

Low-Level Lasers Eyed for Hair Regrowth

BY DAMIAN McNAMARA

FROM THE ANNUAL MEETING OF THE
FLORIDA SOCIETY OF DERMATOLOGY AND DERMATOLOGIC
SURGEONS

NAPLES, FLA. — Although dermatologists have not widely embraced low-level laser therapy for a variety of purported clinical uses, “I bet you in 10 years almost everyone will be using it,” Dr. R. Rox Anderson said.

“(It) is not completely bogus,” he said.

The therapy works “fairly well” for androgenic alopecia, its FDA-approved indication, Dr. Anderson said. Product examples include the HairMax LaserComb (Lexington International) for males with androgenetic alopecia (cleared by the FDA in 2007).

In February 2010, the agency cleared another device, the MEP-90 Hair Growth Stimulation System (Midwest RF), for treating androgenic alopecia in females.

Additional uses of low-level laser therapy (LLLT) in dermatology might include treatment of wounds, grafts, ulcers, stasis dermatitis, Raynaud’s disease, morphea, and vasculitis, said Dr. Anderson, professor of dermatology at Harvard Medical School and director of the Wellman Center for Photomedicine in Boston.

A few minutes of red, yellow, or infrared light, for example, could potentially improve wound healing, Dr. Anderson said. Other potential future indications include “any ischemic or hypoxic state.”

When Dr. Anderson took an informal poll on how many of the attendees currently use LLLT in their dermatology practices, Only a few raised their hands.



Again, he predicted that will change as a great appreciation of the technology evolves.

One challenge to greater acceptance is that the therapy “using small amounts of light for medical indications in dermatology ... is a confusing topic,” Dr. Anderson said. It might seem counterintuitive to sort and claims that a little bit of light helps healing has been around since the 1960s.

Transcranial laser therapy improved outcome in stroke patients, which is remarkable given the failure of new drugs to do so.

DR. ANDERSON

added. Medical indications go beyond dermatology.

For example, the Quantum Light Therapy System (Stargazer International) was cleared by the FDA in 2004 as adjunctive therapy for relief of musculoskeletal pain.

In addition, Dr. Anderson conducted an “interesting,” prospective, multicenter study about potential benefits of LLLT in 120 ischemic stroke patients (Stroke 2007;38:1843-9).

Researchers randomized 79 participants to transcranial infrared laser treatment called NeuroThera Laser (PhotoThera) at a mean of 18 hours.

They randomized another 41 patients to a sham treatment at a mean of 17 hours.

“The 810-nm transcranial laser treatment within 24 hours produced significant better functional outcome in [this] prospec-

A graphic with a yellow background and a dark blue border. At the top, the letters "IMN" are in white on a dark blue rectangular background. Below that, the text "Thinking a in relocation" is written in a stylized, overlapping font. At the bottom, the website "www.imn" is written in a blue, sans-serif font.

rowth, Wound Healing

er tive, controlled, blinded study," Dr. Anderson said.

The primary outcome, treatment success, was based on improvements on the National Institute of Health Stroke Scale.

A total of 70% of the active treatment group experienced success compared with 51% of the control group.

"That is remarkable given the failure of new drugs and neuroprotective agents in stroke," he said.

What are the possible mechanisms by which LLLT provides these clinical benefits?

Findings primarily from animal studies suggest near infrared light could protect against hypoxia and reoxygenation injury through a mechanism modulated by nitrous oxide (*J. Mol. Cell. Cardiol.* 2009;46:4-14).

Another study revealed that the therapy shrank the lesion size in animals following traumatic brain injury compared with controls (*J. Neurotrauma* 2007;24:651-6). ■

Disclosures: Dr. Anderson said that he had no relevant financial conflicts.

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