ABSTRACT

Background: Differences of micro leakage resin modified glass ionomer cement (RMGIC) restoration which were given to sixth and seventh generation of bonding is still unknown so that the research should be conducted. Purpose: to detect leakage at the edge the cavity of resin modified glass ionomer cement with sixth generations and seventh generations of bonding material. Methods: Three groups of samples i.e, group 1: six teeth RMGIC restoration without bonding, group 2: six teeth RMGIC restoration given to sixth-generations of bonding, group 3: six teeth RMGIC restoration given to seventh-generation bonding. Each group stored in the incubator 37 degrees celcius. Then the micro leakage was observed with a digital microscope. Methylen blue penetration was scored on a scale of 0 to 4 are applied in each sample. Results: Data were analyzed with the Kruskal - Wallis and Mann - Whitney Test. There is a significant difference from group 1 and group 2, group 2 and group 3. Conclusion: micro leakage of RMGIC to be sixth generations of bonding material is smaller than a given seventh generations of bonding material.

Key words: sixth and seventh generation of dentin, microleakage, Resin Modified Glass ionomer Cement (RMGIC)