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Effect on the tensile bond strength of glass fiber posts after surface pre – treatment with silane coupling agent and hydrofluoric acid – An in vitro study

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Abstract

Aim: To evaluate the tensile bond strength of glass fiber posts (Reforpost, Angelus) after surface treatments with silane coupling agent and hydrofluoric acid.

Materials and Method: 40 single rooted maxillary central incisors were selected for the study. The specimens were decoronated with a diamond disc and the root length was standardized at 14mm. Cleaning and shaping was done till rotary protaper F3. Obturation was completed with gutta percha and AH Plus sealer. Post space was prepared after 24 hours using gates glidden drill no. 2 followed by drill no.2 provided with the post to a depth of 10mm from the sectioned root surface. The prepared samples were randomly divided into 4 groups.

Group 1: The posts were not subjected to surface treatment (Control Group)

Group 2: The posts were surface treated with silane coupling agent (Monobod S, Ivoclar).

Group 3: The posts were surface treated with 5% hydrofluoric acid for 60 seconds.

Group 4: The posts were surface treated with 5% hydrofluoric acid for 60 seconds followed by application of silane coupling agent (Monobond S, Ivoclar).

The fiber posts were luted with dual cure luting cement (U100, 3M). The samples were then mounted in acrylic blocks. The tensile bond strength was evaluated using a universal testing machine after 24 hours. **(Terna J Dent Sci 2013; 1:84-88.)**