

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ
(وَفَوْقَ كُلِّ ذِي عِلْمٍ عَلِيمٌ)



جِلْدَان

MSS Microbiology | FINAL

Past papers, Activities & Test Bank



Written by : DST & NST

Reviewed by : Bushra Masalha
Rawan Okour
Tuqa Al-Soud

Lecture 5



Activities Questions

Q1

What is the most common bacterial cause of hot tub folliculitis?

- A) *Staphylococcus epidermidis*
- B) *Propionibacterium acnes*
- C) *Pseudomonas aeruginosa*
- D) *Streptococcus pyogenes*
- E) *E. coli*
- F) *Serratia*

Ans:C

Q2

Which one of the following statements is true regarding acne vulgaris?

- a) Several different types of acne lesions exist and include inflammatory papules and pustules
- b) Laboratory diagnosis of acne vulgaris is necessary
- c) Treatment includes the use of topical antifungals
- d) The causative agent is a gram-negative bacteria that is a major part of the skin microbiome

Ans:a

Q3

Why do acne vulgaris lesions predominantly affect the face, chest, and back?

- a) These areas are colonized by *Candida albicans*
- b) These sites are rich in apocrine glands
- c) These regions have the densest number of sebaceous glands
- d) The skin is thinner in these areas
- e) These areas have lower pH

Ans:c

Q4

A culture from a pustule reveals *Staphylococcus aureus*. The lesion began as a folliculitis and progressed to multiple interconnected draining sinuses. What is the diagnosis?

- a) Furuncle
- b) Carbuncle
- c) Cellulitis
- d) Impetigo
- e) Ecthyma

Ans:b

Q5

Why does HSV-1 cause lifelong mucocutaneous infections?

- a) The virus integrates into host DNA
- b) They evade humoral immunity
- C) They establish latency in sensory ganglia
- d) They undergo rapid antigenic shift
- e) They infect immune-privileged sites

Ans:c

Q6

A child presents with fever and lesions on the tongue, palms, and soles. Which virus is the likely cause?

- a) VZV
- b) HSV-1
- c) HSV-2
- d) Coxsackievirus A16

Ans:d

Q7

Which virus most commonly causes fever blisters?

- a) HSV-2
- b) HSV-1
- c) VZV
- d) Enterovirus 71
- e) Coxsackievirus A16
- f) Coxsackievirus A6

Ans:b

Q8

What is the gold standard stain for observing multinucleated giant cells in HSV lesions?

- a) Gram stain
- b) Ziehl-Neelsen stain
- c) Tzanck smear
- d) India ink
- f) PAS stain

Ans:c

Q9

Which virus causes reactivation along dermatomes leading to postherpetic neuralgia?

- a) HSV-1
- b) HSV-2
- c) VZV
- d) Enterovirus 71
- e) Coxsackievirus A

Ans:c

Q10

Which one of the following statements is false regarding cutaneous infections that manifest in purulent lesions?

- a) Carbuncle is a painful infection involving an aggregate of contiguous hair follicles, with multiple drainage points often occurring at the back of the neck
- b) Folliculitis is a superficial pustule located at the orifice of the hair follicle
- c) Furuncles are deeper purulent lesions of hair follicles involving the skin and subcutaneous tissue
- d) Staphylococcus aureus is the most common cause folliculitis, furuncles, and carbuncles
- e) Treatment of carbuncle lesions by systemic antibiotics is sufficient .

Q11

Which one of the following statements is TRUE regarding cutaneous infections that manifest in vesicles, bullae, and purulent lesions?

- a) Tzanck smear can distinguish between HSV-1 and VZV infections
- b) Disseminated gonococemia typically presents with coalescing vesicles on the trunk
- c) HSV-1 lesions are often described as grouped vesicles on an erythematous base
- d) Hand-foot-mouth disease caused by Enterovirus 71 never involves vesicles
- e) Bullae from Staphylococcus aureus infections contain multinucleated giant cells

Q12

Which dermatologic condition manifest in the skin as dewdrops on rose petals?

- a) Hand foot and mouth disease
- b) Gonococemia
- c) Varicella
- d) Zoster
- e) Herpangina
- f) Acne vulgaris
- g) Boils

Ans:c



Past papers

The only question I found for Dr. Malik

What is the most accurate:

- A) Acne vulgaris causitive agent is a gram positive bacteria and abundant in mucrobiome
- B) Furuncles causitive agent is staph. aureus that can begin as fusculitis and end as coalesing sinuses .
- C) Trx of carbuncle lesions by systemic AB is sufficient



Test bank

Q1

Which of the following is the most common cause of genital herpes?

A)HSV-1

B)HSV-2

C)VZV

D)Coxsackievirus A16

Ans:B

Q2

The Tzanck smear in herpes simplex virus infections reveals:

A) Gram-negative rods

B) Multinucleated giant cells with intranuclear inclusions

C) Acid-fast bacilli

D) Pustular skin lesions

Ans: B

Q3

Which disease is characterized by “dew drops on rose petals”?

- A) Zoster
- B) Acne vulgaris
- C) Varicella
- D) Herpetic whitlow

Ans:c

Q4

What is the most common causative agent of hot-tub folliculitis?

- A) *S. aureus*
- B) *P. acnes*
- C) *Candida*
- D) *Pseudomonas aeruginosa*

Ans:d

Q5

What age group is primarily affected by hand, foot, and mouth disease?

- A) Elderly adults
- B) Teenagers
- C) Infants and young children
- D) Middle-aged adults

Ans:c

Lecture 6



Activities Questions

Q1

Janeway lesions are painful due to immune complex deposition in the dermis

True

False

Ans:False

Q2

Impetigo causes deeper tissue necrosis, resulting in ulceration and scarring

True

False

Ans:False

Q3

Ecthyma heals slowly and often results in scarring due to dermal involvement

True

False

Ans:true

Q4

Viridans streptococci are commonly isolated in infective endocarditis among IV drug users due to poor aseptic technique

True

False

Ans:false

Q5

Pseudomonas aeruginosa is most commonly associated with green, foul-smelling discharge and necrotic tissue in burn wound infections

True

False

Ans:true

Q6

Staphylococcus aureus is common in both IV drug users and prosthetic valve endocarditis

True

False

Ans:true

Q7

Splinter hemorrhages are due to trauma and unrelated to endocarditis

True

False

Ans:false

Q8

Osler nodes typically present as linear streaks under the nails

True

False

Ans:false

Q9

Topical mupirocin is appropriate topical treatment for a patient with a limited area of impetigo involving only a few lesions

True

False

Ans:true

Q10

Pseudomonas aeruginosa is the leading cause of infective endocarditis in patients with native valves

True

False

Ans:false

Q11

Candida albicans is the predominant pathogen in HACEK-related infective endocarditis

True

False

Ans:false

Q12

Janeway lesions are painless vascular lesions caused by septic emboli

True

False

Ans:true

Q13

Osler nodes are painless macules on the palms caused by septic emboli

True

False

Ans:false

Q14

Bullous impetigo leaves deep ulcers that require surgical debridement

True

False

Ans:false

Q15

Coagulase-negative staphylococci are rarely involved in prosthetic valve infections

True

False

Ans:false



Test bank

Q1

Which of the following organisms is a common cause of ecthyma gangrenosum in immunocompromised patients?

- A) Streptococcus pyogenes
- B) Staphylococcus aureus
- C) Neisseria meningitidis
- D) Pseudomonas aeruginosa

Ans:d

Q2

Janeway lesions are:

- A) Painful nodules on fingers and toes
- B) Painless, erythematous macules on palms and soles
- C) Vesicular lesions on the lips
- D) Necrotic lesions over pressure areas

Ans:B

Q3

Which of the following conditions is associated with a characteristic “chancre”?

- A) Ecthyma
- B) Herpes simplex
- C) Primary syphilis
- D) Gas gangrene

Ans:c

Q4

Which bacteria are most commonly associated with Impetigo contagiosa?

- A) Pseudomonas and Clostridium
- B) Streptococcus pyogenes and Staphylococcus aureus
- C) Neisseria and Corynebacterium
- D) E. coli and Klebsiella

Ans:B

Q5

Which of the following skin signs is most associated with infective endocarditis?

- A) Hutchinson teeth
- B) Koplik spots
- C) Osler nodes
- D) Bullous lesions

Ans:c

Lecture 7



Past papers

Q1

Which of the following is correct: (OM = Osteomyelitis)

- a) Pseudomonas is becoming increasingly more sensitive to antimicrobials in the OM setting
- b) Viruses almost never infect bone
- c) *S. pyogenes* is most associated with implants or foreign material
- d) *K. pneumoniae* may be resistant to antimicrobials before or after therapy, but not during
- e) The most common and most aggressive pathogen is *S. aureus*

Ans:E

Q2

Regarding hematogenous osteomyelitis, which of the following is correct:

- a) It is a rare condition in children and primarily affects adults.
- b) It is most commonly caused by viral infections.
- c) In adults, it typically involves the long bones of the lower extremities.
- d) Hematogenous osteomyelitis is the most common form of the disease in children.
- e) It usually resolves spontaneously without the need for long-term antibiotic therapy.

Note : All the options above (except the correct answer) are AI-generated and included to complete the question.

Ans: d

Q3

Which of the following is true about osteomyelitis:

- a) It is the inflammation of joints
- b) Only presents as acute
- c) Hematogenous osteomyelitis is more common in infants and children
- d) Homogenous osteomyelitis is more common in infants and children
- e) None of the above

Ans:c

Q4

True about diabetic foot infections:

- a) Presence of neuropathy, peripheral vascular disease, or poor glycemic control are not predisposing to diabetic foot infections.
- b) Most diabetic foot infections are monomicrobial.
- c) Samples should not be obtained in cases with low clinical suspicion.

Ans:c



Activities Questions

Q1

A 77-year old man with recent hospitalization for urosepsis presents with fever and acute mono-arthritis. Which of the following best describes the most likely causative pathogen based on his age and clinical background?

- a) *Streptococcus pyogenes* due to increased mucosal colonization
- b) *Staphylococcus aureus* due to IV catheter use in the elderly
- c) *Neisseria gonorrhoeae* due to age related immune decline
- d) *E.coli* due to bacteremia from urinary source
- e) Anaerobic bacteria due to chronic joint disease

Ans : d

Q2

Which of the following statements best describes why reactive arthritis is considered a sterile condition in spite of its association with pathogens?

- a) Its exclusive association with virus infections
- b) The condition affects joints only in immunocompromized individuals
- c) The joint inflammation occurs without microbial invasion of the joints

Ans : c

Q3

Which of the following pathogen profiles is most likely to be implicated in osteomyelitis in a 4-month-old infant?

- a) *Streptococcus pyogenes*, *Haemophilus influenzae*, *Staphylococcus aureus*
- b) *Staphylococcus aureus*, *Streptococcus agalactiae*, *Escherichia coli*
- c) *Serratia marcescens*, *Staphylococcus epidermidis*, *Staphylococcus aureus*
- d) *Proteus mirabilis*, *Bacteroides fragilis*, *Peptostreptococcus*
- e) *Staphylococcus aureus*, *Campylobacter jejuni*, *Salmonella enterica*

Ans : b

Q4

Which of the following is the recommended antibiotic regimen for osteomyelitis caused by *Pseudomonas aeruginosa*?

- a) Vancomycin
- b) Penicillin G
- c) Clindamycin
- d) Piperacillin-tazobactam

Ans : d

Q5

The most common pathogen implicated in reactive arthritis is:

- a) *Chlamydia trachomatis*
- b) *Campylobacter jejuni*
- c) *Yersinia enterocolitica*
- d) *Shigella*
- e) *Salmonella*
- f) *Streptococcus*

Ans : a

Q6

A 35-year-old intravenous drug user presents with fever and neck pain. Imaging reveals osteomyelitis of the cervical spine. Which of the following is the most likely microbial etiology in this case?

- a) Contamination from athletic footwear with *Staphylococcus aureus* colonization and infection
- b) Bacteremia in intravenous drug use favors seeding of cervical vertebrae with *Pseudomonas aeruginosa*
- c) Peripheral vascular disease in intravenous drug users leads to anaerobic bone infections
- d) Repeated injections increase local joint infections with Coagulase-negative *Staphylococci*
- e) IV drug user often acquire fungal osteomyelitis due to contaminated syringes

Ans : b

Q7

A 77-year-old male diabetic patient presented with osteomyelitis of the foot and has a history of uncontrolled diabetes. Which of the following organisms is least likely to be involved in this case of diabetic foot osteomyelitis?

- a) *Pseudomonas aeruginosa*
- b) *Staphylococcus aureus*
- c) *Prevotella species*
- d) *Haemophilus influenzae*
- e) *Peptostreptococcus*

Ans : d

Q8

Which imaging modality is the most sensitive for the early detection of osteomyelitis?

- a) Ultrasound
- b) Plain & radiograph
- c) CT scan
- d) Bone scan
- e) MRI

Ans : e

Q9

A 22-year-old Australian sexually active female presented with fever, polyarthritits, and scattered pustular skin lesions. Synovial fluid analysis was negative for organisms on Gram stain and culture. Which of the following next steps is most appropriate to confirm the suspected diagnosis?

- a) Repeat joint aspiration and send for acid-fast bacilli staining
- b) Start empiric antifungal therapy and perform fungal cultures
- c) Obtain blood cultures and swabs from mucosal sites for culture on Thayer-Martin media
- d) Perform a bone biopsy to evaluate for osteomyelitis

Q10

Which of the following clinical findings is most characteristic of disseminated gonococcal infection in septic arthritis?

- a) Monoarticular arthritis with positive synovial fluid culture
- b) Polyarthritits with tenosynovitis and pustular skin lesions
- c) Bilateral sacroiliac joint pain with high-grade fever
- d) Erythema migrans and arthralgia after a tick bite

Ans : b

Lab Lecture



Activities Questions

Q1

Microbiologic culture of a wound swab showed colonies on **MacConkey agar**. Gram stain showed **Gram negative rods** that were non-lactose fermenting with a **fruity odor** and a **greenish pigment**. This **oxidase-positive** organism is most likely:

- A. *E.coli*
- B. *Pseudomonas aeruginosa*
- C. *Shewanella putrefaciens*
- D. *Corynebacterium striatum*

Ans:B

Q2

A 28-year-old man presents with a non-itchy maculopapular rash involving the palms and soles, generalized lymphadenopathy, and malaise. Secondary syphilis is suspected. Which of the following is the most appropriate initial diagnostic test?

- A. FTA-ABS
- B. Tzanck smear
- C. VDRL
- D. VCA Igm

Ans:C

Q3

A 28-year-old female presented with a significant discoloration of her index fingernail with a subungual hyperkeratosis that caused color alteration and rough surface areas in the mentioned nail. **Onychomycosis** is suspected. Which of the following is the most appropriate diagnostic test?

- A. Culture of nail clippings on Sabouraud dextrose agar
- B. Culture of nail clippings on CHROM agar
- C. Treatment of nail clippings with 10% KOH and visualization using lactophenol cotton blue
- D. Treatment of nail clippings with 3% KOH and visualization using Gram stain

Ans:A

Q4

A culture from a joint aspirate grows golden-yellow colonies with beta-hemolysis on sheep blood agar. Gram stain shows Gram-positive cocci in clusters. Which of the following tests would best differentiate **Staphylococcus aureus** from **Streptococcus pyogenes**?

- A. Coagulate
- B. Catalase
- C. Mannitol fermentation
- D. Oxidase

Ans:B

Q5

Which of the following stains is commonly used to prepare fungal elements for microscopic examination?

- A. Ziehl-Neelsen stain
- B. Crystal violet
- C. Lactophenol cotton blue
- D. Gram stain

Ans:C

Q6

Why is species-level identification important when diagnosing *Candida* infections?

- A. *Candida* species have different clinical manifestations
- B. *Candida albicans* is the only pathogenic species of the genus
- C. Antifungal susceptibility varies by *Candida* species
- D. Species identification helps in determining disease prognosis

Ans:C

Q7

Which of the following test results is characteristic of *Streptococcus pyogenes*?

- A. Catalase-positive, coagulase-positive, beta-hemolytic
- B. Catalase-negative, bacitracin-sensitive, beta-hemolytic
- C. Catalase-negative, optochin-sensitive, alpha-hemolytic
- D. Catalase-positive, mannitol-fermenting, beta-hemolytic

Ans:b

Q8

After confirming a Gram-positive coccus as catalase-positive, which combination of tests would best confirm the isolate as *Staphylococcus aureus* rather than a coagulase-negative staphylococcus (CoNS)

- A. Beta-hemolysis
- B. Lancefield grouping
- C. Oxidase reaction
- D. Mannitol fermentation

Ans:d

Q9

Which of the following combinations most accurately describes the laboratory identification and optimal culture conditions for *Neisseria gonorrhoeae*?

- A. Gram-negative diplococci, oxidase-negative, grows on MacConkey agar at 30°C
In ambient air
- B. Gram-positive cocci, oxidase-positive, grows on blood agar at 37°C in aerobic
Conditions
- C. Gram-negative diplococci, oxidase-positive, grows on Thayer-Martin agar at 35–
37°C in 5–10% CO₂
- D. gram-negative rods, catalase-positive, grows on Sabouraud dextrose agar at
25°C

Ans:c

Q10

Which of the following is the most appropriate culture medium for isolating dermatophytes from clinical specimens?

- A. Sabouraud dextrose agar
- B. Sheep Blood agar
- C. Thayer-Martin agar
- D. MacConkey agar

Ans:A



Past papers

No past paper questions found for dr. Malik



Test bank

Q1

The catalase test differentiates staphylococci from:

- A) Streptococci
- B) Neisseria
- C) Pseudomonas
- D) Candida

Ans:A

Q2

Which media is selective for the isolation of *Staphylococcus aureus*?

- A) Chocolate agar
- B) Mannitol salt agar
- C) Sabouraud dextrose agar
- D) CLED agar

Ans:B

Q3

Streptococcus pyogenes can be identified by:

- A) Positive catalase test
- B) Negative catalase test and bacitracin sensitivity
- C) Positive coagulase test
- D) Green pigment production

Ans:B

Q4

The Monospot test is used for the diagnosis of:

- A) Syphilis
- B) Infectious mononucleosis
- C) Gonococemia
- D) Candidiasis

Ans:B

Q5

Pseudomonas aeruginosa is characterized by:

- A) Fruity odor and pigment production
- B) Alpha hemolysis on blood agar
- C) Coagulase production
- D) Fermentation of lactose

Ans:A

Q6

Which culture media is used to isolate dermatophytes like *Microsporum gypseum*?

- A) CHROMagar
- B) Sabouraud dextrose agar (SDA)
- C) Chocolate agar
- D) CLED agar

Ans:B

Q7

The first test to differentiate staphylococci from other Gram-positive cocci is:

- A) Coagulase test
- B) Catalase test
- C) Bacitracin sensitivity test
- D) Oxidase test

Ans:B

Q8

Wet mount with 10% KOH is used to diagnose cutaneous candidiasis.

- A. True
- B. False

Ans:True

Q9

Neisseria gonorrhoeae grows on mannitol salt agar.

- A. True
- B. False

Ans:False

رسالة من الفريق العلمي:

و تضيّق دُنْيَانَا فَنَحْسَبُ أَنَّنَا

سَنَمُوتُ يَأْسًا أَوْ نَمُوتُ نَحْيَا

و إِذَا بَلَطَفِ اللهُ يَحْطُلُ فِجَاءً

و يُرِي مِنْ الْيَبَسِ الْفُتَاتِ قُلُوبَا

قَدْ لِلَّذِي مَلَأَ التَّشَاوُمَ قَلْبَهُ

و مَضَى يُضَيِّقُ حَوْلَنَا الْوَفَا

سِرُّ السَّعَادَةِ حَسْبُ ظَنِّكَ بِالَّذِي

خَلَقَ الْحَيَاةَ وَ قَسَمَ الْأَرْزَاقَا

For any feedback, scan the code or click on it.



Corrections from previous versions:

Versions	Slide # and Place of Error	Before Correction	After Correction
V0 → V1			
V1 → V2			