HLA Antigens and Leprosy

To the Editor:

The broad spectrum of clinical forms of leprosy, ranging from tuberculoid to lepromatous leprosy, is determined by the underlying degree of cell-mediated immunity of the host; specific immune response genes (Ir), linked to HLA genes in the major histocompatibility complex, could play a significant role in conditioning the host's susceptibility and/or the type of leprosy.

Many previous population studies of the association of HLA antigens with leprosy, whether tuberculoid or lepromatous, carried out in different ethnic groups failed to show conclusive results, but the family studies of de Vries, *et al.* ([1,2]) have indicated an HLA-linked genetic influence on the course of *M. leprae* infection. On the other hand, the study of Stoner, *et al.* ([4]) has evidenced the absence of an HLA-linked genetic defect underlying the *in vitro* unresponsiveness of lepromatous leprosy patients to *M. leprae* antigens.

We have studied the distribution of HLA antigens in 32 unrelated Italian Caucasian lepromatous leprosy patients and in 210 healthy, unrelated individuals of the same ethnic background. Patients and controls were typed for 52 HLA antigens of A, B, and C loci by the standard NIH Terasaki lymphocytotoxicity microtechnique. The HLA specificities tested were those recognized by the VII Histocompatibility Workshop.

BW52, BW38, and B7 appeared to have an increased frequency in patients when compared to controls (χ^2 with Yates' correction: 5.4, $p < 0.025$; 5.0, $p < 0.05$; 4.7, $p < 0.05$, respectively), but multiplying the significance values by the number of antigens tested ([3]), the differences were no longer significant. Thus our findings do not agree with any one of the previous population studies carried out whether among Caucasian or non-Caucasian ethnic groups. It is likely that the typing of many more patients for HLA-D and DR loci will probably provide more conclusions about some HLA-linked genetic influence on susceptibility to leprosy and/or on the clinical course of this disease.

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