Case Report

Mycobacterium genavense and *Mycobacterium avium* Mixed Infection in an AIDS Patient

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Several mixed nontuberculous mycobacterial infections have been reported in AIDS patients (l-5), and their prevalence is probably underestimated owing to the lack of differentiation of morphologically similar colonies in mixed cultures. Mixed infections are most difficult to detect when the coinfecting species, like *Mycobacterium genavense,* fails to grow on conventional solid media; according to Kirschner et al. (6), only the use of sequencing of PCR-amplified nucleic acids can detect such mixed infections.

We report, however, a case in which *Mycobacterium avium* and *M. genavense* were isolated from distinct blood samples, drawn at different times of the same day, using BACTEC 13A medium (Becton Dickinson, USA). While the isolation of *M. avium* was achieved in 2 wk, the recovery of *M. genavense* required nearly 3 mo, with the growth index starting to rise at the end of the eight week and with a further 25 d elapsing before microscopic detection. The *M. avium* isolate was identified by hybridization to commercial DNA probes (AccuProbe, USA), while the *M. genavense* was identified by E. Böttger (Medizinische Hochschule, Hannover, Germany) by means of 16S rRNA sequencing.

The AIDS patient, a severely immunocompromised (20 CD4+ cells/ml) 27 yr-old homosexual man. presented with high fever, diffuse abdominal pain hepatosplenomegaly, and confusion; the case closely resembled those of two previously described patients with disseminated *M. genavense* infection. and the empirical therapy was based on the susceptibility patterns of those *M. genavense* strains (7). The regimen. a combination of amikacin. clofazimine and rifampin, produced, as in a previous case of *M. genavense* infection (7), a rapid improvement with cessation of fever and recovery of normal mental status. Such a prompt response to the antimicrobial therapy is very unusual in disseminated *M. avium* infections and suggests that *M. genavense* was responsible for the patients symptomatology, as in the only other published report (6). Also our *M. avium* isolate later was found to be resistant in vitro to clofazimine and rifampin, and only moderately susceptible to amikacin.

The impact of infections due to *M. genavense* in HIV-infected patients is surely greater than the paucity of reported cases seem to suggest. The failure of *M. genavense* to grow on conventional solid media makes it undetectable in most clinical laboratories, even those using the BACTEC radiometric system, if a sufficient period of incubation is not allowed. In the case of mixed infection (most frequently with *M. avium*), *M. genavense* is missed because it is overgrown by the other species. In our case it was a matter of chance that the *M. avium* bacteremia was not continuous, and only the practice of performing repeated blood cultures and our previous experience with *M. genavense* infections allowed us to initiate a prompt and effective therapy and to isolate what appeared to be the organism mainly responsible for the clinical condition.

Every effort should be made to diagnose disseminated infections by *M . genavense* in AIDS patients, because prompt and appropriate therapy can rapidly improve the otherwise severe and life-threatening symptomatology caused by this organism.

References

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