Are We Doing Enough to Contain *Acinetobacter* Infections?

To the Editor:

Nosocomial infections caused by antibiotic-resistant strains of *Acinetobacter* are being reported with increasing frequency and are a major source of concern. Many strains have a high level of resistance to multiple antimicrobials and are associated with a high mortality rate, especially for pneumonia and bloodstream infections.[1] Risk factors associated with infection have been reported to include intubation, prolonged stay in the intensive care unit and hospital, prior use of broad-spectrum antibiotics,[2] mechanical ventilation,[3] prior surgery, and urinary catheterization.[4]

Intensive efforts have been applied to preventing or containing outbreaks caused by *Acinetobacter.* The Centers for Disease Control and Prevention (CDC) recommendations regarding control of multidrug-resistant gram-negative rods (including *Acinetobacter)* suggest that, in addition to Standard Precautions, Contact Precautions should be used for infected or colonized patients.[5] However, despite application of these recommendations, nosocomially acquired *Acinetobacter* remains problematic, resulting in substantial associated morbidity and mortality, higher treatment costs, and prolonged hospital stay.

It has been reported previously that *Acinetobacter* may be spread by the airborne route.[6,7] A recent report[8] supports this idea, based on observation that outbreaks of resistant *Acinetobacter* occurred in two facilities in which the index case was placed on Contact Precautions. Sedimentation plates yielded *Acinetobacter* both inside and outside of the infected patient's room. In contrast, no cross-transmission was observed in the facility where the index case was placed on Airborne Precautions.

We also have investigated the potential for multidrug-resistant *Acinetobacter* to spread by the droplet and airborne route in seven patients with respiratory tract infection or colonization.

Sedimentation plates were placed within a patient's room at measured intervals from the patient. The percentage of sedimentation plates with *Acinetobacter* colonies at various distances from the patient were: 1 ft, 42%; 3 ft, 28%; 5 ft, 75%; 7 ft, 60%; 9 ft, 57%; and 11 ft, 40% (maximum spatial separation achievable within the room). In several instances, *Acinetobacter* was also detected on sedimentation plates placed outside of the patient's room and as far away as the nursing station (approximately 22 ft from the room). Strains isolated from the patient's respiratory cultures and from sedimentation plates had the same antibiogram.

The detection of *Acinetobacter* in all areas within the rooms tested, and beyond, suggests a potential for airborne dissemination, as well as for droplet dissemination (which would be confined to a distance of approximately 3 ft from the patient).

Considering the continuing difficulty in controlling the spread of *Acinetobacter* throughout our healthcare facilities, these reports and findings, which suggest the potential for airborne transmission of *Acinetobacter,* are troubling, since current practice, based on CDC guidelines,[5] does not specifically address the potential for droplet or airborne transmission of *Acinetobacter.*

The potential for droplet and airborne transmission must be further evaluated with appropriately designed and controlled studies before any recommendation regarding the widespread use of these enhanced precautions can be considered. However, limited use of airborne precautions for pan-resistant strains of *Acinetobacter* infecting or colonizing the respiratory tract might be prudent for selected cases. This would especially pertain to patients with active cough or on mechanical ventilation requiring frequent suctioning.

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Epidemiology of Nosocomial Infections at Fukuoka University Hospital

To the Editor:

To investigate the epidemiology of nosocomial infections at Fukuoka University Hospital (850-bed), hospital-wide surveillance was conducted from June 1995 to March 1996. The emergency center, the neonatal intensive care unit, and all of the inpatient wards, except the psychiatry ward, were included.

Based on attending physician's reports, bacteriology reports, patient charts, and clinical ward rounds, nosocomial infections were determined by the infection control team (ICT) according to Centers for Disease Control and Prevention definitions.[1] The bacteriology reports were made and prepared by the ICT just on all methicillin-resistant *Staphylococcus aureus* (MRSA) isolates and isolates from blood cultures. The ICT used patient records to determine whether reported cases represented infection or colonization. Once weekly, the ICT made clinical ward rounds to each unit.

Nosocomial infection rates were calculated by dividing the number of nosocomial infections by the number