The Incidence of Lofgren’s Syndrome in Japanese: The Number of Patients Affected, Number of Patients Diagnosed and Number of Cases Reported

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It is well known that certain diseases do not affect the population equally. For example, Behçet’s disease has a higher prevalence in the countries along the ancient ‘Silk Road’ from Japan to the Mediterranean region (1, 2). Assessing variation in the rates and severity of diseases according to demographic factors such as sex and race or ethnicity is the basis of epidemiologic research, but it is complicated by the genetic, environmental, and cultural heterogeneity within each group. Despite these complications, the study of well-defined groups of people can yield useful medical information to improve clinical and public health practice in these groups (3).

Lofgren’s syndrome, characterized by the triad of arthritis, erythema nodosum and bilateral hilar lymphadenopathy, first recognized by Lofgren in 1953, is the most characteristic form of acute sarcoidosis, and generally has a favorable prognosis (4). In the last year issue of Internal Medicine, Ohta et al report a case of Lofgren’s syndrome, which is the seventh Japanese patient reported in the literature (5). As the authors state in their report, the incidence of Lofgren’s syndrome is high in Caucasians. It is true that case reports of Japanese patients with this syndrome are rare, but we should keep in mind that this does not necessarily mean that Lofgren’s syndrome itself is rare in the Japanese population.

Sarcoidosis occurs worldwide, affecting persons of all races, both sexes, and all ages (6). It has a particular proclivity for certain ethnic and racial groups. Estimates of the prevalence of sarcoidosis range from less than 1 case to 40 cases per 100,000 population, with an age-adjusted annual incidence rate in the United States of 10.9 per 100,000 for whites and 35.5 per 100,000 for blacks. Higher annual incidence rates have been reported in older studies among U.S. blacks, the Irish, and Scandinavians, although such rates vary according to the country and state. Sarcoidosis is common in Japanese but infrequent in Chinese, Greeks, and Cypriots (7).

It is also known that there are differences in the pattern of organ involvement and the severity of disease according to race and ethnic background. A number of studies indicate that sarcoidosis affects blacks more acutely and more severely than it does people of other races. Whites, as well as Japanese, tend to present with asymptomatic and chronic disease. Extrathoracic presentations of sarcoidosis, such as erythema nodosum or acute uveitis, may be more common in Puerto Ricans, U.S. blacks, and Scandinavians. The acute clinical presentation of sarcoidosis in blacks may increase the likelihood of disease detection, possibly explaining why early reports may have exaggerated the geographic clustering of the disease. On the other hand, we can easily imagine that many patients with Lofgren’s syndrome, which is a benign and self-limiting form of sarcoidosis, might be underdiagnosed and/or underreported. The rates of exact diagnosis of Lofgren’s syndrome might be different between dermatologists, orthopedists, rheumatologists and pulmonologists. In fact, the six Japanese patients were exclusively reported by rheumatologists or pulmonologists. In their report, Ohta et al (5) comment that the severity of Lofgren’s syndrome in Japanese might be different from others based on the requirement of steroid therapy in the reported cases, but this again needs caution because of the possible bias of the patients.

The largest case series of Lofgren’s syndrome is from the university hospital in Spain (8). Hospital-based studies are prone to patient selection bias (1). In this study, the inclusion criteria were relatively less stringent resulting in possible selection bias. Also, patients referred to a given medical center are selected on the basis of a specific disorder in which the receiving medical center specializes, the interest

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and confidence with which the referring physicians treat patients with similar disorders, presence of other complicating diseases, severity of the disorder and proximity to the medical center. A large proportion of patients with similar disorders, living in the same community, are probably not referred to the study center unless it is the only medical facility for a given community. This is beyond the control of the investigators. Because of this unavoidable bias, results from a hospital-based study may or may not apply to the same groups of people living in the community.

Another possible source of confusion from epidemiological studies is when results are based solely on medical documents or diagnostic codes. These documents are completed by a variety of people without specific standardized guidelines. In some instances, the diagnosis may be questionable or key diagnostic tests may be missing. Consequently, the accuracy of these medical documents is variable, and the results based on them may be erroneous. Review of pertinent medical records with standardized and reasonably strict criteria to confirm the diagnoses will minimize errors.

Only community-based studies, with proper standardized definition and verified diagnosis of the disorder being investigated, will answer the questions regarding differences in the incidence and severity of sarcoidosis and Lofgren’s syndrome, as well as all the other diseases, between various ethnic and racial groups.

References


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