Two year survival, acceptability and feasibility of art restorations in people with disability.

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Atraumatic Restorative Treatment Approach:

- Is a non-invasive approach to restorative treatment
- Has a solid evidence base, consolidated over 30 years
- ART has been shown to be equally effective as conventional restoration in both primary and permanent teeth.
- Is endorsed by the World Health Organisation
- Follows a strict protocol
- Involves caries removal with hand instruments
- Avoids the need for local anaesthesia
- Involves restoration with high viscosity glass ionomer cement


It has been suggested that ART might be useful in SCD:

• Relatively rapid restoration placement
• Avoidance of rubber dam placement
• Avoidance of local anaesthesia (‘the needle’) —
• Avoidance of rotary instrumentation (‘the drill’)
Two year survival, acceptability and feasibility of ART restorations in people with disability.

STUDY AIM:

• 2 year follow-up of ART restorations to assess survival, acceptability and feasibility compared to conventional restorations in people with disability.
METHOD

Two year survival, acceptability and feasibility of ART restorations in people with disability.

Participants:

- 66 patients (13.6 ±7.8 years) with 16 medical disorders were included in the study (consecutive recruitment).
- At initial appointment two treatment techniques explained – ART restorations and conventional composite resin resin restorations
METHOD

Two year survival, acceptability and feasibility of ART restorations in people with disability.

Group assignment:
• At the second visit, the patient and/or carer expressed treatment preference
• Treatment was attempted and preference retained or changed according to ability to perform treatment to an acceptable clinical standard

Treatment & follow up:
• At subsequent visits treatment was completed according to group assignment
• Follow up was performed at 6, 12 and 24 months
METHOD

Two year survival, acceptability and feasibility of ART restorations in people with disability.

Evaluation

Effectiveness

Survival of restorations at 6, 12 and 24 months

ART Restoration Criteria*

Suitability (acceptance, feasibility and satisfaction)

Reasons for selection of a treatment technique

Reasons for change from preferred option

Level of satisfaction with treatment received

First appointment:
DMFT / dmft / S-OHI / GBI / ICF Checklist / Informative brochures

CRT/in clinic  CRT/GA  ART

Reasons for the selection

Second appointment
First treatment session

Group assignment

Reasons for the change

Following sessions:
Treatment provided

6 months follow up:
Survival (detection of early failures)

12 months follow up:
DMFT/dmft/S-OHI/GBI + Survival + Level of satisfaction

24 months follow up:
DMFT/dmft/S-OHI/GBI + Survival

ATRAUMATIC RESTORATIVE TREATMENT IN SCD.
RESULTS

Two year survival, acceptability and feasibility of ART restorations in people with disability.

Treatment preference & acceptability:

<table>
<thead>
<tr>
<th>No. patients</th>
<th>“Want ordinary treatment; ART lower quality treatment; Keep to what we know”</th>
</tr>
</thead>
</table>
| Composite Chairside | 15
| Composite GA | 8 |
| ART Chairside | 43 |

“Needs too many fillings; Dental examination difficult; Urgent need for treatment”

“Cannot cope with drill; Spasticity triggered by drill; Want to avoid general anaesthesia”
RESULTS

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Group assignment & feasibility:

<table>
<thead>
<tr>
<th></th>
<th>Composite Chairside</th>
<th>Composite GA</th>
<th>ART Chairside</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial choice</td>
<td>15</td>
<td>8</td>
<td>43</td>
</tr>
<tr>
<td>Group assignment</td>
<td>5</td>
<td>14</td>
<td>47</td>
</tr>
</tbody>
</table>

Numbers in boxes indicate the count of group assignments.
Two year survival, acceptability and feasibility of ART restorations in people with disability.

Group assignment & feasibility:

Reasons given for a change of group:
- Inability to provide restorations of optimal clinical standard
- Inability to cooperate
- Hyperactivity
- Inability to cope with drill
- Treatment required too extensive for level of cooperation
RESULTS

Two year survival, acceptability and feasibility of ART restorations in people with disability.

<table>
<thead>
<tr>
<th>Treatment Provided</th>
<th>Composite Chairside 5 patients</th>
<th>Composite GA 14 patients</th>
<th>ART Chairside 47 patients</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of permanent restorations</td>
<td>17</td>
<td>30</td>
<td>122</td>
<td>169</td>
</tr>
<tr>
<td>Number of primary restorations</td>
<td>4</td>
<td>65</td>
<td>47</td>
<td>116</td>
</tr>
<tr>
<td>Total number of restorations</td>
<td>21</td>
<td>95</td>
<td>182</td>
<td>298</td>
</tr>
</tbody>
</table>
### Survival: Percentage survival rates (surv) and standard error (SE) of ART and CRT restorations by type of teeth

<table>
<thead>
<tr>
<th>Interval (years)</th>
<th>ART primary</th>
<th>ART Permanent</th>
<th>CRT primary</th>
<th>CRT Permanent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Surv</td>
<td>SE</td>
<td>Surv</td>
<td>SE</td>
</tr>
<tr>
<td>6 mths</td>
<td>98.3</td>
<td>0.6</td>
<td>98.4</td>
<td>1.2</td>
</tr>
<tr>
<td>1 year</td>
<td>96.5</td>
<td>2.6</td>
<td>98.4</td>
<td>1.2</td>
</tr>
<tr>
<td>2 years</td>
<td>92.1</td>
<td>2.2</td>
<td>95.9</td>
<td>1.8</td>
</tr>
</tbody>
</table>
RESULTS

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Survival:

The 2-year survival rates and jackknife standard error of ART and CRT restorations were 94.8±2.1% and 86.5±4.1%, respectively (p=0.01).

Reasons for failure were predominantly related to marginal defect and fracture in the restoration.
RESULTS

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<table>
<thead>
<tr>
<th>Satisfactory:</th>
<th>Visual Analogue Scale (0-10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selected and received ART</td>
<td>9.2 ±0.9</td>
</tr>
<tr>
<td>Selected and received CRT</td>
<td>7.4 ±1.1</td>
</tr>
<tr>
<td>Selected and received CRT GA</td>
<td>8.1 ±1.1</td>
</tr>
</tbody>
</table>

Satisfaction among ART receivers were statistically significantly higher than for CRT receivers in both the clinic and under general anaesthesia (Bonferroni; α=0.05).
CONCLUSION

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The results of the present study show that ART is a feasible, acceptable and effective approach to restorative treatment in patients with disability, many of whom have difficulty coping with conventional treatment.
THANK YOU FOR YOUR ATTENTION


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