Dermoscopy May Enhance Melanoma Risk Assessment

WAIKIKI, HAWAII — Nevi displaying a specific high-risk pattern on dermoscopy appear to indicate a severalfold greater melanoma risk than is conferred by the presence of clinical dysplastic nevi, Dr. Allan C. Halpern said at the annual Hawaii dermatology seminar sponsored by Skin Disease Education Foundation.

This finding from a recent pilot study that he characterized as “very small, pre-liminary, but thought provoking” suggests dermoscopy may enable physicians to do a significantly better job of identifying patients at high risk of developing melanoma, said Dr. Halpern, chief of the dermatology service at Memorial Sloan-Kettering Cancer Center, New York, and cochairman of the National Council on Skin Cancer Prevention.

For the past couple of decades, experts have considered the presence of dysplastic nevi to be one of the most potent available markers of increased risk of developing melanoma. Dysplastic nevi are a stronger risk factor than total skin nevus number, which in turn conveys more information about melanoma risk than does skin complexion.

And while family history of melanoma is another important risk factor, having a parent or sibling with melanoma conveys at least two of the three following criteria: indistinct borders, variable pigmentation, and an irregular asymmetric outline. Dysplastic nevi are markers of risk, not obligate precursors. Although melanoma sometimes arises within a dysplastic nevus, the melanoma risk extends to normal-appearing skin, so there is no point in trying to prophylactically remove dysplastic nevi, he stressed.

To test the hypothesis that dermoscopic pattern might do a better job of defining patients at high risk for melanoma than might identification of clinical dysplastic nevi, Dr. Halpern and his coinvestigators assessed in unblinded fashion dermoscopic images of 187 individual nevi from the backs of 20 patients with invasive melanoma and 150 nevi from 20 age- and gender-matched controls at very high risk for melanoma. All participants had numerous moles, including multiple dysplastic nevi.

In a multivariate logistic regression analysis, the finding of what the investigators called a complex global dermoscopic pattern was associated with a highly significant 2.9-fold increase in melanoma risk. They defined a complex global pattern as one in which both a reticular pigment network and globules of uniform hyperpigmentation were present.

In contrast, the dermoscopic finding of dots in a nevus was associated with a 50% reduction in the likelihood of melanoma (Arch. Dermatol. 1998;134:492-494). This was achieved at week 2 in 80% of the cobetasol monotherapy group and 59% who received the superpotent topical steroid spray as add-on therapy. After 4 weeks, the success rate was 80% in both populations, explained Dr. Koo, professor and vice chairman of the department of dermatology and director of the psoriasis treatment center at the University of California, San Francisco.

On the target plaque severity scale, success rates at week 4 for cobetasol spray as add-on therapy were 76%-84%. The other outcome measure was physician global assessment of improvement. Success required a rating of clear or almost clear on whole body assessment. This was achieved in 30% of the monotherapy group and 27% of the add-on treatment group at week 2, and in 69% of monotherapy and 62% of add-on therapy patients at week 4. Seventy-five percent of participants were reported by their physicians as being very satisfied with their treatment at week 4, while another 19% were somewhat satisfied. Ninety-six percent of patients completed the study.

Among the 2,242 patients included in the safety analysis, one-quarter to one-third experienced treatment-related erythema, stinging/burning, dryness, or peeling/scaling, but these side effects were rated severe in less than 1% of cases. Telangiectasias, skin atrophy, and folliculitis occurred in 1% or less of patients at 4 weeks; pruritus was noted in 5.9%.

Dr. Koo is on the scientific advisory board of Galderma, which sponsored the COBRA trial. He is also a consultant to several other drug and device companies. SDEF and this newspaper are wholly owned subsidiaries of Elsevier.

Value of Melanoma Biopsy Technique Is Revised

He also addressed the significance of the time interval between biopsy to definitive wide excision and the optimal margin of wide excision. Dr. Daniel G. Coit, a surgeon and coleader of the melanoma disease management team at Memorial Sloan-Kettering Cancer Center in New York, and member of the American Joint Committee on Cancer melanoma staging committee.

The key determinant of outcome in melanoma is not biopsy technique but rather tumor biology as expressed in factors including Breslow thickness, sentinel lymph node status, mitotic index, ulceration, and body site, he added. He also noted the significance of the time interval between biopsy and definitive wide excision and the optimal margin of wide excision.

Regarding the clinical impact of biopsy technique, Dr. Coit cited a study by Dr. Barbara G. Molenkamp and colleagues at Vrije University Medical Center, Amsterdam, who reported on 471 patients who underwent initial complete or partial removal of what proved to be stage I/II melanoma. When rebiopsy was done after lymph node biopsy, patients were followed for a mean of more than 5 years. The Dutch researchers found that overall and disease-free survival were unaffected by whether the initial biopsy was done before the definitive wide excision, with positive margins, or incisionally. The presence of residual tumor—in 41 patients—did not adversely affect these key outcomes, either (Ann. Surg. Oncol. 2007;14:1242-30).

“Just because someone was biopsied, it didn’t affect overall or disease-free survival,” Dr. Coit said. “The interval from biopsy to definitive wide excision does not make a whit of difference other than dealing with patient anxiety. It will not make a whit of difference other than dealing with patient anxiety. It is only in the much smaller subgroup of individuals with both an affirmative risk. It’s only in the much smaller subgroup of individuals with both an affirmative risk. It’s only in the much smaller subgroup of individuals with both an affirmative risk. It’s only in the much smaller subgroup of individuals with both an affirmative risk.”

Similarly, when dermatologists at Case Western Reserve University, Cleveland, retrospectively studied 108 patients with invasive melanoma who initially underwent nonexcisional shave or punch biopsy then definitive wide excision, they found 89% of the initial biopsies were accurate as to Breslow depth (J. Am. Acad. Dermatol. 2003;48:420-4).

“If you take less than the whole lesion out, you should expect to be correct about 88% of the time. And that’s not bad. It beats missing a melanoma altogether,” Dr. Coit said. “In a case in which the patient has a melanoma that is primarily cutaneous whose surgical interval between diagnosis and definitive wide local excision ranged from less than 2 weeks to more than 92 days, with a median of 30 days. Surgical interval wasn’t predictive of overall survival, disease-free survival, or local recurrence at a median follow-up of 3 years (Br. J. Dermatol. 2002;147:48-54).

There is no good data from well-conducted prospective studies addressing the optimal width for excision margins. A recent meta-analysis of five randomized trials totaling 3,313 invasive melanoma patients showed no significant differences with wide compared as with narrow margins insofar as local recurrence, disease-specific survival, or overall survival (Arch. Surg. 2007;142:885-91).

The exception is melanoma in situ, for which there are no prospective data. The current recommendation is to aim for histologically negative margins, starting with a 0.5-cm margin beyond the visible disease. ‘‘Explain to patients that while this disease may not be beyond that, and they may need to return,’’ said Dr. Coit.

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