Acute Osteomyelitis

Antibiotics should be withheld until sterile tissue cultures are obtained, unless the patient is septic or there is a concomitant soft tissue infection. Identification of the causative organism is very important in order to treat appropriately.

EVALUATION

- Obtain sterile tissue cultures by percutaneous aspirate or surgical deep culture (ideally before starting antibiotics)
- Wound swabs tend to reflect colonization, and often do not indicate the infecting organism at the site of osteomyelitis
- If septic, draw blood cultures

EMPIRIC CHOICE

- For diabetic foot infections, refer to the 1-page document on that topic
- Acutely Unwell or Septic:
  - ceftriaxone 2 g iv q24h +/- metronidazole 500 mg p.o./iv q12h (add metronidazole for sacral osteomyelitis) +/- vancomycin (if known to be colonized/previous infection with MRSA)
  - if known to be ESBL colonized/previous infection: Meropenem 1 g iv q8h +/- vancomycin if known to be colonized/previous infection with MRSA
- Not septic:
  - Await sterile culture results to guide treatment

DURATION

- 4-6 weeks
- Shorter courses could be considered if the infected bone has been appropriately debrided

ALTERNATIVES FOR ALLERGIES

- If septic: meropenem 1 g iv q8h (penicillin cross-reactivity is ~ 1%) +/- vancomycin
- Not septic: await sterile culture results to guide treatment

TOP ORGANISMS

- *Staphylococcus aureus*
- Streptococci
- Gram negative bacilli
- Anaerobes

IMMUNOCOMPROMISED HOST CONSIDERATION

- Same as for immunocompetent host

ADDITIONAL DIAGNOSTIC AND THERAPEUTIC COMMENTS

- X-ray be normal for the first 2 weeks of osteomyelitis; use CT or MRI for diagnosis if suspicion is high but x-ray is negative