Antibiotic Overprescribing Remains a Problem

More than half of physicians would give an antibiotic when the diagnosis was uncertain.

BY DEEANNA FRANKLIN
Senior Writer

WASHINGTON — Physicians understand that overuse of antibiotics is contributing to rising resistance rates, yet a large minority of physicians continue to prescribe antibiotics for viral illnesses, Mohmad G. Fakih, M.D., reported in a poster presentation at the annual Interscience Conference on Antimicrobial Agents and Chemotherapy.

Dr. Fakih and his colleagues approached primary care physician members of Blue Cross Blue Shield of Michigan in four separate regions of the state, and 277 physicians out of a total of 875 completed surveys.

Among the respondents, 73 were pediatricians, 126 were family physicians, and 58 were internists.

They were questioned on age; specialty; years and type of practice; geographic region; views regarding their education, medical knowledge, and management of upper respiratory infections (URIs); antibiotic use and resistance; and patient expectations.

Regarding their management of URIs, 74.6% of family physicians, 81.0% of internists, and 90.1% of pediatricians felt very secure in rating their knowledge at above average to excellent.

When queried about their treatment approach for URI with pharyngitis, with or without exudates and/or lymphadenopathy, internists were more likely than were family physicians and pediatricians to prescribe antibiotics when more symptoms were present.

Among doctors practicing for less than 10 years, 43% believed that managed care affected their choice of antibiotics, compared with 24% of physicians practicing more than 10 years who felt this way.

Also, physicians practicing 10 years or less were more likely to believe patients were satisfied once they were given an antibiotic prescription (56.6% vs. 40.4%), Dr. Fakih reported.

Antibiotic prescribing appeared to hinge on symptoms. Physicians offered antibiotics to more symptomatic patients, with 89.3% of them using diagnostic tests, such as a rapid antigen detection test or culture, said Dr. Fakih, a specialist in infectious diseases at St. John Hospital and Medical Center in Detroit.

A big surprise in the study was that 55% of those surveyed thought that penicillin resistance to group A streptococci was emerging.

"Physicians agreed that overuse of antibiotics is the major factor in increasing resistance; however, more than half of them would give an antibiotic when the diagnosis is not certain," the researchers said.

A big surprise in the study was that 55% of those surveyed thought that penicillin resistance to group A streptococci was emerging. "There has never been any evidence of resistance to penicillin," Dr. Fakih said in an interview with this newspaper.

He could not explain the regional variances in prescribing, but suggested that differences in physician education or in patient populations might be involved; one region studied included the Detroit area, while the northern region is more rural.

There were significant differences in knowledge of URI depending on region, with more antibiotic prescribing for viral symptoms in more populous areas.

But demanding patients aren't the only factor; "physicians need to be educated. We can't blame it on the patients," he said.

The conference was sponsored by the American Society for Microbiology. ■

Reading Problems Resolve When Ear Infections Resolve

BY MICHELE G. SULLIVAN
Mid-Atlantic Bureau

NEW YORK — Reading performance will return to normal in children who have lagged behind because of hearing impairment associated with chronic middle ear infections, Avishay Golz, M.D., said at the annual meeting of the American Academy of Otolaryngology–Head and Neck Surgery Foundation.

"Reading performance is not affected once these children are healed and their hearing is restored," said Dr. Golz of Ramban Medical Center, Haifa, Israel. "They catch up very rapidly to the same level as children who have never had otologic problems."

Dr. Golz presented the results of a follow-up study on the reading performance of 75 children with chronic middle ear infection; the same group was the subject of a similar study he conducted 4 years ago.

At that time, the children were in first or second grade; they are now in fifth or sixth grade.

In the initial study, Dr. Golz found that the children with chronic ear infections and associated hearing loss made significantly more mistakes in a reading exercise than their classmates, who were matched for gender, age, socioeconomic status, and culture.

The reading scores were expressed as a percentage of mistakes made out of possible mistakes in the passage.

The children with ear infections scored an average of 15%, compared with an average of 5% for children without infections.

The follow-up study included 75 of the original 80 subjects; the children ranged in age from 10 to 11.7 years. Of this group, 64 no longer had otologic infections and had regained normal hearing. Eleven children still had middle ear disorders, including perforations of the eardrum, middle ear effusion, or infected eardrums. Hearing loss in this group ranged from 24 to 45 dB.

The control group consisted of 60 of the subjects' classmates. All controls had a negative history of middle ear infection and had normal tympanic membranes and normal hearing thresholds.

All children received a complete ear, nose, and throat examination and audiologic assessment; they also received two reading tests 4-6 months apart. Each reading test had a possibly of 220 mistakes; the expected average score was 5%.

The control group scored an average of 3.1% on the test, while the children whose ear infections had resolved scored an average of 3.4% — not a significant difference. The children whose ear problems persisted scored an average of 7% — significantly worse than the scores of either of the other groups.

The unhealed children scored better than they did in the initial study, but the second scores were still worse than what was considered an acceptable average, Dr. Golz pointed out.

"Although the children had improved their performance, this should still be regarded as functionally significant," he said.

Teachers should be made aware of chronic ear disorders that can affect hearing and impede reading development, as well as other academic areas. ■

Low-Dose Fluconazole May Prevent Invasive Fungal Infection in Newborns

BY DOUG BRUNK
San Diego Bureau

SAN FRANCISCO — Fluconazole prophylaxis twice weekly during the first 6 weeks of life is similar to the previously studied schedule of more frequent doses in preventing invasive fungal infection in high-risk preterm infants who weigh less than 1,000 g at birth, David Kaufman, M.D., reported at the annual meeting of the Pediatric Academic Societies.

"This dosing seems comparable," Dr. Kaufman said in a later interview. "Certainly, [it] offers the benefit of less cost and less patient exposure as far as potential side effects. The bigger issue is that some fungi develop resistance to fluconazole. This [dosing] is another way to reduce the possibility of resistance."

Dr. Kaufman and his associates conducted a 2-year prospective, randomized, double-blind study of 81 high-risk preterm infants at the University of Virginia Children's Medical Center, Charlottesville.

The infants had birth weights of less than 1,000 g and either an endotracheal tube or central venous catheter. Infants were randomized to receive one of two dosing schedules. Dosing schedule A consisted of 3 mg of intravenous fluconazole per kilogram of body weight every 72 hours during weeks 1 and 2, then every 48 hours during weeks 3 and 4, and every 24 hours for weeks 5 and 6. Dosing schedule B consisted of 3 mg/kg fluconazole twice a week.

The 41 infants randomized to dosing schedule A and the 40 on dosing schedule B were similar in mean body weight (691g vs. 704 g), gestational age (25 weeks vs. 26 weeks), and risk factors for fungal infection, said Dr. Kaufman of the university's department of pediatrics. Two patients in each group had baseline fungal colonization.

During the 6-week treatment period, fungal colonization was documented in five schedule A patients (12%) and in four schedule B patients (10%). Invasive fungal infection occurred in two schedule A patients (5%) and in one schedule B patient (3%).

All these infections cleared with line removal and amphotericin treatment. All fungal isolates remained sensitive to fluconazole, and no adverse side effects were noted.

Dr. Kaufman said he and his associates would like to conduct a larger, multisite, randomized trial of 1,000-1,500 infants within the next year or 2 to confirm the findings.

"A multicenter study would better confirm the efficacy as well as further evaluate side effects and resistance," he said. "It might also be able to show if prophylaxis would decrease mortality. Since up to 40% of extremely preterm infants who develop fungal bloodstream infections die, prevention should improve survival."

If one assumes that each dose of fluconazole costs $50, he added, the cost difference between schedule A dosing and schedule B dosing is significant ($1,600 vs. $600, respectively).

The study was supported by a grant from Pfizer Inc., which markets fluconazole under the brand name Diflucan.

The meeting was sponsored by the American Pediatric Society, the Society for Pediatric Research, and the Ambulatory Pediatric Association. ■