Correspondence

Fatal Acinetobacter baumannii Infection with Discordant Carbapenem Susceptibility

Sir—Clinical experience with meropenem [1–3] and current textbook teaching [4] indicate that meropenem is therapeutically equivalent to imipenem. To alert clinicians of the increasing possibility of discordant susceptibilities to these 2 carbapenems, we report a fatal case of Acinetobacter baumannii pneumonia initially treated with meropenem on the basis of testing that indicated susceptibility to imipenem. Navigable clinical response prompted supplemental disk diffusion tests that confirmed imipenem susceptibility but demonstrated meropenem resistance (figure 1). For serious Acinetobacter infections, clinicians should perform supplemental susceptibility testing for the specific carbapenem being used. Clinically relevant carbapenem discordance among Acinetobacter species has not been previously reported.

A 34-year-old African American man developed hospital-acquired pneumonia 18 days after undergoing a cadaveric renal transplant. Empirical therapy with cefepime and ciprofloxacin was changed to meropenem and amikacin when blood and bronchoalveolar lavage cultures yielded multidrug-resistant A. baumannii that was susceptible to imipenem (MIC, <4 μg/mL), as determined by automated micro-broth dilution technique (Vitek; bioMerieux). Meropenem was chosen instead of imipenem because of the patient’s renal failure (blood urea nitrogen level, 41 mg/dL; creatinine level, 3.5 mg/dL). Follow-up blood culture results were negative, but a specimen recovered from an arterial line catheter tip grew A. baumannii 12 days after the initial isolate was obtained, and this isolate had similar susceptibilities. Because the patient’s condition continued to deteriorate despite the sequential addition of parenteral and inhaled antibiotics to his treatment regimen, a bloodstream isolate was simultaneously tested for susceptibility to meropenem and imipenem with the Kirby Bauer disk diffusion method and was found to be sus-

Figure 1. Kirby Bauer disk diffusion of an Acinetobacter baumannii isolate recovered from the bloodstream showing discordant susceptibilities, with imipenem on the left and meropenem on the right.
ceptible to imipenem (zone diameter, 19 mm) but resistant to meropenem (zone diameter, 13 mm) (Clinical and Laboratory Standards Institute breakpoints are as follows: resistance, ≤13 mm; intermediate susceptibility, 14–15 mm; and susceptibility, ≥16 mm) (figure 1). On the basis of these results, all of the aforementioned antibiotics were replaced with parenteral and inhaled polymyxin B. The patient died 1 month after the initial isolate was recovered. Necrotizing *A. baumannii* pneumonia with lung abscesses was found on autopsy.

Clinicians sometimes prefer meropenem to imipenem because it requires less frequent dosing. Furthermore, in recent studies, meropenem remained the most active antibiotic [5, 6] against multidrug-resistant *Acinetobacter* infection. Additionally, cost and the need for available space for wells on automated MIC platforms limit the number of different antibiotics to which susceptibilities can be tested. Because of these limitations, it is common to use only 1 carbapenem for susceptibility testing. This case prompted us to begin testing the susceptibilities of *A. baumannii* isolates to imipenem and meropenem. We are investigating the outcomes of several additional patients from whom discordant isolates were recovered. Although general resistance mechanisms for carbapenems have been described, mechanisms specific to meropenem have not. One mechanism may involve efflux pumps. To our knowledge, this is the first report of clinically relevant discordant carbapenem susceptibilities.

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Disseminated *Mycobacterium mucogenicum* Infection in a Patient with Idiopathic CD4+ T Lymphocytopenia Manifesting as Fever of Unknown Origin

Sir—Infection due to nontuberculous mycobacteria is a matter of increasing interest. Many of these organisms are currently recognized as human pathogens. Members of the *Mycobacterium fortuitum* complex are the only rapidly growing species that are more frequently isolated as human pathogens [1]. *M. fortuitum*, *Mycobacterium peregrinum*, *Mycobacterium chelonei*, *Mycobacterium abscessus*, and *Mycobacterium mucogenicum* (formerly known as “*M. chelonei*-like organisms”), among other species, are recognized in this complex [2]. *M. mucogenicum* has been reported to cause peritonitis, posttraumatic skin infection, and catheter sepsis [1, 3, 4], although *M. mucogenicum* is rarely clinically isolated [1, 3, 4]. For these reasons, we report a patient with idiopathic CD4+ T lymphocytopenia with prolonged fever of unknown origin. The pathogen was identified by culture of bone marrow specimens and molecular biology techniques.

A 53-year-old woman presented to different hospitals with fever preceded by chills, asthenia, myalgias, and generalized arthralgias, with no identified cause of disease. She was treated for her symptoms, and 4 months later she was hospitalized after her condition had worsened. She had a nonrelevant history of disease and exposure. Initial examination revealed fever (temperature, 39.0°C), Clinical and radiological evaluation revealed left-side pneumonia without pleural effusion. Laboratory evaluation revealed the following findings: WBC count, 13.5 × 10⁶ cells/L (80.0% neutrophils); hemoglobin level, 8.4 g/dL; and platelet count, 591 × 10⁶ cells/L. Three sets of blood cultures performed at admission yielded no organism. Tests for anti-Sm, antinuclear antibodies, and anti-RNP antibodies and cold agglutinins, a rheumatic arthritis test, antistreptolysin O titers, ELISA for HIV-1 and HIV-2, and a Mantoux skin test all had negative results. A blood smear yielded no organism. One day later, a 2/6 systolic murmur was auscultated. Transthoracic echocardiographic findings were normal. The results of other tests for *Candida* and *Histoplasma* species and for hepatitis A, B, and C viruses were all negative. After 1 week of hospitalization, the patient developed cephalgia and dizziness and was found to have multiple white, mottled, exudative retinal lesions in both eyes, causing suspicion of bilateral retinitis. The patient developed acute respiratory distress syndrome, which required mechanical ventilation and treatment with cefoperazone-sulbactam, amikacin, and prednisone in the intensive care unit for 17 days. Further evaluation revealed a CD4 cell