

Sinusite maxillaire aiguë

Dr Guillaume Moulis

Cas clinique

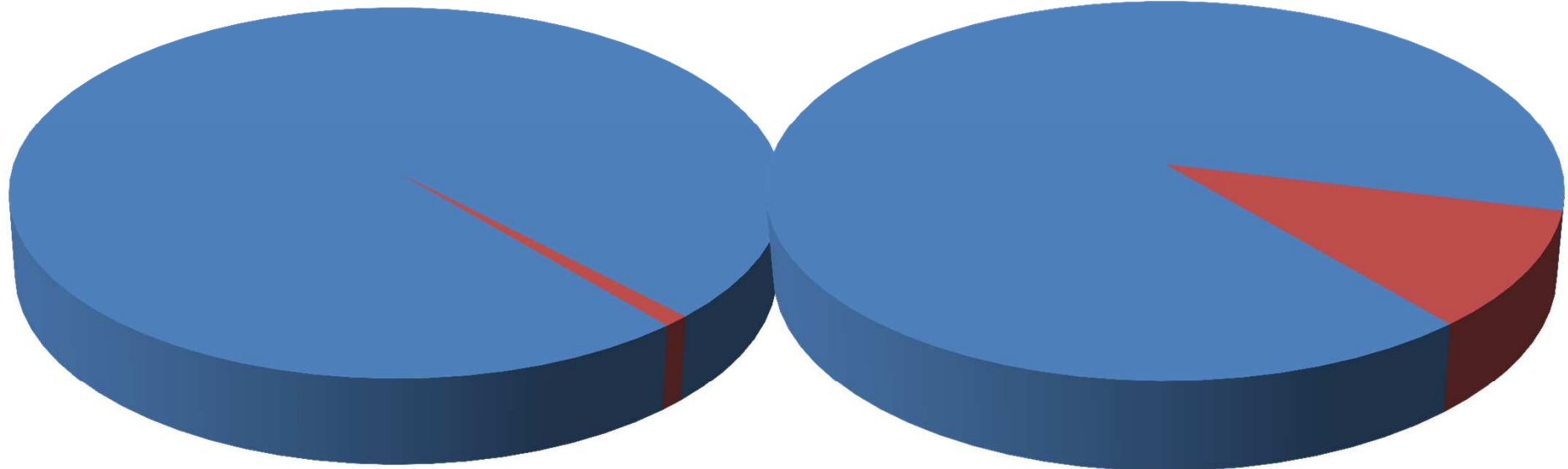
- **Lundi**
- **Homme de 63 ans, informaticien, doit rendre un important rapport pour vendredi**
- **Depuis 48 heures : rhinite claire, douleur maxillaire droite (EVA : 4), augmentée la tête penchée en avant et par pression**
- **Terrain**
 - **HTA équilibrée sous énalapril**
 - **Hypercholestérolémie sous simvastatine**
 - **Syndrome anxio-dépressif sous paroxétine**
 - **Hypertrophie bénigne de la prostate**

Antibiotiques ?

Oui

Non

Fréquence des surinfections bactériennes



ADULTES : 0,5-2%

ENFANTS : 5-13%

Sandes & Gwaltney *CID* 2004

Quelle situation vous ferait prescrire des antibiotiques ?

- Douleur dentaire
- Douleur rétro-orbitaire
- Écoulement nasal purulent
- Niveau hydro-aérique maxillaire à la radiographie
- Diabétique de type 2 parfaitement équilibré sous metformine

Quel antalgique ?

Paracétamol

Ibuprofène

Tramadol

Diclofénac

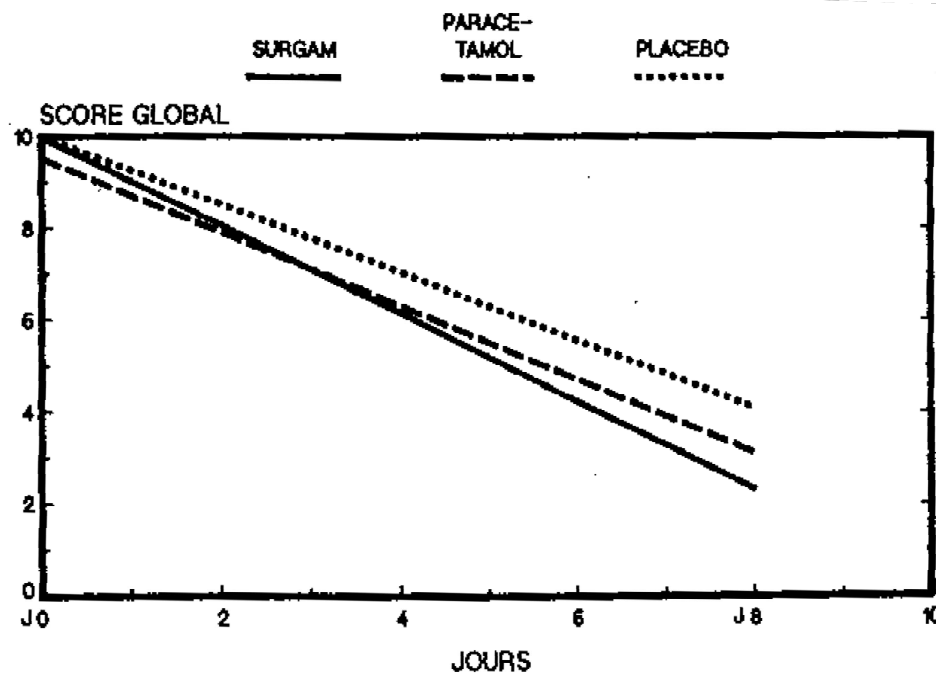
Prednisone

AINS/paracétamol

EFFICACITÉ ET TOLÉRANCE DE L'ACIDE TIAPROFÉNIQUE (SURGAM®) DANS LES SINUSITES AIGÜES DE L'ADULTE Résultats d'une étude randomisée contre paracétamol et contre placebo

B. FRACHET (1), N. GENES (2), Y. REZVANI (2)

Ann. Oto-Laryng. (Paris), 1991, 108, 364-369



n=134
+ amoxiciline 2 g/J

} Pas de différence acide tiaprofénique et paracétamol

La différence entre les 3 groupes de tt. est significative $p=0.029$

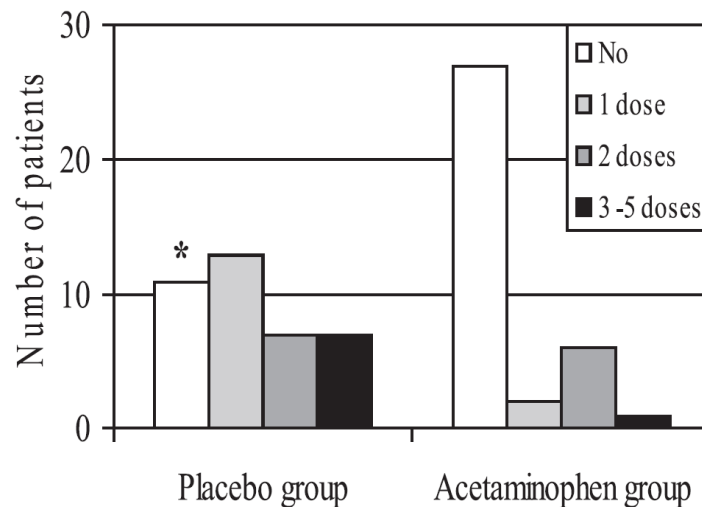
FIG. 1. — Evolution du score global.

Paracétamol en chirurgie de sinus

The Laryngoscope
Lippincott Williams & Wilkins, Inc.
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Rhinological and Otological Society, Inc.

Acetaminophen is Highly Effective in Pain Treatment After Endoscopic Sinus Surgery

Tatu Kempainen, MD; Hannu Kokki, MD, PhD; Henri Tuomilehto, MD, PhD; Juha Seppä, MD, PhD;
Juhani Nuutinen, MD, PhD



➔ **NNT=2**

Fig. 1. Number of oxycodone doses in the placebo and acetaminophen group. * $P = .001$.

AINS vs. paracétamol après chirurgie

Comparison of Parecoxib and Proparacetamol in Endoscopic Nasal Surgery Patients

Yonsei Med J 49(3):383 - 388, 2008
DOI 10.3349/ymj.2008.49.3.383

Yigal Leykin,¹ Andrea Casati,² Alessandro Rapotec,³ Massimiliano Dalsasso,³ Luigi Barzan,⁴ Guido Fanelli,⁵ and Tommaso Pellis³

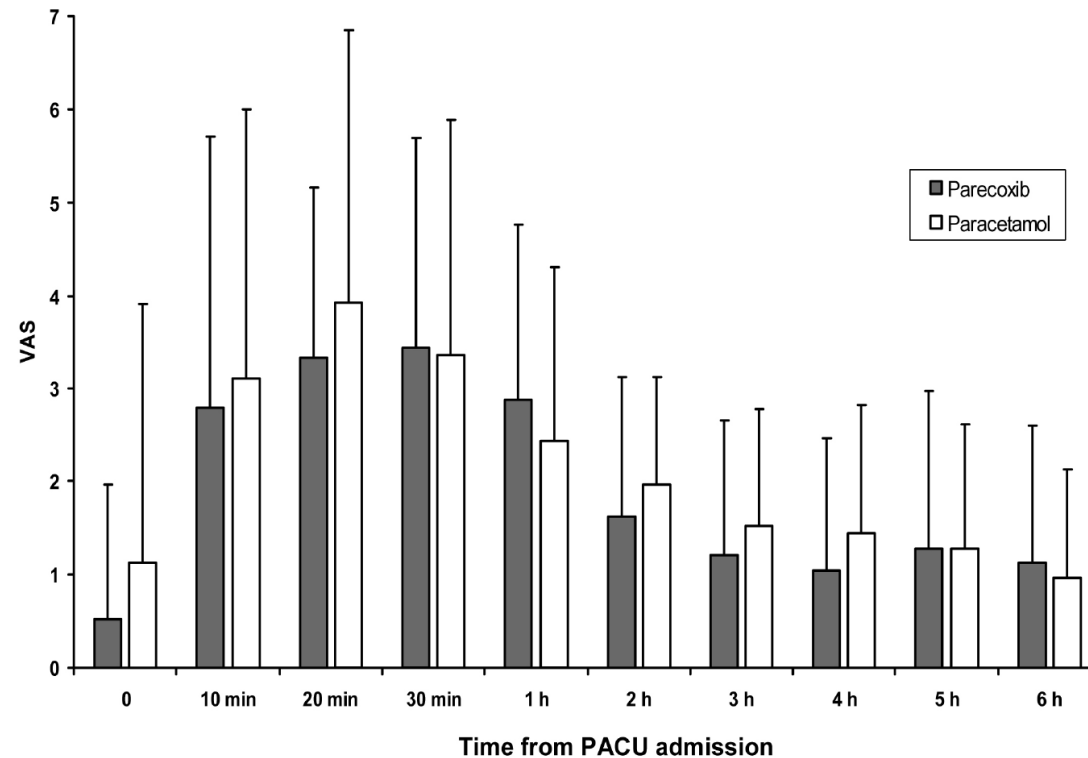


Fig. 1. Mean postoperative VAS measured at PACU admission for the first 6 h.

AINS vs. paracétamol après chirurgie

Comparison of Parecoxib and Proparacetamol in Endoscopic Nasal Surgery Patients

Yonsei Med J 49(3):383 - 388, 2008
DOI 10.3349/ymj.2008.49.3.383

Yigal Leykin,¹ Andrea Casati,² Alessandro Rapotec,³ Massimiliano Dalsasso,³ Luigi Barzan,⁴ Guido Fanelli,⁵ and Tommaso Pellis³

Table 3. Incidence of Adverse Events Reported during First 24 h After Surgery in Patients Receiving Proparacetamol or Parecoxib After Endoscopic ENT Surgery

	Group proparacetamol (n = 25)	Group parecoxib (n = 25)
PONV	3 (12%)	2 (8%)
Gastric pain	0 (0%)	0 (0%)
Minor bleeding	0 (0%)	2 (8%)

PONV, post operative nausea and vomit.
Results are presented as number (%).

Corticoïdes en monothérapie

Systemic corticosteroids for acute sinusitis

Roderick P Venekamp¹, Matthew J Thompson², Gail Hayward³, Carl J Heneghan³, Chris B Del Mar⁴, Rafael Perera³, Paul P Glasziou⁴, Maroeska M Rovers⁵



Cochrane Database of Systematic Reviews 2014, Issue 3. Art. No.: CD008115.

Corticoïdes en monothérapie

Systemic corticosteroids for acute sinusitis

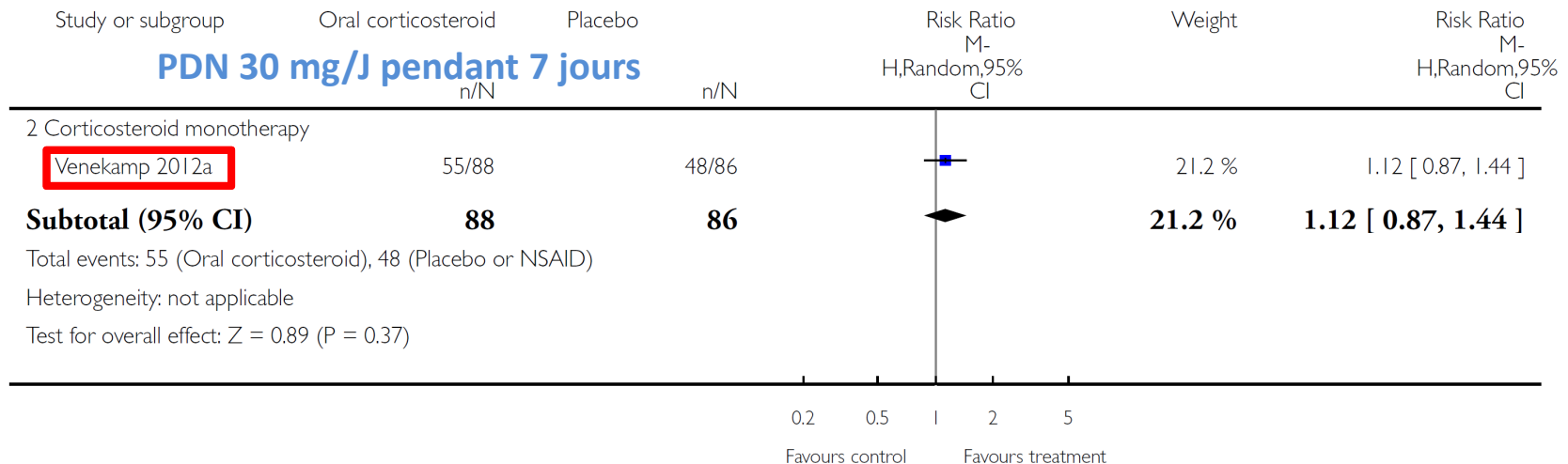
Roderick P Venekamp¹, Matthew J Thompson², Gail Hayward³, Carl J Heneghan³, Chris B Del Mar⁴, Rafael Perera³, Paul P Glasziou⁴, Maroeska M Rovers⁵

Analysis 1.1. Comparison 1 Oral corticosteroids versus placebo Outcome 1 Proportion of patients with resolution or improved symptoms at days 3 to 7.

Review: Systemic corticosteroids for acute sinusitis

Comparison: 1 Oral corticosteroids versus placebo or NSAID

Outcome: 1 Proportion of patients with resolution or improved symptoms at days 3 to 7



Corticoïdes en monothérapie

CMAJ

RESEARCH

Systemic corticosteroid monotherapy for clinically diagnosed acute rhinosinusitis: a randomized controlled trial

Roderick P. Venekamp MD PhD, Marc J.M. Bonten MD PhD, Maroeska M. Rovers PhD, Theo J.M. Verheij MD PhD, Alfred P.E. Sachs MD PhD

CMAJ, October 2, 2012, 184(14)

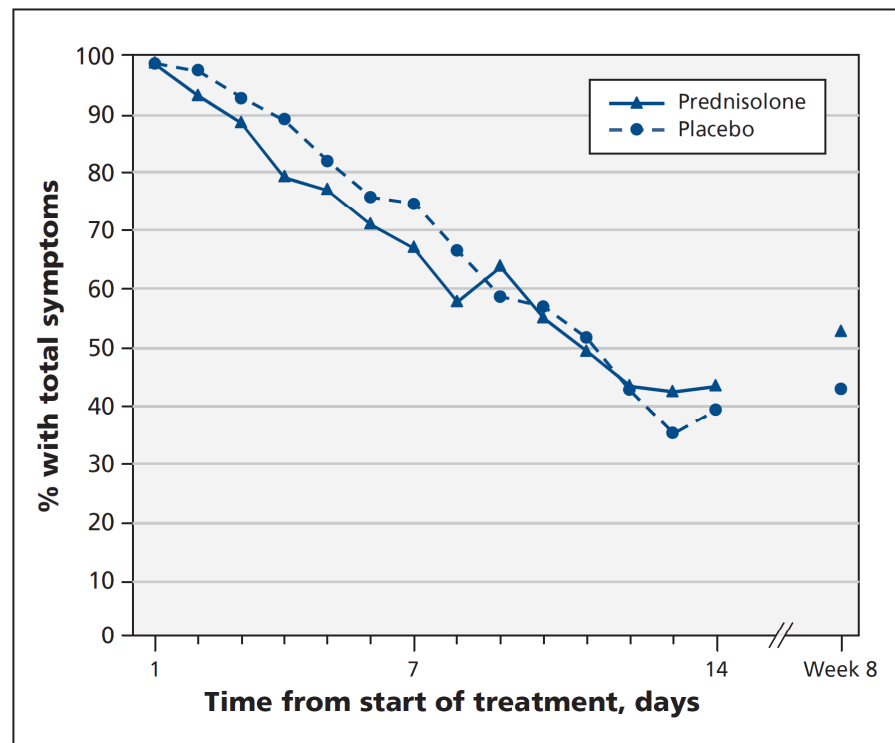


Figure 2: Proportion of patients who had combined symptoms of runny nose, postnasal discharge, nasal congestion, cough and facial pain during follow-up.

Arguments pharmacologiques

Paracétamol

Ibuprofène

Tramadol

Diclofénac

Prednisone

- **Lundi**
- **Homme de 63 ans, informaticien, doit rendre un rapport pour vendredi**
- **Depuis 48 heures : rhinite claire, douleur maxillaire droite (EVA : 4), augmentée la tête penchée en avant et par pression**
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 - Syndrome anxio-dépressif sous paroxétine
 - Hypertrophie bénigne de la prostate

Cas clinique

- **Mercredi**
- **Douleur persistante**
- **Augmentation de la rhinorrhée purulente**
- **Examen normal**

Antibiotiques ?

Oui

Non

Antibiotiques ?

- **Lequel ?**
 - Amoxicilline + acide clavulanique oral
 - Azithromycine orale
 - Cefpodoxime orale
 - Lévofloxacine orale
 - Amoxicilline orale
- **Combien de temps ?**

Choix d'un antibiotique

1. Quel microbe ?

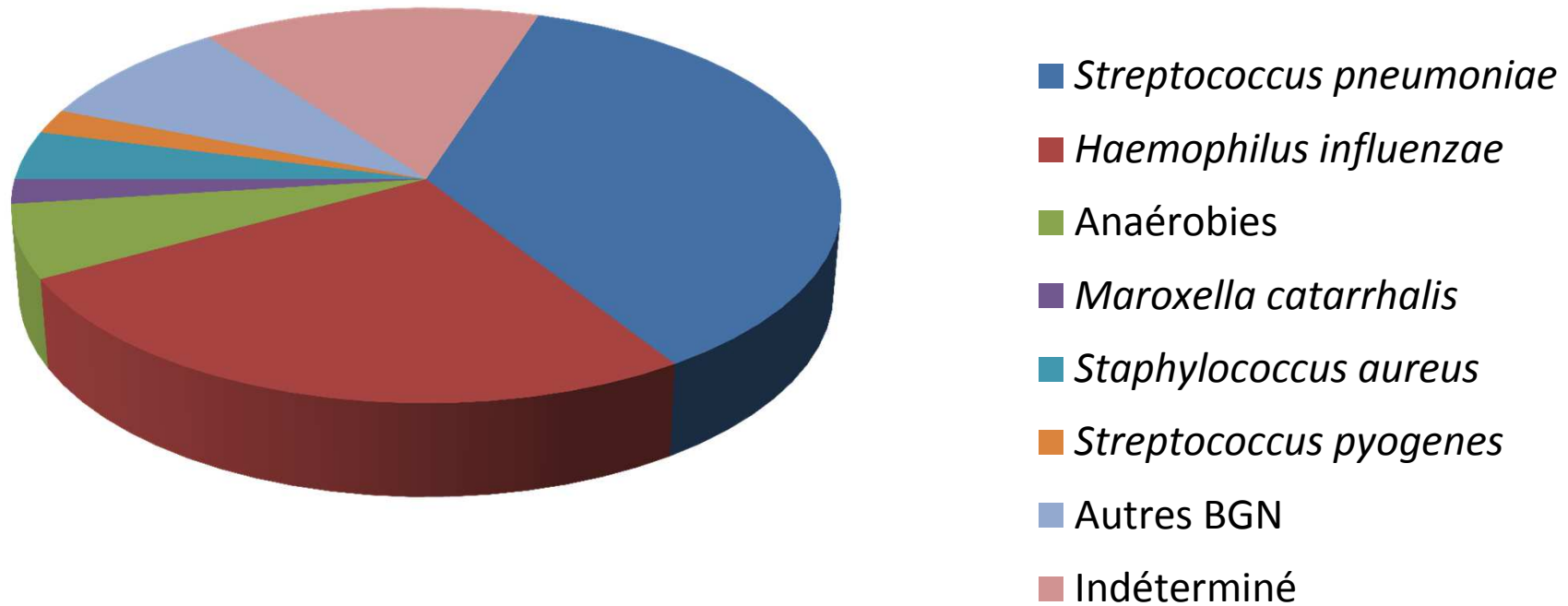


Choix d'un antibiotique

1. Quel microbe ?



Spectre bactérien



Sandes & Gwaltney CID 2004

Spectre bactérien

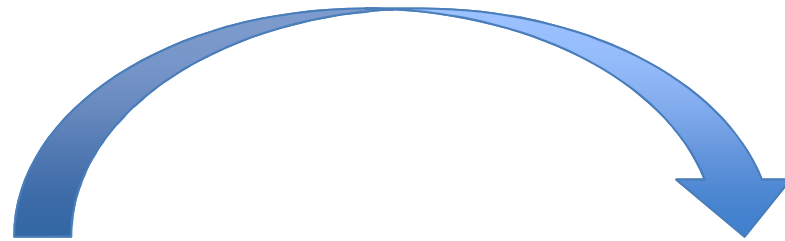
	Pneumocoque	<i>Haemophilus</i>
Amoxicilline	15-35%	20-35%
Amoxicilline + AC	15-35%	<10%
Cefpodoxime	20-60%	+
Azithromycine	35-70%	
Lévofloxacine	+	+

Choix de l'antibiotique

	1. Microbe
Amoxicilline	
Amoxicilline + AC	
Cefpodoxime	
Azithromycine	
Lévofloxacine	

Choix d'un antibiotique

2. Preuves cliniques ?



Preuves cliniques

Antibiotics for acute maxillary sinusitis in adults (Review)

Ahovuo-Saloranta A, Rautakorpi UM, Borisenko OV, Liira H, Williams Jr JW, Mäkelä M



**THE COCHRANE
COLLABORATION®**

Cochrane Database of Systematic Reviews 2014, Issue 2. Art. No.: CD000243.

Preuves cliniques

Antibiotics compared to placebo for uncomplicated acute maxillary sinusitis

Patient or population: patients with uncomplicated acute maxillary sinusitis

Settings: primary care

Intervention: antibiotics: penicillin V, amoxicillin and azithromycin

Comparison: placebo

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of participants (studies)	Quality of the evidence (GRADE)	Comments
	Assumed risk	Corresponding risk				
	Placebo	Antibiotics				
Clinical failure rate Follow-up: 7 to 15 days	Failure defined as a lack of full recovery or improvement 136 per 1000	Failure defined as a lack of full recovery or improvement 90 per 1000 (64 to 128)	RR 0.66 (0.47 to 0.94)	1084 patients randomised and 1058 evaluated (5 studies ¹)	⊕⊕⊕○ moderate ²	Adverse effects ⁸ : antibiotics 8% to 59%; placebo 6% to 38%



NNT=22

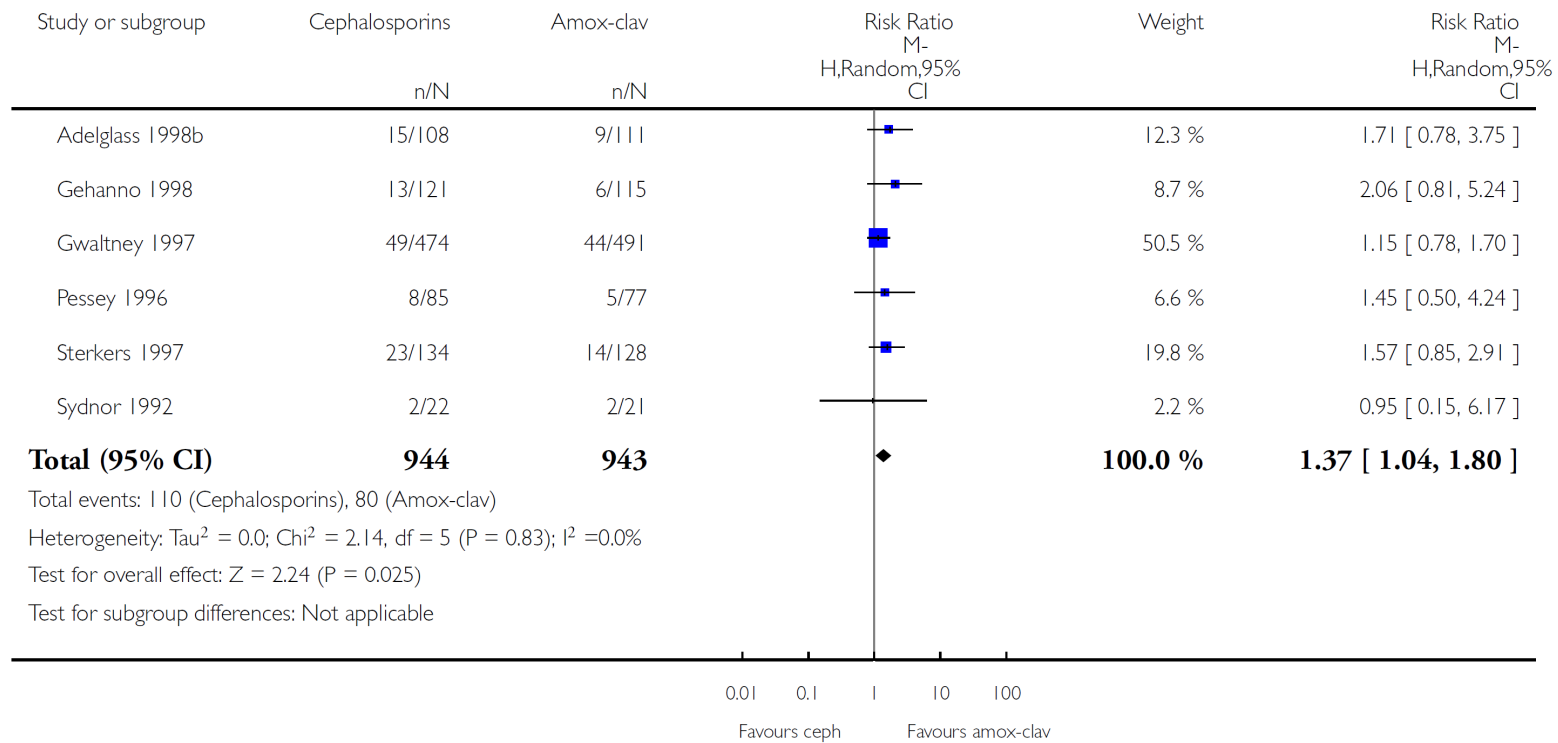
Preuves cliniques

Analysis 2.1. Comparison 2 Cephalosporin/macrolide versus amoxicillin-clavulanate, Outcome 1 Ceph versus amox-clav; clinical failure defined as a lack of full recovery or improvement at 7 to 15 days of follow-up.

Review: Antibiotics for acute maxillary sinusitis in adults

Comparison: 2 Cephalosporin/macrolide versus amoxicillin-clavulanate

Outcome: 1 Ceph versus amox-clav; clinical failure defined as a lack of full recovery or improvement at 7 to 15 days of follow-up

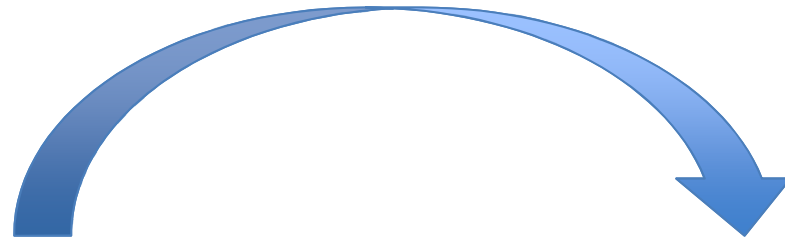


Choix de l'antibiotique

	2. Preuves cliniques
Amoxicilline	
Amoxicilline + AC	
Cefpodoxime	
Azithromycine	
Lévofloxacine	

Choix d'un antibiotique

3. Effets indésirables ?



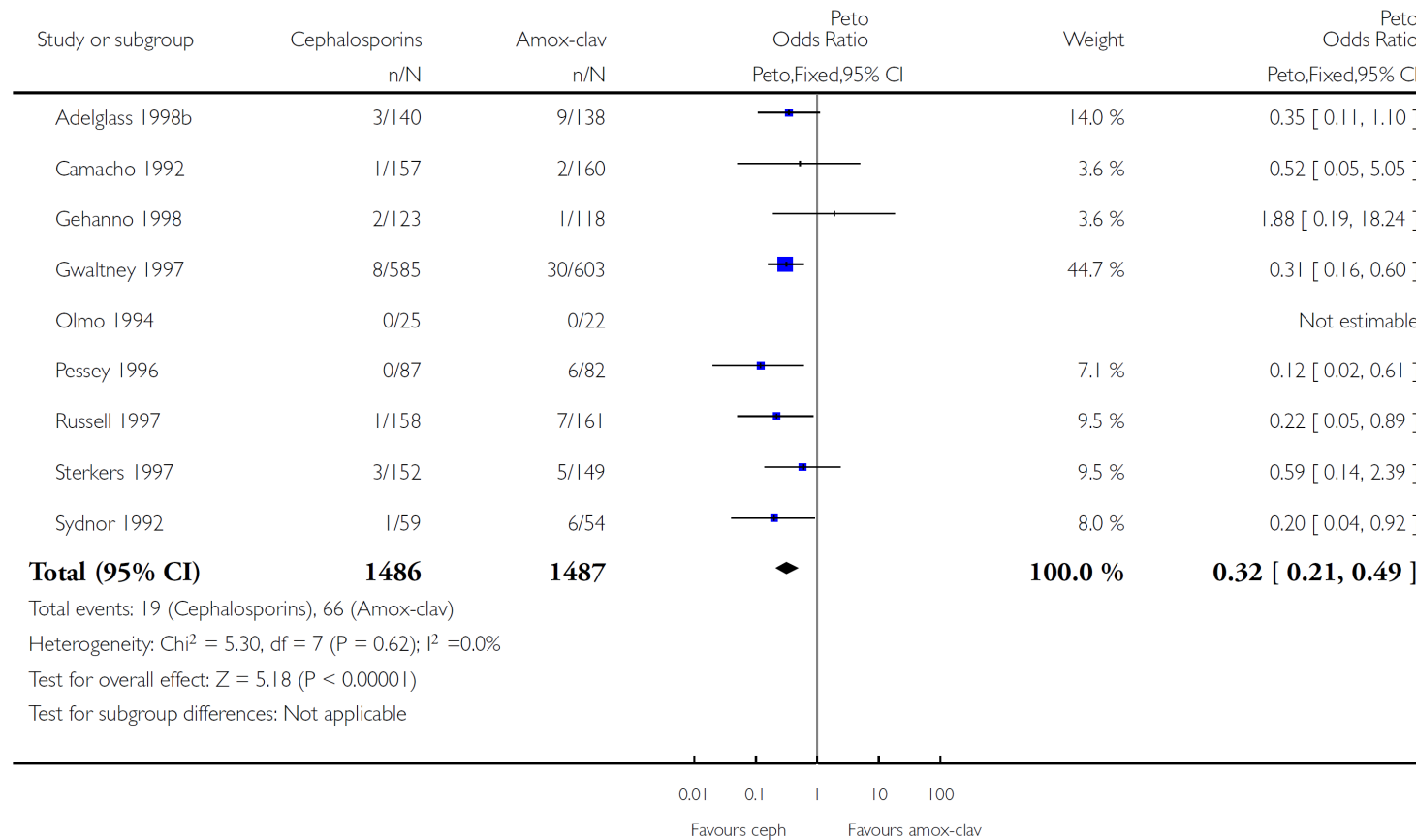
Preuves cliniques

Analysis 2.3. Comparison 2 Cephalosporin/macrolide versus amoxicillin-clavulanate, Outcome 3 Drop-outs due to adverse effects (cephalosporins).

Review: Antibiotics for acute maxillary sinusitis in adults

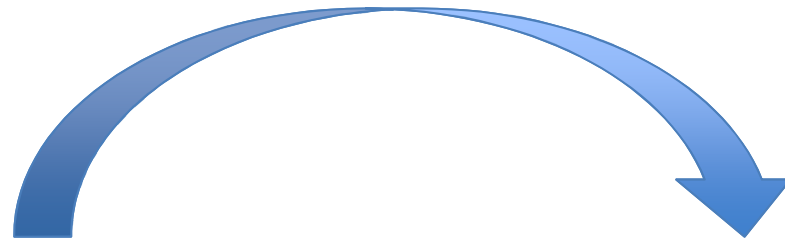
Comparison: 2 Cephalosporin/macrolide versus amoxicillin-clavulanate

Outcome: 3 Drop-outs due to adverse effects (cephalosporins)



Choix d'un antibiotique

3. Effets indésirables ?



Arguments pharmacologiques

- **Lequel ?**

- Amoxicilline + acide clavulanique oral**

- Azithromycine orale**

- Cefpodoxime orale**

- Lévofloxacine orale**

- Amoxicilline orale**

- **Terrain**

- 63 ans

- HTA équilibrée sous énalapril

- Hypercholestérolémie sous simvastatine

- Syndrome anxio-dépressif sous paroxétine

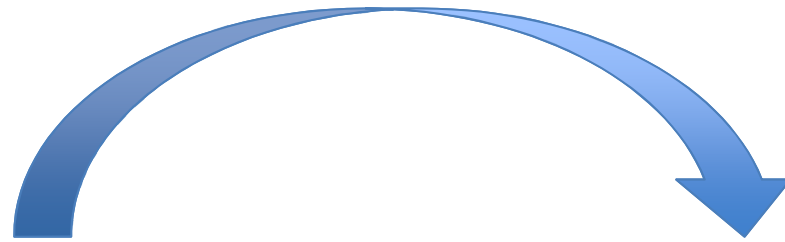
- Hypertrophie bénigne de la prostate

Choix de l'antibiotique

	3. Effets indésirables
Amoxicilline	Yellow
Amoxicilline + AC	Red
Cefpodoxime	Yellow
Azithromycine	Red
Lévofloxacine	Yellow

Choix d'un antibiotique

4. Dégâts collatéraux ?



Choix d'un antibiotique

4. Dégâts collatéraux ?



Choix de l'antibiotique

	4. Ecologie
Amoxicilline	
Amoxicilline + AC	
Cefpodoxime	
Azithromycine	
Lévofloxacine	

Choix de l'antibiotique

	1. Microbe	2. Preuves cliniques	3. Effets indésirables	4. Ecologie
Amoxicilline	Yellow	Yellow	Yellow	Yellow
Amoxicilline + AC	Green	Green	Red	Red
Cefpodoxime	Yellow	Yellow	Yellow	Red
Azithromycine	Red	Yellow	Red	Yellow
Lévofloxacine	Green	Yellow	Yellow	Red

Cas clinique

- **La date limite pour rendre son rapport approche.**
- **« Je veux des corticoïdes »**



Preuves cliniques

Systemic corticosteroids for acute sinusitis

Roderick P Venekamp¹, Matthew J Thompson², Gail Hayward³, Carl J Heneghan³, Chris B Del Mar⁴, Rafael Perera³, Paul P Glasziou⁴, Maroeska M Rovers⁵



Cochrane Database of Systematic Reviews 2014, Issue 3. Art. No.: CD008115.

Preuves cliniques


Oral corticosteroids versus placebo or NSAID for acute sinusitis

Patient or population: patients with acute sinusitis

Settings: primary and secondary care

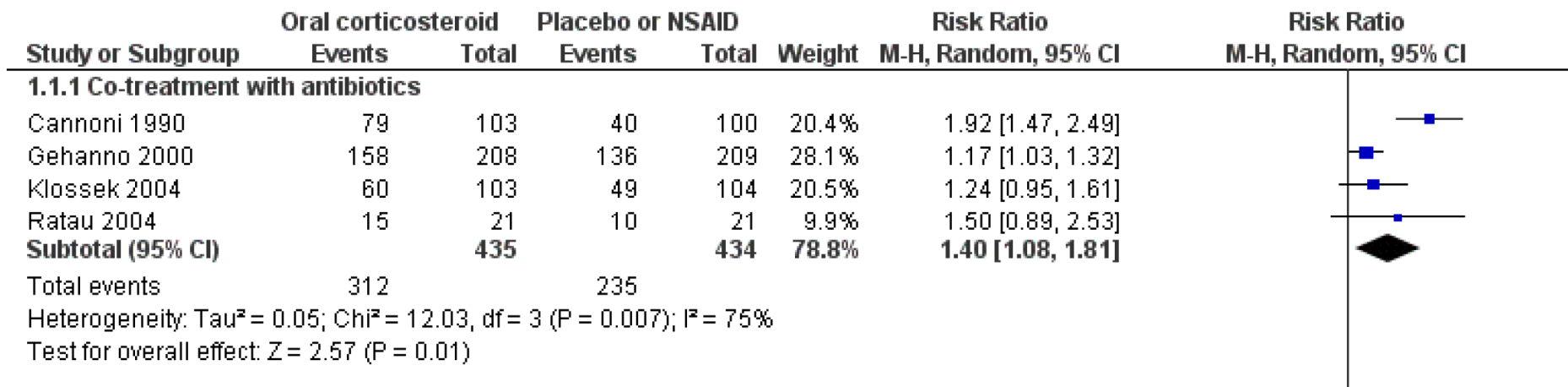
Intervention: oral corticosteroids versus placebo or NSAID

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of participants (studies)	Quality of the evidence (GRADE)
	Assumed risk	Corresponding risk			
	Control	Oral corticosteroids versus placebo or NSAID			
Proportion of patients with resolution or improved symptoms at days 3 to 7 - Co-treatment with antibiotics	Study population 541 per 1000	758 per 1000 (585 to 980)	RR 1.40 (1.08 to 1.81)	869 (4 studies)	⊕⊕○○ low ^{2,3}


NNT=5

Preuves cliniques

Figure 3. Forest plot of comparison: I Oral corticosteroids versus placebo or NSAID, outcome: I.1 Proportion of patients with resolution or improved symptoms at days 3 to 7.



Preuves cliniques

Oral corticosteroids versus placebo or NSAID for acute sinusitis

Patient or population: patients with acute sinusitis

Settings: primary and secondary care

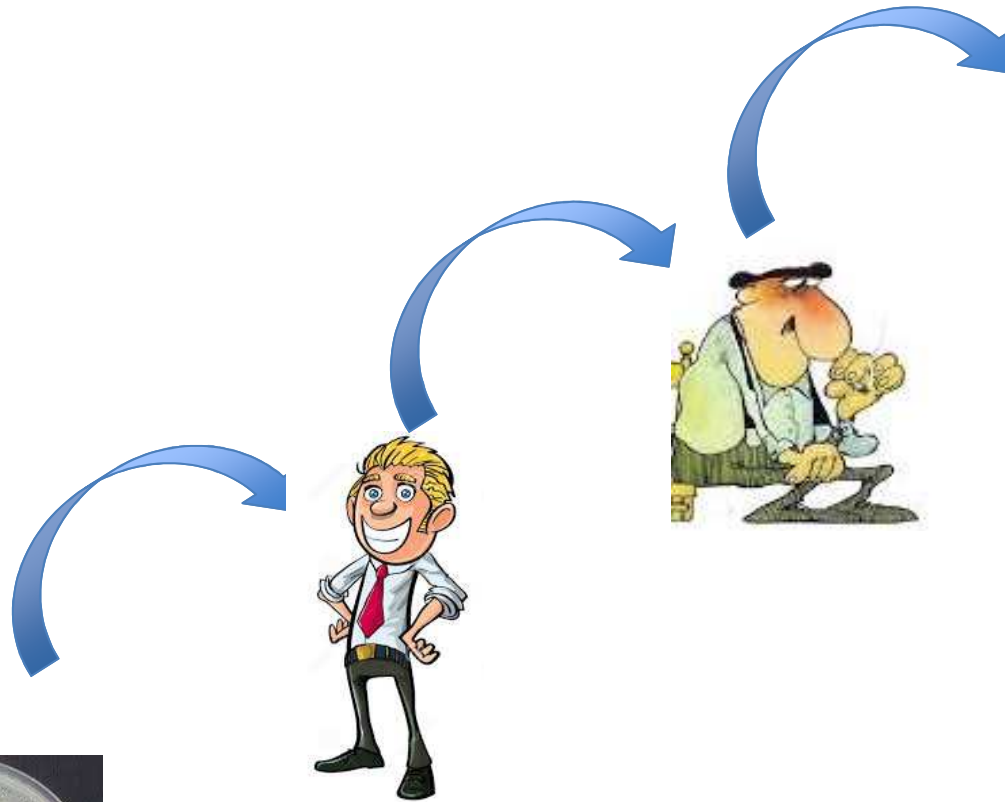
Intervention: oral corticosteroids versus placebo or NSAID

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of participants (studies)	Quality of the evidence (GRADE)
	Assumed risk	Corresponding risk			
	Control	Oral corticosteroids versus placebo or NSAID			
Proportion of patients with resolution or improved symptoms at days 3 to 7 - Co-treatment with antibiotics	Study population 541 per 1000	758 per 1000 (585 to 980)	RR 1.40 (1.08 to 1.81)	869 (4 studies)	⊕⊕○○ low ^{2,3}



NNT=5

Take-homme messages : choix d'un antibiotique



Take-homme messages : sinusite maxillaire aiguë non-complicquée

- **Viral dans l'immense majorité des cas**
 - Antalgique => paracétamol
 - Si échec : antibiotique
 - amoxicilline
 - puis [amoxicilline + AC] ou lévofloxacine
 - Intérêt discutable des corticoïdes en plus
- **Si foyer dentaire, immunodépression ou non maxillaire**
 - Antibiotique d'emblée : amoxicilline + acide clavulanique



Corticoïdes en monotherapie

CMAJ

RESEARCH

Systemic corticosteroid monotherapy for clinically diagnosed acute rhinosinusitis: a randomized controlled trial

Roderick P. Venekamp MD PhD, Marc J.M. Bonten MD PhD, Maroeska M. Rovers PhD,
Theo J.M. Verheij MD PhD, Alfred P.E. Sachs MD PhD

CMAJ, October 2, 2012, 184(14)

Table 4: Adverse events reported during the study*

Adverse event	Group; no. of patients		<i>p</i> value†
	Prednisolone <i>n</i> = 88	Placebo <i>n</i> = 86	
First week			
Gastric complaint	11/86	8/84	0.5
Diarrhea	14/86	10/85	0.4
Increased appetite	14/86	7/84	0.1
Mood disturbance	13/83	15/85	0.7
Sleep disturbance	24/85	28/86	0.5
Second week			
Gastric complaint	7/88	5/85	0.6
Diarrhea	12/87	8/86	0.4
Increased appetite	8/87	3/85	0.1
Mood disturbance	9/88	11/84	0.6
Sleep disturbance	12/87	15/85	0.5

*Two serious adverse events not related to drug use were reported: 1 hospital admission for anemia on day 49 of the study in the placebo group and 1 hospital admission for wasp sting-induced anaphylaxis on day 28 of the study in the prednisolone group.
† χ^2 test.

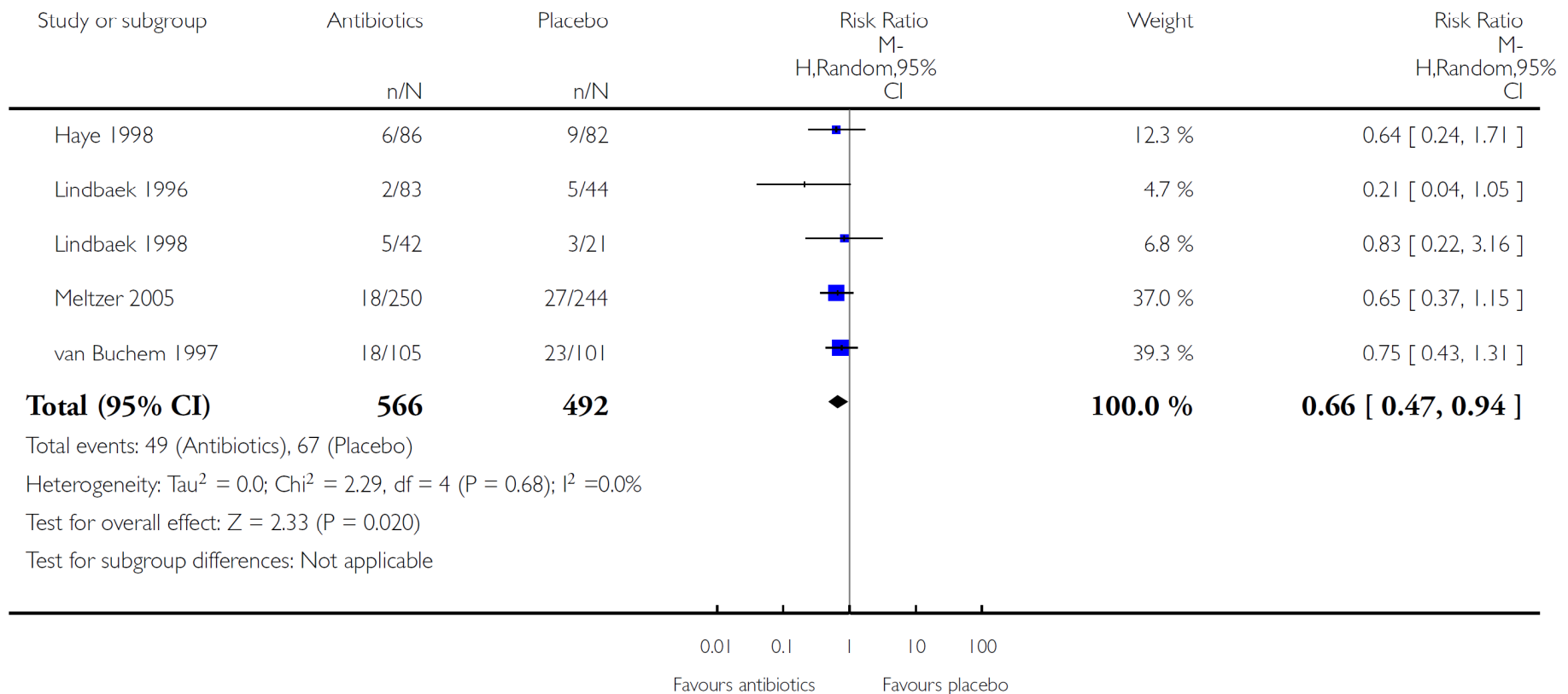
Preuves cliniques

Analysis 1.1. Comparison 1 Antibiotics versus placebo, Outcome 1 Clinical failure defined as a lack of full recovery or improvement at 7 to 15 days of follow-up.

Review: Antibiotics for acute maxillary sinusitis in adults

Comparison: 1 Antibiotics versus placebo

Outcome: 1 Clinical failure defined as a lack of full recovery or improvement at 7 to 15 days of follow-up



Preuves cliniques

Antibiotics compared to other antibiotics for uncomplicated acute maxillary sinusitis

Patient or population: patients with uncomplicated acute maxillary sinusitis

Settings: primary care

Comparisons: non-penicillin antibiotic versus beta-lactamase sensitive penicillins (n = 8), non-tetracycline versus tetracycline (n = 5, of which one study was also included in the comparison of non-penicillin antibiotic versus beta-lactamase sensitive penicillins), macrolides versus amoxicillin-clavulanate (n = 11), cephalosporins versus amoxicillin-clavulanate (n = 10) and miscellaneous comparisons (n = 21)

Outcomes	Impact	No of participants (studies)	Quality of the evidence (GRADE)	Comments
Clinical failure rate (failure defined as a lack of full recovery or improvement or a lack of full recovery) Follow-ups: 7 to 15 days and 16 to 60 days	No difference in failure rates	54 studies representing 10 different comparisons ₁	⊕⊕⊕○ moderate ²	Adverse effects³

Preuves cliniques

Figure 2. Funnel plot of comparison: I Oral corticosteroids versus placebo or NSAID, outcome: I.I Proportion of patients with resolution or improved symptoms at days 3 to 7.

