

# Nonsurgical Periodontal Therapy with/without Diode Laser Modulates Metabolic Control of Type 2 Diabetics with Periodontitis: A Randomized Clinical Trial

Emrah Koçak<sup>1</sup>, Mehmet Sağlam<sup>2</sup>, Seyit Ali Kayış<sup>3</sup>, Niyazi Dünder<sup>4</sup>, Levent Kebapçılar<sup>5</sup>, Bruno G. Loos<sup>6</sup>, Sema S. Hakkı<sup>1,4</sup>

<sup>1</sup>Department of Periodontology, Faculty of Dentistry, Selcuk University, Konya, Turkey

<sup>2</sup>Department of Periodontology, Faculty of Dentistry, Izmir Katip Celebi University, Izmir, Turkey

<sup>3</sup>Department of Biostatistics, Faculty of Medicine, Karabük University, Karabuk, Turkey

<sup>4</sup>Research Center of Dental Faculty, Selcuk University, Konya, Turkey

<sup>5</sup>Department of Endocrinology and Metabolism Disease, School of Medicine, Selcuk University, Konya, Turkey

<sup>6</sup>Department of Periodontology, Academic Center for Dentistry Amsterdam (ACTA), University of Amsterdam and VU University Amsterdam, Amsterdam, The Netherlands

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In order to evaluate whether nonsurgical periodontal treatment with/without diode laser (DL) decontamination improves clinical parameters, the levels of IL-1 $\beta$ , IL-6, IL-8, intercellular adhesion molecule (ICAM), and vascular cell adhesion molecule (VCAM) in gingival crevicular fluid and metabolic control (HbA1c) [were assessed] in chronic periodontitis (CP) patients with diabetes mellitus type 2 (DM2). Sixty patients with DM2 and CP were randomly assigned into two groups to receive scaling and root planing (SRP, n = 30) or SRP followed by diode laser application (SRP + DL, n = 30). Clinical periodontal and gingival crevicular fluid (GCF) parameters were assessed at baseline, 1, and 3 months after periodontal treatment. HbA1c levels were evaluated at baseline and 3 months post-therapy. Total amounts of cytokines and molecules were analyzed by ELISA. Nonsurgical periodontal treatment with/without DL appeared to improve clinical, biochemical parameters, and glycemic control in DM2 patients (BMI < 25 kg/m<sup>2</sup>) with CP. The SRP + DL group provided better reductions in probing depth (PD) and clinical attachment level (CAL) parameters compared to the SRP group ( $P < 0.05$ ). Significant reductions were found in the total amounts of GCF levels of IL-1, IL-6, IL-8, ICAM, and VCAM after treatment ( $P < 0.05$ ). HbA1c levels decreased significantly at 3 months after treatment ( $P < 0.05$ ). SRP + DL reduced HbA1c levels more significantly compared to SRP alone (0.41 vs. 0.22 %,  $P < 0.05$ ). SRP, especially in combination with DL, shows improvement of glycemic control for DM2 patients with CP.

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## DENTAL EDUCATORS' CORNER

### Academy of Laser Dentistry Dental Educators' Corner

A Call for Suggestions for Dental School Educators

*P. Bradford Smith, DDS, FACD, FICD*

*Dean, Midwestern University College of Dental Medicine, Glendale, Arizona*

The Academy of Laser Dentistry and the American Dental Education Association (ADEA) have been working together to enhance awareness and education in the predoctoral student environment. We are looking for articles, clinical experiences, teaching tips, research and trends that have arisen in academia.

Through ADEA, the Lasers in Dentistry Special Interest Group has been discussing a myriad of aspects of laser education, clinical techniques, and clinical oversight. Over the last decade, the group has had many leaders in the laser arena help to guide educators and give them resources, including such things as educational teaching material (PDFs and PPTs), standards, rules, regulations, research, and names of regulatory agencies in the various states. We have discussed the types of lasers that could be used in a formal education setting, and types that might be problematic

We have a cadre of dentists that will be reviewing articles and adding content to the Educators Corner – individuals like Drs. Praveen Arany, Scott Benjamin, Juliana Barros, Shelly Patel, Sebastiano Andreanna, David Roshkind, and myself. I look forward to suggestions from the readership at large that would help in teaching and training the next generation of dentists. Ideas, suggestions, content, equipment, and clinical pearls would all be welcomed topics that could be disseminated to the great group of dental school educators that work daily with full-time dental and hygiene students. Please contact me with your ideas at bsmith@midwestern.edu.

#### AUTHOR BIOGRAPHY



*P. Bradford Smith,  
DDS, FACD, FICD*

Group with ADEA, and as chair in 2015-16. Dr. Smith may be contacted by e-mail at bsmith@midwestern.edu.

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*Smith*