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2042 Anticariogenic effect of glass ionomer cements: Systematic review and Meta-analysis

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*Friday, April 3, 2009*

*Location: Exhibit Hall D (Miami Beach Convention Center)*

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Objective: To report on the absence of caries on margins of Glass Ionomer Cements (GIC) restorations as compared to other materials.

Materials and Methods: PubMed and LILACS databases were searched for articles up to 5 January 2008. Inclusion criteria for articles were: (1) titles/abstracts relevant to topic; (2) published in English, Portuguese or Spanish; (3) reporting on a randomized control trial. Exclusion criteria were: (1) insufficient random allocation of study subjects (2) operator and subject not blinded, where appropriate; (3) all entered subjects not being accounted for at the end of the trial; (4) subjects of both groups not followed up the same way. Articles were only accepted if they complied with all the exclusion criteria.

Results: The systematic literature search identified 54 articles in compliance with the broad inclusion criteria. Of these, 23 articles were rejected due to insufficient internal validity. Thirty-one articles were accepted, 6 of which were systematic reviews. Twenty-five trials were accepted for data extraction and further to meta-analysis. Before heterogeneity was assessed among trials, dichotomous data of the accepted trials were pooled, indicating a pooled odds ratio (OR= Global results) of 1.31 (CI 95% 1.10-1.57). This means that GIC appears to increase the odds of absence of caries by 31%.

Conclusion: The observation that GIC has an anticariogenic effect, as compared to other materials, is supported by available continuous data. These findings are also in line with the results of most rejected trials but not with the conclusions of most of the accepted systematic reviews by other authors. In order to confirm the global results further randomized control trials are needed.

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