

12<sup>th</sup> European Congress of Clinical Microbiology and Infectious Diseases (ECCMID)

## **Moxifloxacin IV Reduces Healthcare Costs and Provides Excellent Outcome for Patients hospitalized with Community-Acquired Pneumonia**

**Milan, 25 April 2002** – Experts attending the 12<sup>th</sup> European Congress of Clinical Microbiology and Infectious Diseases (ECCMID) heard how the intravenous form of moxifloxacin was an attractive new option for the treatment of patients hospitalized with community-acquired pneumonia (CAP), due to its excellent clinical efficacy and safety profile, shorter duration of hospitalisation, higher survival rates for patients, and cost savings for healthcare systems.

Although CAP is treated predominantly in the community, it is a leading cause of morbidity and mortality, and makes a significant impact on healthcare expenditure worldwide. Every year between 350,000 - 500,000 cases of CAP are reported in Germany, and over 700,000 in France. In the UK the cost of treating CAP during 2002 has been estimated at over £700 million, with 32% of hospitalized cases (approximately 50,000 people per year) accounting for 96% of the cost of treating this illness.

In addition to the burden of CAP, today's prescriber has to manage the emergence of multi-resistant respiratory pathogens, newly recognized pathogens, an altering healthcare system, and an evolving patient type. Commenting on this situation, Professor Hartmut Lode, Chief of the Department of Chest and Infectious Diseases, Heckeshorn Hospital, Free University, Berlin, Germany, said, "The need to treat more resistant pathogens more rapidly reduces the options available. Mixed infections have also added to this management dilemma. Moxifloxacin is one option which can be used as initial antimicrobial

therapy to provide rapid and reliable coverage. It is available in both IV and oral formulations, has an excellent safety profile, and with the emergence of antimicrobial resistance, is a particularly attractive therapeutic option. As infectious presentations evolve, it is likely that this 'respiratory' fluoroquinolone will meet many of the clinician's expectations in the future," he concluded.

Commenting on the risks of introducing new members to an antimicrobial class, Franz-Josef Schmitz, Assistant Professor in Medical Microbiology and Virology, University of Düsseldorf, Germany, explained, "Although exciting, new antibiotics may also carry some risks unless the potential for resistance emergence to the new agent and other class members is fully appreciated."

Discussing the benefits of new members to the fluoroquinolone class, Professor Schmitz said, "Fluoroquinolones exert their action at two sites (DNA gyrase and DNA topoisomerase IV) in the bacterial cell. Different antibiotics also have varying affinity for the two sites in different species. The impact of a poor binding drug used extensively in a population encourages rapid emergence of resistance. To prevent this from occurring, high-affinity compounds should be used. Moxifloxacin is one such compound as it has a lower propensity for resistance compared with other antibiotics such as levofloxacin," he concluded.

Assessing the safety and efficacy of intravenous moxifloxacin in hospitalized CAP patients, Dr Javier Garau, Head of the Department of Medicine, Hospital Mutua de Terrassa, University of Barcelona, Spain, presented data from two multicentre studies.

The first, a European study, evaluated the efficacy and safety of sequential IV/oral moxifloxacin (400 mg once daily) compared to the European Respiratory Society (ERS) standard of amoxicillin/clavulanic acid with or without clarithromycin in over 600 patients. Moxifloxacin IV, as monotherapy, was statistically superior to the ERS standard in terms of clinical response; 93% vs. 85%. In addition, patients treated with moxifloxacin IV recovered more quickly

from fever. Bacteriologically, patients responded better with moxifloxacin IV, 94% vs. 82%.

In a second North American study, moxifloxacin IV/oral was found to be equivalent to sequential trovafloxacin or levofloxacin therapy. Of the 550 moxifloxacin-treated patients from both studies 33% reported adverse drug reactions of cases compared to 31% in the comparator group. The most frequent clinical adverse events were diarrhoea and nausea at low rates (under 10%).

Also of significance was that the patients treated with moxifloxacin IV had a lower rate of mortality and were more than twice as likely to survive. In the European study, 7 patients (2.3%) treated with moxifloxacin IV died from CAP within a thirty day period, compared to 15 patients (4.7%) in the comparator arm. Other benefits included a shorter duration of therapy and reduced hospitalisation – both one day shorter than with comparator IV treatments and subsequent cost savings. Intravenous moxifloxacin was well tolerated in both studies. “Together, these studies demonstrate that moxifloxacin IV is well-tolerated, convenient, clinically effective, and can provide excellent outcome for our patients hospitalized with serious community-acquired pneumonia,” Dr Garau concluded.

The results of a cost-effectiveness analysis of this study were presented by Jeremy Chancellor, Managing Director of Innovus Research (European Operations), United Kingdom. From the perspectives of the German and French healthcare systems, the study evaluated the costs of treating CAP over a 21 day period, based on clinical cure rates 5-7 days after treatment, and healthcare resources used.

The results found that treatment with moxifloxacin made savings of 266 Euros (Germany) and 381 Euros (France) per patient, which were primarily due to a shorter length of hospital stay. The study also showed that the probability of moxifloxacin being cost saving was 97% and 95% in the German and French

analysis, respectively. "Because treatment with moxifloxacin resulted in lower overall costs and better outcomes, use of moxifloxacin instead of the comparator was found to be the more efficient therapy choice in both countries," Mr Chancellor concluded.

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#### **Forward-Looking Statements**

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