

Lecture 3



Community acquired pneumonia

- Additional Notes
- Important
- Explanation
- Examples

Introduction

- Basic description: Infection of the lung caused by a bacterial organism that was acquired outside the hospital setting and often follows a viral upper respiratory tract infection.
- Clinically: a new opacity on chest radiography in the presence of respiratory symptoms
- Community-acquired pneumonia is further subdivided into typical and atypical.
- It's 3 types: “ Anatomy “
 - ✓ Lobar (Typical)
 - ✓ broncho-pneumonia (Atypical)
 - ✓ Interstitial
- Common in winter months
- It is the sixth leading cause of death in USA
- The risk factors are old age, asthma, smoking, alcoholism diseases and immunosuppression HIV,DM⁽¹⁾ (Chronic lung and heart in S.pneumoniae).

⁽¹⁾Diabetes mellitus

	Typical	Atypical "more common"
Symptoms	<ul style="list-style-type: none"> - Cough - Fever - Pain "stabbing-like pain" - Shortness of breath - chill 	<ul style="list-style-type: none"> - Flu-like illness - headache - Sore throat - Cough in later stages
Etiology	<ul style="list-style-type: none"> - <i>S. Pneumonia</i> (MC) - <i>H. Influenzae</i> - <i>M. catarrhal</i> 	<ul style="list-style-type: none"> - <i>Mycoplasma pneumoniae</i> - <i>chlamydophila pneumoniae</i> - Legionella - Viruses - Fungal
Radiology <u>"imp in Dx"</u>	Lobar infiltrate	Bronch-olaveolar infiltrate
Diagnosis	Gram Stain & Culture Sample is (Sputum)	serology test
Treatment	<ul style="list-style-type: none"> - Penicillin - Cephalosporin - Quinolone 	- <i>Macrolide</i> e.g. Erythromycin

- Diagnosis:

- ✓ History & physical examination
- ✓ Chest x-ray.
- ✓ Serology for *M.pneumoniae*,
- ✓ Electrolytes (↓Na in legionella)
- ✓ Sputum Gram stain
- ✓ Blood culture

- Treatment:

- ✓ Typical: Penicillin, Cephalosporin, Quinolone
- ✓ Atypical: Macrolide. "VERY important with any atypical organism" e.g. Erythromycin

- Complication:

- ✓ Death
- ✓ Respiratory and cardiac failure
- ✓ Empyema "collection of pus in the space between the lung and pleural space"



Lobar infiltrate

- Prevention:
 - ✓ Vaccination: H. Influenzae, S.pneumoniae
 - ✓ Prevention of Aspiration: Head Position, Teeth cleaning.
- Mycoplasma & Chlamydophila pneumoniae:
 - ✓ Flu-like illness.
 - ✓ Sore throat.
 - ✓ Chest X-ray: Bronchoalveolar infiltrate.
 - ✓ Diagnosed mainly serology.
 - ✓ Some of them are common in children.
 - ✓ Treatment: Macrolide.
- Legionella pneumophila: “found in water”
 - Commonly in patients in ICU
 - Hyponatraemia (↓Na)
 - High fever
 - Treatment: Erythromycin



Bronchoalveolar infiltrate

Quiz

1. What is the best sample for pneumonia diagnosis:
a. Sputum b. Urine c. Gastric wash

2. Which type of bacteria that causes pneumonia commonly in ICU patients?
a. Chlamidophila pneumonia b. Legionella pneumophila

3. Penicillin is the best treatment for any kind of atypical organism:
a. T b. F