

Marginal adaptation in dentin of a self-adhesive universal resin cement compared with well-tried systems.

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OBJECTIVES: This study compares the marginal adaptation of a new self-adhesive universal resin cement with only one application step, to the marginal adaptation of established cements and their corresponding adhesive systems. **METHODS:** All-ceramic crowns were inserted on human molars using a new self-adhesive universal resin cement without and with one pre-treatment step, a resin cement with a smear-layer removing and a compomer cement with a smear-layer dissolving adhesive system. After simulation of five years oral stress, the marginal adaptation was evaluated by dye penetration and scanning electronic microscope analysis using the replica technique. **RESULTS:** Scanning electron microscopy: all investigated luting agents showed comparable amounts of 'perfect margin' ranging between 88-98% (median). Dye penetration: the self-adhesive system had significantly lower dye penetration (18-25%, median). **SIGNIFICANCE:** The results indicate that a self-adhesive universal resin cement without pre-treatment can provide a marginal adaptation at dentin which is comparable to established luting agents.

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