

From evidence to clinical guidelines in antibiotic treatment in acute otitis media in children

Spoiala E.L. et al. *Antibiotics* 2021

Background: Acute otitis media (AOM) is second most common cause for doctor visit in children after URI and early antibiotics have good role in preventing complications.

Aim: To explain antibiotic treatment for AOM by preclinical evaluation in animal models, management of refractory AOM and analysis of different guidelines used world wide.

Methods: (Review of literature)

1. Classic therapeutic options in AOM : A meta-analysis of the studies on the antimicrobial resistance in AOM in children performed during 1980–2017 [39], detected resistance of Gram-positive bacteria (*S. pneumoniae*) to penicillin but not to amoxicillin, the recommendation being to continue using this antibiotic as a first choice in treating children with otitis media. A ten-year retrospective analysis revealed that Ampicillin had the highest overall resistance rate (88.5%), followed by ceftriaxone (84.5%), amoxicillin (81.9%), and tetracycline (74.5%).

2. Guidelines for antibiotic treatment for AOM: A total of 20 AOM clinical practice guidelines were included in this review (WHO, US, UK, Europe and Australia).

ACADEMIC P.E.A.R.L.S

Pediatric Evidence And Research Learning Snippet



Antibiotics in Acute Otitis Media in children: When and which one?

Results :

- *S. pneumoniae* and *H. influenzae* remain the most important pathogens.
- The current guidelines on AOM management include two types of approaches towards antibiotic administration: **watchful waiting approach** and **immediate antibiotic prescription**.
- Amoxicillin is universally accepted as first-line antibiotic therapy.
- Amoxycylav and cephalosporins are second line.
- Duration varied from 5 to 10 days.
- The indications for **immediate antibiotic treatment** are based on the presence of severe symptoms (fever, otalgia, pain, vomiting, diarrhea, tympanic membrane perforation, or otorrhea), unilateral AOM, bilateral AOM with age < 2 years and recurrent AOM.
- The benefits of antibiotic treatment for AOM consist of the management of pain and the reduction in the risk of serious, acute complications as well as the risk of the long-term sequelae, including chronic suppurate otitis media and mastoiditis.

Conclusion: Early but judicious use of antibiotics is a priority, as antimicrobial resistance represents a serious threat to global public health and the adherence to guideline may reduce the treatment failures, which are usually related to antibiotic resistant strains.

EXPERT COMMENT

“Early recognition of signs/symptoms for starting antibiotics in AOM in children is mainstay to prevent complications but overuse must be limited to prevent resistance which is main concern now a days. Amoxicillin is the first line anti-microbial therapy in all included 20 guidelines in the above review.”

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With warm regards,

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Reference

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