

Terapia dell' otite media acuta



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OTITE MEDIA ACUTA

ACUTE OTITIS MEDIA

rapid onset of signs and symptoms of acute infection within the middle ear, with evidence of effusion

Otitis media is one of the most common diagnoses to be treated with antimicrobials in the paediatric population, accounting for **more than 25%** of the oral antibiotics prescribed annually

Shireman TI & Kelsey KA, Clin Drug Invest 2002

2007: 15 milioni di prescrizioni antibiotiche /anno in USA

OTITE MEDIA ACUTA – 30/5/2008

non antibiotico

antibiotico

watchful waiting





Many European pediatricians
(in the Netherlands since early 90s) **suggest a very selective use of antibiotic for AOM**
because:

1. most episodes of AOM have a spontaneous resolution
2. the incidence of severe complications is low
3. the short-term advantages of antibiotic use are not great enough to justify a universal use

Dutch guidelines for management of all episodes of acute otitis media



Patients 2 years and older

1. Analgesia, perhaps decongestive ear drops
2. Parent instructions
 - * Recovery within 3 days – no follow-up
 - * Return if symptoms (pain \pm fever \pm sickness) persist or worsen
 - * If drum perforation, follow-up 2 weeks after onset of running ear
3. If earache and/or fever persist, **amoxicillin**

Patients 6 months to 2 years :

ACT as for older, but with more active attitude related to higher probability of deterioration (visit or contact after 24 hours)

GUARIGIONE SPONTANEA DI OTITE MEDIA ACUTA DI GRAVITA' LIEVE O MODERATA

(Pichichero ME, PIDJ, 1994)

| Autore, anno | N° casi | Età (anni) | % guarigione |
|------------------------|----------------|-----------------------|-------------------------|
| Halsted, '68 | 27 | 0-3 | 81 |
| Laxdal, '70 | 48 | 0-14 | 46 |
| Howie, '72 | 116 | 0-2 | 14 |
| Van Buchem, '81 | 76 | 2-12 | 73 |
| Thalen, '86 | 158 | 2-15 | 88 |
| Burke, '91 | 118 | 3-10 | 86 |
| Appelman, '91 | 54 | 0.5-12 | 81 |
| Kaleida, '91 | 359 | 0-5-12 | 61 |

Difficulties in interpreting data of meta-analyses on the therapy of acute otitis media

1. What does mild or moderate mean?
2. Was the diagnosis correct? (in many studies only hyperemic TM!)
3. Were the studied populations homogeneous for age?

Attention to GIGO! (garbage in garbage out)

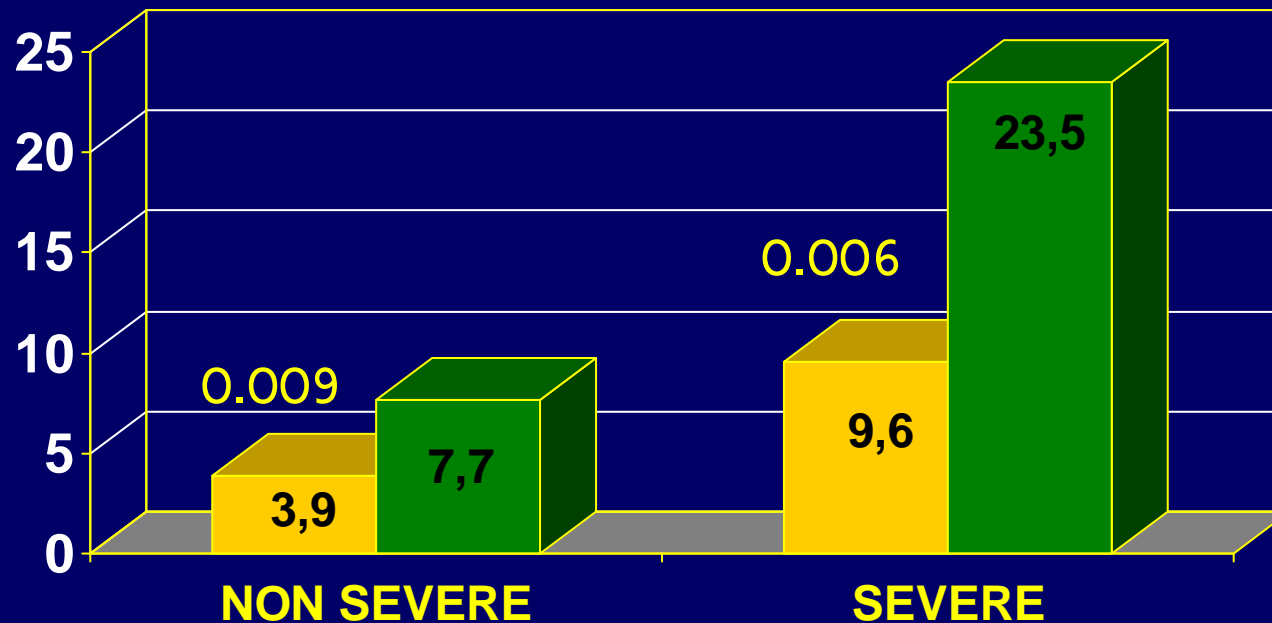


American Pediatricians and ENTs were used to suggest a systematic use of antibiotics in AOM because:

- 1. Clinical trials which indicate that antibiotics are not useful have often methodological problems**
- 2. AOM is mainly a bacterial disease**
- 3. Antibiotic use has largely reduced the incidence of severe complications**
- 4. Antibiotics reduce the duration of acute signs and symptoms of AOM**
- 5. It is impossible to distinguish, on a clinical basis, the episodes which can spontaneously resolve from those which will have a poor outcome**

Initial treatment failures in AOM according to severity of symptoms

Kaleida, Pediatrics 1991



■ amoxicillin ■ placebo

fever > 39°, severe otalgia (score 12 based on duration and intensity)

American Academy of Pediatrics: new guidelines for the treatment of AOM - 2004

www.aap.org

| Age | Diagnosis certain | Diagnosis uncertain |
|------------|---|---|
| < 6 mo. | Treat all with AB | Treat all with AB |
| 6 – 24 mo. | Treat all with AB | <ul style="list-style-type: none">• AB if severe illness• Observe option if non severe |
| > 24 mo. | <ul style="list-style-type: none">• AB if severe illness• Observe option if non severe | <ul style="list-style-type: none">• Observe option |

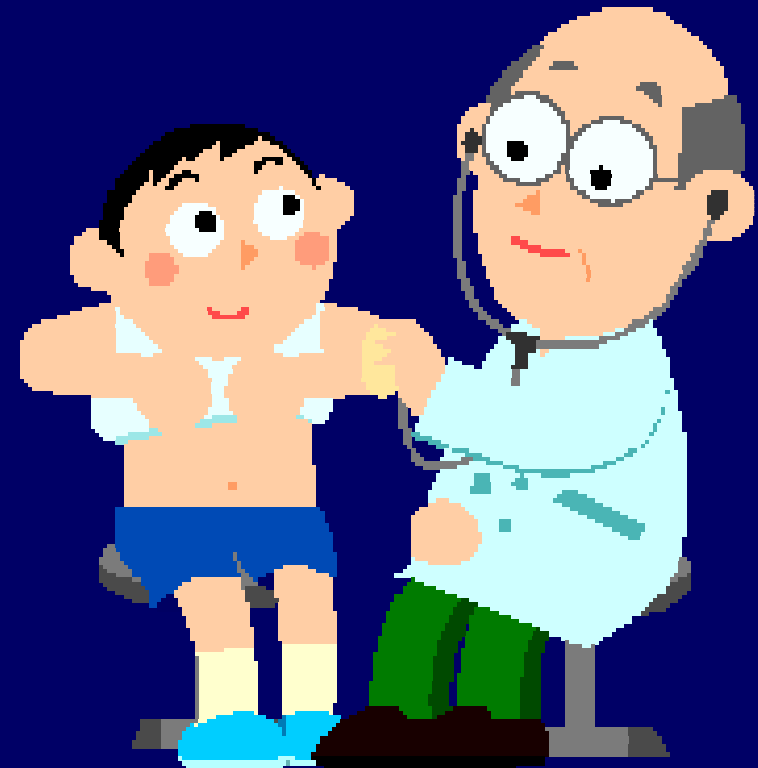
Severe illness:
moderate or severe otalgia
or fever $\geq 39.0^{\circ}\text{C}$





dalla teoria

alla pratica



Delayed Prescription May Reduce the Use of Antibiotics for Acute Otitis Media

A Prospective Observational Study in Primary Care

*Federico Marchetti, MD; Luca Ronfani, MD; Sergio Conti Nibali, MD; Giorgio Tamburlini, MD, PhD;
for the Italian Study Group on Acute Otitis Media*

Conclusions: Practice guidelines based on a wait-and-see strategy for children with AOM are applicable and effective in primary care. This strategy was able to avoid the administration of antibiotic treatment in 2 of 3 children.

Arch Pediatr Adolesc Med. 2005;159:679-684



NONSEVERE ACUTE OTITIS MEDIA: A CLINICAL TRIAL COMPARING OUTCOMES OF WATCHFUL WAITING VERSUS IMMEDIATE ANTIBIOTIC TREATMENT

McCormick DP, Pediatrics 2005

TABLE 5. Clinical Outcome According to Treatment and Age Groups

| | Failure (Day 0–12) | Recurrence (Day 13–33) | Cure | Total |
|-----------------------------|-----------------------|---------------------------|---------|-------|
| <2 y | | | | |
| Immediate ABX, <i>n</i> (%) | 4 (6) | 11 (17) | 50 (77) | 65 |
| WW, <i>n</i> (%) | 12 (24) | 10 (20) | 28 (56) | 50 |
| Total | 16 | 21 | 78 | 115 |
| ≥2 y | | | | |
| Immediate ABX, <i>n</i> (%) | 1 (2) | 9 (21) | 34 (77) | 44 |
| WW, <i>n</i> (%) | 9 (18) | 3 (6) | 38 (76) | 50 |
| Total | 10 | 12 | 72 | 94 |

The association between clinical outcome and intervention group adjusted for age group was statistically significant ($P = .001$), mainly because of large and consistent differences in failure rates. This association was not significantly different from one age group to the other ($P = .13$). Three subjects

**Combining all ages, the failure rate of the immediate ABX
And WW groups were 5% (5/109) and 21% (21/100)**

.. Some children with nonsevere AOM may be observed with watchful waiting as long as maintain nonsevere status and are kept comfortable with appropriate symptom management.

Wait-and-See Prescription for the Treatment of Acute Otitis Media

A Randomized Controlled Trial

Spiro DM et al, JAMA 2006; 296: 1235-1241

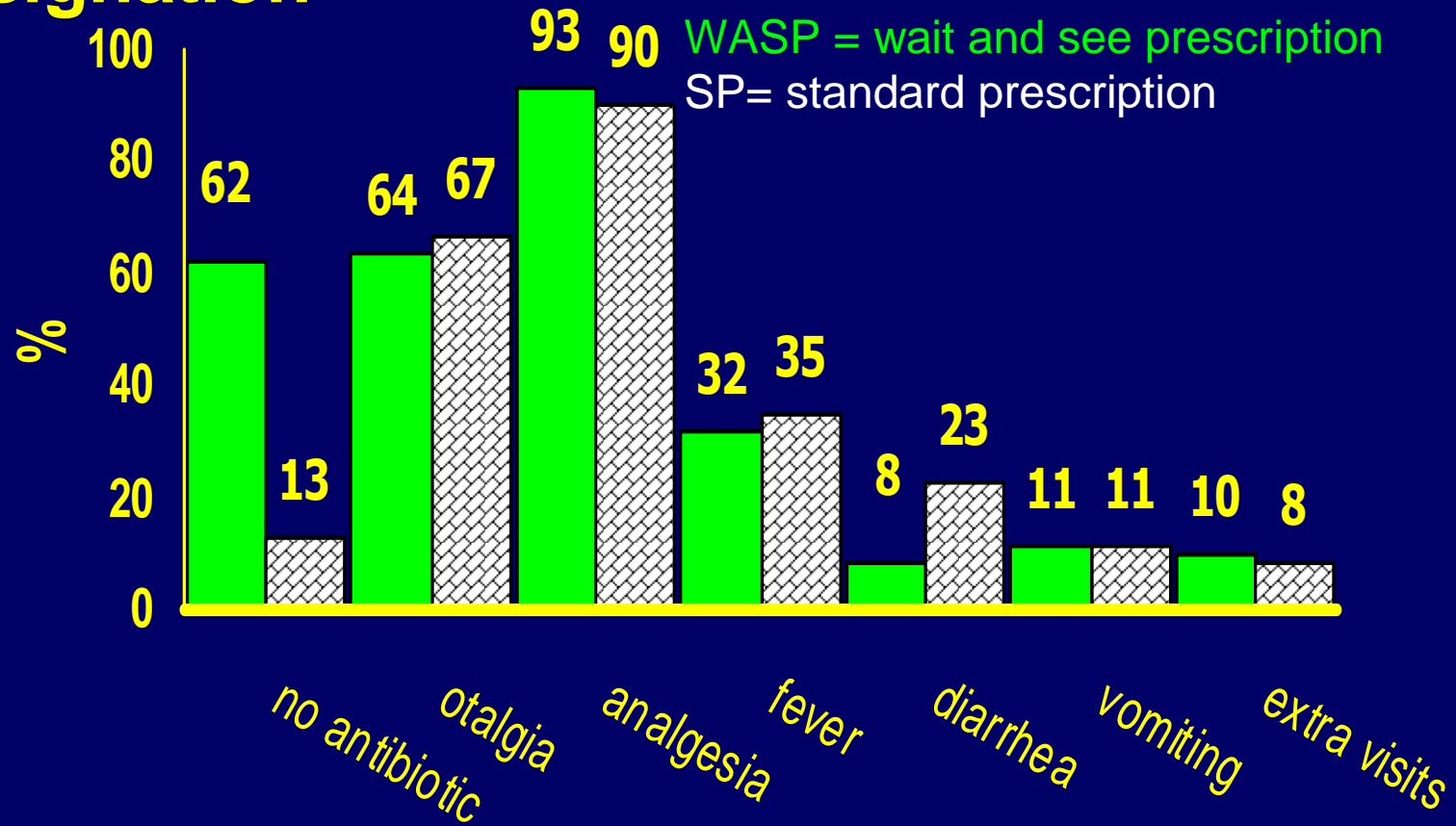
Emergency department

The diagnosis of AOM was made at the discretion of the clinician (no severity grading!)

Exclusion criteria

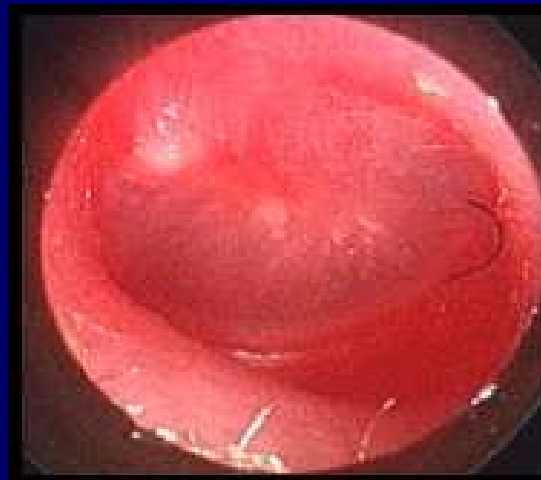
- Intercurrent additional infection
- Toxic appearance
- Hospitalization
- Immunosuppression
- Antibiotics in the previous 7 days
- Tubes or perforation
- Uncertain access to medical cure (no telephone)

Clinical outcome according to group designation



| Characteristic | WASP Group (n = 138) | SP Group (n = 145) | P Value |
|---|-------------------------|-----------------------|------------|
| Male sex, No. (%) | 79 (57) | 76 (52) | .41 |
| Age | | | |
| Median, y | 3.6 | 3.2 | .15 |
| Age <2 y, No. (%) | 39 (28.3) | 40 (27.6) | .90 |
| Race/ethnic group, No. (%) | | | |
| Black | 49 (36) | 62 (43) | .21 |
| Hispanic | 65 (47) | 61 (42) | |
| White | 13 (9) | 18 (12) | |
| Other | 11 (8) | 4 (3) | |
| Temperature at triage, mean (SD), °C | 37.1 (1.0) | 36.9 (1.0) | .12 |
| Temperature >38.0°C, No. (%) | 26 (19) | 18 (12) | .14 |
| Symptoms within 5 d of enrollment, No. (%) | | | |
| Otalgia | 113 (82) | 127 (88) | .10 |
| Fever | 59 (43) | 77 (53) | .17 |
| Cough or rhinorrhea | 110 (80) | 128 (88) | .08 |
| Diarrhea | 10 (7) | 22 (15) | .07 |
| Vomiting | 30 (22) | 41 (28) | .28 |
| No. of previous ear infections in past year, No. (%)* | | | |
| 1 | 77 (57) | 77 (57) | .31 |
| 2 | 25 (19) | 36 (26) | |
| ≥3 | 28 (21) | 18 (13) | |
| Unsure | 5 (4) | 5 (4) | |

OTITE MEDIA è una vera OMA?



A major challenge for the practitioner is to discriminate between OME and AOM.^{17,18} OME is more common than AOM. OME may accompany viral upper respiratory infections, be a prelude to AOM, or be a sequela of AOM.¹⁹ When OME is identified mistakenly as AOM, antibacterial agents may be prescribed unnecessarily.^{20,21} Clinicians should strive to avoid a false-positive diagnosis in children with middle-ear discomfort caused by eustachian tube dysfunction and retraction of the tympanic membrane or when acute viral respiratory infection is superimposed on chronic preexisting MEE.

OTITE MEDIA ACUTA

A quale categoria appartiene
il bambino ?

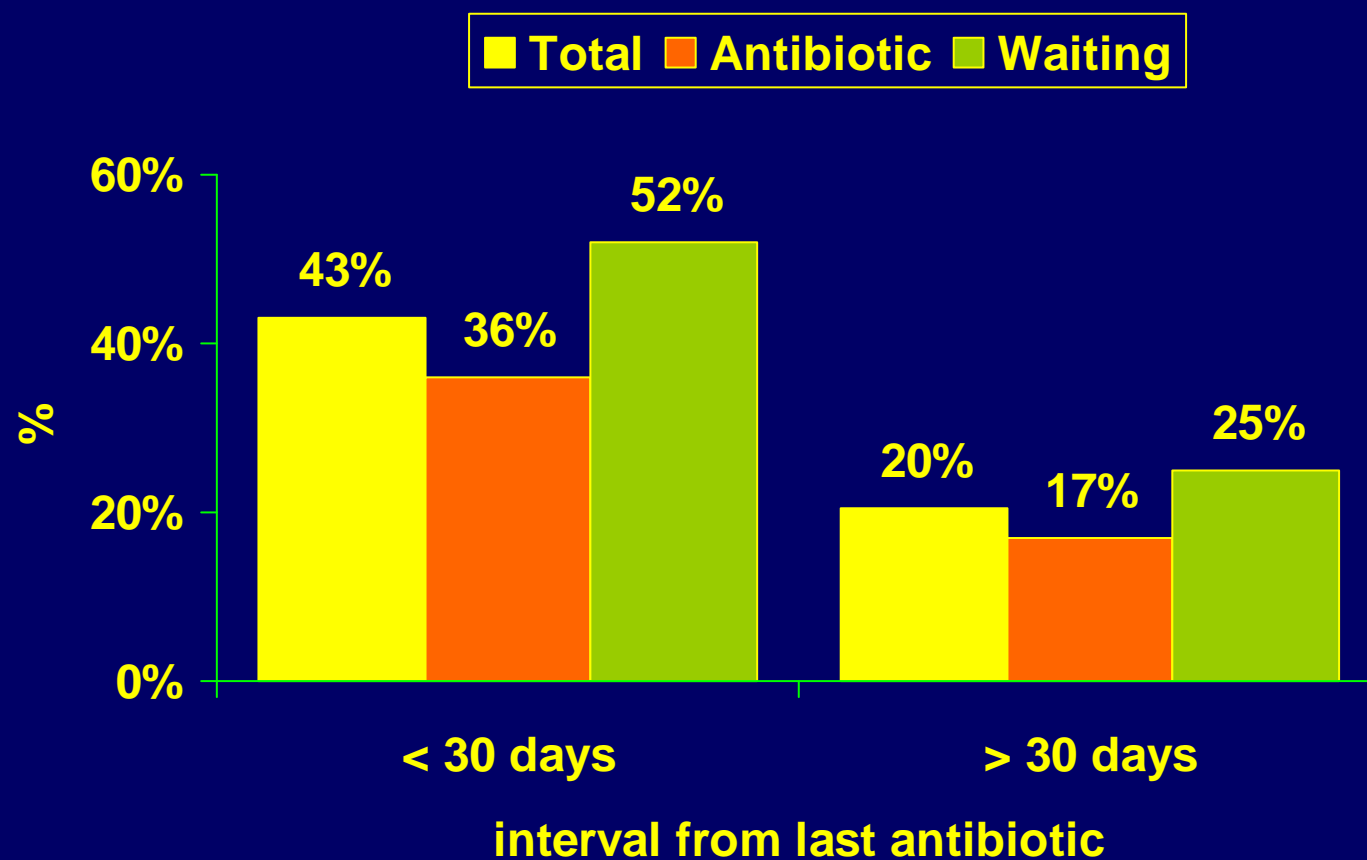
The AAP 2004 guidelines apply to:

- ✓ healthy children
- ✓ no underlying conditions
- ✓ no signs and symptoms unrelated to middle ear
- ✓ no AOM in the previous 30 days
- ✓ no underlying OME

Some factors can negatively influence the outcome in children with AOM

- Age < 24 months
- Severity of disease
- Otorrhea
- History of recurrent otitis media
- Winter respiratory season
- Greater risk of resistant bacteria (day-care attendance, prior antibiotic use)
- Concurrent virus infection
- Compliance

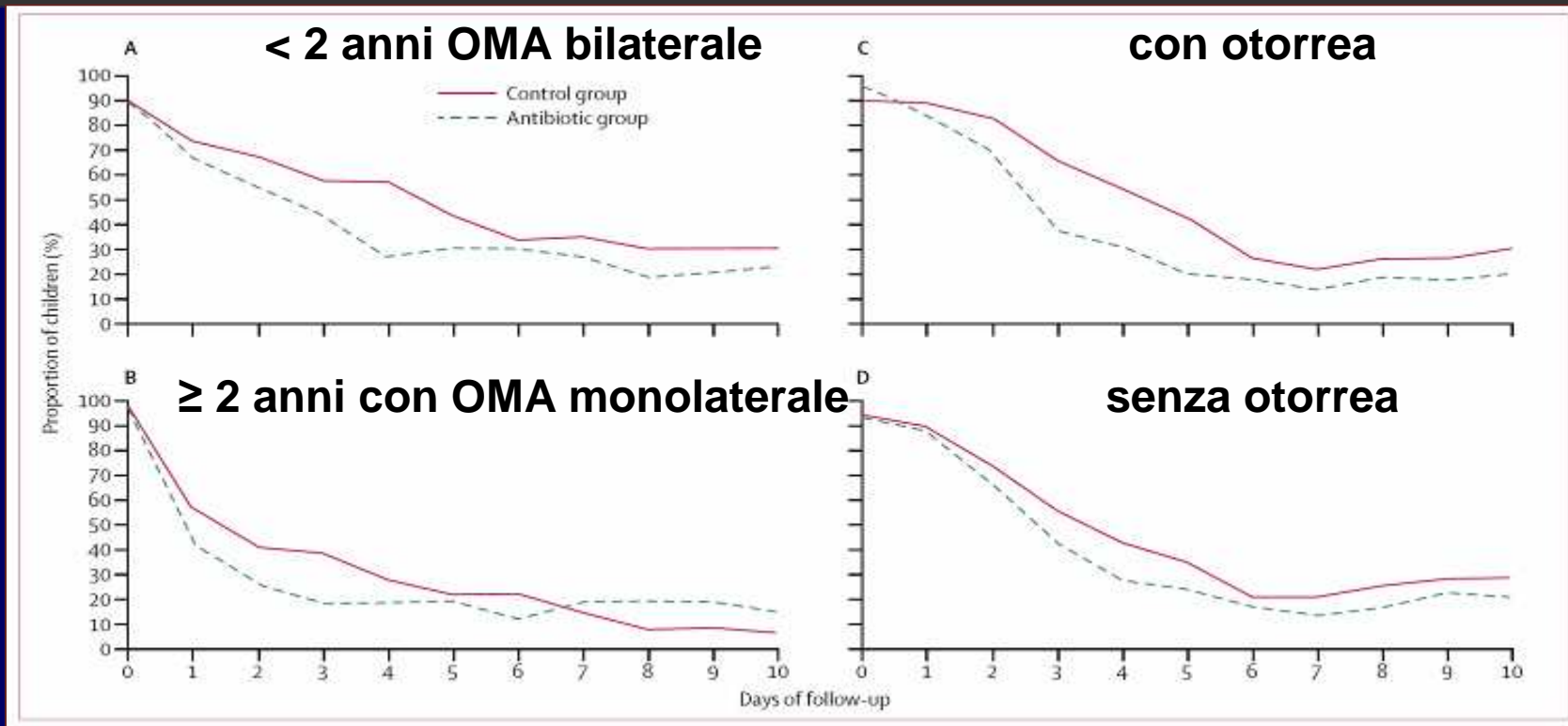
Failures and recurrences in the two groups according to previous antibiotic therapy



Antibiotics for acute otitis media: a meta-analysis with individual patient data

Lancet 2006; 368:1429

Maroeska M Rovers, Paul Glasziou, Cees L Appelman, Peter Burke, David P McCormick, Roger A Damoiseaux, Isabelle Gaboury, Paul Little, Arno W Hoes



Interpretation Antibiotics seem to be most beneficial in children younger than 2 years of age with bilateral acute otitis media, and in children with both acute otitis media and otorrhea. For most other children with mild disease an observational policy seems justified.

NONSEVERE ACUTE OTITIS MEDIA: A CLINICAL TRIAL COMPARING OUTCOMES OF WATCHFUL WAITING VERSUS IMMEDIATE ANTIBIOTIC TREATMENT

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Nonsevere acute otitis media: a clinical trial comparing outcomes of watchful waiting versus immediate antibiotic treatment : parent perception



TABLE 2. Parent Perception of Change in Status at Days 12 and 30 According to Age and Group

| | Day 12 | | P | Day 30 | | P |
|-------------|----------------------|-----------|------|----------------------|-----------|-----|
| | Immediate ABX, n (%) | WW, n (%) | | Immediate ABX, n (%) | WW, n (%) | |
| Age <2 y | | | <.01 | | | .75 |
| Much better | 41 (64) | 15 (28) | | 42 (65) | 28 (57) | |
| Better | 16 (25) | 25 (46) | | 14 (21) | 15 (31) | |
| Not changed | 5 (8) | 10 (19) | | 7 (11) | 5 (10) | |
| Worse | 2 (3) | 4 (7) | | 2 (3) | 1 (2) | |
| Much worse | 0 (0) | 0 (0) | | 0 (0) | 0 (0) | |
| Total | 64 (100) | 54 (100) | | 65 (100) | 49 (100) | |
| Age ≥2 y | | | .25 | | | .29 |
| Much better | 29 (67) | 26 (49) | | 26 (62) | 38 (76) | |
| Better | 12 (28) | 21(40) | | 13 (31) | 9 (18) | |
| No changed | 2 (5) | 4 (8) | | 2 (5) | 3 (6) | |
| Worse | 0 (0) | 2 (3) | | 1 (2) | 0 (0) | |
| Much worse | 0 (0) | 0 (0) | | 0 (0) | 0 (0) | |
| Total | 43 (100) | 53 (100) | | 42 (100) | 50 (100) | |

Age Inconsistency in the American Academy of Pediatrics Guidelines for Acute Otitis Media

Sharon B. Meropol, Henry A. Glick and David A. Asch
Pediatrics 2008;121;657-668

TABLE 6 Clinical and Economic Outcomes Among a Cohort of 1000 Patients

| Strategy | Cost, \$ ^a | Antibiotic Prescriptions, <i>n</i> | | | | Events, <i>n</i> | | | |
|----------------------|-----------------------|------------------------------------|----------------|-----------|-------------|------------------|----------------|-----------|--|
| | | All | Broad-Spectrum | Mild ADEs | Mastoiditis | ENT Referrals | Lost Work Days | Sick Days | |
| 2 to <6 mo | | | | | | | | | |
| Two-criteria | 124 710 | 598 | 50 | 46.16 | 0.81 | 80 | 368 | 826 | |
| AAP | 153 610 | 471 | 32 | 35.68 | 0.95 | 82 | 475 | 931 | |
| Watch and wait | 219 340 | 269 | 1 | 18.82 | 1.27 | 85 | 711 | 1165 | |
| 6–24 mo | | | | | | | | | |
| 2-criteria | 127 870 | 609 | 50 | 51.16 | 0.86 | 84.8 | 377 | 833 | |
| AAP | 158 880 | 453 | 30 | 36.71 | 1.01 | 86.1 | 493 | 946 | |
| Watch and wait | 227 930 | 283 | 1 | 19.94 | 1.34 | 89.1 | 739 | 1190 | |
| 2–12 y | | | | | | | | | |
| Two-criteria | 85 760 | 509 | 48 | 36.57 | .61 | 62.0 | 245 | 713 | |
| AAP | 89 360 | 170 | 13 | 11.70 | .81 | 67.1 | 275 | 740 | |
| Watch and wait | 93 260 | 56 | 1 | 3.22 | .95 | 70.2 | 295 | 758 | |

Age Inconsistency in the American Academy of Pediatrics Guidelines for Acute Otitis Media

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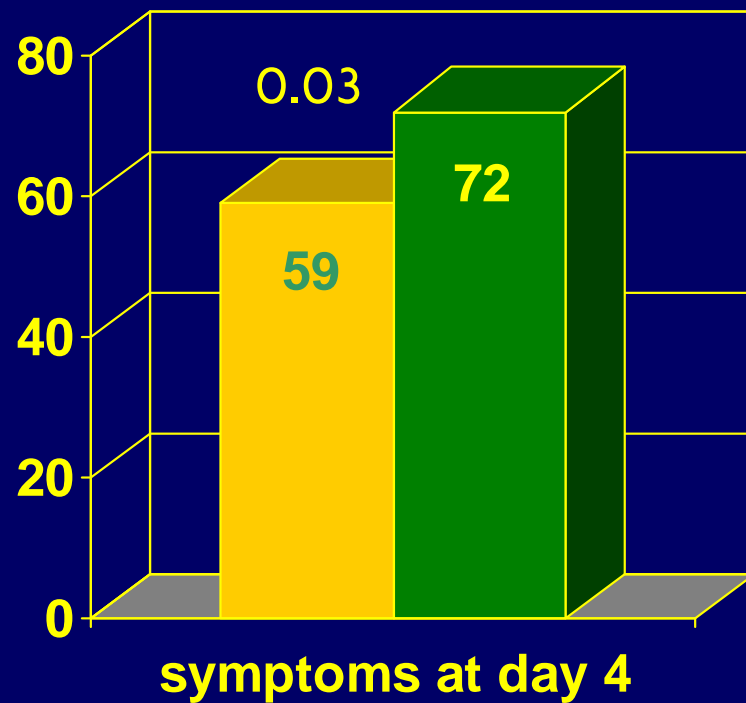
Pediatrics 2008;121:657-668

| Strategy | Incremental Ratios, Compared With Next Less Effective Alternative ^b | |
|----------------|--|----------------------------------|
| | Cost per Antibiotic Prescription Avoided (95% CI), \$ | NNT to Avoid 1 Sick Day (95% CI) |
| 2 to <6 mo | | |
| Two-criteria | | 1.2 (1.0–1.5) |
| AAP | 228 (178–283) | 0.9 (0.7–1.0) |
| Watch and wait | 325 (276–380) | |
| 6–24 mo | | |
| 2-criteria | | 1.4 (1.1–1.8) |
| AAP | 199 (140–263) | 0.7 (0.6–0.8) |
| Watch and wait | 491 (395–604) | |
| 2–12 y | | |
| Two-criteria | | 12.3 (6.6–86.0) |
| AAP | 11 (dominates to 34) | 6.3 (2.4 to dominated) |
| Watch and wait | 34 (dominates to 111) | |

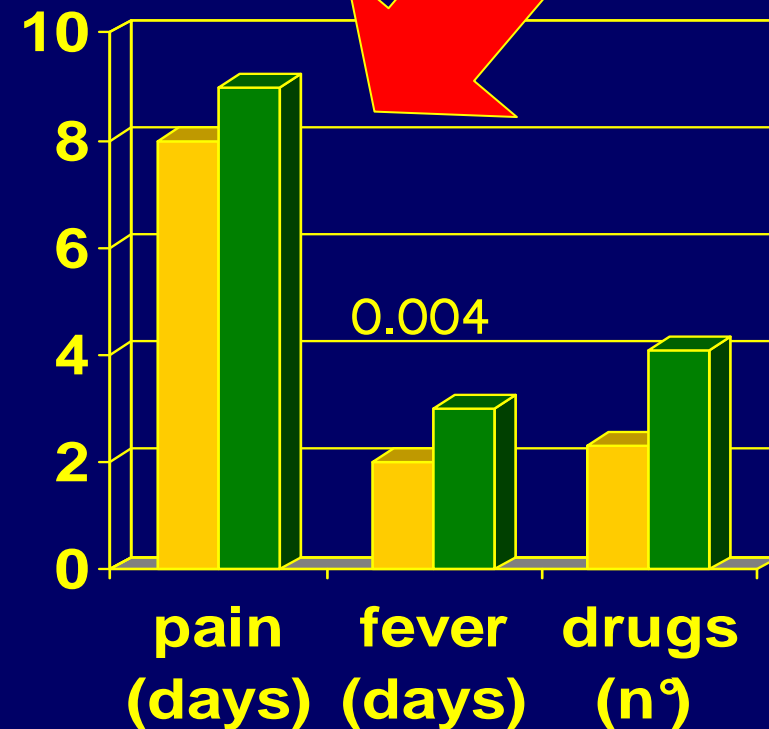
OTITE MEDIA ACUTA

1. Quanto è importante il sintomo dolore (bimbo, pediatra, genitore?)
2. Quanto riesco a controllare il sintomo dolore?

Outcome in infants < 2 years with acute otitis media randomized to receive **amoxicillin** or **placebo**



■ amoxicillin ■ placebo



■ amoxicillin ■ placebo

Damoiseaux RA et al, BMJ 320:350,2000

Table 3: Presence of pain and fever and number of doses of analgesic (ibuprofen or acetaminophen) and codeine over first 3 days Le Saux N et al, CMAJ 2005; 172: 335-341

| Symptom or treatment | Group; no. (and %) of patients* | | <i>p</i> value |
|----------------------|---------------------------------|----------------|----------------|
| | Amoxicillin | Placebo | |
| Fever | | | |
| Day 1 | 74/258 (28.7) | 97/254 (38.2) | 0.022 |
| Day 2 | 37/254 (14.6) | 78/250 (31.2) | < 0.001 |
| Day 3 | 29/253 (11.5) | 45/246 (18.3) | 0.030 |
| Pain | | | |
| Day 1 | 82/258 (31.8) | 106/254 (41.7) | 0.017 |
| Day 2 | 56/254 (22.0) | 83/250 (33.2) | 0.005 |
| Day 3 | 43/253 (17.0) | 53/246 (21.5) | 0.20 |
| Irritability | | | |
| Day 1 | 71/258 (27.5) | 90/254 (35.4) | 0.06 |
| Day 2 | 54/254 (21.3) | 70/250 (28.0) | 0.07 |
| Day 3 | 48/253 (19.0) | 54/246 (22.0) | 0.38 |
| Vomiting | | | |
| Day 1 | 19/258 (7.4) | 29/254 (11.4) | 0.12 |
| Day 2 | 12/254 (4.7) | 13/250 (5.2) | 0.81 |
| Day 3 | 9/253 (3.6) | 8/246 (3.3) | 0.86 |

TABLE 3. Treatments for Otolgia in AOM

| Modality | Comments |
|---|---|
| Acetaminophen, ibuprofen ²⁶ | Effective analgesia for mild to moderate pain, readily available, mainstay of pain management for AOM |
| Home remedies (no controlled studies that directly address effectiveness) | May have limited effectiveness |
| Distraction | |
| External application of heat or cold | |
| Oil | |
| Topical agents | |
| Benzocaine (Auralgan, Americaine Otic) ²⁷ | Additional but brief benefit over acetaminophen in patients >5 y |
| Naturopathic agents (Otikon Otic Solution) ²⁸ | Comparable with ammetocaine/phenazone drops (Anaesthetic) in patients >6 y |
| Homeopathic agents ^{29,30} | No controlled studies that directly address pain |
| Narcotic analgesia with codeine or analogs | Effective for moderate or severe pain; requires prescription; risk of respiratory depression, altered mental status, gastrointestinal upset, and constipation |
| Tympanostomy/myringotomy ³¹ | Requires skill and entails potential risk |

**AMERICAN ACADEMY OF PEDIATRICS AND
AMERICAN ACADEMY OF FAMILY PHYSICIANS**

CLINICAL PRACTICE GUIDELINE

Subcommittee on Management of Acute Otitis Media

Diagnosis and Management of Acute Otitis Media

Various treatments of otalgia have been used, but none has been well studied. The clinician should select a treatment based on a consideration of benefits and risks and, wherever possible, incorporate parent/caregiver and patient preference (Table 3).

Topical analgesia for acute otitis media (Review)

Foxlee R, Johansson A, Wejfalk J, Dawkins J, Dooley L, Del Mar C

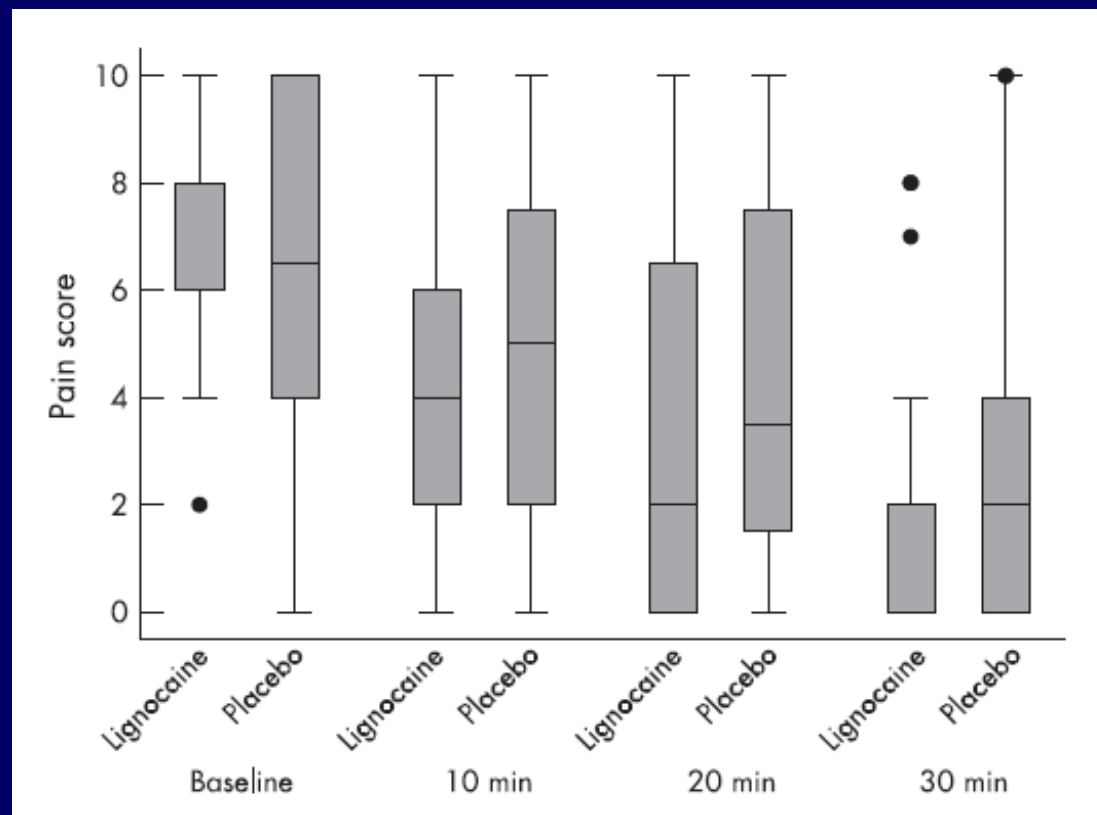
Authors' conclusions

The evidence from these four randomised controlled trials, only one of which addresses the most relevant question of primary effectiveness, is insufficient to know whether ear drops are effective or not.

Topical lignocaine for pain relief in acute otitis media: results of a double-blind placebo-controlled randomised trial

Penny Bolt, Peter Barnett, Franz E Babl and Lisa N Sharwood

Arch. Dis. Child. 2008;93;40-44



- age 3 to 17 yrs (mean 6 yrs)
- 3 drops
- pain scale

This study suggests that topical aqueous 2% lignocaine eardrops provide rapid relief for many young children presenting with ear pain attributed to AOM.

OTITE MEDIA ACUTA – 30/5/2008

Non antibiotico → se non OMA

Antibiotico → se < 2 anni bilaterale, se otorrea, se storia positiva

Watchful waiting → se > 2 anni monolaterale, senza otorrea, senza storia, e con stretto contatto

OTITE MEDIA ACUTA

Quale antibiotico?

Therapy of acute otitis media - 2008

AMOXICILLIN

**50 mg/kg/day
in 2-3 doses
(Italy)**

| Temperature =39°C and/or Severe Otalgia | At Diagnosis for Patients Being Treated Initially With Antibacterial Agents | |
|---|---|---|
| | Recommended | Alternative |
| No | Amoxicillin 80–90 mg/kg/day | Non-Type I: cefdinir, cefuroxime, cefepodoxime Type I: azithromycin, clarithromycin |
| Yes | Amoxicillin- clavulanate (90 mg/kg/day of amoxicillin with 6.4 mg/kg/day of clavulanate | Ceftriaxone— 1 or 3 days |

USA 2004 - www.aap.org

Middle ear pathogens (%) recovered from AOM pre-PCV7 (1992-1998) vs post –PCV7 (2000-2003) in vaccinees 7-24 m (> 3 doses PCV7)

| Bacteria | Pre PCV 7 | Post PCV7 |
|-----------------------|-----------|-----------|
| S. pneumoniae | 48 | 31 |
| •Penicillin S | 23 | 12 |
| •Intermediate | 16 | 13 |
| •Resistant | 9 | 6 |
| H. Influenzae | 41 | 56 |
| •Beta lactamases + | 23 | 36 |
| •Beta lactamases – | 18 | 20 |
| M. Catarrhalis | 9 | 11 |
| GABS | 2 | 2 |

La resistenza agli antibiotici dei patogeni respiratori - Italia 2004

| germe | antibiotico | % R |
|----------------------|---------------------|------------|
| S.pneumoniae | Penicillina | 23 |
| S.pneumoniae | Macrolidi | 40 |
| H.influenzae | Amoxicillina | 22 |
| M.catarrhalis | Amoxicillina | 90 |
| S.pyogenes | Penicillina | 0 |

Marchese A et al 2005

RESISTENZA BATTERICA...

una percentuale da valutare criticamente
quali elementi devono essere considerati ?

- area geografica
- ceppi da ospedale o da territorio
- fenotipi di resistenza
- sito di infezione
- gravità di infezione
- momento del prelievo rispetto alla terapia
- età del paziente
- modalità di valutazione in laboratorio
- attività *in vitro* vs *in vivo*

SOSPENSIONE
dell'utilizzo di una
certa
molecola/classe
di antibiotici se
raggiunge o
supera il 20%

Attività in vitro di 14 antibiotici vs ceppi (113) di *S. pneumoniae* isolati da bambini italiani durante Protekt 2004

| ANTIBIOTICO | MIC ₅₀ | MIC ₉₀ | Range | S% | I% | R% |
|----------------|-------------------|-------------------|-------------|------|------|------|
| | mg/L | | | | | |
| Amoxicillina | 0.03 | 0.25 | 0.03 - 4 | 98.2 | 0.9 | 0.9 |
| Azitromicina | 0.2 | 0.25 | 0.03 - 2 | 98.2 | 1.8 | 42.4 |
| Cefaclor | 0.03 | 0.25 | 0.03 - 4 | 98.2 | 23.9 | 10.6 |
| Cefixime | 0.03 | 0.25 | 0.03 - 4 | 98.2 | - | - |
| Ceftriaxone | 0.03 | 0.25 | 0.03 - 4 | 98.2 | - | 0.9 |
| Claritromicina | 0.03 | 0.25 | 0.03 - 4 | 98.2 | - | 41.6 |
| Clindamicina | 0.03 | 0.25 | 0.03 - 4 | 98.2 | - | 20.4 |
| Cloramfenicolo | 0.03 | 0.25 | 0.03 - 4 | 98.2 | - | 16.8 |
| Cotrimossazolo | 0.03 | 0.25 | 0.03 - 4 | 98.2 | 1 | 18.6 |
| Penicillina | 0.03 | 0.25 | 0.03 - 4 | 98.2 | 17.6 | 7.0 |
| Rifampicina | 0.03 | 0.25 | 0.03 - 4 | 98.2 | 2.7 | 0 |
| Teicoplanina | ≤0.03 | 0.25 | 0.03 - 4 | - | - | - |
| Telitromicina | 0.015 | 0.25 | 0.06 - 1 | 100 | 0 | 0 |
| Tetraciclina | 2 | >16 | ≤0.12 - >16 | 53.1 | 6.2 | 40.7 |

www.gimmoc.it

Attività in vitro di 12 antibiotici nei confronti di 89 *H.influenzae* isolati da bambini italiani durante Protekt 2004 - GIMMOC 2006

| ANTIBIOTICO | MIC ₅₀ | MIC ₉₀ | Range | S% | I% | R% |
|------------------------------------|-------------------|-------------------|---------------|------|------|------|
| | mg/L | | | | | |
| Amoxicillina/ Acido clavulanico | 1 | 1 | 0.25 ->16 | 97.8 | 0 | 2.2 |
| Ampicillina | 0.5 | >16 | ≤0.12- >16 | 75.3 | 4.5 | 20.2 |
| Azitromicina | 0.5 | 1 | ≤0.06 - 4 | 100 | 0 | 0 |
| Cefaclor | 4 | 4 | ≤0.5 - 32 | 96.6 | 2.3 | 1.1 |
| Cefixime | ≤0.06 | ≤0.06 | ≤0.06-0.25 | 100 | 0 | 0 |
| Ceftriaxone | 0.008 | 0.06 | ≤0.004 - 0.25 | 100 | 0 | 0 |
| Cefuroxime | 1 | 2 | ≤0.12 - 4 | 100 | 0 | 0 |
| Claritromicina | 4 | 16 | ≤0.25 - 64 | 76.4 | 18.0 | 5.6 |
| Cloramfenicolo | 0.5 | 1 | ≤0.12 - 4 | 98.9 | 1.1 | 0 |
| Cotrimossazolo | 0.12 | 0.5 | ≤0.03 - 8 | 89.9 | 1.1 | 0 |
| Telitromicina | 2 | 2 | 0.03 - 4 | 100 | 0 | 0 |
| Tetraciclina | 0.5 | 1 | 0.25 - 4 | 97.8 | 2.2 | 0 |

Empiric First-line Antibiotic Treatment of Acute Otitis in the Era of the Heptavalent Pneumococcal Conjugate Vaccine

Jane Garbutt, Isabel Rosenbloom, Jenny Wu and Gregory A. Storch

Pediatrics 2006;117;1087-1094

CONCLUSIONS. In our community, widespread use of heptavalent pneumococcal vaccine has reduced the prevalence of *S pneumoniae* nonsusceptible to penicillin, and the prevalence of *S pneumoniae* nonsusceptible to amoxicillin remains low (<5%). If antibiotic treatment is elected for children with uncomplicated acute otitis media, we recommend treatment with standard-dose amoxicillin (40–45 mg/kg per day) for children with ≥3 doses of heptavalent pneumococcal vaccine, regardless of age and child care status. High-dose amoxicillin should be used for children with <3 doses of heptavalent pneumococcal vaccine and those treated recently with an antibiotic.

THE THERAPY OF ACUTE OTITIS MEDIA alternatives in 2008 in Italy

1. AMOXICILLIN high dosage
2. AMOXICILLIN + CLAVULANIC ACID
(low or high dosage)
3. CEFALOSPORINS resistant to beta-lactamases and with good activity against *S.pneumoniae* (including cefaclor)
4. MACROLIDES

LA TERAPIA DELL'OMA NON DEVE ESSERE ABBREVIATA:

- **nei bambini < 2 anni**
- **nei bambini > 2 anni se:**
 1. **OMA complicata (perforazione, tubi)**
 2. **complicanze intracraniche**
 3. **immunodepressione**
 4. **anamnesi positiva per OMA o OME recente**
 5. **recente terapia antibiotica**
 6. **profilassi antibiotica**
 7. **scarsa possibilità di controllo medico**

It is not recommended that
other therapies be used
in the treatment
of acute otitis media

A RANDOMIZED, PLACEBO-CONTROLLED TRIAL OF THE EFFECT OF ANTIHISTAMINE OR CORTICOSTEROID TREATMENT IN ACUTE OTITIS MEDIA

TASNEE CHONMAITREE, MD, KOKAB SAEED, MD, TATSUO UCHIDA, MS, TERHO HEIKKINEN, MD, CONSTANCE D. BALDWIN, PHD, DANIEL H. FREEMAN, JR, PHD, AND DAVID P. MCCORMICK, MD

Objectives To determine whether the adjunctive drugs antihistamine and corticosteroid improve immediate and long-term outcomes of acute otitis media (AOM).

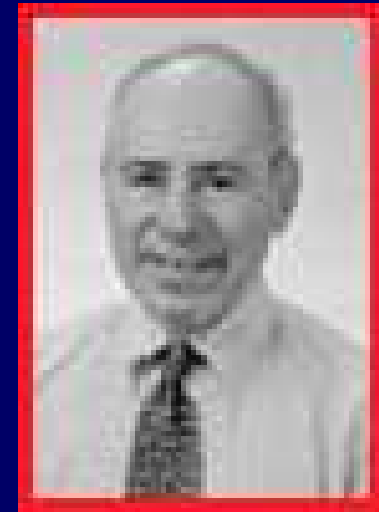
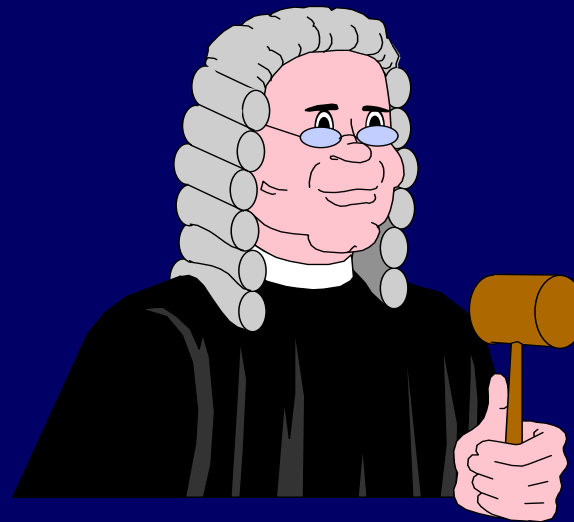
Study design Children with AOM (3 mos-6 y) were enrolled in a randomized, double-blind, placebo-controlled trial. All 179 children received one dose of intramuscular ceftriaxone and were assigned to receive either chlorpheniramine maleate (0.35 mg/kg/d) and/or prednisolone (2 mg/kg/day) or placebo for 5 days. Main outcome measures were rate of treatment failure during the first 2 weeks, duration of middle ear effusion, and rate of recurrences of AOM to 6 months.

Results Clinical outcomes and recurrence rates did not differ significantly with treatment. Children who received antihistamine alone had significantly longer duration of middle ear effusion (median, 73 days) than subjects in other treatment groups (median, 23 to 36 days, $P = .04$). Temporary normalization of tympanometric findings on day 5 occurred more frequently in the corticosteroid-treated group ($P = .04$).

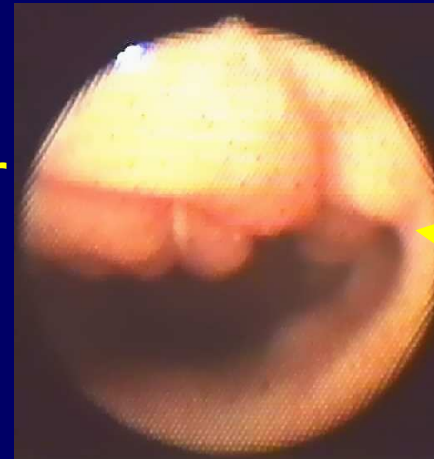
Conclusions Five-day treatment with antihistamine or corticosteroid, in addition to antibiotic, did not improve AOM outcomes. Antihistamine use during an acute episode of OM should be avoided, since the drug may prolong the duration of middle ear effusion. The efficacy of 7- to 10-day treatment of AOM with corticosteroid, in addition to antibiotic, deserves further investigation. (*J Pediatr* 2003;143:377-85)

J. L. Paradise's law since 1985

**IF THE NOSE
IS SNOTTY,
THE EAR WILL
NOT CLEAR**



before and after
nasal irrigation



E.tube

Thank you for your attention!

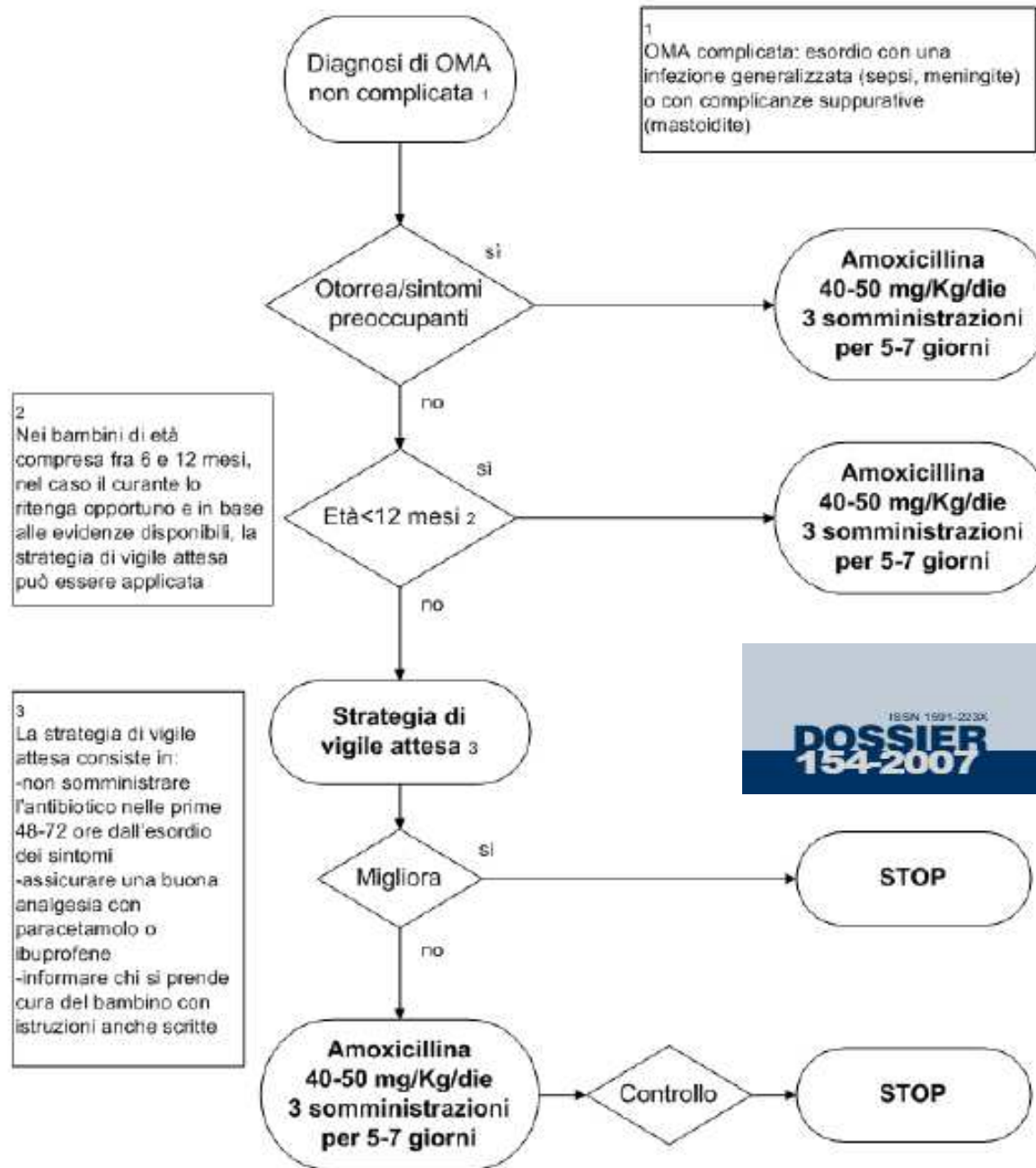


“ Never look for the extraordinary, but, on the contrary, concentrate on the more prevalent and common diseases, and try to cure them; these are the diseases you will most frequently encounter in your practice”

Emile Ménière
Deuxième Congrès
Otologique Internationale
Milan 1880

Otite media acuta in età pediatrica

Linea guida regionale



ISSN 1991-223X
DOSSIER
154-2007



"Sweet peanut," said his mother, "you've had a cold and may have an ear infection now. Let's take your temperature and give you something to make you feel better tonight. We'll visit Dr. Hippocrates in the morning."

