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## CLINICAL EVALUATION OF UNIVERSAL ADHESIVES USED AS A FISSURE SEALANT

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### **ABSTRACT**

This study aimed to evaluate the use of two universal adhesives (Opti Bond Solo and Prime and Bond 2.1) as a sealant themselves, and under the sealant, in comparison to the conventional sealant (Seal Rite type II), under the dry and wet conditions.

The study was applied on 180 students of both sexes aged from 6 to 8 years. They were selected from El Nasr Experimental primary school. The selected students had sound bilateral lower first permanent molars that had moderate or deep fissures. They were classified equally into 5 groups according to the type of the material used as a fissure sealant. In group A, the conventional sealant alone was used. In group B, Opti Bond Solo was used as a base under the sealant, while in group C, Prime and Bond 2.1 was used under the sealant. In group D the Opti Bond Solo was used as a sealant itself, and in group E, Prime and Bond 2.1 was used as a sealant. In each group, the lower right first permanent molar was chosen for the application of the material under the dry condition and referred as subgroups 1, while the lower left molar of the same child was chosen for the material application under the wet condition and referred as subgroups 2. After the application, the children were followed at one week, one, 3, 6, 12, and 18 months for the retention, the marginal adaptation, and caries. The results showed that,

The use of the 2 tested adhesives (Opti Bond Solo and Prime and Bond 2.1), either alone as a sealant, or as a base under the sealant, had no significant difference, compared to the conventional sealant, under the dry condition, regarding the complete retention, marginal adaptation, and caries prevalence.

Under the wet conditions, the use of the adhesives either alone or under the sealant, produced significantly better retention and marginal adaptation, and reduced the caries formation.

There was a significant difference between the dry and wet conditions in the same group .

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