Improve Antibiotic Compliance With Short Course

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NICE, FRANCE — Clinicians should consider shorter, less burdensome regimens as part of an overall strategy to improve antibiotic compliance, Dr. Thomas File Jr. said at the 16th European Congress of Clinical Microbiology and Infectious Diseases.

High cure rates are possible with high-dose, short-course therapy when a potent, rapidly acting antibacterial agent is used, and pharmacodynamic principles are applied.

Respiratory tract infections, such as pneumonia, are traditionally treated with a 7- to 14-day course of antibiotics. But findings from in vitro and in vivo studies suggest that pathogens can be eradicated in 24-48 hours with effective agents. "So why do we need to use 7-14 days?" Dr. File said.

Evaluations of shorter-course therapies include a study in which once-daily

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telithromycin 800 mg was shown to be equivalent to twice-daily clarithromycin 500 mg in a 10-day regimen for community-acquired pneumonia (Clin. Ther. 2004;26:48-62). Similarly, levofloxacin 750 mg for 5 days was as effective as 10 days of levofloxacin 500 mg in patients with mild to severe community-acquired pneumonia (Clin. Infec. Dis. 2003;37:752-60).

More recently, phase III randomized trials have shown that a single 2-g oral dose of azithromycin microspheres (Zmax) was comparable to a 7-day regimen of levofloxacin 500 mg/day in patients with community-acquired pneumonia (Antimicrob. Agents Chemother. 2005;49: 4035-41) and comparable to 10 days of levofloxacin in patients with acute bacterial sinusitis (Otolaryngol. Head Neck Surg. 2005;133:194-200).

Zmax, which was approved in the United States in 2005, has a unique microsphere formulation that releases the active drug in the small intestine rather than stomach, reducing gastrointestinal side effects, said Dr. File, who has received honorarium and clinical support from Pfizer Inc., which markets Zmax. Unpublished pharmacokinetic data suggest that five to eight times more drug is delivered to the site of infection, which maximizes bacterial eradication and thereby helps reduce resistance, he said.

Clinicians should familiarize themselves with the pharmacokinetic and pharmacodynamic parameters of an individual agent and its minimum inhibitory concentration to improve bacterial eradication. Local resistance patterns also should be taken into consideration when choosing an antibiotic. For example, penicillin resistance in isolates of *Streptococcus pneumoniae* during 1998-2000 was just 4% in the Netherlands but a staggering 32% in Ireland (J. Antimicrob. Chemother. 2003;52:229-46).

Finally, Dr. File urged physicians to educate their patients about proper antimicrobial use to reduce patient expectations and the pressure on physicians to prescribe unwarranted antibiotics, both of which have contributed to overprescribing of these drugs.

"Patient satisfaction is not compromised by the absence of an antibiotic prescription, provided that the patient understands the reasons," said Dr. File, professor of internal medicine, Northeastern Ohio Universities College of Medicine, Rootstown, Ohio. ■

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'Physicians who are on call to the universe 24/7 for their entire lives are not going to survive the experience.'

Dr. Richard Swenson, on avoiding physician burnout, p. 66