

Infectious Diseases MCQs

1. Gm positive diplococci are seen on CSF gram stain. Which antibiotics should be given to this patient pending the culture result?
2. In CSF of a patient with viral meningitis, the most prominent white cell is usually?
 - a) monocytes
 - b) lymphocytes
 - c) polymorphs
 - d) eosinophils
 - e) granulocytes
3. Which is the most common organism/s causing osteomyelitis in all age groups?
 - a) streptococci
 - b) staph aureus
 - c) gm negatives
 - d) hemophilus
 - e) fungal
4. Which organism can not be detected by antigen testing of CSF, serum or urine?
 - a) cryptococcus neoformans
 - b) TB
 - c) E. coli
 - d) Hemophilus
 - e) Group B strep
5. Which is not an AIDS defining illness?
 - a) oesophageal candidiasis
 - b) PCP
 - c) CD4 count <200 cells/microL
 - d) Pulmonary TB
 - e) Herpes Zoster
 - f) invasive cervical cancer
6. Which is not a common cause of respiratory symptoms in HIV/AIDS patients?
 - a) community acquired bacterial pneumonia
 - b) non hodgkins lymphoma
 - c) Pulmonary Embolus
 - d) CMV
 - e) PCP
7. Which of these pulmonary conditions is most likely to be seen with a CD4 count between 200 and 500?
 - a) pulmonary TB
 - b) CMV
 - c) PCP
 - d) Kaposi sarcoma
 - e) cryptococcus
8. Which is FALSE regarding PCP pneumonia in AIDS?
 - a) it is usually only seen when the CD4 count <200
 - b) prophylaxis should be given in all pts with CD4 count <200
 - c) CXR characteristically shows bilateral diffuse infiltrates
 - d) Once a patient has had it they are unlikely to get it again
 - e) CXR may be normal in up to 20% of patients

9. Which statement is true regarding CT and LP in AIDS patients?

- a) they should all have a CT prior to LP
- b) if they have no focal neurology they do not need an CT
- c) if they have a GSC of 15 they do not need an CT
- d) if they are not febrile they do not need a CT
- e) all of the above are true

10. Which vaccination should not be given to HIV sufferers?

- a) ADT
- b) Pneumococcal
- c) MMR
- d) DPT
- e) Inactivated polio vaccine

11. Which drug should not be given with midazolam?

- a) zidovudine
- b) lamivudine
- c) nevirapine
- d) indinavir
- e) ritinovir

12. Which drug regimen in AIDS is usually used?

- a) 2 nucleosides and nevirapine
- b) 2 nucleosides and a protease inhibitor
- c) 1 nucleoside, nevirapine and a protease inhibitor
- d) A and B
- e) A, B and C

13. Which agent should not be part of the management of generalized tetanus?

- a) metronidazole
- b) penicillin
- c) midazolam
- d) tetanus immunoglobulin
- e) labetalol

14. A 60 year old lady presents with a skin tear to her left shin on her coffee table. She is unsure of her previous immunization status. How should this be managed?

- a) ADT only
- b) ADT plus immunoglobulin
- c) Immunoglobulin only
- d) Neither
- e) Immunoglobulin, ADT plus antibiotics

15. Which is not a differential diagnosis for tetanus?

- a) strychnine poisoning
- b) dystonic reactions
- c) quinsy
- d) rabies
- e) cyanide poisoning

16. Which animal is least associated with rabies?

- a) dogs
- b) skunks
- c) foxes
- d) rats
- e) bats

17. Which does not require post exposure prophylaxis for rabies?

- a) scratch
- b) bite on face
- c) bite on extremity
- d) skin contact with blood, urine or faeces
- e) mucous membrane exposure to a bat

18. In which illness can hydrophobia be seen?

- a) tetanus
- b) malaria
- c) rabies
- d) EBV
- e) HSV 1

19. Which organism is least likely to show the characteristic periodicity of fever in malaria?

- a) *P. malarie*
- b) *P. vivax*
- c) *P. ovale*
- d) *P. falciparum*
- e) none of them

20. Which statement is not true?

- a) negative thick and thin smears does not adequately rule out malaria
- b) *falciparum* malaria will always show up on thick and thin smears where the others may not
- c) chloroquine is the drug of choice to treat *falciparum*
- d) *vivax* and *ovale* are more likely to reactivate at a later stage
- e) a normochromic, normocytic anaemia is usually seen

21. Which statement is not true?

- a) chloroquine does not extinguish the dormant liver phase in *vivax* and *ovale*
- b) malaria is possible even if full prophylaxis is taken
- c) splenomegally with rupture is possible
- d) a maculopapular rash is characteristic and common.
- e) *vivax*, *ovale* and *malarie* can all be managed as outpatients if the pt is otherwise well and healthy

22. Which atypical pneumonia can be vaccinated against?

- a) *coxiella burnetti*
- b) *mycoplasma pneumoniae*
- c) *chlamydia pneumoniae*
- d) *legionella*
- e) *chlamydia psittaci*

23. Which antibiotic is not recommended as first line therapy for the associated bug?

- a) *legionella* – erythromycin
- b) *chlamydia psittaci* – doxycycline
- c) *chlamydia pneumoniae* – doxycycline
- d) *mycoplasma pneumoniae* – roxythromycin
- e) *coxiella burnetti* - doxycycline

24. Which is not associated with atypical pneumonia?

- a) abnormal LFT'S
- b) hypernatremia
- c) hypophosphatemia
- d) bilateral patchy infiltrates on CXR
- e) elevated cold agglutins

25. A previously well 25 week pregnant lady presents as a neighbour's child she was looking after 2 days ago has developed chicken pox. What would you advise?

- a) Check her serology
- b) Zoster immunoglobulin if negative serology
- c) Prophylactic aciclovir if negative serology
- d) A and B
- e) A, B and C
- f) Nil treatment, present if develops chicken pox, she should then be given aciclovir

26. A 20 day old neonate born at term is exposed to a child with chicken pox, what intervention should take place?

- a) Give ZIG to all such neonates
- b) give ZIG depending on mother's serology
- c) give aciclovir to all
- d) give aciclovir depending on mother's serology
- e) Nil treatment, present if develops chicken pox, it should then be given IV aciclovir

27. Which is the most common organism infecting coral cuts?

- a) non-cholera vibrio
- b) mycobacterium marinum
- c) aeromonas species
- d) e coli
- e) strep pyogenes

28. Which is not true of gangrene?

- a) it is usually caused by clostridium perfringens
- b) pain is out of proportion to the soft tissue injury
- c) hyperbaric oxygen is recommended
- d) gas must be seen on a plain xray
- e) surgical debridement is a must

29. How do you decrease the severity and duration of pertussis infection?

- a) you don't
- b) erythromycin
- c) benzyl penicillin
- d) ampicillin
- e) ciprofloxacin

30. What is the highest likelihood that a doctor acquires HIV from a needlestick injury from an HIV pt?

- a) 0.3%
- b) 2%
- c) 5%
- d) 10%
- e) 30%

31. What is the highest likelihood that a person will acquire Hep B from an eye splash with blood from a Hep B infected patient? Choose from the list above.

32. Which of these does not need treatment of the sexual partner?

- a) trichomonas vaginalis
- b) bacterial vaginosis
- c) candida
- d) chlamydia
- e) gonorrhoea

33. In which of these do you see clue cells?

- a) trichomonas vaginalis
- b) bacterial vaginosis
- c) candida
- d) HSV 2
- e) Primary syphilis

34. How do you treat secondary syphilis?

- a) oral penicillin
- b) i.m. penicillin
- c) i.v. penicillin
- d) erythromycin
- e) none of the above

35. Which is not true of secondary syphilis?

- a) it occurs 3-6 weeks after the primary stage
- b) it involves nonspecific symptoms eg, headache malaise
- c) there is lymphadenopathy
- d) there is a rash, which is pink plaques
- e) investigation involves dark field microscopy, VRDL and treponema antibody tests

36. Which does not cause genital ulceration?

- a) syphilis
- b) herpes simplex infection
- c) HIV
- d) lymphogranuloma venereum
- e) chancroid

37. Which of these causes of gastroenteritis usually requires treatment with antibiotics?

- a) shigella
- b) salmonella
- c) e-coli
- d) giardia
- e) campylobacter

38. Which of these organisms causing gastroenteritis produce the toxin in the food prior to ingestion?

- a) vibrio cholera
- b) salmonella
- c) e coli
- d) clostridium perfringens
- e) staph aureus

39. Which organism is most commonly responsible for travelers diarrhea?

- a) toxigenic strain of e coli
- b) clostridium difficile
- c) salmonella
- d) rotavirus
- e) vibrio cholera

40. Which agent is the usually choice for moderate to severe travelers diarrhea?

- a) metronidazole
- b) doxycycline
- c) norfloxacin
- d) penicillin
- e) cotrimoxazole

ANSWERS

1) cef, benzyl pen, vanc

2)A 3)B 4)B 5)E 6)C 7)A 8)D 9)E 10)C 11)D 12)D 13)B
14)A 15)E 16)D 17)D 18)C 19)D 20)C 21)D 22)A 23)C 24)B 25)A
26)B 27)E 28)D 29)A 30)A 31)E 32)B 33)B 34)B 35)D 36)C 37)D
38)E 39)A 40)C

26. The most frequent aerobic organism isolated in human bites is

- a. Pasteurella multocida
- b. Eikenella corrodens
- c. Haemophilus aphrophilus
- d. Streptococcus viridans
- e. Capnocytophaga canimorsus

27. The suture material which poses the highest risk of infection is

- a. Vicryl
- b. Chromic gut
- c. Silk
- d. Prolene
- e. Nylon

10A 56 yo man presents with a penetrating wound to his leg from a wooden stake. The wound is contaminated with debris.

His last tetanus booster was 12 years ago, but records reliably indicate he's had 3 doses of tetanus vaccine.

The most appropriate anti-tetanus regimen for him is:

- a) ADT (Adult Diphtheria Tetanus) *plus* tetanus Ig (immunoglobulin)
- b) Tetanus Ig only
- c) ADT only
- d) Child diphtheria tetanus, as he is immunologically "immature"
- e) Nothing. No vaccine is indicated

18 Post exposure prophylaxis against Human Immunodeficiency Virus (HIV):

- a) is probably not effective when commenced 36 hours post exposure
- b) is administered intramuscularly
- c) is generally well-tolerated by patients
- d) when given, precludes the need for follow up serology
- e) is absolutely contra-indicated in pregnant women

24 In infective endocarditis

- A. oslers nodes are tender
- B. Janeway lesions are tender
- C. Right ventricular Mi is more likely to be acute than subacute
- D.

A+C

4. Early Goal Directed Therapy in severe sepsis and septic shock (Rivers *et al*) does NOT recommend:
- a) hydrocortisone 100mg QID
 - b) maintaining mixed venous oxygen saturation measurement >70%
 - c) maintaining CVP between 8-12mmHg
 - d) using ionotropes to keep MAP > 65mmHg <90mmHg
 - e) dobutamine infusion if SvO₂ <70% despite the optimisation of CVP, MAP and Hct.
- (a: Rivers et al. Early Goal-Directed Therapy in the Treatment of Severe Sepsis and Septic Shock. NEJM, Nov 8, 2001, No.19. Volume 345:1368-1377)

A

1. An intra-venous drug user with endocarditis has a TOE and multiple blood cultures taken. He is most likely to have:
- a) tricuspid valve involvement and s.aureus on blood culture
 - b) tricuspid valve involvement and enterococci on blood culture
 - c) mitral valve involvement and mixed growth on blood culture
 - d) tricuspid valve involvement and candida on blood culture
 - e) tricuspid valve involvement and negative blood cultures
- Tint 1995

A

35. Tetanus:
- a) is caused by clostridium tetani endotoxin
 - b) is associated with a better prognosis if the incubation period is short
 - c) can be manifest by rigidity of muscles in close proximity to the area of the initial injury
 - d) usually presents with weakness in the extremities which then progresses to the facial muscles
 - e) has no effect on the autonomic nervous system
- Tint 965

C

50. Regarding HIV/AIDS
- a) Shingles, seborrhoeic dermatitis and recurrent HSV infections are typical of early infection.
 - b) A CD4 count of $1.0 \times 10^9 / L$ is associated with late stage AIDS.
 - c) Pre and post test counselling for HIV serology is now no longer mandatory.
 - d) Pneumococcus is a more likely pathogen than TB in AIDS patients with pneumonia.
 - e) Toxoplasma typically causes a retinitis.
- Cam chap 8.8

D

5. Which ONE of the following is NOT a diagnostic criterion for Kawasaki's disease?
- a) fever for 5 days
 - b) bilateral non purulent conjunctivitis
 - c) generalised lymphadenopathy
 - d) polymorphous rash
 - e) changes in extremities, such as oedema and desquamation
21. Which ONE of the following is consistent with scarlet fever:
- a) Punctate rash on neck and trunk
 - b) Circumoral erythema

- c) Geographic tongue
- d) Only occurs in association with streptococcal pharyngitis
- e) Resolution without desquamation

5. 30yr NZ man goes to PNG, takes 300mg chloroquine weekly for 2 weeks prior and 4 weeks post his trip. 3/12 later gets febrile/sweats/maleana with malaria parasites on film. The following is true

- a) He took ½ the normal dose of chloroquine
- b) If he took primaquine for 2/52 this wouldn't have happened
- c) Assume chloroquine resistance and treat accordingly
- d) This is probably p. falciparum
- e) ?

Prophylaxis: short stay chloroquine sensitive area: 250mg, weekly, 1/52 prior & 4/52 post

Chloroquine resistant area: mefloquine 250mg, weekly, 1/52 prior, 4/52 post

Areas of resistance: East Africa, PNG, Thailand, Vietnam, Philippines

If severe assume p. falciparum

Severe = ALOC, jaundice, oliguria, severe anaemia, severe hypoglycaemia, vomiting, acidosis, level > 10%

21. Tetanus:

- a) typically has an incubation period of 23 days
- b) immunization status is particularly poor in elderly women ?
- c) toxoid is more effective by S.C. injection
- d) IgG will provide passive protection for about a week
- e) immunisation is not safe in pregnancy

36. Toxic shock syndrome:

- a) will often manifest without fever x fever >38.9
- b) is a misnomer because BP is often maintained x hypotension or orthostatic hypotension
- c) is caused by pseudomonas species x staph
- d) often produces elevated creatinine kinase ?
- e) produces a discrete papular rash ?

38. Erysipelas

- a) responds to erythromycin ?
- b) is caused strep pneumoniae ?
- c) results from microorganism exotoxin production x
- d) typically occurs on the neck x
- e) shares a similar aetiology to toxic epidermal necrolysis x

62. Cytomegalovirus causes:

- a) infantile bronchiolitis
- b) retinitis
- c) chronic
- d) neonatal encephalitis
- e) Kaposi's sarcoma

21.B 36. D 38. A 62.B

- 4) Regarding infective endocarditis in an IVDU
- a. Usually presents with fever and respiratory symptoms
 - b. Usually involves the mitral valve
 - c. The commonest organism is staph epidermidis
 - d. Negative blood cultures exclude the diagnosis
 - e.

- 14) Regarding PID
- a. Trichomonas and Gardnerella are commonest organisms
 - b. Associated with irregular menstruation
 - c. Absence of fever and cervical excitation excludes diagnosis
 - d.
 - e.

- 4) Regarding infective endocarditis in an IVDU
- a. *Usually presents with fever and respiratory symptoms. – Commonly right sided valvular lesions which embolise to lung.
 - b. Usually involves mitral valve. Crap – usually involves tricuspid
 - c. Commonest organism is staph epi. Crap – staph aureus or strep viridans
 - d. Negative blood cultures exclude the diagnosis. Crap – they are usually positive but not always especially if bacterial showers are missed.

- 14) Regarding PID
- a. Trich and Gardnerella are most common. Crap – chlamydia and gonorrhoea. Gardnerella is an STD but not invasive – has clue cells. Trichomonas is an STD with a fishy smell
 - b. Associated with irregular menses. Bosh
 - c. *Absence of fever and cervical excitation excludes diagnosis. True seeing as these are criterion of inclusion for diagnosis but known to be notoriously inaccurate

35) A 20 year old male from New Zealand travels to PNG after taking a prophylactic course of doxycycline. He presents to ED 4 weeks after returning with intermittent fever and night sweats. Which of the following statements is true?

- a. Primaquine is the correct treatment for vivax
- b. Chloroquine should have been the prophylaxis of choice
- c.
- d.
- e.

35) A 20 year old male from NZ travels to PNG after taking a course of doxy. He presents 4 weeks after returning with intermittent fever and night sweats. Which is true?

- a. *Primaquine is the correct treatment for vivax. True but usually chloroquine as well. Primaquine gets rid of liver infestations
- b. Chloroquine should have been the prophylaxis of choice. Flase – lots of resistant falciparum in PNG

7All of the following are true about erysipelas EXCEPT

- A. facial and scalp manifestations occur in infants and the elderly
- B. it progresses to skin desquamation
- C. bacteremia common in the lower extremity manifestations
- D. fever
- E. a sharp well-demarcated edge.

22 An HIV-positive patient presents to the ED complaining of shortness of breath and non-productive cough. Chest x-ray shows diffuse interstitial infiltrates, and O₂ saturation is 85% on room air. All of the following statements regarding this patient's probable diagnosis are TRUE, EXCEPT

- F. *Pneumocystis carinii* pneumonia (PCP) is the most common opportunistic infection in AIDS patients.
- G. Pentamidine isothionate is an effective alternate therapy to TMP-SMX.
- H. A normal chest x-ray rules out acute PCP infection.
- I. 65% of patients relapse within 18 months.
- J. Oral steroid therapy should be started in patients with a PaO₂ < 70 mmHg, or an alveolar-arterial gradient > 35.