Dermatology Times

Vitiligo laser Tx called 'extraordinary'

Small group of patients shows some repigmentation after six treatments

By Cheryl Guttman
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Periocular vitiligo (left) and complete repigmentation after six treatments with excimer 308-nm laser. (Photographs courtesy of James M. Spencer, M.D., M.S.)

New York — Excimer laser ultraviolet B phototherapy is a promising new treatment for vitiligo, James M. Spencer, M.D., M.S., said.

Using a 308-nm excimer laser (EX-308), Dr. Spencer reported experience from 18 patients, the majority of who had failed a variety of previous therapies. Six patients became rapidly discouraged and withdrew from the study very early. The 12 patients who remained had 23 patches treated. After six treatments given over a two-week period, 57 percent showed some repigmentation. Six patients in the series with 11 patches received 12 treatments, and 87 percent of those showed at least some repigmentation.

"To achieve these treatment responses with so few sessions is extraordinary. Assuredly, if these same patients received PUVA for two weeks, no repigmentation would be evident. The next step will be to extend the duration of phototherapy," commented Dr. Spencer, director of dermatologic surgery, Mt. Sinai School of Medicine, New York.

He observed that there remain no highly satisfactory treatments for vitiligo, although of the various options, phototherapy with PUVA affords the greatest likelihood of producing repigmentation. Even so, PUVA is effective in fewer than 50 percent of patients and a trial with up to 100 sessions may be needed before concluding that it has failed.

Dr. Spencer

Dr. Spencer developed the idea to explore excimer laser phototherapy for vitiligo based on the observation that vitiligo patches may contain pigmented hairs. He theorized that surviving melanocytes were present deep in the hair follicles of the affected skin and might cause repigmentation if they could be stimulated by UVB light.

"It was my thought that while PUVA, not UVB, has shown some efficacy in treating vitiligo, that difference reflected the deeper cutaneous penetration of UVA light, whereas UVB is actually the preferential wavelength for stimulating melanocytes. I hoped that delivering UVB in the form of laser light with the excimer laser would achieve deeper penetration to reach surviving melanocytes. Although this early experience shows UVB treatment with the excimer laser may lead to repigmentation, it does not prove that the mechanism underlying its efficacy relates to these theories," said Dr. Spencer.

The patients treated represented a spectrum of skin types, but in all cases, due to the propensity of vitiliginous patches for UV-induced burning, the excimer laser treatment was initiated at a standard, very low dose, of about 2.5 mJ/cm^2. Even with such careful exposure, a few patients developed mild burns.

Refining parameters

"Clearly, these data reflect initial investigational experience, and refinement of the treatment parameters is an issue for the future," commented Dr. Spencer.

Since the number of patients treated was so small, it was not possible to discern identifying factors that might predict response. Dr. Spencer noted it was his anecdotal impression that patients

with darker skin types responded better than lighter-skinned individuals. Thus far, no difference in response was observed relative to duration of disease.

The EX-308, a product of SurgiLight (Orlando, Fla.), is a compact system, weighing about 130 pounds, designed specifically for medical use. It recently received FDA clearance for marketing in the treatment of psoriasis.

SurgiLight-sponsored clinical trials for vitiligo are ongoing at Duke University Medical Center, Durham, N.C., under the leadership of Claude Burton, M.D., associate professor of dermatology and director of the laser clinic.

Dr. Spencer received funding for his clinical trials, but is not a paid consultant for SurgiLight. **DT**

Vitiligo of elbow (left), resistant to previous treatments, including PUVA; and partial repigmentation after 12 treatments with excimer 308-nm laser.