

Novel Device Ups the Ante in Treating Pigmentary Concerns

An innovative laser device, recently released in the U.S., represents a major technological advance in treating various pigmentary and inflammatory skin conditions. The PALLAS (LaserOptek Co., Ltd., Seoul, Korea) is the first gain switched, Titanium Sapphire 311 nm ultraviolet B (UV-B) laser that is FDA-cleared for phototherapy of psoriasis, vitiligo, atopic dermatitis and leukoderma. Unlike the traditional gas-based Excimer laser employed to treat such indications, the PALLAS utilizes a novel solid-state design that eliminates the need for expensive, time-consuming service calls for gas and electrode replacement resulting in improved return on investment for the practitioner.

For patients, the PALLAS is unique in offering the therapeutic 311 nm wavelength that has been clinically shown to be more effective in treating pigmentary concerns, as well as virtually eliminating complications. "It is well known that 308 nm and 311 nm are the two wavelengths for treatment," said Hong Chu, Ph.D., Founder and Chairman of LaserOptek. "However, until now no laser incorporated the 311 nm wavelength. The difference between the 308 nm and 311 nm wavelengths is significant. The 311 is much safer for the patient with no side effects compared with the Excimer laser. Also, we can push 1.7 times the amount of energy into the scan when using the 311 nm versus 308 nm."

The therapeutic 311 nm wavelength has been clinically shown to be more effective in treating pigmentary concerns.

"I chose the PALLAS UVB laser with the 311 nm output option given its efficacy and higher safety profile for my patients," said Peter Jenkin, M.D., FRCPC, F.A.A.D., a Seattle, Wash.-based dermatologist. "I had been aware of research for a few years that the 311 nm wavelength might be the best option."

According to a recent clinical study, the PALLAS running at 311 nm demonstrated comparable efficacy and safety when compared to a 308 nm Excimer laser in the treatment of vitiligo. In a randomized, controlled trial comparing the 311 nm PALLAS laser with a 308 nm Excimer laser, 74 paired vitiligo lesions in 21 patients were treated by either laser. The lesions were treated twice weekly for 12 weeks and evaluated every four weeks, measuring and comparing the extent of re-pigmentation. The study concluded that patients treated by the PALLAS showed an improved therapeutic effect, with excellent re-pigmentation seen in 65% of facial lesions after 12 weeks versus a 60% improvement seen in Excimer laser treatments.

Another recent pilot study evaluated the effectiveness and safety of the 311 nm wavelength in the treatment of alopecia areata. Nineteen patients (10 women and nine men) were treated once or twice weekly using the PALLAS. According to the study's authors, a remarkable response was achieved in 73.9% of the treated alopecia areata patients, including one of three patients that also had alopecia totalis.



Pearl Grimes, M.D., F.A.A.D.

According to Pearl Grimes, M.D., F.A.A.D., a dermatologist in Los Angeles, Calif., "The PALLAS expands the range of targeted phototherapy devices for photo responsive conditions. Plus, it is efficacious, safe, and is like the Energizer Bunny in the sense that unlike the Excimer laser there is no downtime involved regarding gas and electrode replacement. The PALLAS just keeps on going. This is because the maintenance requirements for a titanium-sapphire solid-state laser are vastly different from the Excimer gas laser."

Patient satisfaction from PALLAS treatments is high, added Dr. Grimes. "They love it. This laser is extremely well tolerated and we have been phenomenally pleased with the results. Whenever you are using a laser you want to achieve minimal photo-toxicity, irritation and burns. And we are not seeing an increase in any of those side effects versus what we would see with the Excimer laser."

While the PALLAS has been FDA-cleared for treatment of medical dermatology-related indications, such as vitiligo, psoriasis, atopic dermatitis, "It also has a very strong aesthetic component," stated Dr. Chu. "For example, vitiligo is not only a disease but comes with a very significant negative impact on a person's quality of life. In a practical sense, the PALLAS is a crossover device that appeals to both dermatologists and aesthetic physicians."

Dr. Grimes agreed. "This point is relevant for pigmentary issues in general. But sticking with vitiligo for a moment, it is a therapeutically challenging condition. It impacts quality of life as well as the look of the face," she expressed. "To be able to achieve re-pigmentation on the face with this device is a huge advantage for the physician and the patient. From that perspective this device meets an aesthetic need, as well as a medical one. Also, I have patients that have non-specific hypopigmented areas, and the PALLAS works extremely well for those non-specific conditions."

