

Success Rate of Primary Teeth MTA Pulpotomies



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INTRODUCTION

- The Lincoln Ave clinic, part of a federally qualified health center, serves many low-socioeconomic children with a high burden of dental disease
- Untreated caries often has broad dental, medical, social, and quality of life consequences¹
- Pulpotomies are a viable treatment option for carious or traumatic pulpal exposures^{2,3}
- The goals of vital pulp therapy are to preserve pulp vitality, manage pain, and keep the primary tooth until it naturally exfoliates²
- Teeth must have healthy pulp or reversible pulpitis and healthy radicular pulp^{2,3}
- Mineral trioxide aggregate (MTA) is biocompatible and induces a thick dentin bridge, which makes it suitable to maintain pulp health^{3,4}
- A recent systematic review found overall MTA success rate to be 94% at 24 months⁵
- Pulpotomy medicaments with reliable outcomes are of great importance

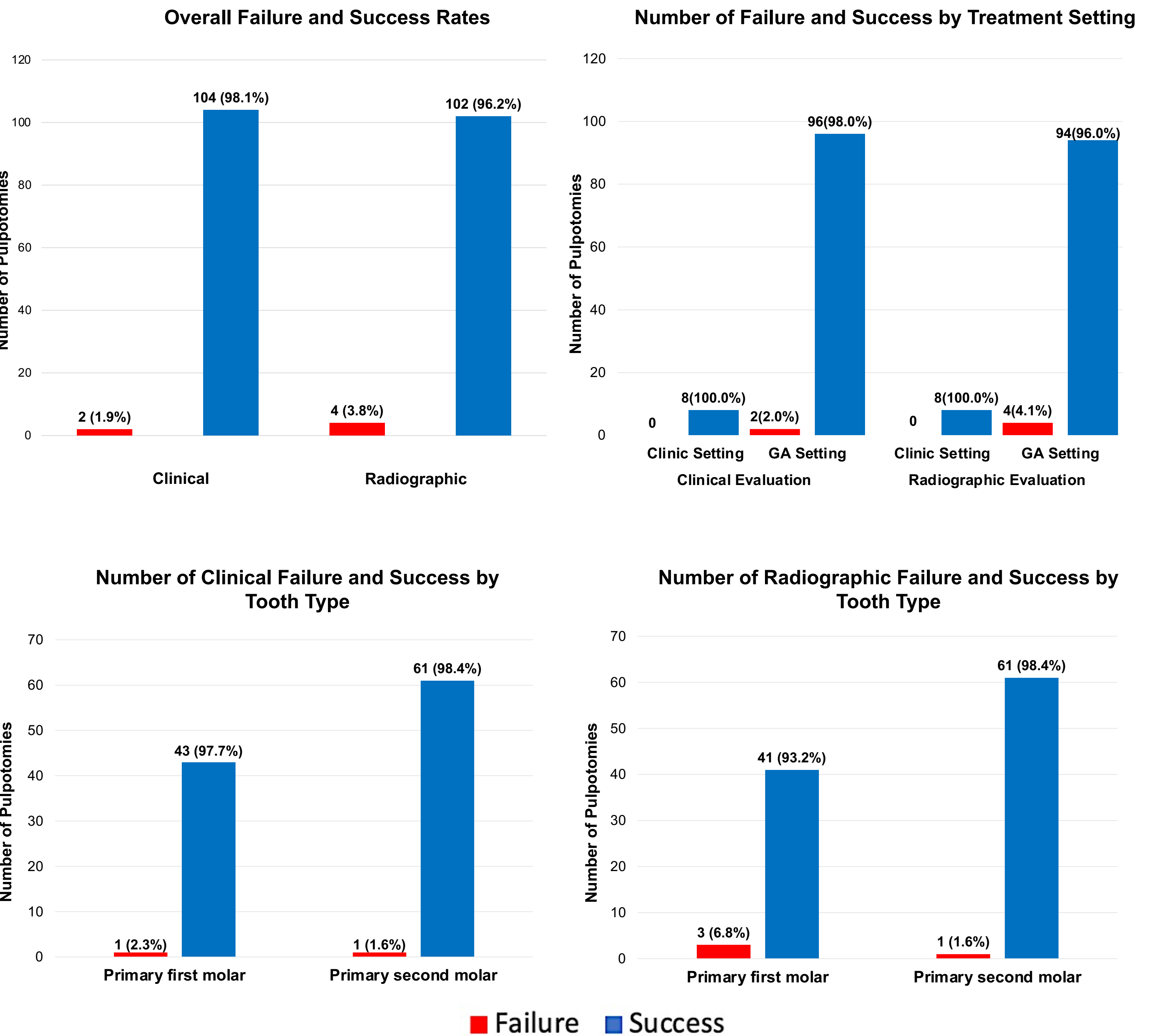
PURPOSE

- To determine the success rate of primary teeth pulpotomies completed with mineral trioxide aggregate (MTA) and sodium hypochlorite at the Lincoln Ave pediatric dental clinic in Yakima, Washington

METHODS

- Pulpotomies completed under general anesthesia or in the clinic setting were evaluated via retrospective record review
- A data report was generated utilizing the D3320 pulpotomy code for dates between October 1, 2019, and September 30, 2021
- The clinical and radiographic outcomes of pulpotomies were assessed

RESULTS



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- 106 pulpotomies were completed for 76 patients
- There were 43 females and 33 males with a mean age of 4.16±1.05 years old
- 92.5% of pulpotomies completed under general anesthesia
- 7.5% of pulpotomies completed in clinical settings
- Primary tooth type included 42% first molars and 58% second molars
- No statistical difference for clinical or radiographic success in terms of treatment setting or tooth type
- Overall clinical success was 98.1% with 1.9% failure
- Overall radiographic success was 96.2% with 3.8% failure
- Distribution of clinical and radiographic variables was significantly different ($p<.05$)

CONCLUSIONS

- MTA is a reliable material for primary teeth pulpotomies
- There is a significant difference between the distribution of clinical and radiographic variables ($p<.05$)
- MTA pulpotomy clinical success rate was higher than radiographic success rate
- Future efforts should focus on further investigating pulpotomy techniques and success rates

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