

## **MTA Pulpotomy for Vital Primary Incisors: A Randomized Controlled Trial**

Nguyen TD, Casas MJ, Sigal MJ, Judd PL  
Faculty of Dentistry, University of Toronto

**Objective:** To compare clinical and radiographic outcomes of mineral trioxide aggregate (MTA) pulpotomy and root canal therapy (RCT) in carious vital primary maxillary incisors.

**Methods:** Asymptomatic carious vital primary incisors with pulp exposure in healthy children aged 18 to 46 months were randomly allocated to receive MTA pulpotomy or RCT. Incisors were assessed clinically and radiographically at 6-month intervals up to 24 months post-treatment. Two disinterested raters classified each incisor into one of the following radiographic outcomes: N=normal incisor without pathologic change; Po=pathologic change present, follow-up recommended; Px=pathologic change present, extract.

**Results:** One hundred seventy one primary incisors in 70 subjects were enrolled in the study. Twelve month outcomes demonstrated no statistical difference in clinical outcomes between MTA pulpotomy and RCT ( $P=.84$ , chi-square test). There was no statistical difference in radiographic outcomes for MTA pulpotomy and RCT group for Px outcomes ( $P=.19$ , chi-square test). Survival analysis demonstrated no significant difference in survival for MTA pulpotomy and RCT incisors ( $P=.69$ , log-rank test) over a 6- to 24-month follow-up interval. A perfect level of agreement between raters was found for incisors with outcome Px ( $K=1$ , Cohen's kappa).

**Conclusions:** MTA pulpotomy can be considered an alternative to RCT for carious vital primary incisors.