

INTRODUCTION

- Numerous studies have shown that IPT on carious teeth have higher success rates compared to those treated with the pulpotomy technique
- Accurate radiographic and clinical diagnosis of pulpal vitality is essential to the success of IPT
- The maintenance of teeth until their normal exfoliation cycle is critical for the facial and oral functional development in a growing child. Premature loss of teeth can contribute to malocclusion, phonetic, functional, and esthetic concerns
- The primary goal of vital pulp therapy aids to preserve teeth with deep carious lesions to maintain arch integrity until their time for exfoliation
- Glass ionomer (GI), stainless steel crowns (SSC), and composite resin are restorative materials which can be used for IPT on permanent and primary teeth

PURPOSE

- To examine differences in success rates of IPT followed by different types of restorations in a diverse pediatric population at high risk for caries

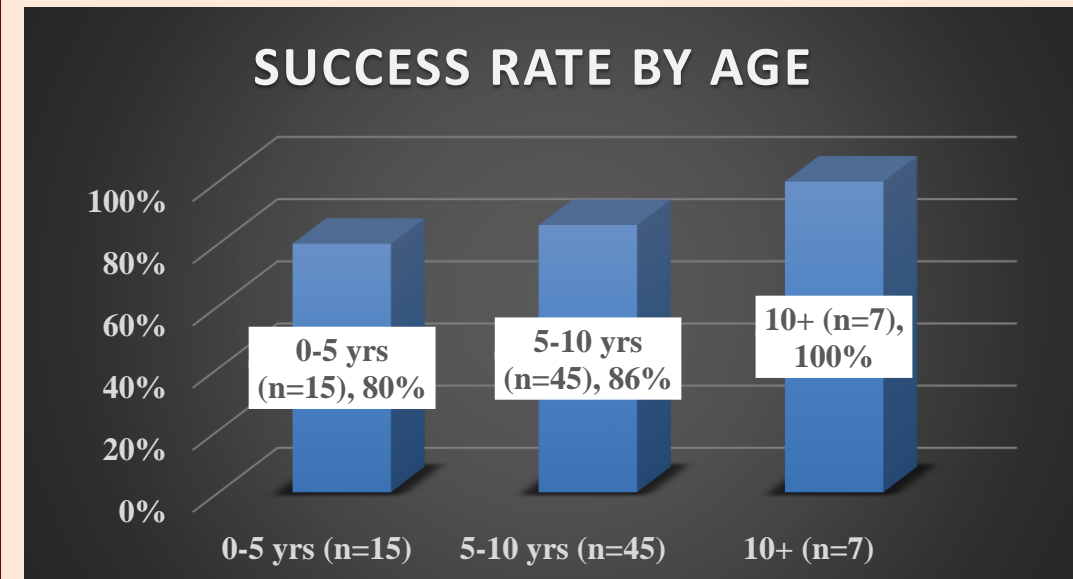
METHOD

- A review of patient records/charts seen at a community hospital from 2019-2022 was conducted. Outcomes of IPT followed by restorations including stainless steel crowns (SSC), glass ionomers (GI), and composite resin were compared. Success was defined as lack of significant clinical and radiographic findings at follow-up

CHART 1



CHART 2



● n = number of patients within that age range

RESULTS

- The sample size was 67 patients with the average age of 7 (range 3-13 years)
- Forty-three percent were Hispanic, 27% South Asian, 13% African American, and 16% Other
- Thirty-nine percent received SSC, 31% GI, and 30% composite resin
- The overall success rate of IPT was 87%
- Significant differences were found in success rates across treatment types ($P = .03$)
- The average time to failure for GI was 177 days vs. SSC and composite resin 304 days. However, this difference was not significant ($P = .30$)

TABLE 1: Demographic Distribution

	Overall (n=67)	SSC (n=26)	GI (n=21)	Composite Resin (n=20)
AGE	7.42 (2.37)	6.65 (1.77)	6.24 (1.97)	9.65 (1.93)
GENDER				
Male	73% (49)	77% (20)	76% (16)	65% (13)
Female	27% (18)	23% (6)	24% (5)	35% (7)
RACE AND ETHNICITY				
Hispanic	43% (29)	46% (12)	48% (10)	35% (7)
South Asian	27% (18)	38% (10)	19% (4)	20% (4)
African American	13% (9)	15% (4)	5% (1)	20% (4)
Other	16% (11)	0	29% (6)	25% (5)

DISCUSSION

- Although the overall success rate of IPT was 87%, significant differences were found in success rates across treatment types, with GI having nearly 30% lower success rate than other restorative modalities
- No significant differences were found between sociodemographic and treatment types
- GI restorations were mostly performed on the younger age group, and could account for the higher failure rate due to behavioral and compliance issues
- Permanent teeth were treated only with composite resin, which could explain the higher success rates compared to GI restorations which were done on both dentitions

CONCLUSIONS

- The lower success rate and difference in the average time to failure for GI restorations warrant consideration. This result cannot be thoroughly explained by sociodemographic differences but could be due to confounding variables such as behavioral factors and selection of restorative material

- Additional studies are recommended to clarify these findings. A larger sample size is needed to validate this data

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