**ABSTRACT**

**Objective:** The aim of this study was to evaluate the bond strength of dentin treated with chlorhexidine, hyaluronic acid, vitamin C and green tea. **Material and Methods:** The roots of 50 bovine teeth were removed and buccal coronal dentin was exposed. After acid-etching, the specimens were divided into 5 groups (n = 10), according to the dentin treatment strategy: CO - untreated dentin; CHX - treated with 2 wt% chlorhexidine for 30 sec; HA - treated with 1 wt% hyaluronic acid for 30 sec; VC - treated with 10 wt% vitamin C for 30 sec; GT - treated a 1% green tea extract for 30 sec.  Adper Single Bond was then applied to the treated according to the manufacturer's recommendations. The specimens were restored with a 4-mm thick layer of the resin composite, which was polymerized for 40 sec. The specimens were stored in distilled water at 37°C for 24 h and sectioned into 1x1 mm2 sticks containing the adhesive interface. Microtensile bond strength testing was performed with a universal testing machine at a cross-head speed of 1.0 mm/min. **Results:** The results were analyzed with one-factor ANOVA and Tukey’s multiple comparison tests. GT group presented the highest values bond strength (29.4±3.1)a, but no significant difference compared to the other experimental groups HA(26.7±3.1)ab, CHX(25.4±2.6)ab and VC(22.4±6.0)b. Bond strengths of experimental groups were not significantly different from the CO. **Conclusion:** Immediate bond strength was preserved after acid-etched dentin was treated.

**Keywords:** Chlorhexidine. Hyaluronic acid. Vitamin C. Green tea. Bond strength.

**Clinical Relevance:** Application of appropriate concentrations of chlorhexidine, hyaluronic acid, vitamin C or green tea extract to acid-etched dentin does not result in deterioration in immediate bond strength of a 2-step etch-and-rinse adhesive to dentin. Thus, evaluation of the effects of these agents on the longevity of resin-dentin bonds is justified.