Levofloxacin Noninferior to Piperacillin/Tazobactam in Hospital-Acquired Pneumonia: Presented at ICAAC/IDSA

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WASHINGTON, DC -- October 31, 2008 -- Levofloxacin 750 mg once daily was proved noninferior to tazobactam/piperacillin 4 g/500 mg 3 times daily in efficacy and bacteriological outcome in a study of hospital-acquired pneumonia of presumed bacterial origin, researchers noted here at the 48th Annual Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC) and Infectious Diseases Society of America (IDSA) 46th Annual Meeting.

Levofloxacin also offered comparable safety and tolerability to tazobactam/piperacillin.

"Since levofloxacin [was] proven as effective as imipenem/cilastatin followed by ciprofloxacin in hospital-acquired pneumonia, we wanted to compare levofloxacin to piperacillin/tazobactam," said coinvestigator Tobias Welte, MD, Hannover-Abteilung Pneumologie, Hanover, Germany.

Dr. Welte and colleagues performed a multicentre, open-label, parallel-group study in which adult patients with a diagnosis of hospital-acquired pneumonia received intravenous (IV) levofloxacin or IV tazobactam/piperacillin for 10 to 14 days.

Overall, 460 patients were included. The clinical per-protocol population comprised 256 patients (63.7% male; mean age 66 +- 17 years). The primary endpoint was clinical cure rate in the clinical per-protocol population at the test-of-cure visit 3 to 8 days post-therapy. Secondary endpoints included bacteriological outcome at the test-of-cure visit in the bacteriological per-protocol population.

Clinical cure rates at the test-of-cure visit were 80.3% (n = 102 of 107) for levofloxacin and 81.4% (n = 105 of 129) for tazobactam/piperacillin. Satisfactory bacteriological outcome occurred in 73.7% (n = 42 of 57) of levofloxacin patients versus 57.7% (n = 41 of 71) for tazobactam/piperacillin.

Adverse events occurred in 18.9% and 16.6% of patients in the levofloxacin and tazobactam/piperacillin groups, respectively. The most common adverse event in both groups was diarrhoea (levofloxacin, 4.4%% [n = 10 of 228]; tazobactam/piperacillin, 7.0% [n = 16 of 229]).

Clostridium-associated disease was reported in 2 levofloxacin and 4 tazobactam/piperacillin patients.

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[Presentation title: Levofloxacin (LVX) vs Piperacillin/Tazobactam (TZP) in the Treatment of Hospital-Acquired Pneumonia (HAP): A Prospective Randomized Study. Abstract K-488]