DermaSculpt laser

Ablation of small cutaneous lesions made easy

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Nashua, N.H. — Several Er:YAG laser devices are currently being used in the ablation of cutaneous lesions in cosmetic dermatology. However, smaller and harder-to-reach lesions are notoriously challenging to treat because of their tiny size or "hidden" location, at least until now. The DermaSculpt laser device (HOYA ConBio) uses tiny straight and curved micron tips to address such lesions easily and effectively, throwing down the gauntlet and raising state-of-the-art laser devices to a new level.


Dr. Khatri

quick read

An Er:YAG laser equipped with tiny, straight and curved micron tips allows physicians to perform ablative treatments of very small and typically hard-to-reach cutaneous lesions more quickly and easily compared to traditional straight tips.

The DermaSculpt system is equipped with an Er:YAG laser (2.940 micrometers), offering ablative, fractionated (nonablative) and micro-tip capabilities, making it extremely versatile in the treatment of cutaneous lesions and skin resurfacing procedures. The novelty of the device is in the curved 300- to 600-micrometer laser tips it employs, allowing the physician to pinpoint and treat small cutaneous lesions as well as those lesions that are notoriously difficult to reach with standard straight tips.

DermaSculpt study

In a recent 15-patient study, the safety, efficacy and precision of the DermaSculpt device using straight and curved 400- to 600-micrometer tips was evaluated in the removal of various cutaneous lesions. Treatment consisted of one laser ablation session with an average fluence of 104.7 J/cm^2 and a mean repetition rate of 11.7 Hz, with either a 400- or 600-micrometer spot size. Patients and investigators evaluated the results, and baseline and post-treatment photographs were compared by blinded observers. Patients were followed up at one, three and six months after treatment.

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Results showed that 90 percent of investigators and 70 percent of patients rated a 76 percent to 100 percent improvement or resolution of lesions after one treatment, and all patients indicated satisfaction with the procedure. No anesthesia was used, and patients rated the majority of stinging or burning sensations as "moderate" during and "mild" after the treatment.

"The DermaSculpt laser allows you to remove cutaneous lesions with much more precision and ease, primarily due to the tiny chisel tips the device is equipped with. This is the major advantage that this Er:YAG laser has over other devices," says Khalil Khatri, M.D., of Skin & Laser Surgery, Nashua, N.H., and head of the study. "Because of the increased maneuverability during the procedure, the treatment sessions can be considerably shorter and save a lot of valuable time."

Laser details

The DermaSculpt laser is the only Er:YAG laser device that comes with these small 400- to 600-micron chisel tips. According to Dr. Khatri, the tiny straight and curved handpieces are ideal for the treatment of small lesions such as hyperplasias or skin papules, which can sometimes be only a millimeter or less in diameter. Other currently available ablative lasers usually come with 1.4, 2 or 3 mm spots, and, often, these are simply larger than the actual lesions themselves.

"With these larger spots, you often unnecessarily end up not only treating the target lesion, but also some of the surrounding healthy skin, as well. However, the much smaller spots in the DermaSculpt laser allow you to pinpoint and treat the lesion and only the lesion without causing any collateral damage to the surrounding tissue," he says.

According to Dr. Khatri, the tiny curved micron chisel tips give the physician more of an angle and get into the anatomical corners where these lesions sometimes arise, such as around the medial canthus and in the paranasal crease, as well as other "hidden" anatomical locations. The smaller spots make this laser not only more user-friendly, but also help to achieve much more precise ablation results. The heightened precision of the treatments can also result in decreased downtime in patients, as the healthy skin surrounding targeted lesions is spared. DT

Disclosures: Dr. Khatri reports no relevant financial interests.