Alternate Acetaminophen, Ibuprofen to Treat Fever

BY KARA A. NYBERG
Contributing Writer

A child's fever can be reduced more quickly and safely by alternating acetaminophen and ibuprofen instead of administering either agent alone, according to Dr. E. Michael Sarrell and his colleagues at Tel Aviv University in Israel.

About 19%-30% of all visits to primary care pediatricians are on account of fever, and acetaminophen and ibuprofen are the most commonly prescribed therapeutics to bring elevated temperatures down. According to Dr. Sarrell and his colleagues, "Antipyretic use therefore plays a major role in daily pediatric practice, and it must be both effective and safe."

As a consequence, they designed a study to determine which agent—or if both intermittently—may be more effective.

In a double-blind, controlled clinical trial 464 children aged 6-36 months with a fever of at least 38.4° C presenting at one of three pediatric centers in Israel were randomized to 12.5 mg/kg of acetaminophen syrup every 6 hours (154 patients), an ibuprofen suspension of 5 mg/kg every 8 hours (155 patients), or alternating acetaminophen/ibuprofen every 4 hours (155 patients) for a total of 3 days. Within each arm, one-half of the children received an initial loading dose of 25 mg/kg of acetaminophen or 10 mg/kg of ibuprofen to more quickly attain an effective drug serum concentration (Arch. Pediatr. Adolesc. Med. 2006; 160:197-202).

The alternating regimen reduced children's fevers more rapidly, led to less stress in children, and required less medication during the first 3 days of treatment.

The type of loading medication had no effect on children's response, but the type of maintenance medication did—and significantly so. The alternating regimen reduced children's fevers more rapidly, led to less stress among children, and required less medication during the first 3 days of treatment than either acetaminophen or ibuprofen alone.

For example, 1 day after initiation of treatment, infants who received the alternating regimen had a 1.07° C drop in temperature (vs. a drop of 0.19° C with acetaminophen and an increase of 0.02° C with ibuprofen), a 52.4% reduction in stress levels (vs. 39.6% with acetaminophen and 35.7% with ibuprofen), and required 22.6% fewer treatment doses from day 1 to day 2 (vs. 11.2% with acetaminophen and 2.2% with ibuprofen).

Moreover, only 10% of children who received the alternating treatment experienced a recurrence in fever on day 5 as opposed to 21% of children on acetaminophen and 17% of children on ibuprofen.

Because their treatment was more effective, children on acetaminophen/ibuprofen missed significantly fewer days of day care (which presumably meant that parents missed fewer days of work) than did children who were on acetaminophen or ibuprofen alone (1.76, 2.64, and 2.58 days, respectively).

No child experienced any serious adverse effects related to treatment, and there were no statistically significant differences between groups for abnormal laboratory values. ■

Oral Cefdinir Found Safe for Penicillin-Allergic Patients

BY JANE SALODOF MACNEIL
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KAPALUA, HAWAII — Oral cefdinir is safe for the treatment of skin and soft-tissue infections in people who are allergic to penicillin, Dr. James Q. Del Rosso said in a poster presentation at the Winter Clinical Dermatology Conference, Hawaii.

Dr. Del Rosso reported that a review of the literature found virtually no cross-reactivity between cefdinir (Omnicef) and penicillin, despite concerns over the use of cephalosporins in patients with a history of penicillin allergy.

The risk of anaphylaxis associated with cephalosporin ranges from 0.1% to 0.0001%, with no cases of fatal anaphylaxis reported in children.

"All cephalosporin antibiotics are not created equal," said Dr. Del Rosso, who has a private dermatology practice in Las Vegas.

He asserted that differences in the seven-position side chain structure of selected cephalosporins make cross-reactivity with penicillin less likely in second- and third-generation cephalosporins such as cefdinir.

"A thorough review of available data indicates that the frequently cited risk of 8%-18% cross-reactivity to cephalosporins among penicillin-allergic patients is not accurate, is misleading, and requires revision," Dr. Del Rosso noted in his poster.

The increased risk of allergic reactions in penicillin-allergic patients is only 0.4% for first-generation cephalosporins and "nearly nil" for certain later-generation agents, which he defined as cefdinir, cefpodoxime, and cefuroxime.

"The one we use in dermatology [cefdinir] appears to have essentially no cross-reactivity with penicillin," he said in an interview at the conference, which was sponsored by the Center for Bio-Medical Communications Inc.

Dr. Del Rosso noted that the American Academy of Pediatrics has endorsed the use of cefdinir, cefpodoxime, and cefuroxime in penicillin-allergic children, excluding those who have had life-threatening reactions such as anaphylaxis or toxic epidermal necrolysis.

He added that the American Academy of Family Physicians has taken a similar position.

"The risk of anaphylaxis associated with cephalosporin use has been cited to range from 0.1% to 0.0001%, with no cases of fatal anaphylaxis reported in children," according to the poster.

Medicis provided support for the production of the poster.

Dr. Del Rosso is a consultant to, and serves on the speakers' bureau of, Abbott Laboratories, which makes Omnicef. ■

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