

Community Acquired Pneumonia

1. Definition:
 - a. A lower respiratory tract infection occurring in a child who has not resided in a hospital or health care facility in the preceding 14 days
2. Signs and Symptoms:
 - a. Neonates
 - i. Nonspecific symptoms including poor feeding, hypotonia, floppiness, lethargy, apnea, temperature elevation or depression, and hypotension
 - b. Older children
 - i. Cough
 - ii. Fever
 - iii. Respiratory distress
 1. Tachypnea
 2. Increased work of breathing
 3. Hypoxemia
 4. Apnea
 - iv. Lung exam
 1. Decreased breath sounds
 2. Bronchial breath sounds (louder than normal, with short inspiratory and long expiratory phases, and higher-pitched during expiration), egophony (E to A change)
 3. Bronchophony (the distinct transmission of sounds such as the syllables of “ninety-nine”)
 4. Whispered pectoriloquy (transmission of whispered syllables)
 5. Tactile fremitus (eg, when the patient says “ninety-nine”)
 6. Dullness to percussion
3. Causes:
 - a. Birth-20 days
 - i. Group B Strep
 - ii. Gram negative enteric bacteria
 - b. 3 weeks-3 months
 - i. Streptococcus pneumoniae
 - c. 4 months-5 years
 - i. Viruses
 1. RSV
 - ii. Streptococcus pneumoniae
 - d. 5 years-adolescence
 - i. Streptococcus pneumoniae
 - ii. Mycoplasma pneumonia
 - iii. Chlamydia pneumoniae

4. Risk Factors:
 - a. History of recurrent respiratory infections during the previous year
 - b. History of wheezing episodes
 - c. History of otitis media
5. Complications:
 - a. Pulmonary
 - i. Pleural effusion or empyema
 - ii. Pneumothorax
 - iii. Lung abscess
 - iv. Bronchopleural fistula
 - v. Necrotizing pneumonia
 - vi. Acute respiratory failure
 - b. Metastatic
 - i. Meningitis
 - ii. Central nervous system abscess
 - iii. Pericarditis
 - iv. Endocarditis
 - v. Osteomyelitis
 - vi. Septic arthritis
 - c. Systemic
 - i. Systemic inflammatory response syndrome or sepsis
 - ii. Hemolytic uremic syndrome
6. Tests:
 - a. Chest X-ray
 - i. Initial
 - ii. Follow-up
 - b. Blood culture
 - c. Viral testing
 - d. Atypical bacteria testing
 - e. Ancillary testing
 - i. CBC
 - ii. ESR
 - iii. CRP
 - iv. Tracheal aspirate cultures
 - f. Pulse oximetry

7. Treatment:

- a. Based on age and suspected cause
- b. First line oral is usually high dose Amoxicillin
- c. First line IV is usually Ampicillin
- d. If thinking atypical bacteria then azithromycin PO/IV
- e. Consider Influenza antiviral therapy if indicated
- f. Duration
 - i. 10 days for antibiotics
 - ii. 5 days for antivirals

8. Prevention:

- a. Immunization
 - i. Pneumococcal, Hib, Pertussis, Influenza
- b. Hand washing