

HOW TO HARNESS THE POWER OF THE LITE TOUCH ER:YAG LASER SYSTEM IN A DENTAL PRACTICE



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BACKGROUND

The arrival of LiteTouch, which boasts incredible enamel fragmentation capabilities, will likely bring about a major change in dental medicine. This next-generation Er:YAG laser fragments tooth structure in a way that makes the cut and grind of traditional rotary drills obsolete.

The Japanese dental community has failed to clearly establish its identity within popular consciousness regarding the treatment of dental caries, which is also to say that intentional regular maintenance of oral health has never taken root among the population at large. Indeed, people tend to give the dentist a wide berth because there is a widespread impression that dental care sits upon some unassailable high. Even today, attitudes so outdated as to be prehistoric are still prevalent, and it speaks volumes about our society when a majority of people delay going to the dentist until their teeth start to hurt and even choose to ignore anodontia.

As a community-based dentist, I hope to eliminate as many of those hurdles as possible. I have introduced the latest LiteTouch as the next-generation Er:YAG laser treatment system in an effort to motivate my patients to keep their teeth healthy rather than seeing them as things that need to be drilled from time to time.

In order to observe LiteTouch's capabilities, I have observed the use of LiteTouch at Smile Art Kamiya Pediatric Dental Clinic, following the process of caries treatment from start to finish. Below are the results of that study.

Caries treatment is not a two-step, drill-and-fill process. The ultimate goal of any dental treatment is to create healthier tissue and function; surely the aim is to leave the teeth stronger after caries treatment. Therefore, I believe that treatments should follow the following four steps regardless of the degree of tooth decay.

Seek Out the Cause

The initial cause of tooth decay is not necessarily bacterial and although plaque is an aggravating factor, it is important to look at the immune capacity of the host teeth rather than focusing exclusively on plaque.

Control Bacteria, Relieve Pain

When treating tooth decay - and acute decay in particular - it is important to make every effort to preserve tooth structure and dental pulp at the same time as trying to provide comfort. This role is performed mainly by such drugs as alkaline agents, antibacterial agents and sterilizing metal ions. LiteTouch figures largely in this process; its painless drilling allows the drugs to be accurately applied to the decayed tooth structure. Conversely, rotary drills can cause crushed wounds in weakened tooth structures, which lead to persistent post-treatment pain. Accordingly, this causes people to delay treatment and, therefore, use of rotary drills should be avoided. Using LiteTouch to remove decayed tooth structure in wet conditions allows two seemingly contradictory processes to be carried out at the same time: not only does it disinfect the affected area, it also protects healthy tooth structure from friction heat that would otherwise be caused by drilling.

Disinfect, Seal

To prevent new infection after the decayed tooth structure has been carefully removed (including cases in which decayed portions are not completely removed but the cavity is nonetheless deemed to be disinfected), adhesive is used to form a protective layer over the dental pulp and restore the tooth structure. Cavity preparation with LiteTouch is most effective at this stage because using LiteTouch to remove decayed tooth structure not only disinfects the pertinent area, it is painless, too.

Strengthen Teeth to Guard against Subsequent Infection

Having completed restoration of the tooth structure, it is necessary to take steps to prevent secondary caries, taking into account the causes of each tooth's decay thus far. When doing so, using LiteTouch as a tool to help maintain the health of the gums that support the teeth and the dental sockets helps build an awareness of the oral cavity as an organ, an "immunological collective," so to speak.

Reference:

Kamiya M. How to Harness the Power of the LiteTouch Er:YAG Laser System in a Dental Practice. 2009. Nov.