

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



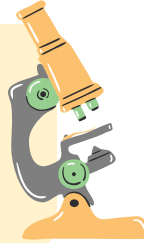
MID | Lectures (1-4)

﴿إِن تَتَوَلَّوْا يَسْتَبَدِلْ قَوْمًا غَيْرَكُمْ ثُمَّ لَا يَكُونُوا أَمْثَلَكُمْ﴾
اللهم استعملنا ولا تستبدلنا

Past Papers

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MICROBIOLOGY



Lecture 1

﴿الَّذِينَ ءَامَنُوا وَتَطْمَئِنُّ قُلُوبُهُمْ بِذِكْرِ اللَّهِ ۚ أَلَا بِذِكْرِ اللَّهِ تَطْمَئِنُّ الْقُلُوبُ﴾

Past papers

Always remember that past exam questions are only for practice.

Bismillah, let's go!



Which of the following conditions are caused by an ectoparasite that can live in any climate and humidity, and is characterised by inflammatory nodules and itching:

- A) scabies
- B) Mononucleosis
- C) Secondary syphilis
- D) Rocket fever syndrome

What is the most common bacterial skin infection in children:

- A) Cutaneous TB
- B) Nocardiosis
- C) Impetigo
- D) Necrotizing fasciitis

True about pressure ulcer with deep necrosis: -

Ans: blood infection is more likely

Pityriasis versicolor is caused by:

- A) *Candida albicans*
- B) dermatophytes
- C) *Malassezia*
- D) *Madurella mycetomatis*

The most prevalent(common) infection among all dermatophytoses is:

- A) Tinea pedis
- B) Tinea unguium
- C) Tinea corporis
- D) Tinea capitis
- E) Tinea cruris

Not included

Ans:A, if question asked about most severe one answer would be D

Dermatophytes are fungi that:-

- A) Infect keratinized areas of the body
- B) Cause in appearance systemic infections
- C) Invariably invade the subcutaneous tissues
- D) Produce morphologically identical spores by all genera
- E) Best grow at 37°C

Book questions

(وَعَسَى أَنْ تَكْرَهُوا شَيْئًا وَهُوَ خَيْرٌ لَكُمْ وَعَسَى أَنْ تُحِبُّوا شَيْئًا وَهُوَ شَرٌّ لَكُمْ ۗ وَاللَّهُ يَعْلَمُ وَأَنْتُمْ لَا تَعْلَمُونَ)

What are most frequent parasites:-

- A) Arthropods
- B) Protozoa
- C) Helminths

Staphylococci cause a variety of diseases including:-

- A) Cutaneous infections
- B) Endocarditis
- C) Food poisoning
- D) SSS & TSS
- E) All of the above

Which of the following is NOT characteristic of impetigo?

- A) Common in children
- B) Can be caused by *staphylococcus aureus*
- C) Can be caused by *streptococcus pyogenes*
- D) Is highly contagious
- E) Can be caused by pseudomonads

A patient presents with skin lesions similar in appearance to molluscum contagiosum. How is diagnosis of this condition typically made?

- A) Viral culture
- B) Rapid antigen test
- C) PCR for viral DNA
- D) Clinical appearance
- E) Inoculation of chorioallantoic membrane of chick embryos

Test bank

﴿قُلْ لَّنْ يُصِيبَنَا إِلَّا مَا كَتَبَ اللَّهُ لَنَا هُوَ مَوْلَانَا ۚ وَعَلَى اللَّهِ فَلْيَتَوَكَّلِ الْمُؤْمِنُونَ﴾

Which of the following statements best describes the role of sweat glands in preventing skin infections?

- A) Sweat glands secrete an alkaline fluid containing lysozyme, which disrupts bacterial DNA synthesis.
- B) Sweat glands produce an acidic secretion containing lysozyme, which breaks down bacterial cell walls and inhibits microbial colonization.
- C) Sweat glands release an antimicrobial secretion rich in fatty acids, which selectively promotes Gram-positive bacteria while eliminating Gram-negative species.
- D) Sweat gland secretions contain proteolytic enzymes that digest bacterial proteins and inhibit fungal growth.

A researcher is investigating microbial colonization patterns on different skin regions. Which of the following conclusions would be most accurate regarding the composition of the skin microbiome?

- A) Viruses are the most abundant microbial group on all skin regions, regardless of moisture levels or environmental exposure.
- B) The microbiome composition varies significantly across different skin regions, with moist areas supporting more Gram-negative bacteria and drier areas favoring Gram-positive bacteria.
- C) The proportion of bacterial, viral, and fungal species remains relatively constant across all skin surfaces, with minimal variation due to environmental factors.

Which of the following immune cell types play the most significant role in skin defense against microbial invasion?

- A) Langerhans cells, which act as antigen-presenting cells and activate adaptive immune responses.
- B) Neutrophils, which remain dormant in the skin until systemic infections trigger their activation.
- C) Mast cells, which only function in allergic reactions but do not contribute to bacterial defense.
- D) Natural killer (NK) cells, which exclusively target intracellular viral infections but do not interact with bacteria.

Lecture 2

(الَّذِينَ ءَامَنُوا وَعَمِلُوا الصَّالِحَاتِ طُوبَىٰ لَهُمْ وَحُسْنُ مَآبٍ)

Past papers

(وَنُنَزِّلُ مِنَ الْقُرْآنِ مَا هُوَ شِفَاءٌ وَرَحْمَةٌ لِّلْمُؤْمِنِينَ وَلَا يَزِيدُ الظَّالِمِينَ إِلَّا خَسَارًا)

One of the following symptoms is associated with erythema infectiosum:

- A) Slapped cheek rash
- B) Pneumonia
- C) Meningitis

Ans:A

Chickenpox is diagnosed by :

- A) Anti-zoster IgM
- B) Anti-varicella IgM
- C) Anti-zoster IgG
- D) Anti-varicella IgG

Most probably not included

Ans:B

One of the following is correctly matched :

- A) Koplik spots are pathognomonic for measles
- B) Rubella can be transmitted feco-orally
- C) HSV has a vaccine
- D) HPV are always asymptomatic
- E) HPV is diagnosed via serology

Ans:A

Which of the following tests is done to detect acute German Measles infection?

- A) Measles antibodies IgM
- B) Rubella antibodies IgG
- C) Rubella antibodies IgM
- D) Measles antibodies IgG

Note : Measles virus is detected by measles antibodies,
while German Measles is detected by rubella antibodies

Ans:C

A patient that missed all his childhood vaccines had coryza, conjunctivitis and cough and fever, and had a rash the began at the level of hairline and spread toward the extremities, when we examined his oral mucosa we found gray macules on his buccal surface, what is the etiology of his condition :

- A) Measles
- B) 5th disease
- C) Roseola infantum
- D) German measles

Which of the following can be treated by antibiotics :

- A) 5th disease
- B) Pastia line
- C) Unmerged rash

Bravo!
Ans:B

The background features three vertical bars on the left: a wide pink bar, a medium-width olive green bar, and a narrow light blue bar. To the right of these bars, there are two clusters of dots. One cluster in the top right corner consists of larger, semi-transparent pink dots arranged in a grid. Another cluster in the bottom left corner consists of smaller, semi-transparent pink dots arranged in a grid.

Book questions

سُبْحَانَ اللَّهِ وَبِحَمْدِهِ سُبْحَانَ اللَّهِ الْعَظِيمِ

A 27-year-old woman who is 2 months' pregnant develops fever, malaise, and arthralgia. A fine maculopapular rash appears on her face, trunk, and extremities. Rubella is diagnosed, and there is concern that the fetus will be infected, resulting in the congenital rubella syndrome. Which of the following statements about this syndrome is correct:

- A) The disease can be prevented by vaccination of school-aged children with measles vaccine
- B) Congenital abnormalities occur when a nonimmune pregnant woman is infected at any time during pregnancy
- C) Deafness is a common defect associated with congenital rubella syndrome
- D) Only rare strains of rubella virus are teratogenic

A 5-year-old child develops a low-grade fever, coryza, conjunctivitis, and Koplik spots. The physician can conclude that :

- A) The child has probably not been successfully vaccinated with the MMR vaccine
- B) The child's pregnant mother is at risk of becoming infected and her unborn child developing congenital abnormalities, including mental retardation
- C) A rash will soon develop on the child's face and will last only 2–3 days
- D) Treatment of the child with the antiviral drug ribavirin should be initiated immediately to minimize the chance of development of acute encephalitis

Each of the following statements concerning rubella is correct except :

- A) Congenital abnormalities occur primarily when a pregnant woman is infected during the first trimester
- B) Women who say that they have never had rubella can, nevertheless, have neutralizing antibody in their serum
- C) In a 6-year-old child, rubella is a mild, self-limited disease with few complications
- D) Acyclovir is effective in the treatment of congenital rubella syndrome

Ans:D

Each of the following statements concerning rubella vaccine is correct except :

- A) The vaccine prevents reinfection, thereby limiting the spread of virulent virus
- B) The immunogen in the vaccine is : killed rubella virus
- C) The vaccine induces antibodies that prevent dissemination of the virus by neutralizing it during the viremic stage
- D) The incidence of both childhood rubella and congenital rubella syndrome has decreased significantly since the advent of the vaccine

Which one of the following is The best evidence on which to base a decisive diagnosis of acute mumps disease :

- A) A positive skin test result
- B) A fourfold rise in antibody titer to mumps antigen
- C) A history of exposure to a child with mumps
- D) Orchitis in young adult man

Which one of the following statements concerning mumps is correct :

- A) Although the salivary glands are the most obvious sites of infection, the testes, ovaries, and pancreas can be involved as well
- B) Because there is no vaccine against mumps, passive immunization is the only means of preventing the disease
- C) The diagnosis of mumps is made on clinical grounds because the virus cannot be grown in cell culture and serologic tests are inaccurate
- D) Second episodes of mumps can occur because there are two serotypes of the virus, and protection is type specific

Ans:A

Which of the following statements is more likely to be true of measles (rubeola) than German measles (rubella) :

- A) Koplik spots are present
- B) It causes birth defects
- C) It causes only a mild illness
- D) Human beings are the only natural hosts
- E) Attenuated virus vaccine is available for prevention

Ans:A

Test bank

لَا إِلَهَ إِلَّا أَنْتَ سُبْحَانَكَ إِنِّي كُنْتُ مِنَ الظَّالِمِينَ

The rash in German measles differs from Measles because it :

- A) Lasts longer
- B) Begins on the palms and soles
- C) Spreads more rapidly and resolves within 3 days
- D) Always causes peeling of the skin

Ans:C



Which of the following is specific to scarlet fever :

- A) Koplik spots
- B) Strawberry tongue
- C) Lacy reticular rash
- D) Petechial rash on soft palate

Ans:B

Which of the following remains latent in monocytes and lymphocytes :

- A) Measles virus
- B) HHV-6
- C) Parvovirus B19
- D) Coxsackievirus

Ans:B

The diagnosis of childhood exanthems is primarily based on :

- A) Skin biopsy
- B) Clinical presentation
- C) Blood cultures
- D) Gram stain

Ans:B

A 5-year-old presents with fever, malaise, and a rash that started on the cheeks and then spread to the trunk and extremities. The child also has mild joint pain. Laboratory findings show reticulocytopenia and a low hemoglobin level. What is the most likely underlying pathogenesis of this condition? :

- A) Viral replication in endothelial cells
- B) Immune complex deposition on the skin
- C) Toxin-mediated vascular injury
- D) Langerhans cells activation in the dermis

Erythema infectiosum, caused by Parvovirus B19, leads to immune complex deposition, explaining the rash and joint pain

Ans:B

A child presents with fever and a widespread maculopapular rash. A serologic test shows IgM antibodies against Parvovirus B19. What additional laboratory abnormality is most likely in this patient :

- A) Elevated lactate dehydrogenase levels
- B) Increased reticulocyte count
- C) Low hemoglobin with absent reticulocytes
- D) High WBC count with atypical lymphocytes

Parvovirus B19 causes transient aplastic anemia by infecting erythroid precursors

Ans:C

A school-aged child presents with a sandpaper-like rash, fever, and a strawberry tongue. A throat swab culture is performed. Which of the following would confirm the diagnosis :

- A) Positive measles IgM test
- B) Growth of beta hemolytic colonies sensitive to bacitracin
- C) PCR detecting a segmented, negative sense RNA test
- D) Growth of non-beta hemolytic colonies



THE END

Ans:B

Lecture 3

(وَعَدَ اللَّهُ الَّذِينَ آمَنُوا وَعَمِلُوا الصَّالِحَاتِ لَهُمْ مَغْفِرَةٌ وَأَجْرٌ عَظِيمٌ)

The background features three vertical bars on the left: a wide pink bar, a medium-width olive green bar, and a narrow light blue bar. In the top right corner, there is a grid of small red dots that fades out towards the right. In the bottom left corner, there is a grid of small red dots that fades out towards the left.

Past papers

Unfortunately, there are no questions from previous years for this lecture, so we will suffice with test bank questions on the lecture.

Test bank

لَا إِلَهَ إِلَّا أَنْتَ سُبْحَانَكَ إِنِّي كُنْتُ مِنَ الظَّالِمِينَ

The microorganism that cause infectious mononucleosis is:

- A) EBV*
- B) HHV7*
- C) Streptococcus pyogenes*
- D) Staphylococcus aureus*

Ans. A

Which of the following stages of syphilis produce rashes?

A) primary

B) Tertiary

C) secondary

Ans. C

What kind of skin lesions are usually found in patients with infectious mononucleosis?

- A) Maculopapular rash*
- B) Vesicular rash*
- C) Petechiae*
- D) Ulceration*
- E) Plaques*

Ans. C

A 20-year-old male patient presents with symptoms of fever, sore throat and malaise. He is initially diagnosed with streptococcal pharyngitis and prescribed amoxicillin. However, a few days later, he develops a rash. What is the most likely explanation for this scenario?

- A) Allergic reaction to amoxicillin.*
- B) Misdiagnosis of streptococcal pharyngitis.*
- C) Progression of streptococcal infection to scarlet fever.*
- D) Reaction to other medications taken alongside amoxicillin.*
- E) Development of infectious mononucleosis due to amoxicillin use.*

Ans. B

Which of the following serologic tests is NOT typically used in the diagnosis of EBV infection?

- A) VCA IgM*
- B) ASO titer*
- C) EA IgG*
- D) EBNA IgG*
- E) Paul-Bunnell test*

Ans. B

Which of the following is a common complication associated with the treatment of EBV mononucleosis with amoxicillin or ampicillin?

- A) Joint pain*
- B) Kidney stones*
- C) Maculopapular rash*
- D) Hypertension*
- E) Bradycardia*

Ans. C

A 25-year-old female presents to the emergency department with sudden onset fever, hypotension, rash, and confusion. She has been using tampons during her menstrual period. On examination, you note the rash has a sunburn-like appearance. Which of the following is the most likely causative organism?

- A) Group B streptococci*
- B) Staphylococcus aureus*
- C) Borrelia*
- D) Group A streptococci*
- E) E.coli*

Ans. B

Which of the following tests is used for the initial detection of heterophile antibodies in EBV infection?

- A) VDRL*
- B) Monospot test*
- C) FTA-ABS*
- D) Western blot*

Ans. B

Which serologic test is used to confirm secondary syphilis after a positive screening test (e.g., RPR or VDRL)?

- A) Paul-Bunnell test*
- B) Monospot test*
- C) FTA-ABS*
- D) ELISA*

Ans. C

A patient presents with fever, pharyngitis, and lymphadenopathy. EBV serology shows the following results:

VCA-IgM: Positive

VCA-IgG: Positive

EBNA-IgG: Negative

EA-IgG: Positive

What is the most likely interpretation?

A) Past EBV infection

B) Primary (acute) EBV infection

C) Reactivation of EBV

D) No prior EBV exposure

Ans. B

A 17-year-old boy presents with fever, sore throat, and fatigue. His Monospot test is negative. The doctor suspects an EBV-like illness. What is the best next step?

- A) Repeat the Monospot test in one week*
- B) Perform EBV-specific serology*
- C) Start antibiotic therapy for bacterial pharyngitis*
- D) Assume the symptoms are due to stress and send him home*

Ans. B

Lecture 4

(أَتَأْمُرُونَ النَّاسَ بِالْبِرِّ وَتَنْسَوْنَ أَنْفُسَكُمْ وَأَنْتُمْ تَتْلُونَ الْكِتَابَ أَفَلَا تَعْقِلُونَ)

Past papers

﴿ وَقُلْ لِعِبَادِي يَقُولُوا الَّتِي هِيَ أَحْسَنُ إِنَّ الشَّيْطَانَ يَنْزِعُ بَيْنَهُمْ إِنَّ الشَّيْطَانَ كَانَ لِلْإِنْسَانِ عَدُوًّا مُبِينًا ﴾

Regarding Fournier gangrene, which of the following is least likely to occur: :

Answer: the disease progresses subacutely

Which of the following pairs is matched correctly:

Answer: erysipelas → well demarcated

Which of the following is FALSE:

- A) Reduced blood flow to the lower limb is seen in diabetes or peripheral vascular disease promote type 1 necrotizing fasciitis
- B) Fournier's gangrene is more likely to be polymicrobial
- C) Majority of necrotizing fasciitis occur in extremities and perineum
- D) Group A strept. cause a more fatal type of necrotizing fasciitis
- E) An alcoholic patient is more likely to have necrotizing skin infections

Which of the following is correct treatment for gas gangrene :

- A) Clindamycin + Penicillin
- B) Vancomycin
- C) Ampicillin
- D) Oxacillin
- E) Amoxicillin

Ans:A

Pityriasis versicolor is caused by :

- A) *Candida albicans*
- B) Dermatophytes
- C) *Malassezia*
- D) *Madurella mycetomatis*
- E) None of the above

Ans:C

Dermatophytes are fungi that :

- A) Infect the keratinized areas of the body
- B) Cause inapparent systemic infections
- C) Invariably invade the subcutaneous tissue
- D) Produce morphologically identical spores by all genera
- E) Best grow at 37°

*A 50-year-old woman receiving chemotherapy via a subclavian catheter for acute leukemia. She presented with fever and stiffness in the neck with clinical suspicion of meningitis. CF culture grew budding yeasts that formed **germ tubes**. The organism most likely causing this infection is:*

- A) *Cryptococcus neoformans*
- B) *Candida albicans*
- C) *Aspergillus fumigatus*
- D) *Candida tropicalis*

One of the following choices is false about candida infection of the skin:

Answer: Amphotericin B is the drug of choice

Hypopigmented macules on the patient's chest and back / mild itchiness. On KOH mount, we will most likely see :

Answer: Round cells with short curved hyphae

Cultures of debrided material and blood cultures are needed for patients diagnosed with cellulitis when :

- A) Patients have no complications
- B) The presence of systemic signs of Infection and fever
- C) Initial antibiotic therapy is effective

Which of the following injuries is most likely to become infected by Pseudomonas after a week of the initial injury? :

- A) Pressure ulcer
- B) Animal bite
- C) Cat scratch disease
- D) Burn wound

Patient was bitten by domestic dog and his hand. Wound showed cellulitis. The most likely etiology of cellulitis in this case is:

- A) Pasteurella
- B) P.aureus
- C) P. aeruginosa
- D) Burgdorferi

What's incorrect about dermatophytoses :

Answer: Anthropophilic dermatophytoses can be transmitted from pets to humans

A woman had hypopigmentation in her legs, what most likely caused it :

Answer: Pityriasis versicolor

Test bank

(قُلْ يَا عِبَادِيَ الَّذِينَ أَسْرَفُوا عَلَىٰ أَنفُسِهِمْ لَا تَقْنَطُوا مِن رَّحْمَةِ اللَّهِ إِنَّ
اللَّهَ يَغْفِرُ الذُّنُوبَ جَمِيعًا إِنَّهُ هُوَ الْغَفُورُ الرَّحِيمُ)

A 60-year-old obese woman with poorly controlled diabetes presents with an erythematous, macerated rash in the inframammary folds. There are satellite pustules around the lesion. Wet mount in 10% KOH shows budding yeast cells and pseudohyphae. What is the best initial treatment for this condition:

- A) Oral fluconazole
- B) Griseofulvin
- C) Topical nystatin or miconazole
- D) Intravenous amphotericin B

A 40-year-old man presents with a chronic, well-defined reddish-brown rash in the groin region. He initially suspected a fungal infection and used over-the-counter antifungal cream, but there was no improvement. A Wood lamp examination reveals coral-red fluorescence. What is the most likely diagnosis :

- A) Tinea cruris
- B) Cutaneous candidiasis
- C) Erythrasma
- D) Cellulitis

A 55-year-old diabetic man presents with rapidly progressing pain, swelling, and erythema of his lower leg after a minor injury. The skin appears dusky with areas of bullae and crepitus. The patient is hypotensive and tachycardic. X-ray reveals gas in the soft tissues. What is the best step in management of man's condition:

- A) IV vancomycin and observation
- B) Immediate surgical debridement and broad-spectrum IV antibiotics
- C) Topical antifungal therapy
- D) Hyperbaric oxygen therapy alone

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			

Additional Resources:

رسالة من الفريق العلمي:

نسأل الله الصبر والتوفيق والسداد في أمور الدين والدنيا والآخرة.

ما عَسَعَ الْيَأْسُ مَزْهُوًّا بِظِلْمَتِهِ
إِلَّا تَنْفَسَ فِي أَعْقَابِهِ الْفَرَجُ

عن أم المؤمنين عائشة رضي الله عنها قالت:
عن النبي صلى الله عليه وسلم؛ أنه قال، في شأن الركعتين
عند طلوع الفجر "لهما أحبُّ إليَّ من الدنيا جميعًا"

'A'isha reported that the Messenger of Allah (ﷺ) said
about the two (supererogatory) rak'ahs of the dawn:
They are dearer to me than the whole world.

صحيح مسلم - Sahih Muslim

أحاديث نبوية