

Antibiotics, Optometry and the Coming Armageddon

Arthur B. Epstein, OD, FAAO

Phoenix, AZ

artepstein@artepstein.com

In use since for less than a century, antibiotics have changed the way we live and the way health care providers practice. This course explores current trends in infectious disease with focus on antibiotic therapy in eyecare

Course Outline

1) How antibiotics work

- a) Overview
- b) The need for an intact immune system
- c) Superinfection
- d) What are the clinically relevant differences between different antibiotics?
 - i) Spectrum
 - ii) Efficacy
 - iii) Kill rates
 - iv) Penetration
 - v) MIC and MBC

2) Antibiotic choice

- a) Fluoroquinolone vs. conventional antibiotic
 - i) Should the "big guns" be saved for severe infections?
 - ii) "Cornea specialist in a bottle"
- b) Differences between fluoroquinolones
 - i) Marketing hype vs. clinical reality

3) Appropriate treatment: dosing

- a) Depends on clinical presentation and severity
- b) Depends on antibiotic being used
- c) Should an antibiotic be tapered
 - i) What if it is an antibiotic-steroid combination?
- d) Length of treatment
 - i) Rebound of some pathogens

4) The realities of today

- a) Emergent Resistance
 - i) What is resistance?

- ii) How does it occur?
- iii) How significant is the problem in the optometric office?
 - (1) Topical vs. systemic antibiotics
 - (2) Inappropriate antibiotic choice
 - (3) Environmental vs. clinical issues
- b) Avoiding resistance
 - i) Conservative treatment strategies
 - (1) Infection control strategies
 - ii) Appropriate antibiotic choice
 - iii) Patient communication

5) Can ocular infection be prevented?

- a) Correlates of ocular infection
 - i) Abrasion with infected materials
 - ii) Contact lenses
 - iii) Refractive surgery
 - iv) Preexisting surface disease
 - v) Dry eye
- b) Surgical Prophylaxis
 - i) Does it work?
 - ii) Is it important
 - (1) Practical vs. medico-legal implications
 - iii) Refractive surgery
 - iv) Cataract and other ophthalmic surgery
 - v) Punctal occlusion
- c) Care product selection and lens care practices in CL wearers