(SHEAR BOND STRENGTH DIFFERENCE COMPOSITE RESIN NANOHYBRID WITH TECHNIQUE WATER WET-BONDING AND ETHANOL-WET BONDING TO DENTIN)

ABSTRACT

Background: Composite resins are widely used today to replace lost tooth structure. Bonding between dentin and resin is a complex process that is influenced by several factors; one of which is ambient humidity. During drying after acid etching, it is recommended not to leave the surface of preparation too dry or too wet. If the surface is too dry, collagen will shrink and collapse. As a result, the bonding material cannot penetrate into the cavity between the fibers. If the dentine is too wet, the bonding material will also be difficult to bind with the collagen, either chemically or mechanically. The amount of water around the collagen closely correlates with the moisture created around the dentin surface during the drying process and also whether or not a rubber dam was used during the preparation process. This study is aimed to compare water wet bonding and ethanol wet bonding technique to control humidity. One way of measuring the strength of bonding is to measure shear strength. **Purpose:** to compare water wet-bonding and ethanol wet-bonding technique.**Materials and Methods:** 32 samples of bovine teeth incisors were randomly divided into 2 group. Each group consists of sixteen samples. Group 1 is treated with water wet-bonding,group 2 is treated with ethanol wet-bonding. **Results:** There is significant difference between group 1 and group 2. **Conclusion:** Shear bond strength of the composite resin bonding on dentin with ethanol wet-bonding technique is higher than the shear bond strength of the composite bonding on dentin with water wet-bonding

Key words: water-wet bonding, ethanol-wet bonding, shear bond strength, composite resin nanohybrid