Case Discussions
CME Naples 2012

A. 42 y.o. man presents to your office 48 hours after returning from his recent vacation trip to the Caribbean. Two days previously he noted the onset of a severely pruritic sensation on the medial distal ventral left foot that has progressively worsened during the last 24 hours. The patient is afebrile but a linear rash (figure to be shown) appeared about 12 hours after the onset of symptoms and has significantly lengthened in the patient’s visual self-evaluation of the lesion by the time he sees you in the office.

B. A 39 y.o. male falls into the water from a boat while in the Caribbean. While making his way back to the boat, he noted sudden onset of severe stinging, burning, and almost numbing pain on the right anterior chest extending down to the right lower quadrant of his abdomen. A couple of hours later, he notes severe burning abdominal and chest pain and has the rash (figure to be shown). VS show only a mild tachycardia, but no fever or change in blood pressure.

C. A 37 y.o. woman and her husband just returned from a 7-day vacation in the Caribbean. She noted the onset of discomfort in the area beneath her swimming suit immediately after coming out of the water on the last day of their vacation (Saturday) before leaving for home that evening. On her first day at home (Sunday), her rash appeared with redness and raised tender lesions. These lesions also caused tremendous itching. Her husband developed no such rash but never actually went into the water. He only sunbathed on the beach.

1. A 4 year old child presents for a well child checkup with no complaints other than a runny nose. You note middle ear effusion on examination. Should this child receive antimicrobial therapy for an ear infection?

2. One week later this child presents with complaint of ear pain. On examination you notice a red, bulging tympanic membrane. What is your approach to management?

3. A 6 year old boy was seen in your office for sore throat and fever of 2 days duration. On exam, he had a temperature of 101°F, pulse was 104, throat was
erythematous but no exudate and submandibular lymph nodes were palpable, swollen and tender. You are not sure if he had a “Strep throat”. What do you want to do for this boy?

4. A 10 year old girl presents with mild fever accompanied by a facial rash (to be shown). She also complains of sore throat and “stomach” pain. Several other children in her class have had a similar illness during the Spring season. She is afebrile and vital signs are normal. She appears well however with red cheeks. There is a macular rash on her cheeks which is non-tender. Should she be given antibiotics for cellulitis?

5. A neighbor of yours (45 year old school teacher) calls stating she has a one day history of fever, chills, myalgia, headache and non-productive cough. She is requesting an antibiotic. What is your response?

6. A 4 year old child presents with a one day history of disseminated vesicular rash. The child has a low-grade fever and mild anorexia. The mother of the child indicates that several of the patient’s classmates have had a recent similar illness. What is your course of therapy?

7. Two weeks later, the 32 year old mother of the child in the previous case presents with a disseminated vesicular rash of one day duration. The mother has a low-grade fever and a non-productive cough. What is your recommendation for therapy?

8. One day after seeing the previous case, your newly employed 28 year old nurse states she has never had chicken pox. She is concerned about her exposure to the 32 year old mother. What is your course of action?

9. A 65 year old patient with severe rheumatoid arthritis presents with localized dermatomal zoster. What is your consideration for therapy?

10. A 22 year old female 1st trimester of pregnancy presents with chicken pox. What is your consideration for therapy?

11. A man is running home. Another man with a mask jumps out at him and the first man turns around and runs in the opposite direction. Why? What kind of mask was the second man wearing? Who are the men? What am I talking about?

12. A 39 year old male presents with 4 days of headache and dental pain after one week of runny nose, scratchy throat and non-productive cough. On exam he has temperature of 100.2°F, mild facial tenderness and a dull left maxillary sinus upon illumination. Should he have an x-ray? Should he receive antibiotics?

13. A 45 year old female presents to your office complaining of the “flu”. Her symptoms began 6 days ago with a runny nose, scratchy throat, generalized
malaise, and non-productive cough. Symptoms are gradually improving with over-the-counter cough medicine, but she is concerned that she may have a sinus infection because she has noted some greenish discharge from her nose. She is afebrile. Examination reveals minimal tenderness over the maxillary sinuses. Examination of the nares reveals minimally inflamed turbinates without purulent drainage from the middle meatus. Lungs are clear to auscultation. Should she receive antibiotics for her “sinusitis”?

14. A 45 year old male presents with a low-grade fever, headache and rash on his arm. Ten days earlier he was camping in upstate New York. Is antimicrobial therapy warranted? If so, what therapy? Could this have been prevented?

15. A 48 year old business man has been vacationing in North Carolina. Now presents with an acute febrile illness associated with headache and myalgias two weeks after returning to Ohio. He denies cough, diarrhea, chest pain, night sweats and rashes. On examination his temperature is 102.0 degrees F, pulse 118, respirations 14, blood pressure 160/90. He appears relatively sick. The rest of the examination is relatively unremarkable.

Laboratory findings include a WBC of 3,500 with a left shift; platelets 75,000; ESR 44. What diagnosis is most probable? What therapy is appropriate.

16. A 31 year old man comes to your office with a history of recurrent sores (painful small ulcers) on his penis. He asks for treatment. How would you treat him?

17. You are evaluating 2 members of your church group who returned 3 days ago from visiting the Dominican Republic. During their visit they were in the rural area assisting in the construction of a church. They present with malaise, moderate headache, myalgias and non-pruritic maculopapular and petechial rash involving the limbs, face and trunk. Laboratory findings include WBC of 3,000 with a normal differential and platelets of 100,000. What is the likely diagnosis and is antimicrobial therapy indicated.

18. A 72 year old man presents to the ER with an 18 hour history of decreasing mental status and fever. Two days earlier he presented to his primary care physician because of earache and was given ciprofloxacin because of a “severe” penicillin allergy. On examination there is no rash noted and the patient has nuchal rigidity. What is your course of action?

An LP is performed and numerous WBC’s are seen and gram-positive diplococci. What antimicrobial therapy is appropriate?

19. A 19 year old female develops fever, headache, and maculopapular rash on her trunk 3 days after returning home from college spring break vacation. She is brought to the Emergency Room because of increasing lethargy over the course of the day. Physical exam reveals her temperature to be 103.6°F and blood pressure
100/65. She is somewhat combative and complaining of an intense headache. Exam reveals nuchal rigidity and evidence of a diffuse petechial rash over her extremities and trunk. There are larger ecchymotic lesions on her legs and back. Neurologic exam reveals no localizing signs. What is your course of action and choice of antimicrobial therapy?

20. A 46 year old male presents with 3 days of headache with nausea and vomiting. Temperature 100.5°F; mental status within normal limits; nuchal rigidity present. What is your plan of management?

21. Vancomycin-resistant enterococcus (VRE) is isolated from each of the following patients. How do you approach management of this organism in each case?

   a. An 82 year old male, status-post abdominal surgery for unresectable cancer, on the Oncology Ward. He has minimal serous drainage from an abdominal wound from which is isolated mixed flora including VRE.

   b. A 57 year old male, status-post abdominal surgery, post-operatively in the Intensive Care Unit, developed ARDS from Pseudomonas bacteremia and is given broad spectrum anti-Pseudomonal antimicrobial therapy. He remains in the Intensive Care Unit for over 2 months. Blood cultures are obtained at that time for transient fever (no other apparent change in his clinical course was noted at the time). VRE was isolated from one bottle.

   c. A 71 year old female was admitted with pulmonary infiltrates and respiratory failure. Wegener’s granulomatosis was eventually diagnosed. She was in the Intensive Care Unit with a complicated course for over one month. At that time she developed new fever and had VRE isolated from blood, urine and chest tube wound site.

22. What is your approach to therapy for each of the following patients?

   a. 25 year old female with honeymoon cystitis

   b. 55 year old asymptomatic diabetic female with $10^5$ E. coli in urine

   c. 68 year old female with asymptomatic catheter associated bacteriuria ($10^5$ GNR)

   d. 25 year old female, 3rd trimester with E. coli cystitis (?Pen allergy)

23. A 20 year old woman was seen in the office for fever, frequency, urgency, and burning on urination. She started to have urinary symptoms 2 days before. Fever started the night before the office visit. Her temperature was 102°F; pulse was
106. The only pertinent physical finding was CVA tenderness on the right side. Urinalysis showed 10-15 PMN’s. Diagnosis?

Suggested treatment?

24. A 65 year old male presents with fever and chills of one day duration. He also noted “change in odor” of urine for two days associated with hematuria noted at the end of urination and some hesitancy in voiding. What is your approach to management and antimicrobial therapy?

25. a. A 79 yo female who has been in a nursing home since her stroke 12 months ago is admitted with fever, mental status change, lower abdominal pain and cloudy urine. She received a week of cipro for a “UTI” four weeks ago. What is your empiric b. A 75 year old female nursing home resident with a chronic indwelling Foley is admitted with fever and pyuria. She is feeling much better after treatment with Cipro. A follow-up urine culture shows >10⁵ yeast while urinalysis shows >100 WBC/HPF. What are the therapeutic options?

26. A 66 year old diabetic gentleman presents with acute onset of fever, shaking chills, and productive sputum. Chest x-ray shows left lower lobe infiltrate. Should he be admitted to the hospital and what antibiotics?

The next day the lab calls and indicates that the patient has positive blood cultures for S. pneumoniae. What is your course of antimicrobial therapy?

The following day the lab indicates that the strain of S. pneumoniae is “resistant to penicillin”. What is your course of antibiotics?

The patient is significantly improved after 72 hours and wishes to be discharged. What is your course of antibiotic therapy?

27. A 52 year old carpenter presents with a two day history of increasing knee pain associated with swelling of the knee and fever. On examination temperature is 101.0°F. There is tenderness of the knee associated with swelling. The patient is able to flex and extend the knee with passive motion.

28. A 35 year old male presents to your office with a 5 day history of “low-grade” fever, myalgia, headache and non-productive cough. Temperature is 100.3°F, respiratory rate 22, blood pressure 120/80, and pulse 80. Lungs revealed bilateral high pitched rhonchi. What is your approach to management?
29. A 17-year-old male patient, Jack, arrives at the office for treatment of a “weird blister that just showed up on my arm a few days ago.” The young man has been a He is in good general health, is up-to-date on all immunizations, and has had no major health problems. He stands 69 inches tall and weighs 165 lb. An excellent athlete, he currently wrestles for the varsity team at the local high school.

Physical examination reveals a single 2-cm pustule on his arm. There is no surrounding erythema, and he is not systemically ill; all vital signs are normal. The patient believes he may have been bitten by a spider while camping out recently with friends, although he did not actually see spiders at any time during the overnight. Jack says that several of them also have had “trouble with spiders,” explaining that several teammates have had similar pustules in the past 10 days or so. Upon further discussion with the HCP, Jack admits that he sometimes shares towels with teammates during practices and matches. When asked, he says that wrestling mats are disinfected “when we remember to do it.”

What is your approach to management of the pustule?
   a. I&D
   b. Antimicrobial therapy
   c. I&D plus antimicrobial therapy

What is your recommendation regarding his wrestling?

29b. Matt, a 49-year-old male patient, presents for the fourth time in 11 months with a recurrence of a community-associated methicillin-resistant Staphylococcal aureus (CA-MRSA) skin and soft tissue infection (SSTI). He is frustrated, angry, and asks for highly effective therapy that can eradicate the infection permanently. He and his wife, who has accompanied Matt today, also express concern that their children, who are aged 5, 9, and 14, are at risk from their father’s repeated SSTI. He has no other significant health issues or notable medical history.

Eleven months ago, Matt presented with an uncomplicated, purulent lesion on his left thigh just above his knee. He had no systemic symptoms, and there does not appear to be any involvement of the deeper soft tissue. Incision and drainage was performed but did not send material for culture. Matt got written instructions on wound care. He reported back within a week that the pustule had stopped draining and was healed.

Two months later, Matt returned with a lesion that resembled the first one, this time on his upper arm. Once again, Matt was free of systemic signs and symptoms, and there was no evidence of deep tissue involvement. Incision and drainage was performed again, Matt works as a construction supervisor, and you reminded Matt that sweating makes it difficult to keep the area dry and that his clothing probably is no match for the dust at his construction site. Matt agreed to change his dressing at least once during the work day, and the infection healed promptly and completely.
Five months after the second pustule appeared and was treated, Matt, accompanied by his wife, presented with a third lesion, this time on his right shin. Incision and drainage was performed, material sent for culture, and a 7-day course of trimethoprim-sulfamethoxazole (TMP-SMX) was prescribed. Matt reported that he showers every morning, as well as at the end of each workday. You remind Matt that in addition to conscientious wound care, he should wash his hands thoroughly with soap and water or an alcohol-based hand sanitizer after dressing the area. You also told him to dispose of the old dressings carefully and in such a way that neither he nor others would touch them again. Matt said that during the workday, he changes his dressings in his truck and “stashes” the old dressings in the cup holder until he gets home that evening.

Today, Matt presents for treatment of his latest pustule, the fourth in less than a year. Matt’s wife confirms that she and her husband have continued to follow the environmental hygiene instructions carefully to protect the children from infection. The pustule, which is on Matt’s left forearm, is similar to the others Matt has had in recent months. What is your course of action?

29c A 56 year old male presents with acute onset of fever and lower leg pain. He has erythema of the medial side of his leg (from ankle to midcalf). He has had two previous similar occurrences. He has had what prior surgical procedure?

What other skin disorder?

What is your therapy (acute and long term)?

30. A 52 year old insulin dependent diabetic patient is admitted through the Emergency Room with an infected foot ulcer. Evaluation of the foot reveals a deep ulcer with very foul-smelling purulent drainage. Gram stain of this material reveals mixed flora. What is best for initial empiric therapy of this patient’s infection?

31. A 30 year old female physician was bitten on her hand by her pet dogs when they were fighting for food. Two days later, the dorsum of her right hand was swollen and a grayish purulent material can be expressed proximal to the third MC joint.

32. A 55 year old male presents with abdominal pain of few days duration. He has had recurrent similar episodes in the past. Temperature 101.0°F, pulse 110, respiratory rate 26. On abdominal examination there is epigastric tenderness, +/- rebound. Amylase is elevated. What is your approach to management? Should this patient receive antimicrobial therapy?
33. A 75 year old woman with coronary artery disease presents to the Emergency Room with acute abdominal pain.

PE: Temperature is 102°F, blood pressure 110/80, pulse 128, respirations 28. On exam there is left lower quadrant pain with rebound tenderness and decreased bowel sounds. Abdominal CT scan reveals pericolic mass. The patient is taken to surgery.

At surgery a perforated diverticular abscess is found. The abscess and perineal cavity are drained and cultures are sent to the laboratory. Two days later cultures reveal isolation of E. coli, B. fragilis, enterococcus and C. albicans.

33a A 50 year old previously healthy male is admitted with 3 day history of fever and chills. Examination reveals a grade 3/6 murmur. On the second day of hospitalization the lab reports all blood cultures positive for S. aureus. What is appropriate antimicrobial therapy?

34. a According to the recent AHA (2007) Guidelines, who should receive an antimicrobial?
A. Pt with Mitral valve prolapse who will have tooth extraction
B. Pt with Prosthetic mitral valve who will have tooth extraction
C. Pt with Prosthetic mitral valve who will undergo cystoscopy
D. All above
E. None above

34.b A 45 year old woman with a known history of infective endocarditis of her mitral valve was asked by her dentist to take antibiotic prophylaxis. She has been on amoxicillin therapy for sinusitis for the past week. Does she need antibiotic prophylaxis?

35. Which of the following regimens is/are recommended for prophylaxis of bacterial endocarditis in an adult patient with an orotic prosthetic valve who is to undergo dental cleaning?

a. Amoxicillin 2 g orally 1 hour before the procedure
b. Clindamycin 600 mg orally 1 hour before the procedure
c. Azithromycin or Clarithromycin 500 mg orally before the procedure
d. Ofloxacin 400 mg orally twice daily for 1 day before the procedure and for 2 days after the procedure.
e. Ampicillin 2 g intravenously or intramuscularly and gentamicin 1.5 mg/kg (not to exceed 80 mg) 30 minutes before the procedure. Then amoxicillin 1 g orally 6 hours after the initial dose.
36. A 38 year old man returns from a holiday in Mexico. Three days later, he develops a fever and diffuse abdominal cramping and increase in number of stools. Temperature is 104.6°F and blood pressure of 125/70. A stool is positive for fecal leukocytes. What is your course of action and therapy?

37. On the same day you evaluate two patients in your office (a 3 year old female and a 78 year old male). Both patients present with fever and frequent “bloody” stools. What is your course of action; antimicrobial therapy?

38. Which of the following patients should be considered as having a positive reaction to the tuberculin skin test.
   a. A 6mm induration a 10 year old girl whose mother recently has been diagnosed as having active pulmonary tuberculosis.
   b. A 6mm induration in a 28 year old male respiratory therapist
   c. A 12mm induration in a 45 year old bank executive who does not have a history of exposure to tuberculosis.
   d. A 6mm induration in a 30 year old man who has tested positive for HIV.

39. A 36 year old female presents to your office on Tuesday complaining of severe earache and breast tenderness. On exam she has low-grade fever (100.5 degrees F), several skin pustules, and tenderness of the breast. What is the likely diagnosis and should she receive antibiotics.

40. A 29 year old male presents with purulent urethral discharge. What is your approach to management?

41. A 21 year old college student presents with increased menstrual bleeding and mild dyspareunia. On physical examination she has normal vital signs. There is bilateral lower abdominal tenderness. Pelvic examination reveals that cervical motion causes adnexal tenderness. The cervix was friable and mucopurulent exudate is present. Should this patient be admitted to the hospital? What therapy do you prescribe?

42. A 31 year old man comes to your office with a history of recurrent sores (painful small ulcers) on his penis. He asks for treatment. How would you treat him?

43. A 32 year old woman presents with rash of 3 days duration. She has no other symptoms. Her last sexual encounter was 4 weeks prior to presentation. Laboratory data: RPR positive at 1:256; FTA positive; HIV test negative. How would you treat her?