Use Antibiotics in Toddlers With Bilateral AOM

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SAN FRANCISCO — Children younger than 2 years with acute otitis media in both ears constitute the pediatric population most likely to benefit from antibiotic treatment of this common childhood infection, according to the findings of a meta-analysis presented at the annual meeting of the Pediatric Academic Societies. “For most other children—older children and children with unilateral acute otitis media—an observational policy seems justified,” said Maroeska M. Rovers, Ph.D., the lead author of the study. Dr. Rovers, an epidemiologist in the Julius Center for Health Sciences and Primary Care at the University Medical Center Utrecht (the Netherlands), based this conclusion on the experience of 824 untreated children in the control groups of six randomized trials in the metaanalysis. Untreated children younger than 2 years with bilateral acute otitis media (AOM) were twice as likely to suffer pain and/or fever at 3-7 days, according to Dr. Rovers and her coinvestigators. She reported that the independent predictors of having pain at 3-7 days were an age younger than 2 years (odds ratio 2.07) and bilateral AOM (odds ratio 1.70). More than half (55%) of 134 children younger than 2 years with bilateral AOM still had pain and/or fever in the target time period, she said. Only 30% of similar children suffered from these symptoms 3-7 days after receiving antibiotic treatment in the six trials. Dr. Rovers said a need-to-treat analysis found that giving antibiotics to just four children younger than 2 years with bilateral AOM would be enough to prevent pain and/or fever in one child. For children who were younger than 2 years but had AOM in only one ear, the benefit was much more modest. Of 132 untreated children, 40% continued to have symptoms vs. 35% of their counterparts who were given antibiotics in the trials. Dr. Rovers said that physicians would need to give antibiotics to 20 children with unilateral AOM in this age group to prevent prolonged pain and fever in one child. Among untreated children 2 years of age and older, 86 had bilateral AOM. More than a third (35%) continued to have fever and/or pain in the 3-7 day window. As symptoms persisted in 25% of comparable children who were treated with antibiotics, Dr. Rovers said that physicians would have to give antibiotics to nine children with bilateral AOM in this age group to prevent extended pain and fever in one child. Most older children with unilateral AOM had neither pain nor fever at 3-7 days; only 26% of 308 children in the control groups and 19% of those treated with antibiotics continued to suffer these symptoms. Physicians would have to treat 25 children with antibiotics to prevent late pain and fever in one older child with unilateral AOM, according to the need-to-treat analysis. The randomized controlled trials, conducted in the United Kingdom, the United States, Canada, and the Netherlands, were selected from 19 randomized trials found by the multinational group of investigators. Data were not available for four trials and nine were excluded for such reasons as inadequate randomization, special population, or lack of information on the outcome studied in the metaanalysis. Demographic data on the 824 untreated children available for the analysis showed that 35% were younger than 2 years old, half were boys, and 27% had bilateral AOM. At the outset of the trials, 35% had fever and 88% had ear pain. In an interview at the meeting—which was sponsored by the American Pediatric Society, Society for Pediatric Research, Ambulatory Pediatric Association, and American Academy of Pediatrics—Dr. Rovers said she felt confident that the results are “quite stable.” She hoped they would be helpful to physicians trying to discriminate between children with mild, self-limiting episodes of AOM and those who are at risk of prolonged illness and possibly complications if not treated with antibiotics.