CLINICAL AID

A Color-Reactivated Flowable Composite for Bonding Lingual Retainers

Flowable resin composites have been made with a variety of formulas and viscosities for different uses.[1-6] The major advantage of these materials over conventional composites is the simplicity of direct application with the needle tips. A uniform thickness of 1mm is easily achieved, providing maximum strength and minimum bulk for bonding lingual retainers.[7] Another benefit is that there is no need for trimming and polishing, as recommended for conventional light-cured adhesives,[8] which saves chairtime.

A modified flowable composite (Tetric Flow Chroma*) has the additional advantage of a reversible color change. Elaut and colleagues have described Tetric Flow, which has the same chemical composition, as an excellent material for bonding lingual retainers with a low failure rate.[9] The new Tetric Flow Chroma changes color to a dark green when exposed to a conventional light-curing unit for three seconds. The remaining material can then be easily identified for efficient removal.

*Ivoclar Vivadent Ltd., Meridian South, Leicester LE19 1WY, U.K. Tetric is a registered trademark.

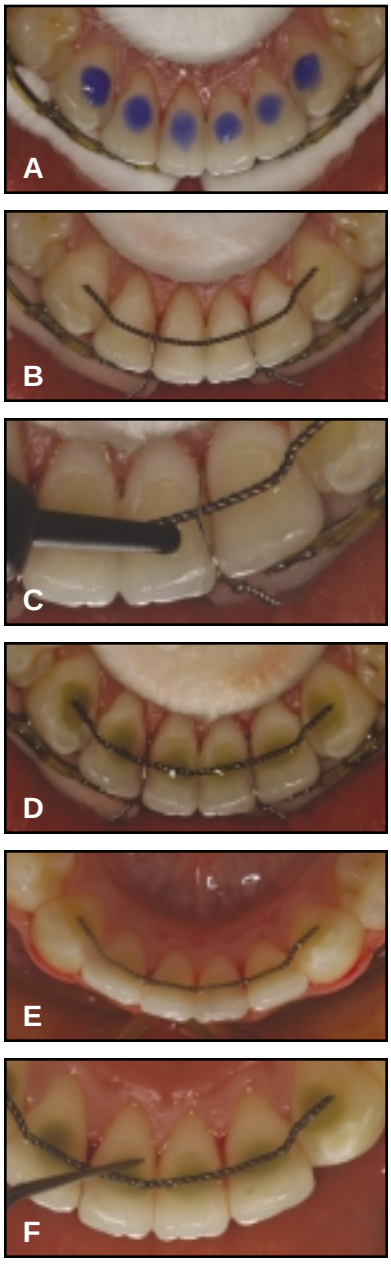
**Trademark of Ormco/"A" Company, 1717 W. Collins Ave., Orange, CA 92867.

Bonding Procedure

1. Before debonding the labial brackets, clean the lingual enamel with a fluoride-free paste.
2. Bend an .0215" Triple Flex** archwire to fit the lingual contours of the six lower anterior teeth.
3. Etch the lingual enamel with 37% phosphoric acid for 60 seconds (A).
4. Rinse and air-dry the tooth surfaces, then apply a light-cured bonding agent.
5. Position the retainer, tying it to the labial archwire with stainless steel ligatures (B).
6. Apply Tetric Flow Chroma (C) to the teeth and retainer.
7. Mold the composite to the retainer with a probe, and cure it immediately.
8. Check the tooth-wire-composite interface and remove any residual adhesive while the composite is dark green (D). After 30-60 seconds, the resin changes back to its original clear color (E).
9. If the adhesive cannot be removed entirely, expose the material to the curing light for another three seconds so it will again turn dark green (F).

Conclusion

This method improves the



efficiency of removing excess adhesive and avoids damaging the lingual enamel when the resin is removed. If the retainer fails, even after a long period of time, it is easy to remove the Tetric Flow Chroma after light-curing it again.

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