UV Exposure May Cut Vulvar Melanoma Risk

BY BRUCE JANCIN

FROM THE 13TH WORLD CONGRESS ON CANCERS OF THE SKIN

MADRID — Solar UV radiation may protect against melanoma of the vulva, a new international study suggests.

This and other recent studies have demonstrated that UV radiation is a double-edged sword in melanoma, acting predictably as a well-established risk factor for cutaneous melanoma in susceptible individuals, while paradoxically decreasing the incidence of melanoma at non–sun-exposed sites, Dr. Isabel Longo reported.

Sunshine's most likely protective mechanism against vulvar melanoma involves UV's stimulation of vitamin D synthesis, said Dr. Longo, a dermatologist at Gregorio Marañón University Hospital, Madrid.

The vulvar melanoma study, "Where the Sun Does Not Shine: Is Sunshine Protective Against Melanoma of the Vulva?" was led by Johan Moan, Ph.D., of the Institute for Cancer Research at the Norwegian Radium Hospital, Oslo.

He and his coworkers analyzed melanoma trends over time and geography in the United States, Sweden, Germany, and Australia. They concluded that while the incidence of cutaneous melanoma on sun-exposed skin sites increased with decreasing latitude—moving north to south in the Northern Hemisphere and oppositely in the Southern Hemisphere—the incidence of vulvar melanoma followed the opposite latitudinal trend.

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Sunlight on the skin stimulates vitamin D serum levels, which are protective against melanoma in non–sun-exposed sites.

The most likely explanation, according to the investigators, is that solar UV-stimulated vitamin D synthesis in sun-exposed skin—greatest at latitudes closest to the equator—boosts serum levels of the vitamin, providing protection against melanoma at non–sun-exposed sites such as the vulva. However, these higher serum vitamin D levels are insufficient to protect against solar UV's cutaneous melanoma-promoting effect (J. Photochem. Photobiol. B March 12, 2010; Epub ahead of print PMID: 20359907).

When the investigators analyzed melanoma incidence trends in the four countries over time, they observed that whenever cutaneous melanoma rates flattened or decreased—presumably in response to public health campaigns regarding sun protection—vulvar melanoma rates increased.

Dr. Moan and colleagues also recently demonstrated in an analysis of Norwegian Cancer Registry data for 1966-2007 that cutaneous melanoma rates for all body sites exhibited a strong latitude gradient, with 2- to 2.5-fold greater incidence in the south of the Scandinavian nation as compared to the north (J. Photochem. Photobiol. B April 6, 2010; Epub ahead of print PMID: 20430639).

Dr. Longo cited evidence suggesting that higher serum vitamin D levels may improve melanoma survival. For example, in a prospective cohort study involving 872 melanoma patients in the United Kingdom, investigators found that higher serum vitamin D levels at diagnosis were associated with a thinner tumor Breslow thickness and also—independent of Breslow thickness—with better survival (J. Clin. Oncol. 2009;27:5439-44).

This work followed an earlier study that found sun exposure to be inversely associated with death from melanoma in 528 patients followed for 5 years.

Patients with evidence of solar elastosis had a 50% relative risk reduction, while those with a history of intermittent sun exposure or ever having been severely burned were 40% less likely to die from their skin cancer. Proposed mechanisms involve vitamin D's antiproliferative and proapoptotic effects. Alternatively, sun exposure may trigger less aggressive melanomas by enhancing DNA repair capability (J. Natl. Cancer Inst. 2005; 97:195-9).

Dr. Longo stressed that "not much" sun exposure is needed to achieve optimal serum vitamin D levels. UV-induced vitamin D synthesis is maximal at less than 1 minimal erythema dose—that is, a 5-minute exposure in the summer for fair-skinned individuals (10-30 minutes if sunscreen is used). ■

Disclosures: *Dr. Longo reported no conflicts of interest.*

Genetic Testing Has Mixed Impact on Skin Self-Exams

BY SUSAN LONDON

FROM THE ANNUAL MEETING OF THE SOCIETY OF BEHAVIORAL MEDICINE

SEATTLE — The impact of genetic testing on skin self-examination behavior among individuals at high risk for melanoma varies with personal history of the disease and test results, according to the first prospective study of this issue in a tested population.

Of 37 individuals at high risk for melanoma because of family history, those who had previously had the disease and who learned that they carried a mutation that sharply increased risk did not alter their skin self-exam behavior. Both before testing and 2 years later, 73% were doing these exams about every month, as is recommended, or more often.

Individuals who had not had melanoma but who learned that they carried the mutation stepped up their skin self-exam behavior: Only 30% were doing these exams at least monthly before testing, but 60% were doing so 2 years afterward.

By contrast, individuals who had not had melanoma and who learned that they did not carry the mutation had little change in their behavior, even though regular skin self-exams are also recommended for this group: 38% were doing these exams roughly once a month or more often before testing, and 44% were doing so at follow-up.

"Researchers and genetic counselors believe that learning one's objective risk will actually motivate behavior change," said lead investigator Jennifer M. Taber.

There are several concerns, however.

"One is that individuals who test negative will feel that their risk is so low that they don't need to engage in prevention or screening behaviors anymore, that they might feel a false sense of security and not change their behavior," she explained. "Another concern is that for those who test positive, they will feel a sense of fatalism—that there is nothing they can do, their risk is so high anyway, so why bother engaging in the behaviors," she added.

Ms. Taber, a graduate student in psychology at the University of Utah in Salt Lake City, and her coinvestigators studied 37 adults from families with very high rates of melanoma. All underwent genetic testing for the p16 mutation, which sharply increases melanoma risk, and were followed for 2 years.

Nearly a third (30%) of participants were affected carriers, meaning they had a history of melanoma and had the mutation; 27% were unaffected carriers, meaning they did not have a history of the disease and did have the mutation; and 43% were noncarriers who did not have a history of the disease and did not have the mutation.

Monthly skin self-exams are recommended for all individuals from families with high rates of melanoma, regardless of their genetic test results, Ms. Taber noted, because even those with a negative result have a lifetime probability of the disease twice that of the general population.

The investigators classified the participants' skin self-exam behavior, according to the number of these exams performed in a 6-month period, as being on target (four to eight exams); overscreening (more than eight), which may actually hamper detection of changes; and underscreening (fewer than four), which may lead to missed lesions.

Two years after testing, the percentage of participants who were either on target or overscreening remained at the same high baseline level among affected carriers (73%) and had doubled among unaffected carriers (from 30% to 60%), but had increased only slightly among noncarriers (from 38% to 44%).

When the results were viewed another way, the percentage of participants who improved their skin self-exam practice during the 2-year period—to comply with the once-a-month recommendation—was 46% in the affected carrier group, 60% in the unaffected carrier group, and 25% in the noncarrier group.

Compared with participants who did not improve, those who did improve reported feeling that they had more control over detecting melanoma early (4.41 vs. 3.68 points on a 5-point scale).

In a subanalysis of the noncarriers, those who were underscreening at 2 years gave as their reason being busy or forgetful, feeling unqualified to perform the exams, and/or believing that their risk was not high enough.

In addition, noncarriers who improved their skin self-exam performance had a gain in their perceived control over early detection during follow-up, whereas those failing to improve did not.

The consistent finding of a link between an improvement in self-exam behavior and perceived control over detecting melanoma early has implications for strategies to increase this behavior, Ms. Taber said. ■

VITALS

Major Finding: Percentage of participants doing skin self-exams at least monthly remained the same among those with a history of melanoma who were mutation carriers (73%) and doubled among unaffected mutation carriers (from 30% to 60%), but increased only slightly among noncarriers (from 38% to 44%).

Data Source: Prospective, 2-year longitudinal study among 37 individuals at high risk for melanoma.

Disclosures: Ms. Taber reported that she had no conflicts of interest related to the study.