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Effect of green tea varnish on depth of root caries

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Background & Aim: Root caries is a common, debilitating condition particularly in the elderly, which can lead to tooth loss and negatively affect the quality of life and general health of individuals. Evidence shows that green tea has cariostatic effects. Considering the gap of information on green tea varnish, this study aimed to assess the efficacy of green tea varnish for prevention of root caries.

Materials & Methods: This in vitro experimental study was performed on 42 sound premolars. Two layers of acid-resistant nail varnish were applied on root surfaces except for a window measuring 1x4 mm. The teeth were randomly divided into three groups (n=14). Group 1 (control) received no intervention. Group 2 received green tea varnish applied on the roots every 48 hours for 21 days. Group 3 received green tea varnish every 24 hours for 21 days. Next, 40 μ sections were cut at the center of window and the depth of carious lesion was measured in three points with 500 μ distance from each other using polarized light microscope. Data were analyzed using SPSS version 16 and non-parametric Kruskal Wallis and Mann Whitney U tests (0.05).

Results: The mean (and standard deviation) depth of carious lesion was 54.30 ± 28.64 (μ m), 0 and 0 in groups 1-3, respectively. Control group showed the highest depth of caries. Groups 2 and 3 were not significantly different in this respect, but significant differences were noted in depth of caries between groups 1 and 2 and also 1 and 3 ($P < 0.001$).

Conclusion: Based on the results, applications of green tea varnish every 24 or 48 hours for 21 days can prevent root caries.

Biography

Zahra Khamverdi has completed her Graduation at Isfahan University in 1999. She is Professor of Operative Dentistry department at Hamadan University of Medical Sciences. She has presented various papers in Operative Dentistry, Aesthetic Dentistry and Dental Materials at international and national conferences and published more than 35 papers in scientific journals.

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