1. What is the initial step in the pathogenesis of atherosclerosis?
a. Accumulation of the lipoproteins
b. Migration of monocytes into the intima
c. Chronic endothelial cell injury
d. Release of growth factors

2. Which molecules do dysfunctional injured endothelial cells express during atherosclerosis pathogenesis?
a. TNF-α
b. VCAM-1
c. IL-6
d. IL-10

3. What do monocytes transform into when they migrate into the intima during atherosclerosis?
a. T cells
b. Macrophages
c. Foam cells
d. B cells

4. What plays a significant role in stabilizing the atheroma and producing a fibrous cap in atherosclerosis?
a. Lipid accumulation
b. Collagen synthesis
c. Free radicals
d. Necrotic debris

5. Which vessels are most commonly involved in atherosclerosis?
a. Jugular veins
b. Femoral arteries
c. Coronary arteries
d. Pulmonary veins

6. What characterizes vulnerable plaques in atherosclerosis?
a. Thick fibrous caps
b. Dense collagen
c. Low of inflammatory cells
d. Minimal lipid accumulation

7. What type of complications can result from the rupture of the fibrous cap in atherosclerosis?
a. Stroke
b. Aneurysm
c. Thromboembolism
d. Gangrene

8. What leads to stable plaques in atherosclerosis?
a. Abundant extracellular lipid
b. Minimal inflammation
c. Large numbers of foam cells
d. Thin fibrous caps

9. What happens when the fibrous cap of a plaque in atherosclerosis ruptures?
a. Formation of thrombus
b. Vessel enlargement
c. Lipid synthesis
d. Aneurysm rupture

10. What is the consequence of the narrowing or complete occlusion of the arterial lumen in atherosclerosis progression?
a. Decreased inflammation
b. Increased artery elasticity
c. Ischemic injury
d. Thrombosis prevention

11. What can result from ulceration, fissuring, or erosion of a plaque's fibrous cap in atherosclerosis?
a. Chronic ischemia
b. Aneurysm formation
c. Lipid accumulation
d. Vessel dilation

12. Which condition can develop due to atheroma-induced pressure or ischemic atrophy of the arterial wall?
a. Aortic dissection
b. Aortic aneurysm
c. Pulmonary embolism
d. Deep vein thrombosis

13. What characteristic distinguishes an atheromatous aneurysm in atherosclerosis?
a. Dense collagen
b. Minimal lipid accumulation
c. Thick fibrous cap
d. Loss of elastic tissue

14. What role do activated T lymphocytes play in atherosclerosis?
a. Formation of fibrous cap
b. Production of free radicals
c. Stimulation of growth factors
d. Induction of foam cell formation

15. What factor leads to the recruitment of smooth muscle cells from the media during the pathogenesis of atherosclerosis?
a. Lipid accumulation
b. Growth factors
c. Endothelial permeability
d. Vascular occlusion

16. What results from the accumulation of oxidized LDL in macrophages and smooth muscle cells during atherosclerosis?
a. Fatty streaks
b. Vascular dilation
c. Endothelial healing
d. Reduced cholesterol levels

17. Which cells engulf oxidized LDL to become foam cells in atherosclerosis?
a. T cells
b. Macrophages
c. Smooth muscle cells
d. B cells

18. What process does the release of growth factors during atherosclerosis pathogenesis promote?
a. Endothelial injury
b. SMC proliferation
c. Lipid accumulation
d. Necrotic debris formation

19. What consequence does the thrombus formation have in atherosclerosis?
a. Decreased vessel occlusion
b. Increased arterial elasticity
c. Systemic thromboembolism
d. Plaque stabilization

20. How can atherosclerotic thrombi affect the arterial lumen?
a. Cause aneurysm formation
b. Lead to endothelial regeneration
c. Result in partial or complete occlusion
d. Induce smooth muscle cell death

21. What is the gold standard diagnostic test for atherosclerosis?
a. MRI scan
b. Blood test
c. Invasive coronary angiography (ICA)
d. Echocardiogram

22. Which of the following is a primary prevention strategy for atherosclerosis?
a. Increasing LDL cholesterol levels
b. Smoking cessation
c. Sedentary lifestyle
d. Poor diet

23. What cellular processes are involved in vascular remodeling in atherosclerosis?
a. Cell division only
b. Cell growth, cell death, cell migration, and extracellular matrix changes
c. Cell migration and cell death
d. Extracellular matrix changes only

24. Remodeling in atherosclerosis involves:
a. Only expansive remodeling
b. Both expansive and constrictive remodeling
c. Constrictive remodeling only
d. No remodeling at all

25. Which type of arteriolosclerosis is seen in benign hypertension and DM?
a. Hyaline arteriolosclerosis
b. Hyperplastic arteriolosclerosis
c. Monckeberg medial sclerosis
d. Atherosclerotic Stenosis

26. What is the aim of secondary prevention programs for atherosclerosis?
a. To delay plaque formation
b. To prevent recurrence of IHD or stroke in symptomatic patients
c. To initiate smoking habits
d. To increase LDL cholesterol levels

27. What is atheroembolism in atherosclerotic disease?
a. Formation of blood clots
b. Production of microemboli composed of plaque contents
c. Rupture of the aorta
d. Enlargement of the vessel circumference

28. Why is arterial remodeling important in vascular pathology?
a. It has no impact on vascular health
b. It helps in maintaining the original vessel size
c. It only occurs in younger individuals
d. It is the primary cause of atherosclerosis

29. What contributes to thickening of the arterial intima in atherosclerosis?
a. Migration and proliferation of vascular smooth muscle cells (VSMCs)
b. Removal of endothelial cells
c. Low cholesterol levels
d. Lack of physical activity

30. What outcomes depend on in atherosclerotic disease?
a. Age of the patient
b. Size of the affected vessel, size, and stability of plaques
c. Daily diet
d. Medication history

1c - Chronic endothelial cell injury
2b - VCAM-1
3c - Foam cells
4b - Collagen synthesis
5c - Coronary arteries
6a - Thick fibrous caps
7c - Thromboembolism
8b - Minimal inflammation
9a - Formation of thrombus
10c - Ischemic injury
11a - Chronic ischemia
12b - Aortic aneurysm
13d - Loss of elastic tissue
14c - Stimulation of growth factors
15b - Growth factors
16a - Fatty streaks
17b - Macrophages
18b - SMC proliferation
19c - Systemic thromboembolism
20c - Result in partial or complete occlusion
21c. Invasive coronary angiography (ICA)
22b. Smoking cessation
23b. Cell growth, cell death, cell migration, and extracellular matrix changes
24b. Both expansive and constrictive remodeling
25a. Hyaline arteriolosclerosis
26b. To prevent recurrence of IHD or stroke in symptomatic patients
27b. Production of microemboli composed of plaque contents
28b. It helps in maintaining the original vessel size
29a. Migration and proliferation of vascular smooth muscle cells (VSMCs)
30b. Size of the affected vessel, size, and stability of plaque