# VOLGOGRAD STATE MEDICAL UNIVERSITY Department of Pathological Anatomy

Blood circulation disorders. Stasis. Thrombosis. Embolism. Shock. Ischemia	
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# **Test QUESTIONS**

## Select all correct answers

- 1. The formation of blood clots in small vessels during stasis causes:
- a) deformation of the walls of blood vessels,
- b) violations of the axial layer of blood flow,
- c) accumulation of activated coagulation factors,
- d) changes in blood composition,
- e) blood hypercoagulability

# Choose one correct answer

- 2.A young man who died suddenly, an autopsy revealed a rupture of the wall of the middle cerebral artery in the area of the aneurysm (protrusion) and a rounded lesion containing blood in the frontal lobe of the brain. This type of hemorrhage is called.
- a) bruising,
- 6) hematoma,
- c) petechiae,
- d) purple.

## Select all correct answers

- 3, Imbalance between stimulants and inhibitors of platelet aggregation can lead to:
- a) hyperemia,
- b) bleeding,
- c) stasis,
- d) thrombosis.

# Choose one correct answer

- 4. White blood clots are described as.
- a) dense grayish-red masses,
- b) elastic grayish-white masses,
- c) elastic grayish-red masses,
- d) dense grayish-white masses.

#### Select all correct answers

- 5. The most common causes of fatty embolism:
- a) excessive accumulation of neutral fat,
- b) fractures of tubular bones,
- c) fractures of cancellous bones,
- d) injury with crushing of fatty tissue.

# Select all correct answers

- b. Pulmonary embolism can result in.
- a) sudden death,
- b) fatty degeneration of the myocardium,

- c) rupture of the vessel wall,
- d) lung infarction.

# Select all correct answers

- 7. The death of a 23-year-old woman occurred during childbirth from amniotic fluid embolism. Histological examination revealed:
- a) pulmonary vasospasm,
- b) DIC syndrome,
- c) hemosiderosis of the lungs,
- d) lung infarctions,
- e) vein thrombosis of the pelvic tissue.

#### Select all correct answers

- 8. Participate in coagulation and fibrinolysis.
- a) macrophages,
- b) endothelium,
- c) platelets,
- d) erythrocytes,
- e) mesothelium.

# Establish compliance

- 9. Type of blood clot: Localization:
- 1) white, a) capillaries,
- 2) red, b) arteries,
- H) hyaline, c) aneurysm cavity,
- 4) mixed, d) lymphatic vessels,
- e) veins.

# Select all correct answers

- 10. A 27-year-old man with polycythemia developed small-vessel thrombosis in the brain, leading to cerebral heart attacks and death. The main causes of thrombus formation in this case.
- a) increased blood viscosity and stasis,
- b) decreased adhesion and aggregation of platelets
- c) accumulation of activated coagulation factors,

#### Choose one correct answer

- 11. "Thrombus of stagnant blood flow":
- a) white,
- b) red,
- c) mixed,
- d) hyaline.

# Establish compliance

- 12. Education 1-2: Sign a-e:
- 1) a blood clot,
- 2) postmortem blood clotting
- a) dull surface,
- b) smooth surface, c) attached to the vessel wall, d) lies in the vessel lumen, e) dense, fragile.

#### Select all correct answers

- 13. The formation of a red heart attack corresponds to:
- a) occlusion of the venous bed,
- b) arterial thrombosis
- , c) double type of organ blood supply,
- d) venous stasis,
- e) arterial hyperemia

# Select all correct answers

- 14. When the lumen of the renal artery narrows by an atherosclerotic plaque in the kidney tissue:
- a) ischemic infarction,
- b) cyst,
- c) atrophy,
- d) sclerosis,
- e) hemorrhagic infarction.

# Choose one correct answer

- 15. Outcome of spleen infarction:
- a) organization,
- b) sewerage,
- c) vascularization,
- d) cyst formation,
- e) formation of a glial scar.

# Select all correct answers

- 16. A 54-year-old man on the 3rd day after the onset of myocardial infarction died of heart rupture in the affected area. The reason for the rupture of the muscle wall:
- a) autolysis,
- b) proteolysis,
- c) organization,
- d) hyperemia, edema,
- e) secondary colliquation.

#### Select all correct answers

- 17. Outcomes of a heart attack:
- a) scar,
- b) cyst,
- c) resorption,

- d) softening,
- e) tutelage.

# Select all correct answers

- 18. Fatal complication of myocardial infarction:
- a) organization,
- b) acute aneurysm,
- c) heart rupture,
- d) chronic aneurysm,
- e) cardiogenic shock.

#### Select all correct answers

- 19. To identify changes in tissues caused by acute ischemia, use:
- a) the Perls reaction,
- b) picrofuchsin,
- c) tetrazolium salts,
- d) SHGK (RA) -reaction.

#### Select all correct answers

- 20. Low resistance to ischemia of the brain and heart is due.
- a) features of the structure of blood vessels,
- b) high metabolic rate,
- c) limited reserves of blood supply,
- d) the aerobic nature of metabolism,
- e) the anaerobic nature of metabolism.

## Choose one correct answer

- 21. The reason for the development of a lung infarction is:
- a) pulmonary vasospasm,
- b) arterial hypertension,
- c) chronic venous plethora,
- d) pulmonary hypertension,
- f) thrombosis of small branches of the pulmonary artery.

# Select all correct answers

- 22. The main mechanisms of hemorrhagic complications in disseminated intravascular coagulation:
- a) alteration of the organ parenchyma,
- b) massive flow of procoagulants into the bloodstream,
- c) activation of platelets,
- d) increased fibrinolysis,
- e) consumption coagulopathy.

## Select all correct answers

- 23. The development of DIC syndrome is determined by:
- a) increased production of thromboplastins,
- b) soluble tissue factors in the bloodstream,
- c) insufficiency of coagulation factors,
- d) damage to the endothelium,
- e) hemorrhagic diathesis.

## Select all correct answers

- 24. DIC syndrome most often occurs when:
- a) embolism by amniotic fluid,
- b) placental abruption,
- c) sepsis,
- d) shock,
- e) venous congestion of internal organs.

# Select all correct answers

- 25. A 54-year-old man with disintegrating pancreatic cancer developed a massive cerebral hemorrhage, which was the cause of death. The autopsy revealed signs of disseminated intravascular coagulation and hemorrhagic diathesis. The mechanism of development of disseminated intravascular coagulation and bleeding.
- a) the presence of vitamin K antagonists,
- b) thromboplastin production,
- c) production of tissue factors,
- d) decreased platelet adhesion,
- e) consumption coagulopathy.

# List of recommended literature: Basic literature:

1. "Basic pathology" Vinay Kumar, Ramzi S. Cotran, Stanley L. Robbins, 1997.

# **Additional literature:**

- 1. "Pathology. Quick Review and MCQs" Harsh Mohan, 2004.
- 2. "Textbook of Pathology" Harsh Mohan, 2002.
- 3. "General and Systemic Pathology" Joseph Hunter, 2002.
- 4. "General and Systematic Pathology" Ed. J.C.E. Underwood Edinburgh: Churchill Livingstone, 1996 (2<sup>th</sup>).
- 5. "Histology for Pathologist" Ed. S.S.Sternberg Philadelphia: Lippincott Raven Publ, 1997 (2<sup>th</sup>).
- 6. "Histopathology. A Color Atlas and Textbook" Damjanov I., McCue P.A. Baltimore, Philadelphia, London, Paris etc.: Williams and Wilkins, A Waverly Co., 1996.
- 7. "Muir's Textbook of Pathology" Eds. R.N.M. MacSween, K. Whaley London: ELBS, 1994 (14<sup>th</sup>).
  - 8. "Pathology" Eds. Rubin, J.L. Farber Philadelphia: Lippincott Raven Publ, 1998 (3<sup>th</sup>).
- 9. "Pathology Illustrated" Govan A.D.T., Macfarlane P.S., Callander R. Edinburgh: Churchill Livingstone, 1995 (4<sup>th</sup>).
- 10. "Robbins Pathologic Basic of Disease" Eds. R.S.Cotran, V.Kumar, T.Collins Philadelphia, London, Toronto, Montreal, Sydney, Tokyo: W.B.Saunders Co., 1998 (6<sup>th</sup>).
- 11. "Wheater's Basic Histopathology. A Color Atlas and Text" Burkitt H.G., Stevens A.J.S.L., Young B. Edinburgh: Churchill Livingstone, 1996 (3<sup>th</sup>).
- 12. "Color Atlas of Anatomical Pathology" Cooke R.A., Steward B. Edinburgh: Churchill Livingstone, 1995 (10<sup>th</sup>).
- 13. "General Pathology" Walter J.B., Talbot I.C. Edinburgh: Churchill Livingstone, 1996 (7<sup>th</sup>).
  - 14. "Concise Pathology" Parakrama Chandrasoma, Glive R. Taylor.
- 15. "Pathology" Virginia A. LiVolsi, Maria J. Merino, John S. J. Brooks, Scott H. Saul, John E. Tomaszewski, 1994.

- 16. "Short lectures on pathology" Zagoroulko A., 2002
- 17. "Robbins pathologic basis of diseases" Cotran R., Kumar V., Collins T.
- 18. "General pathology" Dr. Fatma Hafez, 1979.
- 19. "Anderson's Pathology" Damjanov I., Linder J. St. Louis: Mosby Inc., 1995 (10<sup>th</sup>).

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