

Chapter 73, Self-Assessment Questions

1. A 4-year-old child is brought into the clinic by his mother with complaints of blisters covering his forehead, nose, and cheeks, which have gradually worsened over the last week. His face is red, and many vesicular lesions are noted. Yellowish crusts are present where blisters have apparently ruptured. The child is diagnosed with impetigo. Which of the following statements regarding the treatment of this child's impetigo is true?
 - A. Topical antibiotics, like mupirocin, should be utilized first because of their enhanced efficacy.
 - B. Macrolide antibiotics, such as erythromycin, are typically preferred first line because of their low rates of staphylococcal and GAS resistance.
 - C. Because of the potential for severe complications associated even with mild impetigo, IV antibiotic therapy is the most appropriate treatment option.
 - D. First-generation cephalosporins and penicillinase-stable penicillins are considered first-line treatment for this child since oral therapy is indicated.

2. A 46 year-old man with diabetes presents with a very large and painful nodule on his neck. The nodule is draining pus from multiple hair follicles. The *best* management in this case is:
 - A. Daily cleansing with soap and water, as it is most likely acne.
 - B. Warm moist compresses, as it is most likely folliculitis.
 - C. Application of a topical antibiotic, as it is most likely erysipelas.
 - D. Incision and drainage, as it is most likely a carbuncle.

3. SM is a 43 year-old quadriplegic man. His wife brings him into the clinic, stating that he hasn't been feeling well lately. His appetite has been poor, and he has lost 20 lb (9 kg) in the

last month. SM states that he has been feeling fatigued and “a bit dizzy” at times. His temperature at the clinic is 102.2°F (39.0°C), his blood pressure is 85/46 mm Hg, and physical examination reveals a large, stage 3 pressure sore on his sacrum, with surrounding cellulitis and necrotic debris. Which of the following risk factors for pressure ulcer development is *not* applicable to SM’s case?

- A. Age
 - B. Malnutrition
 - C. Limited mobility
 - D. Loss of sensation
4. Which of the following antibiotics is most appropriate for the treatment of SM’s condition (assume no drug allergies)?
- A. Silver sulfadiazine 1% cream applied three times daily to the pressure ulcer
 - B. Amoxicillin/clavulanate
 - C. Vancomycin in combination with piperacillin/tazobactam
 - D. None of the above. SM’s pressure ulcer is not infected, so no antibiotic therapy is required.
5. A 17-year-old high school athlete is seen in the clinic for redness and swelling of his right upper extremity. He is a wrestler at the local high school, and his symptoms began soon after experiencing a severe mat burn to his elbow. His arm is erythematous with poorly defined margins extending from his elbow midway to his wrist. You suspect CA-MRSA after an outbreak was recently reported by the media. Which of the following antibiotics would not be appropriate for this patient?
- A. Clindamycin

- B. Trimethoprim-sulfamethoxazole DS
 - C. Metronidazole
 - D. Doxycycline
6. A 46-year-old man is seen by his primary care physician for redness, mild pain, and swelling of his left lower extremity. He remembers hitting his shin on a bed frame, but denies any injury more severe than a bruise. The area is warm to the touch and has a poorly defined area of erythema extending outward from his shin around to his calf. What would be the most appropriate treatment option at this time?
- A. Vancomycin
 - B. Dicloxacillin
 - C. Erythromycin
 - D. Levofloxacin
7. A 64-year-old woman with multiple medical problems is hospitalized after what was presumed to be a case of CA-MRSA cellulitis. After 3 days of a 10-day course of trimethoprim-sulfamethoxazole DS, she is now experiencing fevers, chills, and significant pain in her right leg. The affected area has several blisters and bullae indicative of severe ischemia, with a gangrenous area in the center. The patient is diagnosed with necrotizing fasciitis and undergoes surgical debridement. What would be the most appropriate recommendation for her antimicrobial therapy at this time?
- A. Trimethoprim-sulfamethoxazole DS should be continued, as she is only on day 3 and improvement is likely
 - B. Discontinue trimethoprim-sulfamethoxazole DS, and begin oral levofloxacin plus clindamycin

- C. Discontinue trimethoprim-sulfamethoxazole DS, and begin IV meropenem
- D. Continue trimethoprim-sulfamethoxazole DS, but add penicillin VK
8. A 44-year-old man with a 37-year history of type 1 diabetes mellitus is diagnosed with a PEDIS grade 2 diabetic foot infection. Despite the infection, he is otherwise systemically well. Which of the following statements regarding his treatment plan is true?
- A. PEDIS grade 2 infections are limb-threatening, and in this case, would most appropriately be treated with IV antibiotics.
- B. Because of the often inevitable immunopathic, angiopathic, and neuropathic changes associated with hyperglycemia, further preventative measures have no role in this patient.
- C. Antibiotic coverage should typically be broad spectrum because of the polymicrobial nature of many diabetic foot infections.
- D. Extended treatment duration of 28 days is required for resolution of most PEDIS grade 2 infections.
9. RM is a 65 year-old diabetic man who presents to the clinic with a purulent, foul-smelling, necrotic foot ulcer on his heel with cellulitis encompassing most of his foot and lower left extremity. On examination, the ulcer can be probed to the bone. His white blood cell count is 9.8×10^3 cell/ μ L (9.8×10^9 /L), temperature 100.2°F (37.9°C), and SCr 0.8 mg/dL (71 μ mol/L). He states that he does not feel well. He is admitted to the local hospital. Which of the following antimicrobial regimens is most appropriate for RM?
- A. Moxifloxacin 400 mg by mouth every 24 hours
- B. Linezolid 600 mg IV every 12 hours
- C. Nafcillin 2 g IV every 4 hours + ceftriaxone 2 g IV every 24 hours

D. Linezolid 600 mg by mouth every 12 hours + ertapenem 1 g IV every 24 hours

10. Two days later, deep wound cultures reveal that the pathogen causing RM's diabetic foot infection is *Pseudomonas aeruginosa*. What should be done with regard to his antimicrobial therapy?

A. No change is required. Previously selected therapy covers *Pseudomonas*.

B. Change to tigecycline 100-mg IV load, then 50 mg every 12 hours.

C. Change to piperacillin-tazobactam 3.375 g IV every 6 hours.

D. Change to TMP-SMX DS 2 tablets every 12 hours.

11. RM is diagnosed with osteomyelitis and undergoes surgical debridement of necrotic bone.

However, it is felt that some infected bone and/or tissue may remain. He is now on day 10 of your recommended regimen (5 days postsurgical debridement). Does RM require continuation of his antibiotic? If so, what is an appropriate duration of antibiotic therapy?

A. No. Stop therapy as 10 days is plenty, and we should minimize the risks of medication exposure.

B. Yes. Continue for 4 more days, then stop.

C. Yes. Continue for at least 2 more weeks (and possibly longer).

D. Yes. However, switch to strictly topical therapy for 4 weeks to improve wound healing.

12. A 20-year-old woman comes into the emergency department with complaints of hand pain and noticeable swelling and erythema around her wrist. She reports experiencing a cat bite

several days ago while house-sitting for a neighbor. Antimicrobial coverage should be provided for which of the following microorganisms?

- A. *Staphylococcus aureus*
- B. Viridans streptococci
- C. *Pasteurella multocida*
- D. *Escherichia coli*

13. PL is a pregnant 23 year-old woman (38-week gestation) who presents to the emergency department 2 hours after sustaining a cat bite to her hand. On examination, a deep puncture wound is revealed, but no signs of infection are present. Which of the following prophylactic antibiotic regimens should be prescribed for this patient?

- A. Doxycycline 100 mg by mouth every 12 hours for 5 days
- B. Amoxicillin/clavulanate 875 mg by mouth every 12 hours for 5 days
- C. Levofloxacin 500 mg by mouth daily + clindamycin 300 mg by mouth every 6 hours for 5 days
- D. Trimethoprim-sulfamethoxazole DS one tablet by mouth every 12 hours + clindamycin 300 mg by mouth every 6 hours for 5 days

14. Which of the following statements is true regarding human bite injuries?

- A. Antimicrobial coverage for human bites should include *Strep* and *Staph* spp., *Eikenella corrodens*, and anaerobes.
- B. Prophylactic antibiotic therapy for human bites is rarely warranted because infectious complications are rare.

- C. Aggressive irrigation and cleansing of the wound should be avoided to prevent deeper tissue involvement.
 - D. Clenched-fist injuries are less prone to infection, and unless involvement includes broken bone, follow-up is not necessary.
15. When developing a patient care and monitoring plan for the treatment of SSTI, which of the following considerations is false?
- A. Clinical manifestations and severity of infection can help determine the need for oral versus IV antimicrobial therapy.
 - B. Monitoring for efficacy should be based on resolution of signs, symptoms, and laboratory evidence of infection, if available.
 - C. Patients should be counseled on the importance of discontinuation of therapy immediately once their signs and symptoms of infection have resolved.
 - D. Adherence to an antimicrobial regimen is important, and in certain populations (eg, pediatrics), ease of administration and palatability of antibiotic therapy is crucial for ensuring resolution of infection.

Answers to Self-Assessment Questions

1. D
2. D
3. A
4. C
5. C
6. B
7. C
8. C
9. D
10. C
11. C
12. C
13. B
14. A
15. C