

Use of diode laser 980 nm as adjunctive therapy in the treatment of chronic periodontitis. A randomized controlled clinical trial

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SUMMARY

The primary goal of periodontal therapy is the removal of supra and subgingival bacterial deposits by mechanical debridement consisting in scaling and root-planing (SRP) using manual or power-driven instruments. The complete removal of bacteria and their toxins from periodontal pockets is not always achieved with conventional mechanical treatment. The use of lasers as an adjunctive therapy for periodontal disease may improve tissue healing by bactericidal and detoxification effects.

The aim of this study was to compare the effectiveness of Diode laser used as adjunctive therapy of SRP to that of SRP alone for non surgical periodontal treatment in patients with chronic periodontitis.

Nineteen pairs of teeth with untreated chronic periodontitis were selected in 13 patients and randomly treated by SRP alone (control group) or by SRP + laser irradiation (test group). Clinical measurements (PPD, CAL, BOP, GI, PI) were performed before treatment at baseline (T0) and at T1 (after 4 weeks), T2 (8 weeks), T3 (12 weeks), T4 (6 months). Subgingival plaque samples were taken at baseline and after treatment and examined for 8 periodopathogens bacteria using PCR technique.

The present study showed that the additional treatment with diode laser may lead to a slightly improvement of clinical parameters, whereas no significant differences between test and control group in reduction of periodontopathogens were found.

KEYWORDS: Chronic periodontitis, Laser, Non surgical periodontal therapy

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