In a fixed partial denture, abutment teeth need to be prepared to receive restorations and to provide retention for replacing missing teeth. Preparation of vital teeth results in millions of dentinal tubules being exposed with increased postoperative dentin hypersensitivity. The desensitizing agents are frequently used with resin cementation of fixed partial dentures. Although desensitizers are helpful in reducing the patient's discomfort, their effects on bonding performance of adhesive cementation to dentin cannot be ignored. There is lack of literature reporting the bond strengths of different kinds of desensitizers when used with the newly developed resin cement. Therefore, the present study aimed to compare the effect of two different desensitizing agents on shear bond strength between tooth and a recently introduced resin cement.

**PURPOSE**

The purpose of this study was to evaluate and compare the shear bond strength (SBS) of resin-modified glass ionomer (RelyX™ Unicem Aplicap) after application of two desensitizing agents (Ultra-EZ and Therma-Trol) to dentin of permanent teeth in vitro.

**RESULTS**

- The average (+SD) highest SBS was determined for Therma-Trol/2 min (7.387 ± 2.37) and the lowest for Ultra-EZ/15 min (3.473 ± 2.68). While the average for Ultra-EZ/1 h, Therma-Trol/14 min, and control/No treatment were 3.714 (+2.27), 4.946 (+0.74), and 3.966 (+2.13) respectively.
- Tukey HSD Post Hoc Tests showed that Therma-Trol/2 min was significantly different than Ultra-EZ/15 min (P=0.003), Ultra-EZ/1 h (P=0.007) and control/No treatment (P=0.013).
- No significant difference was found between Therma-Trol/14 min and all other groups (P>0.05).
- Bond failures showed 31 (68.9%) mixed, 11 (24.4%) cohesive, and 3 (6.7) adhesive. No adhesive fracture was observed for ThermaTrol/2 min and Therma-Trol/14 min.

**CONCLUSION**

- Applying Therma-Trol desensitizing agent for 2 or 14 minutes increased SBS of RelyX™ Unicem Aplicap cement to dentin of permanent teeth compared to control and Ultra-EZ groups.
- Applying Ultra-EZ desensitizing agent for 15 min and 1 h does not reduce the SBS of RelyX™ Unicem Aplicap cement to dentin of permanent teeth.
- Bond failures were mainly mixed.

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