

ONLINE ISSN : 1881-1361 PRINT ISSN : 0287-4547

Dental Materials Journal Vol. 28 (2009), No. 1 p.62-67

[PDF (582K)] [References]

Shear bond strengths of different adhesive systems to white mineral trioxide aggregate

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(Received April 1, 2008) (Accepted June 17, 2008)

Abstract:

This study was conducted to compare the shear bond strengths of different adhesive systems to White Mineral Trioxide Aggregate (WMTA). To this end, 40 cylindrical acrylic blocks with a hole in the middle measuring 4 mm diameter \times 2 mm height were prepared. The hole was filled with WMTA, and the specimens were allocated into four groups: Group 1 – Prime & Bond NT; Group 2 – AdheSE; Group 3 – Xeno III; and Group 4 – Adper Prompt L-Pop. In each group, a different adhesive system and a compomer (Dyract AP) were applied over WMTA. Shear bond strengths were measured using a universal testing machine, and then the data were subjected to one-way ANOVA and Scheffé's *post hoc* test (p<0.05). Significantly lowest shear bond strength value was obtained with Adper Prompt L-Pop, whereas Prime & Bond NT revealed higher shear bond strength than the others (p<0.05). In conclusion, an etch-and-rinse adhesive system — which exhibited significantly higher shear bond strength than self-etch adhesive systems — could be a preferred choice when placing compomer materials upon WMTA.

Key words:

WMTA, Shear bond strength, Bonding

[PDF (582K)] [References]

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To cite this article:

Sule BAYRAK, Emine Sen TUNÇ, Isil SAROGLU and Türkan EGILMEZ. Shear bond strengths of different adhesive systems to white mineral trioxide aggregate . Dent. Mater. J. 2009; 28: 62-67.

doi:10.4012/dmj.28.62

JOI JST.JSTAGE/dmj/28.62

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