

Gingival curettage study comparing a laser treatment to hand instruments

Jiang Lin & Liangjia Bi & Li Wang & Yuqi Song &
Wei Ma & Steve Jensen & Densen Cao

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Abstract The purpose of this clinical study was to examine nonsurgical treatments of periodontal disease comparing a diode laser to subgingival curettage with conventional hand instruments. The study group comprised 18 patients with moderate periodontal degradation who were treated without local anesthesia. Each quadrant was randomly allocated in a split-mouth design either to treatment with a 810-nm diode laser using an energy of 2 W (test group) or to gingival curettage using hand instruments (control group). Clinical data, including plaque index (PI), gingival index (GI), sulcus bleeding index (SBI), pocket depth (PD), clinical attachment level (CAL) and visual analog scale (VAS) score were acquired prior to and 4 weeks after treatment. The treatment time for each tooth was also recorded. The results demonstrated a statistically significant reduction of the GI, SBI and PD and a significant gain in CAL in both groups after 4 weeks. However, there were no significant

differences between the test and control groups for the above data. The score for the degree of treatment discomfort was significantly lower and the average treatment time was significantly less in the test group than in the control group. Diode laser subgingival curettage resulted in statistically significant improvements in PD, SBI, GI and CAL with less discomfort and treatment time compared to treatment with the hand instruments.

Keywords Gingival curettage · Diode laser · Periodontal disease

J. Lin

Department of Stomatology, the Fourth College,
Harbin Medical University,
Harbin, Heilongjiang Province, China
e-mail: Kelvinperio@163.com

L. Bi · Y. Song · W. Ma

Department of Stomatology, Fourth College,
Harbin Medical University,
Harbin, Heilongjiang Province, China

L. Wang

Department of Periodontology, College of Stomatology,
Harbin Medical University,
Harbin, Heilongjiang Province, China

S. Jensen (✉) · D. Cao

CAO Group, Inc,
4628 West Skyhawk Drive,
West Jordan, UT 84084, USA
e-mail: steve.jensen@caogroup.com