

Lecture Questions:

1. What does it mean when an antibiotic is “broad spectrum”?
 - a. Covers a variety of different organisms to provide maximum coverage when the cause of infection is unknown or polymicrobial
2. What are the most common gram (+) organisms?
 - a. Strep, Staph, Enterococcus
3. A patient presents with a loosely demarcated area of circumferential erythema. The area is flat, but warm to the touch and is without blistering or vesicles. The patient has no PMH or allergies. What is a potential treatment for their condition?
 - a. Cephalexin, Dicloxacillin
4. A 27 y/o female presents to your office for a follow up after recently having a large recurrent abscess on her leg I&D at urgent care 3 days ago. She has a localized area of erythema which is improving. The provider at urgent care gave her a prescription for clindamycin. She was wondering why she was prescribed clindamycin instead of cephalexin, which she was given the last time she had an I&D?
 - a. Due to concern for MRSA
5. What is a black-box warning for fluoroquinolones?
 - a. Tendon rupture
6. Which two antibiotics are typically given for intra-abdominal infections such as acute appendicitis, cholecystitis and diverticulitis? Why?
 - a. Ceftriaxone (gram neg, gram pos) and flagyl (anaerobic)
7. What drug can cause a disulfiram-like reaction when taken with alcohol?
 - a. Metronidazole
8. What organism causes traveler’s diarrhea?
 - a. E coli
9. What antibiotics are safe to use when treating UTI’s in pregnant patients?
 - a. nitrofurantoin, amoxicillin, augmentin, cephalexin
 - b. Avoid bactrim in 1st trimester, aminoglycosides, FLQs & tetracyclines
10. What organism appears as gram (-) diplococci under a microscope?
 - a. N. gonorrhoeae
11. Why are prophylactic antibiotics given to patients with open fractures?
 - a. Due to a break in the skin barrier increasing the risk of developing osteomyelitis
12. A 15 year old with PMH of sickle cell disease presents to the ED with complaints of a 3 day history of worsening fevers, chills, general malaise, redness, swelling and TTP of his left shin. You suspect the patient may have osteomyelitis. What is the most probable pathogen responsible for causing osteomyelitis in this patient?
 - a. Salmonella

Additional Questions:

- Which drugs inhibit bacterial growth by interfering with transpeptidation reactions?
 - a. **B-lactams (PNC, Cephalosporins, Monobactams, Carbapenems)**
 - b. Glycopeptides
 - c. Tetracycline
 - d. Macrolides
- Which of the following can you use to treat Klebsiella pneumonia & Pseudomonas?
 - a. Penicillin G
 - b. Nafcillin

- c. Amoxicillin
 - d. **Piperacillin-tazobactam**
- Which of the following are 1st gen cephalosporins?
 - a. Ceftriaxone
 - b. **Cephalexin & cefazolin**
 - c. Cefoxitin & cefotetan
 - d. Cefazolin & cefaclor
- Which 2 cephalosporins are the only 2 active against anaerobes
 - a. Ceftriaxone & cephalexin
 - b. Cefazolin & cefaclor
 - c. **Cefoxitin & Cefotetan**
 - d. Cefprozil & cefuroxime
- Which 3rd generation cephalosporin has activity against pseudomonas?
 - a. ceftriaxone
 - b. **ceftazidime**
 - c. Cefotaxime
 - d. Cefixime
 - e. Cefpodoxime
 - f. Proxetil
 - g. Cefdinir
 - h. Cefditoren
 - i. Pivoxil
 - j. Ceftibuten
- All of the following 3rd generation cephalosporin are excreted renally EXCEPT ?
 - a. **ceftriaxone**
 - b. ceftazidime
 - c. Cefotaxime
 - d. Cefixime
 - e. Cefpodoxime
 - f. Proxetil
 - g. Cefdinir
 - h. Cefditoren
 - i. Pivoxil
 - j. Ceftibuten
- Which are the only cephalosporins active against pseudomonas?
 - a. **Ceftazidime & cefepime**
 - b. Ceftazidime & Cefotaxime
 - c. Cefixime & Cefpodoxime
 - d. Cefditoren & Pivoxil
- What is the only cephalosporin active against MRSA?
 - a. Ceftriaxone
 - b. cephalexin
 - c. Cefazolin
 - d. **Ceftaroline**
- Which of the following is the drug of choice for a true PNC ax?
 - a. Amoxicillin
 - b. Ceftriaxone
 - c. **Aztreonam**
 - d. Augmentin
- Which of the following carbapenem has no activity against pseudomonas?
 - a. Doripenem
 - b. **Ertapenem**
 - c. Imipenem

- d. Meropenem
- What are carbapenems reserved for?
 - a. Treatment of organisms that have resistance to extended spectrum B lactamases
- Aside from MRSA, what else is vanco used to tx?
 - a. Strep
 - b. Staph
 - c. E. coli
 - d. C. diff**
- Monitoring of trough levels is for ___?
 - a. Vanco**
 - b. Telavancin
 - c. Dalbavancin
 - d. Oritavancin
- What is contraindicated when taking Oritavancin?
 - a. Aspirin
 - b. ACE inhibitors
 - c. heparin**
 - d. Warfarin
- Which of the following has an MOA that causes rapid loss of cellular K⁺?
 - a. Vanco
 - b. Daptomycin**
 - c. Dalbavancin
 - d. Telavancin
- What levels must be monitored for Daptomycin?
 - a. CrCl
 - b. PT/INR
 - c. Cr Phosphokinase**
 - d. aPTT
- What class of drug is ideal for atypical pneumonias?
 - a. Penicillins
 - b. Macrolides**
 - c. Cephalosporins
 - d. Streptogramins
- Quinupristin-dalfopristin is part of the streptogramins class and is bactericidal against all of the following EXCEPT?
 - a. enterococcus faecalis**
 - b. enterococcus faecium
 - c. MRSA
 - d. Pseudomonas
- True or false: Quinupristin-dalfopristin is a strong CYP3A4 inhibitor?
 - a. True
- What causes serotonin syndrome if taken w/ SSRIs or MOA?
 - a. Vancomycin
 - b. Chloramphenicol
 - c. Linezolid**
 - d. Azithromycin
- What is the MOA of sulfonamides?
 - a. Act as structural analogs of PABA → inhibiting dihydropteroate synthase and folate production
- Which fluoroquinolone is not dosed renally?
 - a. Ciprofloxacin
 - b. Levofloxacin
 - c. Moxifloxacin**
 - d. Gemifloxacin
- Which of these is most likely to cause a metallic taste?
 - a. Metronidazole**
 - b. Amphotericin

- c. Linezolid
- d. Ciprofloxacin
- Which TB drug is most likely to cause orange tears?
 - a. **Rifampin**
 - b. Isoniazid (INH)
 - c. Pyrazinamide
 - d. Ethambutol
- Which TB drug is most likely to cause retrobulbar neuritis?
 - a. Rifampin
 - b. Isoniazid (INH)
 - c. Pyrazinamide
 - d. **Ethambutol**
- Which TB drug is most likely to cause peripheral neuropathy, hepatitis, and Drug induced lupus?
 - a. Rifampin
 - b. Isoniazid (INH)**
 - c. Pyrazinamide
 - d. Ethambutol
- What can be used as a one time dose for UTI?
 - a. Nitrofurantoin
 - b. Bactrim
 - c. Fluoroquinolones
 - d. Fosfomycin**
- True or false: Daptomycin can be used to treat HAP?
 - a. False - daptomycin does not treat pneumonia
- Linezolid = active against both enterococcus species
- Drug of choice for endocarditis?
 - a. Nafcillin
- Anti-staphs cover listeria

ANTI-TB

- Rifampin - inhibits RNA synthesis; used for cavitary lesions, strong CYP3A4 inducer → orange
- Isoniazid (INH) - PRODRUG, inhibits mycolic acids → drug induced lupus, hep, peripheral neuropathy (→ give B6 pyridoxine)
- Pyrazinamide - disrupts cell memb transport; hepatox; adjust
- Ethambutol - inhibits mycobacterial arabinosyl transferase → retrobulbar neuritis = routine eye exams