

Study Assesses Warfarin-Antibiotic Interactions

BY DOUG BRUNK
San Diego Bureau

SAN DIEGO — Children on warfarin should get an international normalized ratio measurement within 2-3 days of starting antibiotic therapy, since they may experience significant changes in INR value, Kathy Hinoki, R.N., reported in a poster session at an international Kawasaki disease symposium.

"I have proactively cut back on a warfarin or coumadin dose when the parent has told me the child is sick and has been started on an antibiotic," Ms. Hinoki, a cardiology nurse with Children's Hospital Los Angeles, said in an interview.

"This prevents the lab values from getting out of whack and [lessens the] risk for bleeding."

She noted that while pediatricians typi-

cally order antibiotic for warfarin-treated children, "they usually don't have the background about the seriousness of the warfarin-antibiotic interaction, so they probably should consult with someone who [has the expertise]."

In a 5-year study of 3,582 lab encounters in the anticoagulation clinic at Children's Hospital Los Angeles, Ms. Hinoki and her associates selected 28 children who had a stable INR on the same dose of warfarin for greater than three consecutive lab encounters prior to the initiation of antibiotic therapy.

The three most common reasons for anticoagulation were prosthetic valves, Fontan procedure, and Kawasaki disease.

The investigators measured the INR within 1-7 days after the antibiotics were started, and they calculated the percent change in INR.

Of the 28 cases, eight females and four males demonstrated INR increases of more than 20%. Of the 16 children who demonstrated either no change or a decrease in INR, 12 were males and 4 were females.

Ms. Hinoki noted that erythromycin, cefuroxime, clindamycin, levofloxacin, and doxycycline were associated with significant increases in INR, while ampicillin, cephalexin, and amoxicillin-clavulanic acid were associated with no changes in INR.

Griseofulvin and azithromycin appeared to cause mild to moderate decreases in INR.

Age, ethnicity, and cardiac diagnosis appeared to have no impact on drug interactions.

"There's much more research to do, because antibiotics are constantly changing," said Ms. Hinoki, who runs the hospital's anticoagulation program.

The symposium was sponsored by the American Heart Association. ■

Limit Use of Fluoroquinolones to Refractory, Chronic Conditions

BY SHARON WORCESTER
Tallahassee Bureau

BAL HARBOUR, FLA. — Fluoroquinolones must be used judiciously in children, Sarah S. Long, M.D., said at the annual Masters of Pediatrics conference sponsored by the University of Miami.

These drugs are increasingly available, and they are being widely prescribed to children.

More than 520,000 prescriptions for fluoroquinolones were written for this population in 2002—with more than

16,000 written for those under age 6 years and nearly 3,000 written for those under age 2 years, said Dr. Long, professor of pediatrics at Drexel University, Philadelphia.

And that was before ciprofloxacin received Food and Drug Administration approval for use in those under age 18 years with complicated urinary tract infections, pyelonephritis, and inhalation anthrax exposure, Dr. Long commented.

The FDA granted this approval last year, but there is little guidance beyond that for the use of fluoroquinolones in the pediatric population.

The advantages of fluoroquinolones include oral administration, excellent oral bioavailability, and a gram-negative spectrum, but these drugs are associated with adverse musculoskeletal events. The potential for spontaneous Achilles tendon rupture is of particular concern, Dr. Long said.

Tendon rupture is a rare event, but it is definitely "above the radar," she said.

"These drugs do have some effect on cartilage—there is no question," she added.

In addition, there is some concern about whether fluoroquinolones are associated with long-term arthropathy, Dr. Long noted.

Central nervous system, hepatic, and metabolic effects are also possible, and some patients experience photosensitivity and rashes after taking fluoroquinolones.

Therefore, the use of these drugs in children should be limited mainly to serious gram-negative rod infections for which there are no other treatment alternatives, Dr. Long emphasized.

Topical treatment is acceptable for conjunctivitis and otitis externa that are refractory or resistant to other treatments, but not for plain conjunctivitis or otitis media.

Conditions for which fluoroquinolones may be appropriate in children—other than the approved uses—include chronic otitis, chronic or acute *Pseudomonas aeruginosa* osteomyelitis, cystic fibrosis exacerbations, certain mycobacterium infections, and multidrug-resistant shigella, salmonella, or vibrio infections.

Topical treatment is acceptable for conjunctivitis and otitis externa that are refractory or resistant to

other treatments, but fluoroquinolones should not be used for plain conjunctivitis or otitis media or for community-acquired bronchitis and pneumonia, Dr. Long said. ■

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