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Study finds risk of BCC/SCC high in melanoma patients

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Washington - Patients with a history of melanoma are at increased risk for development of nonmelanoma skin cancer, according to the results of a retrospective study reported by George Kroumpouzos, M.D., Ph.D., instructor, department of dermatology, Harvard Medical School, at the annual meeting of the Society for Investigative Dermatology.

The study compared 1,396 caucasian patients treated for cutaneous melanoma at the Roswell Park Cancer Institute, Buffalo, N.Y., between 1977 and 1978, a control group consisting of the white population of Detroit. During an average follow-up period of four years, the melanoma patients showed an approximately 3.5-fold higher risk for developing nonmelanoma skin cancer.

The risk of nonmelanoma skin cancer was increased in both genders of melanoma patients, although the odds ratio was higher among males compared to females, (3.67 versus 2.89, respectively). There were no correlations between increased risk for nonmelanoma skin cancer and patient age, type, anatomic site, or length of follow-up of cutaneous melanoma.

"Previous investigations have shown that melanoma is associated with an overall increase in actinic tumors. Nevertheless, those analyses included actinic keratoses and did not clearly define the risk for nonmelanoma skin cancer. Although our investigation has inherent limitations from its retrospective design, its results are quite compelling. Therefore, we recommend that patients with melanoma should be educated about the risk for basal cell and squamous cell carcinoma, and their follow-up should include a careful skin examination for these nonmelanoma cancers in addition to surveillance for early detection of melanoma metastases," said Dr. Kroumpouzos, instructor, dermatology, Brigham and Women's Hospital, Boston.

Identification of the type of nonmelanoma skin cancer (basal or squamous cell carcinoma) diagnosed in the melanoma patients further emphasizes the importance of stringent follow-up. The melanoma patients developed 26 new BCCs and nine SCCs, and notably, many of the nonmelanoma skin cancers belonged to histopathologic types associated with an aggressive behavior or high risk of recurrence. Among the BCCs, eight lesions were categorized as infiltrating, basosquamous, morpheaform, or superficial spreading, while two of the SCCs were poorly differentiated.

"These findings clearly indicate that early detection of these nonmelanoma skin cancers is important because it can lead to avoidance of major reconstruction in some patients and reduce the societal costs associated with these cancers," Dr. Kroumpouzos said.

Data for the control group were obtained from the NIH survey involving residents of Detroit (1977 to 78). Dr. Kroumpouzos stressed that only eight American cities and two states, including neither Buffalo nor New York, maintain epidemiologic databases on nonmelanoma skin cancer Therefore, the investigators felt fortunate to have relevant data from Detroit, which is similar to Buffalo in terms of geographic location and population demographics.

"Nevertheless, the possibility of lifestyle differences between the case and control populations cannot be entirely ruled out. However, we believe they are probably minor as the melanoma patients who developed a nonmelanoma skin cancer had neither history of tanning bed use nor PUVA treatment," commented Dr. Kroumpouzos. He acknowledged that the study results may, to a lesser degree, be confounded by selection biases since the melanoma patients may be receiving more regular follow-up and, therefore, are more likely to have nonmelanoma skin cancers detected.

To overcome the limitations of this retrospective trial, the investigators have undertaken a prospective study. This longitudinal trial is a cooperative effort among several centers in New York, Massachusetts, and New Hampshire. In addition to defining the risk of nonmelanoma skin cancer among patients with melanoma, the prospective study aims to identify environmental or biological risk factors for nonmelanoma skin cancer which could explain the observed increased risk.

At present, the investigators postulate that UV exposure may be the common link accounting for the association between melanoma and nonmelanoma skin cancer. According to this speculation, excessive UV exposure may oversaturate the DNA repair system in persons with reduced DNA repair capacity as well as cause immunosuppression which further favors the development of nonmelanoma skin cancer.

In support of this speculation, Dr. Kroumpouzos said that although melanoma occurs in sun-protected areas more often than nonmelanoma skin cancer, both types of skin cancer are observed more densely on the face than on the trunk. Furthermore, although a general consensus holds that nonmelanoma skin cancer is associated with cumulative chronic UV exposure, recent Australian studies show that BCC, like melanoma, may be associated with intermittent, intense UV exposures.

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