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2839 Success of root surface GIC restorations after six months

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Objectives: To describe and compare the success rates of restoring root caries lesions with glass ionomer cement (GIC) using a conventional and an atraumatic restorative treatment (ART) technique. **Materials and Methods:** A randomized double-blind clinical trial was conducted on institutionalized elderly aged 60-89 years in Hong Kong. Active caries lesions on root surfaces deeper than 1 mm were restored randomly by one of the two following methods: (1) caries removed with the aid of a dental bur under local anaesthesia and then the cavity was restored with a light-cured resin-modified glass ionomer cement (Fuji II LC, GC Corporation), the conventional technique and; (2) caries removed with hand instruments only and then restoring the cavity with a chemical-cured high-strength glass ionomer material (Ketac Molar, 3M ESPE), the ART technique. The status of restorations was assessed six months after placement by a masked independent examiner according to the ART and USPHS criteria. **Results:** In the first three months of the study, 87 restorations, 44 conventional and 43 ART, were placed in 53 subjects. After six months, 30 conventional and 36 ART restorations were reviewed. The overall drop-out rate was 24% and similar rates were found in the two groups. The success rates of the restorations according to the ART criteria were 90% and 92% for the conventional and the ART techniques respectively (Chi-square test, $p > 0.05$). Similar success rates were obtained using the USPHS criteria. There were no statistically significant differences (Chi-square test, $p > 0.05$) in restoration survival rates between restorations placed in anterior and posterior teeth, and those placed on different surfaces. **Conclusion:** The 6-month success rates of GIC restorations placed in root surfaces using either the conventional or the ART technique were similar and both were high. **Acknowledgement:** Study supported by a grant from the Hong Kong Research Grants Council (HKU 7244/02M).

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