

THE EFFECT OF RAKE ANGLE ON THE CLEANLINESS OF THE MICRO-ENDODONTIC SYSTEM AS ACHIEVED BY TWO ROTARY ENDODONTIC FILES: SEM STUDY

Khaled Balto* and Rajab Saif **

ABSTRACT

This study was undertaken to evaluate the effect of rotary file designs- if any- on the cleanliness of the micro-endodontic system as assessed by scanning electron microscopy. Debris and smear layer formation within the root canal system were quantified under different regimens of irrigation solutions and after preparation by two different rotary file designs; ProFile and K3. Results showed that K3 files showed statistically significant difference in the cleanliness of the micro-endodontic system with regard to the debris and smear layer when water was the irrigant used. However, this difference was not statistically significant when NaOCl was used as irrigant. We concluded files with positive rake angle results in cleaner root canal systems compared with files with negative ones.

* Assistant Professor, Department of Endodontics, Faculty of dentistry, King Abdulaziz University .

** Associate Professor, Department of Endodontics , Faculty of Oral and Dental Medicine, Cairo university