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 Dr. Andrew Coco of the Lancaster (Pa.) General Research Institute and his colleagues.

They analyzed data on 1,114 acute otitis media (AOM) patients aged 6 months to 12 years that was collected between 2002 and 2006 as part of the National Ambulatory Medical Care Survey, comparing the clinical management 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 study overall, antibiotics were not prescribed in 13% of 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 significant difference, they reported.

"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," they wrote

"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.

An unexpected finding, 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 is, however, consistent with physicians' historical lack of enthusiasm for prescribing the combination treatment for severe infections, they wrote.

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.

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]."

The study authors reported having no conflicts of interest. ■

MY TAKE

Watchful Waiting Is Uncomfortable

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 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 treating 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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Third Wave of H1N1, Viral Reassortment Top Concerns

BY BRUCE JANCIN

KEYSTONE, COLO. — Where has all the seasonal influenza gone?

That's one of the questions preoccupying flu watchers during this unprecedented 2009-2010 influenza season. Other key questions they're pondering include: Will we see a third wave of the influenza A(H1N1) pandemic? And what's going to happen if—or more likely, when—the extremely deadly avian influenza A(H5N1) virus reassorts with H1N1?

Seasonal flu in the United States ordinarily follows a predictable pattern. It arrives in force in January, peaks in February, and then tails off in March. This year, seasonal flu didn't show up anywhere in the United States in January, aside from a few sporadic cases of no epidemiologic significance, Dr. Gwen Huitt said at a meeting on allergy and respiratory disease.

Instead, the Centers for Disease Control and Prevention's Outpatient Influenza-Like Illness Surveillance Network reported a huge peak in October, 4 months earlier than usual and was the crest of the second wave of the H1N1 pandemic. The first wave came in June 2009.

"That was a paradigm shift. It was far different than anything seen in recent history," recalled Dr. Huitt of the department of medicine at the University of Colorado, who is also an infectious disease specialist at National Jewish Health, both in Denver.

"We're treading uncharted territory right now, but the thing we're all concerned about is whether or not we'll have a third wave. The 1918 Spanish flu H1N1 pandemic had three waves. The second was the worst, and the third was almost as bad. So we're just waiting to see what happens," Dr. Huitt said at the meeting sponsored by National Jewish Health.

The CDC has reported 59 documented cases of oseltamivir (Tamiflu)-resistant H1N1 through January of this year. A third wave of the pandemic could turn oseltamivir resistance into a major problem. Availability of another oral drug in addition to oseltamivir and zanamivir (Relenza) would be most welcome. Unfortunately, the only anti-influenza drug in phase III testing is intravenous peramivir, although it does look promising.

Seasonal influenza A isn't being seen on a significant scale anywhere in the world right now. However, an upsurge in seasonal influenza B is underway in China.

"Fortunately, it's a strain included in our seasonal influenza vaccine, so I think our population should be fairly well covered if that virus starts appearing in North America," she said.

The biggest concern now, Dr. Huitt said, is the prospect of genetic reassortment between avian influenza and the H1N1 virus. The avian H5N1 virus has an extremely high mortality rate—around 50%—but poor human-to-human transmissibility. The H1N1 virus has a much lower death rate—certainly less than 10%—but is highly transmissible.

Egypt and Indonesia are the hotbeds of H5N1 activity right now, with large outbreaks in both poultry and humans. Workers from the CDC and the World Health Organization are on the scene, trying to figure out the next move.

Pigs are susceptible to both avian influenza and H1N1 and are thought to be a frequent source of new human viral strains. And, in underdeveloped areas of the world, pigs and flocks of poultry often live underneath or in human dwellings.

"All it takes is two gene reassortments. One has already taken place. So we're waiting for the other shoe to drop, and if that occurs, then you've got a supervirus that's quite lethal. … and easily transmissible from human to human," the physician said.

Dr. Huitt reported having no conflicts of interest. ■