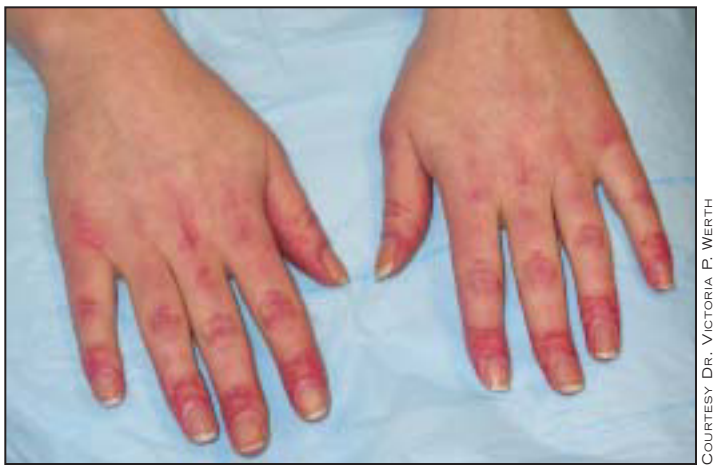

Courtesy Dr. Victoria P. Werth

The intensity of UV radiation exposure may be tied to the prevalence of dermatomyositis in women, shown here.

UV Exposure May Be Tied to Dermatomyositis in Women

BY JEFF EVANS

The intensity of exposure to ambient ultraviolet radiation appears to determine the prevalence of dermatomyositis and an autoantibody specific to the disease in women, based on a recent study.

The UV Index across geographical regions of the United States also significantly correlated with the presence of an autoantibody unique to dermatomyositis (DM)—known as anti-Mi-2—and not to autoantibodies more commonly found in polymyositis (PM). The association between UV radiation and DM was strongest in a collective group of European, Hispanic, and Asian American women, but it also was significant among black women.

This is the first study to show evidence of the influence of sex on the association between UV radiation and autoimmune disorders, commented Dr. Victoria P. Werth, professor of dermatology at the University of Pennsylvania, Philadelphia, and chief of dermatology at the Philadelphia Veterans Affairs Medical Center.

The study brings up many "intriguing kinds of things that we don't totally understand," such as differences in risk factors and responses to UV radiation between men and women and between PM and DM. These types of "interesting epidemiologic observations" may help in the future to understand more about the differences in pathogenesis, Dr. Werth said in an interview.

In the cross-sectional, retrospective study, Dr. Lori A. Love of the National Institute of Environmental Health Sciences and her coinvestigators gathered clinical data and serum samples from 202 PM and 178 DM patients at referral centers across the United States.

The investigators detected myositis-specific autoantibodies in 172 patients (45%), some of which were found in both PM and DM patients, whereas others were found only in each particular phenotypic type of myositis, such as anti-SRP in 21 PM patients and anti-Mi-2 in 23 DM patients.

PM occurred in a significantly greater proportion of black patients (66%) than among nonblack patients (48%). Most (86%) of the patients with anti-SRP antibodies were black, Dr. Love and her associates reported (Arthritis Rheum. 2009;60:2499-504).

The proportion of patients in the study who had anti-Mi-2 autoantibodies was significantly associated with the UV Index for the seven regions (comprising 37 states) that the investigators categorized according to shared geoclimatic factors. However, the UV Index was not associated with the proportion of patients with DM. Both of these comparisons proved to be significant for women but not for men.

The investigators noted that the study may be limited by the following: referral bias; the use of state-level UV radiation intensities; the lack of accounting for individual-level exposure; differences in UV radiation exposure at different locations over time; and the use of personal photoprotective measures.

The study was funded in part by the intramural research programs of the National Institute of Environmental Health Sciences. Dr. Werth said she had no relevant disclosures. ■