

**Short-term effects of photodynamic therapy on periodontal status and glycemic control of patients with diabetes.**

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**BACKGROUND** :Periodontitis is a major cause of tooth loss among adults .Several studies have shown a possible systemic impact of periodontal infection, including poor glycemic control in patients with diabetes .Recently, photodynamic therapy )PDT (was used to successfully treat periodontal infection .PDT provides a broad spectrum antimicrobial efficacy with no local or systemic side effects .The objective of this study was to examine the effect of the adjunctive use of PDT on periodontal status and glycemic control of patients with diabetes and periodontitis .**METHODS** :Forty-five patients with type 2 diabetes and moderate to severe chronic periodontitis were selected and randomly assigned to one of the following three treatment modalities )15 subjects each :(scaling and root planing )SRP (only, SRP plus systemic doxycycline, and SRP plus PDT .The plaque and bleeding scores, probing depth, clinical attachment level, and glycosylated hemoglobin )HbA1c (level were recorded at baseline and 3 months after periodontal treatment .Descriptive statistics, the paired t test, and analysis of variance )ANOVA (were used for data analysis .**RESULTS** :Statistically significant differences in the mean probing depth, clinical attachment level, plaque deposit, and bleeding on probing were found between baseline and 12 weeks post-treatment for all groups .No significant differences in periodontal parameters and glucose levels were detected among the three groups .Reduction in the mean HbA1c level after treatment was observed in all groups but was only significant for the SRP plus doxycycline group .**CONCLUSION** :The results of the present study indicate that PDT does not benefit conventional non-surgical periodontal therapy in patients with diabetes.

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