TECHNIQUE CLINIC

A Quick and Inexpensive Method for Composite Button Fabrication

Low-profile composite buttons are a useful and esthetic alternative to unsightly metal buttons or bulky, expensive ceramic brackets in managing vertical tooth positions, rotations, and anteroposterior corrections with removable appliances. Commercial composite button fabrication kits are an added inventory expense, however, and many items within the kits may go unused. This article describes an efficient, cost-effective technique for immediate chairside fabrication of a low-profile composite button.

Procedure

1. Split an elastomeric separator with a ligature cutter (A). For areas where optimal esthetics is required, such as the maxillary incisor region, cut the separator in half at a bevel. This will allow the composite button to gently transition into the facial surface of the tooth.
2. Isolate, etch, and prime* the tooth surface where the button is to be placed.
3. Directly apply the separator to the tooth, with the split side opposite the location of the ledge for elastic attachment (B).
4. Apply a low-viscosity composite resin,** allowing it to flow over the edges of the separator to create the ledge for the button. If a low-viscosity resin is not available, a primer can be applied to a standard composite resin to reduce its viscosity.
5. After curing the resin for 20 seconds with the separator in place, gently peel away the separator (C). If necessary, shape and bevel the button with a diamond bur.

An elastomeric O-ring can be used instead of a separator to further reduce the profile of the button. The O-ring should be cut in half to increase the width of the button base, since its small lumen would otherwise produce a base that might be too narrow to withstand heavy forces (D).

Clinical Applications

Composite buttons can be used to allow elastic wear (E) dur-

ing anteroposterior correction with clear, removable aligners or lingual brackets, or to assist in making difficult tooth movements with aligners.[1] Extrusive movements are particularly challenging and unpredictable with removable aligners alone.[2] If a composite button is bonded to the facial surface of the tooth and a "Rinchuse Slit" is cut into the palatal margin of the aligner[3] (F), an elastic will pull the tooth into the tray within two to three weeks.[4] Adding undercuts in the aligners, either by using a Hilliard Undercut Enhancing Thermoplier*** or by creating undercuts in the dental cast before vacuum-forming, will improve fit and retention during extrusion.[3]

*Transbond Plus Self Etching Primer, trademark of 3M Unitek, 2724 S. Peck Road, Monrovia, CA 91016.; www.3munitek.com.

**FlowTain, trademark of Reliance Orthodontic Products, P.O. Box 678, Itasca, IL 60143; www.relianceorthodontics.com.

***Part No. 82510, Raintree Essix, Inc., 4001 Division St., Metairie, LA 70002; www.essix.com. Part No. ODG-326, GAC International, Inc., 185 Oval Drive, Islandia, NY 11749; www.gacintl.com.

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NEAL D. KRAVITZ, DMD

BUDI KUSNOTO, DDS, MS
Department of Orthodontics
School of Dentistry
University of Illinois
801 S. Paulina St. (MC 841)
Chicago, IL 60612
nealkravitz@gmail.com