Dermatologists support public education campaigns using photographic references of nevi and melanoma, and they distribute brochures with these images to their patients in the belief that such images teach people to self-detect changing nevi and melanomas. Photographic images of melanomas optimize people's spontaneous image recognition. After the initial review, it is unclear how reference materials are used. We explored the use of educational material by people at risk to develop melanoma.

Methods. The study population, composed of 174 participants with melanoma and their cohabiting partners, was randomized into either the dyadic (couple) or single learning condition of an educational intervention to learn skin self-examination (SSE). Specifics on the inclusion and exclusion criteria and the intervention have been published. Briefly, at the initial visit, subjects participated in a demonstration of the ABCDE rule (asymmetry, border irregularity, color variegation, diameter ≥6 mm, and evolution), and a 15-minute SSE skills training session with quiz questions. They were given an enabling kit consisting of the ABCDE card, a lighted hand magnifying glass, and a millimeter ruler.

At the 4-month follow-up visit, the research assistant (S.O.) asked a series of questions regarding use of the ABCDE card. Frequency of checking the card (daily, 2-3 times per week, once per week, once per month, 1-2 times since received card, never) and the storage location of the card were ascertained. The institutional review boards of Dartmouth-Hitchcock Medical Center and Northwestern University approved the research protocol. Statistical findings were determined by χ² analysis.

Results. There was no difference in the demographic characteristics of age, sex, education, income, and marital status between the dyadic (n=92) and the single (n=82) learning conditions. Use of the illustrated card was associated with dyadic learning (P =.03) (Table). Of the 86 participants who never used the card, 84% indicated that they did not need it as they "got it" during the training session (n=72). The cards were stored in the following locations: bedroom (n=56), bathroom (n=27), kitchen drawer (n=21), and living room (n=2). Sixty-eight participants did not know where the card was located. Cards stored in bedrooms and bathrooms were referred to more than those stored in other locations (P =.02). For those in the single learning condition, the most common reason for referring to the card was to show the partner what to check (n=25). For those in the dyadic learning condition, the card was used to check the color variation.

Comment. Recognizing a melanoma requires associating the image with the model of a melanoma stored in the visual memory. Models are constructed from our visual experience. People cannot recognize things that they have not seen before; however, having seen a melanoma once during supervised learning, people create a visual model. People in our study used the reference material once to help the partner create a model of a melanoma in his or her memory. Some referred to the ABCDE card images to help check color variation and added this information to their global visual model. Since people did not use the reference material to check border irregularity or diameter, it may be inferred that these parameters are more easily understood and incorporated into the learner's visual memory. Many did not need to use reference materials.

The intervention used active learning by performing exercises with a millimeter ruler to demonstrate measuring the diameter and a lighted magnifying lens to identify the border and colors of a mole. The findings from this research using active learning of skills cannot be generalized to patients who are asked to learn passively by reading a magazine or a brochure given to them by a physician.

As dermatologists consider resource allocation for patient education, it behooves us to adopt ways that may be more beneficial to the patient. Having a patient use a ruler to measure a mole and a magnifying lens with nurse supervision may be more efficient in eliciting behavioral change than distributing color brochures to patients. Furthermore, having the patients practice using their own nevi may increase the relevance of the ABCDE materials. Finally, the images of melanomas used in learning materials are often of advanced cases to illustrate all of the features, but these more extreme images may be frightening or confusing to patients. Patients appear to internalize the concept of checking for change in a mole by viewing examples of nevi with 1 or 2 features.
Author Contributions: Study concept and design: Robinson. Acquisition of data: Robinson and Ortiz. Drafting of the manuscript: Robinson. Critical revision of the manuscript for important intellectual content: Ortiz. Obtained funding: Robinson. Administrative, technical, and material support: Ortiz. Study supervision: Robinson.

Financial Disclosure: None reported.

Funding/Support: This study was supported by grant 5R21 CA-103833-02 from the National Cancer Institute (Dr Robinson).

Additional Contributions: Rob Turrisi, PhD, performed the statistical analysis for this study.

Disclaimer: Dr Robinson was not involved in the editorial evaluation or editorial decision to accept this work for publication.


Lichen Planopilaris: Retrospective Study and Stepwise Therapeutic Approach

Lichen planopilaris (LPP) is a primary lymphocytic scarring alopecia that causes inflammation, erythema, pruritus, dysesthesia, and alopecia that can be treatment resistant. After approval from the institutional review board, we performed a retrospective case analysis of alopecia due to LPP to assess possible therapeutic effectiveness.

Methods. All medical charts with International Classification of Diseases, Ninth Revision (ICD-9) diagnoses of alopecia (2004-2007) were analyzed: 674 cases were non-scarring (81%), and 159 were scarring alopecia (19%). Based on clinicopathologic correlation, LPP was diagnosed in 45 cases (28% scarring alopecia, 5% overall), and all patients were diagnosed by the same observer (J.C.E.). According to the criteria of the North American Hair Research Society,1 histologic evidence of lymphocytic scarring inflammation includes lupus erythematosus (LE), classic pseudopelade, central centrifugal cicatricial alopecia, alopecia mucinosa, keratosis follicularis spinulosa decalvans, and LPP.1

Lichen planopilaris and LE require close scrutiny for distinction. Histologic criteria used to distinguish LPP from LE were superficial infiltrate, lack of basement membrane thickening, excess mucin, epidermal thinning, or telangiectasia. Clinically, a diagnosis of LPP was favored over LE if the alopecia had perifollicular hyperkeratosis and erythema, lack of follicular plugging, ill-defined areas of involvement, and no evidence of perilesional hyperpigmentation. Data revealed that 42 of the 45 patients were white (93%), 31 were female (69%), and average age at the time of diagnosis was 51 years. Interestingly, 3 of the 45 patients were diagnosed with a frontal fibrosing alopecia variant with eyebrow loss, and 1 of 45 had Graham-Little-Piccardi-Lasseur syndrome. These numbers substantiate previously reported data regarding prevalence and patient characteristics of LPP.

Twenty-nine patients with LPP met the criteria for analysis of treatment interventions. Those who did not return for follow-up, failed to obtain initial laboratory work, sought care elsewhere, or refused to undergo biopsy were not included in the analysis. Improvement was defined at follow-up as the absence of reported symptoms (pruritus, burning, and/or dysesthesia), lack of progression, reduction in erythema and follicular hyperkeratosis found on examination, and the ability to discontinue therapy. Most of the patients underwent treatment with supplemental topical steroids, topical minoxidil, 5%, and/or oral biotin with or without orthosilicic acid. A summary of instituted systemic immunosuppression approaches appears in the Table.

Results. For 15 patients, an initial tetracycline therapeutic choice (doxycycline hyclate) was given based its relatively low adverse effect profile and lack of laboratory monitoring required: 27% of patients showed improvement (n=4). Twenty-two of our patients took hydroxychloroquine sulfate during their therapy (some initially, others after doxycycline failure) with 9 of 22 showing improvement (41%). The Fisher exact test comparing these initial treatments did not find significant differences (P=.74). Of the patients for whom hydroxychloroquine treatment failed, 10 were treated with mycophenolate mofetil; none received this therapy without a failed trial of hydroxychloroquine. Three patients showed improvement under treatment with mycophenolate mofetil (30%). For those who did not improve, subsequent transition to methotrexate therapy in 1 patient was unsuccessful, and 2 of 3 patients who attempted acitretin treatment found success. The Fisher exact test comparing mycophenolate mofetil and acitretin found no significant difference (P=.51).

Comment. Many systemic agents have been used to treat LPP with limited success.©2009 American Medical Association. All rights reserved.