tween the inorganic fillers and the organic matrix.[4] Although higher opacity has been measured for Empress 2 than for the feldspathic porcelain Vitadur Alpha,[5] a difference in RDB values was not observed in this investigation.

Conclusion

The dual-cured system resulted in lower RDB compared to the light mode. Photopolymerization of the resin cement through ceramic or resin composite blocks negatively affected the curing efficiency, regardless of the curing mode. The resin composite Sinfony gave higher RDB than the ceramic materials Empress 2 and Vitadur Alpha.

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Literature Abstract

A prospective clinical study of bone augmentation techniques at immediate implants

The efficacy of combinations of membranes and autogenous bone grafts at immediate implants were compared in this prospective study. Sixty-two consecutively treated patients (29 males, 33 females) each received an immediate implant for a single tooth replacement at a maxillary anterior or premolar site. Dimensions of the peri-implant defect at the implant collar were measured as follows: vertical defect height (VDH, measured from the most apical extent of the defect to the coronal aspect of the implant collar), horizontal defect depth (HDD, measured bucco lingually from the most buccal extent of the implant collar to the labial bone crest) and horizontal defect width (HDW, measured mesio-distally at the most labial extent of the implant collar). Each implant randomly received 1 of 5 augmentation treatments and were submerged with connective tissue grafts: Group 1 (n = 12), expanded polytetrafluoroethylene membrane only; Group 2 (n = 11), resorbable polylactide/polyglycolide copolymer membrane only; Group 3 (n = 13), resorbable membrane and autogenous bone graft; Group 4 (n = 14), autogenous bone graft only; and Group 5 (n = 12), no membrane and no bone graft control. Wound closure was achieved by the use of connective grafts harvested from the palate. At re-entry after 6 months, all groups showed significant reduction in VDH, HDD, and HDW. Comparisons between groups showed no significant differences for VDH (mean 75.4%) and HDD (mean 77%) reduction. Significant differences were observed between groups for HDW reduction (range, 34.1% to 67.3%), with membrane-treated Groups 1, 2, and 3 showing the greatest reduction. In the presence of dehiscence defects of the labial plate, HDW reduction of 66.6% was achieved with membrane use compared with 37.7% without membranes. Over 50% more labial plate resorption occurred in the presence of a dehiscence defect irrespective of the augmentation treatment used. The results indicate that VDH and HDD reduction at defects adjacent to immediate implants may be achieved without the use of membranes and/or bone grafts. The authors concluded that where the labial plate is damaged, significant resorption of the labial plate occurs irrespective of membrane and/or bone graft use and may have negative esthetic implications. In these situations, the use of barrier membrane and bone grafts or substitutes with slower resorption rates merits further investigations.

Chen ST, Darby IB, Adams GG, Reynolds EC. *Clin Oral Implants Res* 2005;16:176–184. **References:** 53. **Reprints:** Dr Stephen Chen c/o Ms K Fletcher' Centre for Oral Health Science' School of Dental Science, The University of Melbourne, 711 Elizabeth Street, Melbourne, Vic 3000, Australia. Fax: +61 3 9341 2036. E-mail: schen@mira.net—*Tee-Khin Neo, Singapore*