



[A 15-month evaluation of the effects of repeated subgingival minocycline in chronic adult periodontitis.](https://arctichealth.org/en/permalink/ahliterature201582)

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Abstract:

A double-blind, randomized, parallel, comparative study was designed to evaluate the long-term safety and efficacy of subgingivally administered minocycline ointment versus a vehicle control.

One hundred four patients (104) with moderate to severe adult periodontitis (34 to 64 years of age; mean 46 years) were enrolled in the study. Following scaling and root planing, patients were randomized to receive either 2% minocycline ointment or a matched vehicle control. Study medication was administered directly into the periodontal pocket with a specially designed, graduated, disposable applicator at baseline; week 2; and at months 1, 3, 6, 9, and 12. Scaling and root planing was repeated at months 6 and 12. Standard clinical variables (including probing depth and attachment level) were evaluated at baseline and at months 1, 3, 6, 9, 12, and 15. Microbiological sampling using DNA probes was done at baseline; at week 2; and at months 1, 3, 6, 9, 12, and 15.

Both treatment groups showed significant and clinically relevant reductions in the numbers of each of the 7 microorganisms measured during the entire 15-month study period. When differences were detected, sites treated with minocycline ointment always produced statistically significantly greater reductions than sites which received the vehicle control. For initial pockets ≥ 5 mm, a mean reduction in probing depth of 1.9 mm was seen in the test sites, versus 1.2 mm in the control sites. Sites with a baseline probing depth ≥ 7 mm and bleeding index > 2 showed an average of 2.5 mm reduction with minocycline versus 1.5 mm with the vehicle. Gains in attachment (0.9 mm and 1.1 mm) were observed in minocycline-treated sites, with baseline probing depth ≥ 5 mm and ≥ 7 mm, respectively, compared with 0.5 mm and 0.7 mm gain at control sites. Subgingival administration of minocycline ointment was well tolerated.

Overall, the results demonstrate that repeated subgingival administration of minocycline ointment in the treatment of adult periodontitis is safe and leads to significant adjunctive improvement after subgingival instrumentation in both clinical and microbiologic variables over a 15-month period.

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