

Pneumonia & Empyema

Clinical Diagnosis

Symptoms: dyspnea, cough, hemoptysis
Vitals: hypoxia, tachypnea, fever
Findings: leukocytosis, opacity, pleuritic pain

Treatment

*if suspecting viral cause or in a flu-season, consider procalcitonin for better antibiotic stewardship

- CAP – Azithromycin/Ceftriaxone (or Levofloxacin)
- HCAP / HAP / Ventilator – Vanc/Cefepime/Zosyn

Common Bacterial Causes

- Strep Pneumoniae
- Staph Aureus
- Haemophilus influenza
- Aspiration (GNR or anaerobes)
- Alcohol – Klebsiella
- HCAP – MRSA, pseudomonas
- Atypical
 - Mycoplasma
 - Legionella
 - Chlamydia

Complications

(consider CT imaging)

Pulmonary

- Organizing PNA (BOOP)
- Lung abscess
- ARDS

Pleural

- Parapneumonic effusion
- Empyema

Systemic

- Bacteremia
- Dissemination
- Septic Shock

Treatment

- BOOP – biopsy – stop antibiotics - give steroids.
- Abscess – drain
- ARDS – ventilator support

Thoracentesis

- **Light's criteria** will show exudate
 - Total Protein, LDH
- Parapneumonic effusion = no bacteria
- Empyema (abscess in pleural space)

Empyema

- CT finding - Loculated
- Gross pus during drainage
- +gram stain/culture
- pH < 7.2, glucose < 60

Treatment

- Parapneumonic effusion → Observe.
- Empyema
 - Drain with Chest tube
 - CT surgery (VATS, decortication)

Light's Criteria (exudate)

- Fluid:serum TP > 0.5
- Fluid:serum LDH > 0.6
- Fluid LDH > 2/3 upper limit normal

*Garg's
Simple Medicine*

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