were allowed to autopolymerize. The first 2 research hypotheses were validated. However, studies evaluating the mechanical properties of dual-curing restorative materials have long been advocated for use in dentistry, and a resin denture base that causes discomfort should not be used.

Pressure-indicating media have more diverse applications than merely the identification of areas on the denture surface. Various luting composite resins.25 The relative hardness of composite resins has been proposed as a means of determining the effectiveness of polymerization when comparing values of a test group to those of a control group known to have been maximally polymerized. It is also suggested that a ratio of 90% would be acceptable for a clinical situation.10 If such an assumption was extrapolated to the DC analysis of the current study, the autopolymerizing modes of products exhibiting PCA/D values of approximately 90% might provide RLA layers acceptable for a clinical situation.10 If we assume that RLAs demonstrating approximately 90% might provide RLA layers acceptable for a clinical situation.10 If we assume that RLAs demonstrating properties of resin cements with different acid-base characteristics of resin cements.19 Anusavice KJ, Hojjatie B. Tensile stress in polyethylene: Part II. Identifying the mechanical properties of dual-cured luting composites.

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CONCLUSIONS

Within the limitations of the cur- rent study, it was concluded that the dual polymerization mode of products tested generated higher DC values than the autopolymerizing mode. However, Rmax and PCA0 varied widely among products. The DC of all products at 10 minutes after initial material mixing was higher than that at 5 minutes, only in the autopolymerizing mode. Thus, the first 2 research hypotheses were validated, while the third hypothesis was only validated when the resin cements were allowed to autopolymerize.
sure on the palatal portion of a maxillary denture, as functional loading does not occur in this location. 9

9. Exert pressure perpendicular to the occlusal plane unless evaluating the pressure pattern when the denture is moving. 8 Do not move or tip the denture or allow it to shift when assessing normal denture base fit. 5

10. To evaluate flange extensions, stabilize the denture over the occlusal surfaces of the teeth to prevent it from moving while the patient makes functional movements, 3, 10 or while the clinician manipulates the cheeks or lips, 5 to detect overextensions in areas of the moveable mucosa and frenum, which typically do not displace media as easily as firmer tissues. 3

11. To interpret nonsetting pastes, examine the denture for 3 distinct patterns in the media: areas where streaks remain, representing areas where there has been acceptable contact; and areas without paste, which typically do not displace media (Fig. 4). Areas of excess pressure will appear as uncovered, or more lightly covered, or too much (lower right) can make interpretation more difficult.

12. For polymerizing-type pastes, use media of different thicknesses 7 or viscosities to identify problem areas that might not be identified by another media (Fig. 4).

13. Use caution when interpreting lack of paste surrounding tissue undercuts (Fig. 5). 9, 11 Note that when the denture moves over an undercut, paste will normally be removed from the denture. 9, 11, 12 Adjust the undercut area only when there are signs or symptoms of excess pressure or tissue impingement. Similarly, expect slightly more pressure on primary bearing areas and do not adjust these areas unnecessarily. 9, 11

14. Note that commonly adjusted areas of complete dentures include the incisive papilla, 7 malar process of the zygoma, 8, 9, 11 median palatal raphe, 13 posterior palatal seal area, 9 hamular notch 7 (Fig. 6), pterygomandibular raphe, mylohyoid ridge, 8, 9, 12 border of the retromylohyoid space, 7 distobuccal border of the maxillary 8, 9 and mandibular 8, 9, 12, 13 dentures, bony prominences 7, 14 or spicules, mental foramina, 7 buccal shelves, 7 and frenal attachments. 7

15. Use pressure-indicating media to detect and adjust other areas on the oral, rather than the intaglio, surface of a prosthesis. Note that functional impingements of the coronoid process against the distobuccal surface of the denture 5, 16 (Fig. 7), bulky buccal contours 7 (Fig. 8), and teeth placed too far buccally into the vestibule (Fig. 8) can be identified using pressure-indicating media. 7

16. Diagnose speech problems, when possible, with palatograms, using paste and spray-type pressure-indicating media to diagnose tongue contact areas on the denture palate. 8, 15 Instruct the patient to repeat problematic sounds with the media covering the palate. Note that different sounds result in different contact patterns 8, 15 (Fig. 9), which can be modified by selective removal from or additions to the palatal contour. Note that the registration of the tongue contact area on the palate using paste-type media may sometimes require numerous repetitions of phonetic phrases before the registrations are easy to interpret.

17. After identifying areas requiring modification, adjust the denture with an acrylic bur of appropriate size and shape (H79E, H351E, H261E, H251E; Brasseler USA, Savannah, GA). After adjustment, reapply media to ensure that the adjustment has been effective or to determine if other areas require modification. 8

18. For cream-type media, use an air syringe to blow off as much of the adjustment debris as possible, then wipe away any remaining debris in the cream, prior to reapplying paste with streaks.
Coat denture with enough paste so base is primarily color of medium, with streaks in paste as on left. Too little (upper right) or too much (lower right) can make interpretation more difficult. Use of indicating medium for adjustment of hamular raphe, mental foramina, buccal shelves, and frenal attachments.

To assess normal denture base fit. Do not move or tip the denture or allow it to shift when assessing normal denture base fit.

To evaluate flange extensions, stabilize the denture over the occlusal surfaces of the teeth to prevent it from moving while the patient makes functional movements, or while the clinician manipulates the cheeks or lips, to detect overextensions in areas of the moveable mucosa and frena, which typically do not displace media as easily as firmer tissues.

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Use pressure-indicating media to detect and adjust other areas on the oral, rather than the intaglio, surface of a prosthesis. Note that functional impingements of the coronoid process against the distobuccal surface of the denture (Fig. 7), bulky buccal contours (Fig. 8), and teeth placed too far buccally into the vestibule (Fig. 8) can be identified using pressure-indicating media.

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For cream-type media, use an air syringe to blow off as much of the adjustment debris as possible, then wipe away any remaining debris in the cream, prior to reapplying paste with streaks.

Use indicating medium on nonbearing surfaces of dentures to disclose problems such as impingement by coronoid process in lateral excursions. Interferences can cause both pain and loosening of dentures.
nies a pressure spot, do not ask the patient if the adjustment has made a problem “better,” as the most likely response will be “yes.” Rather, ask an un-biased question, such as, “How does that feel?” Then, if the patient states that the problem feels “better,” ask the patient to rate the improvement in terms of a percentage. Note that the patient should rate the improvement in comfort at least 100% when the adjustment is complete, and, if the patient does not, further adjustment is most likely warranted.

**SUMMARY**

Use of an indicating medium is one of several strategies that clinicians can employ for improving diagnosis and correction of denture-related problems. Denture adjustments are more accurate and effective when made using an indicating medium. The authors recommend that the use of pressure-indicating media for adjusting dentures should become routine.

**REFERENCES**


**Noteworthy Abstracts of the Current Literature**

### Single-tooth replacement in the anterior maxilla by means of immediate implantation and provisionalization: A review


**Objectives:** The objective of this study was to assess to what extent the outcome of immediate implantation and provisionalization for replacing single maxillary teeth in the esthetic zone is favorable and predictable from biologic and esthetic points of view.

**Material and Methods:** An electronic search (MEDLINE and Cochrane Oral Health Group Specialized Trials Register) and a manual search were performed to detect studies concerning maxillary single-tooth replacements by means of dental implants immediately placed into fresh extraction sockets and provisionalized within the first 24 hours. Only full-text reports on clinical studies published in English up to June 2006 were included. Case reports and reviews on the topic of interest were excluded.

**Results:** Eleven studies were selected. Based on a qualitative data analysis, implant survival and even management of papilla levels seem predictable following immediate implantation and provisionalization. However, maintaining the midfacial gingival margin may be more problematic, since postextraction bone remodeling and therefore marginal gingival changes will occur irrespective of the timing of the placement of the implant. The long-term impact of this remodeling is currently unclear and needs to be elucidated in future research.

**Conclusion:** The clinician is recommended to be reserved when considering immediate implant placement and provisionalization for replacing single maxillary teeth in the anterior zone. At the very least, a number of guidelines and prerequisites need to be taken into consideration.

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**Looney and Knechtel**
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**SUMMARY**

Use of an indicating medium is one of several strategies that clinicians can employ for improving diagnosis and correction of denture-related problems. Denture adjustments are more accurate and effective when made using an indicating medium. The authors recommend that the use of pressure-indicating media for adjusting dentures should become routine.

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