this is messy, and the gloves may inhibit the polymerization of polyvinyl siloxane materials.[8,9] Moreover, once an impression material polymerizes, accessing the guide pin may become difficult.[7] To solve this problem, a cotton swab extension slightly larger than a guide pin's screw hole has been suggested.[7] However, the adjustment of the swab tip with a surgical blade is complicated. This article presents a time-saving technique to extend the guide pin with an endodontic material that is plastic, compact, and solid.[10]

PROCEDURE

1. Make the 1.4-mm tip diameter of a standardized gutta percha cone (Dia-ProISO. 06 40 Plus; Diadent) with a gutta percha cone gauge (gauge for gutta-percha-points; Dentsply Maillefer) and a surgical blade (no. 11; Paragon) (Fig. 1).
2. Insert the sectioned gutta percha cone into the guide pin's screw hole. If the gutta percha cone is

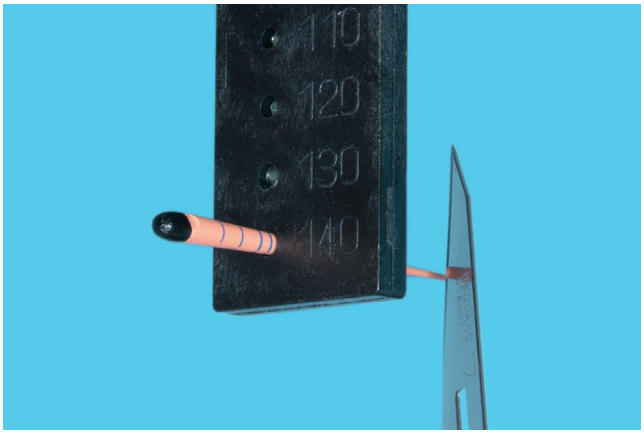

Figure 1. Gutta percha cone inserted into a cone gauge.

Figure 2. Extended guide pin with gutta percha.

[a]Assistant Professor, Department of Dentistry, Catholic University of Daegu School of Medicine, Daegu, South Korea; and Graduate student, Department of Prosthodontics, School of Dentistry, Kyungpook National University, Daegu, South Korea.
[b]Assistant Professor, Department of Dentistry, Catholic University of Daegu School of Medicine, Daegu, South Korea.

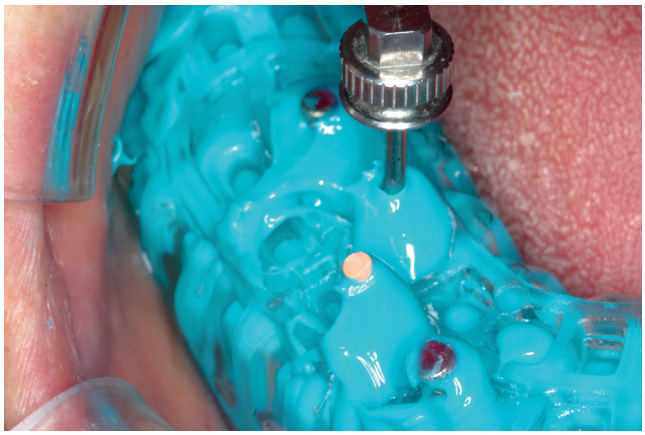

Figure 3. Easy access to guide pin with screwdriver for unscrewing.

not tightly engaged in the screw hole, section the cone slightly to increase its diameter. Apply warm gutta percha to the lateral surface of the gutta percha cone with a heated gutta percha delivery system (Obtura III MAX; Obtura Spartan). During the semirigid stage, mold this mass to fabricate the gutta percha extension larger than the guide pin for easy removal of the guide pin from the definitive impression (Fig. 2).

3. Secure an impression coping into the implant. Insert the extension into the guide pin and make the impression (Fig. 3).[6]

REFERENCES

1. Jemt T. In vivo measurements of precision of fit involving implant-supported prostheses in the edentulous jaw. Int J Oral Maxillofac Implants 1996;11:151-8.
2. Lee H, So JS, Hochstedler JL, Ercoli C. The accuracy of implant impression: a systematic review. J Prosthet Dent 2008;100:285-91.
3. Kim JH, Kim KR, Kim S. Critical appraisal of implant impression accuracies: a systematic review. J Prosthet Dent 2015;114:185-92.
4. Lin WS, Harris BT, Morton D. The use of a scannable impression coping and digital impression technique to fabricate a customized anatomic abutment and zirconia restoration in the esthetic zone. J Prosthet Dent 2013;109:187-91.
5. Brandt J, Lauer HC, Peter T, Brandt S. Digital process for an implant-supported fixed dental prosthesis: a clinical report. J Prosthet Dent 2015;114:469-73.
6. Rosenstiel SF, Land MF, Fujimoto J. Contemporary fixed prosthodontics. 5th ed. St. Louis: Elsevier; 2016. p. 342-4.
7. Jung SR, Bashutski JD. Method to simplify a direct implant impression using an extended guide pin. J Prosthet Dent 2010;104:137-8.
8. Windhorn RJ, Gunnell TR. A simple open-tray implant impression technique. J Prosthet Dent 2006;96:220-1.
9. Peregrina A, Land MF, Feil P, Price C. Effect of two types of latex gloves and surfactants on polymerization inhibition of three polyvinyl siloxane impression materials. J Prosthet Dent 2003;90:289-92.
10. Hargreaves KM, Berman LH. Cohen's pathways of the pulp. 11th ed. St. Louis: Elsevier; 2016. p. 297-311.

Corresponding author:
Dr Ju-Hyoung Lee
Catholic University of Daegu School of Medicine
3056-6 Daemyung-4-Dong
Namgu, Daegu
SOUTH KOREA
Email: jus2u@cu.ac.kr

Acknowledgments
The authors thank Hye-Jung Yun for technical assistance.