

Clinical and radiographic comparison of primary molars after formocresol and electrosurgical pulpotomy: A randomized clinical trial

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[View references \(7\)](#)

Abstract

Background: Vital pulpotomy is a single-stage procedure defined as the surgical amputation of the coronal portion of exposed vital pulp, usually as a means of preserving the vitality and function of the remaining radicular portion. **Objectives:** The aim of this study was to compare the clinical and radiographic success rates for electrosurgical vs formocresol pulpotomy in human primary molar teeth. **Settings and Design:** This was a prospective, randomized clinical trial. **Materials and Methods:** In this randomized clinical trial, pulpotomies were performed on 70 primary molars in children aged 2-10 years. The teeth were treated using either a conventional formocresol (30 teeth) or electrosurgical technique (40 teeth). Following the pulpotomy procedure, the teeth were evaluated for clinical and radiographic success for three, six and nine months. The teeth were evaluated for the presence of pain, abscess, fistula, mobility, internal and external resorption, and radiolucency. **Statistical Analysis:** The data were assessed with Fishers' Exact test. **Results:** After nine months of follow-up, the clinical and radiographic success rates were 96 and 82% respectively in the electrosurgical group and 100 and 96.8% respectively in the formocresol group. There was no statistically significant difference between the success rates in the two groups ($P > 0.05$). **Conclusions:** Our results showed the failure rates for electrosurgical pulpotomy to be equal to those for formocresol pulpotomy. Although electrosurgical pulpotomy is a nonpharmacological technique giving favorable results, it is still a preservative technique. Further studies using larger samples and longer evaluation periods are recommended.

Reaxys Database Information

Author keywords

Electrosurgery; Formocresol; Pulpotomy

Indexed Keywords

EMTREE drug terms: dental alloy; formocresol; zinc oxide eugenol

EMTREE medical terms: article; child; clinical trial; comparative study; controlled clinical trial; controlled study; deciduous tooth; dental surgery; drug effect; electrosurgery; endodontics; follow up; human; methodology; molar tooth; periodontal disease; preschool child; prospective study; randomized controlled trial; tooth disease; tooth fistula; tooth pain; tooth periapical disease; treatment outcome

MeSH: Child; Child, Preschool; Dental Amalgam; Dental Fistula; Dental Pulp Capping; Dental Pulp Exposure; Dental Restoration, Permanent; Electrosurgery; Follow-Up Studies; Formocresols; Humans; Molar; Periapical Abscess; Prospective Studies; Pulpotomy; Tooth Mobility; Tooth Resorption; Tooth, Deciduous; Toothache; Treatment Outcome; Zinc Oxide-Eugenol Cement

Medline is the source for the MeSH terms of this document.

Chemicals and CAS Registry Numbers: dental alloy, 8049-80-2; formocresol, 37203-87-0; zinc oxide eugenol, 8068-83-0; Dental Amalgam, 8049-80-2; formocresol, 37203-87-0; Formocresols; Zinc Oxide-Eugenol Cement

ISSN: 0970-9290 • Source Type: Journal Original language: English