2350 Stability of periodontal and cardiovascular measures in untreated periodontitis patients

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OBJECTIVES: The Hawthorne effect may confound the results of an investigation. Establishing the pre-treatment stability of a research population is thus paramount in supporting the role of the tested therapy as the causative agent for change. METHODS: Fifty-two individuals (23-63) with ≥ 20 teeth, diagnosed with generalized moderate to advanced chronic periodontitis (AAP Type III-IV) and having no serious systemic illnesses or autoimmune diseases were enrolled in a clinical treatment study. Clinical periodontal values (mean and maximum probing depth, attachment level, gingival index, and plaque index; and extent of PD 5+ mm and AL 3+ mm); serum lipid values (high-density lipids, low-density lipids), and serum inflammatory markers (C-reactive protein) were measured at baseline and at 6 weeks with no intervening treatment. Values were compared between baseline and 6 weeks using the Wilcoxon rank sum test and Spearman correlation coefficient (SCC) to establish the stability of the study population prior to treatment. RESULTS: Median CRP decreased slightly but not significantly from baseline to 6 weeks (2.1 pg/ml (IQ range 4.5) to 1.2 pg/ml (IQ range 3.4, \( P=0.80 \)); individual values of CRP correlated well between the two visits (SCC 0.70, \( P=0.0014 \)). Most of the other measurements had excellent correlation from baseline to 6 weeks (SCC ≥ 0.70) except for extent of PD 5+ mm (SCC 0.49), HDL cholesterol (SCC 0.50), and LDL cholesterol (SCC 0.58). None of the measures differed significantly over the “run-in period” from baseline to 6 weeks (\( P, \) Wilcoxon rank sum test > 0.05). CONCLUSIONS: This population has demonstrated stability in clinical and serum measurements over an initial six-week “run-in” period, with no evidence of regression to the mean. These results suggest that therapeutic outcomes can be attributed to the treatment itself and are not due to the Hawthorne effect. This research was sponsored by NIDCR grant 5P60DE013079-05.

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