Corticosteroids, Antihistamines No Use in AOM

BY ROBERT FINN
San Francisco Bureau

SAN FRANCISCO — Although it may seem logical that corticosteroids, antihistamines, and/or decongestants may be good adjunctive treatments of acute otitis media, the evidence does not bear this out, Dr. Tasnee Chonmaitree said at the annual meeting of the Pediatric Academic Societies.

The rationale for using corticosteroids and antihistamines is clear: Drugs that can inhibit the synthesis or counteract the actions of inflammatory mediators should help improve the outcome—or at least provide some symptom relief—in acute otitis media (AOM), said Dr. Chonmaitree of the University of Texas, Galveston.

The conclusion of one study was that antihistamines actually prolong middle ear effusion in patients with AOM and should not be used.

Corticosteroids, for example, inhibit the recruitment of leukocytes and monocytes to the affected area, reduce vascular permeability, and inhibit the synthesis or release of numerous inflammatory mediators and cytokines. Moreover, there is evidence that corticosteroids improve outcomes in otorrhea in children and AOM in animal models.

But two randomized controlled trials conducted by Dr. Chonmaitree and her colleagues demonstrated no clear benefit for corticosteroids and antihistamines alone or in combination in patients taking antibiotics.

Both studies had four arms. Some patients received two placebos, some received one placebo plus corticosteroid, some received one placebo plus antihistamine, and some received corticosteroid plus antihistamine.

The first study involved 80 patients, aged 3 months to 6 years, who were followed for 3 months. There were no differences in laboratory values, including levels of histamine and leukotriene B4 that could be attributed to either of the drugs.

However, corticosteroid treatment was associated with a lower rate of treatment failure within the first 2 weeks and a shorter duration of middle ear effusion.

A second trial followed 180 high-risk children with at least two previous episodes of AOM for 6 months. There were no statistically significant differences in the percentage of patients experiencing treatment failure in the first 2 weeks. But there was a significant difference in the duration of middle ear effusion. This difference favored placebo.

Patients receiving placebo alone experienced a median of 25 days of middle ear effusion.

Patients receiving antihistamine alone experienced middle ear effusion for a median of 73 days, almost three times longer.

Patients taking corticosteroid alone had about the same duration of effusion as did the placebo patients, and patients taking antihistamine and corticosteroid experienced a median of 36 days of effusion.

The conclusion was that antihistamines actually prolong middle ear effusion in patients with AOM and thus should not be used.

The Cochrane Collaboration conducted a detailed metaanalysis on the use of antihistamines and/or decongestants in AOM and came to similar conclusions (Cochrane Database Syst. Rev. 2004;3: CD001727).

Reviewing 15 randomized controlled trials involving a total of 2,695 cases, the investigators found that the combined evidence favored neither antihistamines nor

VERBATIM

'I will contend that you and I are coming off a period of relatively mild staph and [entering] a period of bad staph.'

Dr. Kenneth Alexander on CA-MRSA , p. 21

decongestants on their primary outcome measure, which was persistent AOM at 2 weeks.

There was at least one significant difference, however—patients taking antihistamines and/or decongestants experienced significantly more side effects than did patients taking placebo.

"I conclude that for decongestants and antihistamines in acute otitis media [there is] no benefit for early cure rate, no benefit for symptom reduction, no benefit for prevention of complications, and increased risk for side effects," Dr. Chonmaitree said at the meeting, which was sponsored by the American Pediatric Society, Society for Pediatric Research, Ambulatory Pediatric Association, and American Academy of Pediatrics.

Corticosteroids have similar evidence of inefficacy, and the bottom line is that the symptomatic treatment of AOM should include only an analgesic/antipyretic, she said.

Regarding the use of steroids, decongestants, or antihistamines in AOM, Dr. Richard M. Rosenfeld of Long Island College Hospital, New York, said in an interview that he largely agrees with Dr. Chonmaitree. "I would say the evidence [for their use] is quite weak. Occasionally you'll find a little statistically significant benefit pop out on one of the outcomes. ..but looked at as a whole the benefits are quite small if not trivial or absent. And when you then factor in the issue of potential side effects, it's a real tough case to recommend adding these adjuvant therapies. ...In the child who's a frequent-flier and manages every couple of weeks to get a new episode of acute otitis, I think that it becomes even more ludicrous to repeatedly expose them to therapies of questionable benefit but significant adverse effects." Dr. Rosenfeld is cochair of the American Academy of Pediatrics Subcommittee on Otitis Media With Effusion. ■

International Vaccine Records Usually Valid

BY ROBERT FINN
San Francisco Bureau

SAN FRANCISCO — Records for most vaccines from most countries of origin for children adopted internationally are trustworthy, Dr. Bindy Crouch said in a poster presentation at the annual meeting of the Pediatric Academic Societies.

For this reason, Dr. Crouch of the State University of New York at Stony Brook and her colleagues recommend that antibody titers should be tested before revaccinating adopted children who have documentation of vaccines that were given in their countries of origin.

The study involved a retrospective chart review of 219 internationally adopted children seen between January 2003 and December 2004.

Of those children, 72 came from China, 87 from Russia, 28 from Korea, 19 from Guatemala, 4 from Ethiopia, 2 each from Belarus, Colombia, and the Philippines, and 1 each from India, Kazakhstan, and Romania.

At the time of adoption, 73% were under the age of 2 years.

With the exception of hepatitis B among children adopted from Korea and mumps among all children, the percentages of positive antibody titers were similar to rates that have been reported in U.S. vaccine studies.

For example, of the children with records of DTP vaccine, 99% were titer positive for diphtheria antibody and 88% were titer positive for tetanus. Children with records of polio vaccine were 95% titer positive, those with records of measles vaccine were 92% titer positive, and those with reported rubella vaccine were 92% titer positive.

On the other hand, of children adopted from Asian countries other than China (28 of 31 of these children came from Korea), only 63% of those who had records of hepatitis B vaccine were titer positive. This was a significantly lower percentage of positive titers than that seen in children from all other areas.

The investigators suggested that the lower percentage of positive hepatitis B titers in children from Korea may be due to the manufacturing, storage, or administration of vaccine, but it is also plausible that Korean children have poorer responses to the vaccine.

Only 67% of all the adopted children with records of mumps vaccine had positive titers, which the investigators said was significantly lower than the percentage reported in U.S. vaccine studies. Investigators said that this may be attributable to issues with vaccine handling and storage, inaccurate record keeping, or an impaired immune response to the mumps vaccines used.

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