

AOM Guideline Failed to Rein In Prescribing

BY DIANA MAHONEY

The percentage of pediatric acute otitis media visits during which an antibiotic was not prescribed did not increase significantly in the 30 months after the dissemination in 2004 of the well-publicized clinical practice guideline that allowed for patient observation without initial antibiotic therapy, according to a report.

Dr. Andrew Coco of the Lancaster (Pa.) General Research Institute and his colleagues analyzed data on 1,114 acute otitis media (AOM) patients aged 6 months to 12 years that were collected between 2002 and 2006 as part of the National Ambulatory Medical Care Survey, comparing the clinical manage-



Family education about antibiotic use might make physician compliance with the guideline more likely.

DR. SIEGEL

ment strategies during the 30-month periods before and after the publication of the 2004 American Academy of Pediatrics and American Academy of Family Physicians clinical practice guideline.

The primary study end point was the rate of AOM encounters with no reported antibiotic prescribing. Secondary end points were predictors of AOM encounters at which no antibiotic prescribing was reported and the rates of antibiotic prescribing and analgesic prescribing. Eighty-two percent of visits were with pediatricians, 14% were with family physicians, and 4% were with other physicians (*Pediatrics* 2010;125:214-20).

During the period of study overall, antibiotics were not prescribed in 13% of

VITALS

Major Finding: In the 30 months prior to the publication of the clinical guideline, 11% of the AOM diagnoses were managed without an antibiotic, compared with 16% after the guideline publication, a non-significant difference.

Data Source: National Ambulatory Medical Care Survey, 2002-2006.

Disclosures: None reported.

the visits, according to the analysis. In the 30 months prior to the publication of the clinical guideline, 11% of the AOM diagnoses were managed without an antibiotic, compared with 16% after the guideline publication, which does not represent a statistically significant difference, the authors reported.

"Although the results of our analysis demonstrate a slightly increased trend in the management of AOM without antibiotics over the study period, the absence of an inflection point around the time of the guideline publication argues against the guideline being a large factor in what more likely represents a general secular trend," Dr. Coco and his associates wrote.

"It seems that, despite the guideline's endorsement, physicians have been reluctant to frequently use the observation option, perhaps because of perceptions of parental reluctance to accept this approach and barriers to follow-up."

Independent predictors of a patient visit at which antibiotic prescribing was not reported included the absence of ear pain, the absence of fever, and receipt of an analgesic prescription, according to multivariate logistic regression modeling.

"It is encouraging that children who did not receive antibiotics were also less likely to present with symptoms of severe infection, such as fever or ear pain," the authors wrote. "Thus, consistent with the guideline, it seems that the initial observation option was more likely to be chosen in children with mild infections."

An unexpected finding, according to

the authors, was the fact that amoxicillin/clavulanate prescribing, which the guideline recommends for the treatment of children with severe infection and those with treatment failure, decreased from 23% to 16%. This finding is, however, consistent with physicians' historical lack of enthusiasm for prescribing the combination treatment for severe infections, Dr. Coco and his associates said.

Physicians in the study "were choosing cefdinir as a second-line agent instead, perhaps because of a more convenient dosing schedule, a lower incidence of diarrhea, or more aggressive marketing," the investigators wrote. Its use doubled from 7% to 14% of all antibiotics prescribed after publication of the guideline.

The proportion of visits at which amoxicillin was prescribed increased from 40% to 49%, which is consistent with the guideline recommendation, the authors noted.

The rate of analgesic prescribing also increased from 14% to 24%—an indication that pediatric providers "have

accepted this strong recommendation to treat the pain that is often associated with AOM, which is a reversal of previous findings showing that treating otalgia is not prioritized by clinicians," Dr. Coco and his associates wrote.

"It would seem that physicians were more willing to adopt a recommendation from the guideline to add a treatment [analgesic agents] rather than to withhold one [antibiotics]."

In an accompanying editorial, Dr. Robert Siegel of Cincinnati Children's Hospital Medical Center suggested that family education about antibiotic use and AOM pain management might yield the most success with respect to meeting guideline recommendations.

"Today's patients and families are more medically sophisticated than the last generation, because they have greater access to information," he wrote. "Health care providers should embrace and encourage this empowerment and involve patients in shared decision making regarding whether to use antibiotics for otitis media" (*Pediatrics* 2010;125:384-6).

No Surprises in This Study

MY TAKE

The finding that the 2004 AAP/AAFP guideline for AOM treatment has not substantially increased the proportion of the pediatric AOM cases being managed without antibiotics is not especially surprising.

Many physicians are uncomfortable with the watchful waiting recommendation because there is reasonable evidence that certain children benefit significantly from antibiotics. For example, the findings of a recent meta-analysis suggest that antibiotics are effective for the treatment of AOM in children younger than 2 years old who have bilateral disease and in children with both otorrhea and AOM (*Lancet* 2006;368:1429-35).

Additionally, the guideline calls for the use of antibiotics for the treatment of severe disease, which is a subjective characterization.

The gap between the guideline recommendations and clinical practice will likely widen further in the near future, with the upcoming publication of new studies linking watchful waiting with a greater proportion of children in whom the signs and symptoms of AOM last beyond 3 or 4 days.

Despite the guideline controversy, the reduction of antibiotic prescribing continues to be an important goal. To achieve it, we should focus on developing a vaccine that prevents viral and bacterial respiratory tract infections, practicing restraint in treat-

ing nonfocal upper respiratory tract infections with antibiotics, and establishing more accurate diagnostic criteria for AOM and sinusitis.

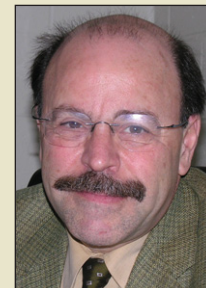
Another important goal should be the selection of appropriate antibiotics for the likely pathogens. Currently, the spectrum of antibiotics that are prescribed portray a lack of understanding of the effectiveness of various antibiotics against various pathogens.

For example, data on the increase in the use of azithromycin are problematic as it is a drug with a long half-life and is believed to promote the emergence of resistance to a greater extent than some other antibiotics.

Even so, studies have shown that pediatricians choose azithromycin twice as often in children with recurrent AOM, which is backward, as it would be less likely to be effective in a recurrent episode than in a first.

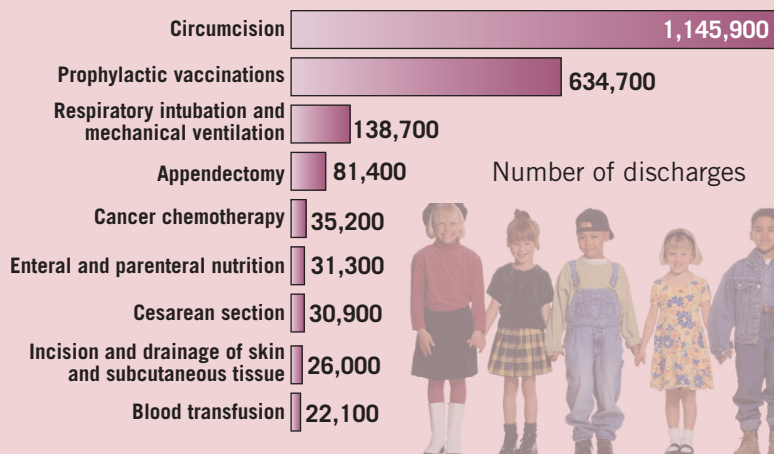
I think this confirms that selection of antibiotics is based more on convenience, taste, and possibly marketing than on an understanding of the activity and limitations of the antibiotic.

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DATA WATCH

Procedures Received by Children in the Hospital



Notes: Based on 2006 data for children aged 17 or younger; excludes diagnostic testing.
Source: Agency for Healthcare Research and Quality