سامية محمد مصطفى

شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

سامية محمد مصطفى

شبكة المعلومات الجامعية

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التوثيق الالكتروني والميكروفيلم

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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار

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بعض الوثائق الأصلية تالفة

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بالرسالة صفحات لم ترد بالأصل

بسم الله الرحمن الرحيم

"قالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَاۖ إِنَّكَ أَنتَ الْعَلِيمُ الْحَكِيمُ"

صدق الله العظيم

ايه ٣٢ سوره البقره

Faculty of Dentistry
Endodontic Department

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Dedication

To my great Father

To my dearest mother

To my lovely family

To my dear professors

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Successful endodontic treatment depends on the elimination of endodontic micro-organisms from the root-canal system and prevention of reinfection. So chemo-mechanical preparation is an essential step in root canal treatment.

The root canal is shaped with hand and rotary instruments under sufficient amount of irrigation to remove necrotic and inflamed tissues, micro-organisms and debris from the root-canal space. The main goal of instrumentation is to facilitate effective irrigation, disinfection and filling, so fulfillment mechanical and biological objectives.

Unfortunately, there are some problems make total debridement inside root canal virtually impossible, as instruments only act on the central body of the canal. Presence of canal fins, isthmus remained untouched after completion of preparation. These areas might harbor debris, micro-organisms, and their by-products which results in periradicular inflammation.

Furthermore, Vapor Lock effect occurs when NaOCl reacts with organic material in the root canal and forms micro-gas bubbles at the apical termination then coalesce into an apical vapor lock which prevent further irrigant to reach the apical region. So, agitation of irrigation inside root canal is to facilitate removal of micro-organisms, by-products, debris from inaccessible areas especially apical one third.

There are different agitation techniques one of them is sonic agitation of irrigation through two mechanisms; cavitation and acoustic streaming which enhances debridement and removal of endodontic biofilm. The EndoActivator system has been purported to improve disinfection. This device uses a cordless sonic handpiece to activate strong, highly flexible polymer tips. Noncutting tips have tapers and terminal diameters that closely match the dimensions of the