



1-antibiotic selection:

age; clinic ;imaging

age{<3months A, 3month-5yearsB,
>5yC}

A:viral,RSV,Influenza,para,human

metapneumovirus B:The same

C:Influenza,adeno,human

metapneumovirus

A:GBS, Gram neg bacill ,SP ,

Bordetella P , Chlamydia P

B:Strep P, MP, Staphy aureus , Group

A Strep ,H Inf Type B

C:MP, SP, S aureus, Group A Strep.

H Inf Type B

Guideline Criteria for Severe CAP

Patient Must Fulfill Either 1 Major Criterion or ≥ 3 Minor Criteria

Major criteria:

Respiratory failure requiring mechanical ventilation
 Septic shock requiring vasopressors

Minor criteria:

Confusion or disorientation
 Hypotension requiring aggressive fluid resuscitation
 Hypothermia (temperature $< 36^{\circ}\text{C}$)
 Respiratory rate ≥ 30 breaths/minute
 $\text{PaO}_2/\text{FiO}_2$ ratio ≤ 250
 Multilobar infiltrates
 Uremia (blood urea nitrogen level ≥ 20 mg/dL)
 Leukopenia (WBC count $< 4,000$ cells/mcL) due to infection and not another source, such as chemotherapy
 Thrombocytopenia (platelet count $< 100,000$ cells/mcL)

CAP: community-acquired pneumonia; FiO_2 : percentage of inspired oxygen; PaO_2 : partial pressure of oxygen.
 Source: References 4, 5.

Major: acute need for NIPPV {non
invasive positive pressure}

Hypoxemia

Minor: RR > WHO classification,
apnea, increased work of breathing
, effusion, comorbid,

unexpected metabolic acidosis

≥ 1 major or ≥ 2 minor

1-Choice antibiotic :dx is sever pneumonia , vancomycin and Ceftriaxone is the best option

2-WHO guidelines recommend reviewing treatment after 48 hours and changing antibiotics if there is no improvement, i.e. “slower breathing, less fever, eating better”.

treatment failure at 48 hours as :
worsening, compared to admission
findings, of one or more of these
clinical abnormalities: conscious level,
SaO₂ <90%; respiratory rate, or
temperature or no improvement in any
these clinical abnormalities; or a new
finding of: empyema, bacterial
meningitis, signs of shock or renal
impairment.

Case2:CXR

2-use of tetracycline (doxycycline or minocycline) and fluoroquinolones is considered for patients with M. pneumoniae infection who do not respond to macrolides.

Macrolide-resistant:

Mutations in the 23SRNA gene.
Asia >90%, in US and Canada the
rate of resistance varied from
3/5% to 13% of cases.

Disease onset is gradual, and pt can initially complain of headaches, malaise, and low-grade fever. A nagging cough is usually the most prominent respiratory feature. Chest soreness from coughing is common. Wheezing can also occur.

Pleural effusion occurs in 15% to 20% and may predict increased morbidity and mortality. Most cases of pneumonia are mild and self-limited. Extra pulmonary features may help suggest the diagnosis and include hemolysis, skin rash, joint pain, gastrointestinal (GI) symptoms, and heart disease. These occur in less than 5% to 10% of patients.

PCR can be done rapidly and is the test of choice. Testing for cold agglutinins can sometimes support a clinical diagnosis when a rapid diagnosis must be made. *M. pneumoniae* lacks a cell wall and is fastidious; therefore, gram stain and cultures are not useful for the diagnosis of these organisms

Gradual onset of symptoms combined with extra pulmonary involvement and a normal WBC count points to atypical pneumonia.

Treatment of *M. pneumoniae* includes macrolides, doxycycline, or fluoroquinolones. Azithromycin is the most frequently used antibiotic and is usually prescribed for 5 days. Patients receiving doxycycline or fluoroquinolones should be given 7 to 14 days. Macrolide resistance continues to emerge, so if a patient is not responding to macrolides, other antibiotics can be given

