

EFEK BAHAN BONDING GENERASI VII TERHADAP KEKUATAN GESER ANTARA DENTIN DENGAN SEMEN RESIN (PENELITIAN LABORATORIUM)

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Background: Excessive removal of the tooth tissue on fixed bridge preparation may cause tooth to form cone like shape which may decrease the retention ability, increasing the sensitivity of the tooth to temperature because of the exposed dentin, and would even cause necrosis of the pulp. The main role of the resin cement materials is to obtain retention of the fixed bridge. Adhesive bond between the dentin and cement may be obtained by resin adhesive techniques. Adhesive technique requires an intermediary material called dentin bonding. Currently, the bonding material has developed and the seventh generations bonding agent (self-etch) has been introduced.

Purpose: The purpose of this laboratory research is to study the shear strength of resin cement on dentin with and without the application of the seventh generations bonding agent (self-etch)

Materials and Method: Fourteen samples of human extracted permanent premolar teeth were divided into two groups. Each group consisted of seven samples. Group A was treated with the seventh generations bonding agent (self-etch). Group B was treated without the application of the seventh generations bonding agent (self-etch)

Result: The average shear strength in group A is 5.15 MPa, whereas that group B is 3.02 MPa.

Conclusion: There is a significant difference between both group and the shear strength of resin cement on dentin with the application of the seventh generations bonding agent (self-etch) is higher than without the application of the seventh generations bonding agent (self-etch).

Keywords: resin cement, self-etch bonding agent, shear strength