

0735 ART and Conventional Root Restorations in Elders after 2 Years

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Objective: This longitudinal study evaluated the clinical performance of root surface restorations placed using either the atraumatic restorative treatment (ART) or the conventional technique in institutionalized elders in Hong Kong. The null study hypothesis was that the survival rates of the two types of root restorations would be similar. **Methods:** A randomized, double-blind, parallel group clinical trial was conducted in 21 homes for elders. Root surface caries lesions deeper than 1 mm and not involving the pulp were treated using either (1) conventional approach - caries removed by dental drills under local anesthesia and the cavity filled with light-cured resin-modified glass ionomer cement (GIC), or (2) ART approach - caries removed using hand instruments only and the cavity restored with a chemical-cured high-strength GIC. Status of the restorations was assessed 6, 12 and 24 months after placement by a single experienced examiner using a portable clinic light, mouth-mirrors and probes. **Results:** At baseline, 84 conventional and 78 ART restorations were placed in 103 elders whose mean age was 78.6 years. After two years, 46 conventional and 49 ART restorations were reviewed. The main reason for loss to follow-up was the subjects having passed away or being too ill for proper examination. The cumulative survival rates (i.e. present without major defects) of the ART and conventional restorations were 88% and 79% respectively ($p=0.13$). All the restoration failures seen at the 24-month examination were due to loss of retention. **Conclusion:** The survival rates of both the ART and conventional root restorations after two years were acceptable and similar. Since the equipment required for placing ART restorations is simpler, this approach may be more appropriate for use in outreach dental service settings for institutionalized elders. Supported by the Research Grants Council of Hong Kong (Ref. HKU 7244/02M).

[Seq #66 - Morita Awards and Clinical Gerodontology](#)

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[Back to the Geriatric Oral Research Program](#)

[Back to the IADR General Session & Exhibition \(June 28 – July 1, 2006\)](#)