Evidence-based Medicine

Tra ipotesi di lavoro ed applicazione

Ferrara, 29-30 settembre 2000

Sessione Clinica

Evidence-based Clinical Problem Solving

3. Pneumologia

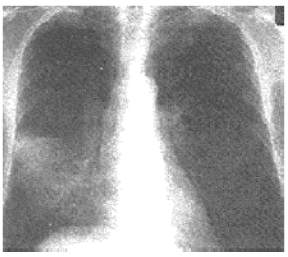
Scenario Clinico (1)

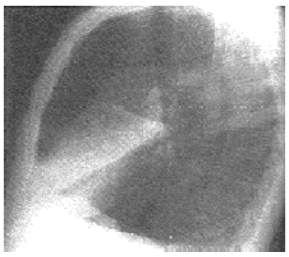
• Gustavo è un ex dirigente d'impresa di 66 anni, con storia d'ipertensione arteriosa trattata con nifedipina. Fuma sigari

• Da due giorni presenta febbre elevata (sino a 40 °C), che non è sensibile al paracetamolo.

• All'esame obiettivo: murmure vescicolare normotrasmesso, crepitazioni in campo medio dx. Toni cardiaci validi, ritmici, pause libere. Non edemi declivi. Non segni di TVP

• Rx torace: esteso focolaio broncopolmonare del lobo medio di dx. Non segni di versamento pleurico





Scenario Clinico (2)

• In considerazione delle buone condizioni generali, assenza di fattori di rischio - score di Fine 81 (Classe III) - assenza di insufficienza respiratoria, il paziente viene inviato in Day Hospital.

• Inizia terapia antibiotica (ceftriaxone 1gr IM + claritromicina 500 mg 1 cpr x 2) e sfebbra dopo tre giorni di trattamento.

• Sierologie per Legionella, Mycoplasma e Chlamydia negative

Scenario Clinico (3)

• In ottava giornata esegue controllo Rx: "detersione del parenchima polmonare in regione lobare media di dx per parziale risoluzione del grossolano addensamento segnalato".

• Sospende terapia antibiotica in 14° giornata, ed una Rx di controllo in 20° giornata mostra "ulteriore riduzione in estensione e densità dell'addensamento parenchimale in sede lobare media dx"

CLINICAL QUESTIONS

?

• Ritieni corretta la decisione di non ospedalizzare il paziente?

• Nella gestione domiciliare del paziente è sufficiente l'impiego di antibiotici per via orale ?

• Quale classe di antibiotici ritieni più appropriata?

- Beta-lattamici
- Cefalosporine
- Macrolidi
- Fluorochinolonici
- Nessuno dei precedenti
- Una variabile associazione dei precedenti

• Ritieni che l'applicazione di un percorso assistenziale (care pathway) per i pazienti con polmonite acquisita in comunità possa migliorare la qualità dell'assistenza e l'utilizzo delle risorse?

Fine MJ, Auble TE, et al.

A prediction rule to identify low-risk patients with community-acquired pneumonia

N Engl J Med 1997;336:243-50

Fine MJ, et al.
N Engl J Med 1997

TABLE 2. POINT SCORING SYSTEM FOR STEP 2 OF THE PREDICTION RULE FOR ASSIGNMENT TO RISK CLASSES II, III, IV, AND V.

CHARACTERISTIC	POINTS ASSIGNED*
Demographic factor	
Age	
Men	Age (yr)
Women	Age (yr) − 10
Nursing home resident	+10
Coexisting illnesses†	
Neoplastic disease	+30
Liver disease	+20
Congestive heart failure	+10
Cerebrovascular disease	+10
Renal disease	+10
Physical-examination findings	
Altered mental status‡	+20
Respiratory rate ≥30/min	+20
Systolic blood pressure <90 mm Hg	+20
Temperature <35°C or ≥40°C	+15
Pulse ≥125/min	+10
Laboratory and radiographic findings	
Arterial pH <7.35	+30
Blood urea nitrogen ≥30 mg/dl (11 mmol/liter)	+20
Sodium <130 mmol/liter	+20
Glucose ≥250 mg/dl (14 mmol/liter)	+10
Hematocrit <30%	+10
Partial pressure of arterial oxygen <60 mm Hg§	+10
Pleural effusion	+10

Fine MJ, et al.
N Engl J Med 1997

Table 4. Risk-class mortality rates.

Risk class	No. of points	Validation cohort		Recommended site of care
		No. of patients	Mortality, %	
I	—[a]	3034	0.1	Outpatient
II	≤70	5778	0.6	Outpatient
III	71–90	6790	2.8	Outpatient or brief inpatient
IV	91–130	13,104	8.2	Inpatient
V	>130	9333	29.2	Inpatient

[a] Absence of predictors.

Da Fine MJ, et al. (semplificata)
N Engl J Med 1997

Verheij T, Kochen M, Hoepelman IM, Lammers JW, Macfarlane J, Woodhead M.

Antibiotics for community acquired pneumonia in adult outpatients

(Protocol for a Cochrane Review)

The Cochrane Library, Issue 3, 2000. Oxford: Update Software.

Pomilla PV, Brown RB

Outpatient treatment of community-acquired pneumonia in adults

Arch Intern Med 1994;154:1793-802

• Etiologic diagnosis is helpful in determining appropriate outpatient treatment for community-acquired pneumonia, and usually requires only sputum Gram's stain analysis.

• Viral, mycoplasmal, and chlamydial agents are among the most common pathogens encountered in individuals treated as outpatients, although much variability exists.

• Many oral antibiotic trials for community- acquired pneumonia have been published, but shortcomings in study design limit their clinical applicability.

• A treatment algorithm is offered, using the best available data.

Pomilla PV, Arch Intern Med 1994

• Two RCTs found evidence that, in immunocompetent people admitted to hospital who were not suffering life threatening illness, intravenous antibiotics were no more effective than oral antibiotics and were associated with increased length of hospital stay.

• Intravenous antibiotics are needed in people who cannot take oral medication because of severe nausea or vomiting, or who are bacteraemic or in septicaemic shock.

Siegel RE, et al. Chest 1996;110:965–971.

Ramirez JA, et al. Infect Med 1997;14:319–323.

• A follow up study in 96 people admitted to hospital with community acquired pneumonia found that people could be switched from intravenous to oral antibiotics when they had been afebrile for 8 hours; symptoms of cough and shortness of breath were improving; white blood counts were returning to normal, and they could tolerate oral medication. [

Polmonite Acquisita in Comunità nell'Adulto

Linee Guida Pubblicate

• Infectious Diseases Society of America
Clinical Infectious Diseases 1998;26:811–38

• European Respiratory Society
Eur Respir J 1998;11:986-91

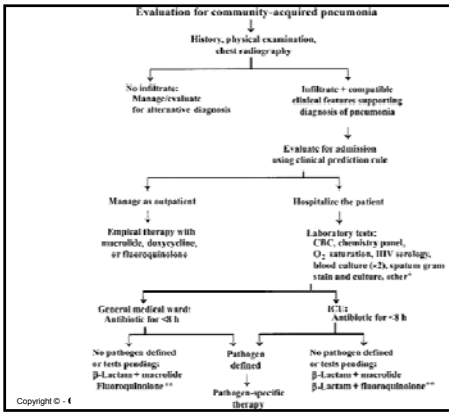
• American Thoracic Society
Am Rev Respir Dis 1993;148:1418-26.

• The British Thoracic Society
Br J Hosp Med 1993;49:346-50

Infectious Diseases Society of America

Practice Guidelines for the Management of Community-Acquired Pneumonia in Adults

Electronically published 7 September 2000



Marrie TJ, Lau CY, Wheeler SL, et al.

A controlled trial of a critical pathway for treatment of community-acquired pneumonia

JAMA 2000;283:749–755

• Multicentre trial with cluster randomisation involving nine teaching and 10 community hospitals in Canada.
It included 1743 people presenting to emergency rooms at participating hospitals.

• Intervention hospitals (n = 9) instituted a critical pathway for treating pneumonia consisting of:
- an admission guideline (Fine criteria)
- a guideline for switching from i.v to oral antibiotic therapy
- a discharge guideline
- treatment with the antibiotic levofloxacin.

• Treatment at control hospitals (n = 10) consisted of usual care.

Marrie TJ, et al JAMA 2000

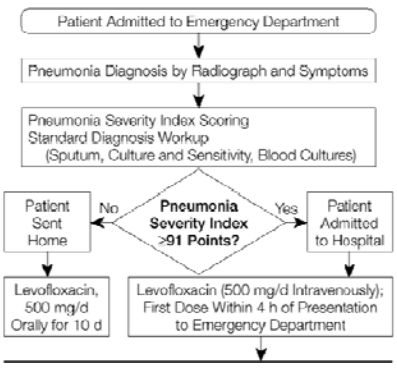
• The two groups did not significantly differ in quality of life, occurrence of complications, readmission, or mortality.

Intervention hospitals
- admitted fewer people at low risk
- used fewer bed days per person managed
- administered 1.7 fewer days of intravenous antibiotic therapy
- were more likely to use only one class of antibiotic

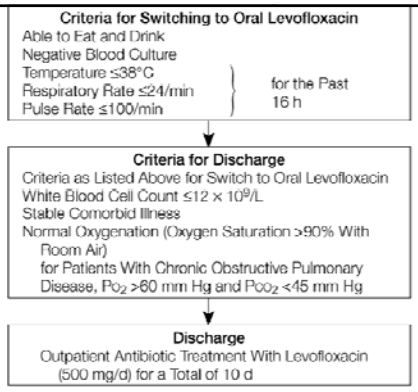
• Results are stronger because people admitted with the critical pathway were at higher risk

•The trial did not identify which components of the pathway were likely to be beneficial.

Marrie TJ, et al JAMA 2000



Marrie TJ, et al JAMA 2000



Marrie TJ, et al JAMA 2000

Metlay J P, Kapoor W N, Fine M J.

Does this patient have community-acquired pneumonia?
Diagnosing pneumonia by history and physical examination.

JAMA1997;278:1440-5

• There are no individual clinical findings or combinations of findings that can 'rule in' the diagnosis of pneumonia.

• If diagnostic certainty is required in the management of a patient with suspected pneumonia, the chest radiography should be performed.

Metlay JP, et al. JAMA, 1997