Clinical Guideline

Complicated pneumonia

Pediatric Emergency, Acute Care and Critical Care Medicine

This guideline should not replace clinical judgment.

Please refer to Community-Acquired Pneumonia

guidelines for antibiotic regimen(s) Antibiotics: Ceftriaxone + Vancomycin

Identification of complicated pneumonia (pleural effusion, empyema) Consider: Pediatric Surgery consult; may also consider IR consult Pediatric Infectious Disease consult Pediatric Pulmonary consult to establish long term outpatient follow-up plan If small (approx. <1/4 thorax opacified): If moderate/large (approx. >1/4 to >1/2 thorax opacified) treat with abx and no surgical/procedural assess degree of respiratory compromise and clinical course intervention is indicated Discussion with Pediatric Surgery/IR, PID, medical team Reassess if responding to treatment about placement of chest tube and administration of fibrinolytics -Chest tube +Chest tube Continue medical management Placement of chest tube + fibrinolytics tPA = at time 0, 24 hours, and 48 hours (1 hour dwell time) If not improved/worsening Dose: 4mg tPA in 40mL sterile saline (regardless of patient weight for >3 months of age**) Discuss with Pediatric Surgery/PID Consider placement of chest tube + fibrinolytics vs. Daily CXR **VATS** If not improved/worsening If improving Daily CXR with chest tubes Daily CXR with chest tubes, pull if clear (if with whiteout or Discuss with Ped Surgery/PID If improving questionable imaging, get repeat If with persistent moderate-large effusions and ongoing US), no air leak, approx. <1mL/ respiratory compromise, continued fevers and leukocykg/24 hours drainage tosis despite management with chest tube and fibrinolytic Discuss with team that placed therapy (tPA x 3 doses), or any other clinical concerns: tube (Ped Surgery/PICU/IR) in Re-image with US, consider VATS and discuss other manregards to pulling chest tube agement options Consider chest CT if not improving or with worsening status Antibiotic therapy: discuss with Pediatric Infectious Disease Consider narrowing based on pathogen isolation/course of

**If <=3 months, discuss with pharmacy dose



improvement, duration 2-4 weeks

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Contraindications to chest tube, fibrinolytics:

**Consider/Recommend Heme/Onc consult if platelets are <100K or with family history of bleeding to evaluate for other contraindications

- Thrombocytopenia (<50K)
- Active bleeding or concern for bleeding
- Previous history of hemorrhage
- Patient already on systemic anticoagulation

*** If with concern for bronchopleural fistula, discuss with Pediatric Surgery if can place chest tube and administer fibrinolytics

PICU admission

- If meets any of the severe criteria in Table (see CAP guideline)
 Oxygen saturation ≤90% despite supplemental oxygen on 50% FiO2; apnea, bradypnea, or hypercarbia
- Need for mechanical venitaltion or non-invasive positive pressure ventilation; severe respiratory distress or concern for impend-ing respiratory failure
- Systemic signs of inadequate perfusion, including fluid refractory shock, hypotension, sustained tachycardia, need for pharmaco-logic support of blood pressure or perfusion
- Toxic or septic appearing and/or altered mental status

Pleural fluid testing

- Gram stain, culture
- WBC, differential
- pH, glucose, protein, LDH, other other fluid studies are NOT routinely recommended unless suspect other differential diagnoses



Complicated Pneumonia Guideline **Executive Summary**

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References

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Retrieval website: http://www.chrichmond.org/clinical-guideline-complicated-pneumonia

Example:

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