

3MSM Health Care Academy

Anterior challenge: obtain high aesthetics with two different restoration materials and cements.

by Dr Carlos Eduardo Sabrosa, DDS, MSD, DScD, Brazil.

The continuous evolution of restorative materials has inevitably created a need for an expanded range of different cements. This has also resulted in an increased level of confusion about what cement may be the best choice to use. Whilst many dentists may have become loyal to one cement and use it for numerous procedures/indications, there is now, more than ever, a strong argument to be made for having multiple cements on hand. Today's cement options allow dentists to choose a cement based on indication and desired bond strength, however, to date, there is still no "one size fits all" product out there. Some cements may share similar benefits, but that doesn't mean they are the same or perfect for every indication. Not all cases are the same, so dentists have to ask themselves; "Is my go-to cement really the best for this indication? - Is there a better option in this case?". Familiarising themselves with multiple cements could in fact make a world of clinical difference in their practice. In this clinical case, Dr Carlos Sabrosa uses two quite different cements, based on two very different substrates to achieve a highly acceptable clinical result.



Figure 1: Younger male patient with failing composite fillings on central as well as right lateral incisors. Also in need of a crown on left lateral incisor. Agreement to make three veneers in addition to the crown to improve aesthetics and cover the defects.



Figure 2: Situation after tooth preparation.



Figure 3: The placement of two retraction cords per tooth to open up sulcus well for impression taking.



Figure 4: Application of 3M™ Impregum™ L DuoSoft™ Polyether Light Body Impression Material keeping tip well immersed.

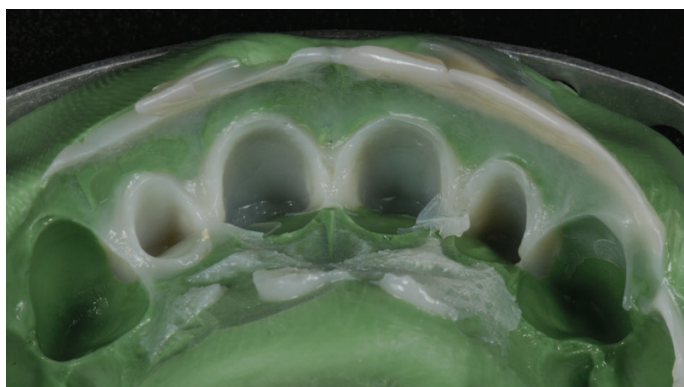


Figure 5: Making the temporary restoration with 3M™ Protemp™ 4 Temporisation Material and a silicone matrix.



Figure 6: Finished temporary restoration.



Figure 7: Temporary in the mouth.



Figure 8: Fabrication of the final restorations in the laboratory: three Lithium disilicate veneers and a zirconia crown.



Figure 9: Try in of the restorations with 3M™ RelyX™ Try-In Paste to determine the optimal cement shade.



Figure 10: Aspect after try in.

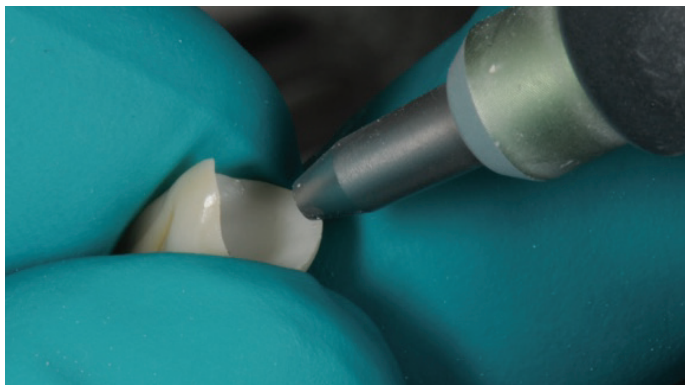


Figure 11: Pretreatment of the bonding surface of the zirconia crown with aluminum oxide (maximum 2 bar and a grain-size of 30 or 50 µm).

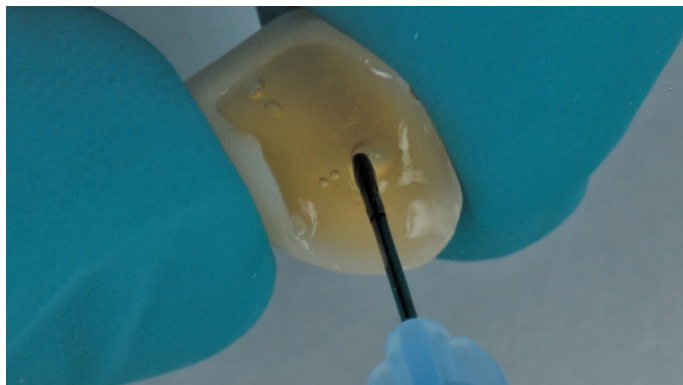


Figure 12: After etching with hydrofluoric acid the veneers are silanised with 3M™ Scotchbond™ Universal Adhesive, rubbing it in for 20 seconds and then air thinning it gently until no more ripples are observed.



Figure 13: Prior to cementing the crown, the tooth preparation is mechanically cleaned with pumice paste, rinsed and gently dried to leave the surface slightly moist and shiny.



Figure 14: 3M™ RelyX™ Unicem Aplicap™ Self-Adhesive Resin Cement is directly applied into the previously sandblasted zirconia crown.



Figure 15: The crown is firmly seated under finger pressure and the excess removed with a scaler after a 1-2 second tack cure. Final cure for 20 seconds per surface. Finish and polish as needed.

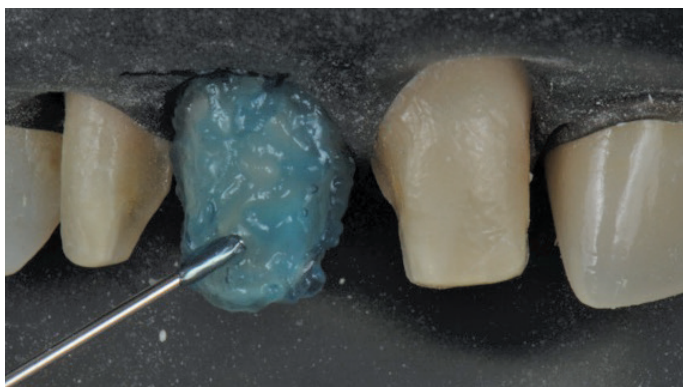


Figure 16: The veneer preparations are etched with phosphoric acid.



Figure 17: Apply 3M™ Scotchbond™ Universal Adhesive and rub it in for 20 seconds.



Figure 18: 3M™ RelyX™ Veneer Cement is applied into each of the pretreated veneers.



Figure 19: Each veneer is carefully placed under slight pressure to extrude the excess. A 20 second spot light cure away from the margin is recommended to ensure a stabilised restoration in place prior to cleaning up the excess. Final cure for 30 seconds from all surfaces.



Figure 20: Final restorations in place.



Figure 21: Lateral view of a happy patient.



Dr Carlos Sabrosa

Dr Carlos Sabrosa is an Associate Professor at the State University of Rio de Janeiro Dental School. He received his DDS in 1992 from the State University of Rio de Janeiro Dental School and the Clinical Advanced Graduate Studies (CAGS) in Prosthodontics from Boston University Goldman School of Dental Medicine in 1996. Dr. Sabrosa also received his MSD and DScD in Prosthodontics/Biomaterials from Boston University Goldman School of Dental Medicine in 1997 and 1999 consecutively. He received the Steven Gordon Research/Clinical Award in 1995 and 1996 and the Tylman Research Grant Award in 1993 from the American College of Prothodontics. He has a private practice, focused in oral rehabilitation and implantology, in Leblon, Rio de Janeiro, Brazil.

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Dr Sabrosa has received an honorarium from 3M Oral Care.

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