Here Comes the Sun: Addressing Skin Cancer

One in 5 Americans will develop nonmelanoma (basal cell or squamous cell) skin cancer in their lifetime, and 1 in 50 will develop melanoma by 2015. The risk of having skin cancer doubles the risk of having another type of cancer. Women with a history of nonmelanoma skin cancer are at higher risk of developing leukemia, breast, kidney, and lung cancers, and men with a history of nonmelanoma skin cancer are at higher risk of developing prostate cancer. The combined estimated direct costs associated for the treatments of nonmelanoma and melanoma skin cancers in the United States in 2010 exceeded $3.85 billion.¹

Exposure to ultraviolet (UV) light is the most preventable risk factor for all skin cancers. Very young children who experience as few as 2 to 3 sunburns may have an increased risk of developing skin cancer later in life. The risk of developing skin cancer increases as one ages. The majority of lifetime sun exposure occurs before age 18, and skin cancer can take 20 years or more to develop. The recent increase in melanoma in white women under 44 years old (up 6.1% annually) has been attributed, in part, to trends in indoor tanning. Indoor tanning exposes users to both UVA and UVB rays. Using a tanning bed is particularly dangerous for younger users; people who begin tanning younger than age 35 years have a 59% higher risk of melanoma. Studies show that indoor tanning before the age of 35 increases the risk of melanoma by 59% to 79%, and tanning before the age of 25 increases nonmelanoma skin cancer risk from 40% to 100%.¹ Thirty-five states and the District of Columbia have some type of age-restriction on tanning beds use. Say NO to teen tanning!

Melanoma incidence rates in whites are 5 times higher than in Hispanics and 23 times higher than in blacks. However, all races are susceptible to developing the disease. Among blacks, melanomas occur mainly on body sites that are not pigmented, such as the palms of the hands, the soles of the feet, and the skin beneath the nails.

Genograms are important predictors of melanoma risk. About 1 in every 10 patients diagnosed with melanoma has a family member with a positive history of the disease, and each person with a first-degree relative diagnosed with melanoma has a 50% greater chance of developing the disease than those without a family history of the disease. When atypical moles are found in an individual belonging to a melanoma family, the condition is known as familial atypical multiple mole melanoma syndrome. People with this syndrome are at the greatest risk of developing melanoma. Additionally, a mutation in a gene, BRAF, may play a part in causing melanoma. In 1 study, this mutated gene was found in two thirds of the melanoma cells analyzed.² Mutations in this gene can lead to uncontrolled cell growth and cancer. This research breakthrough has led to the development of experimental therapies to inhibit BRAF.

The evaluation of moles and skin pigmentation should be done using the ABCDE criteria. A is for asymmetry; the lesion cut in half should be a mirror image of itself. B is for border; an irregular, scalloped, or poorly defined border is risky. C is for coloration; different shades of browns, blues, reds, whites, and blacks are concerning. D is for diameter; a mole or pigmented spot should be smaller than the size of a pencil eraser (< 6 mm). E is for evolution; if a mole or spot has changed in size, shape, and

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color over time, it needs to be assessed. Additionally, fingernails and toenails should be examined for suspicious changes, which may include brown- or black-colored stripes under the nail or a spot that extends beyond the edge of the nail.

Mole and skin pigmentation evaluation is a skill. Patients present with a variety of “spots” that they fear are worrisome. Early detection and recognition of skin cancer are the keys to improving the chance for successful treatment. A practitioner’s ability to differentiate basal and squamous cells from actinic keratosis and benign moles is invaluable, but it takes practice. The INFORMED (INternet curriculum FOR Melanoma Early Detection) program was developed to provide a Web-based early detection training program available that is grounded in the realities of the primary care environment and that includes a deep image database. The goal of the site is to improve the detection of skin cancers by increasing practitioner clinical knowledge and diagnostic skills and ultimately reduce the skin cancer mortality rate (http://www.skinsight.com/info/for_professionals/skin-cancer-detection-informed/skin-cancer-education). Try it!

Both basal cell and squamous cell carcinomas have cure rates approaching 95% if detected early and treated promptly. The 5-year survival rate for people whose melanoma is detected and treated before it spreads to the lymph nodes is 98%. The 5-year survival rates for regional and distant stage melanomas are 62% and 15%, respectively. Treatment is directed at surgical removal, staging, and adjunctive therapy if indicated. Referral to dermatology and/or plastic surgery is appropriate.

It has been estimated that the regular application of sunscreen with a sun protection factor of 15 or greater for the first 18 years of life would reduce the lifetime incidence of non-melanoma skin cancers by 78%. Research has found that daily sunscreen use cuts the incidence of melanoma in half. Although exposure to the sun’s UV rays is said to be the most important factor in the cause of skin cancers, only a little over half of American adults use sun protection measures. Encourage this practice.

Primary prevention of skin cancer is based on increasing public awareness of the risks of sun exposure and providing patients with individualized guidance. The American Academy of Dermatology encourages everyone to protect their skin by applying sunscreen, seeking shade, and wearing protective clothing. Patients who are educated about risk factors for skin cancer are more likely to self-select for clinical screening and to bring malignant lesions to the attention of a health care provider. Providers who are adept at screening lesions can refer promptly for appropriate treatment, educate their patients about safe sun practices, and help make the world a more beautiful place!

References