

ABSTRACT

AIM:

Evaluation and comparison of the clinical performance of DMG Constic 3 in 1 flowable composite with a gold standard Resin Modified Glass Ionomer Cement, Ketac N100 in Non-Carious Cervical Lesion for a time period of 6 months.

MATERIALS AND METHODS:

80 restorations with non-carious cervical lesions were treated with either Resin Modified Glass Ionomer Cement Ketac N100 or DMG Constic flowable light cure composite after randomization of allocation. Patients were recalled for follow up at baseline, 15 days and 6 months. Clinical Evaluation was done using Ryge criteria (Modified USPHS) for direct clinical evaluation of restoration. The data collected was compiled and transferred to version 20 SPSS software for statistical analysis. For survival analysis Kaplan Meier test was done and the statistical analysis was completed with chi-square test along with Pearson correlation test for relation of age to gross fracture of material and Spearman's correlation test for relation of sex with gross fracture of the material.

RESULTS:

80 restorations were done and due to attrition, a total of 76 restorations were available for evaluation after 6 months out of which 40 restorations were for DMG Constic and 36 restorations were done for Ketac N100. Survival analysis based on materials used using Kaplan Meier analysis showed 4% survival for DMG Constic and 5.3% survival for of Ketac N100. Chi-Square test revealed statistically significant data was obtained between DMG Constic and Ketac N100 with respect to colour change where DMG Constic showed 75% colour match after 6 months compared to 55.55%

for Ketac N100 (p-value =0.24). Marginal discolouration at the cavosurface was marginally better for Ketac N100 with 86.84% (p-value = 0.108) when compared to DMG Constic with 83.33% (p-value = 0.016). Marginal integrity of Ketac N100 is much better with 81.08% (p-value = 0.060) than DMG Constic 42.5% (p-value = 0.001). Spearman's analysis showed that females tend to have less gross fractures than males with a poor spearman's correlation Coefficient of -.227 for DMG Constic and -.236 for Ketac N100 which is statistically significant (p-value = 0.011).

CONCLUSION:

DMG Constic performed better with respect to colour match and colour retention than Ketac N100 over a period of 6 months. Ketac N100 performed better with respect to marginal integrity and had less discolouration in cavosurface margin when compared with DMG Constic. DMG Constic and Ketac N100 all performed equally satisfactory in other parameters of Ryge's [Modified USPHS criteria] such as anatomic contour, surface texture, gross fracture and secondary caries. Females were marginally less susceptible to gross fracture than males. Age was not significant factor for loss of retention.

Keywords: DMG Constic, Ketac N100, Flowable, Light cure Composite, Resin-Modified Glass Ionomer.