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**Adhesive's Effect on 24-Hour Bond Strength of Bioactive Materials**

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**Objectives** This in vitro study evaluated the effect of universal adhesive on 24-hour shear bond strength (SBS) of bioactive restorative materials to dentin.

**Methods** Totally 70 sound human molars were used and flat midcoronal dentin surfaces were obtained. They were randomly divided into 5 groups according to restorative materials [two bioactive materials- one alkasite/CN: Cention N (Ivoclar Vivadent) and a dual-cure bulk-fill composite/AC: Activa BioACTIVE Restorative (Pulpdent) and one conventional composite-nanohybrid/EP: Estelite Posterior Quick (Tokuyama Corp.)] and presence of universal adhesive/UA: G Premio Bond (GC Corp.) (n=14). 1)Group EP (control); 2)Group CN; 3)Group CN+UA; 4)Group AC; 5)Group AC+UA. Universal adhesive was utilised with self-etch mode. Restorative materials were applied using a cylinder-shaped mold according to the manufacturers' instructions. All samples were stored for 24 h at 37 °C and then subjected to SBS test using a universal testing machine (AGS-X Shimadzu Corp.) (crosshead speed:1 mm/min). Failure modes were evaluated under a stereomicroscope. Two-way analysis of variance (ANOVA) and Bonferroni tests were used for statistical analysis(p<0.05).

**Results** Group EP (control) showed statistically higher SBS than other tested groups. (p<0.05). In terms of restorative materials, no significant differences in SBS were detected between Group AC and Group CN(p>0.05). Besides, Group AC+UA showed similar SBS to Group CN+UA(p>0.05). Regarding the presence of adhesive system, Group AC+UA and Group CN+UA exhibited statistically higher SBS than Group AC and Group CN(p<0.05). Stereomicroscope analysis revealed that a higher number of mixed failures were observed for Group AC+UA and Group CN+UA than Group AC and Group CN.

**Conclusions** The use of universal adhesive might be beneficial for 24-hour bond strength of bioactive restorative materials to dentin.