

Atraumatic Restorative Technique: An evidence based approach for the management of caries in older adults

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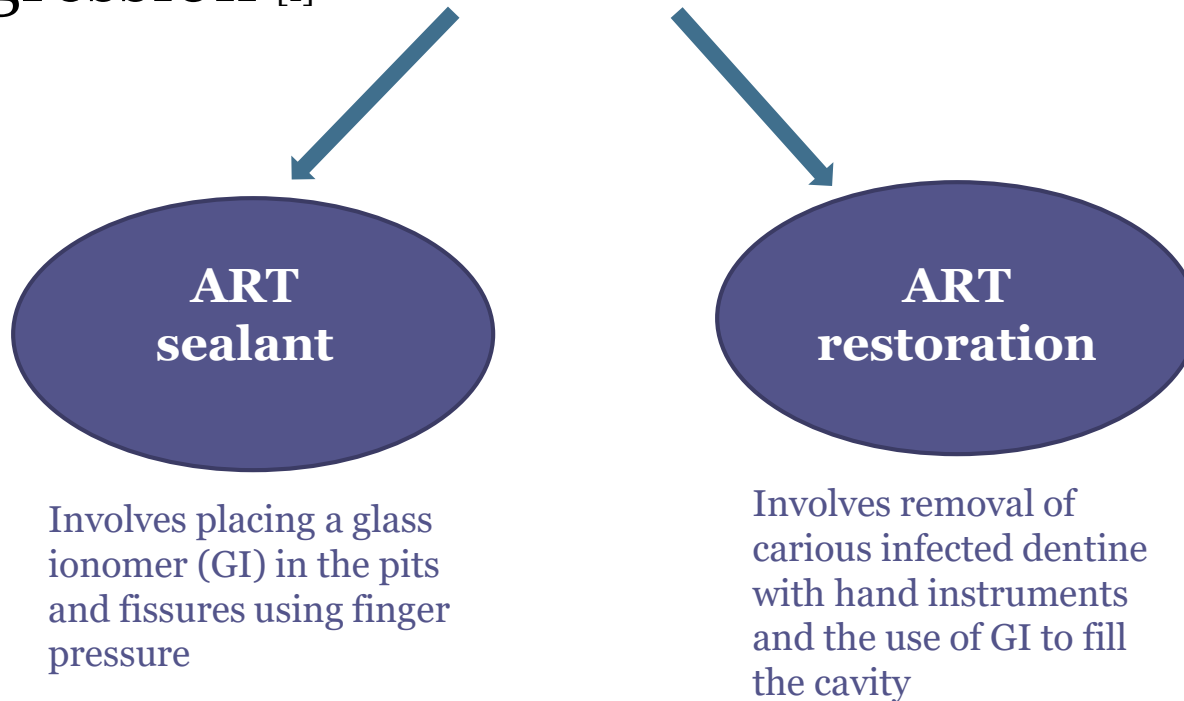
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What is Atraumatic Restorative Technique?



Atraumatic Restorative Technique (ART) –a minimally invasive care approach in preventing dental caries and stopping its further progression ^[1]



What is an older adult?



- Chronological age of $>$ or $=$ 65 years old ^[2]
 - Accepted by most developed countries
- However, chronological age doesn't always reflect the biological age ^[2]
 - Therefore a worldwide accepted definition is difficult to be established



Use of ART for older adults - What is the evidence?



METHODS

- Literature search was undertaken using the following databases:
 - PubMed, Google Scholar and Cochrane library

Search terms:

“atraumatic restorative technique”
“older adults OR elderly”
“dentistry OR dental”

- Five articles deemed relevant
 - 1 case series, 4 RCTs
- Narrative literature review

ART Vs Conventional Restorations

- Success rate of ART high and statistically insignificant to conventional restorations (63% - 86.4%)

- Honkala 2002 (case series) [3]
- Lo *et al.* 2006 (RCT) [4]
- da Mata *et al.* 2015 (RCT) [5]

-Short follow up (1-2 years)
-Many have a low sample size and a high dropout rate
-some used different restorative materials for each group (GI for ART, RMGI for conventional)

- Conventional Restorations significantly more effective than ART

- Cruz Gonzalez and Marin Zulaga 2016 (RCT) [6]

-Short follow up (6 months)
- High dropout rate
- 2 different operators

Chemical caries removal agents

- Use of chemical caries removal agent (carisolv) prior to ART restoration did not significantly improve the success rates

- Gil-Montoya et al. 2014 (RCT) [7]

- Short follow up (6 months)
 - High dropout rate
 - 2 different operators

Discussion



Number of older
adults is ↑



Number of older adults
retaining their natural
teeth is ↑



High quality evidence to aid
clinical decision making for
this patient cohort is essential

Advantages of the use of ART for older patients

1. Remove barriers to dental care
 - Fear, anxiety, lack of knowledge, costs etc.
2. Decrease oral health inequalities
 - By making dental care more accessible and affordable
3. Increase levels of oral and general health
4. Help governments achieve their aims
 - By providing cost effective interventions that can be used in policies to prevent and control oral diseases in older patients

- Based on the studies available, it can be concluded that ART restorations are an effective and reliable alternative to conventional restorations
- This literature review found that the use of carisolv is not associated with higher success rates
- While evidence is available to support success of ART, many dentists find it hard to accept this concept and adopt it in routine practice

Conclusion



- While available evidence is limited, it supports the use of ART restorations for older patients
- Further high quality RCTs, systematic reviews and meta-analyses will be beneficial in reinforcing the available literature
- By providing a cost-effective alternative method to conventional restorations, ART can help remove some of the barriers to dental care, decrease oral health inequalities and improve oral and general health of older patients

Thank you!

Acknowledgments:

Dr Caoimhin MacGiolla Phadraig (Dublin Dental University Hospital)



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