

Prevention of root caries in Hong Kong elders: one-year result

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Objectives: To compare the effectiveness of four methods in preventing new caries and in arresting active root surface caries in elders. **Methods:** This study is a randomized clinical trial on institutionalized elders aged 60-89 years in Hong Kong. A baseline examination was conducted on elders living in 13 elderly homes. Status of their tooth roots was recorded. Elders having at least 5 teeth with exposed root and no serious medical problems were randomly allocated into one of four prevention groups: Group 1- giving individualized oral hygiene instruction (OHI) alone; Group 2 - OHI and three-monthly applications of sodium fluoride varnish; Group 3 - OHI and three-monthly applications of chlorhexidine varnish; and Group 4 - OHI and annual applications of silver diamine fluoride solution. Status of their root surfaces were assessed again after one year by a masked independent examiner. **RESULTS:** In the first three months of this study, 183 elders were recruited. After one year, 138 elders were reviewed. The subject drop-out rates in the four groups were similar, about 25%. The mean number of root surfaces with new caries found at the one-year review in the groups 1 to 4 were 0.60, 0.22, 0.69, and 0.21, respectively (ANOVA test, $p > 0.05$). The respective mean numbers of root surfaces with arrested caries were 0.11, 0.16, 0.19, and 0.21 (ANOVA test, $p > 0.05$). **Conclusion:** The differences between the effectiveness of the four studied caries prevention methods after one year were not statistically significant. The current study is still ongoing and further results will be reported later. Study supported by the Hong Kong Research Grants Council (HKU 7244/02M).

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