

## Abstract

**Objective** To evaluate the effect of different surface treatments on the bond strength of quartz fiber post

**methods** Thirty five extracted human mandibular first premolar teeth were sectioned below the cementoenamel junction and the roots were endodontically treated. Following standardized post space preparation, the roots were divided into seven groups according to the concentration of hydrogen peroxide and post surface treatment time. And then further into three subgroups of 10 specimens each according to root region. A push-out test was performed to measure regional bond strengths, and the fracture modes were evaluated using a stereomicroscope. Data were analyzed with three-way analysis of variances and Tukey HSD test.

**Results** At the root region, there were no statistically significant differences ( $p>0.05$ ) in push-out bond strength among the tested concentration of hydrogen peroxide and surface treatment time. Nevertheless, significantly higher push-out bond strength were achieved on 30% hydrogen peroxide at 10 minutes and 35% hydrogen peroxide at 5 minutes in quartz fiber groups ( $p<0.05$ ).

**Conclusion** Quartz fiber posts surface treatments by 30% hydrogen peroxide at 10 minutes and 35% hydrogen peroxide at 5 minutes increased the push-out bond strength to dentin when compared with the control group significantly.

**Key Words** : bond strength, hydrogen peroxide, quartz fiber post