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Laser use at a dental clinic in Japan

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The treatments in dental clinics in Japan are composed of dentist's and hygienist's field. Various types of instruments to cut, remove and prepare have been developed and used nowadays. Engine drills, air turbine bur, ultra sonic instruments and surgical knife are common. Various types of CO₂ laser, Nd: YAG laser, Er:YAG laser, YSGG laser are also used on a daily basis for those aim. Dental clinics which use laser have a positive image for patients. Therefore, at the present time, many dental clinics in Japan use them. In particular, Er:YAG laser and YSGG laser are effective for soft and hard tissue. A few years ago, an Israel company (Syneron) developed an innovative Er:YAG laser (Lite Touch) without fiber to guide the laser beam. While the laser beam streams to the hand-piece during drilling, there is no loss of energy. So, It is very sturdy tough and the maintenance cost is low. I will introduce the following treatment using Lite Touch; removal of caries, composite resin restoration, peri-implantitis, peripheral periodontitis, extraction, stomatitis, ulcer and so on. The most of those treatments are performed by dentists.

However, it is, recently, changing from treating diseases by dentist to maintaining healthy condition of

oral tissue by hygienist. The number of dental caries and children is decreasing rapidly compared with number of dentist. The financial supports by government is getting weak. In stead of dentist's works, various types of hygienist's works have been developed. The preventive treatment; sealant for pit and fissure and PMTC (professional mechanical tooth cleaning) by hygienist are common in Japanese dental clinics. This, new type of Er:YAG laser is also available in this field. In cases of sealant, at first, a dental caries detector (Diagnodent) using fluorescence reacted by a wavelength of 655 nm laser is used to absent caries. Bacterias in pit and fissure are removed by Er:YAG laser and then sealed by light curing resin. To maintain healthy gingival tissue, low energy laser of Er:YAG laser is also used by dental hygienists. Laser beam in 0.5W using low mode hand-piece of Lite Touch is radiated in the periodontal sulcus to maintain the healthy gum after PMTC. It is one of treatment using LLLT (low level laser therapy).

Lasers, especially Lite Touch are available to both field. This lecture will be shown usefulness of Er:YAG laser, especially Lite Touch.