

SUPHOT TAMSAILOM : COMPARATIVE EFFECTIVENESS BETWEEN ULTRASONIC SCALERS WITH PROBE-TYPE TIP AND CURVED TIP IN THE REMOVAL OF SUBGINGIVAL CALCULUS. THESIS ADVISOR : ASSO. PROF. CHANIN TAECHAPRASERTVITTAYA , CO-ADVISOR : ASSIST. PROF. WANDEE APINHASMITH, Ph.D. 92 pp. ISBN 974-584-452-7

This investigation was performed to compare the effectiveness of ultrasonic scalers with probe-type tip and curved tip in the removal of subgingival calculus , and to evaluate effect of the two ultrasonic scaler tips to root surfaces after instrumentation in patients with periodontal disease. It was done only on the proximal surfaces of single rooted teeth which had been planned for extraction. The mesial and distal surfaces of each selected tooth had the same calculus index and probing pocket depth. Two surfaces of each tooth were assigned by systematic randomization to be instrumented by different types of the ultrasonic scaler tips until the root surface felt smooth and clean as examined with explorer tip. After extraction, 51 teeth were studied under a stereomicroscope to assess the amount of residual calculus of each tooth surface. The result showed that the percentage of surfaces with residual calculus of the group using ultrasonic scaler with probe-type tip were 33.3 which was significantly greater than 23.5 of the group using ultrasonic scaler with curved tip ($p<0.05$), however, when standardizing the calculus index and probing pocket depth, the differences of the number of surfaces with residual calculus between the two groups were clinically non-significant. Most of the residual calculus area covered small area which was about 0.1-5.0 % of root surface area. No significant difference of the residual calculus area existed between the two groups. In addition, 10 teeth were examined under scanning electron microscope and then the roughness and loss of tooth substance scores were determined. The result indicated that the median of the scores of the group using probe-type tip and curved tip were 2 and 3, respectively. The former was less than the latter significantly ($p<0.05$).

From the present study, it was concluded that the effectiveness of ultrasonic scalers with probe-type tip and curved tip were indifferent in the removal of subgingival calculus, but the probe-type tip caused less damage to the root surfaces.