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## Gingival health around cervical carious lesions restored with calcium silicate based cement (Biodentine) compared to those restored with glass ionomer cement

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**Background & Aim:** Earlier studies of plaque accumulation on and gingival response around different filling materials have produced conflicting results. The aim of this study was to assess the gingival health around cervical lesions restored with calcium silicate (Biodentine) in comparison with glass ionomer.

**Method:** Healthy subjects attending Jordan University of Science and Technology Dental Health Center with carious lesions on the cervical third of the buccal surfaces of posterior teeth (class V- Black's Classification) from December 2014 to February 2015 were invited to participate. Based on sample size calculation, a minimum of 28 subjects, 14 in each group were needed. Subjects were distributed over two equal groups and received two types of restorations either calcium silicate based cement (Biodentine Bio) or glass ionomer cement (GC Fuji IX GP (GIC)), For each patient, plaque and gingival indices, probing pocket depth, recession, and bleeding on probing were evaluated over a 6 months period. Data were analyzed using the Statistical Package for Social Sciences software (SPSS). Difference between two means was analyzed using independent t test. The change over time in each group was analyzed using GLM with repeated measures. A p-value of less than 0.05 was considered statistically significant.

**Results:** Throughout the study, the recorded clinical parameters changed significantly between Bio and GIC, the plaque index and gingival index, were higher in Bio Group at 1, 3 and 6 months of evaluation with a significant difference ( $p < 0.05$ ), a rise in pocket depth has been noticed at 3 and 6 months ( $p < 0.05$ ), however, gingival recession did not show any difference between groups ( $p > 0.05$ ). Moreover bleeding on probing values were higher for Bio Restorations compared to GIC with significant difference ( $p < 0.05$ ).

**Conclusion:** Biodentine showed greater amounts of plaque and a higher degree of gingivitis in comparison with GIC.

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