Educate Parents to Back Watchful Waiting for AOM

BY CHRISTINE KILGORE
Contributing Writer

Watchful waiting for nonsevere acute otitis media can be as acceptable to parents as immediate antibiotic treatment—if parents are properly educated about the options, new study findings and survey results indicate.

Parents' satisfaction with their children's care was no different among parents whose children were randomized to receive either immediate antibiotic treatment or watchful waiting in an outcomes study of the two approaches. The parents all were educated at the study site—a pediatric clinic in Galveston, Texas—about the risks and benefits of treatment.

In a separate study, only a minority of parents who were randomly surveyed by mail about a hypothetical visit for an ear infection—without being given much information—said they would feel comfortable with a watchful waiting approach. Most said they would feel neutral or dissatisfied with such an approach.

The studies, both of which appear in the June issue of Pediatrics, show that "when it's properly explained, parents are equally satisfied with watchful waiting and antibiotic treatment [for nonsevere acute otitis media]," said Allan S. Lieberthal, M.D., who led development of the American Academy of Pediatrics' guidelines on the diagnosis and management of acute otitis media. "Now we need tools for educating parents within the confines of a busy pediatric office," he said in an interview.

Investigators in the randomized study used a handheld flip chart for a 5- to 10-minute review with parents of the definition and causes of ear infections, characteristics of nonsevere and severe acute otitis media (AOM), antibiotic resistance and costs, rate of symptom response to antibiotics, and possible adverse outcomes associated with immediate treatment versus observation. Parent satisfaction was no different between a group of 111 children randomized to a watchful waiting group and 112 randomized to receive immediate antibiotics, either at day 12 or day 30 after the children were seen, reported David P. McCormick, M.D., of the University of Texas, Galveston, and his colleagues (Pediatrics 2005:115;1455-65).

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In the survey, 5,129 parents in 16 Massachusetts communities were asked to rate their level of satisfaction "if your child's doctor diagnosed an ear infection and recommended waiting 1 or 2 days before starting antibiotics (to see if the symptoms get better on their own)."

Of 2,054 parents who returned the survey, 34% said they would be somewhat or extremely satisfied. Another 26% indicated they would be neutral, and the remaining 40% said they would be somewhat or extremely dissatisfied, reported Jonathan A. Finkelstein, M.D., of Harvard Medical School, Boston, and his associates (Pediatrics 2005:115;1466-73).

Both studies were conducted before the AAP guidelines were published last year.

In addition to offering new insight into issues of parent acceptance, findings from the randomized study affirm what the guidelines say: that some children with nonsevere AOM may be observed with watchful waiting as long as they maintain nonsevere status and are kept comfortable with appropriate symptom management, Dr. Lieberthal said.

Of the children randomized to the watchful waiting group, 66% completed the study without antibiotics.

Immediate antibiotic treatment was associated with 16% fewer treatment failures—a difference that the investigators said was larger than what they "expected from [their] review of the literature"—and improved symptom control.

Antibiotic treatment also was associated, however, with increased antibiotic-related adverse events. And although immediate treatment resulted in eradication of *Streptococcus pneumoniae* carriage in the majority of children, the *S. pneumoniae* strains cultured from children in the antibiotic group at day 12 were more likely to be multidrug-resistant than were strains from the watchful waiting group,

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Varicella Vaccine Was Effective During Outbreak

BY KEVIN FOLEY
Senior Writer

Varicella vaccination was found to be highly effective during an outbreak of varicella among elementary school children in Utah, reported Maryam B. Haddad of the Centers for Disease Control and Prevention, Atlanta, and associates.

The outbreak occurred from October 2002 until February 2003 in two schools, one with 597 students (school A) and another with 952 students (school B). Most parents returned a questionnaire about their children's health. Parents who reported varicella symptoms in their children were interviewed, their children's vaccination records were verified, and they were asked to submit any existing lesions for polymerase chain reaction (PCR) testing.

"Health care providers should verify the vaccination status of older children who are not subject to a school-entry requirement and might remain susceptible during adulthood," Ms. Haddad and associates recommended.

During the outbreak, 57 unvaccinated and 26 vaccinated children were reported to have varicella, with 17 more cases among household contacts, they said. PCR analysis found wild-type varicella in five unvaccinated and three vaccinated children (specimens from two other vaccinated children were insufficient for testing). Nine unvaccinated children with varicella reported that it was a second occurrence of the disease.

In school A, 27% of the 66 unvaccinated children acquired varicella, while only 4% of the 223 vaccinated children did. In school B, 41% of the 74 unvaccinated children reported varicella, while only 5% of the 348 vaccinated children did (Pediatrics 2005;115:1488-93).

The varicella vaccine overall was 87% effective. It was 90% effective against moderate or severe disease in school A and 99% effective in school B. Among the nine unvaccinated children with a history of varicella, the attack rate was 0.4% in school A and 1.4% in school B. Mild varicella was more common among vaccinated children (69%) than unvaccinated children (15%).

Risk factors for breakthrough varicella included a history of eczema (3.8 times greater risk), time since vaccination (relative risk 3.0 if vaccinated 5 or more years before the outbreak), and age at vaccination (relative risk 2.6 if vaccinated at age 18 months or less). Among the 163 children vaccinated 5 or more years before the outbreak, children vaccinated at age 18 months or less were 9.3 times more likely than those vaccinated after age 18 months to develop breakthrough varicella. ■

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the investigators reported.

"Watchful waiting seems to be an alternative that is acceptable to parents, reduces the number and cost of antibiotic prescriptions, and reduces the percent of multidrug-resistant bacteria colonizing the nasopharynx of children after an episode of AOM," Dr. McCormick and his associates said. Regardless of the intervention, children who had received antibiotics within the previous 30 days were more than twice as likely to fail treatment as those who had not recently received antibiotics.

In addition to parent education, key factors for implementation of a watchful waiting strategy include access to follow-up care, management of AOM symptoms, and a method to classify AOM severity, the investigators said.

Dr. McCormick and his colleagues assessed AOM severity based on four factors: parental perception of severity, otoscopic examination, body temperature, and tympanogram scores. However, "in retrospect," they reported, they "could have obtained the same results"—identifying 87% of the nonsevere cases identified with the four-factor scoring system—by using a two-factor scoring system that omitted body temperature and tympanogram.

"Most children with AOM are afebrile at the time of diagnosis as a result of antipyretic medication," they said, adding that "practicing clinicians rarely use the tympanogram to make a diagnosis of AOM."

Dr. Lieberthal, cochair of the AAP's subcommittee on management of AOM and professor of pediatrics at the University of Southern California, Los Angeles, said the issue of how to most accurately and uniformly assess AOM severity is still unresolved. "We still need a validated scoring system." ■