Background: Canada and the northern United States have some of the highest reported rates of multiple sclerosis (MS). In contrast, the prevalence of MS was found to be significantly lower in the Middle East. Although genetic susceptibility has been well demonstrated in twin and family studies, the geographic distribution of MS suggests a strong environmental contribution as well. Various environmental contributing factors have been proposed, including infections, immunizations, climate, diet, and stressors. Objectives: To study the effects of migration from Iran (a low-prevalence area) to British Columbia (a high-prevalence area) on MS onset; and to investigate how MS presents in this poorly studied population and the effect that various environmental factors may have. Methods: A standardized questionnaire form assessing factors such as age at migration, exposure to sunlight, and others was created for the study. Interviews and chart reviews were performed for Iranian MS patients. Information was collected on 22 patients (with all patients being diagnosed in Canada and 17 of 22 experiencing their first onset of symptoms in Canada as well). Results: The rate of MS in the Iranian population in Fraser Health was found to be 110 in 100,000. The male:female ratio was 1:1. Relapsing-remitting MS was present in 20 of the patients, with two having tumefactive MS. Patients experiencing MS onset in Iran took an average (±SD) of 15.2 (±6.32) more years to be diagnosed, as compared with those experiencing the onset in Canada. The most commonly reported onset symptoms were sensory impairment (59%), motor weakness (32%), and visual deficits (23%). Smoking half a pack or more of cigarettes a day predisposed to an earlier age of MS onset than that for the rest of the patients: 25.2 (±3.33) years versus 35.1 (±1.94) years. Conclusions: The results suggest that Iranians do not have genetic protection from acquiring MS and that when taken out of their native environment are as likely as other Canadians to get MS. The difference in the health-care systems may contribute to the shorter time from onset to diagnosis in Canada. Increasing sample size by collecting data from other MS centers will allow for a better understanding of whether smoking in the Iranian population has a robust effect. The final analysis of the data will be presented at the conference.

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