p-19 The effect of additional enamel etching on microleakage of the adhesion of self etching primer system

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Ⅰ.Objectives

This study investigated the effect of additional enamel etching on microleakage of the adhesion of self etching primer system

Ⅱ. Material and Method

Class Ⅴ cavity(4*3*1.5) preparations with all margins in enamel were prepared on buccal surface of 42 extracted human upper central incisor teeth. Prepared teeth randomly divided into 3 groups. Specimens in Group 1 received no pretreatment with 37% phosphoric acid(NE). Group 2 received pretreatment with 37% phosphoric acid during 10 seconds(E10s). Group 3 received pretreatment with 37% phosphoric acid during 20 seconds(E20s). The adhesives (Clearfil SE Bond, Kuraray, Japan) and composite resins (Clearfil, Kuraray, Japan) were applied following the manufacturer's instructions. All the specimens were finishied by the polishing disc, thermocycled for 500 cycles between 5℃ and 55℃, resected apical 3mm. .028 stainless steel wire was inserted apically into the pulp chamber of each tooth and sealed into position with sticky wax. Surrounding tooth surface was covered with a nail varnish 2 times except areas 1mm far from all margin. After drying for one day and soaking in distilled water. Microleakage was aseessed by electrochemical method(System 6514. Electrometer, Keithley, U.S.A) in distilled water. The data were statistically analysed using one-way ANOVA and Scheffe post hoc test

Ⅲ. Result

In this study, the microleakages were the lowest in group 1 and the highest in group 3 (NE<E10s<E20s), but no statistically significant differences were found ($p=0.5$)

Ⅳ. Conclusion

Additional enamel etching had no influence on microleakage of the adhesion of self etching primer system.