

Combo Device Partially, Temporarily Clears Acne

BY SHARON WORCESTER
Southeast Bureau

ATLANTA — Patients with acne vulgaris may benefit from treatment with a device that combines pulsed light and radiofrequency energy, Dr. Neil Sadick reported at the joint annual meeting of the American Society for Dermatologic Surgery and the American College of Mohs Micrographic Surgery and Cutaneous Oncology.

In 32 patients with moderate acne who were treated twice a week for 4 weeks, the combined use of optical and conducted bipolar radiofrequency energy reduced the average lesion count by 47%.

Of patients surveyed, 59% rated overall improvement as good, 32% rated it as very good, and 4.5% rated it as excellent. Another 4.5% had mild or no improvement, said Dr. Sadick, clinical professor of dermatology at Cornell University, New York.

Biopsies were performed on four of the patients prior to treatment, 1 week after the initial treatment, and 1 month after the initial treatment. Compared with the baseline biopsy, the last biopsy showed a lower percentage of follicles with perifolliculitis (58% vs. 33%, respectively) and a reduction in the size of sebaceous glands (0.092 vs. 0.07, respectively). Heat shock protein 70 and procollagen-1 appeared unaffected by treatment.



A patient is shown before undergoing treatment with the Aurora AC device.



Partial clearance is evident above after 1 month of twice weekly treatments.

The patients were treated using the Aurora AC device (Syneron Inc., Richmond Hill, Ont.). Those with Fitzpatrick skin types I-IV were treated with pulsed light of 8-10 J/cm², and those with types V-VI were treated with pulsed light of 6-8 J/cm². Radiofrequency of 15-20 J/cm³ was used in all patients.

The combined use of optical energy and conducted bipolar radiofrequency current has a direct effect on *Propionibacterium acnes* by photochemical activation of porphyrins, and by selective hyperthermia of the sebaceous glands. The radiofrequency energy supplements the optical energy and raises the temperature of the sebaceous glands, severely damaging the bacteria, Dr. Sadick explained.

The technology is effective and safe for the typically young patients who present with acne vulgaris, but it is not a cure, he said. The effects are temporary and provide about a 3- to 4-month disease-free interval when the device is used as the sole acne treatment modality.

The mechanisms of action of this technology need to be further defined, and the optimal treatment settings and number need to be determined. Additional study of the use of this technology along with other treatment modalities is also warranted, Dr. Sadick concluded.

Dr. Sadick is a research consultant for Syneron Inc. ■

PHOTOS COURTESY DR. NEIL SADICK

Henna Tattoos Can Trigger Allergy to Hair Dye Later On

BY JANE SALODOF MACNEIL
Southwest Bureau

KAPALUA, HAWAII — Paraphenylenediamine, a chemical found in permanent hair and fur dyes and temporary henna tattoos, has been chosen as the American Contact Dermatitis Society's 2006 Allergen of the Year.

"All these little kids who become allergic to their henna tattoos will not be able to dye their hair permanently again," Dr. David E. Cohen said at the Winter Clinical Dermatology Conference, Hawaii, where he announced the selection.

Dr. Cohen, director of allergic, occupational, and environmental dermatology at New York University School of Medicine, said the dubious honor is designed to draw attention to allergens that are very common and/or under-recognized and merit more attention because they are causing significant contact dermatitis.

As the society's presentation on paraphenylenediamine has not yet been published, he gave his views on why physicians need to be more aware of its effects.

Paraphenylenediamine is well known as an allergen that can provoke reactions to permanent hair dyes, according to Dr. Cohen. The heightened sensitivity brought on by its use in temporary henna tattoos is a newer phenomenon.

Distinguishing ceremonial tattoos from the darker temporary products sold in this country, he said henna is safe as used in India and other traditional societies.

"Those [ceremonial tattoos] are pure henna tattoos, but the black henna tattoos are compounded with paraphenylenediamine to get the darker color and to get more endurance," he explained in an interview at the meeting, which was sponsored by the Center for Bio-Medical Communications Inc.

As a result the commercial tattoos can contain higher concentrations of paraphenylenediamine than the larger quantity used in hair dye, according to Dr. Cohen.

This exposure can in turn lead to a lifelong allergy, he said, reporting that recent research has shown that concentration of the sensitizing agent is more important than the overall dose in triggering sensitization.

"If you introduce higher concentrations of paraphenylenediamine in these small locations, you are going to increase the initial sensitization," he said.

Practitioners have long been concerned about paraphenylenediamine, he said. And finding an alternative product is difficult when allergic patients want to color their hair, which many do.

He cited a recent British study that found 18% of men and 75% of women had dyed their hair at some point during their lives. The median age of first hair dye was 16 years, with a range of 1-80 years. One in 20 people who dyed their hair had an adverse reaction. Of these, only 15% sought help from a dermatologist (Br. J. Dermatol. 2005;153:132-5).

Typically, packages of permanent dyes include a sensitivity test that purchasers can use at home if they are concerned about an allergic reaction. Dr. Cohen recommended that people be encouraged to try these tests before using a product that contains paraphenylenediamine.

"It is almost as good as doing our patch test," he said. "They will learn quickly if they are allergic to it."

In addition, Dr. Cohen urged physicians to be familiar with previous Allergens of the Year, of which he noted the following:

► **2005: Corticosteroids.** Dr. Cohen said screening tests are available for tixocortol, budesonide, and hydrocortisone butyrate.

► **2004: Cocamidopropyl betaine.** Found in more than 600 personal care products "such as shampoos, bath products, and eye and facial cleansers," it can produce low-level irritation in the face, neck, and hands.

► **2003: Bacitracin.** Dr. Cohen said about 9% of people who undergo patch tests and 1% of the general population are sensitive.

► **2002: Thimerosal.** This substance was actually designated "non-Allergen of the Year," according to Dr. Cohen. Removed from many products, it can still be found in most flu shots, he said. All told, 91% of thimerosal-allergic individuals have had "no reaction whatsoever" to flu shots, and the remaining 9% had only an injection site reaction.

► **2001: Gold.** The second most common metal allergy in North America, gold allergy affects mostly women, said Dr. Cohen. About 10% of patients who take patch tests are allergic.

► **2000: Disperse Blue.** One in five people tested for allergies to textile dyes were allergic to either blue or red, according to Dr. Cohen. Reactions to blue dyes were more than three times as common as to red. The acetate liners in clothing can be a problem for these people. ■



The ceremonial tattoos that use pure henna, such as those in India, are safe.

DR. COHEN

Melanoma Survivors Should Get Annual Skin Examinations for Life

SANTA BARBARA, CALIF. — Secondary primary melanomas occur in 2.3% of patients, compared with a 1% incidence of primary melanoma in the white population.

That difference is high enough to justify annual skin examinations throughout life for any patient with a history of melanoma, said Dr. June K. Robinson, chief of dermatology at Dartmouth-Hitchcock Medical Center, Hanover, N.H.

The checks should be at shorter intervals in the years immediately following a melanoma diagnosis, she explained at the annual meeting of the California Society of Dermatology and Dermatologic Surgery.

Patients with stage IA melanoma should receive a history and physical every 6 months for 2 years, then annually, she said. Those with stage IB through stage III should receive a history and physical, chest x-ray, and lactic dehydrogenase (LDH) screen every 3-6 months for 3 years, then every 6-

12 months for 2 years, and then annually.

The timing of the examinations is admittedly guesswork, Dr. Robinson said. "More than anything else, you're hand-holding. You're a stable presence for them," Dr. Robinson said.

An overlooked benefit of follow-up examinations is the opportunity to identify and educate family members who often do not realize that they need to protect themselves and perform regular skin self-examinations.

If a family member accompanies a melanoma survivor to an appointment, Dr. Robinson speaks directly about elevated risk in family members and preventive steps that can be taken.

Patients who come alone can be counseled to speak with their siblings, children, and grandchildren about melanoma risk, tanning booths, sun protection, and the importance of skin self-examination and regular screening, she said.

—Betsy Bates