SHS + UHN ASP ANTIMICROBIAL STEWARDSHIP PROGRAM

Hospital-Acquired Pneumonia

EMPIRIC CHOICE

- Patient is on a non-ICU ward: ceftriaxone 1g iv q24h or amoxicillin-clavulanate 875/125 mg p.o. BID
- Patient is in the ICU or transferred there as a result of HAP:
  - piperacillin-tazobactam 4.5 g iv q8h
  - Could consider ceftriaxone instead of piperacillin-tazobactam for some patients in whom the risk of *Pseudomonas* is likely low, such as patients who have been on a ward where *Pseudomonas* infections are uncommon or those that have been in the hospital for ≤ 1 week
  - If known to be colonized with MRSA, add vancomycin
  - If known to be colonized with an ESBL, use meropenem 1g iv q8h instead of piperacillin-tazobactam

DURATION

- 7 days

ALTERNATIVES FOR ALLERGIES TO BETA-LACTAMS (see 1-pager on beta-lactam allergies for risk of cross-reactivity)

- Patient is on a non-ICU ward: moxifloxacin 400 mg p.o./iv q24h
- Patient is in the ICU or transferred there as a result of HAP:
  - moxifloxacin 400 mg p.o./iv q24h if infection due to *Pseudomonas* is likely to be low
  - If *Pseudomonas* risk is high: meropenem 1 g iv q8h (cross-reactivity is 1% with penicillin allergy)
  - If known to be colonized with MRSA, add vancomycin

TOP ORGANISMS (what we expect for common organisms)

- *Staphylococcus aureus*
- Gram negative aerobic bacilli (Klebsiella, Serratia, Pseudomonas, etc)
- *Streptococcus pneumoniae*
- *Haemophilus influenzae*

CURRENT RESISTANCE ISSUES

- Consider the patient's prior antibiotic use and colonization status (ie. ESBLs, MRSA) in making your empiric decision

IMMUNOCOMPROMISED HOST CONSIDERATION

- piperacillin-tazobactam 4.5 g iv q8h
- Treat x 10 days

ADDITIONAL DIAGNOSTIC AND THERAPEUTIC COMMENTS

- Antimicrobial therapy is not indicated for aspiration pneumonitis (primarily from macro-aspiration from vomiting).
- Aspiration pneumonia (primarily from swallowing difficulties) does not require the addition of metronidazole as the anaerobes involved are oral anaerobes (ie. Peptostreptococcus) which are covered by most beta-lactams

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