An Alternative Impression Technique for Implant-Retained Overdentures With Locator Attachments

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Locator attachments are commonly used for mandibular implant-retained overdentures. This case report presents an alternative mandibular overdenture impression technique that is pressure free.

Key Words: impression technique, implant-retained overdenture

INTRODUCTION

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verdentures supported by 2 implants are reported as being highly successful in the edentulous mandible. It is essential that overdenture attachments have adequate retentive properties to enhance the stability of the prosthesis, while allowing the patient to easily place and remove the prosthesis. It has been stated that for implant-retained overdentures, the resilience difference between the mucosa and implant must be considered during selection of the attachment system. Additionally, the difference in resilience should be considered for the impression of implant-tissue-retained overdentures. Three types of impression techniques have been described in the literature for implant-retained overdentures. These techniques are open- or closed-tray and functional impression techniques. All of these techniques require finger pressure; however, it is possible to make a pressure-free impression for implant-retained overdentures with locator attachments by utilizing cap attachments. This article describes a pressure-free impression technique to fabricate implant-retained mandibular overdenture with locator attachments.

PROCEDURE

1. Replace healing caps (PerioType-Dental Implant Systems; Clinical House Dental GmbH, Bochum, Germany) with locator attachments (PerioType-Dental Implant Systems) (Figure 1a). Place impression transfer caps (PerioType-Dental Implant Systems) on the locator attachments (Figure 1b). Utilizing a stock tray, take a preliminary mandibular arch impression with irreversible hydrocolloid (CA37; Cavex Holland BV, Haarlem, The Netherlands). Place locator analogs (PerioType-Dental Implant Systems) in the impression transfer caps (Figure 1c).
2. Pour the mandibular cast with dental stone (Moldano; Heraeus Kulzer GmbH, Hanau, Germany). Once the impression has set and been separated, place cap attachments (PerioType-Dental Implant Systems) on the locator analogs. Place 1 mm thick dental wax (Heraeus Kulzer) on the model. Prepare a mandibular custom tray that incorporates the cap attachments. The attachments can be secured with self-curing acrylic resin (Meliodent; Heraeus Kulzer) (Figure 1d). Place custom tray on the locator attachments in the mouth and check the relationship with the soft tissue.

3. Take the impression of the alveolar mucosa with a polyether impression material (Impregum; 3M Espe, Monrovia, Calif) (Figure 2a) by placing the custom tray on the locator attachments. Upon removal of the impression, place locator analogs (PerioType-Dental Implant Systems) into cap attachments (Figure 2b).

4. Pour the impression with type IV stone (Begostone; Bego Dental, Bremen, Germany).

**DISCUSSION**

The main advantage of this technique may provide the accurate relation of the implant components and the supporting tissues without finger pressure. After delivery of the prosthesis to the patient, chair time decreases for postinsertion adjustments. However, it is technique sensitive, and the clinician must assure the accurate placement of the locator attachments on the implant abutments during the impression process. Experimental studies examining the accuracy of this technique would be beneficial.
LOCATOR ATTACHMENTS ARE COMMONLY USED FOR IMPLANT-RETAINED OVERTENTURES. THIS ARTICLE DESCRIBES A PRESSURE-FREE IMPRESSION TECHNIQUE TO FABRICATE AN IMPLANT-RETAINED MANDIBLE OVERTENTURE WITH LOCATOR ATTACHMENTS THAT MAY RESULT IN FEWER POSTINSERTION ADJUSTMENTS.

REFERENCES


Figure 2. (a) Definitive impression of the mandible. (b) Definitive impression with implant analogs in place.

SUMMARY

Locator attachments are commonly used for implant-retained overdentures. This article describes a pressure-free impression technique to fabricate an implant-retained mandibular overdenture with locator attachments that may result in fewer postinsertion adjustments.