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**FRACTURE RESISTANCE IN MAXILLARY**  
**PREMOLAR RESTORED WITH NEWER COMPOSITE**

By

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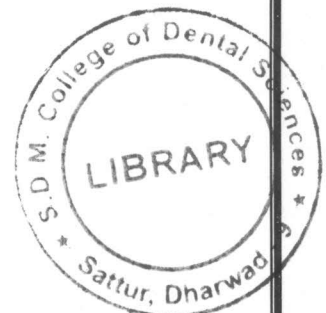
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## ABSTRACT

**Title :** Fracture resistance in maxillary premolar restored with newer composite

**Background & Objectives:** Better resistance to deformation and fracture, provision of more equitable stress distributions, and greater probability of clinical success are provided by stronger restorative materials. There is need to come up with new composite material which can withstand higher fracture resistance. In this study fracture resistance of two newer composite material has been compared.

**Materials and Methodology:** 30 non carious unrestored human premolars were collected, Mesio-occluso (MO) cavities were prepared of similar dimensions, extracted teeth were randomly divided into 3 groups (n = 10). Group A was taken as positive control with no restoration. The two groups were restored with two different composite materials as follows: Group B receivedOrmocer based composite, Group C received Tetric PowerFill, Nanohybrid composite each of these teeth were tested for fracture resistance using a universal testing machine. Differences between the groups were evaluated by one way ANOVA and Post-Hoc Analysis.

**Result :** There was no statistically significant difference between group 1 and group 2 group 3. The mean value obtained in group A is 1592.70, in group B 1180.25 and in group C is 1623.66. The highest force applied on group A is 2926.28, in group B 2087.40 and in group C is 2746.94. The one way ANOVA analysis has shown no statistical significance among three groups.

**Conclusion :** This study opens new opportunities for the use of tetric powerfill and Ormocers as a newer material in restoration of posterior teeth.

**Keywords :** fracture resistance; mesio-occlusal cavity; class II restoration.