

**Evaluation of Post-Operative Pain after  
Indirect Pulp Treatment of Young  
Permanent Molars using Photo-Activated  
Oral Disinfection versus Calcium  
Hydroxide:  
A Randomized Clinical Trial**

**Thesis**

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Cairo University

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{ بسم الله الرحمن الرحيم }

**"قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا**

**إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ**

**الْعَلِيمُ الْحَكِيمُ"**

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# ***Dedication***



## ***Dedication***

*To:*

*My beloved parents, my father, mother, my sister  
and brother for their endless love, support and  
encouragement.*

*My dear husband, my lovely daughter and son.*

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## List of Abbreviations

<b>DEJ</b>	dentinoenamel junction
<b>RDT</b>	remaining dentinal thickness
<b>IPT</b>	Indirect pulp treatment
<b>DCE</b>	direct complete excavation
<b>MTA</b>	Mineral trioxide aggregate
<b>Ca(OH)</b>	Calcium hydroxide
<b>GI</b>	Glass ionomer
<b>RMGI</b>	resin modified GI
<b>HEMA</b>	hydroxyethyl methacrylate
<b>SDF</b>	silver diamine fluoride
<b>LF</b>	laser induced fluorescence
<b>PAD</b>	Photo-Activated Disinfection
<b>PACT</b>	Photodynamic Antimicrobial Chemotherapy
<b>LED</b>	light emitting diode.
<b>XCP</b>	Extension Cone Paralleling
<b>SD</b>	standard deviation
<b>TBO</b>	Toluidine Blue O