

**CONSULT
ID and
Thoracic
Surgery**

EMPIRIC CHOICE

- ✦ Ceftriaxone 1g IV q24h + metronidazole 500 mg PO/IV q12h
 - Consider adding vancomycin 15 mg/kg IV q12h if MRSA suspected
- ✦ Piperacillin-tazobactam 4.5 IV q8h or other appropriate agent if known colonization with drug-resistant organisms (e.g. *P. aeruginosa*)
- ✦ Amoxicillin-clavulanate 875mg/125mg PO q12h if source control achieved and patient clinically stable

DURATION

- ✦ Duration guided by drainage and clinical resolution

ALTERNATIVES FOR ALLERGIES

- ✦ See [β-lactam allergies](#)
- ✦ β-lactam allergy: moxifloxacin 400 mg PO/IV q24h
- ✦ Vancomycin allergy – add linezolid 600 mg PO/IV q12h

COMMON ORGANISMS

- ✦ *S. anginosus* group organisms
- ✦ *S. pneumoniae*
- ✦ Anaerobes (*B. fragilis* group, *Prevotella* sp, *Fusobacterium* sp)
- ✦ *S. aureus* (including MRSA)
- ✦ *K. pneumoniae*

CURRENT RESISTANCE ISSUES

- ✦ MRSA – has emerged as the most commonly isolated pathogen in nosocomially-acquired bacterial empyema

IMMUNOCOMPROMISED HOST CONSIDERATION

- ✦ Fungal empyema in this patient population must be considered

ADDITIONAL DIAGNOSTIC AND THERAPEUTIC COMMENTS

- ✦ Antimicrobial therapy may be tailored in some cases presumed to be mono-microbial in nature
- ✦ Empyema is defined as the presence of pus or bacteria in the pleural cavity
- ✦ Bacteriology of empyema in adults complex – wide range of pathogens and mixed infections common; up to 40% of empyema specimens fail to yield an organism
- ✦ Surgical intervention is required for successful clinical outcome in most patients with complicated parapneumonic effusions (including empyema) – e.g. VATS, thoracotomy, or open lung decortication

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