Drugs 2000 May; 59 (5): 1148
0012-6667/00/0005-1148/$25.00/0

Gemifloxacin

A Viewpoint by Roger G. Finch

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The evolution of the fluoroquinolone antibiotics continues apace. The importance of respiratory tract infections as a prescribing indication, the ever-increasing prevalence of penicillin-resistant *Streptococcus pneumoniae* and the inactivity of the aminopenicillins against β-lactamase producing pathogens have been fundamental factors in stimulating the development of these new agents. Gemifloxacin resembles gatifloxacin and moxifloxacin in its activity spectrum, and captures all common respiratory pathogens including *Legionella pneumophila* and atypical bacteria. Additionally, the increased activity of gemifloxacin, in comparison with levofloxacin, is noteworthy.

Whilst published information is limited, the preclinical, pharmacokinetic and pharmacodynamic data indicate the likely efficacy of gemifloxacin in the treatment of community-acquired pneumonia and acute infective exacerbations of chronic bronchitis. The low level *in vitro* activity of gemifloxacin against the Enterobacteriaceae suggests that urinary tract infections and intra-abdominal sepsis are unlikely to be major indications. The anaerobic activity is of interest but is unlikely to justify replacement of first-line agents such as metronidazole in treating anaerobic infections.

As the fluoroquinolones have evolved, one of the major determinants of their acceptance in clinical use has been their safety and tolerability. There is little to suggest that any novel toxicities or interactions are likely with gemifloxacin. In particular, the absence of any significant prolongation of the QT_c interval is reassuring. However, as with other fluoroquinolones, the true safety profile will only be established in the post-licensing period. ▲