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Bonding an All-Ceramic Maxillary Incisor Crown with New Panavia-F Dual Cure

By Jeffrey C. Hoos, DMD, FAGD

Dentists face numerous challenges when trying to restore a patient's anterior esthetic complement of teeth. The tasks that the restorative dentist must accomplish are:

- Fabricate temporaries that are esthetically pleasing and functionally correct.
- Transfer the esthetic information to the laboratory.
- Try in the prosthetics for verification of form and function.
- Have the restoration esthetically correct.
- Cementation of the prosthetics, and to have the restoration "stand up" to the rigors of every day use.

Dentists have techniques, which allow for die fabrication of restorations; giving our patients wonderful smiles that are truly functional. Laboratories have, with the help of modern materials, worked out methods for producing beautiful restorations. The weak link has been the cementation of these esthetic restorations. I believe that **PANAVIA-F (J.MORITA)** has helped solve these cementation problems. **PANAVIA-F** is a unique cement because of the following properties:

- Dual-Curing (Chemical and light) adhesive resin cement for metal, indirect composite, and silanated porcelain restorations.
- PANAVIA-F resin cement is fluoride releasing.
- Alloy Primer (J.MORITA) increases the Bond between PANAVIA-F and precious alloy.
- PANAVIA-F has a compressive strength of 333 PSI as compared to Vitremer which is only 136 PSI.
- PANAVIA-F is Radio-Opaque.

Case Discussion:

An attractive 40 year old woman came to our office with a broken lateral porcelain crown that was done five years previously in our office. The crown had shattered off the gold cast post. The crown probably broke because the cement chosen did not allow for the bonding of the crown to the gold post and the remaining tooth structure. The restoration was really "glued" on the post, without a true bond of the restoration to the supporting structure.

The restoration was completed in the following sequence. The tooth was minimally prepared to ensure a clean finish on the post and margins of the tooth structure. The preparation chosen was a butt joint margin. A **BLUE VELVET** and **FLEXI VELVET** impression (J.MORITA) was taken with a triple tray allowing for a dual arch impression with no cord placement and a temporary was fabricated out of an acrylic shell. A shade was taken and a porcelain crown was fabricated with an opaque core to mask out the gold post previously placed. The crown was tried in for esthetics and lab work was excellent (Metropolitan Dental Lab, CT.) in form and function.

Sequence of Steps:



The acrylic temporary was removed. The tooth and post were cleaned using the J.Morita **AD-ABRADER PLUS** chairside sandblaster. The interior of the crown was sandblasted and acid etched with phosphoric acid, rinsed completely and air-dried. The inside surfaces and margins were silanated with **CLEARFIL PORCELAIN BOND** (J.MORITA). **Alloy Primer** was applied to the metal post. **ED PRIMER** was applied to the entire tooth surface including the post. (Do not put primer in the crown)

Dry the primer with a gentle blast of air. Dispense and mix **PANAVIA-F** paste for 20 seconds. Apply the mixed cement to the internal aspect of the crown as well as the margins. (Do not place cement on tooth or post surface). I like using a brush for cement application. Place the crown carefully with firm pressure assuring complete seating and allowing excess cement to exit the crown. A clean brush was used to remove the excess cement; brushing away from the margins. The margins may be light cured but I chose to use **Oxyguard** because of the opaque core used and the margins were cleaned back to the surface of the crown. The margins were then finished back by finishing burs and polishing. An X-ray was taken to ensure the cement was removed interproximally. Because of the radio-opaque nature of the cement, this is a helpful step. The final restoration was esthetic and the patient extremely pleased with the final result.

For ordering and/or technical information, call J. Morita USA at 888-JMORITA.

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