

Locally Administered Metronidazole as an Adjunct to Conventional Periodontal Therapy in Diabetic Patients

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Abstract

Periodontitits is considered the sixth complications of diabetes, and recently, treatment of periodontal infection was shown to improve the glycemic control of diabetic patients.

Scaling and root planing (Sc/Rp) alone may fail to eliminate periodontal pathogens especially in inaccessible areas. Since not all diabetics can tolearte surgical intervention, the use of an adjunctive therapy is advisable. The purpose of this study was to determine the clinical and microbial response to local application of metronidazole as an adjunct to scaling and root planing in diabetics. The study utilized a total of 60 patients (20 non-diabetics, 20 type I and 20 type II diabetics) with generalized severe periodontitis. Each individual was provided four treatment modalities, one in each quadrant. These were: 1) Sc/Rp plus application ofplacbo; 2) Sc/Rp plus application of 25% metronidazole gel (Elyzol); 3) Sc/Rp plus irrigation with 2% chlorehexidine gluconate (CHX) and 4) Sc/Rp plus Elyzol and CHX irrigation. Among diabetics, the results showed no significant change in probing depth (PPD) when Sc/Rp was the only treatment. Whereas, all the three groups showed a significant reduction in PPD after application of Elyzol with/without CHX irrigation. The treatment modality consisting of Elyzol plus CHX irrigation was the most effective in all groups. Based on these results, we concluded that local delivery of metronidazole/CHX as an adjunct to Sc/Rp may improve periodontal health among diabetics.