

At Issue: bacterial resistance

Q: *At Issue* posed the following question to a panel of experts: "Are doctors seeing a rise in antibiotic resistance?"

A: Address the issue now

Noel A. Alpins, MD: The worldwide trend seems to suggest that the incidence of bacterial resistance is currently on the rise. In a specialist refractive surgery setting, I have been fortunate not to have experienced this firsthand. However, as prescribers of antimicrobial agents, all ophthalmologists are in an ideal position to assist in avoiding the development of further resistant strains.

Primarily, bacterial resistance develops secondary to genetic mutation of bacterial genomes, from the misuse or excessive use of antibiotics or a combination of these factors. It is important to ensure an accurate diagnosis of the condition prior to beginning pharmacological therapy. Ideally, when doubt exists and if possible, cul-

Noel A. Alpins, MD, can be reached at 7 Chester-ville Rd., Cheltenham, VIC 3192, Australia; (011) 61-3-9584-6122; fax: (011) 61-3-9585-0995; e-mail: alpins@newvisionclin-ics.com.au.



tures should be obtained to determine the primary causative pathogen and treatment should be modified accordingly. Armed with the appropriate first-line defense, the offending pathogen, may be selectively destroyed, thus minimizing the duration of treatment.

Of course, not all circumstances allow for such monotherapy, and in a daily practice setting, we will often favor the use of a broad-spectrum antibiotic, commonly a fluoroquinolone. The use of such agents should not be discouraged, but caution should still be exercised by addressing the necessity of the therapy and the dosage regime and duration. For instance, using antibiotics in low doses

over a long time frame can promote the emergence of resistant bacteria strains. The opportunity for this to occur seems to be more prevalent within a hospital environment where risk of cross-infection is greater. It is for this reason, too, that patients should be properly instructed to ensure compliance with the therapy initiated.

Undeniably, bacterial resistance is an important issue and will develop more importance as time progresses. By addressing the issue now, the future impact and consequences of bacterial resistance may be delayed or reduced enabling the development of new antibiotics to keep pace with the emergence of resistant strains.

OSI