had inappropriate indications for the drug, and of the 19 in whom quinolone therapy was appropriate, only 1 was given the correct dose for the correct duration, he said (Arch. Intern. Med. 2003;163:601-5).

"This is the type of behavior that drives more resistance and has to be avoided," Dr. Niederman added.

Because recent prior therapy with β-lactams, macrolides, or quinolones predicts subsequent pneumococcal resistance to the agent that was used, "it is imperative that clinicians take a history of recent antibiotic usage and be prepared to choose an agent that differs from what was used previously," Dr. Niederman said. "This form of patient-specific antibiotic rotation only works if we have choices, which requires an understanding of the acceptable options for therapy."

For example, studies have shown that penicillin resistance probably has therapeutic significance only when MIC values are at least 4 mg/L.

"If β-lactam resistant pneumococcus is suspected, ceftriaxone [Rocephin] may be a reliable choice, while the cephalosporin cefuroxime [Ceftin] may be associated with increased mortality if used in the presence of in vitro resistance to this agent," he said.

In general, when managing patients at risk for drug resistance, "clinicians should choose a highly active antipneumococcal agent to minimize selection pressure for more organisms emerging with higher levels of resistance," Dr. Niederman said.

Patients not likely to have resistance should receive focused therapy with macrolides or ketolides, "reserving more potent agents for the appropriate setting," he added.

Ketolide use in particular "can improve the management of community acquired pneumonia in this era of pneumococcal antibiotic resistance by adding another choice to the heterogeneity of options," he said.

Studies have shown that telithromycin (Ketek)—the first ketolide available for clinical use—is an effective outpatient treatment for mild to moderate community-acquired pneumonia, even in older patients, those with higher pneumonia severity index scores, and those with bacteremia.

"The agent's rapid bactericidal effects appear to make short treatment durations feasible, and its mechanisms of action may avoid the induction of resistance, while maintaining good intrinsic activity against pneumococci, including those that are macrolide resistant," Dr. Niederman said. ■

Moxifloxacin Treats Aspiration Pneumonia

MONTREAL — The potent respiratory fluoroquinolone moxifloxacin is as safe and effective as combination ampicillin/sulbactam therapy for the treatment of aspiration-associated pulmonary infections, Sebastian Ott, M.D., reported in a poster presentation at an international conference on community-acquired pneumonia.

To compare the efficacy, safety, and tolerability of moxifloxacin (Avelox) with that of ampicillin/sulbactam (Unasyn) for the treatment of aspiration pneumonia and primary lung abscess, Dr. Ott of the Helios Chest Hospital Heckeshorn in Berlin and his colleagues enrolled 139 patients diagnosed with either condition in a multicenter, open-label trial.

Nearly 65% of the patients in the study were diagnosed solely with aspiration pneumonia, and definite or presumptive pathogens were isolated in 45 subjects, he said.

Of the 139 patients, 96 were treated according to protocol: 48 were randomized to receive 400 mg of moxifloxacin given intravenously once daily followed by oral moxifloxacin for 7-14 days or until complete resolution of radiologic and clinical signs of infection, and 48 received 1.5-3.0 g of ampicillin/sulbactam intravenously twice daily followed by oral administration for the same duration.

At the end of treatment, the overall clinical response rate for both groups was 67%. In the moxifloxacin group, 59% of patients with aspiration pneumonia and 80% of those with primary lung abscess had responded to the antibiotic treatment.

Among those who received ampicillin/sulbactam, 64% of the aspiration pneumonia patients and 82% of the primary lung abscess patients responded to treatment.

Both of the regimens were well tolerated to a similar degree, "even after long-term administration," Dr. Ott said. "The benefit of moxifloxacin is that its [once-daily] dosing is more convenient."

The findings of this study provide clinicians with an important therapeutic option to add to their toolbox for treating aspiration-related pulmonary infections, which are rare but potentially life threatening.

—Diana Mahoney