

INTRODUCTION

- For children with early childhood caries (ECC), traditional restorative procedures for maxillary incisors are technique sensitive.
- Due to identified barriers, the ability to treat these patients under sedation or general anesthesia (due to poor cooperation and/or extent of treatment) is limited.
- Interim, non-invasive caries control approaches such as silver diamine fluoride are currently utilized, but pose esthetic concerns, especially in the anterior region.

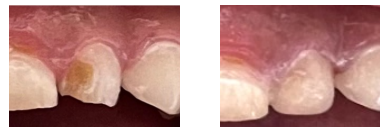
OBJECTIVES

- To determine if resin-modified glass ionomer strip (RMGI) crowns are:
 - effective for interim caries management in young children with ECC (ex: restoration marginal integrity, discoloration, absence of pathology)
 - accepted by 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.
- Healthy children ages 36-71 months old with supragingival, multi-surface lesions present on maxillary incisors are being recruited. 1-4 carious maxillary incisors per patient were treated.
- Carious teeth were restored with resin-modified glass ionomer strip crowns in an atraumatic manner (no local anesthesia and no tooth preparation).
- Parental esthetic acceptance and effectiveness of the restorative technique was measured at each follow up visit (3 months, 6 months, and 12 months).

RESULTS



Pre-operative

Post-operative

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



a)

3 months

6 months

12 months



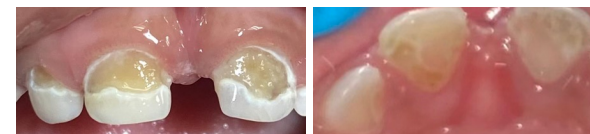
b)

Pre-operative

6 months

12 months

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



Pre-operative



Post-operative

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

- Currently, there are 10 patients with 16 teeth enrolled in the study.
- Of the 10 patients, 1 patient failed to continue with follow-up, 1 restoration was redone in the operating room along with complete oral rehabilitation, and 1 was redone due to discoloration.
- Data collection and analysis is ongoing with the intent of enrolling upwards of 20 patients.
- From current data, 100% parental satisfaction was reported following immediate treatment and at subsequent follow-ups.

CONCLUSION

- Based on limited follow up information currently, there have been no adverse effects noted clinically or radiographically.
- With an increased sample size, it is anticipated that findings tend to support the hypothesis that resin-modified glass ionomer strip crowns are acceptable interim therapeutic restorations for caries management and have acceptable esthetic outcomes for primary maxillary incisors affected by ECC.