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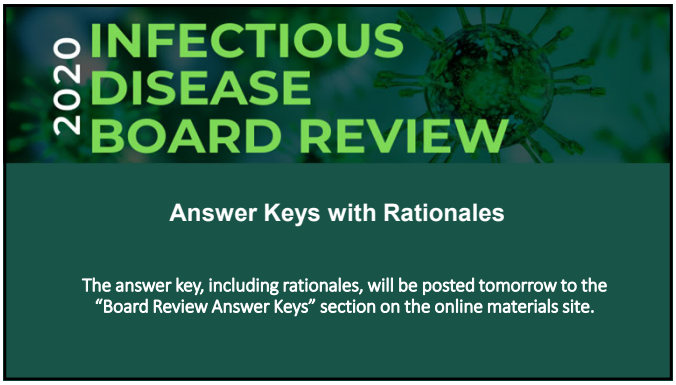

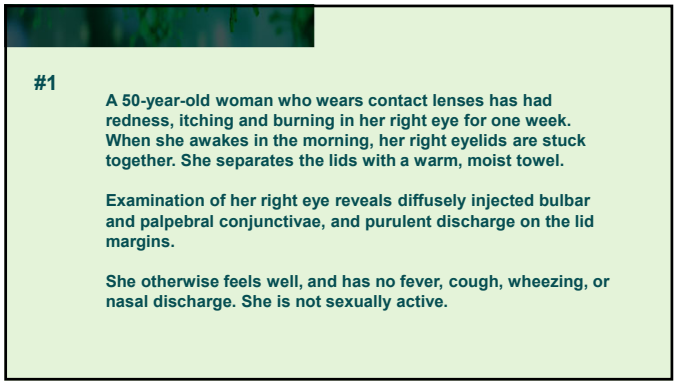

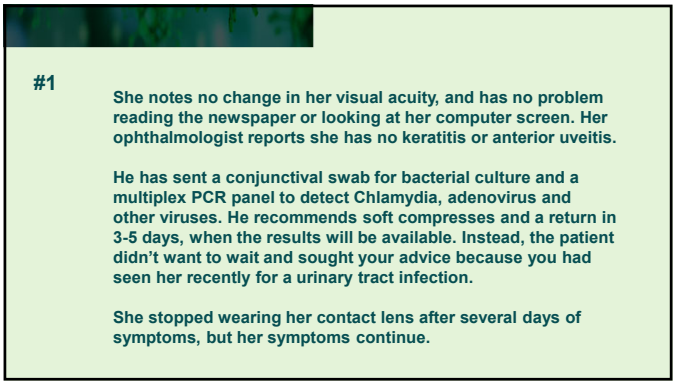

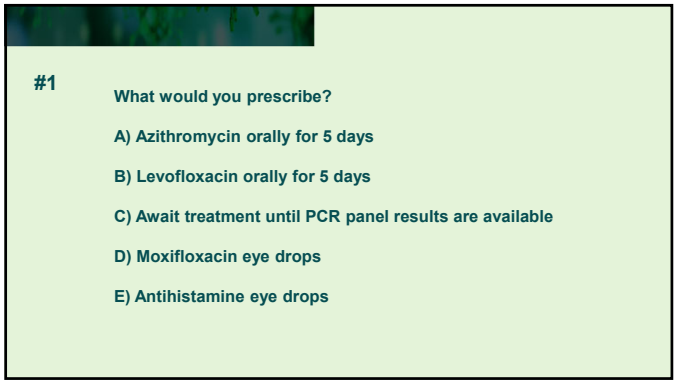

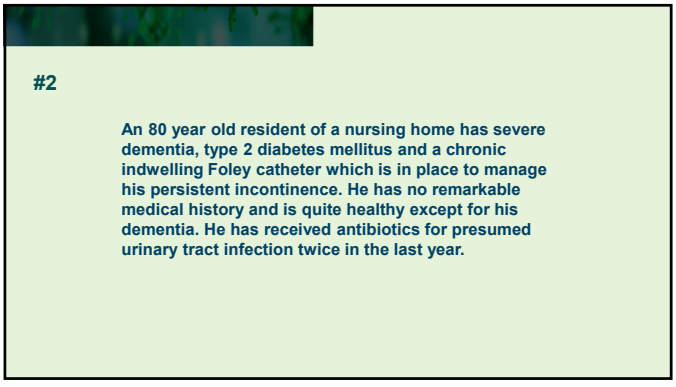

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#2

The nursing home staff decided to obtain a urinalysis and urine culture: they call you because the urine culture is growing Candida albicans with a colony count of 100,000 cfu/ml. His UA shows 30-40 WBC and 10-20 RBC per HPF, with a 1+ leukocyte esterase

He is in his usual state of health with no fever, no urinary symptoms that you can elicit from him, and no flank tenderness.

#2

What would you recommend?

A) Observe and do nothing more unless the patient becomes symptomatic

B) Observe but obtain repeat urinalysis and culture in one week

C) Change Foley catheter and give oral fluconazole for 1 week

D) Change Foley catheter and IV caspofungin for 1 week

E) Change the Foley catheter and order Amphotericin B deoxycholate bladder washes daily for 5-7 days

#3

In the month of January in Chicago, a 30 year old woman in excellent health has had purulent nasal drainage, fevers to 38.5 C, sore throat, and chills for the past 14 days.

She has been able to work and to exercise on the tread mill as usual, but she feels tired in addition to her other symptoms.

She saw her primary care physician after 3 days of symptoms, who was insistent that she did not need antibiotics because her symptoms were of short duration and likely would resolve without antibiotics.

#3

She comes to you as an ID physician for another opinion a week after seeing her primary care physician.

On exam she has a temperature of 38.3C with intermittent chills, moderate pain over her sinuses, and purulent looking nasal discharge. Her CBC is still normal.

She has no drug allergies.

#3

What would be the best choice for management?

A) Cephalexin (Keflex)

B) Nasal decongestant and nasal irrigations with saline twice daily for 3-5 days but no antibiotics unless her clinical symptoms worsen

C) Clindamycin (Cleocin)

D) Amoxicillin-clavulanate (Augmentin)

E) Ciprofloxacin

#4

A 45 year old male is 10 days post-chemotherapy with cytarabine plus daunorubicin for acutemyeloidleukemia. He presents to the ED with profound weakness, fever, and watery diarrhea.

Due to a known absolute neutrophil count of <500 cells/mcL, he has been taking prophylactic once daily levofloxacin since starting chemotherapy.

Three days prior to admission, WBC was 0.1 K/mcL, hgb 9 gm/dL and platelets 26,000/mcL.

In the ED, T 103°F, BP 79/42 mm Hg, P 144/min. Immediate empiric therapy was started with meropenem and vancomycin.

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#4

The lab was unable to measure hgb due to massive hemolysis.

Peripheral smear shows "ghost" RBCs (RBCs without a cytoplasm).

Lactic acid 14 mmol/L

Total bilirubin 13.6 mg/dl, creatinine 48 mg/dL and LDH 17,000 units/L.

#4

Which one of the following is the most likely pathogen causing the clinical syndrome?

A) Clostridium perfringens

B) Clostridium sordellii

C) Escherichia coli shiga toxin

D) Group A Streptococcus

E) Bacteroides fragilis

#5

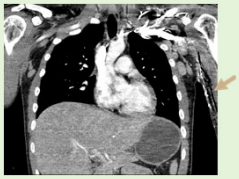
A 56-year-old man was admitted to the ICU with sepsis. His family notes that the previous day he complained of diffuse myalgias and chills and he stayed home from work. The next morning, he was unarousable. EMS was called and patient was intubated at the scene.

Physical exam was pertinent for T=34.7 C, BP=77/42 (unresponsive to fluid resuscitation), HR=126. He was unresponsive to voice, but grimaced with palpation of left upper extremity, and bilateral lower extremities. Scleral icterus was present. Extremity exam was without erythema, swelling or fluctuance, but note was made of left upper extremity crepitus on palpation.

#5

Labs revealed WBC=28.9 (96% seg), H/H=6.9/20.3, platelets=50, Cr=2.7, AST/ALT=521/312, Bil=7.2, LDH=842

CT scan of the chest is displayed below:



#5

What is the most likely predisposing factor for his illness?

A) Colon cancer

B) Poorly controlled diabetes

C) Hypogammaglobulinemia

D) Tick bite

E) Tinea pedis

#6

A 57 year old female is admitted for alcohol intoxication.

She has symptoms of an upper respiratory tract infection, is mildly tremulous, but otherwise has no complaints.

Temperature is 37°C, heart rate 110, blood pressure 145/95, respiratory rate 16. The exam is normal except for tremulousness.

Admission labs include serum sodium 132 mEq/L, serum potassium 3.2 mEq/L, serum chloride 98 mEq/L, bicarbonate 23 mEq/L, blood urea nitrogen 30 mg%, serum creatinine 1.6 mg%.

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#6

CXR is normal.

She responds well to fluids and lorazepam.

After 3 days labs have normalized and she is ready for discharge.

Two blood cultures obtained on admission grew nothing, urine culture from admission 10^4 cfu/ml of pan-susceptible MSSA (contemporaneous urinalysis 10-20 WBCs, 1+ protein, trace ketones, and a few squamous cells).

You are asked by the primary team to provide recommendations on antimicrobial therapy.

#6

Which is the following would you recommend?

A) No antimicrobial therapy

B) A 7-day course of cefazolin 1 g IV q8H

C) A 7-day course of cephalexin 500 mg po q6h

D) TMP/SMX 160/800 mg po twice daily for 3 days

E) Penicillin VK 500 mg po q6h for 7 days

#7

A 28 year old male who injects drugs is admitted for fever and left hip pain. On physical examination the temperature is 39.5°C , heart rate 130, blood pressure 110/60, respiratory rate 22.

He has a 2/6 systolic murmur at the left sternal border and difficulty moving his left hip because of pain. Renal function is normal.

#7

CXR is normal and CT of the left hip shows a large left gluteal abscess. The abscess is drained with Gram-stain of the pus showing Gram-positive cocci in clusters.

He is empirically started on vancomycin. The next day 2 of 2 blood cultures from admission are positive for Gram-positive cocci in clusters. A transthoracic echocardiogram is normal.

#7

What empirical therapy would you recommend for this patient?

A) Continue vancomycin

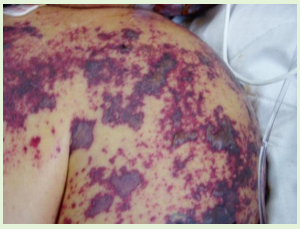
B) Continue vancomycin and add rifampin

C) Continue vancomycin and add nafcillin

D) Discontinue vancomycin and start daptomycin

E) Discontinue vancomycin and start linezolid

#8



This rash was found on a stuporous adult one morning. He had appeared well the night before other than some “flu like” symptoms.

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#8

Blood cultures of this patient are likely to grow which of the following:

A) Gram negative cocci

B) Gram positive cocci

C) Gram negative bacilli

D) Gram positive bacilli

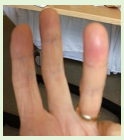
#9

A 74-year-old female presented with a 4-month history of fatigue and one month of dull, non-radiating lumbar back pain.

She had low-grade fever four months ago which resolved with three weeks of amoxicillin-clavulanate, given for sinusitis.

She has lost 10 pounds of weight, has sweating at night and recently noticed a tender swelling on her finger.

#9



She had a mitral valve repair with a prosthetic ring implanted 20 years prior and has mitral regurgitation on transthoracic echocardiogram, unchanged from 8 months prior.

#9

The finger nodule in the above photo, is suggestive of which of the following:

A) Staphylococcal felon

B) Osler's node

C) Rheumatoid nodule

D) Polymyalgia rheumatic

E) Janeway lesion

#10

A 55-year-old male carpenter consulted his orthopedic surgeon about increasing pain and stiffness in his right shoulder over the past three months.

Fifteen months previously the surgeon had performed a right shoulder arthoplasty because of severe arthritis in the shoulder. The patient had been able to return to work and reported no fever, redness or swelling.

#10

The surgeon aspirated about a milliliter of cloudy fluid from the joint which had a WBC of 2500 and a negative Gram stain, routine aerobic and anaerobic culture.

Because of concern for infection in the prosthetic joint, the surgeon plans on a two-stage joint replacement and seeks your advice about intraoperative cultures.

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#10

You recommend which of the following:

A) Obtain 3-5 pieces of tissue from the infected site and request the lab hold aerobic and anaerobic cultures for 14 days

B) Inoculate any fluid found in the joint into aerobic and anaerobic blood cultures for routine processing

C) Send swabs of the prosthetic ball and socket for aerobic and anaerobic culture

D) Request that all intraoperative cultures be stained for acid fast organism and cultured for Mycobacteria as well as routine aerobic and anaerobic cultures

E) Ask the lab to hold some of the intraoperative specimen for possible PCR testing in case the routine cultures are negative

#11

A 20-year-old woman presents with progressive pain and swelling over her right medial clavicle.

She first noticed discomfort several weeks ago that was most apparent when she used her right arm. Over the last week she became aware of swelling in this area. She has had occasional low-grade fevers over this period of time which respond to ibuprofen.

When she was 18 years old, she developed subacute osteomyelitis of her left femur. Blood cultures and bone cultures were negative. She received a course of oral antibiotics and reports that the pain in her leg improved over several months.

#11

She lives on an organic dairy farm. She denies any history of injection drug use.

On exam she is well appearing. The medial clavicle is prominent with tenderness and erythema overlying the sternoclavicular junction. ESR is 32 and CRP 14.6 mg/dL.

Plain films demonstrate lytic areas within the medial clavicle with periosteal thickening and areas of sclerosis. The sternum was normal.

#11

What do you suggest next?

A) MRI of the clavicle and bone scan

B) Percutaneous needle biopsy of the clavicle for histopathology and culture

C) Open surgical debridement of the clavicle with cultures and biopsy

D) Administer vancomycin and ceftriaxone for a six-week course

E) Administer ciprofloxacin and doxycycline for a 12-week course

#12

A 59 year old male is being treated for MSSA sternal osteomyelitis after undergoing coronary artery bypass grafting. He has been home receiving outpatient parenteral antimicrobial therapy (OPAT) with IV oxacillin.

Two weeks after discharge, fever develops. On OPAT laboratory surveillance, the following results are noted:

WBC: 18.4
neutrophils: 32%
eosinophils: 18%

#12

HCT: 31.3
PLT: 512
BUN: 24
Creatinine: 1.4 (baseline 1.1)
AST: 380
ALT: 475
Alk Phos: 166
Bili: 1.0

Oxacillin is stopped, but fever persists, and he develops a diffuse erythematous maculopapular rash on his torso and limbs.

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#12 What is your best management option?

A) Start nafcillin; advise oral diphenhydramine and continue outpatient monitoring

B) Start cefazolin and IV diphenhydramine; continue outpatient monitoring

C) Start vancomycin; hospitalize and consider corticosteroid therapy

D) Test dose cefazolin; if tolerated start IV cefazolin

E) Penicillin skin testing and test dose of nafcillin; if negative start nafcillin

#13

A 31-year-old male first grade school teacher developed fever, rhinorrhea, and malaise for several days, followed by a progressively worsening dry cough. He has now been sick for 12 days.

His chest x-ray was normal.

An empirical 5 day course of azithromycin treatment was begun on day three of his illness (he has now completed treatment 4 days ago), but he has continued to cough.

A nasopharyngeal swab, sent for Bordetella pertussis PCR, was positive. He was previously in excellent health. He received all of his childhood immunizations but nothing subsequently.

#13 The best advice for this patient would be which one of the following:

A) His clinical syndrome is not due to pertussis if his chest x-ray is normal.

B) He should not return to the classroom until his PCR is negative.

C) His students should be offered chemoprophylaxis. Students who refuse should be excused from school for 21 days.

D) If the teacher was immunized as a child, this is likely a false positive PCR.

E) All his household contacts, regardless of age and vaccine status, should receive prophylaxis.

#14

A 70-year-old male presents to the Emergency Room with confusion, slurred speech and a right sided weakness of 3 hours duration.

He had previously been healthy except taking methotrexate and infliximab for rheumatoid arthritis.

He has no history of headaches and no pain on palpation of his forehead.

MRI with gadolinium contrast showed restricted diffusion in the left posterior basal ganglia extending to the internal and external capsule, compatible with an acute stroke.

#14 LP showed:

- 90 wbc (90% mononuclear)
- 5 rbcs
- Glucose: 50 mg/dl
- Protein: 60 mg/dl

The patient's wife reports that he had shingles on his left forehead and around his eye 7 weeks ago. This began while he was on a Mediterranean cruise, delaying medical attention. While extremely painful, the rash had improved over three weeks with famciclovir and prednisone.

#14 If this lesion were caused by an infectious agent, which of the following would be the most likely etiologic agent?

A) West Nile Virus

B) CMV

C) HSV

D) VZV

E) Tick borne encephalitis virus

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#15

A 29-year-old man is referred to you for evaluation of fever and a rash, which have lasted 5 days. He returned from vacationing in South Africa 3 days ago. While there he spent most of his time at the beaches around Capetown.

On the last day of his vacation, he had the onset of fever, mild headache, and myalgias. These symptoms persisted and were accompanied by photophobia and the development of a diffuse papular rash last night. He was sexually active while on vacation with two different female partners. His past medical history is unremarkable and he is taking no medications.

#15

On examination, temperature is 100.6°F, BP 110/78 mm Hg, pulse 94/min, respirations 14. There is a diffuse, papular erythematous rash on the trunk that extends onto the extremities.

There are five dark red, 0.5–1.0-cm lesions on the right lower extremity. A few shotty cervical and inguinal lymph nodes are palpable bilaterally.

The conjunctivae are mildly injected. The oropharynx is normal as are the ears and nose. The remainder of the examination is normal.

#15

Which of the following is the most likely cause of this patient's current illness?

A) Rickettsia prowazekii

B) Rickettsia rickettsia

C) Rickettsia africae

D) Measles

E) Treponema pallidum