Does Dapsone Resistance Really Matter in the MDT Era?

TO THE EDITOR:

In a Letter to the Editor ([4]), Dr. Paul W. Roche and his colleagues presented the results of drug susceptibility testing of 268 clinical isolates of *Mycobacterium leprae* by means of the mouse foot pad technique between 1987 and 1999 at Anandaban Leprosy Hospital, Kathmandu, Nepal. Their results are interesting. However, their opinion about the significance of high-level, primary resistance to dapsone (DDS) in the era of multidrug therapy (MDT) is open to argument.

Roche, *et al.*, proposed that "It will be important to monitor the trends in the level of resistance as well as the frequency of primary dapsone resistance . . ." ([4]), because "MDT efficacy could be severely compromised if high-level primary dapsone resis-

tance becomes highly prevalent." ([4]). In fact, the MDT regimens, i.e., two drugs [DDS and rifampin (RMP)] for paucibacillary (PB) leprosy and three drugs (DDS, clofazimine and RMP) for multibacillary (MB) leprosy, were designed on the principle that they would be effective against all the strains of *M. leprae* regardless of their susceptibility to DDS ([6]). Hence, whether the global prevalence of DDS resistance is increasing or declining is virtually irrelevant to the therapeutic effect of MDT ([5]), and there is no need to closely monitor trends of resistance to DDS.

Roche and his co-authors expressed their concern regarding the gradual disappearance of mouse foot pad laboratories ([4]). Unfortunately, for various reasons, this is probably an irreversible trend; sooner or later, the susceptibility of *M. leprae* to drugs will be tested by molecular genetic methods ([1, 2]) rather than by the mouse foot pad technique. Moreover, instead of DDS-resistance, one should pay attention especially to resistance to RMP, by far the most powerful bactericidal drug against *M. leprae* ([3]), and an irreplaceable component of the MDT regimens.

—Baohong Ji, M.D.

Bactériologie et Hygiène
Faculté de Médecine Pitié-Salpêtrière
Paris, France

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