Sunscreen Found to Cut Melanoma Incidence

BY MARY ANN MOON

FROM THE JOURNAL OF CLINICAL ONCOLOGY

Regular use of sunscreen during a clinical trial of basal cell and squamous cell carcinomas was found to reduce the incidence of a different skin malignancy – new primary melanomas – up to 10 years later, according to a study published online in the journal.

The number of invasive melanomas in particular decreased by 73%, but this was an exploratory finding "and should be interpreted cautiously," said Dr. Adéle C. Green and her associates at the Queensland Institute of Medical Research, Royal Brisbane (Australia) Hospital.

The original clinical trial, conducted in 1992-1996 and involving 1,621 white Queensland residents aged 25-75 years at baseline, examined the effects of 5 years of sunscreen application and beta-carotene supplementation on the incidence of basal and squamous cell carcinoma.

The researchers' new report focuses on the incidence of melanoma as a secondary end point in the same population. "Despite the known etiologic role of sun exposure, the question regarding sunscreen use to prevent melanoma remains open and controversial," they noted.

In all, 812 patients were given a free, unlimited supply of SPF-16 sunscreen and told to use it daily on their head, neck, arms, and hands, whereas 809 controls were randomly assigned to continue using sunscreen of any SPF at their own discretion, which included no use at all in 38% and infrequent use in another 35%.

The two groups were similar in established risk factors for skin cancer, degree of sun exposure, and use of sun protection measures other than sunscreen.

Between baseline in 1992 and the end of the extended follow-up in 2006, 36 study patients developed first primary melanomas. These were in situ malignancies in 22 subjects and invasive in 14; none was metastatic. Three patients who had melanoma diagnosed in 1992 were excluded.

Only 11 subjects in the sunscreen group developed melanoma, compared with 22 in the comparison group. "Risk of melanoma overall was reduced in those randomly assigned to daily sunscreen compared with discretionary use, although the result was of borderline statistical significance," the investigators reported (J. Clin. Oncol. 2010 Dec. 6 [doi:10.1200/JCO.2010.28.7078]).

The average melanoma thickness was 0.53 mm in the sunscreen group, compared with 1.2 mm in the comparison group. The incidence of invasive melanoma was decreased by 73% with sunscreen, whereas the incidence of in situ lesions was not significantly different between the two groups.

Melanoma incidence was decreased at all sites on the body, not just on the sites assigned to protection by sunscreen. This is probably because many study patients in the sunscreen group applied sunscreen to their trunks and lower limbs regularly, even though they had not been instructed to do so, Dr. Green and her associates noted.

"Our findings provide reassurance in view of the widespread uncertainty to date about sunscreen's ability to prevent melanoma," they reported.

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The application of sunscreen was found to decrease the risk of melanoma in study participants.

"Although the results are directly relevant to people who live in sunny climates like Australia's and who receive relatively high levels of ambient sun exposure as a matter of course, they also have implications for white people living in temperate climates in North America and Europe who are at increased risk of melanoma because of increased solar UV exposure caused by the predilection for holidays in sunny places," they concluded. ■

Melasma and PIH Require Aggressive Treatment Approach

BY SHARON WORCESTER

EXPERT ANALYSIS FROM SDEF THE LAS VEGAS DERMATOLOGY SEMINAR

Pigmentary disorders are more than just a cosmetic concern, according to Dr. Susan C. Taylor.

Studies show that disorders such as melasma and postinflammatory hyperpigmentation (PIH) are particularly common in women with darker skin, and the conditions can have a profound effect on quality of life, Dr. Taylor said at the seminar sponsored by Skin Disease Education Foundation (SDEF).

In one prospective cohort study, 47% of patients with pigmentation disorders said they felt self-conscious about their skin, 33% reported feeling unattractive, and 33% reported putting effort into hiding pigment changes. Nearly 24% said they thought their skin condition affected their activities, and 22% believed others focused on their skin (J. Cosmet. Dermatol. 2008;7:164-8).

"These conditions should be treated aggressively," said Dr. Taylor, founding director of the Skin of Color Center at St. Luke's–Roosevelt Hospital Center in New York. For both melasma and PIH, that means using treatments that decrease melanin formation, block the transfer of melanosomes, minimize inflammation, and nonselectively suppress melanogenesis, or increase melanin removal through desquamation, she said.

Dr. Taylor said topical therapies are not curative, but they can be effective.

For melasma, triple-combination therapy with a cream containing hydroquinone (4%), retinoic acid (0.05%), and fluocinolone acetonide (0.01%) has been shown to be quite effective in multiple studies, and is Dr. Taylor's preferred treatment.

Data from two 8-week randomized trials showed that significantly more patients treated with the triple-combination cream experienced complete clearing, compared with those on dyad creams (26% vs. 5%). An extension study showed that 80% of patients who were treated with or switched to the triple-combination cream were completely cleared or nearly cleared at 12 months. Only 2.5% of patients discontinued the study because of treatment-related adverse events (J. Drugs Dermatol. 2005;4:592-7).

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Melasma, seen here on the cheeks, should be treated aggressively.

Other options shown to be of benefit for the topical treatment of melasma include 0.1% tretinoin cream or 20% azelaic acid cream, Dr. Taylor said.

Oral therapy with procyanidin plus vitamins A, C, and E also shows promise. In an 8-week randomized, double-blind, placebo-controlled trial in 60 Filipino women, treatment was associated with significant improvements in the left and right malar regions, and was safe and well tolerated (Int. J. Dermatol. 2009;48:896-901). However, additional studies are needed to confirm these results, she noted.

Chemical peeling agents can serve as good adjuncts to other therapies for melasma, particularly in recalcitrant cases. In one study, Dr. Taylor said, the addition of eight glycolic acid peels to topical therapy with azelaic acid and adapalene gel improved outcomes vs. the topical treatments alone. Priming agents such as 2% hydroquinone and 0.025% retinoic acid can boost the effects of such peels (J. Dermatol. 2007;34:25-30).

Finally, an emerging treatment option for melasma appears to be fractional photothermolysis.

In a pilot study, 10 female melasma patients who failed prior treatments received four to six fractional laser treatments at 1- to 2-week intervals using 1,535-nm and 1,550-nm wavelengths and 6- to 12-mJ/microthermal zone. Most patients (60%) had 75%-100% clearing, and 30% had less than 25% improvement, Dr. Taylor said (Dermatol. Surg. 2005;31:1645-50). The investigators used microdermabrasion to improve penetration to the target site, followed by an effective tyrosinase inhibitor to suppress melanocytes and remove melanin from the stratum corneum, she explained, adding that sunscreens and topical vitamin C were also used.

"Fractional resurfacing may hold the key to treatment of dermal melasma," she said. It also appears to be useful in PIH.

A case report of its use in a patient with PIH on the neck that had failed to respond to topical therapies for 2 years showed that after 3 treatments, the patient had near-complete clearing with no postprocedural complications or recurrence at 7-month follow-up. Treatment was with a 1,550-nm wavelength erbium-doped Fraxel SR1500 laser at a fluence of 15 mJ, level of 6, with 8-10 passes (Dermatol. Surg. 2009;35:1844-8), Dr. Taylor said.

She cautioned, however, that using lasers in patients with skin of color can potentially cause PIH.

Other treatment options for PIH include hydroquinones, which remain the gold standard, and retinoids, mequinol, and azelaic acid, she said, noting that all patients with melasma and PIH should be advised to use sunblock, protective clothing, and sunglasses and to avoid ultraviolet exposure when possible.

Dr. Taylor serves on advisory boards for Beiersdorf, Johnson & Johnson, Medicis, and GlaxoSmithKline. She has been an investigator for Johnson & Johnson, Medicis, Merz, and Palomar, and is on the speakers bureau of Medicis and Stiefel. She owns stock in T2 Skincare.

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