

TECHNIQUE CLINIC

Glass Ionomer Cement Hooks for Stabilizing Lingual Retainer Wires

Accurate placement of direct-bonded lingual retainers requires meticulous stabilization of the wire during the bonding procedure. My clinic has developed a technique that uses stabilization hooks fabricated from glass ionomer cement (GIC) to hold retainer wires securely in place.

Procedure

1. Adapt an .0175" or .020" coaxial retainer wire to the lingual surfaces of a plaster cast.
2. On the cast, apply a thin layer of petroleum jelly to three or four of the lingual, labial, and incisal interdental embrasures of the anterior teeth to be retained. Take care not to cover the areas where bonding composite will be applied or the surfaces that will contact the wire.
3. Prepare the GIC hooks by mixing the self-curing restorative glass ionomer powder and liquid* on a paper pad until the cement displays a glossy surface and tacky consistency (about 45-60

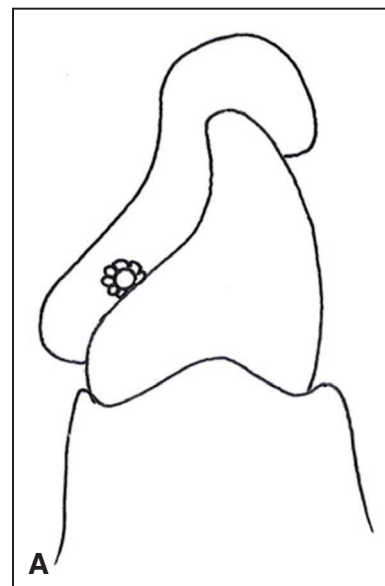
*GC Gold Label 2 Universal Restorative Glass Ionomer Cement, GC Asia Dental, Jubilee Hills, Hyderabad 500033, India; www.gcindiadental.com. Available as GC Fuji II Glass Ionomer Restorative from GC America, 3737 W. 127th St., Alsip, IL 60803; www.gcamerica.com. Fuji II is a trademark.

seconds). While holding the retainer wire in place on the cast with a finger, apply a small amount of the GIC mixture to the wire in one of the embrasure areas, then drag the mass of cement toward the incisal embrasure, continuing up the labial side to cover the incisal one-third of the embrasure (A).

4. Repeat the procedure to build additional "hooks" in the remaining embrasures (B). At this point, flash can easily be removed using a sharp blade. Apply a thin coat of varnish to the hooks to prevent desiccation during setting.

5. After 24-72 hours of setting time, and just before the bonding appointment, use a sharp sickle scaler to gently disengage the hooks from the cast. Our routine disinfection procedure is to spray the wire-hooks assembly thoroughly with detergent solution, rinse it in a bowl of tap water, and then immerse it in a diluted sodium hypochlorite solution for 10 minutes. After another water rinse and air-drying with a triplex syringe, the assembly is ready for bonding.

6. Prepare the enamel surfaces as usual, and place the retainer wire in the mouth, using the hooks to hold it in position (C).





7. After bonding the wire, break off the GIC hooks (D,E).

Conclusion

We have found this to be a simple and accurate technique that requires minimal chairtime and is comfortable for the patient. Although we generally opt to use self-curing glass ionomer cement, a light-cured, resin-modified GIC can certainly be used in cases that require immediate fabrication of the hooks, or if the clinician prefers a material with less chance of breakage.¹

REFERENCES

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