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Telithromycin

A Viewpoint by Douglas N. Fish

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Telithromycin is the first member of the ketolide family of antibacterial agents. It has a favourable spectrum of activity against community-acquired respiratory tract pathogens, including potent activity against penicillin- and/or macrolide-resistant strains of *Streptococcus pneumoniae*. Telithromycin also has a favourable pharmacokinetic profile, with an oral bioavailability of 57% and elimination half-life of approximately 10 hours. These pharmacokinetic properties enable telithromycin to be administered as a single daily dose, an important feature in today's competitive marketplace.

Telithromycin's spectrum of activity and convenient dosing schedule will make it an attractive choice for treatment of common respiratory tract infections. Some concern exists regarding telithromycin's relatively poor activity against *Haemophilus influenzae*. However, patients infected with *H. influenzae* responded well to telithromycin during clinical studies, as did patients with penicillin- and/or macrolide-resistant *S. pneumoniae*, in whom bacterial eradication rates were approximately 90%. Telithromycin performed well overall, with rates of clinical success and bacterial eradication similar to those of comparator agents. Telithromycin's pharmacodynamic characteristics have not yet been fully explored. However, high tissue and intracellular concentrations achieved after oral administration undoubtedly contribute to telithromycin's clinical and microbiological efficacy.

Telithromycin's safety profile has been well described thanks to randomised studies in >26 000 patients. Telithromycin is well tolerated with gastrointestinal effects being the most common adverse events. Risks of more severe adverse effects, such as cardiac toxicities, appear to be minimal; however, the potential for drug interactions involving the cytochrome P450 system will warrant caution in certain patients. Although more extensive clinical use is required to fully characterise telithromycin's safety profile, it is notable that the drug's safety has been evaluated in a far greater number of patients than is typical for newly marketed antimicrobials.

In summary, telithromycin will be most appropriately used for the treatment of respiratory tract infections in patients at risk for penicillin- and/or macrolide-resistant pathogens such as *S. pneumoniae*. Although telithromycin's clinical efficacy does not appear to be superior to other currently available antimicrobials, it's once-daily dosing schedule, short 5-day regimen and low potential for cross-resistance make it a convenient alternative agent. ▲