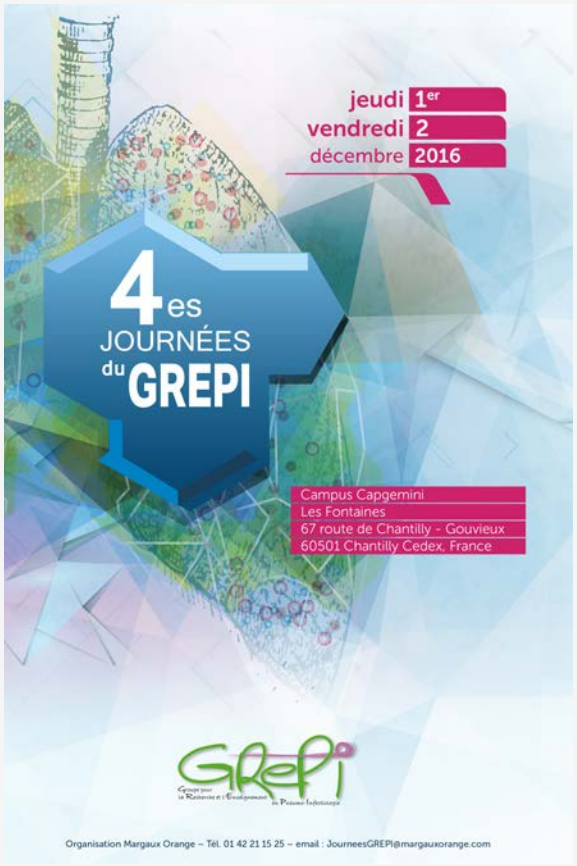


Session communautaire : Les nouveautés de 2016

Dr Damien BASILLE

basille.damien@chu-amiens.fr

02/12/2016 - Chantilly

CHU AMIENS PICARDIE

Liens d'intérêts

- **Aucun en rapport avec cette présentation**

Le point sur la corticothérapie (1)

Efficacy and Safety of Corticosteroids for Community-Acquired Pneumonia

A Systematic Review and Meta-Analysis

You-Dong Wan, MD; Tong-Wen Sun, MD, PhD; Zi-Qi Liu, MD; Shu-Guang Zhang, MD; Le-Xin Wang, MD, PhD; and Quan-Cheng Kan, MD, PhD

CHEST 2016; 149(1):209-219

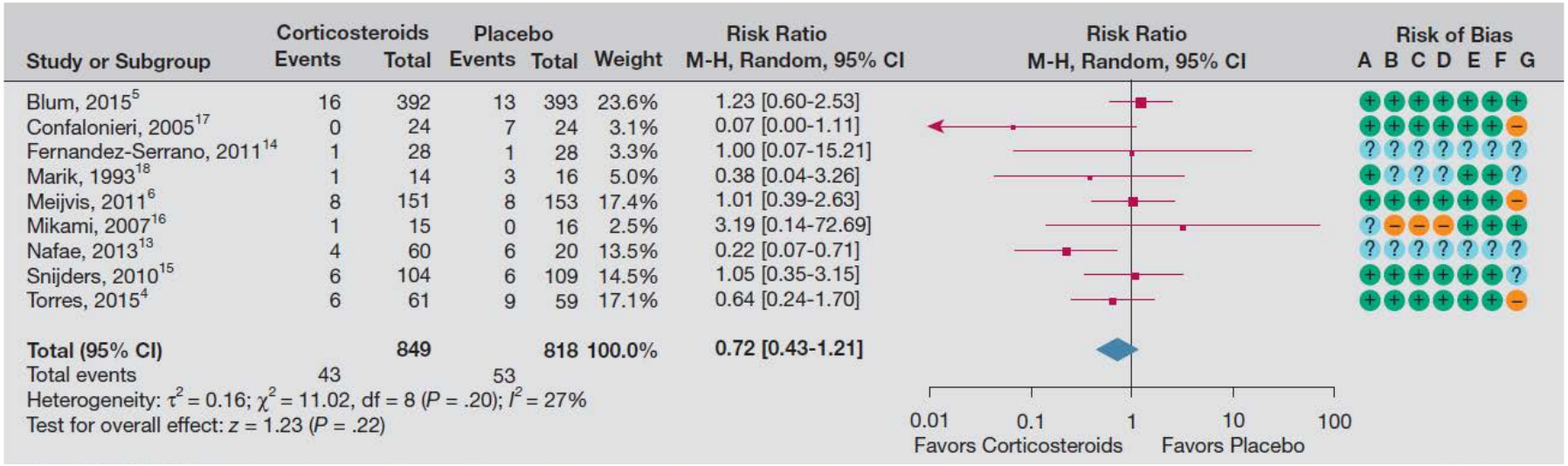


Figure 1 – *Mortality of patients with CAP according to treatment arm. The sizes of the squares denoting the point estimate in each study are proportional to the weight of the study. The diamonds represent the overall findings in each plot. For all study names, see the cited references. CAP = community-acquired pneumonia; M-H = Mantel-Haenszel.*

- **Autres résultats (sous-groupes)**
  - Intérêt d'une dose de charge / dose cumulée > 300mg eq. Pred.
  - CAP sévères : puissance insuffisante pour démontrer un bénéfice

Le point sur la corticothérapie (2)

Pathogen- and antibiotic-specific effects of prednisone in community-acquired pneumonia

Sebastian A. Wirz[1,7], Claudine A. Blum[2,3,7], Philipp Schuetz[3], Werner C. Albrich[4], Christoph Noppen[5], Beat Mueller[6], Mirjam Christ-Crain[2,7] and Philip E. Tarr[1,7] for the STEP Study Group[8]

Eur Respir J 2016; 48: 1150–1159

- **Double aveugle RCT :**
  - 50 mg Pred / 7j ⇔ 1/1
  - 726 patients CAP

Rappel

	Prednisone (n=392)	Placebo (n=393)	Regression analysis	
www.thelancet.com Vol 385 April 18, 2015			HR, OR, or difference (95% CI)	p value
Primary endpoint				
Intention-to-treat: time to clinical stability, days	3·0 (2·5–3·4)	4·4 (4·0–5·0)	HR 1·33 (1·15 to 1·50)	<0·0001
Per-protocol: time to clinical stability, days	3·0 (2·5–3·2)	4·4 (4·0–5·0)	HR 1·35 (1·16 to 1·56)	<0·0001

TABLE 2 Days to clinical stability according to microbiological diagnosis, antimicrobial treatment group, and initial procalcitonin level

	Prednisone	Placebo	Adjusted hazard ratio (95% confidence interval)		Prednisone	Placebo	Adjusted hazard ratio (95% confidence interval)	Interaction p-value
Microbiological subgroup								
Any pathogen (prednisone n=108; placebo n=113)	3.4 (2.0–7.0)	4.4 (2.4–8.0)	1.36 (1.03–1.80)	All others (prednisone n=254; placebo n=251)	2.6 (1.9–5.0)	4.5 (2.2–8.0)	1.63 (1.36–1.96)	0.26
Bacterial (prednisone n=78; placebo n=87)	3 (1.5–7.0)	4 (2.4–9.0)	1.54 (1.11–2.14)	All others (prednisone n=258; placebo n=245)	3 (2.0–5.0)	4.5 (2.3–7.5)	1.46 (1.22–1.75)	1
Pneumococcal (prednisone n=53; placebo n=53)	3.4 (1.5–8.5)	3.6 (2.0–5.9)	1.28 (0.85–1.94)	All others (prednisone n=250; placebo n=268)	3.0 (2.0–5.3)	5 (2.5–8.3)	1.60 (1.33–1.91)	0.14
Respiratory virus (prednisone n=40; placebo n=35)	4 (3.0–6.6)	4.4 (2.4–7)	1.21 (0.74–1.98)	All others (prednisone n=174; placebo n=183)	3.0 (2.0–5.4)	4.5 (2.3–8.0)	1.52 (1.22–1.89)	0.40
Influenza virus (prednisone n=11; placebo n=13)	4.0 (1.4–7.0)	5.0 (3.0–10.4)	4.50 (1.17–17.25)	All others (prednisone n=203; placebo n=205)	3.0 (2.0–5.5)	4.4 (2.3–7.5)	1.45 (1.18–1.77)	0.91
Fever at inclusion								
Temperature ⩽37.8°C (prednisone n=226; placebo n=219)	2.5 (1.5–5.4)	4.0 (2.0–7.6)	1.27 (1.05–1.54)	Temperature >37.8°C (prednisone n=137; placebo n=144)	3.0 (2.0–5.5)	5.0 (3.0–8.4)	1.47 (1.15–1.86)	0.57

Antibiothérapie / PEC globale précoce (1)

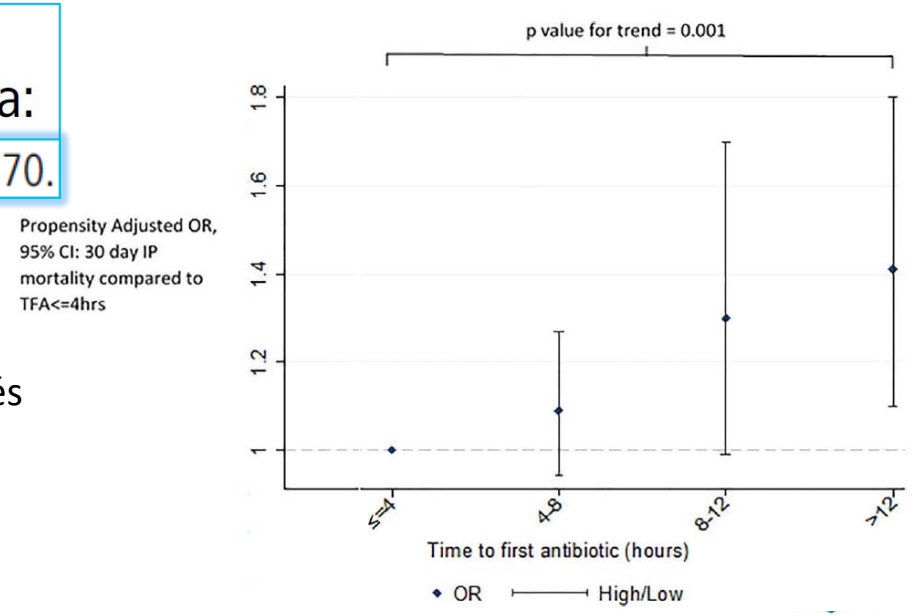
British Thoracic Society community-acquired pneumonia care bundle: results of a national implementation project *Thorax* 2016;**71**:288–290.

- **RxT < 4H / O2 / CURB-65 / ATB < 4H**
- **Mise en place progressive :**
  - 1% en 2012 / 20% en 2013

	CAP bundle (196)	No-CAP bundle (1152)	Adjusted OR	95%CI	P value
RxT < 4h	83,7	88,8	0,93	0,62-1,39	0,71
Evaluation O2	95,9	94,9	1,26	0,60-2,65	0,54
ATB < 4H	29,4	25	1,52	1,08-2,14	0,016
Mortalité J30	8,8	13,6	0,59	0,37-0,95	0,03

Time to first antibiotic and mortality in adults hospitalised with community-acquired pneumonia: a matched-propensity analysis *Thorax* 2016;**71**:568–570.

- **Étude observationnnelle**
- **ATB < 4h**
  - Plus jeune, plus sévère, COPD, moins de comorbidités cardiovasculaire et rénales
  - Réanimation (7,4% *VS* 4,4%)
  - ATB IV (82% *VS* 64,9%)



Nouvelles techniques diagnostiques (1)

Comprehensive Molecular Testing for Respiratory Pathogens in Community-Acquired Pneumonia

Clinical Infectious Diseases® 2016;62(7):817–23

Naomi J. Gadsby,[1] Clark D. Russell,[1,2] Martin P. McHugh,[1] Harriet Mark,[1] Andrew Conway Morris,[3] Ian F. Laurenson,[1] Adam T. Hill,[4] and Kate E. Templeton[1]

Table 1. Characteristics of Included Patients With Community-Acquired Pneumonia (n = 323)

Demographics	N (%)
Male (%)	177 (54.8)
Age, median (interquartile range) years	67, 51–78
Age ≥65 y (%)	182 (56.3)
Age ≥75 y (%)	111 (34.4)
Pneumonia severity index class[c]	
1	46 (21.2)
2	9 (4.2)
3	18 (8.3)
4	78 (35.9)
5	66 (30.4)
Admission C-reactive protein, mg/L (interquartile range)[d]	149.9 (43–246.5)
Antimicrobial administration	
Received antimicrobials in the 72 h prior to sputum sampling[b]	268 (84.8)
Outcome	
Intensive care unit admission	40 (12.4)
Intubation and ventilation	24 (7.4)
Vasopressor requirement	19 (5.9)
Total 30-day mortality	20 (6.2)

- **Intérêt décroissance ATB avec identification : limité à 30-40%**
- **Diagnostic moléculaire 26 pathogènes (virus + bactérie)**
  - PNP prouvée radio + expectoration purulente
  - Comparé à ECBC => 39%
  - Impact estimé sur la prescription ATB

Nouvelles techniques diagnostiques (2)

Comprehensive Molecular Testing for Respiratory Pathogens in Community-Acquired Pneumonia

Clinical Infectious Diseases® 2016;62(7):817–23

Naomi J. Gadsby,[1] Clark D. Russell,[1,2] Martin P. McHugh,[1] Harriet Mark,[1] Andrew Conway Morris,[3] Ian F. Laurenson,[1] Adam T. Hill,[4] and Kate E. Templeton[1]

Table 2. Pathogen Detection in Patients With Community-Acquired Pneumonia Using Molecular Methods (n = 323)

Pathogen	N (%)
Bacteria	
Any bacteria	262 (81.1)
With ≥10^5 CFU/mL cutoff where quantified	231 (71.5)
Haemophilus influenzae	130 (40.2)
Streptococcus pneumoniae	115 (35.6)
Moraxella catarrhalis	44 (13.6)
Escherichia coli	37 (11.5)
Staphylococcus aureus	33 (10.2)
Virus	
Any virus	98 (30.3)
Rhinovirus	41 (12.7)
Influenza	23 (7.1)
A	16 (5.0)
B	7 (2.2)
Any pathogen[a]	280 (86.7)
With ≥10^5 CFU/mL cutoff for bacteria where quantified	263 (81.1)
Codétection Virus+ bactérie	80 (25%)

- **Avantages**
  - 1 jour ouvré
  - Peu d'impact de l'ATB préalable

Table 3. Estimated Potential Impact of Comprehensive Molecular Testing on Antimicrobial Prescribing in Patients With Community-Acquired Pneumonia (n = 320)

Potential Modification	Antibiotic Agent	N (%)
De-escalation		247 (77.2)
Escalation		19 (5.9)
No change		54 (16.9)

- **Limites**
  - Seuil 10^5 CFU/ml
  - PNP prouvées +++

Durée de l'antibiothérapie (1)

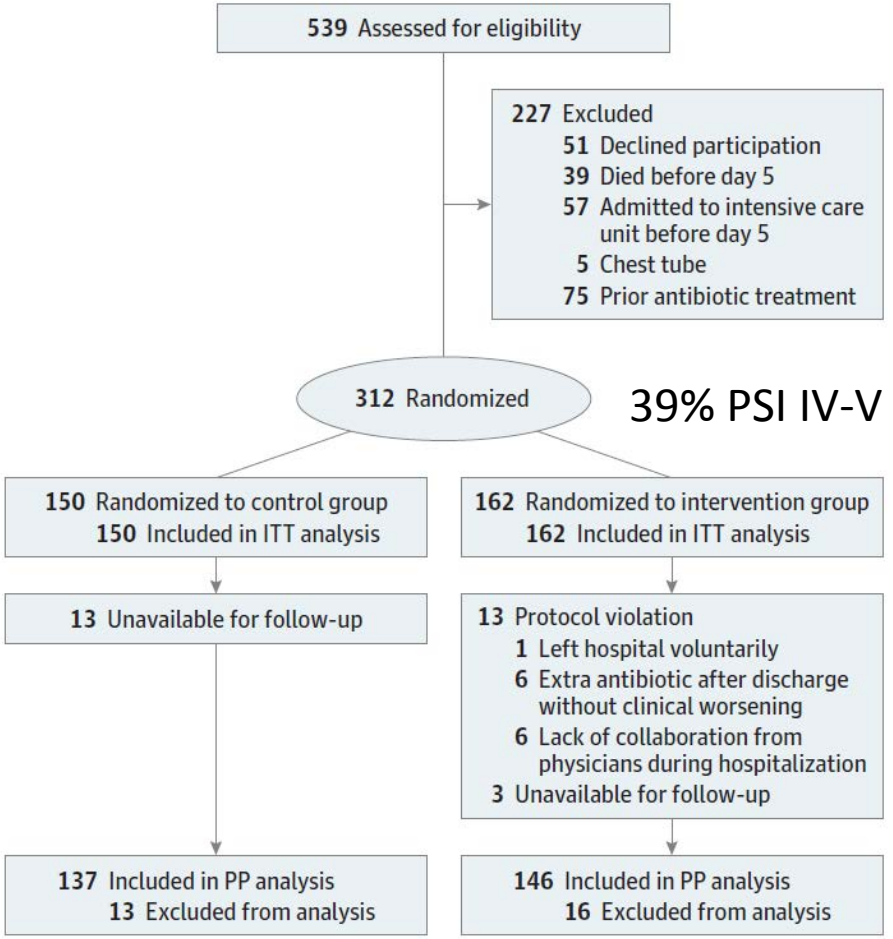
JAMA Internal Medicine | Original Investigation | LESS IS MORE

Duration of Antibiotic Treatment in Community-Acquired Pneumonia

JAMA Intern Med. 2016;176(9):1257-1265.

- **↘ Résistances, ↘ effets secondaires, ↗ adhérences, ↘ coûts**
- **RCT 4 centres en Espagne :**
  - Intervention : ↕ J5 selon clinique / Contrôle : ↕ selon clinicien
  - Critère 1[al] : Taux de succès J10 – J30
  - Stratification sur PSI / type ATB

Figure. Study Flow Diagram



Durée de l'antibiothérapie (2)

JAMA Internal Medicine | Original Investigation | LESS IS MORE

Duration of Antibiotic Treatment in Community-Acquired Pneumonia

JAMA Intern Med. 2016;176(9):1257-1265.

Table 2. Results for the Primary Study Outcomes

Outcome	Control Group	Intervention Group	*P* Value
Intent-to-Treat Analysis			
Total No. of participants	150	162	
Clinical success, No. (%)[a]			
At day 10	71 (48.6)	90 (56.3)	.18
At day 30	132 (88.6)	147 (91.9)	.33

Table 3. Clinical Success Rates at Days 10 and 30 Among Different Severity Groups Defined by PSI Class[a]

	No. (%) of Participants		
PSI Class	Control Group	Intervention Group	*P* Value
Clinical Success at Day 10			
PSI classes I-III			
Intent to treat	41/86 (47.7)	58/101 (57.4)	.18
Per protocol	39/80 (48.8)	58/94 (61.7)	.09
PSI classes IV-V			
Intent to treat	30/60 (50)	32/59 (54.2)	.64
Per protocol	28/53 (52.8)	28/50 (56)	.75

Table 4. Results for Secondary Study Outcomes in the Per-Protocol Analysis[a]

Outcome	Control Group (n = 137)	Intervention Group (n = 146)	*P* Value
Time, median (IQR), d			
Taking antibiotics	10 (10-11)	5 (5-6.5)	<.001
30-d Mortality	3 (2.2)	3 (2.1)	>.99
Recurrence by day 30	6 (4.4)	4 (2.8)	.53
Length of hospital stay, mean (SD), d	5.5 (2.3)	5.7 (2.8)	.69

Durée de l'antibiothérapie (3)

JAMA Internal Medicine | Original Investigation | LESS IS MORE

Duration of Antibiotic Treatment in Community-Acquired Pneumonia

JAMA Intern Med. 2016;176(9):1257-1265.

- **Hors réa, ID, ATB récent (<30 days), institution**

- **Non conforme aux recommandations françaises :**
  - **80% de Quinolones**
  - 8% β-lactamine + macrolide
  - 12% β-lactamine

  } Pas d'impact du type d'ATB

- **Transposable à la situation française?**
  - NCT01963442 : Short Duration Treatment of Non-severe Community Acquired Pneumonia

Autres lectures intéressantes

Beta-lactam plus macrolides or beta-lactam alone for community-acquired pneumonia: A systematic review and meta-analysis

Respirology (2016) **21**, 1193–1200

- "the favourable impact of adding macrolide to beta-lactam was limited to severe cases."

SOLITAIRE-IV: A Randomized, Double-Blind, Multicenter Study Comparing the Efficacy and Safety of Intravenous-to-Oral Solithromycin to Intravenous-to-Oral Moxifloxacin for Treatment of Community-Acquired Bacterial Pneumonia

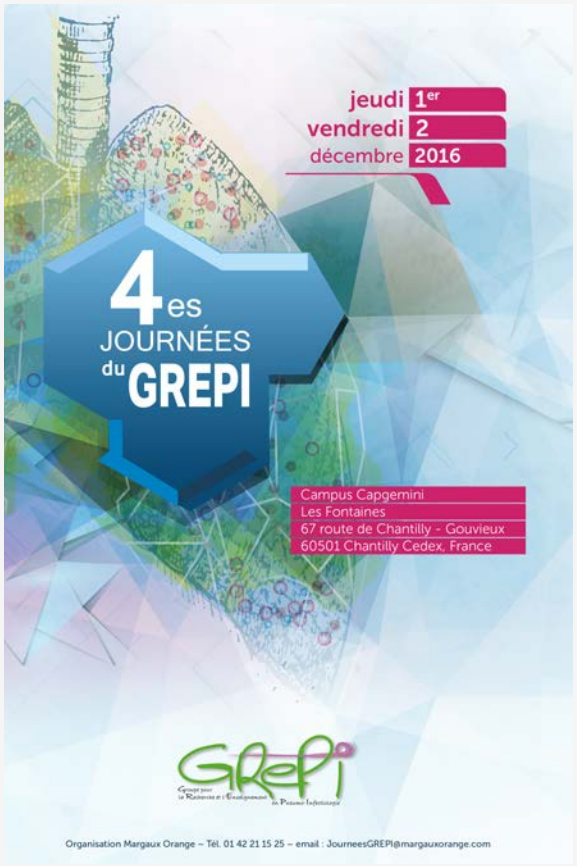
Clinical Infectious Diseases® 2016;63(8):1007–16

- "Intravenous-to-oral solithromycin was noninferior to intravenous-to-oral moxifloxacin. Solithromycin has potential to provide an intravenous and oral option for monotherapy for community-acquired bacterial pneumonia.."

Feasibility and Safety of Substituting Lung Ultrasonography for Chest Radiography When Diagnosing Pneumonia in Children

CHEST 2016; 150(1):131-138

- " There was a 38.8% reduction in CXR among investigational subjects …no cases of missed pneumonia among all study participants."



Merci de votre atention