

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا
إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ

صَدَقَ اللَّهُ الْعَظِيمُ

سورة البقرة الآية ٣٢

*Efficacy Of Nickel-Titanium Rotary
Instruments Versus Stainless Steel Hand
Files In The Removal Of Gutta Percha With
Two Different Types Of Sealers
(An in-vitro study)*

*A Thesis submitted to the Faculty of Oral and Dental
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requirements for master degree in dental science.
(Endodontics).*

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I dedicate this work to ...

My precious mother...

Who sacrificed her comfort to guarantee mine ...

And to whom I owe everything...

My supportive father who never let me down...

My beloved family who always inspired me...

*And to my loyal friends who have always
been there for me...*

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Abstract

The aim of this study was to determine the effectiveness of rotary NiTi instruments versus hand instruments, with the use of gutta-percha solvent eucalyptol, in the removal of gutta-percha with two different types of sealers, from both straight and curved canals, during root canal retreatment. Canal wall cleanliness, time for retreatment, and procedural errors were evaluated. Eighty single rooted teeth were divided into Group **(I)** (straight roots) and Group **(II)** (curved roots) each was then subdivided according to the type of sealer used in the root canal obturation; Subgroup **(A)** (Endofill) and Subgroup **(B)** (Topseal). Each subgroup was further subdivided according to the technique of filling material removal into two subgroups; Subgroup **(h)** (Hedström files) and Subgroup **(r)** (R-Endo). Eucalyptol was used in all groups during retreatment.

Key words: Endodontic retreatment, R-Endo NiTi rotary files, eucalyptol solvent, Topseal resin based sealer, curved roots.

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