

Kuat rekat tarik dan geser bahan bonding pada perekatan awal braket dengan pengetsaan dan perekatan ulang tanpa pengetsaan (penelitian laboratorik)

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Abstrak

The incidence of loose brackets during orthodontic treatment has reached 5%; therefore, loose brackets should be rebonded. Rebonding without etching might decrease chair time without compromising bond strength. The objective of the study was to determine the shear bond strength and tensile bond strength of rebonded brackets without etching, in comparison with corresponding strength when using prior enamel etching. Forty human first upper premolar brackets were used as samples, divided into two groups. Group A (20 samples) were used to assess tensile bond strength, and group B (20 samples) to assess shear bond strength. Each group was tested twice with Universal testing Machine Shimadzu AG-5000. Test I was carried out to measure tensile and shear bond strength of brackets which were bonded after enamel etching, by pulling the brackets until loose. Test II was carried out to measure tensile and shear bond strength of brackets that were bonded without prior etching of the enamel, again by pulling the brackets until loose. The results showed a significant difference ($p < 0.05$) between the two groups. Test II demonstrated significantly different tensile bond strength when compared to test I. Tensile and shear bond strength values of the bonding agent on rebonded bracket without etching were lower than tensile and shear bond strength values of the bonding agent in case of bonding with etching. However, even though the score decreased, it was still above the minimal score required for a bonding agent.