Calcium Hydroxide and Iodoform Compared to Zinc Oxide and Eugenol Containing Materials Pulpectomy in Primary Teeth: A Systematic Review and Meta-Analysis

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Aim. This systematic review and meta-analysis aimed to evaluate whether primary teeth calcium hydroxide and iodoform pulpectomy is more successful clinically and radiographically compared to ZOE containing materials.

Methods. A systematic search was performed through electronic databases to find relevant studies. The Titles of all studies were reviewed by two authors independently. Duplicate articles were excluded. After titles selection, the abstracts then full text were reviewed. Finally, a meta-analysis was performed.

Results. The searches yielded 3,492 potentially related titles, 25 were selected and reviewed in full text. The 15 studies included in the presented systematic review have included 1,649 primary teeth (337 anterior teeth and 1332 posterior teeth) from children aged between 3 -13 years were pulpectomized and have follow-up period ranged from 2 – 30 months. The included studies reported different inclusion and exclusion criteria and different interventions in their methodology. A total number of 10 studies were included in the meta-analysis showed no statistical significant difference in the overall clinical and radiographic success rate in primary teeth pulpectomy when using calcium hydroxide and iodoform compared to zinc oxide and eugenol containing materials. However the high

quality studies reported statistical significant difference in the radiographic success rate in zinc oxide and eugenol containing materials group compared to calcium hydroxide and iodoform.

Conclusion. This study represents no statistical significant differences between the overall clinical and radiographic success rate of calcium hydroxide and iodoform compared to zinc oxide and eugenol containing materials used in primary teeth pulpectomy. However the high quality studies reported statistical significant difference in the radiographic success rate in zinc oxide and eugenol containing materials group compared to calcium hydroxide and iodoform. The results of this study recommended more high quality randomized clinical trials with long follow up period to determine the clinical and radiographic success rate of in zinc oxide and eugenol containing materials group compared to calcium hydroxide and iodoform.