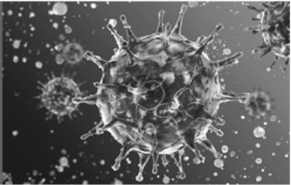


BR3 –Board Review: Day 3

Moderator: Paul Auwaerter, MD

IDBR
INFECTIOUS DISEASE BOARD REVIEW
AUGUST 17-21, 2024



Board Review: Day 3

Moderator: Paul Auwaerter, MD
Faculty: Drs. Bell, Bennett, Dhanireddy, Dorman, Ghanem, Klompas, and Winthrop

7/1/2024

BOARD REVIEW DAY 3 **INFECTIOUS DISEASE BOARD REVIEW 2024**

#27 A 55-year-old man presents for outpatient evaluation of subjective fevers and recurrent pruritic skin eruption.

He is currently asymptomatic.

He notes that over the last 6 months he has had >5 episodes of hives that resolve with Benadryl.

He has felt hot during these episodes but has not taken his temperature.

1 of 4

BOARD REVIEW DAY 3 **INFECTIOUS DISEASE BOARD REVIEW 2024**

#27 There are no additional symptoms, and he is not aware of any precipitating factors.

The patient owns a tree nursery and is frequently outdoors. He lives in Kentucky and denies travel.

He recalls multiple tick bites over the last year prompting his PCP to send tick serologies. *Rickettsia rickettsii* antibodies are negative.

An IFA for *Ehrlichia chaffeensis* is elevated at 1:256.

2 of 4

BOARD REVIEW DAY 3 **INFECTIOUS DISEASE BOARD REVIEW 2024**

#27 What is the most appropriate next step in management for this patient?

- A) Doxycycline
- B) Convalescent *Ehrlichia* serologies
- C) Prednisone dose pack
- D) Dietary modification
- E) Stool O&P

3 of 4

BOARD REVIEW DAY 3 **INFECTIOUS DISEASE BOARD REVIEW 2024**

#28 You've been charged with leading a program to decrease ventilator-associated pneumonia (VAP) rates in the medical intensive care unit.

You gather a multidisciplinary team with nurses, doctors, respiratory therapists, pharmacists, physical therapists, and the unit clerk.

1 of 3

BOARD REVIEW DAY 3 **INFECTIOUS DISEASE BOARD REVIEW 2024**

#28 Which of the following initiatives is most likely to lower VAP rates and improve outcomes for patients on mechanical ventilation?

- A) Begin bathing patients twice daily with povidone iodine
- B) Provide oral care with 0.12% chlorhexidine solution twice daily
- C) Switch to using silver coated endotracheal tubes for all patients
- D) Introduce a protocol to minimize sedation and increase patient mobility
- E) Put patients in the Trendelenburg position in order to encourage drainage of respiratory secretions away from the lungs

2 of 3

BR3 –Board Review: Day 3

Moderator: Paul Auwaerter, MD

BOARD REVIEW DAY 3

INFECTIOUS DISEASE BOARD REVIEW 2024

#29 A 50-year-old-woman with psoriatic arthritis presented with two weeks of cough, dyspnea, fever, and malaise. She had been treated with prednisone and methotrexate for several years. She was started on infliximab about 10 months prior to this illness.

1 of 6

BOARD REVIEW DAY 3

INFECTIOUS DISEASE BOARD REVIEW 2024

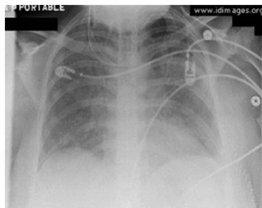
#29 On physical exam, she appeared short of breath. Her respiratory rate was 32 and her oxygen saturation was 96% on 100% FiO₂ supplemental O₂. Her lungs had coarse rales bilaterally, decreased breath sounds at bases.

2 of 6

BOARD REVIEW DAY 3

INFECTIOUS DISEASE BOARD REVIEW 2024

#29 Her CXR showed bilateral pulmonary infiltrates, and she underwent lung biopsy.

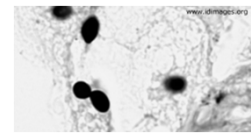
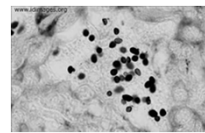


3 of 6

BOARD REVIEW DAY 3

INFECTIOUS DISEASE BOARD REVIEW 2024

#29 Lung Biopsy
Silver stain: organisms 2-5 microns in size, narrow based budding



4 of 6

BOARD REVIEW DAY 3

INFECTIOUS DISEASE BOARD REVIEW 2024

#29 Which one of the following is the most likely diagnosis?

- A) Histoplasmosis
- B) Pneumocystis pneumonia
- C) Coccidioidomycosis
- D) Cryptococcosis
- E) Blastomycosis

5 of 6

BOARD REVIEW DAY 3

INFECTIOUS DISEASE BOARD REVIEW 2024

#30 A primary care physician asks you about TB testing for one of her patients. Her patient is a 30-year-old accountant in a midwestern United States city who has never traveled outside the United States. The accountant is in excellent health, takes no medications, and has no known exposures to tuberculosis. The accountant has never been tested for latent TB.

1 of 3

BR3 –Board Review: Day 3

Moderator: Paul Auwaerter, MD

BOARD REVIEW DAY 3

INFECTIOUS DISEASE BOARD REVIEW 2024

#30 What would you advise regarding testing this patient for latent tuberculosis?

- A) PPD skin test
- B) Interferon gamma release test (IGRA)
- C) IGRA: if negative, follow up with a PPD
- D) No testing

2 of 3

BOARD REVIEW DAY 3

INFECTIOUS DISEASE BOARD REVIEW 2024

#31 A 62-year-old woman with no medical issues, normal BMI, who is vegetarian and does regular yoga asks if she should get the RSV vaccine.

1 of 3

BOARD REVIEW DAY 3

INFECTIOUS DISEASE BOARD REVIEW 2024

#31 What do you tell her about this vaccine?

- A) Given that it is approved for her age cohort, she should get it if she wants it
- B) Those most likely to benefit from this vaccine include those with comorbidities or who are over the age of 75 years; given that she does not have any of those risk factors, she may wish to consider waiting
- C) Her brother's history puts her at higher risk for Guillain-Barre syndrome after vaccination
- D) It is a relatively new vaccine, and you are not recommending it for anyone

2 of 3

BOARD REVIEW DAY 3

INFECTIOUS DISEASE BOARD REVIEW 2024

#32 A 24-year-old transgender woman presents for evaluation of rectal discharge. She has engaged in unprotected receptive anal intercourse on several occasions over the last few months. She takes cabotegravir injections every 2 months for prevention of HIV, as well as citalopram for generalized anxiety.

1 of 4

BOARD REVIEW DAY 3

INFECTIOUS DISEASE BOARD REVIEW 2024

#32 She has no known medication allergies. A rectal swab for nucleic acid amplification testing (NAAT), is positive for *Neisseria gonorrhoea* and negative for *Chlamydia trachomatis*.

2 of 4

BOARD REVIEW DAY 3

INFECTIOUS DISEASE BOARD REVIEW 2024

#32 Which of the following describes the recommended management of this patient, according to the Centers for Disease Control and prevention (CDC) guidelines?

- A) Doxycycline 100 mg by mouth twice daily for 10 days
- B) Cefixime 500 mg po single dose
- C) Ceftriaxone 500 mg single dose via intramuscular injection
- D) Ceftriaxone 500 mg single dose via intramuscular injection, plus azithromycin 2 grams orally in a single dose
- E) Azithromycin 2 grams orally in a single dose

3 of 4

BR3 –Board Review: Day 3

Moderator: Paul Auwaerter, MD

BOARD REVIEW DAY 3

INFECTIOUS DISEASE BOARD REVIEW 2024

#33 A distraught nurse pages you to report that she just got splashed in the eye while irrigating a deep sacral wound in a patient with hepatitis C. There was visible blood in the wound. The patient's hepatitis C viral load is over 3 million copies/ml. The nurse advises you that she is pregnant.

1 of 3

BOARD REVIEW DAY 3

INFECTIOUS DISEASE BOARD REVIEW 2024

#33 How will you advise this nurse?

- A) Start post-exposure prophylaxis with sofosbuvir-velpatasvir now
- B) Start post-exposure prophylaxis with sofosbuvir-velpatasvir as soon as the nurse delivers her baby
- C) Get a hepatitis C viral load now. If negative, nothing more needs to be done
- D) Get an HCV antibody test now, in 3-6 weeks, and in 4-6 months. If negative, nothing more needs to be done
- E) Get an HCV antibody test now, a hepatitis C viral load in 3-6 weeks, and an antibody test again in 4-6 months. If negative, nothing more needs to be done

2 of 3

BOARD REVIEW DAY 3

INFECTIOUS DISEASE BOARD REVIEW 2024

#34 A 56-year-old white male with cavitary pulmonary disease due to *Mycobacterium abscessus* is transferred to your care. He is thought to be failing therapy. He is currently being treated with azithromycin, clofazimine, and moxifloxacin. He started this regimen 6 weeks ago with intravenous amikacin but had sudden onset of tinnitus and the amikacin was stopped a month ago.

1 of 4

BOARD REVIEW DAY 3

INFECTIOUS DISEASE BOARD REVIEW 2024

#34 His antibiotic susceptibility testing reports "susceptibility" to each of the medications within the current regimen except the moxifloxacin which has an MIC of 4.0. Tigecycline and linezolid were tested as possible additional agents for this patient and were found to be in "susceptible" range.

2 of 4

BOARD REVIEW DAY 3

INFECTIOUS DISEASE BOARD REVIEW 2024

#34 Which of the drugs being tested may fail because of induced resistance in an isolate that appears susceptible on routine testing?

- A) Clofazimine
- B) Tigecycline
- C) Moxifloxacin
- D) Azithromycin
- E) Linezolid

3 of 4

BOARD REVIEW DAY 3

INFECTIOUS DISEASE BOARD REVIEW 2024

#35 In July, an 18-year-old girl in rural northern Louisiana presented with a 5 cm diameter fiery red, round, well-demarcated macular lesion on the back of her left knee. The lesion had been present for at least 2 days, accompanied by moderate headache and malaise but not fever. The lesion was not painful or pruritic.

1 of 4

BR3 –Board Review: Day 3

Moderator: Paul Auwaerter, MD

BOARD REVIEW DAY 3 INFECTIOUS DISEASE BOARD REVIEW 2024

#35 She had removed a tick from the area of the lesion. No inguinal adenopathy was palpable. Routine laboratory work was normal.

2 of 4

BOARD REVIEW DAY 3 INFECTIOUS DISEASE BOARD REVIEW 2024

#35 Which tick would be the most likely vector for this illness?

A) *Dermacentor andersoni*
B) *Ixodes pacificus*
C) *Amblyomma americanum*
D) *Ixodes scapularis*
E) *Ornithodoros parkeri*

3 of 4

BOARD REVIEW DAY 3 INFECTIOUS DISEASE BOARD REVIEW 2024

#36 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.

1 of 4

BOARD REVIEW DAY 3 INFECTIOUS DISEASE BOARD REVIEW 2024

#36 On OPAT laboratory surveillance, the following results are noted:

WBC: 18.4	Creatinine: 1.4 (baseline 1.1)
neutrophils: 32%	AST: 380
eosinophils: 18%	ALT: 475
HCT: 31.3	Alk Phos: 166
PLT: 512	Bili: 1.0
BUN: 24	

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

2 of 4

BOARD REVIEW DAY 3 INFECTIOUS DISEASE BOARD REVIEW 2024

#36 What is the 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

3 of 4

BOARD REVIEW DAY 3 INFECTIOUS DISEASE BOARD REVIEW 2024

#37 A patient with HIV Infection on dolutegravir, emtricitabine, tenofovir alafenamide was recently found to have converted his PPD to positive and was placed on daily isoniazid plus pyridoxine since he thought he could remember a daily regimen and did not want to take rifampin or rifapentine due to fear of drug interactions with psychotropic medications he was taking.

1 of 4

BR3 –Board Review: Day 3

Moderator: Paul Auwaerter, MD

BOARD REVIEW DAY 3

INFECTIOUS DISEASE BOARD REVIEW 2024

- #37** He has no comorbidities or concurrent medical issues.
His evaluation for active TB was negative.
He comes back after two months and admits that he never takes his pyridoxine.

2 of 4

BOARD REVIEW DAY 3

INFECTIOUS DISEASE BOARD REVIEW 2024

- #37** What toxicity is most likely to occur if he fails to take pyridoxine?
- A) Encephalopathy
 - B) Peripheral neuropathy
 - C) Hepatitis
 - D) Dermatitis
 - E) Microcytic anemia

3 of 4

BOARD REVIEW DAY 3

INFECTIOUS DISEASE BOARD REVIEW 2024

- #38** An 18-year-old woman is considering the desirability of getting HPV vaccine.
She asks about the advantages of 9 valent HPV vaccine for her and her male sexual partners.
Among the information you might consider telling her is that vaccine has a high rate of protection against acquiring cervical HPV, cervical dysplasia, and likely developing cervical cancer.

1 of 3

BOARD REVIEW DAY 3

INFECTIOUS DISEASE BOARD REVIEW 2024

- #38** Which of the following limitations of the 9 valent vaccine is correct?
- A) Will not prevent her developing HPV associated anogenital warts
 - B) Will not prevent transmitting infection to her male sexual partner
 - C) Will not prevent her from developing HPV associated oropharyngeal cancer
 - D) Will only prevent HPV infection for 2-5 years
 - E) Will not eradicate an existing infection

2 of 3

BOARD REVIEW DAY 3

INFECTIOUS DISEASE BOARD REVIEW 2024

- #39** A medical products vendor approaches you as the head of your hospital's infection control committee to share data with you on a promising new endotracheal tube design.
The vendor describes a randomized controlled trial in which they were able to demonstrate that the new endotracheal tube was associated with a 32% decrease in ventilator-associated pneumonia (VAP) rates. You're intrigued but want to know more.

1 of 3

BOARD REVIEW DAY 3

INFECTIOUS DISEASE BOARD REVIEW 2024

- #39** Which of the following questions is most likely to help you better understand the potential benefits of this new technology and whether you ought to advocate for its adoption in your hospital?
- A) What country was the study performed in?
 - B) What was the impact of the intervention on duration of mechanical ventilation?
 - C) What kind of ICU was the study performed in?
 - D) How large was the study population?
 - E) Did the study include post-operative patients?

2 of 3