

CHAPTER VI

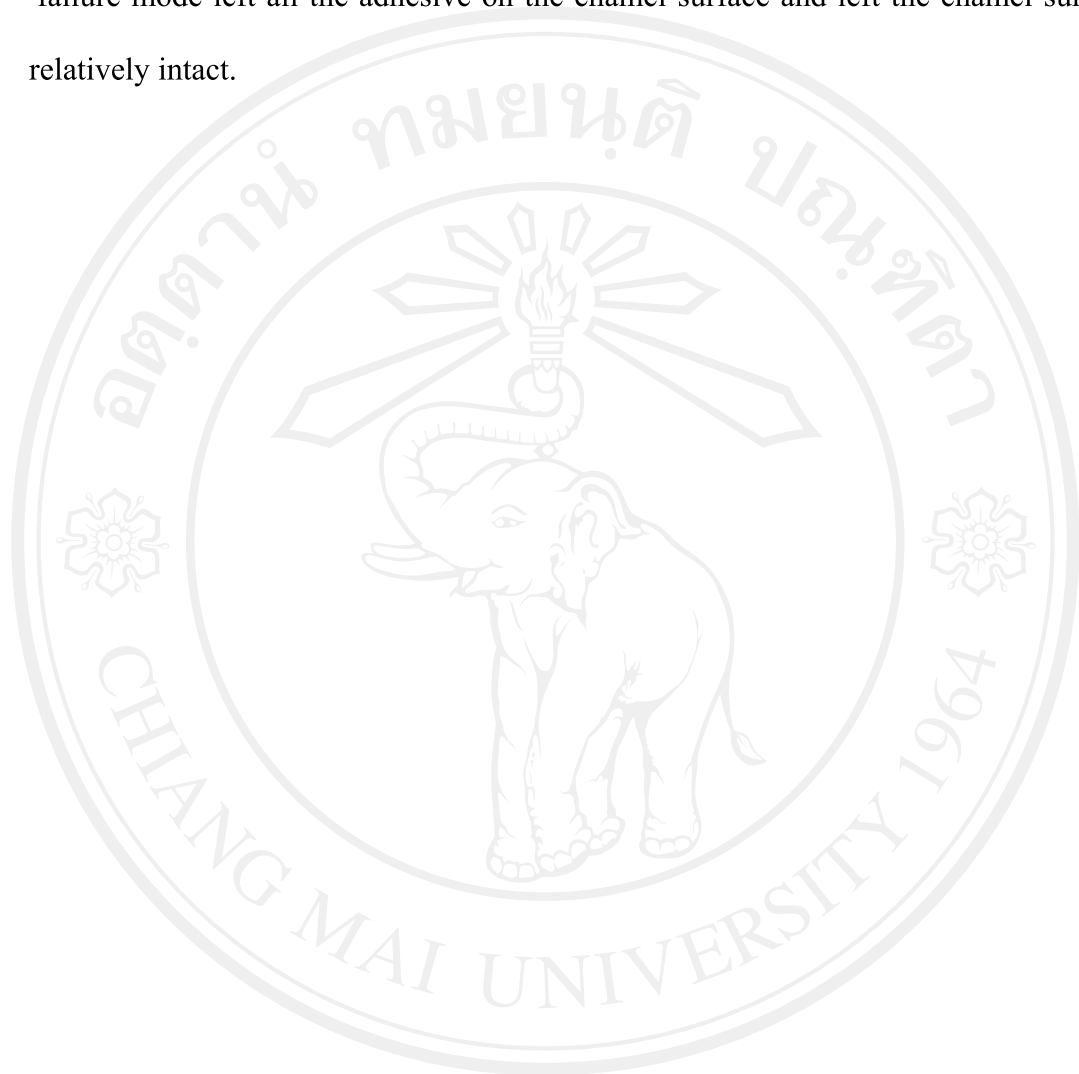
CONCLUSIONS

In normal teeth, the mean shear bond strength values in Groups 1, 2 and 3 were 10.25, 11.59 and 13.86 MPa, respectively. In fluorotic teeth, the mean shear bond strength values in Groups 4, 5 and 6 were 6.51, 7.51 and 12.29 MPa, respectively. The bonding effectiveness to moderately fluorotic teeth was lower than that to normal teeth for the all adhesives tested. In both normal and fluorotic teeth, the mean shear bond strength values of Superbond C&B were greater than those of either SystemTM1+ or UniteTM. In fluorotic teeth, the mean shear bond strength values of SystemTM1+ and UniteTM were within the range of adequate clinical values (6-8 MPa) but that of Superbond C&B was greater than 6-8 Mpa. However, several samples of SystemTM1+ and UniteTM produced shear bond strength values less than adequate clinical values.

In normal and fluorotic teeth, adhesive and cohesive failures at the enamel/adhesive interface were most common with SystemTM1+ and UniteTM, whereas with Superbond C&B commonest site of failure was the adhesive/bracket interface.

This study suggested Superbond C&B for clinical use in orthodontic placement of brackets on fluorotic teeth because it produced a shear bond strength value that was higher than generally-accepted adequate clinical values and after de-bonding, the commonest site of failure was the adhesive/bracket interface. So, this

failure mode left all the adhesive on the enamel surface and left the enamel surface relatively intact.



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