Pharmacology MCQs: Antihypertensives, vasodilators, angina drugs, cardiac glycosides.

1. Diuretics

    a. Work to lower BP initially by decreasing peripheral vascular resistance
    b. Thiazide diuretics are potassium sparing
    c. Are effective in lowering Bp by 20 – 25 mmHg in most patients
    d. BP response to thiazides continues to increase at doses greater than usual therapeutic dose.
    e. Diuretics may impair glucose tolerance

2. Methyl dopa

    a. Lowers the heart rate and cardiac output more than clonidine does
    b. Causes reduction in renal vascular resistance
    c. Has minimal CNS side effects
    d. Has 80% bioavailability
    e. Usual therapeutic dose is about 1 – 2 mg/day

3. Propranolol

    a. Is a B1 specific blocker
    b. Causes prominent postural hypotension
    c. Inhibits the stimulation of renin production by catecholamines
    d. Has a half life of 12 hours
    e. Has no effect on plasma lipids

4. Hydralazine

    a. Dilates veins but not arterioles
    b. Is contraindicated in the treatment of preeclampsia
    c. Can cause an SLE type syndrome in up to 10 – 20% of patients
    d. Causes orthostatic hypotension in many cases

e. Is extremely useful as a single agent in treatment of hypertension

5. Which of the following drug's metabolism characteristics are bimodally distributed in the population?

    a. Sodium nitroprusside
    b. Clonidine
    c. Minoxidil
    d. Hydralazine
    e. Phentolamine

6. The ACE inhibitors

    a. Inhibit peptidyl dipeptidase thus preventing the inactivation of bradykinin
    b. Captopril is a prodrug
    c. Are to be used with caution in patients with IHD as reflex sympathetic activation occurs secondary to the hypotensive effects of the ACE inhibitors
    d. Have no role in treating the normotensive diabetic patients
    e. Are useful antihypertensive agents in late pregnancy

7. The following drugs when combined with ACE inhibitors may produce troublesome problems EXCEPT

    a. Diclofenac
    b. Potassium supplements
    c. Spironolactone
    d. Lithium
    e. Theophylline

8. The nitrates

    a. Have an antianginal effect via vasodilation of arterioles only
    b. Serve to increase preload

c. Have a direct effect on cardiac muscle to cause a decrease in anginal symptoms
d. All have high oral bioavailability
e. Are contraindicated in the presence of increased intracranial pressure

9. Regarding Calcium channel blockers

a. Calcium channel blockers are not bound to plasma proteins
b. Nifedipine has less vascular potency than verapamil
c. Felodipine has been shown to inhibit insulin release in humans
d. Diltiazem has a plasma half life of 3 – 4 hours
e. Verapamil has high affinity for cerebral blood vessels thus decreasing vasospasm post subarachnoid haemorrhage

10. Which of the following calcium channel blockers is excreted predominantly in the faeces?

a. Nifedipine
b. Felodipine
c. Diltiazem
d. Nimodipine
e. Verapamil

11. Which of the following calcium channel blockers has the longest plasma half life?

a. Felodipine
b. Diltiazem
c. Amlodipine
d. Nimodipine
e. Verapamil

12. The following include major actions of digoxin on cardiac electrical functions EXCEPT

a. Decreased PR interval on ECG

b. Decreased conduction velocity at the AV node
c. Increased automaticity of the atrial muscle
d. Decreased effective refractory period in purkinje system/ventricles
e. Bigeminy can be induced by digoxin

13. Which of the following increases the risk of digoxin induced arrhythmias?

a. Hyperkalaemia
b. Hypercalcaemia
c. Hypermagnesaemia
d. Hyperuricaemia
e. Hypernatraemia

14. Digoxin

a. Is poorly lipid soluble
b. Is extensively metabolized
c. Has a half life in the body of 40 hours
d. Has minimal GI toxicity
e. Is 80% bound to plasma proteins

15. Drugs which may increase digoxin effect include all of the following EXCEPT

a. Amiodarone
b. Diltiazem
c. Frusemide
d. Quinidine
e. Antacids

16. Which of the following drugs has the smallest volume of distribution?

a. Chloroquine
b. Verapamil
c. Imipramine

d. Warfarin
e. Digoxin

Pharmacology Answers

1. E
2. B
3. C
4. C
5. D
6. A
7. E
8. E
9. D
10. C

11. C
12. A
13. B
14. C
15. E
16. D

Physiology MCQs: Circulation

04/06/02

1. Regarding circulating body fluids

    a. 75% of cells in the bone marrow belong to the WBC producing myeloid series
    b. The average half life of a neutrophil in the circulation is 6 hours
    c. C3b leads to opsonisation of bacteria
    d. Cellular immunity is mediated by T lymphocytes
    e. All of the above are true

2. The following pairings of immunoglobulin and function are correct EXCEPT

    a. IgG = complement fixation
    b. IgE = pentamer with J chain
    c. IgD = Ag recognition by B cells
    d. IgM = Plasma concentration = 120 mg/dl
    e. IgA = localized protection in external secretions

3. Which of the following tissues has a conduction rate of 0.05 m/s?

    a. Ventricular muscle
    b. Bundle of His
    c. Atrial pathways
    d. AV node
    e. Purkinje system

4. Regarding cardiac arrhythmias

    a. Heart rate decreases during inspiration
    b. Left posterior hemiblock produces abnormal left axis deviation
    c. Heart rate averages 35 beats/min in patients with infranodal block
    d. Short PR interval and normal QRS complex characterizes Wolff Parkinson White syndrome
    e. The congenital forms of long QT syndrome have been found to be caused by genetic defects in calcium channels.

5. The following changes would be seen on an ECG in a patient with serum potassium levels >8.5 mmol/l EXCEPT

    a. p waves
    b. Slurred QRS complex
    c. Tall peaked T waves
    d. QRS complex = 0.2 secs
    e. Irregular rhythm

6. Regarding the cardiac cycle

    a. Peak LV pressure is about 180 mmHg
    b. End diastolic ventricular volume = 130 ml
    c. Isovolumetric ventricular contraction lasts about 0.5 seconds
    d. 70% of ventricular filling occurs via atrial contraction
    e. The amount of blood ejected by each ventricle per stroke at rest = 50 ml

7. Regarding the jugular venous pulse

    a. A ‘V’ wave mirrors the rise in atrial pressure before the tricuspid valve closes
    b. “A” wave is due to atrial diastole
    c. Venous pressure increases during inspiration
    d. “C” wave occurs during isovolumetric ventricular contraction
    e. Giant “V” waves may indicate complete heart block

8. All of the following increase cardiac output EXCEPT

    a. Eating
    b. Pregnancy
    c. Sleep
    d. High environmental temperature
    e. Exercise

9. What is the Cardiac output of a man with a BP = 120/70, pulse = 70/min, cardiac index = 3.2 litres, and stroke volume of 70 ml?

    a. 500 ml/min
    b. 1.5 litres/min
    c. 3.5 litres / min
    d. 5 litres/min
    e. 7 litres/min

10. Regarding the circulation

    a. Total cross sectional area of vessels is 4500 cm^2 in the arterioles
    b. 50% of the circulating blood volume is in the systemic veins
    c. 8% of the circulating blood volume is in the low pressure pulmonary circulation
    d. Relative resistance is highest in the venules
    e. 1% of the circulating blood volume is in the capillaries

11. Causes of increased interstitial fluid volume and oedema include all of the following EXCEPT

    a. Increased venous pressure
    b. Decreased plasma protein level
    c. Inadequate lymph flow
    d. Arteriolar constriction
    e. Histamine

12. Stimuli which increase gastrin secretion include all of the following EXCEPT

a. Secretin
b. Increased vagal discharge
c. Luminal distention
d. Peptides and amino acids
e. Calcium

13. Regarding daily water turnover in the GIT

a. 2500 ml is secreted by the pancreas
b. 7000 ml is reabsorbed
c. 5500 ml of water is reabsorbed by the jejunum
d. 9000 ml is endogenously secreted by the body
e. 800 ml of water is excreted in the normal stool daily

14. Contents of the normal gastric juice include all of the following EXCEPT

a. Intrinsic factor
b. Lipase
c. Pepsins
d. Sulphate
e. Calcium

15. Regarding GI hormones

a. Gastrin stimulates pepsin secretion
b. CCK inhibits gallbladder contraction
c. Secretin stimulates production of a pancreatic juice rich in enzymes
d. GIP inhibits insulin production
e. Somatostatin stimulates secretion of CCK, gastrin, and secretin

Physiology Answers

1. E
2. B
3. D
4. C
5. A
6. B
7. D
8. C
9. D
10. B
11. D
12. A
13. C
14. E
15. A

Heart

1. Myocardial infarction

a. Is characterized by necrosis beginning approximately 30 minutes after coronary occlusion
b. Most often involves occlusion of the left circumflex coronary artery
c. Are apparent macroscopically at around one hour after coronary occlusion
d. Typically results in liquefactive necrosis
e. Is subendocardial if only two thirds of the ventricular wall is involved

2. regarding the changes to myocardium after MI

a. pallor at 24 hours
b. wavy fibres are found centrally
c. decreased contractility after 5 minutes
d. liquefactive necrosis is typical
e. sarcoplasm is resorbed by leukocytes

3. In compensated cardiac hypertrophy changes include:

a. Diffuse fibrosis
b. Hyperplasia
c. Decreased sarcomeres
d. Increased capillary density
e. Increased capillary/myocyte ratio

4. endocarditis in IV drug abusers typically

a. involves the mitral valve
b. is caused by candida albicans
c. does not cause fever
d. has a better prognosis than other types of endocarditis
e. is caused by staph aureus

5. The commonest cause of fungal endocarditis is

a. Actinomycosis
b. aspergillus
c. ?
d. candida
e. blatomycosis

6. With regard to MI

a. Gross necrotic changes are present within 3-5 hours
b. Irreversible cell injury occurs in less than 10 minutes
c. Fibrotic scarring is completed in less than 2 weeks
d. Death occurs in 20% of cases in less than 2 hours
e. Is most commonly caused by occlusion of the left circumflex coronary artery

7. Regarding pericarditis

a. Constrictive pericarditis only rarely follows suppurative pericarditis
b. Primary pericarditis is usually bacterial in origin
c. Serous pericarditis may be due to uraemia
d. Fibrinous pericarditis is due to Mycobacterium tuberculosis infection until proven ptherwise
e. Haemorrhagic pericarditis is most commonly due to Klebsiella infection

8. A young man presents with central chest pain presumed to be associated with vasoconstriction. The most likely cause of the pain is local

a. Hypoxia
b. Decreased ATP
c. Increased CO_2
d. Catecholamines acting on alpha 1 receptors
e. Acetylcholine stimulation

9. An adult male with an ejection fraction of 80% could be due to

a. Myocardial ischaemia
b. Arrythmia
c. Thiamine deficiency
d. ?
e. ?

10. The cause of fluid retention peripherally with congestive cardiac failure is

a. Increased renin
b. Increased GFR
c. Increased angiotensin II
d. Increased aldosterone
e. ?

11. rheumatic carditis is associated with

a. Curschmann spirals
b. Ito cells
c. Aschoff bodies
d. Nutmeg cells
e. Reed-Sternberg cells

12. Regarding myocardial infarction:

a. The size of the infarct is independent of collateral circulation
b. Is mainly precipitated by vasospasm
c. Irreversible tissue damage appears within 30 minutes
d. Acute cellular swelling is due to ATP depletion
e. Occlusion of right coronary artery is responsible for most infarcts in the anterior wall of the left ventricle

13. The most common form of congenital heart disease is

a. Coarctation of the aorta
b. Tetralogy of Fallot
c. ASD
d. PDA
e. VSD

14. Myocardial infarction:

a. Is usually a consequence of coronary vessel occlusion by embolus
b. Is characterized morphologically by liquefactive necrosis
c. Is most commonly complicated by ventricular rupture
d. Can be either transmural or subendocardial
e. Is apparent on light microscopy within minutes

15. All of the following are cardiac compensatory responses that occur in heart failure except:

a. Cardiac muscle fibre stretching
b. Increased adrenergic receptors on cardiac cells
c. Chamber hypertrophy
d. Decreased heart rate
e. Increased vasopressin levels

16. The most common cause of pericarditis is

a. SLE
b. Drug hypersensitivity
c. Trauma
d. Post myocardial infarction
e. Bacterial

17. all of the following are features of rheumatic fever EXCEPT

a. carditis
b. subcutaneous nodules
c. erythema nodosum
d. elevated antistreptolysin
e. Aschoff bodies in the heart

18. The histological appearance of contraction bands in association with acute myocardial infarction indicate:

a. Previous old myocardial infarction
b. Early aneurismal formation
c. Compensatory responses to decreased myocardial contractility
d. A right ventricular infarct
e. Recent reperfusion therapy

19. After occlusion of a coronary artery

a. The ischaemia is most pronounced in the epicardial region
b. Loss of contractility only occurs when ultrastructural changes in the myocyte are present
c. Reperfusion of the ischaemic area can result in new cellular damage, due to the generation of oxygen free radicals
d. Q waves on the ECG are diagnostic of transmural infarction
e. None of the above are true

20. In compensated heart failure

a. Right atrial pressure drops
b. Maximum cardiac output is unchanged
c. Resting cardiac output is unchanged
d. Renin level eventually drops below premorbid level
e. Fluid retention plays no role

21. Infective endocarditis

a. In the acute form, is most commonly caused by streptococci
b. Involves abnormal valves in most acute cases
c. Is confirmed by positive blood cultures in less than 50% of cases
d. May cause splenic infarction
e. May cause MacCallum’s plaques to form on affected valves

22. cor pulmonale may be caused by

a. congenital heart disease
b. mitral stenosis
c. left ventricular failure
d. primary pulmonary hypertension
e. aortic regurgitation

23. Post myocardial infarction

a. ATP is down to 50% at 10 minutes
b. Irreversible cell injury occurs within 5 minutes
c. ATP depletion begins at 2 minutes
d. Microvascular injury occurs within 30 minutes
e. Wavy fibres are seen within 20 minutes

24. congestive heart failure can be caused by:

a. vitamin A deficiency
b. niacin deficiency
c. vitamin D deficiency
d. thiamine deficiency
e. vitamin B2 deficiency

25. Regarding acute endocarditis

a. It has a mortality of <20%
b. It is caused by virulent organisms
c. 30% is caused by bacteria
d. ?
e. ?

26. A 50 year old man with an acute myocardial infarction has a BP 130/80. He can maintain his BP because of:

a. An absolute increase in cardiac output
b. Increased systolic filling pressure
c. Increased right atrial pressure
d. Increased water absorption
e. Decreased sympathetic outflow

27. What is the most common histological change seen in myocardial infarction less than 24 hours duration?

a. Pallor and oedema
b. Haemorrhage
c. Hyperaemic border
d. Liquefactive necrosis
e. ?

28. With regard to acute coronary occlusion

a. Collaterals do not flow for 4-6 hours
b. Striking loss of contractility within 60 seconds
c. 50% recanalise spontaneously
d. ischaemia occurs after 60 minutes
e. ?

29. In hypertensive cardiac disease there is:

a. Flattening of trabeculae
b. Insterstitial fibrosis
c. Dilation of the left ventricle
d. ?
e. ?

30. Acute severe MI causes:

a. Pulmonary oedema
b. Thoracic pressure
c. Increased right atrial pressure
d. Decreased aterial pressure

e. ?
31. Coronary thrombus

a. If asymptomatic, carries a low risk
b. Increased tissue plasminogen activator inhibitor causes extension of thrombus
c. Vessels mostly occluded to decrease blood velocity
d. Is at increased risk of because of mechanical stressors
e. 50-75% occlusion is likely to cause infarction
32. The most common complication of acute myocardial infarctionis

a. Sudden cardiac death
b. Congestive cardiac failure
c. Valvular dysfunction due to papillary muscle rupture
d. Ventricular aneurysm
e. Arrythmia
33. in the developed world, the most common cause of myocarditis is

a. SLE
b. HIV
c. Enteroviruses
d. Chlamydiae
e. Drug hypersensitivity
34. Plaque associated thrombosis is associated with all EXCEPT:

a. Transmural MI
b. Subendocardial MI
c. Unstable angina
d. Stable angina
e. Sudden cardiac death
35. in left heart failure

a. failure is typically secondary to right heart failure
b. ascites is a predominant feature
c. right heart failure is rarely, if ever, associated with left heart failure
d. renal congestion and acute tubular necrosis are less common
e. pulmonary congestion and oedema are rare
36. Regarding myocardial infarction

a. Subendocardial infarcts are most common
b. Approximately 30% of transmural infarcts are due to vasospasm
c. Irreversible cell injury occurs within 20-40 minutes
d. Reperfusion does not salvage reversibly damaged cells
e. Irreversible injury does not first occur in the subendocardial zone
37. congestive cardiac failure is characterized by all of the following EXCEPT:

a. perivascular and interstitial transudate
b. Kerley A lines on chest Xray
c. Activation of renin-angiotentin-aldosterone system

d. Haemosiderin-containing macrophages in the alveoli
e. Progressive oedematous widening of alveolar septa
38. Pertaining to ischaemic heart disease:

a. Coronary atherosclerosis begins to form in middle age
b. 50% of people with this condition have underlying atherosclerotic plaques
c. acute myocardial infarction occurs mostly by embolus occluding the artery
d. Prinzmetal angina occurs due to coronary artery spasm
e. Subendocardial infarcts always occur from reduced systemic blood pressure
39. Regarding macroscopic changes in myocardial infarcts:

a. Changes may be accentuated as early as 1-2 hours by histochemical stains
b. By 18-24 hours infarcted tissue becomes dark and swollen
c. In the first week, the lesion becomes sharply defined, yellow and soft
d. At four days, a rim of hyperaemic granulation tissue appears
e. A fibrous scar is well established at two weeks

Answers Heart

1. a
2. a
3. a
4. e
5. d
6. d
7. c
8. a?d?
9. c
10. d
11. c
12. d
13. e
14. d
15. d
16. d

17. c
18. e
19. c
20. c
21. d
22. d
23. a
24. d
25. b
26. a
27. a
28. b
29. b
30. a
31. b?
32. e
33. c
34. d
35. d
36. c
37. b
38. d
39. c

Blood Vessels

back

1. In atherosclerosis the cells at the centre of the plaque are

a. Macrophages
b. Foam cells
c. Leukocytes
d. Smooth muscle cells
e. ?

2. All of the following are major risk factors for atherosclerosis EXCEPT:

a. Obesity
b. Hyperlipidaemia

c. Smoking
d. Hypertension
e. Diabetes
3. Which risk factors have the greatest association with atherosclerosis?

a. Hypertension, diabetes, smoking, hyperlipidaemia
b. Hypertension, male, family history
c. Hypertension, obesity, sedentary lifestyle
d. Hypertension, female, OCP
e. Age, family history, sex
4. Malignant hypertension

a. 75% recover with no loss of renal function
b. is associated with abnormal renin levels
c. ?
d. ?
e. affects 1-5% of HT sufferers
5. In the current view of pathogenesis, atherosclerosis involves:

a. Smooth muscle migration into adventitia
b. Chronic endothelial injury
c. Lymphocytes engulfing lipids
d. Endothelial cell proliferation
e. Collagen degradation
6. Aortic dissection

a. Occurs most commonly in women
b. Is most commonly caused by atherosclerosis
c. Can be associated with inherited connective tissue disorders
d. Most commonly causes death by disruption of the aortic valve
e. Is most commonly preceded by an internal tear occurring in areas of atherosclerotic plaque
7. possible causes of secondary hypertension include

a. hypothyroidism
b. reduced intracranial pressure
c. low serum renin
d. addisons disease
e. glomerulonephritis
8. atherosclerosis

a. when advanced is rarely calcified
b. mainly affects the media of arteries
c. commonly affects renal arteries
d. produces lesions commonly containing neutrophils
e. can cause aneurysmal dilation when severe
9. Regarding giant cell arteritis, which statement is INCORRECT?

a. Affects medium arteries
b. Affects small arteries including vertebral

c. Affects small arteries including ophthalmic
d. Has an increased prevalence of HLA-DR4
e. Has no gastrointestinal manifestations
10. Select the true statement concerning atherosclerosis

a. Congenital absence of LDL cholesterol leads to premature atherosclerosis
b. Thoracic aorta is more likely to be involved than the abdominal
c. Fatty streaks appear in the aortas of children as young as 1 year
d. Fatty streaks are destined to become atherosclerotic plaques
e. Endothelial disruption always precedes atheroma development
11. Select the false statement concerning atherosclerosis

a. Familial hypercholesterolaemia is associated with inadequate hepatic uptake of LDL
b. CMV has been detected in human atheromatous plaques
c. Fibrous atheromatous plaques are capable of regression
d. Foam cells can be considered to be specialized macrophages
e. Atherosclerosis is associated with medial calcific sclerosis
12. With regard to aortic dissection, which is INCORRECT?

a. It tends to occur in 40-60 year old men
b. Approximately 90% of non-traumatic cases occur in patients with antecedent hypertension
c. It is usually associated with marked dilation of the aorta
d. It is unusual in the presence of substantial atherosclerosis
e. It is usually caused by an intimal tear within 10cm of the aortic valve
13. Regarding the plaque in atherosclerosis, which is CORRECT?

a. Mixture of cells and connective tissure matrix
b. Rarely causes microemboli
c. Coronary arteries are the most affected
d. Thoracic aorta is more affected than the abdominal aorta
e. ?
14. Regarding atherosclerosis

a. Coronart arteries equally affected as renal arteries
b. Exclusively affects medium and large arteries
c. Increased incidence in hypothyroidism
d. Decreased incidence in nephritic syndrome
e. ?
15. Atherosclerotic plaques

a. Are located within the media
b. Involve the coronary arteries most heavily
c. Contain foam cells that are derived from macrophages and smooth muscle cells
d. Are commonly found in arteries of the upper limb
e. Are rarely found at the ostia of branches of the descending aorta
16. false aneurysms

a. remain in the confines of the circulatory system
b. include berry aneurysms
c. can be fusiform or saccular
d. are produced by a leak at the junction of a vascular graft with a natural artery
e. are commonly caused by syphilis
17. The most common cause of aortic dissection in the elderly

a. Hypertension
b. Marfan's syndrome
c. Connective tissue disorders
d. Ischaemic heart disease
e. Aortic valvular disorders
18. Atherosclerosis

a. Is initiated by endothelial injury
b. Is a disease of the media of blood vessels
c. Predominantly involves arterioles
d. Is most common in the internal carotid arteries
e. Begins in middle age
19. Regarding atherosclerosis

a. The risk is directly related to HDL (high density lipoprotein) levels
b. The current "response to injury" hypothesis considers it to be an acute inflammatory response to endothelial injury of arterial walls
c. It typically beings in childhood, but only manifests itself in later life
d. It involves smaller elastic and larger muscular arteries
e. 20% of all deaths in USA are attributable to this disease process

Answers Blood Vessels

back

1. b

2. a

3. a

4. e

5. b

6. c

7. e

8. e

9. e

10. c

11. e

12. c
13. a
14. b
15. c
16. d
17. a
18. a
19. c

Valvular heart disease MCQs (from Louis)

1. Major etiologies of aortic valve stenosis include all except:
    a. Rheumatic heart disease
    b. Marfan syndrome
    c. Age related
    d. Congenital heart disease

2. Cardiac decompensation with aortic valve stenosis is associated with:
    a. A dilated thin walled heart
    b. Cor pulmonale
    c. An ejection diastolic murmur
    d. 2-5 year mortality of 50%

3. Major Jones criteria for rhematic fever include all except:
    a. Fever
    b. Chorea
    c. Polyarthritis
    d. Carditis

4. Rheumatic heart disease is commonly associated with all except:
    a. Mitral valve stenosis
    b. Right ventricular hypertrophy
    c. Infective endocarditis
    d. Congestive heart failure

5. Infective endocarditis is diagnosed using the
    a. Jones criteria
    b. Wells criteria
    c. Duke criteria
    d. HACEK criteria

ANSWERS

1. B, page 561, table 12-7, Marfan causes Ao regurg and Ao root dilation
2. D, page 562 (onset of symptoms = decompensation, 50% die in 5 years if angina, 50% in die in 2 years if CHF)
3. A, page 566 – fever is minor criteria
4. B, page 566 – the pulmonary valve is rarely affected, typically (L)VH
5. C, page 569

1. Regarding complications of atherosclerotic plaques

   a. Atheroma plaques composing of large amount soft foam cells and lipid , are less likely to rupture than those with smaller amounts of lipid
   b. A severely stenotic plaque is required as a precipitating lesion for patients who develop myocardial infarcts
   c. In the coronary arteries it is usually around 70% of a fixed occlusion that is required to get stenosis and the signs of angina.
   d. Haemorrhage into a plaque is considered the most dangerous complication

2.In aneurysms

   a. HT is the most common condition associated with aneurysms of the descending aorta
   b. Atherosclerosis is the most common condition associated with aneurysms of the ascending aorta
   c. Berry aneurysms are typically seen in the Circle of Willis
   d. All the above are true

3. Regarding arteries, which is true?

   a. As vessels become smaller the ratio of wall thickness to lumen diameter becomes greater
   b. Capillaries are the principal points of physiological resistance to blood flow
   c. Capillaries have a media of spirally arranged muscle cells
   d. In many types of inflammation vascular leakage and leucocyte exudation occur preferentially in pre- capillary venules.

4. Fenestrated endothelial layers are likely to be seen in the capillaries of which organ?

   a. Spleen
   b. Liver
   c. Lung
   d. Adrenal gland

5. Of the following arteries, which is least likely to be affected by atherosclerosis?

a. Vessels in the Circle of Willis
b. Popliteal
c. Coronary
d. Abdominal aorta

6. Which of the following is not a major risk factor for atherosclerosis?

a. Family history
b. Cigarette smoking
c. Obesity
d. Male gender

7. Regarding hypertension

a. Hypertension is defined as either sustained diastolic pressure > 100mmHg or sustained systolic pressure > 180mmHg
b. 10%of the general population are hypertensive
c. 5% of hypertensive patients develop malignant hypertension
d. Hypertension is twice as common in white skinned people compared to black patients

8. Which is associated with medium vessel vasculitis?

a. Kawasaki disease
b. Takayasu disease
c. Churg –Strauss
d. Wegners granulomatosis

9. In Giant cell arteritis

a. It only affects the temporal arteries
b. Is an uncommon vasculitis in the elderly in USA
c. Thought to be a T cell mediated immune response against an unknown agent
d. A negative biopsy rules out the diagnosis

10. Thromboangiitis obliterans is commonly associated with

a. Female gender
b. Old age
c. Obesity
d. Cigarette smoking
e.

11. Regarding Raynaud's disease (primary Raynaud's phenomenon)\

a. Usually associated with a connective tissue disorder
b. Is associated to smoking
c. Is common in young males
d. It is rare to see ulceration

e.

12. Regarding deep venous thrombosis, which is not risk factor?

a. CHF
b. Pregnancy
c. Adenocarcinoma
d. All the above

13. Which of the following is a change seen in the aging heart

a. Decreased myocardial mass
b. Increased left ventricular cavity size
c. Decreased left atrial cavity size
d. Dilatation ascending aorta with rightward shift

14. In volume overload hypertrophy

a. Is characterized by ventricular dilatation
b. The wall thickness is the best way to measure hypertrophy in these patients
c. The wall thickness is always reduced
d. None of the above are true

15. In left heart failure, which is an early and cardinal symptom?

a. Weight gain
b. Dyspnoea
c. Fatigue
d. Chest pain on exertion

16. Which is the most likely cause of cyanosis in early post natal life?

a. Tetralogy of Fallot
b. Transposition of the great arteries
c. Truncus arteriosis
d. Tricuspid atresia

17. Abdominal aortic aneurysms are

a. Common above the renal arteries
b. Common in Marfans syndrome
c. Caused by intimal weakness
d. A source of atheroemboli to the kidneys

18.Regarding aortic dissection

a. The most common cause of death is dissection involving the coronary arteries
b. Usually commences with an intimal tear within 10cm of the aortic valve
c. Men aged > 60years with antecedent HT constitute one of he most common at risk groups
d. Cystic medial degeneration is a rare pre exsisting histological lesion

19. Which of the possible complications of acute myocardial infarction would be expected to be most delayed in onset?

a. Arrhythmia
b. Myocardial rupture
c. Congestive heart failure
d. Mural thrombus

20.The most frequent of all valve abnormalities is

a. Aortic stenosis
b. Aortic regurgitation
c. Mitral stenosis
d. Mitral regurgitation

21. Which is not a major criteria for rheumatic fever

a. Sydenham chorea
b. Subcutaneous nodules
c. Pancarditis
d. Erythema multiforme

22, The most likely organism responsible for prosthetic valve endocarditis is

a. Staphylococci epidermis
b. Staphylococcus aureus
c. Streptococci viridans
d. Haemophilus influenza

23. the most common form of pericarditis is

a. Purulent
b. Haemorrhagic
c. Fibrinous
d. Caseous

24. Regarding myocardial infarcts

a. Severe ischaemia causes immediate cell death
b. All regions of the myocardium are equally ischaemic
c. Reperfuison of the myocardium within 20min of the ischaemia onset may completely prevent necrosis
d. A reperfused infarct is usually coagulative

25.Regarding acute plaque change, which is correct?

a. Only haemodynamically significant lesions result in acute transformation
b. Plaque rupture always results is occlusive thrombosis
c. Statins have a beneficial effect by reducing plaque inflammation and therefore increasing stability
d. Plaque composition is stable once formed

26. Mitral valve prolapse

a. Is often an incidental finding in young males
b. Is associated with a mid diastolic click
c. Is usually secondary to a herdatory connective tissue disorder ie Marfans
d. Has a rare complication of causing infective endocarditis

27. Hypertrophic cardiomyopathies

a. Are associated with myocardial hyperplasia
b. Are associated with systolic dysfunction
c. Are a leading cause of LVH unexplained by other clinical/pathological cause
d. The heart hypo-contracts

28. Regarding Infective endocarditis which is the correct pairing

a. Native but pre damaged ,otherwise normal valves: staph. epidermidis
b. Prosthetic valves: staph aureus
c. Healthy valves: staph aureus
d. Iv drug users haemophilus

29. Regarding heart tumours

a. Rhabdomyomas are the most frequent primary tumour of infants hearts and in the first year of life
b. Fibromas are the most common primary tumour of the adult heart
c. 90% myxomas occur in the ventricles
d. Myxomas are rarely solitary

30.Acute rheumatic fever

a. Histologically aschoff bodies are only found in the pericardium.
b. Is due to an immune reaction against Group B streptococci
c. Occurs around 7 days after the strep. Pharyngitis
d. 1st attacks can occur in middle to late life

ANSWERS

1.c
2.c
3.a
4.d
5.a
6.c
7.c
8 a
9 c
10 d
11 d
12 d (should read IS a risk factor)
13 d
14 a
15 b
16a
17d
18 b
19 b
20 a
21 d
22 a
23 c
24 c
25 c
26 d
27 c

28 c
29 a
30 d