

Use of Disclosing Material to Detect Fixed Retainer Bond Failures

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Fixed retainers are generally bonded to all the teeth to be retained, although some clinicians bond only to the terminal teeth.^{1,2} When a bond to a terminal tooth fails, the patient tends to notice because of irritation from the loose wire end. The wire is usually bent down by the forces of mastication, and therefore the patient can clean beneath the wire without much risk of plaque accumulation. Still, the tooth is prone to undesirable movement.

Bond failures can go unnoticed for long periods of time when mesial teeth are involved, considering the normal intervals between retention appointments. Failures usually occur between the tooth and the adhesive remaining on the retainer wire, and plaque accumulation is inevitable. Both caries and unwanted tooth movements can result.

This article presents two methods for early detection of retainer bond failures using disclosing tablets or solution.³⁻⁷

Home Procedure

All patients with fixed retainers should be informed of the possibility of undetected bond failures and of the potential consequences. The importance of keeping regular retention appointments should be emphasized. Each patient should be instructed to use the disclosing tablets or solution at home at least once a week.

After application of the disclosing material, the patient should brush thoroughly. If a dark red stain remains on the retainer, this usually indicates a bond failure, and the patient should call the office for an early appointment.

Office Procedure

The chairside staff should check for bond failures at every retention visit. Patients with fixed retainers should be identified in advance by some notation in the appointment book or computerized schedule. They are then given disclosing material upon arrival and told to brush their teeth after its application.

At the chair, the orthodontist or chairside assistant should look carefully for any dark red stains in the retainer area. Bond failure sites will remain dark red in the margins or beneath the adhesive (Figs. 1,2). If there is any question, pumicing the area will clarify the situation (Fig. 3).

Conclusion

The home procedure described in this article involves patients more in their own treatment, and thus can improve oral hygiene and overall dental awareness. The office procedure is simple and quick, and can help prevent caries and undesirable tooth movements during retention. □

FIGURES



Fig. 1 A. Fixed mandibular retainer with no apparent bond failures. B,C. After use of disclosing material, bond failures evident on right central and lateral incisors.



Fig. 2 Bond failure shown on right lateral incisor after use of disclosing material.



Fig. 3 A. Fixed mandibular retainer with no apparent bond failures. B. Ambiguous result after use of disclosing material. C. After pumicing, bond failures evident on right lateral and left central and lateral incisors.

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