Randomized trial examines community-acquired pneumonia treatments

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In a randomized clinical trial of antibiotic treatments for community-acquired pneumonia (CAP), researchers did not find that monotherapy with β-lactam alone was worse than a combination therapy with a macrolide in patients hospitalized with moderately severe pneumonia, write author Nicolas Garin, M.D., Hôpital Riviera-Chablais, Switzerland, and colleagues.

CAP is responsible for a high burden of deaths, hospitalizations and health care costs. International medical societies differ in their recommendations on how to treat it. North American guidelines recommend treatment of atypical pathogens with respiratory antibiotics or with a combination of a macrolide and a β-lactam for all hospitalized patients. European guidelines recommend combination therapy only for more severely ill patients. The authors sought to determine whether monotherapy with β-lactam alone was noninferior (not worse than) to a combination therapy with a macrolide for patients in the hospital with moderately severe pneumonia.

The randomized trial included 580 patients (291 received monotherapy and 289 had combination therapy). The median age of patients was 76 years.

After seven days of treatment, 120 of 291 patients (41.2 percent) who received monotherapy vs. 97 of 289 (33.6 percent) who had combination therapy had not reached clinical stability. Patients who were infected with atypical pathogens or with more severe pneumonia were less likely

to reach clinical stability with monotherapy. Patients not infected with atypical pathogens or with less severity of illness had equivalent outcomes in the two treatment groups. There were more 30-day readmissions in the monotherapy treatment group (7.9 percent vs. 3.1 percent). Mortality, admission to the intensive care unit, complications, length of stay and pneumonia recurrence did not differ between the two groups within 90 days.

"We were unable to demonstrate noninferiority of initial empirical treatment with a β-lactam agent alone in hospitalized patients with moderately severe community-acquired pneumonia. There was a nonsignificant trend toward superiority of combination therapy, which could represent a chance finding or true superiority that was not significant because of insufficient power."

In a related commentary, Jonathan S. Lee, M.D., and Michael J. Fine, M.D., M.Sc., of the University of Pittsburgh School of Medicine, write: "We believe that evidence from this trial pushes the pendulum further in favor of antibiotic therapy covering atypical and typical bacterial pathogens for patients hospitalized for CAP. Lessons learned from its design and results should inform future trials required to definitively settle this debate. ... Finally, to maximize the detection of atypical pathogens and ensure their timely treatment in all study arms, future trials should use the most comprehensive point-of-care diagnostic testing for pneumonia pathogens. Although trials with these features would bring us substantially closer to ending the debate, until that time, dual therapy should remain the recommended treatment for patients hospitalized for CAP. "

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Commentary: Debate on Antibiotic Therapy for Patients Hospitalized

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