ABSTRACT

AIM: The aim of this in vitro study is to compare the coronal sealing ability of Light Cure Temporary Restorative Material (Systemp Inlay manufactured by Voclar Vivadent, Lsteiniechten and CLIP manufactured by Voco, Germany) with Conventional Temporary Restorative Material (e-Temp manufactured by Diadent, India and Tempfil G manufactured by Shivam Dental, India) over different periods of time.

MATERIALS AND METHODS: 150 human premolar teeth were used in this study. Standard endodontic cavities were prepared in 135 teeth. The samples were divided into 4 Test groups (n = 30) and a negative control group without cavity preparation (n = 15) and a positive control group without restoration (n = 15). The test Groups were sealed with one of the four test materials which was further divided into 2 subgroups of 15 teeth each. After that all the samples from one subgroup of each test group were immersed separately in methylene blue solution for one day and similarly the remaining subgroups for 7 days, and the control groups were also immersed in methylene blue dye for 7 days. The teeth were sectioned and examined using a stereomicroscope for dye penetration scores. Data were analyzed and compared using Kruskal Wallis Anova, Median test and Mann whitney U test (P < 0.05).

RESULTS: All the test materials showed increase in microleakage from day 1 to day 7 and at the end of one week Conventional Temporary restorative material (Group 4 - Tempfil - G) showed the least micoleakage scores whereas the maximum microleakage scores was shown by Light Cure temporary reatorative material (Group 1 - Systemp Inlay).

CONCLUSION: All the test materials devoid of the mode of curing showed increase in the microleakage values between day 1 to day 7 and the conventional self cure temporary restorative materials provided less microleakage when compared to light cure temporary restorative materials after one week time interval.

KEY WORDS: Microleakage, Dye penetration test, Temporary Restorative material.