PATHOLOGY MCQs

BLOOD VESSELS

1) The primary anatomic site of pressure regulation in the vascular system is:

A. aorta

B. arteries

C. arterioles

D. capillaries

E. heart

2) Which of the following characteristics best describes essential hypertension?

A. can be caused by adrenal tumors

B. is commonly seen with aortic coarctation and pheochromocytoma

C. causes arteriolar changes in the kidneys

D. may lead to diabetes

3) Complications of chronic hypertension include each of the following except:

A. left ventricular hypertrophy

B. congestive heart failure

C. renal failure

D. diabetes mellitus

E. brain hemorrhage

4) Causes of secondary hypertension include all of the following except:

A. renal artery stenosis

B. adrenal cortical carcinoma

C. chronic pyelonephritis

D. lipoid nephrosis (“nil” disease)

5) Recognized complications of severe hypertension include all of the following except:

A. renal failure
B. retinal hemorrhages with loss of vision
C. dissecting aortic aneurysm
D. diabetes mellitus
E. acceleration of atherosclerosis

6) Causes of secondary hypertension include all of the following except:
A. chronic renal disease
B. aortic valvular stenosis
C. neoplasms or hyperplasias of the adrenal cortex
D. pheochromocytoma
E. coarctation of the aorta

7) Renal causes of secondary hypertension include which of the following:
A. narrowing of the renal artery
B. acute glomerulonephritis
C. polycystic kidneys
D. chronic glomerulonephritis
E. all of the above

8) Secondary hypertension may be associated with all of the following except:
A. narrowing of the renal artery
B. adrenal adenoma
C. uremia
D. brain stem lesions
E. pheochromocytoma

9) Which is usually associated with thromboangiitis obliterans?
A. high fat diet
B. purines
C. smoking
D. alcohol
10) Patchy destruction of elastic tissue in the aortic media associated with obliterative endarteritis of vaso vasorum is characteristic of:

A. Marfan’s syndrome
B. giant cell arteritis
C. syphilitic aortitis
D. polyarteritis nodosa
E. Monckeberg’s sclerosis

11) Which is predominantly a disease of vessels of the lower extremities with an inflammatory component and nerve involvement?

A. dermatomyositis
B. Takayasu’s
C. thromboangiitis obliterans
D. systemic lupus erythematosus

12) Tobacco smoking is important in the pathogenesis of:

A. polyarteritis nodosa
B. Wegener’s granulomatosis
C. Raynaud’s disease
D. Takayasu’s arteritis
E. Buerger’s disease

13) All of the following are true of thromboangiitis obliterans (Buerger’s disease) except:

A. is often associated with severe pain
B. may lead to gangrene of the extremities
C. characteristically and predominantly occurs in females
D. is aggravated by smoking

14) A characteristic of polyarteritis nodosa is:

A. a “butterfly”-shaped rash over the face
B. greatly thickened skin and sloughing of the epidermis
C. severe anemia

D. necrotizing arteritis

E. jaundice

15) Drugs may be a cause of:

A. polyarteritis nodosa

B. systemic lupus erythematosus

C. both

D. neither

16) A 27-year-old woman at a snowy football game developed marked pallor, tingling and burning of her nose and fingertips. She most likely had:

A. thromboangiitis obliterans

B. Takayasu’s syndrome

C. arteriosclerosis obliterans

D. Raynaud’s disease or syndrome

E. arteriolar sclerosis

17) A 60-year-old male had a 3-month history of severe throbbing pain and tenderness over the temple. He now presents with blindness. The most likely diagnosis is:

A. Raynaud’s disease

B. syphilitic arteritis

C. thromboangiitis obliterans

D. rheumatoid arteritis

E. giant cell arteritis

18) At autopsy a 23-year-old woman has atypical verrucous endocarditis, hematoxylin bodies, and fibrinoid deposits in blood vessels, endocardium, serous membranes and other sites, and glomerulonephritis. She had:

A. eclampsia

B. polyarteritis nodosa

C. progressive systemic sclerosis

D. systemic lupus erythematosus
19) The most common cause of aortic aneurysms is:

A. syphilis
B. congenital weakness of the aortic wall
C. atherosclerosis
D. occlusion of the vasa vasorum
E. bacterial arteritis

20) Syphilitic aortitis is commonly associated with all of the following except:

A. aortic valvular insufficiency
B. difficulty in swallowing
C. endarteritis of vasa vasorum
D. right ventricular hypertrophy

21) Which one of the following is most often the cause of death in cases of dissecting aneurysms?

A. hemopericardium
B. congestive heart failure
C. myocardial infarction
D. aortic stenosis

22) A 72-year-old male presents with lower abdominal and left flank pain of one week’s duration. Physical exam reveals a pulsatile mass in the mid-abdomen. An x-ray of the abdomen reveals obliteration of the left psoas muscle shadow. Each of the following are likely to be correct except:

A. He has an atherosclerotic aneurysm of the abdominal aorta.
B. He has a luetic aneurysm of the abdominal aorta.
C. The aneurysm is leaking.
D. He needs an immediate operation.
E. His prognosis is poor.
23) The most common cause of abdominal aortic aneurysms is:

A. trauma

B. atherosclerosis

C. syphilis

D. hypertension

E. cystic medial necrosis

24) Aneurysms of the arch of the aorta are most characteristically caused by

A. atherosclerosis

B. tuberculosis

C. syphilis

D. congenital defects

E. fungi

25) Aneurysms associated with generalized atherosclerosis are found most often in the:

A. circle of Willis

B. abdominal aorta

C. arch of the aorta

D. renal arteries

E. ascending aorta

26) Characteristics of berry aneurysms include each of the following except:

A. cause subarchnoid hemorrhage

B. lack a muscular wall

C. more often solitary than multiple

D. occur at bifurcation of internal and external carotid arteries

E. rare in childhood

27) Dissecting aneurysms of the aorta are most characteristically associated with:

A. cystic medial necrosis

B. fibrous dysplasia
C. cystic fibrosis
D. senile elastosis

28) Each of the following diseases is characteristically accompanied by atherosclerosis of the aorta except:

A. Marfan’s syndrome
B. diabetes mellitus
C. hyperlipidemia
D. tertiary syphilis
E. hypertension

29) Factors operative in the morphogenesis of atherosclerotic plaque include all of the following except:

A. endothelial injury with platelet aggregation
B. incorporation of mural thrombi into arterial intima
C. vascularization of the atheromatous plaque
D. perivascular inflammation
E. fatty accumulation in intimal cells

30) Which of the following does not appear to be a risk factor in the development and complications of atherosclerosis?

A. maleness
B. diabetes mellitus
C. hypertension
D. alcoholism
E. cigarette smoking

31) Following injury produced by cutting the toe nail too short, a 70-year-old diabetic woman developed infection that progressed to gangrene of the left great toe. The most likely vascular disease process is:

A. infectious arteritis
B. thrombophlebitis
C. arteriosclerosis
D. phlebosclerosis
E. thromboangitis obliterans

32) Thrombophlebitis is associated with:
A. atherosclerosis
B. pulmonary emboli
C. both
D. neither

33) The major cause of pulmonary thromboemboli is:
A. hypertension
B. heart failure
C. atherosclerosis
D. thrombophlebitis
E. varicose veins

34) A benign tumor of vascular smooth muscle origin which usually occurs beneath the nail bed and which may be painful is the:
A. glomus tumor
B. hemangioblastoma
C. hemangioma
D. hemangiopericytoma
E. lymphangioma

35) A painful neoplasm which most frequently occurs in the fingers is:
A. hemangioma
B. lymphangioma
C. hemangiopericytoma
D. glomangioma
E. hemangioendothelioma
36) A benign vascular tumor arising in the liver is most likely to be a:
A. hemangioma
B. lymphangioma
C. pericytoma
D. glomangioma
E. granuloma pyogenicum

37) A patient has had since birth a single, large red-blue or “port-wine” discoloration of skin on the face. The lesion is probably
A. a cavernous lymphangioma
B. a hemangioma
C. Kaposi’s sarcoma
D. hereditary hemorrhagic telangiectasia (Osler-Weber-Rendu)
E. an arterio-venous fistula or aneurysm

38) A birthmark on the face characterized by a slightly raised circumscribed deep purple area is a:
A. hemangioma
B. lymphangioma
C. hemangiopericytoma
D. glomangioma

39) Cystic hygroma is:
A. a malignant blood vessel tumor
B. benign and a variety of lymphangioma
C. a cystic tumor of ovarian epithelium
D. congenital polycystic disease of kidney

40) A cavernous hemangioma is:
A. neoplasm of vascular elements
B. hamartoma of compact capillaries
C. vascular neoplasm of pericyte origin

D. hamartoma of large vascular channels

41) Pain is usually or often a symptom of each of the following except:
A. thromboangiitis obliterans
B. glomangioma
C. dissecting aneurysm
D. Kaposi’s sarcoma

42) Each of the following statements applies to varicose veins except:
A. are caused by increased venous pressure
B. common source of large pulmonary thromboemboli
C. frequently become thrombosed
D. more common in women than in men
E. occur in association with cirrhosis of the liver

43) Features of Raynaud’s disease include:
A. occurs primarily in men
B. precipitated by exposure to warm temperatures
C. little or no morphologic changes in the affected arterioles early in the course of the disease
D. nearly always a progressive disease leading to extensive gangrene of the extremities

44) Idiopathic cystic medial necrosis is associated with:
A. tertiary syphilis
B. previous hemolytic streptococcal infection
C. atherosclerotic aneurysm
D. coxsackie infection
E. dissecting aneurysm

45) A 48 year old man suffers the sudden onset of severe tearing pain in his mid-upper back. His blood pressure is 210/120. Radial pulses are markedly unequal in intensity. The most LIKELY diagnosis is:
A. thromboangiitis obliterans
B. thickening and increased permeability of the capillary basement membranes throughout the body are characteristic of:

A. Raynaud's disease
B. systemic lupus erythematosus
C. hyperestrogenemia
D. diabetes mellitus
E. bacterial endocarditis

47) Temporal arteritis is associated with each of the following except:

A. granulomatous inflammation
B. gangrene of the scalp
C. older age groups
D. pain
E. visual symptoms

48) Idiopathic cystic medial necrosis is associated with:

A. fusiform aneurysm
B. cardiovascular syphilis
C. dissecting aneurysm
D. atherosclerotic aneurysm
E. saccular aneurysm

49) Migratory thrombophlebitis is most suggestive of:

A. collagen disease
B. cancer
C. contraceptive use
D. pregnancy
E. alcoholism
50) The most significant complication of thrombophlebitis is:
A. stasis ulcers
B. pain
C. edema
D. pulmonary embolism
E. cancer

51) Giant cell arteritis is associated with all of the following except:
A. old age
B. temporal artery
C. pain
D. failure to respond to steroid therapy

52) Migratory thrombophlebitis is often a sign of:
A. varicose veins
B. connective tissue disease
C. neoplasia
D. contraceptive use

53) Aneurysms of the descending aorta are usually caused by:
A. atherosclerosis
B. syphilis
C. trauma
D. polyarteritis nodosa
E. Raynaud’s disease

54) The cleft-shaped empty spaces in histological sections of an atheroma are indicative of:
A. serum
B. collagen
C. fibrin
D. cholesterol
55) Which one of the following complications of superficial varicose veins occurs most frequently?

A. pulmonary embolus  
B. cor pulmonale  
C. gangrene  
D. thrombophlebitis  
E. dependent edema

56) Polyarteritis nodosa is not characterized by:

A. acute inflammation of arteries  
B. response to steroid treatment  
C. occurrence in young adults  
D. sensitivity to tobacco

57) Severe (malignant) hypertension is characterized by:

A. hyperplastic arteriolosclerosis  
B. aortic insufficiency  
C. Marfan’s syndrome  
D. calcific aortic stenosis  
E. thromboangiitis obliterans

58) Hypersensitivity angiitis involves:

A. arterioles and venules  
B. large veins  
C. both  
D. neither

59) An aneurysm of the abdominal aorta is:

A. usually the end result of syphilitic aortitis  
B. usually the end result of atherosclerosis  
C. a frequent complication of polyarteritis nodosa
D. called a berry aneurysm

60) Essential hypertension is associated with all of the following except:

A. arteriolosclerosis

B. amyloidosis

C. left ventricular hypertrophy

D. renal disease

61) Which one of the following diseases is least likely to be associated with thrombosis?

A. Monckeberg’s (medial) sclerosis

B. atherosclerosis

C. temporal arteritis

D. varicose veins

E. polyarteritis nodosa

62) Varicose veins of the legs are associated with which of these:

A. cigarette smoking

B. pregnancy

C. acute pancreatitis

D. excessive walking

63) Petechiae are most suggestive of:

A. acute rheumatic heart disease

B. bacterial endocarditis

C. Libman-Sack’s endocarditis

D. Marfan’s disease

E. carcinoid syndrome

64) Hypertension is associated with:

A. pheochromocytoma

B. adrenal cortical adenoma

C. both
D. neither

65) Hypertensive patients most commonly die of:
A. cerebral hemorrhage
B. renal failure
C. congestive heart failure
D. cerebral infarction
E. pulmonary embolism

66) The most diagnostic histopathologic finding associated with hypertension is:
A. interstitial fibrosis of myocardium
B. arteriosclerosis
C. arteriolar sclerosis
D. aortic medial calcification
E. aortic aneurysm

67) Telangiectases are:
A. prone to become malignant
B. caused by polyvinyl chloride
C. composed of dilated lymphatics
D. associated with hyperestrogenemia

68) Capillary hemangiomas are characterized by:
A. frequent malignant transformation to sarcomas
B. infection by retrovirus
C. exposure to polyvinyl chloride
D. frequent regression

69) Which one of the following pathologic conditions is most likely to lead to systemic hypertension?
A. hypersensitivity to B-hemolytic streptococcus
B. ganglioneuroblastoma
C. pheochromocytoma
D. hypernephroma

E. cystic medial necrosis

70) A 72 year old woman presents to your clinic with a complaint of an acute onset of right side headache. She also has acute and progressive vision deficit in her right eye. You promptly admit her to the hospital, requesting a biopsy of her distal right temporal artery. What histologic features do you suspect will be present in the pathology report?

A. a “lumpy-bumpy” pattern of immunoglobulin deposition in the basement membrane by immunofluorescent stain

B. a linear pattern of immunoglobulin deposition in the basement membrane by immunofluorescent stain

C. fibrinoid necrosis and PMN infiltration

D. granulomata and giant cells

71) Hypertension is associated with all of the following except:

A. renal artery stenosis

B. diabetes mellitus

C. coarctation of the aorta

D. minimal change disease

E. anaphylactoid purpura (Henoch-Schönlein syndrome)

72) Amyloidosis is associated with all of the following except:

A. birefringence properties with Congo Red stain

B. multiple myeloma

C. chronic infection, e.g. tuberculosis

D. “butterfly rash” over bridge of nose

73) Polyarteritis nodosa is:

A. caused by hypersensitivity to tobacco

B. does not respond to steroid treatment

C. both

D. neither
74) Raynaud’s disease is associated with:

A. hypertension
B. old age
C. sensitivity to cold
D. arteriosclerosis
E. visual symptoms

75) A neoplasm frequently associated with AIDS is:

A. Kaposi’s sarcoma
B. carcinoma of lung
C. malignant melanoma
D. telangiectasia
E. Follicular carcinoma of thyroid

76) Hyalinized arterioles in the kidney are found in association with:

A. congestive heart failure
B. malignant hypertension
C. hypersensitivity angitis
D. diabetes mellitus

77) A renal biopsy of a patient who has survived a chronic disease for 15 years reveals massive Congo Red deposits in the mesangium of glomeruli and in subendothelial locations of small arteries and arterioles. Our diagnosis is:

A. lupus nephritis
B. rapidly progressive glomulonephritis
C. secondary amyloidosis
D. Goodpasture’s disease
E. Kimmelstiel-Wilson kidney