LED photomodulation helps avoid skin reactions, treatment interruptions in breast cancer patients.

**By Diana Mahoney**

New England Bureau

BOSTON — A light-based therapy commonly used in cosmetic dermatology minimizes the occurrence and symptom intensity of radiation-induced dermatitis in breast cancer patients undergoing radiation treatment, according to the results of a recent investigation. The preventive therapy not only minimizes patient discomfort but also prevents treatment interruptions necessitated by severe skin reactions, said Dr. M. Mainland DeLand at the annual meeting of the American Society for Laser Medicine and Surgery.

Postradiation dermatitis can include reactions ranging from mild to moderate dryness and peeling to significant erythema, hyperemia, and moist desquamation with loss of epidermal barrier, said Dr. DeLand, a radiation oncologist in Lafayette, La. The investigators hypothesized that targeting these areas with pulses of nonthermal low-energy light via arrays of light-emitting diodes (LED) would interrupt the postradiation inflammatory process and stimulate collagen synthesis, and by so doing strengthen the skin’s defenses, she said.

In the pilot study, 18 of 19 women who received LED photomodulation therapy following radiotherapy for breast cancer experienced little to no radiation dermatitis, whereas all 28 matched controls who did not receive the light therapy experienced some degree of skin reaction, reported Dr. DeLand.

Patients in the study were 35-80 years old. Prior to radiation therapy, all had undergone single lymph node sampling or axillary dissection; some had chemotherapy. The women in the photomodulation group received the LED treatment immediately following their daily radiation therapy, and were allowed to use a neutral pH ointment for dry skin after each session. The women in the control group followed the same radiation therapy protocol without the LED follow-up, and were also allowed to use the ointment.

Of the 19 women in the treatment group, 7 had no skin reactions, 11 had grade 1 reactions, and 1 patient had a grade 2 reaction. In contrast, 4 of the control patients had grade 1 reactions, 18 had grade 2 reactions, and 6 had grade 3 reactions.

In the control group, the skin reactions—specifically, severe erythema and moist desquamation—led to treatment interruptions in 19 patients.

“Only one patient in the [treatment group] had a reaction severe enough to require a treatment interruption,” Dr. DeLand said. “This is an important finding, because the efficacy of radiation therapy is based on a dose/time relationship. You really want to avoid treatment disruptions to achieve the best biologic response, she said.

The LED therapy also appeared to provide long-lasting skin benefits. At 3 and 6 months post therapy, the skin texture and pigment of irradiated areas in the women in the treatment group were “excellent,” whereas all 28 matched controls experienced some degree of skin reaction, reported Dr. DeLand.

In September, he treated 10 women postmastectomy with pulses of nonthermal light from an LED array. Of these 10 women, 7 experienced no skin reaction, 2 had mild skin reactions, and 1 had a grade 1 reaction. Patients were allowed to use a neutral pH ointment for dry skin if needed following each session.

“The shifts toward nonantibiotics, reported in an analysis of national prescription habits between 1990 and 2002, may in part be explained by an increasing awareness of antibiotic-resistant Propionibacterium acnes, wrote Dr. Suganthi Thevarajah and her associates in a poster presentation at the annual meeting of the American Academy of Dermatology.

The first report of antibiotic resistance to cutaneous P. acnes appeared in the late 1970s. The study showed that one in five U.S. patients treated with topical erythromycin or clindamycin had resistant strains within their pilar sebaceous follicles, noted Dr. Thevarajah of Hospital Kuala Lumpur, Malaysia. Dr. Thevarajah led the study while at the Center for Dermatology Research, Wake Forest University, Winston-Salem, N.C. The center is supported by a grant from Galderma Laboratories, which makes acne treatments.

She and her associates retrospectively analyzed data from all 4,922 acne visits from 1990 to 2002 in the National Ambulatory Medical Care Survey. The survey consists of outpatient information obtained from U.S. non-federally employed physicians.

During the 13-year period, there were significant declines in the likelihood of prescribing agents that relied on antimicrobial mechanisms for controlling acne. Included among these were benzoyl peroxide, topical erythromycin, and tetracycline-group antibiotics. In the same time period, there were significant increases in the likelihood of prescribing agents that were not dependent on antimicrobial mechanisms, such as topical retinoids and oral isotretinoin.

“Cross-resistance between topical erythromycin and clindamycin is increasing. This knowledge may have resulted in a decline in prescriptions for topical antibiotics as seen in our study,” Dr. Thevarajah wrote.

While use of tetracycline-group antibiotics decreased overall, their use increased among dermatologists. This may be because dermatologists are increasingly prescribing them for their anti-inflammatory effects rather than their antimicrobial properties, she added. Dermatologists were more likely than nondermatologists to prescribe benzoyl peroxide, clindamycin, isotretinoin, topical retinoids, and tetracycline-group antibiotics.

Controls for demographics did not change the utilization findings. Older patients were less likely to receive clindamycin, topical retinoids, benzoyl peroxide, tetracycline-group antibiotics, and oral isotretinoin. Whites were more likely than nonwhites to get isotretinoin but less likely to be given benzoyl peroxide.

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**Acne Treatment Shifting From Antibiotics Toward Retinoids**

**By Sherry Boschert**

San Francisco Bureau

SAN FRANCISCO — Prescribing has been gradually moving away from antimicrobial agents and toward increased use of retinoids in the treatment of acne vulgaris.

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