

MULTIPLE CHOICE

AB AORTA AND GREAT VESSELS - PRACTICE SET

PROPOSED FOR REVIEW - questions are the author's verbatim Q&A; distractors are auto-selected from other answers in the same bank and must be checked by a subject-matter reviewer (a distractor could coincidentally be correct). Not authoritative assessment content.

1. Cavernous transformation of the portal vein refers to:

- A. Fatty infiltration of the portal triad
- B. Cystic dilation of the portal vein lumen
- C. Aneurysmal dilation of the portal vein
- D. Formation of periportal collateral channels in patients with chronic portal vein obstruction

2. The superior mesenteric vein joins which vein behind the neck of the pancreas to form the main portal vein?

- A. Inferior mesenteric vein
- B. Splenic vein
- C. Left gastric vein
- D. Left renal vein

3. Which embryologic structure gives rise to the postrenal (infrarenal) segment of the inferior vena cava?

- A. The vitelline veins
- B. The umbilical veins
- C. The subcardinal veins
- D. The supracardinal veins

4. True or False: If a pseudoaneurysm does not close, no intervention is required.

- A. True. A persistent pseudoaneurysm requires no intervention.
- B. False. A persistent pseudoaneurysm can become a source of emboli, become infected, or rupture; surgical or other definitive intervention is required.

5. What is the most common location of rupture in an abdominal aortic aneurysm?

- A. The anterior wall, above the renal arteries
- B. The medial wall, at the aortic bifurcation
- C. The posterior wall, at the celiac trunk
- D. The lateral wall, below the level of the renal arteries

6. Which vascular structures carry blood AWAY from the heart?

- A. Veins
- B. Arteries
- C. Capillaries
- D. Venules

7. Which three vessels are the branches of the celiac trunk?

- A. Left gastric, right gastric, and gastroduodenal arteries
- B. Left gastric, splenic, and common hepatic arteries
- C. Splenic, gastroduodenal, and proper hepatic arteries
- D. Common hepatic, right renal, and left renal arteries

8. Budd-Chiari syndrome is most accurately described as:

- A. Thrombosis of the hepatic veins
- B. Thrombosis of the inferior vena cava only
- C. Compression of the splenic vein by the pancreas
- D. Thrombosis of the portal vein

9. Which statement best describes the course of the left renal artery from the aorta to the renal hilum?

- A. It arises from the left common iliac artery and courses superolaterally to the left renal hilum
- B. It arises from the aorta and courses directly laterally to the left renal hilum
- C. It arises from the splenic artery and travels laterally to the left renal hilum
- D. It arises from the aorta and courses posterior to the inferior vena cava to reach the left renal hilum

10. Which three factors are primarily related to the growth rate of an abdominal aortic aneurysm?

- A. The initial size of the aneurysm, the presence of cardiac disease, and the use of beta-blocker (blood-pressure-lowering) medications
- B. The patient's hematocrit, platelet count, and cholesterol level
- C. The presence of diabetes, hypothyroidism, and chronic kidney disease
- D. The patient's gender, height, and body mass index

11. Which small arteries arise from the lateral walls of the abdominal aorta to supply the undersurface of the diaphragm?

- A. Adrenal arteries
- B. Gonadal arteries
- C. Lumbar arteries
- D. Phrenic (inferior phrenic) arteries

12. Which hepatic vein primarily drains the left lobe of the liver?

- A. Left hepatic vein
- B. Caudate hepatic vein
- C. Right hepatic vein
- D. Middle hepatic vein

13. What is the most common underlying cause of abdominal aortic aneurysm?

- A. Mycotic infection
- B. Syphilis
- C. Marfan syndrome
- D. Atherosclerosis

14. Which branch of the proper hepatic artery supplies the caudate and left lobe of the liver?

- A. Right hepatic artery
- B. Left hepatic artery
- C. Cystic artery
- D. Gastroduodenal artery

15. In a patient who cannot tolerate anticoagulation, what intervention is used to prevent recurrent pulmonary embolization?

- A. Angiographic placement of a transvenous filter in the inferior vena cava
- B. Aortic stent placement
- C. Surgical bypass of the inferior vena cava
- D. Embolization of the renal veins

16. The portal vein is formed by the union of which two vessels near the porta hepatis?

- A. Inferior mesenteric vein and splenic vein
- B. Superior mesenteric vein and splenic vein
- C. Superior mesenteric vein and inferior mesenteric vein
- D. Left gastric vein and splenic vein

17. Which Doppler waveform characteristic best describes a resistive vessel?

- A. Bidirectional pulsatile flow throughout the cardiac cycle
- B. High continuous diastolic flow supplying organs that need constant perfusion
- C. Little or reversed flow in diastole, supplying organs that do not require constant perfusion
- D. Continuous low-velocity flow with no systolic peak

18. True or False? Patients should not be imaged sonographically until at least 24 hours after an endoscopic evaluation, to allow residual air to resolve.

- A. True
- B. False

19. Compared to arteries of similar caliber, the tunica media of veins is:

- A. Thinner
- B. Identical in thickness
- C. Absent
- D. Thicker

20. How does infrahepatic interruption of the inferior vena cava with azygos continuation typically present clinically?

- A. Acute lower extremity deep vein thrombosis in childhood
- B. Sudden cardiac death in adolescence
- C. Congestive heart failure in infancy
- D. Portal hypertension in the third or fourth decade of life

21. What is the upper limit of normal for the diameter of the inferior vena cava?

- A. Less than 2.5 cm
- B. Less than 5 cm
- C. Less than 4 cm
- D. Less than 1 cm

22. Which statement best describes the course of the right renal artery from the aorta to the renal hilum?

- A. It arises from the superior mesenteric artery and travels laterally to the right renal hilum
- B. It arises from the aorta and courses posterior to the inferior vena cava to reach the right renal hilum
- C. It arises from the aorta and courses anterior to the inferior vena cava to reach the right renal hilum
- D. It arises directly from the right common iliac artery and courses superolaterally to the right renal hilum

23. In a patient with a known renal cell carcinoma, which vessel should be carefully assessed sonographically for tumor thrombus?

- A. Superior mesenteric vein
- B. Abdominal aorta
- C. Inferior vena cava
- D. Common bile duct

24. The superior mesenteric vein primarily drains blood from which structures?

- A. The spleen and the body and tail of the pancreas
- B. The small intestine and the ascending and transverse colon
- C. The descending colon, sigmoid colon, and rectum
- D. The stomach and the gastroesophageal junction

25. What is the expected Doppler flow pattern in a normal renal vein?

- A. Absent flow that is detectable only with color Doppler
- B. A variable flow pattern similar to that of the inferior vena cava
- C. A triphasic pulsatile pattern identical to a peripheral artery
- D. A continuous monophasic pattern identical to a normal portal vein