PERBEDAAN KEBOCORAN TEPI ANTARA *GLASS IONOMER CEMENT, NANOHYBRID COMPOSITE RESIN* DAN *RESIN BASED* (CENTION N) PADA RESTORASI KELAS I

MICROLEAKAGE DIFFERENCES ON GLASS IONOMER CEMENT, NANOHYBRID COMPOSITE RESIN AND RESIN BASED (CENTION N) IN CLASS I RESTORATION

ABSTRACT

***Background**: The ideal restoration material should have endurance, compatible with tooth structure and visible surrounding tissues and must be able to restore the lost tissue. There are various restoration materials such as Glass Ionomer Cement (GIC), nanohybrid composite resin and even Cention N. Microleakage is one of the failure in surface sealent, and this may increase the risk of secondary caries.* ***Purpose**: The aim of this study was to prove the differences of microleakage between Glass Ionomer Cement, nanohybrid composite resin and resin based (Cention N) in class I restoration.* ***Method**: 27 upper first premolar teeth with class I cavities (diameter: 3mm, depth: 2mm) divided into three groups with 9 samples each group. Group I: GIC (Fuji IX GP – GC Japan), Group II: Nanohybrid composite Tetric® N-Ceram Bulk Fill (Ivoclar Vivadent Liechtenstein), and Group III: Cention N (Ivoclar Vivadent Liechtenstein). All groups were immersed in 0,5% methylene blue solution for 24 hours, rinsed in running water, and section facio-palatally using carborundum disc. Afterward, section were assessed for dye penetration that represent the microleakage using scoring method under digital microscope. Finally data were collected and statistically analyzed.* ***Result**: Restoration with GIC and Cention N show significant differences, restoration with nanohybrid composite resin and Cention N show significant differences too, but restoration with GIC and nanohybrid composite resin show no significant differences.* ***Conclusion**: This research show that there is a differentiation of microleakage between Glass Ionomer Cement (GIC), nanohybrid composite resin, and Cention N in class I restoration. In Cention N found the smallest microleakage.*

***Keyword**: Microleakage; Glass Ionomer Cement; Nanohybrid Composit Resin; Cention N*