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Influence of casein phosphopeptide-amorphous calcium phosphate application, smear layer removal, and storage time on resin-dentin bonding

Key words: Tooth Mousse, Ethylenediaminetetraacetic acid (EDTA), Casein phosphopeptide amorphous calcium phosphate, Smear layer, Bond strength

Research Summary

- The aim of this study is to evaluate the influence of Tooth Mousse (TM) application, smear layer removal, and storage time on resin-dentin microtensile bond strength (μ TBS).

Innovation points

- Examine the influence of **three factors** on resin-dentin bond strength.
- 1. Casein phosphopeptide-amorphous calcium phosphate application.
- 2. Smear layer removal.
- 3. Storage time.

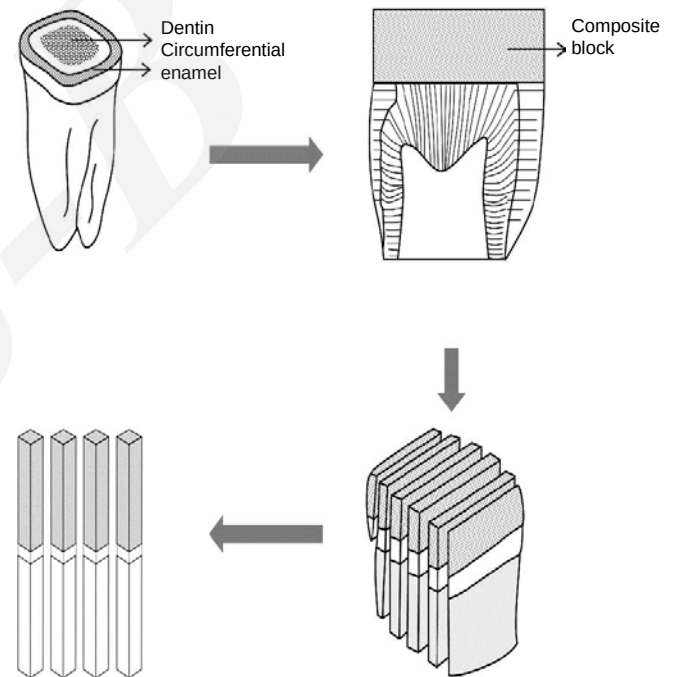


Fig. 1 Flow chart from tooth to specimen showing the design of specimens with the circumferential enamel present and removed.

Innovation points

- Based on the usefulness of CPP-ACP as a desensitizer and in the absence of data on bond strength after long-term storage, the aim of this study was to evaluate the influence of CPP-ACP on microtensile bond strength (μ TBS) in a two-step self-etching/priming adhesive, an all-in-one adhesive, and a total-etch adhesive to dentin in combination with or without smear layer removal.