Comparison between TheEffect of Pulpotec and The Effect of Calcium Hydroxide Dressing on Interappointment Pain Relief on Symptomatic Posterior Teeth with Acute Pulpitis and Periodontitis

(Randomized Controlled Trial: Part 8)

A Thesis

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This thesis is dedicated to my parents who supported and guided me more than I can ever tell. I hope that this achievement will complete the dream that you had to for me all those many years ago when you choose to give me the best education you could.

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List of abbreviations

Ca(oH)₂ Calcium Hydroxide

PD Pulpotec

RCT Randomized controlled trial

ZNO Zinc oxide eugenol

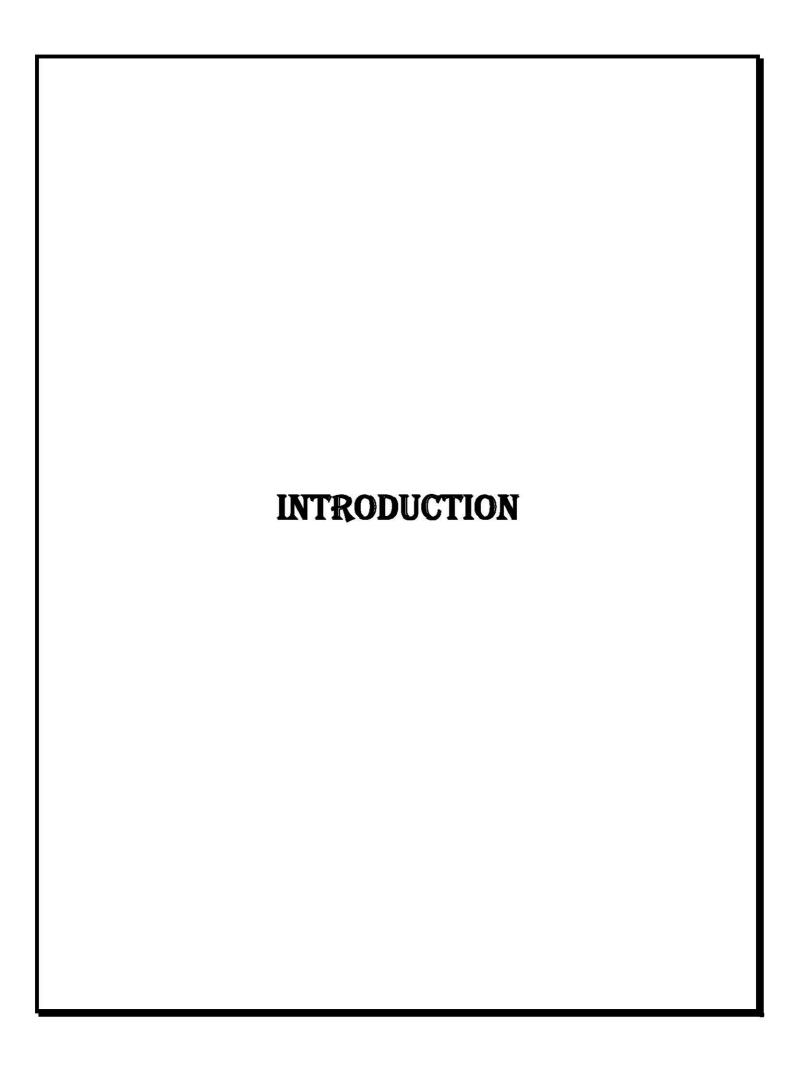
VAS Visual analogue scale

NaOCL Sodium hypochlorite

MTA Mineral trioxide aggregate

CEM Calcium enriched mixture

NEC New endodontic cement



Introduction

Pulpitis and periodontitis is a condition in which the periodontium and the pulp of the tooth become inflamed by an irritant, causing pain and pressure in the tooth. There are varying degrees of pulpitis, ranging from mild to severe.

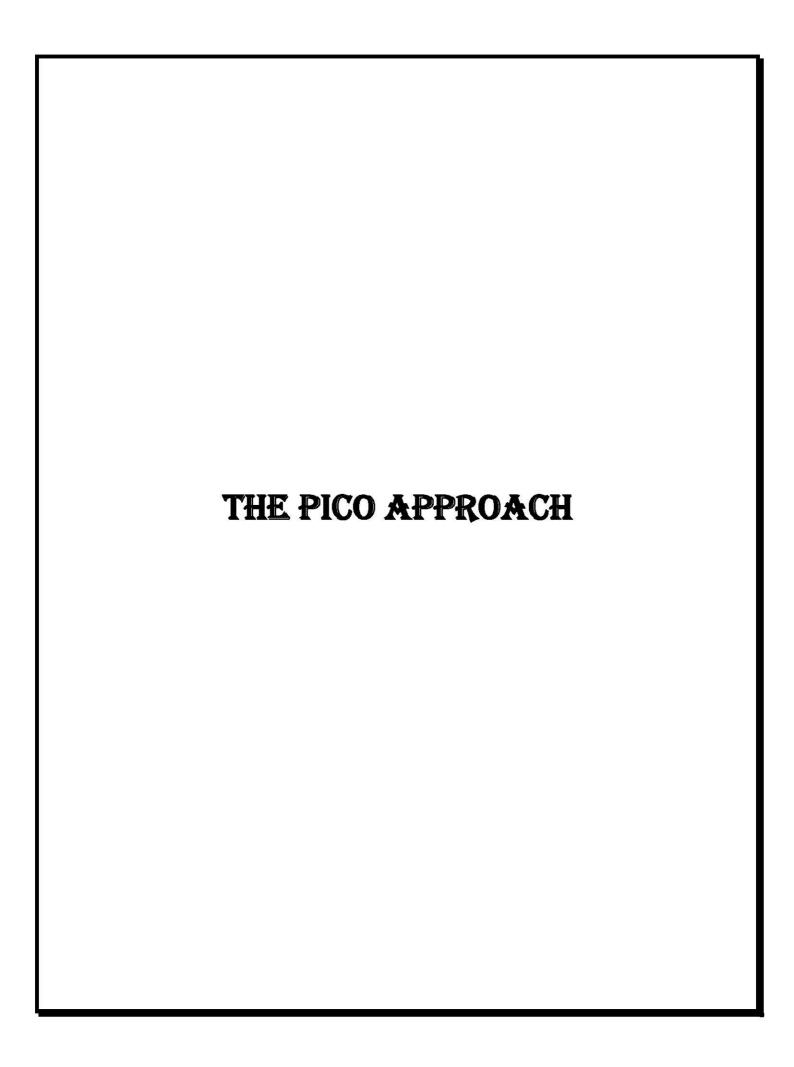
In mature teeth suffering from pulpitis, pulp tissue is usually removed and the root canals are cleaned, shaped and filled. Despite reported clinical success, endodontically-treated teeth become devitalized, brittle and susceptible to postoperative fracture or other complications, including reinfections due to coronal leakage or microleakage. From a biological point of view, the most desirable treatment outcome for any endodontic treatment is to preserve the vital pulp, thus promoting a normally functioning dentin/pulp complex.

Among the methods for preservation of affected pulp, vital pulpotomy for exposed permanent teeth is an option; pulpotomy is the strategy where teeth with large pulp exposure, or with infected pulp, all of the coronal pulp must be removed; a capping agent is placed directly on the exposed pulp to protect the underlying pulp from further injury. After pulpotomy treatment, the dental pulp within the root canal can be preserved.

Several pulp capping materials have been used, traditionally; calcium hydroxide has been the most common capping agent. Calcium hydroxide is antibacterial and disinfects the superficial pulp; however, there was several drawbacks related to calcium hydroxide, which led scientist to seek new material.

Pulpotec is a recent filling paste for simple, rapid and long-term treatment by pulpotomy of vital molars, both permanent and deciduous.

This study was preformed to compare the effect of Pulpotec to Calcium Hydroxide as pulp capping agent after pulpotomy of permanent teeth suffering from acute pulpitis with apical periodontitis, and graded their success based on presence or absence of pain or radiographic findings.



PICO Approach

P (Problem, patient):

Patient with symptomatic pulpitis with periodontitis.

I (intervention):

Pulpotec used as interappointment dressing.

C (compotator):

Calcium hydroxide used as interappointment dressing.

O (outcome):

Interappointment pain relief measured by operator using visual analogue scale (VAS) and patient related (clinical and radiographic findings).

