CURRENT MANAGEMENT AND REFERRAL PATTERNS OF PEDIATRICIANS FOR ACUTE OTITIS MEDIA

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Abstract

Educational Objectives: At the conclusion of this presentation, the participants should be able to understand trends in current treatment and referral patterns of acute otitis media and how they compare to national published guidelines.
Objective: The American Academy of Pediatrics (AAP) has published an evidence-based clinical practice guideline for the management of acute otitis media (AOM), most recently revised in 2013. This study aims to assess current practice patterns and how they compare to the published guideline.

Study Design: Survey of practicing Pediatricians.

Methods: An 11 question survey addressing topics included in the 2013 AAP AOM guidelines were mailed to 196 practicing Pediatricians. Statistical analysis was performed using Chi-square and ANOVA testing.

Results: 76 (38%) completed surveys were returned. 75% of respondents were in group practice (non-academic) and 83%were in practice 11 years or more. 93% were members of the AAP. 46% of responding Pediatricians use pneumatic otoscopy and/or tympanometry at least once a day to aid in the diagnosis of AOM, while 28% never do. 15% of respondents would choose close observation over antibiotics in a child under the age of 2 years with unilateral non-severe AOM while 50% would choose close observation in a child over age 2. 70% would make an appropriate referral to Otolaryngology for recurrent AOM. No significant differences were noted in responses based on practice type, years in practice, or Otolaryngology experience during residency training.

Conclusion: Current Pediatrician practice and referral patters for AOM are not consistent with 2013 guidelines from the AAP. As consulting surgeons, Otolaryngologists should have knowledge of management protocols in related specialties that can have an impact on their practice.

Introduction

In 2013, the American Academy of Pediatrics and the American Academy of Family Physicians worked together to update published guidelines on the diagnosis and management of acute otitis media (AOM).

In previous guidelines, it was found that while physicians acknowledged the guideline and the role of observation, there was no significant change in the number of children being observed or the number of antibiotic prescriptions[1,2]

The 2013 guideline[3] has made some changes to the diagnostic criteria for acute otitis media:

- More emphasis on physical exam findings
- Distinguishing AOM from otitis media with effusion (OME)
- Routine use of pneumatic otoscopy
- Incorporation of pneumatic otoscopy education in all stages of training

Methods

A survey study was conducted of Pediatricians currently practicing in Pennsylvania and surrounding areas.

193 Pediatricians chosen randomly to receive surveys.

Questions were created to emphasize different recommendations in the 2013 AOM Guideline.

Surveys were mailed and a link to the online RedCap survey was made available to participants

Statistical analysis was performed using Chi-square and ANOVA testing

Results

76 of the 193 surveys (39.4%) were returned.

Table 1: Descriptive analysis of Pediatricians who responded to the AOM survey.

	N = 76 (%)
Practice Type	
Private	6 (7.9)
Group (non-academic)	57 (75.0)
Academic	13 (17.1)
Years in Practice	
0-5	5 (6.6)
6-10	8 (10.5)
11-15	15 (19.7)
16+	48 (63.1)
AAP member	71 (93.4)

Table 2: Use of pneumatic otoscopy and/or tympanometry amongst Pediatricians based on practice type.

	Private N=6 (%)	Group N=57 (%)	Academic N=13 (%)	Totals N=76 (%)
Multiple times each day	3 (50)	18 (32)	1 (8)	22 (29)
At least once per day	1 (17)	10 (17)	2 (15)	13 (17)
Several times a week	1 (17)	5 (9)		6 (8)
Several time a month		5 (9)		5 (7)
Once a month		9 (16)		9 (12)
Never	1 (17)	10 (17)	10 (77)	21 (28)

15% of respondents would choose close observation over antibiotics in a child under the age of 2 years with unilateral non-severe AOM while **50%** would choose close observation in a child over age 2.

70% would make an appropriate referral to Otolaryngology for recurrent AOM after 4 documented episodes of AOM within the span of 1 year.

No significant differences were noted in responses based on practice type, years in practice, or Otolaryngology experience during residency training.

Survey

Version Date: 11 October 2015

Acute Otitis Media Survey

Please select the answer which best represents you and your practice. Your completion of this survey implies your voluntary consent.

1. What is your practice type?
   a) Private practice (solo practitioner)
   b) Group private practice (2 or more practitioners not directly affiliated with an academic institution)
   c) Academic practice (directly affiliated with an academic institution)

2. How many years have you been in practice?
   a) 1-5 years
   b) 6-10 years
   c) 11-15 years
   d) 16+ years

3. Are you a member of the American Academy of Pediatrics (AAP)?
   a) Yes
   b) No

4. In general, do you feel that the Clinical Guidelines published by the AAP are utilized in guiding clinical decision making in your practice?
   a) Yes
   b) No

4. How often do you use pneumatic otoscopy and/or tympanometry in your practice?
   a) Multiple times each day
   b) At least one per day
   c) Several times a week
   d) Several times a month
   e) Once a month
   f) Never

5. Did you have an ENT rotation as part of your residency training?
   a) Yes
   b) No

For the following questions: please choose the answer that most reflects your clinical diagnosis/recommendation based on the information provided:

6. Parker, a 12 month old boy, presents to your office with fever at home of 102.4 and pulling on both ears for the past 2 days. He is otherwise healthy. Otoscopy reveals findings shown in the images. What is your next course of action?
   a) Prescribe amoxicillin 90mg/kg/day for 10 days
   b) Prescribe amoxicillin 90 mg/kg/day for 5 to 7 days
   c) Prescribe Augmentin 90 mg/kg/day for 10 days
   d) Observation with a follow up appointment in 48 hours
   e) Observation with a prescription to start amoxicillin 90 mg/kg/day if symptoms are not improving in 48 hours
   f) Other____________________

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7. Lucy, an 8 month old girl, otherwise healthy, who you have been following regularly since birth, presents to your office with a 1 day history of fever to 100.2, rhinorrhea, ear pulling, and increased fussiness. Right-sided otoscopy reveals a normal tympanic membrane. Left-sided otoscopy findings are shown in the image. What is your next course of action?
   a) Prescribe amoxicillin 90mg/kg/day for 10 days.
   b) Observation with follow up appointment in 48 hours.
   c) Observation, with a prescription to start amoxicillin 90 mg/kg/day for 7 days if symptoms are not improving in 48 hours.
   d) No intervention.
   e) Other____________________

8. Trevor, a 3 year old boy, otherwise healthy, who you have been following regularly since birth, presents to your office with a 2 day history of fever to 100.2, rhinorrhea, ear pulling, and increased fussiness. Right-sided otoscopy reveals a normal tympanic membrane. Left-sided otoscopy findings are shown in the image. What is your next course of action?
   a) Prescribe amoxicillin 90mg/kg/day for 7 days.
   b) Observation with follow up appointment in 48 hours.
   c) Observation, with a prescription to start amoxicillin 90 mg/kg/day for 7 days if symptoms are no improving in 48 hours.
   d) No intervention.
   e) Other____________________

9. Trevor's symptoms subsequently resolve. 2 months later, you are seeing him back for a well-child visit. He and his parents have no complaints. Left-sided otoscopy reveals an air-fluid level. Right-sided otoscopy is still normal. What is your next course of action?
   a) Prescribe amoxicillin 90 mg/kg/day for 7 days
   b) Prescribe Augmentin 90 mg/kg/day for 7 days
   c) Observation
   d) Refer to ENT
   e) Other ____________________

10. 3 months later, Trevor returns to clinic with yet another ear infection. This is his fourth ear infection this year. What is your next course of action?
   a) Prescribe antibiotics for 7 days
   b) Prescribe low dose long term antibiotics (4-6 months)
   c) Prescribe antibiotics for 7 days and refer to ENT for evaluation for possible myringotomy and tubes
   d) Observation
   e) Refer to ENT for evaluation
   f) Other____________________

Thank you for completing this survey!

Discussion

- Nearly all respondents were AAP members and in general felt guidelines published by the AAP were useful.
- There is gross under-utilization across all Pediatricians of pneumatic otoscopy to aid diagnosis of AOM
- A minority of Pediatricians feel comfortable using observation in non-severe unilateral AOM in children under age 2 despite the option per the guidelines
- For unknown reasons, many Pediatricians are not making appropriate referrals to Otolaryngology for recurrent AOM
- The study was limited in that it was not assessed how many Pediatricians were aware of the published guidelines and whether inconsistencies in practice were due to experience or lack of knowledge.

Conclusions

Current Pediatrician practice and referral patterns related to the diagnosis of AOM are not consistent with published guidelines

More research is needed to assess why practice patterns are not consistent with guidelines.

Education is needed amongst Pediatricians on appropriate indications for referral to Otolaryngologists with regards to acute otitis media.

References

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