

THE RETENTION OF PITS AND FISSURE SEALANT APPLIED USING A SELF ETCHING ADHESIVE

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ABSTRACT

The aim of the present study was to measure the bond strength of fissure sealant to tooth enamel using a new self etching adhesive and compare it to the conventional acid: etch approach without a bonding agent, both in vivo and in vitro. Clinically, sealant was applied either conventionally or through the application of AdheSE self etching adhesive as the sole etching, priming and bonding agent on a number of 40 first permanent molars (20 each) and was followed up after 6 months for retention. None of the sealant in the control group was lost while only 2 (10) of the test group totally lost the sealant. The conventional approach was better but not significantly different. In the in vitro study, the shear bond strength of sealant applied to tooth enamel was tested using both techniques. 10 specimens were prepared for each technique and tested on a universal testing machine. The shear bond strength of sealant applied using the conventional acid etch technique was higher but not statistically significant than that applied using the self etching adhesive without a separate etching step. It was concluded, from the present study that the use of Adhe.SE. bonding agent beneath sealant without applying a separate etching step gave non significant lower shear bond strength when tested in vitro while clinically, it was close to the conventional approach. Further research is needed in this area to try other bonding agents and compare them to find the most suitable technique and material.

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