

## Assessment of shear bond strength between resins modified glass ionomer and composite using 6th and 7th generation of bonding agents.

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### **Abstract:**

**Background and Aim:** Sandwich technique is one of the most common methods in dentistry in which resin-modified glass ionomers due to advantages such as fluoride release and adhesion to tooth structure are used with composite restorations. The aim of this study is assessment of shear bond strength between resin modified glass ionomer and composite using different bonding agents.

**Material and Method:** In this invitro study, 60 resin modified glass ionomer samples (GC FUJI 2LC) were prepared. In the first group, without the use of bonding agent and in other two groups with the use of bonding agents( SE bond and S3 bond) composite adhered to glass ionomer. After placing the samples in distilled water in incubator with temperature 37/5° C for one week, shear bond strength of samples was measured by the universal machine test. One way analysis of variance and Tukey test were used for analyzing the data and comparison between groups.

**Results:** The maximum amount of the bond strength was for specimens bonded with SEbond(13/09 Mpa) and the lowest amount was in control group(5/3 Mpa). The mean shear bond strength was significantly different between the four groups.( $p < 0.05$ )

**Conclusion:** The maximum shear bond strength between resin-modified glass ionomer and composite resin was related to SE bond therefore using of this bonding agent in sandwich technique is recommended.

**Keywords:** Shear strength, composite resin, resin modified glass ionomer, bonding agent.