ABSTRACT

Background. The success of HEMA dentin bonding agent-to-dentin adhesion depends on the bond strength which one of the kind is tensile bond strength. Quality of the bond strength itself depends on the application technique used is total etch or self etch technique. Several studies have reported the tensile bond strength of HEMA on dentin with total etch technique was greater than using self etch technique. Purpose. The aim of this study was to prove whether the tensile bond strength of HEMA on dentin with total etch technique was greater than using self etch technique. Method. The research was conducted on the surface of bovine teeth. Enamel sharpened flat (the direction parallel to the pulp) until reaches the dentin. Dentin surface area that was used for research by \[ \pi \times r^2 = (3,14 \times 1,5^2) = 7,1 \text{ mm}^2 \]. 7 pieces bovine bonded with total etch technique in which the phase of etching, washing, drying, and bonding (HEMA) applications performed separately. 7 pieces bovine bonded with self etch technique in which the phase of etching has been joined with the bonding (HEMA) applications so there is no washing and drying phase. Tensile bond strength was tested with Autograph Simadzu in LDB – Unair. Conclusion. The tensile bond strength of HEMA on dentin with total etch technique was greater than using self etch technique.

Keywords: HEMA, dentin, total etch, self etch