

"CONFIRM"
Chief of Department of General
Surgery and Semiology nr.3
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QUESTIONS
for examination in general surgery and semiology (2024-2025 yy)

Asepsis

1. Nosocomial infection. Surgical site infection: definition, classification, bacteriology.
2. Asepsis: definition and objectives. Sources and ways of spreading of surgical infection.
3. Prevention of airborne infection in surgery. Planning and of rules of activity in surgical department and operating room.
4. Prevention of contact infection in surgery. Spaulding classification of medical equipment. Sterilization and disinfection.
5. Prevention of contact infection in surgery. Preparing of surgical instruments for sterilization. Methods of sterilization of surgical instruments. Methods of sterilization of surgical drapes, gowns and bandages.
6. Prevention of contact infection in surgery. Methods of sterility control of surgical drapes, bandages and instruments.
7. Methods of surgeon's hands decontamination prior to surgical intervention: classic and novel methods. Rules of skin decontamination of operating field.
8. Definition, sources and features of contamination by implantation of infected materials in surgery. Sterilization of implantable items.
9. Common sources of endogenous infection. Antibacterial prophylaxis: indications for various types of surgical procedures, drug selection, rules of administration.

Antisepsis

10. Antisepsis: definition, history, classification.
11. Physical antisepsis: description, basic methods.
12. Mechanical antisepsis: description, basic methods.
13. Chemical antisepsis: description, main groups of medications. Antiseptics and disinfectants.
14. Biological antisepsis: description, main types.

Bleeding

15. Hemorrhage: definition, classification. Assessment of bleeding severity.
16. Physiological adaptive reactions and pathological mechanisms of decompensation in hemorrhage.
17. Semiology of internal intracavitary bleeding. Diagnostic methods and laboratory tests.
18. Semiology of internal intraluminal bleeding. Diagnostic methods and laboratory tests.
19. Semiology of internal intratisular bleeding. Petechia, purpura, ecchymosis, hematoma. Diagnostic methods and laboratory tests.

Hemostasis

20. Spontaneous blood coagulation: phases and pathways of hemostasis. Mechanisms for limitation of local coagulation process.
21. Syndrome of disseminated intravascular coagulation: etiology and pathogenesis, semiology depending on the phase of disease, laboratory diagnosis and principles of treatment.
22. Methods of temporary surgical hemostasis. Principles of hemostatic tourniquet application.
23. Mechanical, physical, chemical and biological methods of definitive surgical hemostasis.

Blood transfusion

24. Main blood antigen systems and their role in medical practice. Blood group affiliation. Rh-factor.
25. Blood agglutination: types, use in blood transfusion. Ottenberg's rule. Methods of blood groups determination.
26. Indications and contraindications for blood transfusion. Methods of blood transfusion: direct and indirect transfusion of donor blood, transfusion of autologous blood.
27. Blood components and plasma derivatives. Composition, methods of preparation and storage, indications for administration.
28. Blood substitutes: classification, characteristics, advantages and disadvantages, indications for administration.
29. Procedure of blood transfusion. Transfusion report.

Complications of blood transfusion

30. Classification of posttransfusion reactions and complications. Posttransfusion reactions. Infectious complications of blood transfusion.
31. Acute non-immune posttransfusion reactions and complications. Semiology, prophylaxis and treatment.
32. Acute immune posttransfusion reactions and complications. Semiology, prophylaxis and treatment. Hemolytic shock.

Nutritional disturbances

33. Semiology of nutritional disturbances and its importance in surgery.
34. Anthropometrics in assessment of surgical patient's nutritional status.
35. Enteral feeding: indications, methods and protocols, feeding products, complications.
36. Parenteral nutrition: indications, types and complications.
37. Morbid obesity: definition, classification. Problem of obesity in surgery.

Surgical intervention

38. Surgical intervention: definition, classification.
39. Preoperative period. Surgical risk. Preparing of patient for surgery. Preoperative conclusion.
40. Basic steps of surgical intervention. Protocol of surgical intervention.
41. Postoperative management of surgical patient. Complications of postoperative period.

Surgical instruments, sutures and knots

42. Surgical instruments: general concept, requirements and classification. Requirements and types of operating room table and surgical light.
43. Suture materials: brief history and requirements. Classifications of suture materials by structure and source from which they are produced.

Local anesthesia

44. Local anesthesia: concept, methods. Local anesthetics: mechanism of action, classification.
45. Indications and contraindications for local anesthesia. Infiltration anesthesia by Vishnevsky: indications, technique. Novocain blockages.
46. Epidural and spinal anesthesia: indications and contraindications, technique, risks and complications.

Wounds

47. Wounds: definition, local symptoms and its description.
48. Classification of wounds. Features of gunshot wounds.
49. Wound healing process: definition, phases. Pathological and clinical description of phases.
50. Types of wound healing. Structure and function of granulation tissue.

Treatment of wounds

51. First aid in case of wound. Complications of wounds and wound's healing.
52. Surgical treatment of contaminated and purulent wounds. Primary surgical processing of wound. Additional physical methods of purulent wounds' cleaning.
53. Topical medication and general treatment of purulent wounds.
54. Primary, primary deferred, early secondary and late secondary sutures for wound closure.

Surgical infection

55. Surgical infection: concept, classification.
56. Pathogenesis of surgical infection: pathogenic germs and source of infection, specific and nonspecific reactions of organism. Factors which decrease effectiveness of protective mechanisms.
57. Semiology of surgical infection: local and general symptoms.
58. Principles of local and general treatment in case of purulent surgical infection of soft tissue.
59. Furuncle and carbuncle: definition, symptoms and treatment. Cavernous sinus thrombosis.
60. Abscess and phlegmon: definition, etiopathogenesis, symptoms and treatment.
61. Paraproctitis: definition, classification, symptoms and treatment. Pilonidal sinus and abscess.
62. Erysipelas: definition, clinical forms, symptoms and treatment. Erysipeloid.
63. Hydradenitis, lymphangitis, lymphadenitis, adenophlegmon: definition, symptoms and treatment.
64. Pressure ulcer (bedsores): etiology, classification, conservative and surgical treatment, prevention.
65. Fistulas: definition, classification, semiology, principles of diagnosis and treatment.

Felon and hand's phlegmon

66. Felon: definition, classification, general principles of treatment.
67. Cutaneous felon, subcutaneous felon and paronychia: definition, symptoms and treatment.
68. Purulent tenosynovitis, osseous felon, articular felon and pandactylitis: definition, symptoms and treatment.
69. Phlegmon of hand: definition, classification, symptoms and treatment.

Anaerobic infection

- 70. Anaerobic clostridial infection of soft tissues (gas gangrene): characteristics of microorganisms, conditions for infection development, classification according to origin and clinical features.
- 71. Pathophysiology of anaerobic clostridial infection of soft tissues (gas gangrene).
- 72. Clinical signs, diagnosis, medical and surgical treatment of anaerobic clostridial infection of soft tissues (gas gangrene).
- 73. Anaerobic non-clostridial surgical infection: causative organisms, clinical manifestations, diagnosis, and treatment.
- 74. Surgical aspects of tetanus: causative microorganism and source of infection. Pathophysiology and classification of tetanus.
- 75. Clinical features of neonatal, cephalic, local, and generalized tetanus. Role of surgical treatment, principles of medical care and prevention of tetanus.

Surgical sepsis

- 76. Sepsis: definition, classification, systemic inflammatory response syndrome (SIRS).
- 77. Pathophysiology of surgical sepsis. Cytokines and their role in pathogenesis of sepsis.
- 78. Clinical signs, diagnosis, local and general treatment of surgical sepsis.

General semiology

- 79. Phases of diagnostic process. Concepts of symptom, syndrome and semiology. Particularities of surgical history of disease.

Semiology of breast diseases

- 80. General semiology of breast. Methods of inspection and palpation of mammary gland. Semiology of congenital breast anomalies.
- 81. Palpatory characteristics of breast mass. Method of palpation of regional lymph nodes.
- 82. Semiology of breast cancer. Male breast cancer.
- 83. Semiology of benign breast diseases. Mastopathy. Gynecomastia.
- 84. Acute lactogenic mastitis: definition, classification, symptoms, prophylaxis and treatment.

Semiology of acute abdomen

- 85. Acute abdomen: concept, groups of diseases.
- 86. Patient complaints and history in case of acute abdomen. Inspection of patient with acute abdomen.
- 87. Technique of abdomen palpation in case of acute abdomen: main symptoms. Percussion and auscultation in case of acute abdomen.
- 88. Semiology of acute inflammatory diseases of abdominal organs. Instrumental diagnosis.
- 89. Semiology of hollow viscus perforation into abdominal cavity. Instrumental diagnosis.
- 90. Semiology of acute intestinal obstruction. Instrumental diagnosis.

Semiology of trauma

- 91. Trauma: concept, classification. Definition of isolated, multiple, associated and combined trauma.
- 92. General semiology of head injury. Primary and secondary brain injury.
- 93. Semiology of special types of head trauma: skull fractures, concussion, diffuse axonal injury, cerebral contusion, cerebral compression.
- 94. Semiology of chest injury: rib and sternum fractures.

95. Semiology of pleural injury: pneumothorax, hemothorax.
96. Semiology of mediastinal injuries: tracheobronchial injuries, traumatic diaphragmatic hernia, esophageal injury.
97. Semiology of mediastinal injuries: cardiac tamponade, traumatic aortic rupture.
98. Abdominal trauma: classification, main clinical syndromes.
99. Semiology of abdominal trauma with hemorrhagic syndrome (rupture of solid organs). Diagnosis and laboratory tests.
100. Semiology of abdominal trauma with peritoneal syndrome (rupture of hollow viscus). Diagnosis and laboratory tests.
101. Fracture: definition, classification.
102. Semiology of limb fractures. Absolute and relative symptoms of fracture. X-ray signs of fracture.
103. First aid in case of fracture. Methods of splinting. General principles of treatment.
104. Dislocation: definition, classification, semiology. X-ray signs of dislocation.

Semiology of peripheral blood vessels

105. Semiology of acute arterial insufficiency (acute ischemia) of extremities.
106. Semiology of chronic arterial insufficiency (chronic ischemia) of extremities.
107. Semiology of chronic venous insufficiency of lower limbs.
108. Semiology of deep vein thrombosis.
109. Necrosis: concept, classification. Semiology of dry and damp gangrene. Treatment.
110. Trophic ulcer: concept, causes. Semiology of ischemic, venous and neuropathic ulcers.

Diabetic foot

111. Definition of diabetic foot syndrome. Epidemiology. Medical and public importance of diabetic foot.
112. Pathogenesis of diabetic foot. Pathophysiology and forms of disease. Factors which contribute to septic complications of diabetic foot.
113. Wagner and another classifications of diabetic foot syndrome.
114. Principles of physical examination of a patient with diabetic foot. Role of instrumental studies and laboratory tests.
115. Differential diagnosis between the ischemic and neuropathic form of diabetic foot syndrome.
116. Diagnosis of diabetic foot infection: symptoms, tests, laboratory, imaging. Principles of treatment.
117. Principles of treatment of ischemic and neuropathic diabetic foot. The ways for prevention of diabetic foot syndrome.

Basic transplantology

118. Fundamentals of transplantology. Types of transplantation. Replantation. Prosthetics (grafting).
119. The problem of tissue compatibility in transplantology. Hyperacute, acute, and chronic transplant rejection. Prevention and treatment.
120. Organs donation: living donors and deceased donors. Signs of brain death. Current problems in organ transplantation.