Empyema Care Guideline



Inclusion Criteria - Previously healthy children

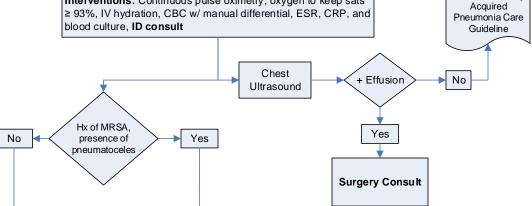
- Infants > 3 months of age
- Suggestion of clinically significant effusion on chest x-ray

Exclusion Criteria

- Infants < 3 months of age
- Sepsis/shock/multiple organ dysfunction syndrome (MODS)
- Pneumonia without effusion (use Community Acquired Pneumonia
- Toxic appearance, impending respiratory failure

Assessment: Respiratory status (increased rate for age, signs of increased work of breathing such as retractions or use of accessory muscles), O2 Saturations, vital signs, immunization status

Interventions: Continuous pulse oximetry, oxygen to keep sats ≥ 93%, IV hydration, CBC w/ manual differential, ESR, CRP, and blood culture, ID consult



Administer Ceftriaxone 50 mg/ kg IV q 12 hrs (Max: 2 gm q 12 hrs)

Administer Ceftriaxone 50 mg/kg IV q 12 hrs (Max: 2 gm q 12 hrs)

AND

Clindamycin 10 mg/kg IV q 6 hrs (Max: 600 mg/dose)

> Chest tube to suction, pleural fluid diagnostics

Chest

tube

vs VATS

VATS (videoscopicassisted thoracoscopy surgery) within 24 hrs of diagnosis

Imaging:

Chest CT with &

without contrast

Go to Community

Continued Considerations

- Saline lock IV once tolerating oral fluids
- Consider oral antibiotics based on culture results and clinical improvement

Discharge Criteria

- Stable for 24 hrs after chest tube removal
- Diet tolerated and adequately hydrated
- No supplemental O2 needed for at least 24 hrs; meets room air criteria*
- Follow-up care coordinated; home IV antibiotic therapy arranged if ordered

*Room Air Criteria

O2 sat ≥ 90% RR WNL for age Infants 30-60 Toddlers 24-46 Preschoolers 22-34 School age 16-30 Adolescents 16-20

Recommendations/ Considerations

- Empyema is the presence of pus in the pleural space
- The most common pathogens seen in empyema are S. pneumoniae. Staphylococcus aureus, and S. pyogenes, although some cases may be culture negative.
- Early VATS has been shown to decrease hospital length of stay
- Pleural fluid diagnostics should include: Gram stain & culture, LDH, total protein, pH, cell count, differential

American Thoracic Society Classifications of **Empyema**

Stage 1: Exudative

- · Accumulation of thin pleural fluid w/ few cells
- Pleura & lung are mobile

Stage 2: Fibropurulent

- · Infected pleural fluid consolidation & accumulation of fibrous material
- Formation of loculations
- Loss of lung mobility Stage 3: Organizing
- Thick fibrinous peel formation
- Lung entrapment

Patient/Family Education

 Handout: Complicated Pneumonia-Pleural Effusion and Empyema (located on PAWS Patient and Family Education)

Reassess the appropriateness of Care Guidelines as condition changes and 24 hrs after admission. This guideline is a tool to aid clinical decision making. It is not a standard of care. The physician should deviate from the guideline when clinical judgment so indicates.

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