

40 – Daily Question Preview 4

Moderator: Paul Auwaerter

2020 INFECTIOUS DISEASE BOARD REVIEW


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2020 INFECTIOUS DISEASE BOARD REVIEW PREVIEW QUESTION

1.1

A 50-year-old woman with newly diagnosed AML developed tender, pruritic papules and plaques on her neck.




She had been febrile 38.7C for the past several days and had received a dose of G-CSF 3 days earlier, with rapid WBC increase (900 ANC).

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1.1

Most likely etiology:

- A) Candida albicans
- B) Sweet's syndrome
- C) Aspergillus niger
- D) Varicella Zoster Virus
- E) Pseudomonas aeruginosa




2020 INFECTIOUS DISEASE BOARD REVIEW PREVIEW QUESTION

1.2

A 70-year-old woman with AML, neutropenic for 15 days, s/p induction chemotherapy develops fever, diarrhea, and abdominal pain.

Exam - decreased bowel sounds and tenderness with deep palpation in her RLQ. CT shows inflammation in cecum.



She was receiving Levofloxacin and fluconazole prophylaxis.


4 days prior to her admission for chemotherapy, she ate Chinese food.

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1.2

Which is the most likely etiology?

- A) Norovirus
- B) Clostridioides (Clostridium) difficile
- C) Mixed anaerobic and aerobic bacteria
- D) Candida albicans
- E) Bacillus cereus



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1.3

A 46-year-old male 18 months s/p HLA mismatched BMT. History of GVHD skin, GI tract, and BOOP 3 months ago, treated with steroids.

One month s/p Parainfluenza 3 URI

Two weeks ago had chest CT - tree-in-bud opacities in LLL. Received levofloxacin for 10 days.

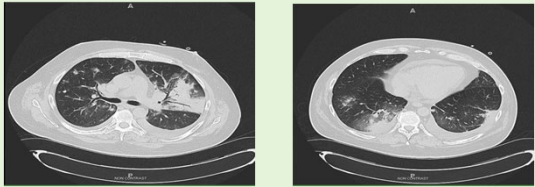
He now has increasing shortness of breath and cough.

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1.3



Two axial CT scans of the chest. The left scan shows bilateral pulmonary infiltrates, particularly in the lower lung zones, consistent with a fungal infection. The right scan shows a similar pattern of infiltrates.

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1.3

Blood cultures no growth. Sputum – LF GNR. Serum galactomannan is negative.
What is the most likely cause of his current process?

- A) *Cryptococcus neoformans*
- B) *E. coli*
- C) MRSA
- D) *Aspergillus fumigatus*
- E) *Fusarium* spp.

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1.4

72 year old female with chronic cough, normal CXR, and 1/3 sputums grow MAC.

Which one of the following you do recommend ?

- A) CT scan of chest AND Additional sputum AFB cultures
- B) Empiric therapy with azithromycin, ethambutol, and rifampin
- C) Additional sputum AFB cultures
- D) Wait for in vitro susceptibility data and then treat.

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1.5

A 52-year-old female S/P cadaveric renal transplant has been receiving tacrolimus, prednisone and mycophenylate.

Week 30 post transplant her serum creatinine rose from 1.5 to 2.3 mg/dl.

Tacrolimus levels were in therapeutic range.

Urinalysis revealed one plus protein and no cells or casts.

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1.5

Which would be most helpful in understanding if BK virus was causing her renal failure?

- A) Presence of decoy cells in urine cytology
- B) Urine BK viral load
- C) Urine culture for BK virus
- D) Plasma BK viral load
- E) Demonstration of BK inclusions in renal tubular epithelium on renal biopsy

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1.6

Liver transplant recipient presented 21 days post transplant with confusion, tremors, lethargy, anorexia

He has been on bactrim & valganciclovir prophylaxis

Rapid progressive neurologic decline > agitation & delirium > intubation

Blood & urine cultures: negative

CSF: lymphocytic pleocytosis (25 WBCs/mm³) & elevated protein
Gram stain, bacterial, fungal cultures negative

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1.6 This presentation is most consistent with:

- A) CMV encephalitis
- B) HHV6 encephalitis
- C) VZV encephalitis
- D) Rabies encephalitis
- E) Cryptococcal meningitis

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1.7 A 55-year-old male with 6d fever, malaise, severe headache, dry cough, myalgia

PMH: HTN
Meds: Lisinopril/HCT
SH: Married, suburban Maryland

Works in long-term care facility
Visited pet shop 10 days earlier
Parakeets, cockatiels
Confided infidelity in last month

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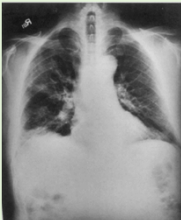
1.7 Exam: ill-toxic, 40°C P88
BP100/70 RR18 O2 97% RA
Lungs: clear
Neck: supple
Cor: no murmurs
Skin: no rashes
LP: pending

Labs:
WBC 5200, 26% B
Sputum: 1+ PMNs, no organisms

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1.7 Which antibiotic will lead to the most rapid improvement?

- A) Ceftriaxone
- B) Gentamicin
- C) Doxycycline
- D) Trimethoprim/sulfamethoxazole



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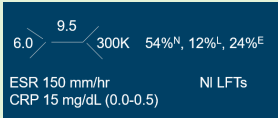
1.8 A 69-year-old male c/o fever and dyspnea x 3 days
-Dry cough, pleuritic chest pain
-In nursing facility for L foot, C1-2, L4-5 osteomyelitis + MRSA bacteremia

Vancomycin (5d, rash) > Ceftaroline (4d, hives) > Daptomycin (11d)

PMH: Diabetes, HTN, COPD, R BKA, bedbound
SH: 40 PPD smoker, now vaping, Baltimore MD resident, hx substance use
Meds: methadone, insulin, nifedipine, Lisinopril/HCT, inhalers

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1.8 PE: T101.4° F, P 106, RR 24, O2 sat 90% on 6L O2
No lymphadenopathy, no JVD
Lungs: poor air movement, basilar crackles bilaterally
Cor: no murmur
Ext: no edema



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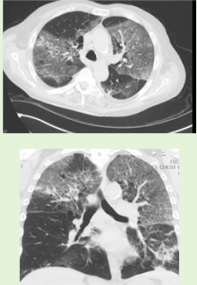
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PREVIEW QUESTION

1.8

The pneumonia is most caused by

- A) Vaping-associated pulmonary injury (VAPI)
- B) Allergic bronchopulmonary aspergillosis
- C) Ceftaroline
- D) Daptomycin
- E) Strongyloides



2020 INFECTIOUS DISEASE BOARD REVIEW

PREVIEW QUESTION

1.9

A 62-year-old male living in an exurb of Phoenix, Arizona presents in early September with a three day history of fever, myalgia, headache and rash.

He works as a lineman for a utility company.
He lives with his family in an older adobe home with dogs.

He has beginnings of petechial features on the wrists and ankles.

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PREVIEW QUESTION

1.9

Which of the following is the most likely diagnosis?

- A) Human Monocytic Ehrlichiosis (HME)
- B) Human Granulocytic Anaplasmosis (HGA)
- C) Babesiosis
- D) Rocky Mountain Spotted Fever (RMSF)
- E) Tularemia

2020 INFECTIOUS DISEASE BOARD REVIEW

PREVIEW QUESTION

1.10


A 48-year-old male presents in October with fever and rash

Patient is a supervisor for apartment building in Queens, NY.
Lives in cellar apt.

Exam: T 39.0C

Brown-black 8mm eschar on RLE

~30 papulovesicular lesions on trunk




2020 INFECTIOUS DISEASE BOARD REVIEW

PREVIEW QUESTION

1.10

Which of the following is the most likely etiologic agent?

- A) R. rickettsii
- B) R. parkeri
- C) R. akari
- D) R. conorii
- E) Borrelia recurrentis



2020 INFECTIOUS DISEASE BOARD REVIEW

PREVIEW QUESTION

1.11

A 28-year-old female presents with recurrent crampy abdominal pain for several months.

She recently returned to the U.S. after living in Tanzania for two years. Colonoscopy reveals small white papules.

Biopsy of a papule reveals a parasite (egg) with surrounding granulomatous inflammation.

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2020 INFECTIOUS DISEASE BOARD REVIEW PREVIEW QUESTION

1.11

Most likely diagnosis?


- A) Entamoeba histolytica
- B) Strongyloides stercoralis
- C) Wuchereria bancrofti
- D) Schistosoma mansoni
- E) Paragonimus westermani

2020 INFECTIOUS DISEASE BOARD REVIEW PREVIEW QUESTION

1.12

A 13-year-old girl developed a pruritic rash on her foot after moving to rural northeast Florida. Which of the following helminths is the most likely cause of the rash?

- A) Enterobius vermicularis
- B) Ascaris lumbricoides
- C) Trichuris trichiura
- D) Toxocara canis
- E) Ancylostoma braziliense



Am Fam Physician 2010, 81(2): 203-4.

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1.13

A 6-year-old boy from Indiana who has a pet dog and likes to play in a sandbox presents with fever, hepatosplenomegaly, wheezing, and eosinophilia. He has never travelled outside the continental U.S.

The most likely causative agent acquired in the sandbox is:


- A) Anisakis simplex
- B) Onchocerca volvulus
- C) Enterobius vermicularis
- D) Toxocara canis
- E) Ancylostoma braziliense

2020 INFECTIOUS DISEASE BOARD REVIEW PREVIEW QUESTION

1.14

A 56-year-old man from southern Missouri –no travel

Onset in July: Myalgia and malaise
Rash of two days duration
Tick bite 1 week ago



Exam: T 37.0° C
Annular "bull's-eye" ~6 cm
(same area engorged tic removed earlier in the week)

2020 INFECTIOUS DISEASE BOARD REVIEW PREVIEW QUESTION

1.14

Which of the following is the most likely diagnosis?

- A) Lyme disease due to Borrelia burgdorferi
- B) Human Monocytic Ehrlichiosis, Ehrlichia chaffeensis
- C) Borrelia mayonii
- D) Southern tick-associated rash illness (STARI)
- E) B. lonestari infection

2020 INFECTIOUS DISEASE BOARD REVIEW PREVIEW QUESTION

1.15

A 50-year-old female alcoholic suffered a provoked dog bite. It was cleansed, tetanus toxoid given, and the dog placed under observation.

The patient is post-elective splenectomy for ITP. She received pneumococcal vaccine one year ago.

One day later, the patient is admitted to the ICU in septic shock with severe DIC and peripheral symmetric gangrene of the tips of her fingers/toes.

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INFECTIONIOUS DISEASE BOARD REVIEW PREVIEW QUESTION

1.15

Which one of the following is the most likely etiologic bacteria?

- A) Pasteurella canis
- B) Capnocytophaga canimorsus
- C) Fusobacterium sp.
- D) Bartonella henselae

INFECTIONIOUS DISEASE BOARD REVIEW PREVIEW QUESTION

1.16

A 25-year-old female suffers a cat bite on the forearm. She presents one hour later for care.

If no antibacterial is administered, the percentage of such patients that get infected is:

- A) 0-10 %
- B) 10-30 %
- C) 30-70 %
- D) 70-100 %

INFECTIONIOUS DISEASE BOARD REVIEW PREVIEW QUESTION

1.17

A 53-year-old male construction worker has sudden onset of pain in his left calf. Within hours the skin and subcutaneous tissue of the calf are red, edematous and tender. Red “streaks” are seen spreading proximally

A short time later, patient is brought to the ER

Confused, vomiting, and hypotensive.
Temp is 40C with diffuse erythema of the skin.
Oxygen sat. 88% on room air
WBC 3000 with 25% polys and 50% band forms.
Platelet count is 60,000

INFECTIONIOUS DISEASE BOARD REVIEW PREVIEW QUESTION

1.17

Which one of the following is the most likely complication of the erysipelas?

- A) Bacteremic shock due to S. pyogenes?
- B) Toxic shock due to S. pyogenes?
- C) Bacteremic shock due to S. aureus?
- D) Toxic shock due to S. aureus?

INFECTIONIOUS DISEASE BOARD REVIEW PREVIEW QUESTION

1.18

A 60-year-old female smoker, admitted, intubated, and ventilated due to severe COPD with Acute Respiratory Failure.

Chest X-Ray: New bibasilar infiltrates and Emphysema

Empiric ceftriaxone and azithromycin

Sputum positive for both rhinovirus and Klebsiella pneumoniae resistant to both ceftriaxone and azithromycin

Also “R” to: all fluoroquinolones, aminoglycosides, pip/tazo, and all carbapenems

INFECTIONIOUS DISEASE BOARD REVIEW PREVIEW QUESTION

1.18

Which one of the following antibiotics would you select for this KPC infection?

- A) Tigecycline
- B) Ceftazidime-avibactam
- C) Aztreonam
- D) Ceftolozane-tazobactam

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INFECTIOUS DISEASE BOARD REVIEW

PREVIEW QUESTION

1.19

A 33-year-old woman is traveling to Uganda to do field studies in anthropology. She is two months pregnant.

Which of the following do you prescribe for malaria prophylaxis?

- A) Doxycycline
- B) Chloroquine
- C) Mefloquine
- D) Atovaquone/proguanil
- E) No prophylaxis

INFECTIOUS DISEASE BOARD REVIEW

PREVIEW QUESTION

1.20

A 54-year-old woman presents with fever, chills, and oliguria one week after travel to Malaysia.

Vitals: 39.0° C, HR 96/min, RR 24/min, BP 86/50

Notable labs: Hct 31%, platelets 14,000/ml, Cr of 3.2 mg/dL.

Peripheral blood smear has intraerythrocytic forms that are morphologically consistent with *Plasmodium malariae*.

INFECTIOUS DISEASE BOARD REVIEW

PREVIEW QUESTION

1.20

The most likely infectious agent causing the patient's illness is:

- A) *Plasmodium malariae*
- B) *Plasmodium knowlesi*
- C) *Plasmodium vivax*
- D) *Plasmodium falciparum*
- E) *Babesia microti*