

## ABSTRACT

Periodontitis is a destructive inflammatory disease of the supporting tissues of the teeth that occurs in response to a predominantly gram-negative bacterial infection originating from dental plaque. The aim of the present study was to determine the clinical parameters on the response to non-surgical periodontal therapy in smokers. A total of 30 participants with periodontitis (15 non-smoking chronic periodontitis patients and 15 smoking chronic periodontitis patients) were included in this study. Plaque index (PI), Bleeding on probing (BOP), Pocket depth (PD) and Clinical attachment level (CAL) were measured before and 2 weeks, 3 weeks, 1 month after periodontal treatment. Patients were non-surgically treated with mechanical debridement of local initiating factors (bacterial plaque) and contributing factors for periodontal diseases. The Wilcoxon Signed Ranks test was applied to determine the statistical significance between time point within each group for PI, BOP, PD and CAL. The Mann-Whitney U test was utilized to compare the clinical parameters between two groups. After the nonsurgical periodontal therapy, PI, BOP, PD and CAL in both groups showed a significant decline from the pre-treatment values ( $p < 0.05$ ).

The improvement of all clinical parameters in smoking patients was less than that of nonsmoking patients. Among these, PD (2.13 mm versus 0.58 mm) and CAL (1.42 mm versus 0.71 mm) were significantly decreased in nonsmoking patients compared with smoking patients.

The present study suggested that the smoking may negatively affect on periodontal response to non-surgical periodontal treatment in periodontitis patients. Based upon recent findings, smoking should be

stopped to obtain better or more successful non-surgical periodontal treatment in chronic periodontitis patients within a short period of time.

Key Words: Periodontitis, Nonsurgical therapy, Clinical Parameters, Smokers.