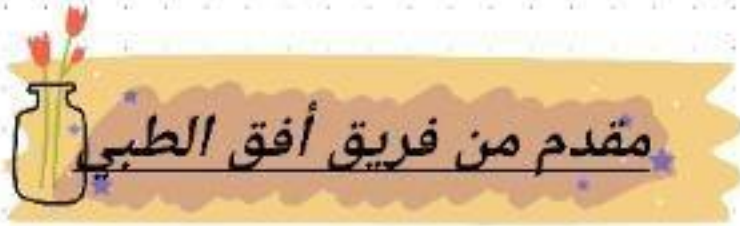
مقدم من فريق أفق الطبي


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حركة الشبيبة الفتحاوية
جامعة الأزهر
Fateh Youth Movement

Intracellular Accumulations & Extracellular Depositions - 50 Multiple Choice Questions (MCQs) with Answers

1. What is intracellular accumulation?

A) Deposition of substances inside cells
B) Loss of cellular material
C) Absence of cellular metabolism
D) Increase in cellular division
Answer: Deposition of substances inside cells

2. Which of the following diseases is characterized by the accumulation of sphingomyelins in phagocytic and parenchymal cells?

A) Gaucher's disease
B) Niemann-Pick disease
C) Tay-Sachs disease
D) Alkaptonuria
Answer: Niemann-Pick disease

3. What type of fat accumulation is seen in atherosclerosis?

A) Intracellular lipid accumulation
B) Extracellular lipid deposition
C) Both intracellular and extracellular lipid accumulation
D) No fat accumulation
Answer: Both intracellular and extracellular lipid accumulation

4. What is the hallmark feature of xanthomas?

A) Fat deposits in the liver
B) Fat accumulation in the skin
C) Pigment deposition in tissues
D) Glycogen accumulation
Answer: Fat accumulation in the skin

5. What is the defining feature of mucinous degeneration?

A) Accumulation of mucin inside epithelial cells
B) Depletion of mucopolysaccharides
C) Increased keratin production
D) Deposition of amyloid in tissues
Answer: Accumulation of mucin inside epithelial cells

6. Which of the following is an example of extracellular mucin accumulation?

A) Cloudy swelling
B) Myxomatous degeneration
C) Xanthoma
D) Amyloidosis
Answer: Myxomatous degeneration

7. What does hyaline change (hyalinosis) refer to?

A) Accumulation of mucin
B) Homogeneous, glassy-pink appearance in tissue sections
C) Increase in pigment deposition
D) Inflammation of tissues
Answer: Homogeneous, glassy-pink appearance in tissue sections

8. In which condition are Russell bodies found?

A) Alcoholic hepatitis
B) Chronic inflammation
C) Atherosclerosis
D) Hemochromatosis
Answer: Chronic inflammation

9. What is the main protein involved in Mallory bodies (Mallory alcoholic hyaline)?

A) Actin
B) Keratin
C) Cytoskeletal proteins
D) Myosin
Answer: Cytoskeletal proteins

10. What is the cause of vascular hyalinosis in diabetes mellitus?

A) Increased protein accumulation in the vessel walls
B) Excess collagen deposition
C) Lipid accumulation in the arteries
D) Increased number of red blood cells
Answer: Increased protein accumulation in the vessel walls

11. What type of accumulation is seen in glycogen storage diseases?

A) Increased glycogen within lysosomes
B) Increased glycogen in the extracellular matrix

C) Increased mucin production
D) Calcium deposition
Answer: Increased glycogen within lysosomes

12. What is anthracosis?

A) Iron overload disorder
B) Black pigmentation of the lungs due to carbon inhalation
C) Hemoglobin accumulation in cells
D) Lipid accumulation in arteries
Answer: Black pigmentation of the lungs due to carbon inhalation

13. Which pigment is responsible for Addison's disease hyperpigmentation?

A) Lipofuscin
B) Melanin
C) Bilirubin
D) Hemosiderin
Answer: Melanin

14. What is the main cause of albinism?

A) Excess melanin production
B) Deficiency of tyrosinase enzyme
C) Excessive collagen production
D) Increased iron deposits
Answer: Deficiency of tyrosinase enzyme

15. What is lipofuscin commonly referred to as?

A) Aging pigment
B) Hemoglobin pigment
C) Calcium-binding protein
D) Blood clotting factor
Answer: Aging pigment

16. What is the characteristic feature of brown atrophy of the heart?

A) Accumulation of hemosiderin
B) Accumulation of lipofuscin
C) Calcium deposition in the myocardium
D) Increased glycogen storage
Answer: Accumulation of lipofuscin

17. What causes hemosiderosis?

A) Excess iron accumulation in tissues
B) Excess bilirubin production
C) Decreased hemoglobin synthesis
D) Excessive collagen deposition
Answer: Excess iron accumulation in tissues

18. What is the primary test for detecting hemosiderin?

A) Congo red stain
B) Prussian blue reaction
C) PAS stain
D) Hematoxylin and eosin stain
Answer: Prussian blue reaction

19. What is the main cause of primary hemochromatosis?
A) Genetic defect leading to excessive iron absorption
B) Chronic liver disease
C) Excessive iron supplementation
D) Multiple blood transfusions
Answer: Genetic defect leading to excessive iron absorption

20. Which pigment is formed in malaria due to parasite metabolism of hemoglobin?

A) Melanin
B) Hemozoin
C) Bilirubin
D) Lipofuscin
Answer: Hemozoin

21. What is dystrophic calcification?

A) Deposition of calcium in dead or degenerated tissues
B) Deposition of calcium in normal tissues
C) Excess collagen production
D) Excess lipid accumulation
Answer: Deposition of calcium in dead or degenerated tissues

22. What is metastatic calcification?

A) Deposition of calcium in normal tissues due to hypercalcemia
B) Accumulation of melanin in tissues
C) Excess lipid deposition in arteries

D) Iron overload disorder
Answer: Deposition of calcium in normal tissues due to hypercalcemia

23. Which of the following conditions is associated with dystrophic calcification?

A) Atherosclerosis
B) Hypercalcemia
C) Chronic renal failure
D) Vitamin D toxicity
Answer: Atherosclerosis

24. What is amyloidosis?

A) Deposition of abnormal protein in tissues
B) Lipid accumulation in organs
C) Excess calcium deposition
D) Increased red blood cell production
Answer: Deposition of abnormal protein in tissues

25. What is the classic histological stain for amyloid?

A) Congo red stain
B) Prussian blue stain
C) PAS stain
D) H&E stain
Answer: Congo red stain

26. What is the main organ affected in systemic amyloidosis?

A) Liver
B) Kidney
C) Heart
D) Skin
Answer: Kidney

27. What is the most common type of amyloidosis associated with multiple myeloma?

A) AL amyloidosis
B) AA amyloidosis
C) Senile amyloidosis
D) Secondary amyloidosis
Answer: AL amyloidosis

28. Which of the following is a feature of nephrotic syndrome due to amyloidosis?

A) Proteinuria
B) Hypertension
C) Increased red blood cells
D) Iron overload
Answer: Proteinuria

29. What is gout caused by?

A) Uric acid accumulation
B) Excess collagen production
C) Lipid metabolism disorder
D) Increased bilirubin
Answer: Uric acid accumulation

30. What is the characteristic feature of chronic tophaceous gout?

A) Deposition of monosodium urate crystals
B) Increased hemoglobin production
C) Accumulation of calcium in tissues
D) Increased melanin production
Answer: Deposition of monosodium urate crystals
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31. What is the primary biochemical defect in primary gout?

A) Deficiency of tyrosinase
B) Overproduction of uric acid due to purine metabolism defect
C) Excess bilirubin accumulation
D) Increased iron absorption
Answer: Overproduction of uric acid due to purine metabolism defect

32. In which joint does acute gouty arthritis most commonly occur?

A) Knee joint
B) First metatarsophalangeal joint (big toe)
C) Hip joint
D) Shoulder joint
Answer: First metatarsophalangeal joint (big toe)

33. What is the histological hallmark of tophi in chronic gout?

A) Fatty vacuoles

B) Deposition of monosodium urate crystals surrounded by a foreign body giant cell reaction
C) Iron deposits
D) Excess glycogen accumulation
Answer: Deposition of monosodium urate crystals surrounded by a foreign body giant cell reaction

34. What is the primary cause of secondary gout?

A) Genetic mutation in uric acid metabolism
B) Increased purine turnover due to conditions like leukemia
C) Excess tyrosine metabolism
D) Decreased collagen synthesis
Answer: Increased purine turnover due to conditions like leukemia

35. What is nephrocalcinosis?

A) Deposition of calcium salts in renal tubules
B) Excess lipid accumulation in kidneys
C) Deposition of amyloid in kidneys
D) Increased glycogen storage in kidneys
Answer: Deposition of calcium salts in renal tubules

36. What is the most common cause of metastatic calcification?

A) Chronic inflammation
B) Hypercalcemia due to hyperparathyroidism
C) Iron overload
D) Protein accumulation
Answer: Hypercalcemia due to hyperparathyroidism

37. Which condition is associated with dystrophic calcification?

A) Dead or degenerated tissues
B) Hypercalcemia
C) Excess bilirubin production
D) Increased protein synthesis
Answer: Dead or degenerated tissues

38. What is the characteristic feature of calcification in tuberculosis?

A) Dystrophic calcification in caseous necrosis
B) Metastatic calcification in lung alveoli
C) Increased glycogen deposits
D) Excess lipid accumulation

Answer: Dystrophic calcification in caseous necrosis

39. What type of calcification is seen in an old thrombus (phlebolith)?

A) Metastatic calcification
B) Dystrophic calcification
C) Amyloidosis
D) Hemosiderosis
Answer: Dystrophic calcification

40. What is the most commonly affected tissue in metastatic calcification?

A) Gastric mucosa
B) Lung alveoli
C) Renal tubules
D) All of the above
Answer: All of the above

41. What is the key histological feature of amyloidosis?

A) Congo red staining showing apple-green birefringence under polarized light
B) Black pigment deposition
C) Increased glycogen accumulation
D) Presence of iron granules in macrophages
Answer: Congo red staining showing apple-green birefringence under polarized light

42. Which type of amyloidosis is associated with chronic inflammatory diseases like tuberculosis?

A) AL amyloidosis
B) AA amyloidosis
C) Senile amyloidosis
D) Localized amyloidosis
Answer: AA amyloidosis

43. What is the precursor protein for AL amyloidosis?

A) Immunoglobulin light chains
B) Serum amyloid A protein
C) Transthyretin
D) Beta-2 microglobulin
Answer: Immunoglobulin light chains

44. What is the most serious complication of renal amyloidosis?

A) Nephrotic syndrome leading to renal failure
B) Increased glycogen deposition
C) Lipid peroxidation
D) Hemochromatosis
Answer: Nephrotic syndrome leading to renal failure

45. In which organ does senile amyloidosis primarily occur?

A) Liver
B) Brain (associated with Alzheimer's disease)
C) Skin
D) Pancreas
Answer: Brain (associated with Alzheimer's disease)

46. What type of amyloidosis is associated with long-term hemodialysis?

A) AL amyloidosis
B) AA amyloidosis
C) Beta-2 microglobulin amyloidosis
D) Senile amyloidosis
Answer: Beta-2 microglobulin amyloidosis

47. What is the primary effect of amyloid deposition in the heart?

A) Cardiac hypertrophy
B) Cardiac failure due to restrictive cardiomyopathy
C) Increased contractility
D) Increased heart rate
Answer: Cardiac failure due to restrictive cardiomyopathy

48. What is the gross appearance of an amyloid-affected kidney?

A) Pale, enlarged, and waxy
B) Shrunken and dark brown
C) Black pigmented
D) Red and swollen
Answer: Pale, enlarged, and waxy

49. Which of the following is a feature of systemic amyloidosis affecting the spleen?

A) Sago spleen
B) Tigroid spleen
C) Granulomatous inflammation

D) Hemosiderin deposition
Answer: Sago spleen

50. What is the most common clinical manifestation of gastrointestinal amyloidosis?

A) Macroglossia and diarrhea
B) Increased gastric acid production
C) Lipid accumulation in intestines
D) Excess collagen deposition
Answer: Macroglossia and diarrhea