

Bonding Interdental Retainers in Patients with Generalized Marginal Bone Loss

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Retention is a major challenge in patients with generalized marginal bone loss. It is often impossible to keep the maxillary teeth in position using only removable appliances. Bonded lingual retainers cause occlusal interferences unless they are bonded well to the gingival, in which case the wire may be visible between the teeth, creating an esthetic problem. They also make oral hygiene difficult in these patients, for whom plaque control is critical.

Interdental bonding is an excellent solution, but applying adhesive in the interproximal areas using conventional methods is difficult and time-consuming. To simplify this procedure, we use flexible plastic tubes of different diameters, depending on the size of the interproximal space (Fig. 1). The tubes, which may be purchased at hardware stores, should be transparent to permit the use of light-cured resin.

Procedure

1. Prepare the interproximal surfaces for bonding by pumicing the contact areas with polishing

strips and applying etching gel (Fig. 2). A rubber dam is highly recommended to prevent contamination during bonding.

2. Apply an unfilled resin primer to the etched surfaces, and light-cure the primer.

3. Select a tube that fills each interdental space without opening the contact point (Fig. 3).

4. Apply the filled light-cured resin to the interproximal space with the tube in position.

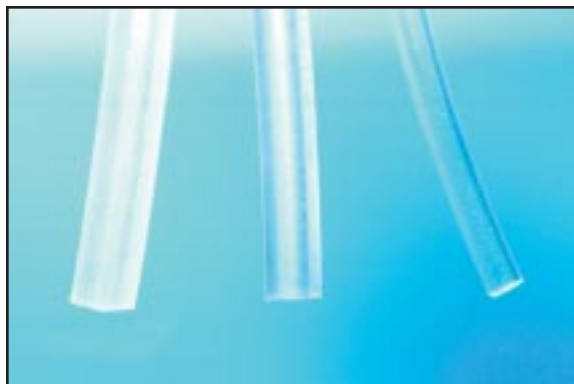


Fig. 1 Various diameters of flexible plastic tubes.



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Fig. 2 Application of etching gel.



Fig. 3 Tube selected to fit interproximal space.



Fig. 5 Remainder of interproximal spaces bonded.



Fig. 4 Both ends of tube cinched incisally before curing of filled resin.



Fig. 6 Thin coating of unfilled resin light-cured over adhesive.

5. Pull both ends of the tube firmly to the incisal (Fig. 4), and light-cure the resin.
6. Repeat these steps until all the interdental spaces have been bonded (Fig. 5).
7. Remove the excess material with Sof-Lex and Sof-Lex XT Pop-On* contouring and polishing discs.
8. Apply a thin coat of unfilled resin over the adhesive, and light-cure it (Fig. 6).

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Conclusion

For patients with generalized marginal bone loss, interdental retainers make plaque control much easier and are also more esthetic than other kinds of fixed retainers (Fig. 7). Flexible tubes help place, condense, and form the bonding discs for interdental retainers.

We have used this system for several years, generally without problems. If the occlusion lacks vertical support, however, there is a high risk of bond failure. We recommend the use of a macrofilled composite (Transbond LR*) because of its greater elasticity and bond strength compared to microfilled resins. □



Fig. 7 A. Finished interdental retainer. B. Patient eight months later.