Wait-and-See Prescription for the Treatment of Acute Otitis Media
A Randomized Controlled Trial

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David M. Spiro, MD, MPH; Khoon-Yen Tay, MD; Donald H. Arnold, MD, MPH; James D. Dziura, PhD; Mark D. Baker, MD; Eugene D. Shapiro, MD

FROM ABSTRACT
Context
Acute otitis media (AOM) is the most common diagnosis for which antibiotics are prescribed for children.

Previous trials that have evaluated a "wait-and-see prescription" (WASP) for antibiotics, with which parents are asked not to fill the prescription unless the child either is not better or is worse in 48 hours, have excluded children with severe AOM. None of these trials were conducted in an emergency department.

Objectives
To determine whether treatment of AOM using a WASP significantly reduces use of antibiotics compared with a "standard prescription" (SP) and to evaluate the effects of this intervention on clinical symptoms and adverse outcomes related to antibiotic use.

Design, Setting, and Patients
A randomized controlled trial conducted.

Children with AOM aged 6 months to 12 years seen in an emergency department were randomly assigned to receive either a WASP or an SP.

All patients received ibuprofen and otic analgesic drops for use at home.

A research assistant, blinded to group assignment, conducted structured phone interviews 4 to 6, 11 to 14, and 30 to 40 days after enrollment to determine outcomes.

Main Outcome Measures
Filling of the antibiotic prescription and clinical course.

Results
Overall, 283 patients were randomized either to the WASP group (n = 138) or the SP group (n = 145).

Substantially more parents in the WASP group did not fill the antibiotic prescription (62% vs 13%).
There was no statistically significant difference between the groups in the frequency of subsequent fever, otalgia, or unscheduled visits for medical care.

Conclusion
The WASP approach substantially reduced unnecessary use of antibiotics in children with AOM seen in an emergency department and may be an alternative to routine use of antimicrobials for treatment of such children.

THESE AUTHORS ALSO NOTE:

“Acute otitis media (AOM) is the most common reason for which an antibiotic is prescribed to children,” accounting for an “estimated 15 million antibiotic prescriptions written per year in the United States.”

“Untreated AOM has a high rate of spontaneous resolution, with similar rates of complications whether antibiotics are prescribed or withheld.”

“Resistance to antibiotics is a major public health concern worldwide and is associated with the widespread use of antibiotics.”

These authors conducted a randomized controlled trial with a consecutive series of children diagnosed with AOM during a 1-year period in a pediatric emergency department.

All participants received complimentary bottles of ibuprofen.

RESULTS
Acute otitis media was unilateral in 83% of children in the WASP group and in 85% of the children in the SP group.

The mean length of antibiotic therapy prescribed for each group was a 10-day course. Amoxicillin was prescribed for 92% of the children.

Prescriptions were not filled for 62% of patients in the WASP group and 13% of patients in the SP group.

“No serious adverse events were reported for patients in the study.”

“Diarrhea was more frequently reported in the SP group, and this difference was statistically significant (8% vs 23%).”

Within the WASP group, “parents who did not fill the prescription were substantially more likely to indicate they would be willing to withhold antibiotics for future episodes of AOM compared with those who did fill the prescription.”
COMMENT FROM AUTHORS:

“The WASP reduced the use of antibiotics by 56% in children between 6 months and 12 years of age diagnosed as having AOM.”

“We demonstrated that the WASP is a successful treatment strategy for AOM.”

These authors found that “immediate treatment of AOM with an antibiotic resulted in rates of diarrhea that were 2- to 3-fold higher than those in the WASP group, consistent with previous studies.”

This randomized controlled trial has provided evidence that the “WASP strategy significantly reduces the use of antibiotics in an urban population presenting to an emergency department and may be an alternative to routine treatment of AOM with antibiotics.” [Very Important]

“Wait-and-see prescriptions remain controversial as most pediatricians in the United States have been trained to routinely prescribe antibiotics for AOM and believe that many parents expect a prescription; a small minority of practitioners who care for children routinely use watchful waiting.”

“The risks of antibiotics, including gastrointestinal symptoms, allergic reactions, and accelerated resistance to bacterial pathogens must be weighed against their benefits for an illness that, for the most part, is self-limited.” [Very Important]

“The routine use of WASP for AOM will reduce both the costs and adverse effects associated with antibiotic treatment and should reduce selective pressure for organisms resistant to commonly used antimicrobials.” [Very Important]

KEY POINTS FROM DAN MURPHY

1) “Acute otitis media is the most common reason for which an antibiotic is prescribed to children,” accounting for an “estimated 15 million antibiotic prescriptions written per year in the United States.”

2) “Untreated acute otitis media has a high rate of spontaneous resolution, with similar rates of complications whether antibiotics are prescribed or withheld.”

3) “Resistance to antibiotics is a major public health concern worldwide and is associated with the widespread use of antibiotics.”

4) The typical length of antibiotic therapy prescribed for children with acute otitis media is a 10-day course, and Amoxicillin is prescribed 92% of the time.
5) Diarrhea is the most frequently reported side effect of taking antibiotics for acute otitis media.

6) Immediate treatment of acute otitis media with antibiotics increases the rates of diarrhea by 2- to 3- times compared to the wait and see approach to treating acute otitis media.

7) These authors showed that waiting to prescribe antibiotics for acute otitis media is a "successful treatment strategy."

8) This randomized controlled trial has shown that waiting to use antibiotics for acute otitis media "significantly reduces the use of antibiotics" without compromising clinical results.

9) Most pediatricians in the U S are trained to routinely prescribe antibiotics for acute otitis media and “believe that many parents expect a prescription.”

10) Only a “small minority of practitioners who care for children routinely use watchful waiting” before prescribing an antibiotic for acute otitis media.

11) “The risks of antibiotics, including gastrointestinal symptoms, allergic reactions, and accelerated resistance to bacterial pathogens must be weighed against their benefits for an illness that, for the most part, is self- limited.” [Very Important]

12) “The routine use of waiting to prescribe antibiotics for acute otitis media “will reduce both the costs and adverse effects associated with antibiotic treatment and should reduce selective pressure for organisms resistant to commonly used antimicrobials.” [Very Important]

13) The waiting to prescribe antibiotics approach “substantially reduced unnecessary use of antibiotics in children with acute otitis media.”