ABSTRACT

**Background.** Total etch and self etch bonding agents had been used extensively in operative dentistry. These materials were used on enamel and dentin surfaces before application of the resin composite restorations. One of indications about successful restoration is there is no microleakage. The use of bonding agent has influence in attachment of teeth’s surface with composite. Different kind of bonding can influence microleakage of restorations. **Purpose.** The aim of this study was to prove the microleakage of demineralized tooth after restoration by composite using self etch and total etch bonding agent. **Method.** Extracted bovine tooth as a sample was preparationed 3 mm depth after immersed in Coca-Cola for 24 hours. 7 pieces bovine bonded with total etch technique and 7 pieces bovine bonded with self etch technique. After sample was preparationed, then patched the cavity with bonding self etch or bonding total etch and after that with composite, sample was immersed in 0.5% methylene blue solution for 4 hours. After application, the sample teeth were cut in slices mesiodistal direction, so that scores could be assigned according to the leakage by travelling microscope. **Conclusion.** The self etch bonding agent have a lower microleakage compared with total etch bonding agent.

**Key words:** HEMA, dentin, total etch, self etch