بسم الله الرحمن الرحيم

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تم رفع هذه الرسالة بواسطة /صفاء محمود عبد الشافى

بقسم التوثيق الإلكتروني بمركز الشبكات وتكنولوجيا المعلومات دون أدنى مسئولية عن محتوى هذه الرسالة.

ملاحظات: لايوجد

Comparison of Postoperative Pain Levels after Root Canal Instrumentation with Two Rotary Nickel Titanium Instruments

(An In-Vivo Study)

Thesis
Submitted to Endodontic Department, Faculty of Dentistry, Ain Shams University in Partial Fulfillment of the Requirements for Master's Degree in Endodontics

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صدق الله العظيم

طـه : ١١٤

Dedication

After being in deep gratitude to Allah

I am honored to dedicate my work to

My Beloved Parents and Sisters

My very first mentor

Associate Prof. Dr. Elham Ibrahim Elshaboury

My second family

Department Of Endodontics – MSA University

My extremely supportive seniors& colleagues

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Introduction

Post-operative pain has been a pivotal concern in Endodontics that is mainly associated with inflammation of the periapical tissues. Along with Microorganisms as the main cause for pain a multitude of microbial, chemical and mechanical factors might be involved in this inflammatory process. Some predisposing factors were reported to be positively associated with post-operative pain. These factors include: gender, position of tooth, preoperative status, number of visits, apical extrusion of debris, technique of Obturation and teeth vitality[1].

A subjective aspect is added as threshold differs among patients according to physical, behavioral and psychological factors. Incidence of post- endodontic pain was reported to be from 3%-55%[2]. On follow-ups, the intensity of pain showed a gradual decrease over time with duration ranging from hours to days. Accordingly different pain assessment scales have been applied, e.g. the Visual Analogue Scale, the Verbal Rating Scale and the Numerical Rating Scale[3].

Among the common reasons of post-operative pain, instrumentation procedure was claimed to noticeably affect the degree of post treatment pain probably due to the extrusion of bacteria and debris during chemo-mechanical preparation of the root canal[4].

Instrumentation has been considered to affect the incidence and intensity of post-operative pain and has been correlated to many variables. These include file designs, motions and kinematics[5].

DENTSPLY Tulsa Dental Specialties launched a new rotary system called ProTaper Gold™ with increased flexibility and increased resistance to cyclic fatigue. The feedback on it – to a considerable extent- is positive and makes it a priority choice in cases of curved roots due to its flexibility and less debris extrusion. The files are available in tip sizes up to 0.50

A new rotary file system made of CM wire - KontrolFlex™ - has been launched by Brasseler, USA, with 4 tapers available 0.04, 0.05, 0.06, 0.07 and tip sizes ranging from 0.15 to 0.45 allowing it to be used for the whole cleaning and shaping procedure. This file system has been used in a rotation motion.

Based upon the aforementioned data, it was thought that comparing postoperative pain levels after rotary instrumentation with KontrolFlex™ and ProTaper Gold™ in rotation motion would be of value. The null hypothesis is that there is no difference between the effects of the two files on post-operative pain intensity.

Review of Literature

Postoperative pain has been viewed by patients as a determinant of the operator's skills. For endodontic treatment, postoperative pain is considered as an inevitable event and patients should always be informed of the possibility of pain occurrence postoperatively. Post endodontic pain is considered to be multifactorial and operator should be updated with recent studies to be able to both decrease the pain level postoperatively and anticipate the intensity of pain if unavoidable[6].

Among the causative factors of post endodontic pain are: periapical insult by chemical, mechanical or microbial injuries caused by apical extrusion of debris and irrigant, over extended obturation material, preoperative status of the tooth and vitality[7].

Factors Affecting Post Endodontic Pain:-

1- Preoperative pain

Oginni & Udoye[8] found a strong clinical correlation between the presence of preoperative pain and the incidence and intensity of post endodontic pain.

Ali et al[9] conducted a study to assess the effect of preoperative pain on the intensity of post endodontic pain and concluded that the preoperative pain highly influences the prevalence and severity of post endodontic pain.

Singh and Ashutosh[10] studied the variables affecting post endodontic pain and concluded that post endodontic pain was significantly increased by the presence of preoperative pain