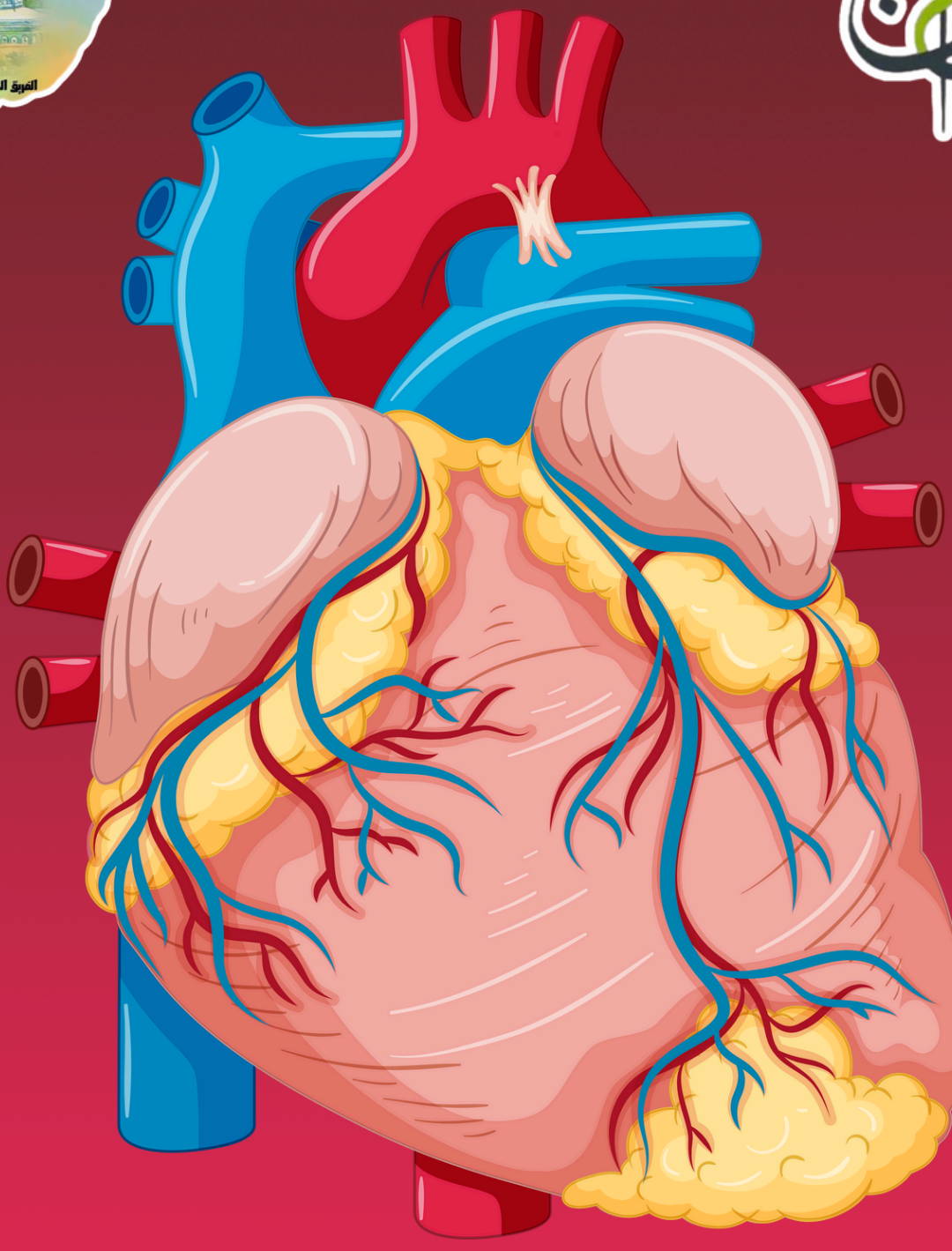
PATHOLOGY - TEST BANK

CVS



Lec (1-3) :

Past papers

Resolution is the fate that may occur in ONE of the following:

a. Stable atheroma.

b. Old thrombus.

c. Recent thrombus.

d. Old infarct.

e. Vulnerable atheroma.

ANSWER: C

Which of the following is wrong:

a. Basal state of endothelial cells causes thrombosis.

b. Thrombosis occurs when unnecessary blood clotting is activated.

c. Turbulent flow retards inflow of clotting inhibitors.

d. Multiple small emboli within pulmonary are asymptomatic.

e. most common target of venous emboli is lung.

ANSWER: A

All of the following matches regarding thrombosis are correct EXCEPT:

a. Endothelial cell Injury: arterial thrombi.

b. Stasis: venous thrombi.

c. The propagating part: the adherent part of the thrombus.

d. Hypercoagulability: immobilization (bed-rest).

e. Recanalization: can establish some degree of blood flow.

ANSWER: C

The term 'vegetations' refers to a formation at:

a. Lumen of aorta.

b. Deep leg veins.

c. Canula insertion site.

d. Cardiac valves.

e. Coronary artery.

ANSWER: D

All of the following are associated with stasis EXCEPT:

a. Disrupts normal blood flow.

b. Mostly causes venous thrombi.

c. Allows the dilution of activated clotting factors.

d. Prevents the inflow of clotting factor inhibitors.

e. Promotes endothelial cell injury.

ANSWER: C

Organization means:

a. Accumulation of additional platelets and fibrin that obstruct the vessel.

b. Removing thrombi using fibrolytic mechanisms.
c. Ingrowth of endothelial cells, smooth muscle cells and fibroblasts into fibrin rich thrombus.
d. Fragmentation of thrombi and transport elsewhere in the vasculature.
e. none of the above.

ANSWER: C

Vegetation means

a. thrombi on heart valve
b. thrombi in heart chambers
c. fat deposit on the wall of vessels
d. hardening of vessels

ANSWER: A

the most common cause of pulmonary thromboembolism:

a. Thromboembolism.
b. Fat embolism.
c. Nitrogen embolism.
d. Cholesterol embolism.
e. Air embolism

ANSWER: A

which of the following is wrong;

a. Paradoxical embolus means saddle shaped thrombi obstruct the pulmonary bifurcation.

b. DVT is main cause of pulmonary thrombus.

c. Immobilization causes secondary hypercoagulability.

d. Lines of Zahn indicate antimortem thrombi

ANSWER: A

wrong about amniotic fluid embolism:

a. Presence of Luongo hair within mother pulmonary circulation.

b. Cause ARDS and DIC.

c. Cause cassion disease.

d. Highly mortality.

e. Mainly appears in the venous side

ANSWER: C

all of the following regarding pulmonary thromboembolism are true EXCEPT:

a. Arises in most of the cases from deep vein thrombosis of the lower limb.

b. Organization is seen in most of the cases.

c. Saddle embolus is an embolus that occurs in the arch of the aorta.

d. Pulmonary hemorrhage occurs when medium sized arteries are obstructed.

e. Paradoxical embolus can pass into the systemic circulation due to ventricular septal defect.

ANSWER: C

White infarcts can be seen in all of the following EXCEPT:

a. Heart

b. Lungs

c. Spleen.

d. Kidney.

ANSWER: B

Most prominent in fat embolism:

a. Caisson disease.

b. Neurological symptoms.

c. Bone fractures.

ANSWER: B

The most frequent emboli are:

a. Fat emboli.

b. Amniotic fluid

c. thrombotic origin.

d. Atherosclerotic.

e. air emboli

ANSWER: C

which is correct about fat embolism.

a. Freducmy follows complicated Caesarean sections

b. Represents the most common type of emboli.

c. Anemia and thrombocytopenia may occur in associated syndrome.

d. Fat along with epithelial cells and mucus are found within the embolus.

e. Dissolved nitrogen is the major contributor to symptoms.

ANSWER: C

cassion disease is caused by:

a. thromboembolism

b. Nitrogen embolus.

c. Saddle embolus.

d. Amniotic fluid embolus.

e. Fat embolus.

ANSWER: B

Wrong about fat embolism

a. symptoms need 1-3 days after injury to appear

b. it causes anemia and thrombocytopenia

c. Fat globules cause toxic injury

d. May be due to acute pancreatitis

e. Fat embolism syndrome occurs in 90% of tibia injury cases

ANSWER: E

The major targrt of systemic thromboembolism is:

a. Brain

b. lower limbs

c. Intestine

d. Kidney

e. Spleen

ANSWER: B

The red infarction happens in:

a. Kidney

b. Spleen

c. Lung

d. Skeletal muscle

ANSWER: C

All of the following are examples of red infarcts except:

A Small intestnal infarction

b. renal infarction

c. Reperfused spleen infarct

d. Pulmonary infarct

e. Liver infarct

ANSWER: B

Not a cause of pulmonary embolism:

a. saddle thrombus

b. Varicose vein

ANSWER: B

Monckeberg medial sclerosis is:

a. It is usually found in young people.

b. Causes vascular obstruction and ischemia.

c. Underlying atherosclerosis is always found.

d. It is calcified deposits in muscular arteries.

e. Seen in benign hypertension and diabetes.

ANSWER: D

One of the following is a modifiable risk factor of atherosclerosis:

a. Age.

b. Gender.

c. Hypertension.

d. Genetic abnormality.

e. Family history

ANSWER: C

Which of the following is not a risk factor of atherosclerosis:

a. Obesity.

b. Stable atheroma.

c. Male gender.

d. Hypertension.

e. Diabetic patient.

ANSWER: B

One of the following is a component of necrotic center:

a. Neutrophils.

b. Cholesterol.

c. Macrophages.

d. Lymphocytes.

e. Proteoglycans.

ANSWER: B

All are true regarding atherosclerosis EXCEPT:

a. Consists of a soft necrotic center surrounded by a white fibrous cap.

b. Due to formation of an atheromatous plaque in the vessel's intima.

c. Hyperlipidemia is a major non-modifiable risk factor.

d. The lower abdominal aorta is mostly affected.

e. Premenopausal women are protected more than their counterpart aged men.

ANSWER: C

All are true regarding Mönckeberg medial calcific sclerosis EXCEPT:

a. Affects muscular arteries.

b. Occurs mostly in children.

c. Radiologically visible on x-ray.

d. Doesn't encroach on the vessel lumen.

e. Not significant

ANSWER: B

Doesn't cause obstruction and ischemia of downstream tissues:

a. Thrombus

b. Monkeburg's sclerosis

ANSWER: B

All of the following may complicate advanced atherosclerosis except:

a. Arterial rupture

b. Aneurysm formation

c. Varicosities formation

d. Distal infarction

e. Superimposed thrombus

ANSWER: C

All of the following form Virchow's triad, except:

a. Endothelial injury

b. Turbulent flow

c. Laminar flow

d. Hyper-coagulability

e. Stasis

ANSWER: C

The most common target of venous thrombi, is:

a. Legs

b. Lungs

c. Brain

d. Heart

ANSWER: B

Which statement accurately describes fat embolism syndrome?

a. Known as Cassion disease

b. Linked to decompression sickness

c. Involves a systemic immune response triggered by fat globules

d. Death is seen in 90% of the cases

e. Can result in Cushing's syndrome

ANSWER: C

Atheromatous plaques are located in the:

a. Tunica intima

b. Tunica media

c. Tunica externa

d. Tunica adventitia

ANSWER: A

Refers to the ingrowth of endothelial cells, smooth muscle cells, and fibroblasts into the fibrin-rich thrombus:

a. Organized thrombus

b. Amniotic fluid

c. Embolus

d. Aneurysm

ANSWER: A

Unique feature of necrotic core in atheroma:

ANSWER: Cholesterol crystals

All most commonly a source of embolus to lower limb EXCEPT:

ANSWER: DVT

Decompression sickness.

ANSWER: Air embolus

Which is wrong

ANSWER: Coagulation necrosis in the brain is a result of ischemic injury

Which sentence is true

ANSWER: Fat embolism/Thrombocytopenia

Robbins testbank

A 22-year-old construction worker falls 30 ft and fractures several bones, including his femoral shafts. Six hours later, the patient develops shortness of breath and cyanosis. Which of the following hemodynamic disorders best explains the pathogenesis of shock in this patient?

A) Acute myocardial infarction

B) Deep venous thrombosis

C) Fat embolism

D) Paradoxicalembolism

E) Septic shock

The answer is C: Fat embolism. Fat emboli originate from adipose tissue in the medulla of fractured long bones. Fat carried by venous blood reaches the lungs, filters through the pulmonary circulation, enters arterial blood, and is disseminated throughout the body. The occlusion of cerebral capillaries is accompanied by petechial hemorrhages in the brain and is the most important complication of fat embolism.

Acute myocardial infarction (choice A) would be unlikely in a 22-year-old patient. Deep venous thrombosis (choice B) and septic shock (choice E) would be unlikely within this time frame. Paradoxical embolism (choice D) refers to emboli that arise in the venous circulation and bypass the lungs by traveling through an incompletely closed foramen ovale, subsequently entering the arterial circulation.

Diagnosis: Fat embolism

A 69-year-old man is brought to the emergency room complaining of visual difficulty and weakness. On physical examination, the patient is aphasic with a right-sided hemiplegia. Retinal hemorrhages are seen bilaterally. You suspect that a thromboembolus coursed to the left middle cerebral artery and smaller emboli traveled to the retinal arteries. Which of the following anatomic sites is the most likely source for these emboli in this patient?

A) Adrenals

B) Deep leg veins

C) Heart

D) Liver

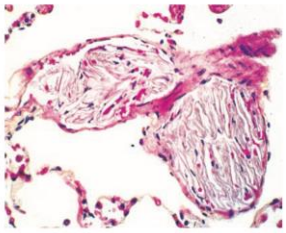
E) Lungs

The answer is C: Heart. The heart is the most common source of arterial thromboemboli, which usually arise from mural thrombi or diseased valves. These emboli tend to lodge at points where the vessel lumen narrows abruptly (e.g., at bifurcations or in the area of an atherosclerotic plaque). The viability of the tissue supplied by the vessel depends on the availability of collateral circulation and on the fate of the embolus itself. Paradoxical emboli from the right side of the circulation are exceedingly rare.

Diagnosis: Cerebral embolism, stroke

A 25-year-old woman delivers a healthy baby at 39 weeks of gestation. Six hours later, the mother develops severe short- ness of breath and appears cyanotic. Despite resuscitation, she dies 2 hours later. A section of lung at autopsy is shown in the image. These

pathologic findings are associated with which of the following mechanisms of disease?



A) Amniotic fluid embolism
B) Cardiogenic shock
C) Maternal-fetal histoincompatibility
D) Metastatic squamous cell carcinoma
E) Pulmonary thromboembolism

The answer is A: Amniotic fluid embolism. Amniotic fluid embolism refers to the entry of amniotic fluid containing fetal cells and debris into the maternal circulation through open uterine and cervical veins. It is a rare maternal complication of childbirth, but when it occurs, it is often catastrophic. This disorder usually occurs at the end of labor when the pulmonary emboli are composed of the epithelial constituents (squamae) contained in the amniotic fluid. None of the other choices show these pathologic findings.
Diagnosis: Amniotic fluid embolism

If the patient described in thre previous question had survived the acute episode of cyanosis and shock, she would have been at risk for developing which of the following life-threatening complications?

A) Bacterial endocarditis
B) Disseminated intravascular coagulation
C) Fatembolism
D) Neurogenic shock
E) Septic shock

The answer is B: Disseminated intravascular coagulation (DIC). The clinical presentation of amniotic fluid embolism can be dramatic, with the sudden onset of cyanosis and shock, followed by coma and death. If the mother survives the acute episode, she may die of DIC. Should she overcome this complication, she is at risk of developing acute respiratory distress syndrome. DIC is a thrombotic microangiopathy. Fibrin thrombi form in small blood vessels because of uncontrollable coagulopathy, which consumes fibrin and other coagulation factors. Once coagulation factors are depleted, uncontrollable hemorrhage ensues. None of the other choices are complications of amniotic fluid embolism.
Diagnosis: Amniotic fluid embolism

A 53-year-old man is hospitalized after injuring his neck in an automobile accident. He is placed in cervical traction. One week later, the patient develops painful swelling and erythema of his left calf. Doppler imaging discloses deep venous thrombosis. Which of

the following is the most likely cause for the development of thrombosis in this patient?

A) Age

B) Endothelial damage

C) Hypercoagulability

D) Infection

E) Stasis

The answer is E: Stasis. Venous thrombosis is caused by the same factors that predispose to arterial thrombosis, namely endothelial injury, stasis, and a hypercoagulable state. Although all of the choices are risk factors for deep venous thrombosis, the most likely choice, given the patients' immobilization, is stasis. Most venous thromboses occur in the deep veins of the legs.
Diagnosis: Deep venous thrombosis

A 60-year-old man has his left forearm amputated because he has invasive rhabdomyosarcoma. The pathologist notes calcification in the wall of the radial artery, which otherwise appears unremarkable. Which of the following is the appro- priate diagnosis?

A) Churg-Straussdisease

B) Complicated atherosclerotic plaque

C) Fibromusculardysplasia

D) Mönckeberg medial sclerosis

E) Polyarteritisnodosa

The answer is D: Mönckeberg medial sclerosis. Mönckeberg medial sclerosis is characterized by calcification of the media of large- and medium-sized arteries of older persons who are not otherwise affected by atherosclerosis (choice B). On gross examination, the involved arteries are hard and dilated. These arterial changes are usually asymptomatic. None of the other choices display calcification.
Diagnosis: Mönckeberg medial sclerosis

Patho Past paper

Lecture 4: Aneurysms and dissections

1- Wrong about aortic aneurysm and aortic dissection:

a. Hypertension is the most common cause for aortic dissection

b. Atherosclerotic aneurysm occurs more in men <50 years

c. Marfan syndrome is the most common CT disorder for aortic dissection

d. Syphilitic aneurysm is associated with obliterative end-arteritis

e. Mycotic aneurysm is an infection of a major artery

Answer: B

2- Regarding abdominal aortic aneurysm, all are correct **EXCEPT**:

a. Occurs mostly in men and above 50 years of old

b. Marfan syndrome is one of its causes

c. Bacteremia from salmonella gastroenteritis could be one of the causes

d. Occurs in infra-renal level of abdominal aorta

e. Syphilitic aneurysms are the most common cause nowadays

Answer: E

3- Aneurysms are most commonly due to:

a. Aging

b. Syphilis

c. Atherosclerosis

d. Systemic hypertension

e. Inflammation

Answer: C

4- The following confirm with aortic dissection, **except**:

a. More common at distal than proximal segment of the arch

b. More frequent in hypertensives than normotensives

c. Atherosclerosis has little or no influence in its production

d. Might be confused with MI clinically

e. Pregnant ladies are more at risk of its development

Answer: A

5- One is correct regarding vascular dissection:

a. Dissection doesn't result in hypotensive shock as blood remains inside the vascular system

b. Dissection rarely develops at sites of arterial aneurysms

c. Superior and inferior vena cava are the main affected vessels

d. Diabetes mellitus is the major risk factor for aortic dissections

e. Proximal aortic dissections are more life-threatening than isolated descending aortic dissections

Answer: E

6- One of the following is correct regarding aneurysms:

a. Ehlers-Danlos syndrome causes aneurysms by defective fibrillin

b. Aneurysms are disorders that only involve arteries

c. Abdominal aortic aneurysms maybe related to weak aortic media

d. False aneurysms and dissection are interchangeable terms

e. Chancre of primary syphilis may lead to aortic aneurysms

Answer: C

7- Post-MI ventricular wall rupture is an example of:

a. False aneurysm

b. Saccular aneurysm

c. Fusiform aneurysm

d. True aneurysm regardless of the morphology

Answer: A

8- Marfan syndrome can cause:

a. Aortic aneurysm

b. Aortic dissection

c. Valvular stenosis

d. A+B

Answer: D

9- Marfan syndrome is a risk factor for:

A. Aortic dissection

B. Mycotic aneurysm

C. Pulmonary embolism

D. Cerebral aneurysm

Answer: A

10- Which of the following is considered a false aneurysm?

A. Syphilitic aneurysm

B. Graft hematoma

C. Fusiform aneurysm

D. Saccular aneurysm

Answer: B

Lecture 5: Hypertension vascular disease

1- Necrotizing arteriolitis is a characteristic sign of:

a. malignant hypertension

b. varicosities

c. benign hypertension

Answer: A

2- All of the following regarding hypertensive vascular disease are true **EXCEPT:**

a. Benign hypertension constitutes almost 95% of the cases

b. Renal disease is the most common cause of secondary hypertension

c. Hyperplastic arteriolosclerosis is associated with severe hypertension

d. Hyaline arteriolosclerosis can occur in people with diabetes milletus

e. Malignant hypertension is associated with 50% of the cases

Answer: E

3- Choose the correct answer:

a. Malignant hypertension > with cancer metastasis

b. Hyaline arteriolosclerosis > normo-tensive

c. Hyperplastic arteriolosclerosis > diabetes essential hypertension is about 5%

Answer: B

4- Among the following, the most likely underlying cause of malignant hypertension is:

a. Chronic hepatic disease

b. A hidden malignancy in the lung

c. Adrenal insufficiency syndrome

d. Uncontrolled chronic hypertension

e. Protein losing enteropathy

Answer: D

5- Onion skin appearance of the arteriole results from:

a. Cholesterol crystals accumulation

b. Neutrophils and edema filling the inflamed vessel

c. Alternating platelet-rich and red blood cell-rich layers

d. Reduplication of basement membrane

e. Deposition of hyaline material in the wall

Answer: D

Lecture 6: Veins and lymphatics

1- A patient who underwent a procedure to treat breast cancer, which includes removal of the tumor and breast tissue in addition to ipsilateral axillary lymph nodes, she will absolutely suffer from:

a. secondary lymphedema

b. primary lymphedema

c. Varicosities

Answer: A

2- Filariasis is an infection that can lead to:

a. DVT

b. lymphedema

c. benign hypertension

Answer: B

3- Which of the following occurs as a paraneoplastic syndrome related to tumor elaboration of pro-coagulant factors?

a. chylothorax

b. IVC syndrome

c. migratory thrombophlebitis

Answer: C

4- Varicose veins are associated with all of the following **except:**

a. Superficial veins of the upper limb

b. Increase in intra-luminal pressure

c. Venous wall thinning and loss of support

d. Chronic varicose ulcers

e. Congestion and swelling

Answer: A

5- Varicose veins choose the correct answer:

a. Hypertension is a major risk factor

b. More in males

c. Chronic skin ulcers are a complication

d. Embolism is common

Answer: C

6- Lymphadenitis refers to which one of the following definitions:

a. Inflamed, swollen and tender draining lymph nodes

b. Dilated and tortuous subcutaneous vessels

c. Lymph accumulation and inflammation of vessels

d. Bacterial infection and inflammation of lymph vessels

e. Absence of lymphatics in a certain organ or tissue

Answer: A

7- Symptoms resulting from a mass in the lung compressing the superior vena cava vein can lead to:

A. Dilatation in head, neck, and arm veins

B. Edema in the lower extremities

C. Ascites

D. Gastrointestinal bleeding

Answer: A

Test bank

1. Aneurysm and Dissection

1. Aortic dissections are most life-threatening when they involve:

a. The descending aorta only.

b. The ascending aorta only.

c. Both the ascending and descending aorta.

d. The abdominal aorta.

Answer: c

2. Which of the following is a true aneurysm?

a. Pseudoaneurysm.

b. Aneurysm involving all three layers of the vessel wall.

c. Saccular aneurysm containing no thrombus.

d. Dissecting aneurysm.

Answer: b

3. The most common cause of abdominal aortic aneurysm is:

a. Syphilis.

b. Marfan syndrome.

c. Atherosclerosis.

d. Hypertension.

Answer: c

4. Cystic medial degeneration of the aorta is most commonly seen in:

a. Hypertension.

b. Marfan syndrome.

c. Atherosclerosis.

d. Syphilitic aneurysm.

Answer: b

5. A false aneurysm is characterized by:

a. Involvement of all three layers of the vessel wall.

b. A contained rupture in the vascular wall.

c. Aneurysms in the venous system.

d. Fusiform dilation of the artery.

Answer: b

6. Which of the following is a major complication of an aortic dissection?

a. Pulmonary embolism.

b. Cardiac tamponade.

c. Hypertensive encephalopathy.

d. Varicose veins.

Answer: b

8. Which connective tissue disorder increases the risk of aortic dissection?

a. Osteogenesis imperfecta.

b. Ehlers-Danlos syndrome.

c. Goodpasture syndrome.

d. Celiac disease.

Answer: b

9. What is the most common site of atherosclerotic aneurysms?

a. Thoracic aorta.

b. Abdominal aorta.

c. Common carotid artery.

d. Subclavian artery.

Answer: b

10. Which is TRUE about type B aortic dissections?

a. They involve the ascending aorta.

b. They commonly require surgical intervention.

c. They originate distal to the subclavian artery.

d. They are associated with Marfan syndrome.

Answer: c

2. Hypertensive Vascular Disease

1. Hyaline arteriolosclerosis is associated with:

a. Benign hypertension.

b. Malignant hypertension.

c. Vasculitis.

d. Congenital vascular defects.

Answer: a

2. The "onion skin" appearance of arterioles is a feature of:

a. Hyaline arteriolosclerosis.

b. Hyperplastic arteriolosclerosis.

c. Monckeberg medial calcific sclerosis.

d. Atherosclerosis.

Answer: b

3. The most common cause of secondary hypertension is:

a. Renovascular hypertension.

b. Endocrine disorders.

c. Coarctation of the aorta.

d. Obstructive sleep apnea.

Answer: a

4. Malignant hypertension is associated with all of the following EXCEPT:

a. Fibrinoid necrosis.

b. Concentric "onion skin" lesions.

c. Renal failure.

d. Thrombophlebitis.

Answer: d

5. Which of the following is TRUE about essential hypertension?

a. It accounts for 5% of all hypertension cases.

b. It is primarily caused by renovascular disease.

c. It is strongly linked to genetic and environmental factors.

d. It commonly presents with retinal hemorrhages.

Answer: c

6. Hypertensive heart disease can lead to:

a. Left ventricular hypertrophy.

b. Right ventricular dilation.

c. Tricuspid stenosis.

d. Mitral valve prolapse.

Answer: a

The most common site for hyaline arteriolosclerosis is:

a. Retina.

b. Kidney.

c. Liver.

d. Brain.

Answer: b

8. What is the primary mechanism of hyperplastic arteriolosclerosis?

a. Fibrinoid necrosis.

b. Endothelial cell injury.

c. Basement membrane reduplication.

d. Smooth muscle proliferation.

Answer: c

9. A patient with malignant hypertension is most likely to develop:

a. Cerebral edema.

b. Coronary artery aneurysm.

c. Pulmonary embolism.

d. Venous thrombosis.

Answer: a

10. Which genetic factor has been implicated in essential hypertension?

a. Mutations in fibrillin genes.

b. Polymorphisms in the renin-angiotensin system.

c. Deficiency of alpha-1 antitrypsin.

d. Loss of LDL receptor function.

Answer: b

3. Veins and Lymphatics

1. Varicose veins are characterized by:

a. Venous thromboembolism.

b. Involvement of deep veins.

c. Dilated, tortuous superficial veins.

d. Increased risk of embolism.

Answer: c

2. A 56-year-old woman with breast cancer who underwent axillary lymph node dissection develops chronic swelling of her arm. The most likely diagnosis is:

a. Lymphangitis.

b. Secondary lymphedema.

c. Filariasis.

d. Thrombophlebitis.

Answer: b

3. Trousseau syndrome (migratory thrombophlebitis) is most commonly associated with:

a. Connective tissue disorders.

b. Atherosclerosis.

c. Paraneoplastic syndromes.

d. Venous stasis.

Answer: c

4. The most common cause of the superior vena cava syndrome is:

a. Hepatocellular carcinoma.

b. Renal cell carcinoma.

c. Lung cancer.

d. Breast cancer.

Answer: c

5. Which of the following is NOT a risk factor for varicose veins?

a. Obesity.

b. Osteoporosis.

c. Pregnancy.

d. Female gender.

Answer: b

6. Lymphangitis is most commonly caused by:

a. Group A streptococci.

b. Staphylococcus aureus.

c. Escherichia coli.

d. Mycobacterium tuberculosis.

Answer: a

7. What is the most common complication of varicose veins?

a. Pulmonary embolism.

b. Chronic varicose ulcers.

c. Venous rupture.

d. Arterial aneurysm.

Answer: b

8. Filariasis is a parasitic infection that can cause:

a. Superior vena cava syndrome.

b. Primary lymphedema.

c. Secondary lymphedema.

d. Lymphangiosarcoma.

Answer: c

What is the hallmark microscopic feature of lymphangitis?

a. Fibrinoid necrosis.

b. Neutrophilic infiltration of lymphatic vessels.

c. Hyaline deposits in vessel walls.

d. Onion skin appearance.

Answer: b

Lec 7

Test Bank

1. What is the leading cause of morbidity and mortality worldwide? a) Cancer

b) Infectious diseases
c) Heart disease
d) Neurological disorders
e) Diabetes

Answer: c) Heart disease

2. Myocardial ischemia results from an imbalance between:

a) Oxygen production and consumption
b) Blood pressure and heart rate
c) Cardiac blood supply and oxygen demand
d) Electrical conductivity and mechanical activity
e) Cholesterol levels and exercise

Answer: c) Cardiac blood supply and oxygen demand

3. Which of the following is NOT a common cause of reduced coronary blood flow?

a) Atherosclerosis

b) Coronary vasospasm
c) Hypovolemia

d) Shock
e) Hyperglycemia

Answer: e) Hyperglycemia

4. What distinguishes myocardial infarction (MI) pain from angina pectoris? a) MI pain is relieved by rest

b) Angina pain lasts longer than 20 minutes
c) MI pain is not relieved by nitroglycerin or rest
d) MI pain occurs episodically with exertion
e) Angina pain is associated with vasospasm

Answer: c) MI pain is not relieved by nitroglycerin or rest

5. Which of the following treatments is most effective for angina caused by reversible myocardial ischemia?

a) Calcium supplements
b) Beta-blockers
c) Nitroglycerin
d) ACE inhibitors
e) Anticoagulants

Answer: c) Nitroglycerin

6. Which of the following is a characteristic of stable angina?

a) Occurs at rest or during sleep
b) Relieved by rest or nitroglycerin
c) Associated with plaque rupture
d) Causes irreversible damage to the myocardium
e) Is not related to increased myocardial oxygen demand

Answer: b) Relieved by rest or nitroglycerin

7. Unstable angina is typically associated with which of the following?

a) Stable atherosclerotic plaques
b) Increased cholesterol absorption
c) Superimposed partial thrombosis and vasospasm
d) Reversible ischemia during exertion only
e) Reduced myocardial oxygen demand

Answer: c) Superimposed partial thrombosis and vasospasm

8. Which condition is described as progressive cardiac decompensation following myocardial infarction? a) Chronic ischemic heart disease (IHD)

b) Acute coronary syndrome (ACS)
c) Stable angina
d) Hypertrophic cardiomyopathy
e) Sudden cardiac death

Answer: a) Chronic ischemic heart disease (IHD)

9. Which of the following is a feature of Prinzmetal (variant) angina?

a) It occurs only with physical exertion
b) It is relieved by reducing myocardial oxygen demand
c) It is associated with episodic vasospasm of coronary arteries
d) It occurs exclusively in the presence of atherosclerosis
e) It is unresponsive to vasodilators

Answer: c) It is associated with episodic vasospasm of coronary arteries

10. Which is NOT a mechanism for reduced oxygen-carrying capacity contributing to myocardial ischemia?

a) Anemia

b) Carbon monoxide poisoning
c) Tachycardia
d) Hypovolemia
e) Chronic obstructive pulmonary disease

Answer: d) Hypovolemia

11. Sudden cardiac death (SCD) following myocardial ischemia is most commonly caused by: a) Severe atherosclerosis

b) Ventricular arrhythmia
c) Chronic heart failure
d) Acute thrombosis
e) Myocardial rupture

Answer: b) Ventricular arrhythmia

12. What type of angina is characterized by increasing frequency, intensity, and duration of pain, often occurring with less exertion? a) Stable angina
b) Unstable angina
c) Prinzmetal angina
d) Silent ischemia
e) Acute myocardial infarction

Answer: b) Unstable angina

13. Critical stenosis with superimposed plaque disruption can lead to all of the following EXCEPT: a) Partial thrombosis

b) Vasospasm
c) Distal embolization
d) Complete myocardial oxygenation
e) Increased frequency of angina

Answer: d) Complete myocardial oxygenation

14. Which of the following is a hallmark of myocardial ischemia?

a) Death of myocardial cells
b) Pain lasting over 20 minutes and relieved by nitroglycerin
c) Insufficient blood supply relative to oxygen demand
d) Normal cardiac output during exercise
e) Increased oxygen supply relative to demand

Answer: c) Insufficient blood supply relative to oxygen demand

021 test bank

1-diminished oxygen-carrying capacity of the blood represents the most frequent Mechanism of cardiac ischemia
a. True
b. False

Ans: B

2-angina pectoris is defined as ischemia that causes pain but is insufficient to lead to death of myocardium a. True

b. False

Ans: A

3-Stable angina pectoris is also known as crescendo angina a. True

b. False

Ans: B

4-the following statements conform with angina pectoris except: a. Prinzmetal is usually associated with elevated ST segment of ECG

b. Stable angina is relieved by rest
c. Unstable angina is considered a pre-infarction
d. Typical angina is produced mainly on rest
e. Variant angina is due to vasospasm
Ans: D (not included)

5-stable angina has the following characters except: a. Appears with increased demand for blood

b. Associated with depressed ST segment of ECG
c. Basically there is fixed coronary narrowing by atherosclerosis
d. Usually of a short period
e. Being the least common
Ans: E

6-angina pectoris that occurs more frequently and of progressively longer period than other is: a. Crescendo

b. Stable
c. Variant

d. Prinzmetal
e. Effort angina
Ans: A

7-a man who suffer from chest pain and breathlessness after climbing the stairs to the 3rd floor, he has: a. Stable angina

b. Prinzmetal angina
c. Unstable angina
d. Myocardial infarction
Ans: A

8-all of the following regarding ischemic heart disease are correct EXCEPT: a. Associated with a severe substernal pain that can radiate to the left arm

b. Variant angina is associated with coronary artery vasospasm
c. Stable angina is also known as pre-infarction angina
d. Chronic IHD is usually associated with arrhythmias
e. Typical angina can be relieved by rest and nitroglycerin
Ans: C

9-all of the following would mostly lead to unstable angina EXCEPT: a. Partially occlusive thrombus

b. Complete coronary obstruction
c. Stenosis with superimposed spasm
d. Distal embolus formation
e. Atheromatous plaque rupture
Ans: B

10-Thrombosis of atheromatous plaque, the most common complication:

A. Stable angina
B. Effort angina
C. Unstable angina
D. Prinzmetal angina
E. Variant angina
Ans:C

Which of the following mostly to proceed to MI?

Unstable angina

***Not one of the clinical forms of IHD:**

Endarteritis obliterans

***Wrong pair:**

Atherosclerotic plaque rupture/ prinzmetal angina

Lec 8

Test Bank

1. **What is the most common cause of myocardial infarction (MI)?**

a) Acute occlusion of the right coronary artery

b) Chronic hypertension

c) Acute occlusion of the left anterior descending artery (LAD)

d) Pulmonary embolism

e) Rupture of a ventricular aneurysm

Answer: c

2. **Which of the following is the best marker for detecting acute myocardial infarction?**
a) Myoglobin

b) Creatine kinase-MB (CK-MB)

c) Lactate dehydrogenase

d) Cardiac Troponins T and I (TnT, TnI)

e) Electrocardiographic abnormalities

Answer: d

3. **Silent infarcts are more commonly observed in which groups of patients?** a) Young adults

b) Athletes

c) Diabetic patients and the elderly

d) Patients with high HDL levels

e) Pregnant women

Answer: c

4. **Which microscopic feature is observed 2–3 days after a myocardial infarction?**

a) Granulation tissue with abundant capillaries

b) Dense neutrophil infiltrate

c) Wavy fibers and coagulative necrosis

d) Dense collagenous scar

e) Necrotic cells surrounded by edema fluid

Answer: b

5. **What is the mortality rate for cardiogenic shock resulting from large infarcts?** a) 15%

b) 30%

c) 50%

d) 70%

e) 90%

Answer: d

6. **Which complication is characterized by the formation of thin scar tissue after a large transmural infarct?** a) Mural thrombus

b) Ventricular aneurysm

c) Myocardial rupture

d) Cardiogenic shock

e) Pericarditis

Answer: b

7. **Which of the following conditions is NOT a typical complication of ventricular aneurysms?** a) Mural thrombus

b) Severe mitral regurgitation

c) Arrhythmias

d) Heart failure

e) None of the above

Answer: b

8. **What is the staining technique used to identify granulation tissue during myocardial repair?** a) Hematoxylin and Eosin (H&E)

b) Masson Trichrome

c) Periodic Acid-Schiff

d) Silver stain

e) Giemsa stain

Answer: b

9. **What is the direct mechanism of death in most sudden cardiac death (SCD) cases?**
a) Myocarditis

b) Ventricular fibrillation

c) Coronary artery spasm

d) Pulmonary embolism

e) Septal rupture

Answer: b

10. **Which marker is the second best for diagnosing acute myocardial infarction after cardiac troponins?** a) Myoglobin

b) Creatine kinase-MB (CK-MB)

c) Lactate dehydrogenase

d) Hematocrit

e) Platelet count

Answer: b

11. **What microscopic feature is observed 7–10 days after a myocardial infarction?**
a) Coagulative necrosis

b) Granulation tissue

c) Dense neutrophil infiltrate

d) Removal of necrotic myocytes by macrophages

e) Dense collagenous scar

Answer: d

12. **Which condition is most likely to cause lethal arrhythmias in young patients without coronary artery disease?**

a) Mitral valve prolapse

b) Congenital coronary abnormalities

c) Myocarditis

d) Hypertrophic cardiomyopathy

e) All of the above

Answer: e

13. **Which of the following is associated with cardiac tamponade?**

a) Papillary muscle rupture

b) Mural thrombus

c) Rupture of the ventricular free wall

d) Ventricular aneurysm

e) Pericarditis

Answer: c

14. **What is a key histological feature of a healed myocardial infarction?**

a) Coagulative necrosis

b) Dense collagenous scar

c) Dense neutrophil infiltrate

d) Granulation tissue

e) Wavy myocardial fibers

Answer: b

15. **What percentage of first-year mortality is observed following myocardial infarction?** a) 10%

b) 20%

c) 30%

d) 50%

e) 70%

Answer: c

021 Test bank

1-36 hours following acute myocardial infarction, the infarct site reveals a dense neutrophil infiltrate a. True

b. False

Ans: A

2-overall, non-atherosclerotic causes of sudden cardiac death are more frequent than atherosclerotic causes: a. True

b. False

Ans: B

3-regarding myocardial infarction, all are correct EXCEPT:

a. Most cases of pre-hospital deaths are due to lethal arrhythmias
b. Troponin I and T are the best indicators for MI
c. 40-50% of cases are due to occlusion of the circumflex artery
d. Coagulative necrosis and wavy fibers are seen within 24 hours of injury
e. Most cases of in-hospital deaths are due cardiogenic shock

Ans: C

4-a 67 years old man with a history of hypertension was sent home 4 days after an MI. he returned to his normal activities, but died suddenly the next day. We expect to see: a. Arrhythmia

b. Myocardial rupture
c. Ventricular aneurysm

Ans: B

5-all of these factors modify the location and extent of MI, except: a. Patient's cardiovascular status

b. Sex of the patient
c. Vasospasm
d. Duration of occlusion
e. Collaterals

Ans: B

6-in the right coronary dominant patients, the most frequent coronary artery occlusion causing MI is: a. Left main stem

b. Right main stem
c. Left circumflex

d. Left anterior descending

e. Right posterior descending

Ans: D

7-serum creatine kinase determination in cardiac infarction conforms with the following, except:

a. Appears in 2-4 hours

b. Does not elevate with angina pectoris

c. Peaks in 24 hours

d. Considered highly specific

e. Disappears in 3 days

Ans: D

8-the heart specific enzyme/ protein serum elevation indicative of myocardial infarction is:

a. Lactic dehydrogenase

b. Creative kinase index

c. Troponin I

d. Troponin T

**Ans: C (according to our lecture c&d)

9-all of the following are complications of myocardial infarction EXCEPT: a. Papillary muscle rupture causing acute mitral regurgitation

b. Free wall rupture

c. Early pericarditis

d. Cardiogenic shock

e. Acute aortic regurgitation

Ans: E

10-at the site of a myocardial infarction, phagocytic macrophages are most abundant in which of the following time zones from infarct onset: a. After 6 weeks

b. Within the first 2 days

c. After 3 weeks

d. Within first 24 hours

e. By the end of first week

Ans: E

11-one of the following is considered a late complication that may occur months after acute myocardial infarction: a. Infarct expansion

b. Papillary muscle rupture

c. Fibrinous pericarditis

d. Ventricular aneurysm

e. Cardiogenic shock

Ans: D

12-papillary muscle rupture can lead to: a. Aortic regurgitation

b. Mitral stenosis

c. Mitral regurgitation

d. Aortic stenosis

Ans: C

*Late complications of MI:

Ventricular aneurysm

*Masked MI in:

Peripheral neuropathy

*Up to 50% of all MI are due to occlusion of:

Left anterior descending artery

*Wrong complication of MI:

Papillary muscle rupture/ severe aortic regurgitation

*Wrong combination:

Post-MI pericarditis/ staph aureus infection

*Which of the following is a major risk factor of MI:

Smoking

Lec 9

Test Bank

1. **Which heart valve is most commonly affected by chronic rheumatic heart disease?**
a) Aortic valve

b) Mitral valve

c) Pulmonary valve

d) Tricuspid valve

e) None of the above

Answer: b

2. **What is the most common congenital heart valve abnormality?**

a) Mitral stenosis

b) Tricuspid atresia

c) Bicuspid aortic valve

d) Pulmonary valve insufficiency

e) Double outlet right ventricle

Answer: c

3. **Which of the following is the major cause of acquired valvular heart disease?** a) Rheumatic fever

b) Infective endocarditis

c) Congenital abnormalities

d) Mitral valve prolapse

e) Aortic valve stenosis

Answer: a

4. **What is the primary pathologic mechanism in acute rheumatic fever?**

a) Direct bacterial invasion

b) Ischemia due to atherosclerosis

c) Hypersensitivity reaction against streptococcal antigens

d) Autoimmune attack on the myocardium

e) Endothelial dysfunction

Answer: c

5. **Which histological lesion is pathognomonic for rheumatic fever?**

a) Vegetations on the mitral valve

b) Aschoff bodies

c) Fibrosis of heart valves

d) Myocardial necrosis

e) Calcification of the aortic valve

Answer: b

6. **In infective endocarditis, what is the most common causative organism in previously normal valves?**

a) Streptococcus viridans

b) Staphylococcus aureus

c) Streptococcus pyogenes

d) Pseudomonas aeruginosa

e) Candida albicans

Answer: b

7. **Which valve is most commonly affected in intravenous drug abusers with infective endocarditis?**

a) Aortic valve

b) Mitral valve

c) Pulmonary valve

d) Tricuspid valve

e) None of the above

Answer: d

8. **What is the hallmark of chronic rheumatic heart disease?**

a) Friable vegetations

b) Thickened valve leaflets with commissural fusion

c) Granulation tissue

d) Aschoff bodies

e) Papillary muscle rupture

Answer: b

9. **Which clinical sign is most indicative of valvular heart disease?** a) Palpitations

b) Thrills

c) Murmurs

d) Chest pain

e) Dyspnea

Answer: c

10. **Infective endocarditis with low virulence organisms such as Streptococcus viridans is classified as:** a) Acute endocarditis

b) Subacute endocarditis

c) Chronic endocarditis

d) Fulminant endocarditis

e) Recurrent endocarditis

Answer: b

11. **What is the most important diagnostic tool for infective endocarditis?** a) Blood cultures

b) Chest X-ray

c) Electrocardiogram (ECG)

d) Cardiac MRI

e) Coronary angiography

Answer: a

12. **Which complication is NOT typically associated with infective endocarditis?** a) Emboli

b) Abscesses

c) Mycotic aneurysms

d) Ventricular rupture

e) Septic infarcts

Answer: d

13. **Which phase of rheumatic fever is characterized by fever, migratory polyarthritis, and carditis?** a) Chronic phase

b) Acute phase

c) Latent phase

d) Remission phase

e) Terminal phase

Answer: b

14. **What is the most common long-term outcome of untreated rheumatic fever?** a) Infective endocarditis

b) Mitral valve stenosis

c) Myocardial infarction

d) Ventricular rupture

e) Aortic valve prolapse

Answer: b

15. **What is the standard treatment duration for infective endocarditis with antibiotics?** a) 1–2 weeks

b) 2–4 weeks

c) 4–6 weeks

d) 6–8 weeks

e) 8–10 weeks

Answer: c

021 test bank

1- Rheumatic fever is an infection of the heart caused by bacteria, especially Streptococci a- True b- False

Ans:B

2- Fever and painful tender joints are common signs and symptoms of Rheumatic fever a- True b- False

Ans:A

3-The second most common valve to be affected by rheumatic after mitral is : a. Aortic

b. Pulmonary

c. Tricuspid

d. Pulmonary and tricuspid

Ans:A

4-The microorganism responsible for rheumatic carditis is: a. Alpha streptococcus hemolytic group A

b. Human papilloma virus

c. Staphylococcus aureus

d. All of the above

e. None of the above

Ans :E

5-The valve most commonly affected by rheumatic carditis is the : a. Pulmonic

b. Tricuspid

c. Mitral

d. Foramen ovale

e. Aortic

Ans:C

6-All of the following regarding rheumatic heart fever are correct EXCEPT : a. Aschoff bodies can be seen in acute rheumatic heart disease

b. Chronic form of rheumatic heart fever is associated with stenosis

c. Can affect the pericardium, myocardium or endocardium (including valves)

d. The most important cause of acquired post-inflammatory valves scarring

e. It’s an infection due to group A – β hemolytic streptococci

Ans:E

7-The following conform with rheumatic carditis except: a. Incidence peaks during childhood

b. Death in acute rheumatic carditis is most commonly due to mitral stenosis

c. Considered of immunologic etiology

d. Antibiotic prevention is possible

e. All cardiac tissues can be involved

Ans:B

8- Which of the following is not one of JONES criteria? a. Arthritis

b. Elevated ESR

c. Erythema marginatum

d. Syndrham chorea

e. carditis

Ans:B

9- Which of the following is true regarding aortic bicuspid valve ? a. Forms stenosis later on

b. 50% of humans are diagnosed with it

c. It is acquired

Ans:A

10-Major cause of death in (acute) Rheumatic Carditis :

Acute Myocarditis

11-An 11 years old girl suffered from acute pharyngitis and died shortly after. Her condition became worse before she died. What will we expect to see in a postmortem sample?

a. Aschoff bodies (bcz its acute)

12-The most common congenital valve disease : a. Bicuspid aortic valve

13-Not part of major Jones criteria : a. Fever

14-Wrong combination :

a. Aschoff bodies & acute phase of infective endocarditis

15-Influenza viruses represent the most important pathogens in infective endocarditis a- True b- False

Ans:B

16- Prosthetic heart valves are considered risk factors for infective endocarditis a- True b- False

Ans:A

17- IV drug usage is a unique risk factor for infective endocarditis of the pulmonary valve a- True b- False

Ans :B

18-Which of the following regarding infective endocarditis is TRUE:

a. No fever can be seen during infection

b. Is an auto-immune mediated disease

c. Acute endocarditis is due to infection with a low virulent microorganism

d. Can result in the formation of a septic infarct

e. Recovery is very difficult and most cases end in death

Ans:D

19-Subacute endocarditis is often developed by presence of:

a. Abnormal valves

b. Congenital deformities

c. Rheumatic lesions

d. A&B is correct

e. All are correct

Ans:E

20-The cardiac vegetations which fragment and embolize most are due to :

a. Infective endocarditis

b. Rheumatic carditis

c. Systemic lupus erythematosus

d. Non-bacterial thrombotic endocarditis

e. Marantic endocarditis

Ans:A

21-The cardiac valve vegetations most frequently embolizing are those of :

a. Limban sacks

b. Rheumatic carditis

c. Marantic

d. Infective endocarditis

e. Associated with cancer

Ans:D

22- What could be found as a result of infective endocarditis?

a. Aschoff bodies

b. Bacteria on vegetation

Ans:B

Lec 10

Test Bank

1. **What is the most common type of vascular tumor?**

a) Angiosarcoma

b) Kaposi sarcoma

c) Hemangioma

d) Cavernous hemangioma

e) Lymphangioma

Answer: c

2. **Which location is most commonly affected by hemangiomas?**

a) Limbs

b) Head and neck

c) Abdomen

d) Lungs

e) Heart

Answer: b

3. **What virus is associated with Kaposi sarcoma?**

a) Epstein-Barr virus

b) Human papillomavirus

c) Human herpesvirus-8 (HHV-8)

d) Cytomegalovirus

e) Hepatitis C virus

Answer: c

4. **Which type of hemangioma is most commonly seen in newborns and often regresses with time?**

a) Capillary hemangioma

b) Strawberry hemangioma

c) Pyogenic granuloma

d) Cavernous hemangioma

e) Juvenile hemangioma

Answer: b

5. **What is the hallmark feature of Kaposi sarcoma?**

a) Large, dilated vascular channels

b) Red-purple skin plaques or nodules

c) Rapidly growing pedunculated lesions

d) Friable and bulky vegetations

e) Organized vascular channels

Answer: b

6. **Which cardiac tumor is the most common primary malignant tumor of the heart?**

a) Myxoma

b) Rhabdomyoma

c) Angiosarcoma

d) Hemangioma

e) Lipoma

Answer: c

7. **Which of the following is NOT a benign vascular tumor?**

a) Capillary hemangioma

b) Pyogenic granuloma

c) Lymphangioma

d) Angiosarcoma

e) Cavernous hemangioma

Answer: d

8. **What is the most common malignant tumor metastasizing to the heart?**

a) Breast cancer

b) Lung cancer

c) Melanoma

d) Colon cancer

e) Prostate cancer

Answer: b

9. **What is a significant risk factor for liver angiosarcoma?**

a) Viral infections

b) Chemical carcinogens

c) Radiation exposure

d) Chronic inflammation

e) Long-term smoking

Answer: b

10. **Which of the following is a clinical feature of cardiac tumors?**

a) Hypertension

b) "Ball-valve" obstruction

c) Irregular heart rhythms

d) Persistent cough

e) Cyanosis

Answer: b

11. **What diagnostic tool is most useful for identifying cardiac tumors?** a) MRI

b) Echocardiography

c) CT scan

d) PET scan

e) Angiography

Answer: b

12. **What type of hemangioma is commonly found in deep organs such as the liver?**

a) Capillary hemangioma

b) Pyogenic granuloma

c) Cavernous hemangioma

d) Strawberry hemangioma

e) Lymphangioma

Answer: c

13. **What is the primary treatment for benign cardiac tumors?**

a) Chemotherapy

b) Radiation therapy

c) Surgical resection

d) Antiviral medications

e) Observation

Answer: c

14. **Which of the following tumors is classified as borderline in terms of malignancy?**

a) Lymphangioma

b) Kaposi sarcoma

c) Angiosarcoma

d) Cavernous hemangioma

e) Pyogenic granuloma

Answer: b

15. **What clinical feature is caused by interleukin-6 secretion in cardiac tumors?**

a) Arrhythmias

b) Fever and malaise

c) Pulmonary edema

d) Cyanosis

e) Weight loss

Answer: b

والعاقلُ يعلمُ أنَّ أبرك الأيَّام يومٌ يزداد فيه فضيلةً وعلمًا

CREDITS TO:

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كل التوفيق لكم.