

## C665380: MAJOR PERIODONTICS

KEY WORD: TETRACYCLINE HYDROCHLORIDE/ CITRIC ACID/ ROOT SURFACE  
RACHAYA CHAMPARTHEE, CAPTAIN : COMPARATIVE SEM STUDY  
ON THE EFFECT OF TETRACYCLINE HYDROCHLORIDE AND  
CITRIC ACID ON ROOT SURFACES. THESIS ADVISER :  
ASSO. PROF. CHANIN THECHAPRASERTVITAYA, CO-ADVISER :  
ASSIST. PROF. WANDEE APINHASMIT, Ph.D. 84 pp. ISBN  
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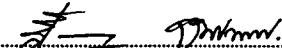
The objective of this study was to compare the results of 50, 100 and 150 mg/ml of the tetracycline hydrochloride solutions and citric acid pH 1 on dentin blocks prepared from 10 periodontitis affected teeth. Dentin blocks were applied by 4 types of solutions and then processed and examined by using scanning electron microscopy. The number, diameter and total area of dentinal tubule openings were compared by One Way Analysis of Variance. The results showed that there were no statistically significant differences ( $p < 0.05$ ) between the effect of tetracycline hydrochloride at the concentrations of 100 and 150 mg/ml and citric acid. In addition, the comparison of 100 and 150 mg/ml of the tetracycline hydrochloride and citric acid on periodontitis affected root surfaces after scaling and root planing of 10 teeth were performed. The results revealed no differences in appearance among these three groups. Some areas had cementum left whereas some had dentin exposed. In the cementum left areas, different appearances such as, fissure-like cleft or granular appearance outlining by collagen like intrinsic fibers were seen. The granular appearance represented the remnant of Sharpey's fibers. Exposed dentin areas had small scattered dentinal tubules and tufted collagen fibers.

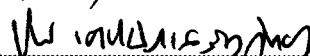
From the present study, it was concluded that 100 and 150 mg/ml of tetracycline hydrochloride demineralized and changed the morphology of root surface similar to that of citric acid. Therefore, tetracycline hydrochloride (100 or 150 mg/ml) may be considered as an alternative choice for root surface demineralization.

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