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Test Bank

Lecture 7+8
(Ischemic heart disease)

1. What is the most common cause of ischemic heart disease (IHD)?

1. Atherosclerosis
2. Coronary vasospasm
3. Hypovolemia
4. Anemia

Answer: 1. Atherosclerosis

2. Which of the following statements is correct about angina pectoris?

1. Pain lasts more than 20 minutes and is not relieved by nitroglycerin.
2. It is caused by myocardial ischemia insufficient to cause myocardial death.
3. Pain is caused by myocardial infarction.
4. It occurs exclusively during rest.

Answer: 2. It is caused by myocardial ischemia insufficient to cause myocardial death.

3. Which type of angina is associated with increased myocardial oxygen demand and is relieved by rest?

1. Unstable angina
2. Variant angina
3. Stable angina
4. Pre-infarction angina

Answer: 3. Stable angina

Which of the following is a hallmark of unstable angina

1. Pain only during exertion
2. Increasing frequency of pain with less exertion
3. Pain relieved by rest

answer : 2

Which of the following best describes variant (Prinzmetal) angina?

1. Occurs only during exertion
2. Associated with atherosclerotic narrowing
3. Occurs at rest or during sleep and is treated with vasodilators
4. Preceded by partial thrombosis

Answer: 3. Occurs at rest or during sleep and is treated with vasodilators

What are the key pathological features of unstable angina?

1. Complete plaque occlusion and tissue necrosis
2. Plaque disruption, partial thrombosis, and vasospasm
3. Episodic pain caused by increased demand
4. Critical narrowing without plaque change

Answer: 2. Plaque disruption, partial thrombosis, and vasospasm

What is a common cause of diminished oxygen-carrying capacity leading to IHD?

1. Tachycardia
2. Atherosclerosis
3. Anemia or CO poisoning
4. Hypertension

Answer: 3. Anemia or CO poisoning

What is the typical treatment approach for stable angina?

1. Emergency revascularization
2. Vasodilators like nitroglycerin and rest
3. Long-term anticoagulants
4. Beta-blockers only

Answer: 2. Vasodilators like nitroglycerin and rest

Which of the following is NOT a key feature of chronic IHD?

1. Progressive cardiac decompensation after MI
2. Sudden cardiac death from arrhythmia
3. Repeated episodes of angina without infarction
4. Heart failure

Answer: 3. Repeated episodes of angina without infarction

What does "ischemic heart disease (IHD)" represent?

1. Increased myocardial oxygen demand without symptoms
2. Imbalance between cardiac blood supply and oxygen demand
3. Permanent myocardial perfusion without ischemia
4. Non-progressive cardiac dysfunction

Answer: 2. Imbalance between cardiac blood supply and oxygen demand

Which of the following is NOT a syndrome related to IHD?

1. Angina pectoris
2. Acute myocardial infarction
3. Sudden cardiac death
4. Hypertrophic cardiomyopathy

Answer: 4. Hypertrophic cardiomyopathy

What percentage of IHD cases are caused by atherosclerosis?

1. 50%
2. 70%
3. 90%

4. 100%

Answer: 3. 90%

Which type of angina is most likely caused by vasospasm in vessels without atherosclerosis?

1. Stable angina
2. Variant (Prinzmetal) angina
3. Unstable angina
4. Pre-infarction angina

Answer: 2. Variant (Prinzmetal) angina

What causes sudden cardiac death (SCD) in IHD?

1. Acute pulmonary edema
2. Myocardial rupture
3. Lethal arrhythmia following myocardial ischemia
4. Chronic cardiac decompensation

Answer: 3. Lethal arrhythmia following myocardial ischemia

Which of the following describes unstable angina?

1. Pain associated only with exertion
2. Occurs exclusively at night
3. Associated with plaque disruption and partial thrombosis
4. Fully relieved by rest

Answer: 3. Associated with plaque disruption and partial thrombosis

Which condition is characterized by progressive cardiac decompensation after myocardial infarction?

1. Variant angina
2. Chronic IHD
3. Stable angina
4. Sudden cardiac death

Answer: 2. Chronic IHD

What is a key clinical feature of myocardial infarction (MI)?

1. Episodic pain lasting less than 20 minutes
2. Pain relieved by nitroglycerin or rest
3. Severe and persistent chest pain lasting more than 20 minutes
4. Pain occurring exclusively during exertion

Answer: 3. Severe and persistent chest pain lasting more than 20 minutes

What is the hallmark of stable angina?

1. Occurs at rest and is caused by vasospasm
2. Pain relieved by reducing myocardial oxygen demand
3. Increasing frequency of pain with less exertion
4. Pain not relieved by nitroglycerin

Answer: 2. Pain relieved by reducing myocardial oxygen demand

What is the treatment for variant (Prinzmetal) angina?

1. Beta-blockers
2. Revascularization surgery
3. Vasodilators like nitroglycerin or calcium channel blockers
4. Long-term anticoagulation therapy

Answer: 3. Vasodilators like nitroglycerin or calcium channel blockers

Which of the following is a characteristic feature of chronic IHD?

1. Rapid development of symptoms following MI
2. Progressive heart failure due to long-term damage
3. Sudden pain episodes caused by vasospasm
4. Complete resolution of myocardial ischemia

Answer: 2. Progressive heart failure due to long-term damage

Which is a common consequence of acute plaque change in unstable angina?

1. Chronic stable ischemia
2. Complete vessel occlusion
3. Partial thrombosis and embolization
4. Absence of myocardial ischemia

Answer: 3. Partial thrombosis and embolization

Myocardial infarction (MI) refers to:
A) Complete occlusion of the aorta
B) Necrosis of the heart muscle due to ischemia
C) Inflammation of the pericardium
D) Pulmonary embolism

Answer: B

What is the most common cause of myocardial infarction?
A) Occlusion of the circumflex artery
B) Acute occlusion of the proximal left anterior descending (LAD) artery
C) Coronary artery spasm
D) Mitral valve prolapse

Answer: B

Which of the following is NOT a typical symptom of MI?
A) Substernal chest pain radiating to the left arm
B) Dizziness and sweating
C) Bradycardia
D) Nausea in posterior MI

Answer: C

Silent myocardial infarctions are more common in:
A) Patients with diabetes mellitus
B) Pregnant women
C) Smokers
D) Athletes

Answer: A

Which laboratory marker is considered the most specific for myocardial infarction?
A) Myoglobin
B) Lactate dehydrogenase
C) Cardiac troponins T and I
D) Creatine kinase-MB (CK-MB)

Answer: C

Creatine kinase-MB (CK-MB) is best described as:
A) The primary marker for MI
B) Second-best marker after cardiac troponins
C) Specific for pulmonary embolism
D) Elevated only in chronic heart failure

Answer: B

What is the predominant microscopic feature of MI within the first

24 hours?
A) Dense neutrophilic infiltration
B) Coagulative necrosis and wavy fibers
C) Granulation tissue formation
D) Dense collagenous scar

Answer: B

Granulation tissue, characterized by loose connective tissue and abundant capillaries, typically appears:
A) Within the first 24 hours
B) At 2-3 days
C) At 7-10 days
D) Up to 14 days

Answer: D

Which of the following complications is most likely to occur within the first hour of symptom onset in MI?
A) Cardiogenic shock
B) Ventricular aneurysm
C) Sudden cardiac death
D) Pericarditis

Answer: C

Ventricular free wall rupture following MI typically leads to:
A) Hemopericardium and cardiac tamponade
B) Mitral valve stenosis
C) Left-to-right shunting
D) Pulmonary congestion

Answer: A

The 1st-year mortality rate for patients following an MI is approximately:

A) 10%
B) 20%
C) 30%
D) 50%

Answer: C

Progressive heart failure post-MI is caused by:
A) Acute pulmonary embolism
B) Exhaustion of hypertrophic viable myocardium
C) Chronic pericarditis
D) Ventricular aneurysm

Answer: B

Which condition increases the risk of silent myocardial infarction?
A) Hypertension
B) Diabetes mellitus with peripheral neuropathy
C) Hypercholesterolemia
D) Aortic valve stenosis

Answer: B

The most common direct mechanism of sudden cardiac death (SCD) in MI is:
A) Pulmonary hypertension
B) Lethal arrhythmias like ventricular fibrillation
C) Cardiac tamponade
D) Coronary artery spasm

Answer: B

During the first 2-3 days after MI, the main microscopic finding is:
A) Dense neutrophil infiltration
B) Formation of granulation tissue
C) Complete removal of necrotic myocytes by macrophages
D) Formation of a dense collagenous scar

Answer: A

 After several weeks, the healing process of MI is characterized by:
A) Coagulative necrosis and wavy fibers
B) Granulation tissue with capillary proliferation
C) Formation of a dense collagenous scar
D) Dense neutrophil infiltration

Answer: C
 Cardiogenic shock is most likely to occur when MI involves:
A) The right ventricle
B) Less than 10% of the myocardium
C) More than 40% of the left ventricle
D) The coronary sinus

Answer: C

Which complication is a result of post-MI disproportionate stretching, thinning, and dilation of the infarct region?
A) Ventricular aneurysm
B) Infarct expansion
C) Mural thrombus
D) Pericarditis

Answer: B

 Ventricular aneurysms typically result from:
A) Massive inferior infarctions
B) Transmural anteroseptal infarcts healing with scar tissue
C) Non-transmural infarctions
D) Early surgical intervention

Answer: B

Pericarditis after MI typically appears:

A) Within the first hour
B) 2 to 3 days post-transmural MI
C) After several weeks
D) Only in patients with diabetes

Answer: B

 The annual mortality rate for MI patients after the first year is approximately:
A) 1%
B) 3%
C) 10%
D) 15%

Answer: B

Which laboratory test is most useful for detecting reinfarction after an initial MI?
A) Cardiac troponins
B) Myoglobin
C) CK-MB
D) Lactate dehydrogenase

Answer: C

Which cardiac condition is more common in younger MI patients without significant atherosclerosis?
A) Dilated cardiomyopathy
B) Myocarditis
C) Congenital coronary arterial abnormalities
D) Hypertrophic cardiomyopathy

Answer: C

An ECG can confirm a silent myocardial infarction. This is particularly useful in:
A) Diagnosing mitral regurgitation
B) Detecting ischemia in patients with DM
C) Ruling out ventricular septal defects
D) Identifying systemic embolism

Answer: B

The pathological hallmark of MI seen in Masson's Trichrome staining at 14 days is:
A) Coagulative necrosis
B) Dense collagenous scar
C) Granulation tissue with loose connective tissue
D) Infiltration by lymphocytes

Answer: C

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