

Evaluation of the Bactericidal Effect of Er,Cr:YSGG, and Nd:YAG Lasers in Experimentally Infected Root Canals

Qian-qian Wang, DDS, Cheng-fei Zhang, DDS, PhD, and Xing-zhe Yin, DDS

Abstract

The aim of this study was to evaluate the bactericidal effect of the Er,Cr:YSGG laser and the Nd:YAG laser in experimentally infected root canals. Sixty single-rooted teeth with straight canals were selected. After preparation and sterilization, the specimens were inoculated with *Enterococcus faecalis* for 3 weeks. After irradiation by lasers, the number of bacteria in each root canal was examined. The Er,Cr:YSGG laser gave a reduction of 77% after irradiation at 1 W and 96% at 1.5 W, but there was no significant difference ($p > 0.05$). The Nd:YAG laser gave a reduction of 97% at 1 W and 98% at 1.5 W, and there was no significant difference ($p > 0.05$). Compared with the Er,Cr:YSGG laser, the Nd:YAG laser is more effective ($p < 0.05$). In conclusion, both lasers systems have a significant bactericidal effect in infected root canals, and the Nd:YAG laser is more effective than the Er,Cr:YSGG laser. (J Endod 2007;33:830–832)

Key Words

Bactericidal, Er,Cr:YSGG laser, Nd:YAG laser, root canal

From the Special Dental Department, Peking University School and Hospital of Stomatology, Beijing, China.

Address requests for reprints to Dr. Cheng-Fei Zhang, Special Dental Department, Peking University School and Hospital of Stomatology, Beijing, 100081, PR China. E-mail address: zchengfei@yahoo.com

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