

##C465052 : MAJOR ORTHODONTIC

KEY WORD: GLASSIONOMER/ZINC PHOSPHATE/SHEAR/PEEL STRENGTH

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GLASSIONOMER AND ZINC PHOSPHATE CEMENTS FOR ORTHODONTIC BANDING.  
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The purposes of this research were to compare the shear/peel strength between a glassionomer cement and a zinc phosphate cement for cementation of orthodontic bands, and to study the frequency of failure location that occurs.

One hundred and twenty sound, extracted human premolar teeth were selected from orthodontic patients who were extracted 4 first premolars. The teeth of the same patients' were divided into two groups (upper premolars and lower premolars). The cements and bands were the products of Ormco's. Cement selected bands which were fitted on each tooth by glassionomer cement on one side and zinc phosphate cement on the other. Shear/peel strength was tested 24 hours after cementation. The results were statistically analyzed using T-test.

#### Research Results :

1. There was significant difference between shear/peel strength of a glassionomer cement and a zinc phosphate cement ( $p < 0.01$ ).
2. Shear/peel strength of glassionomer cement was not significant difference between upper and lower premolars ( $p > 0.01$ ). The frequency of failure location mostly occurred between cement and the stainless steel band.
3. Shear/peel strength of a zinc phosphate cement was not significant difference between upper and lower premolars ( $p > 0.01$ ). The frequency of failure location mostly occurred within the cement.