

Romanian community provides insight into genetic factors associated with vitiligo

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An isolated, inbred Romanian community has a higher than average frequency of the skin disease vitiligo and other autoimmune diseases, suggesting a genetic variation that may indicate susceptibility to the condition in a broader population, according to a report in the March issue of *Archives of Dermatology*, one of the JAMA/Archives journals.

Vitiligo is a disorder in which progressive patches of skin, hair and mucous membranes lose color due to a decrease in the number of pigment-producing cells known as melanocytes, according to background information in the article. Vitiligo affects about 0.38 percent of whites and occurs with similar frequency in populations worldwide. Researchers are attempting to identify the genes responsible for susceptibility to vitiligo, in part to identify pathways through which effective treatments might be developed.

Stanca A. Birlea, M.D., Ph.D., and colleagues at the University of Colorado Denver, Aurora, Colo., studied 1,673 residents of a geographically isolated community in the mountains of northern Romania between 2001 and 2006. The researchers identified patients with vitiligo and obtained information on demographic data, genealogies, occurrence of other diseases and family structure. The skin of patients with vitiligo and their relatives was examined.

During the study, researchers identified and examined 51 patients with vitiligo. “The 2.9 percent frequency of vitiligo in the study community is 19.3 times its 0.15 percent frequency in the five surrounding villages,

7.5 times that among whites on the island of Bornholm, 5.7 times that among individuals in Calcutta, India and 22.5 times that among Han Chinese in Shaanxi Province, China, the only other populations for which empirically determined prevalence estimates have been published,” the authors write. Rates of other autoimmune diseases, including thyroid disease, adult-onset type 1 diabetes and rheumatoid arthritis, were also elevated in the community.

However, the average age at which symptoms of vitiligo first developed was 36.5 years, significantly older than the average age of onset among white individuals (24.2 years). Analyses indicated that this unusual factor most likely was not genetic. “Whereas disease susceptibility seems to involve a major genetic component, actual onset of vitiligo in genetically susceptible individuals seems to require exposure to environmental triggers,” the authors write.

Source: JAMA and Archives Journals

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