Simple(r) Soft Tissue Masque for Individual Fixed Restorations

Philip Leong Biow Tan, BDSc;[1] *and Gary Alan Ruder, CDT*[2]

This article describes a simplified technique for creating a soft tissue masque to aid in shaping the gingival contours of fixed restorations. The additional clinical visit that has been previously described is circumvented, and only one master cast is required.

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THE HARMONY of a restoration with the surrounding soft tissues is important. Proper emergence profile and contact point location are paramount to the maintenance of periodontal health and esthetic appearance. Soft tissue contours, however, are not well captured in a final impression for fixed prosthodontics due to the need for gingival retraction. The dental technician fabricating the restorations is thus relegated to arbitrarily creating the restoration's gingival shape.

Various methods have been described to record soft tissue contours for use as a laboratory guide to establishing the contours of a restoration.[1-7] By far, the most popular involves a pickup impression of the restoration copings and pouring a second working cast.[1-5] This technique's shortcoming is the need for an additional clinical appointment to capture the soft tissue morphology and the substantial number of extra laboratory steps. This may be unobjectionable when the procedure can be combined with another clinical step, such as fixed partial denture (FPD) framework try-in; however, when individual anterior restorations are being fabricated, the extra clinical visit is inconvenient and an additional expense for both the dentist and patient. Merely pouring a second cast from the final impression in a rigid polyvinylsiloxane (PVS) material and using it as a soft tissue guide has been suggested.[6,7] The problem with this approach is that the gingival tissue has been retracted, and the cast does not correspond accurately to the patient's intra-oral situation.

The objective of this article is to describe a clinically convenient technique to record undistorted soft tissue contours for use with fabrication of individual fixed restorations.

Technique

Lab Steps

1. Make one full arch custom tray (Triad Tru-Tray; Caulk Div, Dentsply Int., York, PA) that will capture the prepared teeth and 5 mm of facial soft tissue. Only extend the custom tray to capture 2 mm of palatal soft tissue.
2. Make a second full arch custom tray (Triad Tru-Tray) for final impressions of the prepared teeth.

Clinical Steps

3. Prepare the teeth, but leave the restorative margin at the gingival level and make an impression with the first custom tray with unretracted soft tissue using light body polyvinylsiloxane (PVS) (Aquasil LV; Caulk Div, Dentsply Int., York, PA) around the teeth and gingiva with heavy body impression material (Aquasil Ultra Heavy) in the tray (Fig 1). Do *not* perform any gingival retraction before

[1]*Department of Prosthodontics, College of Dentistry, University of Iowa, Iowa City.*

[2]*Riverview Dental Studio, Williamsburg, IA.*

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Correspondence to: Dr. Philip Tan, Department of Prosthodontics, College of Dentistry, University of Iowa, Iowa City, IA 52242. E-mail: ptanau@yahoo.com.au

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Figure 1. Soft tissue impression.

this point, as is common practice with a 2-cord-retraction technique.[8]

4. Finalize the margin location and make a final impression of the prepared teeth using retraction cord (Ultra-pak; Ultradent, South Jordan, UT) to expose unprepared tooth structure with the second custom tray (Fig 2).

Lab Steps

5. Pour the master cast from the final impression and fabricate removable dies (Pindex system; Coltene Whaledent, Cuyahoga Falls, OH). Mount the master cast and then trim the dies. This will create a space around each die for the soft tissue masque.
6. Trim the soft tissue impression so that 5 mm of impression material remains on the facial of the prepared teeth, and 3 mm remains on the palatal aspect of the soft tissue. Also trim the unprepared teeth so that only the occlusal half of the tooth remains (Fig 3).

Figure 2. Final impression.

Figure 3. Trimmed impression.

7. Verify that the trimmed soft tissue impression fits over the working model. Also ensure that there is adequate access around the dies from the palatal aspect of the impression to inject the masque material.
8. Apply petroleum jelly (Vaseline petroleum jelly; Unilever United States, Inc., Englewood Cliffs, NJ) to areas of the impression that will contact the moulage, to prevent the 2 materials from sticking.
9. Apply a lubricant to the entire die (Lubritex No. 12 die lubricant; Whipmix Corp., Louisville, KY).
10. Re-insert the master cast into the impression and syringe the soft tissue moulage (Soft Tissue Moulage; KerrLab, Orange, CA) into the space between the dies and the impression, starting at one end and working across the arch (Fig 4). Note: the posterior teeth have been removed for clearer illustration of the technique only!

Figure 4. Injecting soft tissue moulage.

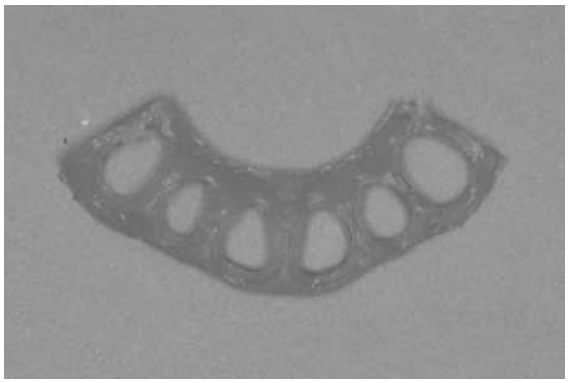

Figure 5. Trimmed masque.

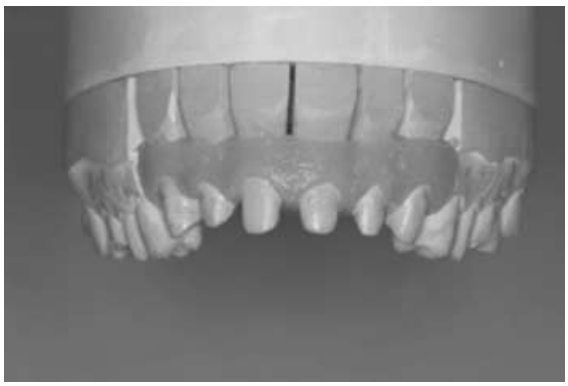

Figure 6. Masque in place.

Figure 7. Final restorations fabricated.

Figure 8. Final restorations delivered.

11. After the moulage has set, separate and verify that the moulage fully penetrated around the cervical aspect of the dies and there are no voids present.
12. Remove the soft tissue masque and trim the flash from around the teeth with a pair of small scissors (Fig 5). This is important to allow full seating of the restorations. If necessary, the palatal third of the masque can also be removed. Take care to preserve the height of the gingival papillae.
13. Reseat the soft tissue masque and the unprepared teeth (Fig 6).
14. Fabricate the definitive restorations (Figs 7 and 8).

Summary

This article describes a technique for creating a soft tissue masque for a cast with removable dies. It is done without an additional clinical visit, thus saving time and expense. It also circumvents using soft tissue that has been distorted by retraction techniques, thereby increasing the accuracy.

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