"COMPARATIVE EVALUATION OF MICRO-TENSILE BOND STRENGTH OF TWO 8TH GENERATION DENTIN BONDING AGENTS:AN IN VITRO STUDY."

by

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ABSTRACT

Title : COMPARATIVE EVALUATION OF MICRO-TENSILE BOND STRENGTH OF TWO 8TH GENERATION DENTIN BONDING AGENTS : AN IN VITRO STUDY

Background and Objectives:. The aim of the study was to evaluate and compare the micro tensile bond strength of two 8th generation dentin bonding agents with different solvent bases.

Materials and methodology: For the study 50 intact human permanent molar teeth were used and divided in two groups of 25 and allocated to each of the 8th generation dentin bonding agents used in the study. In all teeth occlusal enamel was removed using diamond disk and flat superficial dentin was exposed and finishing was done with wet 600-grit silicon carbide paper. Then adhesive systems were applied followed by composite resin and a resin composite block of 4mm high was obtained and the roots were removed from crown 2mm below cementoenamel junction using diamond disk and sectioned in occluso-gingival direction to obtain 3mm thick bar specimens which were grounded at the dentin - resin interface to create an hour-glass shape using round bur and the specimens were taken for micro-tensile bond strength test. Testing jig with the specimen was fixed in Universal Testing Machine and microtensile force was applied till the specimen was fractured. This testing was analyzed using unpaired Student's t-test.

Results:.

In this study microtensile bond strength of two different 8th generation dentin bonding agents having different solvent bases was evaluated. It was found that group I Futurabond DC had highest mean tensile strength among both groups.

Interpretation and Conclusion: It was found that FuturaBond DC (ethanol base)showed highest tensile bond strength when compared with G-Premio bond (acetone base).

Keywords: dentin bonding agents; self etch; bond strength; solvent