Abstract

Objective: The purpose of this pilot study was to examine the effects of a topical patch on gingival inflammation.

Methods: Sites of inflammation were identified on subjects with moderate-to-severe chronic periodontitis, and were allocated to either patch placement or untreated controls, both for 24 hours. Conventional treatment with scaling and root planing was postponed during the study period. Inflammation was evaluated measuring neutrophilic activity using gingival crevicular fluid (GCF) β-glucuronidase (b-glu) levels, and clinical response was evaluated using the gingival index (GI).

Results: A total of 26 patients were recruited and 36 sites examined, with 22 sites on which the patch was placed and 14 controls. GCF b-glu levels at 24 hours were reduced following patch placement, significantly more so than with controls (17/22 vs. 3/14 sites, respectively; p = 0.002). The patch placement resulted in a significant reduction in mean b-glu levels (–2.52 ± 1.62), with a reduction from baseline of 29.7%. This compared to untreated controls, for whom the mean b-glu levels and percent change from baseline increased (2.14 ± 0.89 and 33%, respectively). At 24 hours, GI response rate for treated sites was better than for control sites (18/21 vs. 7/14; p = 0.053). No adverse events were reported in either group.

Conclusion: This pilot study indicates that a topical gingival patch promotes reduction of gingival inflammation. Further clinical testing of this novel treatment of gingival inflammation is warranted.

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