

Effect of *Salvadora Persica* Gel on Clinical and Microbiological Parameters of Chronic Periodontitis

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Abstract : *Salvadora Persica* (SP) is known to have anti-inflammatory, antioxidant, anti-coagulant and anti-bacterial properties that may provide therapeutic benefits in the treatment of chronic periodontitis (CP). The current clinical trial was designed to investigate the clinical and anti-microbial effects of SP gel as an adjunct to scaling and root planning (SRP) in subjects with generalized CP. Sixty-six subjects with CP were randomized allocated into two groups: SRP + SP gel (test group) and SRP only (control group). Clinical parameters (periodontal pocket depth, gingival recession, clinical attachment level, bleeding score and plaque score) were recorded at baseline before SRP and at 6 weeks. At baseline and 6 weeks subgingival plaque samples were collected and periodontopathogen *Porphyromonas Gingivalis* (Pg) quantified using Real-time Polymerase Chain Reaction (RT-PCR). Both therapies reduced the mean periodontal pocket depth (PPD), plaque score (PS) and bleeding score (BOP) and improved the mean clinical attachment level (CAL) between baseline and 6 weeks. In subjects receiving adjunctive SP gel a statistically significant improvement was observed in BOP at follow-up compared to control group ($15.01 \pm 3.47\%$ and $22.81 \pm 6.81\%$ respectively, $p=0.001$), while there was no statistically significant difference in periodontal pocket depth, gingival recession, clinical attachment level and plaque score between both groups. The test group displayed significantly greater Pg reduction compared to the control group after 6 weeks. The current study establishes that local delivery of SP gel into periodontal pocket in CP stimulated a significant reduction in bacteria Pg level and an improvement in gingival health, as evident from a reduced bleeding score, when used as an adjunct to SRP.

Keywords : miswak, scaling and root planing, *porphyromonas gingivalis*, chronic periodontitis

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