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Yoichi Taniguchi, DDS, PhD. is Adjunctive Lecture of Periodontology, Graduate school of Medical and Dental Sciences, Tokyo Medical and Dental University (TMDU), Tokyo, Japan and the director of Taniguchi Dental Clinic, Sapporo Japan.

He graduated from the Dental School, Nippon Dental University in 2007.

He received PhD program parallel to his clinical training in Department of Periodontology, TMDU in 2008-2012, then became a clinical instructor in TMDU Dental Hospital in 2013-2015. He became a director in Taniguchi Dental Clinic, Hokkaido, Sapporo in 2015. His research includes bone regenerative therapy using Er:YAG laser for periodontitis and peri-implantitis.

Title

Laser-assisted bone regenerative therapy for periodontitis, implant treatment and peri-implantitis.

Synopsis

Bone regenerative therapy are applied to periodontal and implant treatment. Especially, membrane technique such as guided tissue/bone regenerative therapy was commonly performed to regenerate for major bone defect in periodontal therapy and to improve for insufficient bone quantity in implant treatment. However, membranes increase the risk of impaired healing in the interdental region and alveolar ridge area as well as postoperative exposure of the membrane and infect to grafted bone. To date, a highly effective and low-morbidity surgical procedure has not been generally established for bone regeneration in severe bone defects.

Recently, we developed a novel bone regenerative procedure, Er:YAG laser-assisted bone regenerative therapy (Er-LBRT), which induces blood clot coagulation in the superficial areas of grafted bone. We have applied this technique in periodontal regenerative therapy. Er-LBRT achieved successful clinical outcomes that are more than equivalent to those seen with conventional periodontal regenerative therapy at a lower risk such as infection to bone graft material. Furthermore, Er-LBRT was applied to regenerative therapy in ridge preservation and ridge augmentation and peri-implantitis treatment. In this lecture, the Er-LBRT procedure is introduced and its effectiveness is discussed based on clinical evidence.