

Resin infiltration effects in a caries-active environment—two year results

March 20 2014

Today during the 43rd Annual Meeting & Exhibition of the American Association for Dental Research, held in conjunction with the 38th Annual Meeting of the Canadian Association for Dental Research, Mathilde C. Peters, University of Michigan, Ann Arbor, USA, will present research titled "Resin Infiltration Effects in a Caries-Active Environment – 2 Year Results."

The objective of this study was to compare carious lesion changes after resin [infiltration](#) of approximal non-cavitated lesions in a high caries risk population after two years. Resin infiltration (I=Icon, DMG-Germany) was compared to mock infiltration (C=Control) in a split-mouth RCT. Lesion progression was monitored at two levels (lesion depth rating (E2/D1/D2) and lesion depth changes within ratings) in caries-active subjects (mean DMFT=7.4+2.0, age=14-36yrs), receiving standard-of-care preventive measures including F-supplementation.

After two years, 15 tooth pairs (68% recall) in 10 patients were available for analysis. Lesion depth rating and depth increase (within ratings) were visually determined from digital radiographs by two independent examiners (intra-/inter-evaluator agreement: $k > 0.70$). Depth increase was confirmed by digital subtraction radiography (SDR). Ratings were statistically analyzed by logistic regression. Discrete time survival analysis (logistic regression and GEE modeling) was used to examine effects of treatment on probability of lesion increase over time, controlling for baseline severity.

The researchers found that infiltration successfully stabilized early non-cavitated lesions in a small population with high caries-activity. Continuing follow-up may further confirm its efficacy.

This pilot study identified important promising trends between the plaque and salivary metabolomes from caries-active and caries-free children, despite a relatively low number of subjects.

More information: This is a summary of abstract #161, "Resin Infiltration Effects in a Caries-Active Environment – 2 Year Results," which will be presented on Thursday, March 20, 2014: 10:45 a.m. – 12:15 p.m. in Exhibit Hall AB of the Charlotte Convention Center.

Provided by International & American Associations for Dental Research

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