New Laser Technology Enhances a Podiatry Practice

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Laser therapy is not new to podiatry, but new technology is providing versatility and power that brings this type of therapy to a new level. Patients are increasingly attuned to the availability and popularity of laser treatments in general, and I have found it increasingly easy to attract patients for laser therapy. When I do, I always review oral, topical and laser treatment options with them in terms of risk and benefits, and the laser option fills a niche for an astounding number of patients that do not want pharmaceuticals or have failed oral and topical treatments in the past.

Pre-Treatment

10 Months After One Treatment

I have been using the **LightPod Forte Podiatry Laser** now for nearly a year. This laser from **Aerolase** differs from other Nd:YAG 1064nm lasers in that the pulse is generated directly in the handpiece. This innovation, as compared to the prior generation of lasers which included a cabinet-style unit with a water-cooled crystal that transfers the energy to the handpiece through fiber optics, allows for several advantages over other lasers on the market. This laser delivers energy without any direct skin contact, and there is no need for expensive reusable pieces, enhancing return on investment.

The Forte also provides more power to the tissue with a wider range of fluences, or energy settings of the laser, ranging from 5 J/cm2 sq to 318 J/cm2. This power is delivered in a shorter, gentler 0.6 millisecond pulse duration which allows significant energy transmission below the skin's thermal relaxation time. Pulses administered without overlap at this duration incur far less treatment pain. These capabilities enable me to use lower settings to stimulate granulation of tissue in open wounds, and to use higher settings to ablate skin lesions such as achrocordons, warts and unwanted pigmented nevi with minimal discomfort and no scarring or post treatment care. In treating onychomycosis, I can stack multiple low energy pulses to bring the nail bed temperature up gradually, and I can comfortably use very high powered pulses to penetrate into deeper elements of the nail, which I find necessary for thicker toenails—particularly along the nail folds. I have also found that employing this full flexibility speeds up treatment times. I generally complete a nail treatment in less than 9 minutes.

Of course, the most compelling reason to get a laser is to achieve new levels of treatment efficacy with onychomycosis. The big question is, "does it work?" And, if your patients are improving, is it because paying for laser treatment encourages compliance with topical medications? Or, is it the laser that is clearing the fungus? I have done preliminary comparisons to attempt to answer this question. At my own expense I purchased a few DTM dishes and have grown out nail specimens taken before and after laser treatment on the same day. 4/4 samples grew orange brown colonies and or black molds with no growth on the lasered sample after 2-4 weeks. I have treated a few dozen cases of onychomycosis at the time of this writing and have seen >90% of nails showing outgrowth of healthy toenails. Clearance of warts is also around 90%. The laser can also be used to remove spider veins, which can be very unsightly on the ankles, and it is used for other treatments such as psoriasis and scar revision. The broad application versatility of the Forte reflects the fact that the laser energy is absorbed in pigment, hemoglobin and water in the skin tissue—therefore it can heat and destroy a wide range of different tissue structures.

Because the Forte is uniquely portable (weighs just 22 lbs.) and can be plugged into any standard 110V outlet, it can be transported to different offices or treatment rooms. Even within an office, countless times I have found it easier to move the laser than to move a wheelchair-bound patient. In contrast, other higher-power laser brands require expensive electrical work to add special outlets—which then confines the laser treatment to the room where the laser can be plugged in.

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