Molecular Epidemiology of Stenotrophomonas maltophilia Isolated from Cystic Fibrosis Patients

We read with interest the recent study of Krzewinski and colleagues (2). However, we wish to clarify some issues in relation to our own work (1), to which they refer. They suggested that we had found a genotype of Stenotrophomonas maltophilia in cystic fibrosis (CF) patients that was distinct from those isolated from other patient groups or from the environment. This is not our interpretation of our findings (1). We genotyped isolates of S. maltophilia obtained from 41 CF patients attending our pediatric CF unit between 1993 and 1995 using enterobacterial repetitive intergenic consensus-PCR and pulsed-field gel electrophoresis (PFGE). Thirty-three of the 41 patients were colonized with unique strains, and four pairs of patients shared strains. We found PFGE to be more discriminatory as a typing method than the PCR-based methodology. There was no supporting epidemiological evidence to suggest patient-to-patient transmission, but there was some microbiological and genotypical evidence to implicate the ward environment as the source for a small number of the patient strains. In light of these findings, we do not believe that segregation of S. maltophilia-positive patients would be beneficial as an infection control measure. The ease of isolation of S. maltophilia from moist environmental sites associated with plumbing systems (e.g., water, faucets, and sink drains) within both the home and hospital environments suggests that controls directed towards these may be more helpful. The practice of rinsing reusable equipment for the delivery of aerosolized antibiotics in tap water is one such issue. We are currently investigating the incidence of contamination of reusable aerosolization equipment with S. maltophilia and shall report our findings shortly. It is interesting that studies assessing the efficacy of aerosolized tobramycin in the management of chronic Pseudomonas aeruginosa infections in CF patients have reported high conversion rates to S. maltophilia positivity during trial periods (3). Forty-one (16%) of 258 patients receiving aerosolized tobramycin and 58 (22%) of 262 patients receiving an aerosolized placebo had S. maltophilia newly isolated from their respiratory tract secretions. These findings suggest that the use of nebulizer equipment per se is a more important risk factor for S. maltophilia acquisition than the selection pressure exerted by the antibiotics delivered by this route. We agree with Krzewinski and colleagues when they suggest that further studies are needed to fully understand how patients with CF acquire S. maltophilia and the clinical impact of long-term S. maltophilia colonization. However, the importance of the environment should not be overlooked.

REFERENCES


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