



INTRODUCTION

- Restoring maxillary incisors in children with Early Childhood Caries (ECC) can be challenging due to poor cooperation and the technique sensitive nature of traditional restorative procedures.
- While silver diammine fluoride (SDF) can be a great interim, non-invasive treatment option, its dark staining can raise esthetic concerns, especially for anterior teeth.

OBJECTIVES

- To determine if strip crowns filled with resin-modified glass ionomer (RMGI) are:
 - 1) an effective interim caries management option for young children with ECC (ex: discoloration, absence of pathology, marginal integrity of the restoration)
 - 2) acceptable to parents as an esthetic, interim therapeutic restoration

MATERIALS AND METHODS

- A clinical study is being conducted at the University of Florida- NCEF Pediatric Dental Center.
- Inclusion criteria:** Healthy children ages 3 to 5 years old with one or more supragingival, multi-surface carious lesions in maxillary primary incisors; open contacts; marginally cooperative
- Exclusion criteria:** History of SDF use, trauma, noted malocclusion, periodontal pathology, less than 1/2 of root remaining
- Atraumatic restorative treatment (without local anesthesia or tooth preparation) was performed with strip crowns filled with FUJI II LC.
- Marginal integrity and absence of pathology of the restorations were then examined with 3, 6 and 12 months follow-up visits.
- Parental acceptance regarding the effectiveness of the treatment and esthetics of the restorations (s) was evaluated via questionnaire at each visit.

RESULTS

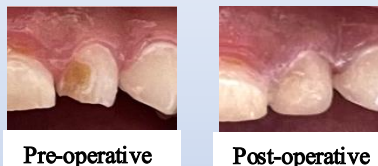


Figure 1. Pre-operative and immediate post-operative clinical photos of tooth #G treated with an RMGI strip crown.



Figure 2. Clinical photos (a) and radiographic follow-up (b) for tooth #G.

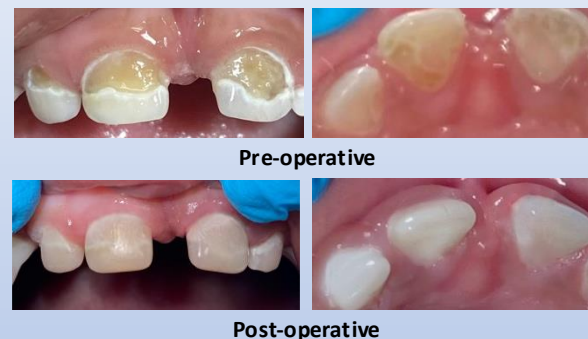


Figure 3. Pre-operative and immediate post-operative clinical photos of teeth #D, #E, and #F treated with an RMGI strip crown.

- A total of 13 patients were enrolled in the study with a total of 26 teeth treated
- Of the 13 patients, 7 completed all the follow up appointments
- Only 3 teeth (in 3 different subjects) had restorations redone - 1 tooth due to discoloration of the material and 2 teeth as part of complete oral rehabilitation under sedation
- None of the teeth developed pain or radiographic pathology during the study
- Based on the data collected, 100% parental satisfaction was reported following immediate treatment and at subsequent follow-ups

CONCLUSION

- The data collected in this pilot study suggest that resin-modified glass ionomer strip crowns are an acceptable interim therapeutic restorations for caries management and have acceptable esthetic outcomes for primary maxillary incisors affected by ECC. Further research and data collection in more subjects is necessary to validate these initial findings.