

Resin cements produced by composite and compomer light cured orthodontic adhesives.

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Abstract:

OBJECTIVES: To test the shear bond strengths obtained when orthodontic brackets were bonded ex vivo using a composite resin and a compomer orthodontic adhesive. **METHODS:** Specimens were tested in a special jig made to fit an Instron testing machine. After debonding, the adhesive remaining on bracket bases and enamel surfaces was mapped. **RESULTS:** Bond strengths ranged from 8 to 23 MPa with the composite resin producing higher strengths than the compomer for similar combinations of variables. Bond strength was increased by longer curing and a longer debond interval and was higher for brackets with mesh bases than undercut bases. More compomer remained on the enamel surface after debonding than did the composite resin. **CONCLUSION:** The compomer produced bond strengths within the range considered to be clinically acceptable in other studies. If it was clinically successful as an orthodontic adhesive a compomer would confer the advantage that fluoride release would help to minimize the onset of early caries around bonded brackets.