



## INTRODUCTION

Early childhood caries (ECC) is a major health problem in the United States. ECC-affected children often require advanced behavior guidance techniques for restorative care due to age and cooperation ability. Long waiting lists and limited operating room time availability for dental care in hospitals are apparent across the US. Interim application of Silver Diamine Fluoride (SDF) may delay or arrest caries progression.

## OBJECTIVE

To determine the impact of SDF application on patients waiting for comprehensive treatment in the operating room and the severity of treatment provided compared to the initially planned treatment.

## MATERIALS AND METHODS

A retrospective chart review of patients aged 3 to 10 years seen at the Naples Children and Education Foundation Dental Center in Naples, Florida during the fiscal year 2021.

### INCLUSION CRITERIA

- 3-10 years of age
  - Interproximal caries in posterior teeth seen radiographically (D2 lesions)
  - Lesions deemed restorable at exam appointment
  - Radiographs taken prior to operating room treatment
  - If SDF was placed, must be placed after radiographs but prior to the operating room.
- Out of 190 patients seen in the operating room in the year 2021, 61 patients qualified: 153 teeth total, with 53 being treated with SDF and 100 without SDF.
  - All teeth that received SDF had only received it once between diagnosis of the lesion and treatment in the operating room.

## RESULTS

Table 1. Number of SDF application, Extraction and Pulp Therapy

Variable		Number	Percentage (%)
SDF Application	Yes	44	12.3
	No	17	4.7
Extraction	0	47	77.0
	1	12	19.7
	2	1	1.6
	4	1	1.6
Pulp Therapy	0	47	77.0
	1	9	14.8
	2	5	8.2

(n=61)

Table 2. Cross-tabulation Analysis

	SDF			
	YES		NO	
	Number	Percentage	Number	Percentage
<b>Extraction</b>				
None	16	94.1	31	70.5
One or more	1	5.9	13	29.5
Chi <sup>2</sup> : 3.88 p= 0.049				
<b>Pulp Therapy</b>				
None	14	82.4	33	75.0
One or more	3	17.6	11	25.0
Chi <sup>2</sup> : 0.375 p= 0.540				

There was a statistically significant difference between SDF placed and extraction ( $p < 0.049$ ). No significant difference was observed between placing SDF and having pulp therapy ( $p > 0.54$ ).

## CONCLUSIONS

The results show that application of SDF was deemed effective in preventing extractions (94.1%) for patients waiting for comprehensive restorative treatment in the operating room, thus leading to less severe treatment. SDF did not play a role in preventing pulp therapy in restorable teeth.

## ACKNOWLEDGEMENTS

This study was supported in part by a grant from the Naples Children and Education Foundation.

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