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[\[Image PDF \(851K\)\]](#) [\[References\]](#)**Bond Strengths of Three Different Dentin Adhesive Systems to Sclerotic Dentin**[Solen KARAKAYA^{1\)}](#), [Nimet UNLU^{1\)}](#), [Esra Can SAY^{2\)}](#), [Fusun ÖZER^{1\)}](#), [Mubin SOYMAN^{2\)}](#) and [Junji TAGAMI^{3\)}](#)

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Abstract:

The two-fold aims of this study were: (1) to evaluate the microtensile bond strengths of different adhesive systems to sclerotic and sound palatal dentin; and (2) to observe the respective resin-dentin interfaces. Thirty extracted human incisor teeth were divided into two groups. Group I comprised sclerotic defects in the palatal zone. Group II comprised sound palatal dentin surfaces as control. Each group (n=15) was divided into three subgroups according to dentin adhesive systems: self-etch (Clearfil SE Bond), total-etch (Scotchbond Multi-Purpose Plus), and glass ionomer (Reactmer Bond) adhesive systems. The specimens were subjected to tensile forces. Obtained data were analyzed by two-way ANOVA and *post hoc* Duncan's test. Fracture sites and resin-dentin interfaces were observed using a light microscope and SEM. With sound dentin, Clearfil SE Bond showed a significantly higher bond strength than the other adhesives ($p < 0.05$). With sclerotic dentin, although there were no significant differences in bond strength among the adhesives groups ($p > 0.05$), the bond strength values of Clearfil SE Bond and Scotchbond Multi-Purpose Plus were significantly decreased. On resin-dentin interface observation, different images were presented by different bonding systems.

Key words:[Sclerotic dentin](#), [Microtensile bond strength](#), [Total-etch](#), [Self-etch](#), [Glass ionomer](#)

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