

WOMEN MEDICAL COLLEGE
THIRD YR MBBS **BLOCK G** EXAM ON 29TH MAY 2023
PATHOLOGY MCQS (35)

1. A renal biopsy is performed on a 33 yr old female who has had increasing renal failure for the past week. Which of the following changes seen with electron microscopy most likely suggests a diagnosis of acute tubular necrosis?

- a) Mitochondrial swelling
- b) Nuclear fragmentation**
- c) Plasma membrane blebs
- d) Chromatin clumping
- e) Ribosomal disaggregation from endoplasmic reticulum

2. A Young 18 year old woman died because of the diphtheritic myocarditis with signs of progressive heart insufficiency. What histological changes in cardiomyocytes can be found?

- a) Mucoïd degeneration
- b) Hydropic degeneration
- c) Fatty degeneration**
- d) Amyloid degeneration
- e) Hyaline droplets degeneration

3. Which of the following is the most likely pathologic alteration following occlusion of the left middle cerebral artery by a sterile thrombus?

- a) Pale infarction with coagulative necrosis
- b) Brain abscess due to suppurative inflammation
- c) Recovery of damaged neurons if the vascular supply is re-established
- d) Wet gangrene with secondary bacterial infection
- e) Cerebral softening from liquefactive necrosis**

4. The high level Lactic Dehydrogenase (LDH) isozymes concentration showed the increase of both LDH-1 and LDH-2 in a patient's blood plasma. Point out the most probable diagnosis:

- a) Myocardial infarction**
- b) Skeletal muscle dystrophy

- c) Diabetes mellitus
- d) Viral hepatitis
- e) Acute pancreatitis

5. A 37-year-old man comes to the physician for a follow-up visit for management of non-Hodgkin lymphoma follicular type. The lymphoma cells do not appear to be actively dividing, however the number of malignant cells continues to increase. Overexpression of which of the following best accounts for the inhibited apoptosis of these abnormal cells?

- a) Caspases
- b) Fas
- c) Bcl-2**
- d) Myc
- e) p53

6. A 22-year-old man developed marked right lower quadrant abdominal pain over the past day. On physical examination there was rebound tenderness on palpation over the right iliac fossa. The pain experienced by this patient was predominantly the result of the formation of which of the following chemical mediators?

- a) Complement C3b and IgG
- b) Prostaglandin and bradykinin**
- c) Interleukin-1 and tumor necrosis factor
- d) Histamine and serotonin
- e) Leukotriene and HPETE

7. An 8 year old boy develops a sore throat, fever, and a clear nasal discharge indicative of the common cold. In the inflammatory infiltrate within the submucosal tissue of the nasopharynx you would expect to find predominance of:

- a) Neutrophils
- b) Lymphocytes**
- c) Mast cells
- d) Eosinophils
- e) Plasma cells

8. A patient, having suffered a thermal burn, developed painful boils filled with turbid liquid in the skin. What morphological type of inflammation has developed in the patient?

- a) Suppurative

- b) Fibrinous
- c) Granulomatous
- d) Catarrhal
- e) Serous**

9. After initiation of an acute inflammatory process third in a sequence of changes in vascular flow is:

- a) Vasoconstriction.
- b) Redness.
- c) Leukocytic migration.

d) Vasodilatation

- e) Slowing of the circulation

10. The main reason for the rapid onset of vasodilation after tissue injury is

a) release of histamine from mast cells

- b) neural reflexes.
- c) release of leukotrienes.
- d) release of prostaglandins from mast cells.
- e) activation of complement

11. The type of necrosis that occurs in peripancreatic tissue in acute pancreatitis is:

- a) Liquifactive

b) Fat

- c) Coagulative
- d) Gummatous
- e) Fibrinoid

12. A 68 yr old man with prostate cancer and bone metastasis presents with shaking chills and fever. The peripheral WBC count is 1000/ μ L. Which of the following terms best describes this hematologic finding?

- a) Leukocytosis
- b) Pancytopenia
- c) Leukemoid reaction

d) Neutrophilia

e) **Leukopenia**

13. Which of the following growth factors comes from platelets, macrophages, endothelial cells, and smooth muscle and functions as a chemotactic for PMNs, macrophages, fibroblast, and smooth muscle? It also functions to stimulate production of MMPs, stimulate angiogenesis, and wound contraction.

a) Epidermal Growth Factor (EGF)

b) Transforming Growth Factor- α (TGF- α)

c) Vascular Endothelial Growth Factor (VEGF)

d) **Platelet-Derived Growth Factor (PDGF)**

e) Fibroblast Growth Factor (FGF)

14. A male patient is 28 years old. Histological study of a cervical lymph node revealed a change of its pattern due to the proliferation of epithelioid, lymphoid cells and macrophages having nuclei in form of a horseshoe. In the center of some cell clusters there were non-structured light-pink areas with fragments of nuclei. What disease are these changes typical for?

a) Sarcoidosis

b) Viral infection

c) Tumor metastasis

d) **Tuberculosis**

e) Actinomycosis

15. The patient with chronic glomerulonephritis has died with accompanied signs of uremia. The cadaver had specific uremic smell. Macroscopically: there were a lot of pile like whitish grayish material on the surface of pericardium. The vessels filled with blood became visible after removal of such formations. What process did develop in the pericardium?

a) **Fibrinous inflammation.**

b) Granulomatous inflammation.

c) Suppurative inflammation.

d) Hemorrhagic inflammation.

e) Arterial hyperemia.

16. A 28-year-old woman cuts her hand while dicing vegetables in the kitchen. The wound is cleaned and sutured. Five days later, the site of injury contains an abundance of chronic inflammatory cells that actively secrete interleukin-1, tumor necrosis factor-

alpha, interferon-alpha, numerous arachidonic acid derivatives, and various enzymes. Name these cells.

- a) B lymphocytes
- b) Macrophages**
- c) Plasma cells
- d) Neutrophils
- e) T lymphocytes

17. Which of the following growth factors appears to be most important in scar formation during the fibroblast migration and proliferation stage?

- a) EFG
- b) PDGF
- c) FGF
- d) TNF

e) TGF-Beta

18. In the surgical ward, the dressing material was undergoing sterilization in an autoclave. The temperature in the autoclave reached only 100°C instead of the due 120°C. What microorganisms can stay viable under these conditions?

- a) Staphylococci and streptococci
- b) Mold and yeast fungi
- c) Salmonella and klebsiella
- d) Bacilli and clostridia**
- e) Corynebacteria and mycobacteria

19. Which of the following diseases and bacteria is matched up incorrectly?

- a) Otitis media - Streptococcus pneumoniae
- b) Scarlet Fever - Streptococcus pyogenes

c) Lyme disease - Yersinia pestis

- d) Gastritis-Heliobacter pylori
- e) Urethritis - Chlamydia trachomatis.

20. A child develops acute rheumatic fever following a streptococcal pharyngitis. The mechanism of this illness is related to which of the following?

- a) Exotoxin that destroys heart valves

b) Autoimmune reaction

- c) Endotoxin that causes blood clots
- d) Bacterial growth in cardiac muscle
- e) Concurrent viral myocarditis

21. A 2-month-old infant presents with fever to 38.6°C (103°F), neck rigidity. Cerebrospinal fluid shows numerous neutrophils, decreased glucose, and increased protein. Gram positive cocci are present. Which of the following is the most likely cause of meningitis in this neonate?

- a) Haemophilus influenzae
- b) Streptococcus pyogenes
- c) Neisseria meningitidis

d) Group B streptococcus

- e) Staphylococcus aureus

22. A sick man with high temperature and a lot of tiny wounds on the body has been admitted to the hospital. Lice have been found in the folds of his clothing. What disease can be suspected in the patient?

- a) Endemic typhus
- b) Tularemia
- c) Scabies
- d) Leptospirosis

e) Epidemic typhus

23. Purulent endometritis developed in a woman after delivery. Treating with antibiotics that inhibit murein synthesis was ineffective. Wide spectrum bactericidal antibiotic was administered to her. In 6 hours temperature rapidly increased up to 40°C with shiver. Muscle pains have appeared. BP dropped down to 70/40 mmHg. Oliguria has developed. What is the main reason for the development of this condition?

a) Endotoxic shock

- b) Toxic effect of antibiotic preparation
- c) Internal bleeding
- d) Anaphylactic shock
- e) Bacteremia

24. A woman delivered a dead child with multiple developmental defects. What protozoan disease might have caused the intrauterine death?

- a) Leishmaniasis
- b) Amebiasis
- c) Toxoplasmosis**
- d) Trypanosomiasis
- e) Malaria

25. Autopsy of a 2 year-old child revealed haemorrhagic skin rash, moderate hyperaemia and edema of nasopharyngeal mucous membrane, small haemorrhages in the mucous membranes and internal organs, dramatic dystrophic alterations in liver and myocardium. acute necrotic nephrosis, massive haemorrhages in the adrenal glands. What organism is likely cause of these alterations?

- a) Neisseria meningitidis**
- b) Measles Virus
- c) Corynebacterium diphtheriae
- d) Hemophilus influenzae
- e) Malaria

26. A 19-year-old woman presents with vague lower abdominal pain and a swollen, painful right knee. She denies any trauma to the knee or history of arthritic disorders. Physical examination reveals an enlarged joint that is red, warm, and painful. Pelvic examination is exquisitely painful and reveals an ill-defined thickening in both adnexae. A green-yellow purulent vaginal discharge is noted. The patient is febrile and has an elevated WBC count of 15,000/L. Which of the following etiologic agents is most likely responsible for this patient's condition?

- a) Escherichia coli
- b) Staph aureus
- c) Neisseria gonorrhoeae**
- d) Treponema pallidum
- e) Bacteroides

27. A 31 yr old woman is evaluated for infertility. Pelvic examination shows a markedly enlarged vulva, inguinal lymph node enlargement and rectal stricture. Biopsy of an Inguinal lymph node reveals necrotizing granulomas, neutrophilic infiltrates, and inclusion bodies within macrophages. Which of the following is the most likely etiology of infertility in this patient?

- a) Chlamydia trachomatis**

- b) Herpes simplex type 2
- c) Molluscum contagiosum
- d) Mycobacterium tuberculosis
- e) Treponema pallidum

28. A 16 yr old boy from a village presents with a 5-day history of fever and testicular pain. Physical examination shows swollen, tender parotid glands and testes. Which of the following is the most likely responsible pathogen?

- a) Haemophilus ducreyi
- b) Neisseria gonorrhoeae
- c) Human papillomavirus
- d) Mumps virus**
- e) Streptococcus pyogenes

29. A 63-year-old man with an open fracture of the femur develops the rare complication of gas gangrene and requires leg amputation. What is the most likely causative agent?

- a) Clostridium botulinum
- b) Clostridium perfringens**
- c) Clostridium tetani
- d) Staphylococcus aureus
- e) Klebsiella pneumonia

30. You are asked to review a patient 7 days after a laparoscopic cholecystectomy. One of the port sites has notable surrounding erythema and there is some pus visible at the site of the incision. Culture grew gram positive coagulase positive cocci resistant to penicillin. What is the most likely causative organism?

- a) Streptococcus viridans
- b) Enterococcus faecalis
- c) Staphylococcus epidermidis
- d) Streptococcus pyogenes

e) Staphylococcus aureus

31. A 32-year-old-woman complained of abdominal pain and fever. She had been using IUCD- intra uterine contraceptive device for about 6 years and she had it removed one month before. An abdominal ultrasonography showed unilateral ovarian abscess. Unilateral oophorectomy was performed. In the histopathological examination of the specimen sulfur granules were observed. Most likely pathogen involved is

- a) Bacillus cereus
- b) Actinomyces israelii**
- c) Clostridium perfringens
- d) E.Coli
- e) Klebsiella pneumoniae

32. Which of the following is the most prevalent microorganism in the vagina and may also be protective?

- a) Streptococci
- b) Bacteroides fragilis
- c) Candida
- d) Lactobacillus species**
- e) Fusobacterium

33. A patient presented with intermittent fever, weakness, and weight loss with distension of abdomen. On examination, massive enlargement of the spleen and Hyperpigmentation of the skin was noted. There was prevalence of sand flies in that area. What is the diagnosis?

- a) Hydatid cyst
- b) Dengue hemorrhagic fever
- c) Leishmaniasis**
- d) Black water fever
- e) Trypanosomiasis

34. A 29 year old male, developed fever, malaise, head ache, fatigue and sore throat. Physical examination revealed Lymphadenopathy and splenomegaly. Blood examination showed elevated SGOT, SGPT, ALP and direct and indirect Bilirubin. CBC showed elevated WBC with lymphocytic predominance, many of which were large atypical T lymphocytes giving a suspicion of Infectious mononucleosis. Which of the following is likely cause?

- a) EBV- Epstein-Barr virus**
- b) HTLV 1-Human T-lymphotropic virus 1
- c) HPV 6- Human Papillomavirus 6
- d) CMV- Cytomegalovirus
- e) VZV- Varicella zoster virus

35. Autopsy of a Middle-Eastern woman, who had been suffering from wasting fever for a long time, revealed enlarged blackened liver and spleen. Bone marrow was hyperplastic and black-colored as well. Cerebral cortex was smoky grey. What disease is it characteristic of?

- a) **Malaria**
- b) AIDS
- c) Sepsis
- d) Generalized herpetic infection
- e) Meningococccemia