Antibiotherapy for the hospitalized CAP

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Acknowledgments: António Diniz
Hospitalized CAP in Portugal

Total hospital admissions 2000-2009

CAP admissions / 1000 inhabitants 2000-2009

CAP in Adults – a 10-Year Retrospective Study in the Hospital Setting in Mainland Portugal
F Froes, A Diniz, M Mesquita, M Serrado, B Nunes (in press)
Hospitalized CAP in Portugal

admissions by gender and age

CAP in Adults – a 10-Year Retrospective Study in the Hospital Setting in Mainland Portugal
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Hospitalized CAP in Portugal

Global intra-hospital mortality ≈ 20%

4X

18-49 50-64 65-74 50+ 65+ 75+

Hospitalized CAP in Germany

New perspectives on community-acquired pneumonia in 388,406 patients. Results from a nationwide mandatory performance measurement programme in healthcare quality

S Ewig,1 N Birkner,2 R Strauss,3 E Schaefer,2 J Pauletzki,4 H Bischoff,5 P Schraeder,2 T Welte,7 G Hoeffken8


Figure 4  Distribution of in-hospital death proportions of patients hospitalised with community-acquired pneumonia according to age classes (total population in 2005 and 2006).
Antibiotherapy and Mortality

TREATMENT OF PNEUMONIA WITH 2-[(p-AMINOBENZENESULPHONAMIDO) PYRIDINE

By G. M. Evans, M.D. Birm., M.R.C.P. Lond.

AND

Wilfrid F. Gaisford, M.D., M.R.C.P. Lond.

Physicians to Dudley Road Hospital, Birmingham

Table I.—Case-mortality rate

<table>
<thead>
<tr>
<th>Age in years</th>
<th>8–19</th>
<th>20–29</th>
<th>30–39</th>
<th>40–49</th>
<th>50–59</th>
<th>60 and over</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases</td>
<td>31</td>
<td>20</td>
<td>18</td>
<td>13</td>
<td>13</td>
<td>5</td>
<td>100</td>
</tr>
<tr>
<td>Deaths</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONTROL CASES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases</td>
</tr>
<tr>
<td>Deaths</td>
</tr>
</tbody>
</table>

8% mortality with antibiotics
Antibiotherapy in CAP

Differences?
Antibiotherapy in Portugal (2003)

Inpatients

Ward

- β-lactamic + macrolide or fluoroquinolone

Alternative
- β-lactamic + Doxicicline
Antibiotherapy in USA (2007)

Inpatient

Ward

β-lactamic + macrolide or fluoroquinolone

Alternative:
- Ertapenem* + macrolide
- β-lactamic + Doxicicline

Ertapenem:
- anaerobes
- DRSP
- enterobacteriacea (including ESBL producers)
Antibiotherapy in UK (2009)

Inpatient

Ward

CURB65 = 0-1

- Amoxiciline
  - Alternative: Doxicicline, Clarithromycine

CURB65 = 2

- Amoxiciline + Clarithromycine
  - Alternative: Doxicicline, Levofloxacin, Moxifloxacin
Antibiotherapy in UK (2009)

Inpatient

Ward / ICU

CURB65 \( >= 3-5 \)

Co-amoxiclav + Clarithromycine

Alternative:
- Benzilpeniciline + (levofloxacin or ciprofloxacin)
  or
- Cefuroxime or Cefotaxime or Ceftriaxone + Clarithromycine
Antibiotherapy in Spain (2010)

Inpatient

Ward

- Cefalosporine 3ª + macrolide
  - or
  - Co-amoxiclav + macrolide
  - or
  - Levofloxacin

1 Cefotaxime or Ceftriaxone
2 Azithromycine or Clarithromycine
Antibiotherapy in CAP

Differences?

- more similarities than differences (even ICU)
- why different outcomes?
Born Equal?

1236 patients
median age: 70 years old
treatment failure: 16%
mortality: 7,1%
with TF: 17,3%
CURB-65 >=4: 50%
antibiotics!!!!!
The greatest opportunity to improve outcomes for patients over the next quarter century will probably come not from discovering new treatments but from learning how to deliver existing effective therapies.

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Dynamic process with multiple variables:

- patient
- disease
- organization
- treatment (antibiotics)
Management of CAP

Dynamic process with multiple variables:
- patient
- disease
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Process of care

Patient
Disease
Drugs
Management of CAP: Prevention

Hospitalizations for CAP and Incidence ILI by week (2000 – 2009)

F Froes, A Diniz, M Mesquita, M Serrado, B Nunes (in press)
Management of CAP

Dynamic process with multiple variables:
- Patient
- Disease
- Organization
- Treatment (antibiotics)

HEALTH PROMOTION
PREVENTION

“Drugs”

17° Infection and Sepsis Symposium

PRESERVE THE ANTIBIOTICS AND THE FUTURE