Clinical and Microbiological Effects of Photodynamic Therapy Associated with Non-surgical Treatment in Aggressive Periodontitis

Elnaz Farhoudi[16]
Email: elnaz.farhoodi@yahoo.com
Adileh Shirmohameadi[17] ,
Mohammad Taghi Chitsazi [18]

Abstract

The aim of this study was to compare the effectiveness of adjunctive photodynamic therapy in the treatment of aggressive periodontitis.A total of 24 patients with clinical diagnosis of aggressive periodontitis received scaling and root planing (SRP) for periodontal treatment. In a split-mouth design study, the teeth of one quadrant of each arch with ≥4 mm PD were selected randomly for additional treatment with PDT (test group). The control group consisted of selected teeth of the contralateral quadrant (SRP only). Before any treatment, subgingival plaque samples were collected by an endodontic paper cone for microbiological analysis by real-time PCR. Clinical parameters, including clinical attachment loss (CAL) as primary outcome, plaque index (PI), bleeding on probing (BOP), probing depth (PD) and gingival recession (REC), were measured at baseline and after 90 days. Intergroup and intragroup statistical analyses were performed.Treatment groups showed an improvement in all the clinical parameters and a significant reduction in the counts of periodontopathogen Aggregatibacter actinomycetecommitans at 90 days compared to baseline (P<0.05). None of the periodontal parameters showed significant differences between the two groups (P>0.05).Within the limitations of this study, the results did not show additional benefits from PDT as an adjunctive treatment for patients with aggressive periodontitis.

Evaluation of photobiomodulation effects of different wavelengths of laser on gingival wounds repair

Reza Fekrazad[19]
Email: rezafekrazad@gmail.com
Amir Mirmoezzi[20] , Katayoun AM Kalhori[21]

Abstract

Many studies have demonstrated that therapeutic lasers can promote the wound healing on non-diabetic and diabetic animals. The effects of gingival wound healing acceleration on diabetic rats were compared using tree wavelengths of laser. 32 Male Wistar rats were successfully induced diabetes using intraperitoneal injection of Streptozotocin (150 mg/kg). After intraperitoneal injection of anesthetic a full-thickness gingival wound (10mm×2mm) was created aseptically with a scalpel on the hard palate of diabetic rats. The study was performed using Red(630nm) ، Green(532nm) and Blue(425nm) lasers and control group. Energy density of 2 J/cm2 and treatment schedule of 3 times/week was used in the experiments for 10 days. The area of wound on all rats was measured and recorded on the chart. The samples were sacrificed and a full-thickness sample of wound area for pathological purpose was prepared at the end of the period (10 days). There was a significant difference ($p < 0.001$) in the mean slope values of wound healing between treatment and control groups. There was also a significant difference ($p < 0.001$) in the mean slope values of wound healing between Red laser and two other lasers(Blue and Green). There was not a significant difference ($p=0.777$) in the mean slope values of wound healing between Blue laser and Green laser. Pathologies findings also corporate these results.Based on this research terms and results this study provides evidence that gingival wound healing on control rats were slower than on treatment groups. It also indicated that wound healing was faster in red laser group than other groups. Further studies are required for more conclusive results.

[16]Assistant Professor of Periodontology, Ardebil University of Medical Science,Ardebil
[17]Professor of Periodontology,Tabriz University of Medical Science, Tabriz
[18]Associate Professor of Periodontology, Tabriz University of Medical Science,Tabriz

[19] Periodontist, Periodontology Department, Dental faculty, AJ University of Medical Sciences, Tehran
[20] DDS,Iran
[21] Oral & Maxillofacial Pathologist, Iranian Medical Laser Association,Tehran

Comparison of bone mineral density in the jaws of peri-menopausal women with and without chronic periodontitis

Elnaz Farhoudi [93]
Email: elnaz.farhoodi@yahoo.com

Abstract

Several studies showed relationship between systemic bone mineral density (BMD) and the severity of periodontitis. The aim of this study was to compare mandibular BMD of peri-menopausal women with chronic periodontitis with that of periodontally healthy subjects. 20 peri-menopausal women with healthy periodotium and 20 peri-menopausal women with moderate to severe chronic periodontium were included in the study. All subjects were systemically healthy. The mandibular bone mineral density of the subjects was determined by dual energy X-ray absorptiometry and a computer calculated the bone mineral density of mandible.The mandibular bone mineral density of the subjects with periodontitis was significantly lower than that of the periodontically healthy subjects (p,0.01). There were correlations between the mandibular bone mineral density values and parameters of periodontal periodontitis. Bone mineral density in the mandible may be associated with chronic periodontitis of peri-menopausal women.

[93] Assistant Professor,Ardebil University of Medical Sciences,Ardebil

Comparison of periodontal parameters in cardiovascular patients with healthy controls

Arash Ghanbarzadegan [94]
Email:arash.ghanbarzadegan@yahoo.com
Ensiye Bateni [95] , Azim Rabiei [96]

Abstract

The purpose of the present study was to compare periodontal indexes in patients with heart disease versus healthy individuals in an Iranian population. In this descriptive cross-sectional study, 100 patients with mean age of 50.99 ± 11.04 years were divided in to two case and control groups. The case group consisted of 50 patients riffering to heart diseases department of Ali Ibn Abi Talib(AS) Hospital of Rafsanjan that their heart disease were confirmed by a cardiologist. Control group included 50 healthy volunteer people with no history of systemic disease referring to oral medicine diagnosis of Rafsanjan dental school. Plaque index, Bleeding point index, Clinical attachment loss , Pocket depths and Number loss teeth were assessed in this study. All data was analyzed using SPSS-21 software with Independent two-sample t-test , chi-square test and Pearson's Correlation Coefficient and ($p<0.05$) was considered as the level of significance. Plaque index, Clinical attachment loss, Pocket depth and Number loss teeth in the case group were more than control group. ($p<0.05$) Bleeding point index was not statistically difference between two groups.(p=0/927). According to the results of this study,it seems that Plaque index, Clinical attachment loss, Pocket depth and Number loss teeth are higher in patients with heart disease than healthy people.

[94] Dentistry Student,Rafsanjan University of Medical Sciences, Rafsanjan
[95] Periodontist,Department of Periodontology,Rafsanjan University of Medical Sciences,Rafsanjan
[96] Dentist,Private Office,Rafsanjan University of Medical Sciences,Rafsanjan