



CLINICIAN'S TIP

Cementing Zirconia Crowns

By Paul Favela, DDS, Bowler, WI

Over the past few years, I have almost exclusively been using full contour zirconia crowns fabricated by D&S Dental Laboratory. Our clinic has not had any issues with retention, and I thought I'd share our experiences and procedure steps.



The crown cementation procedure generally starts with the assistant removing the temp crown. If anesthetic is not needed for the appointment, the assistant will pumice the preparation with a prophyl cup to thoroughly remove any remaining temporary cement. I, the dentist, will then fit the crown and verify esthetics with the patient. If any adjustments are necessary, they are made using fine diamond burs under air-water spray with a light touch in order to avoid overheating the material. Any adjustments made are polished with Dialite ZR polishing cups.

Prior to cementation, the crown is thoroughly rinsed and dried. Ivoclean, a phosphate scavenger and crown cleaner, is then applied to the intaglio surface of the crown for 30 seconds. The crown is again rinsed and dried. The prep is then isolated with cotton rolls. I have exclusively cemented zirconia crowns with RMGI cement, Fuji Plus. (On a side note, I have recently been informed that Fuji Plus is the single-dose version of Fuji Cem II.) The prep is again rinsed and dried. The prep is thoroughly coated in Fuji Tooth Conditioner for 30 seconds. The prep is rinsed and thoroughly dried. The Fuji Plus capsule is mixed and the initial portion of mixed cement is bled from the capsule. The assistant fills the crown about three-quarters full and uses the tip of the dispenser to pull the cement over the margins of the crown.

The crown is seated and held in position using strong thumb pressure by the dentist. One minute and fifteen seconds after mixing, the excess cement can be removed from around the tooth while maintaining strong thumb pressure on the crown. After the material has fully set, the tooth is cleaned of remaining excess cement and rechecked for proper occlusion.

While I have been extremely satisfied by the fit of zirconia crowns fabricated by D&S, it is important to remember that retention is strongly influenced by the shape of the preparation, proper isolation and cementation technique. Proper technique combined with effective communication with your lab will naturally lead to increased quality of care, increased patient satisfaction and decreased chair time.