

Surgical Diseases

Questions for exam

I. Acute appendicitis

1. Anatomy of the appendix, cecum and terminal ileon. The possible positions of the appendix.
2. Acute appendicitis: etiology, pathogenesis, and classification.
3. Acute appendicitis. Clinical symptoms: Blumberg's sign, Rovsing's sign, Sitkovski's sign, Bartomie-Mihelson's sign, Cope's sign, Obraztsov's sign, sign of cough, Mandel-Razdolski's sign, triad of Dieulafoy.
4. Acute appendicitis in children and in elderly. Particularities of diagnosis and treatment.
5. Acute appendicitis in pregnancy. Surgical management, preoperative preparation and particularities of anesthesia.
6. Clinical features of acute appendicitis in dependence on appendix's position (retrocecal, pelvic, medial, and high-lying positions).
7. Differential diagnosis of acute appendicitis with gastroduodenal ulcer perforation, acute pancreatitis, acute cholecystitis.
8. Differential diagnosis of acute appendicitis with intestinal obstruction, Crohn's disease, and right renal colic.
9. Differential diagnosis of acute appendicitis with ruptured Graafian follicle, rupture of tubal gestation, and acute salpingitis.
10. Complications of acute appendicitis: diffuse peritonitis, appendiceal infiltrate, periappendiceal abscess, pylephlebitis, and generalized sepsis. Symptoms, diagnosis, surgical management and treatment.
11. Appendiceal infiltrate: etiology and pathogenesis, symptoms and diagnosis in the different stages of disease. Management and volume of surgical procedure.
12. Appendectomy: preoperative preparation, anesthesia, anterograde and retrograde appendectomy. Laparoscopic appendectomy. Possible intraoperative complications, prophylaxis and correction.
13. Chronic appendicitis: definition, symptoms, and diagnosis. Differential diagnosis of chronic colitis, chronic pyelonephritis and salpingitis. Treatment.

II. Cholelithiasis. Posthepatic (mechanical) jaundice.

14. Cholelithiasis: definition, etiology and pathogenesis, mechanisms of the gallstones formation.
15. Cholelithiasis: clinical features in dependence on the clinical form.
16. X-ray methods of diagnosis of cholelithiasis, indications and contraindications. Ultrasonographic examination. Ultrasound findings in an uncomplicated gallstone disease, acute cholecystitis, choledocholithiasis.
17. Cholecystectomy: indications, anesthesia, surgical approaches, and methods of intervention. Possible intraoperative complications within cholecystectomy.
18. Mechanical complications of cholelithiasis: symptoms, diagnosis and treatment.
19. Inflammatory complications of cholelithiasis: symptoms, diagnosis, treatment, and prophylaxis.
20. Degenerative complications of gallstone disease: symptoms, diagnosis and treatment, and prophylaxis.
21. Acute cholecystitis: classification, symptoms, and diagnosis, conservative and surgical management.
22. Surgical policy in acute cholecystitis. Preoperative preparation and variants of cholecystectomy.
23. Choledocholithiasis: classifications, symptoms, diagnosis, and treatment. Methods of drainage of the biliary ducts.
24. Posthepatic (mechanical) jaundice: etiology and pathogenesis, symptoms, methods of instrumental diagnosis.
25. Clinical and laboratory differential diagnosis of posthepatic (mechanical), hepatic (parenchymal) and prehepatic (hemolysis) jaundice.
26. Endoscopic methods of diagnosis and treatment of the posthepatic (mechanical) jaundice.
27. Surgical treatment of the posthepatic (mechanical), jaundice. Methods of drainage of the biliary ducts, biliodigestive anastomosis.
28. Minimal invasive surgery in diagnosis and treatment of cholelithiasis.

III. Hernia

29. Definition of abdominal wall hernia, eventration and evisceration. Components of hernia. Local and general etiological factors in development of hernia. Predisposition and determination factors.

30. Abdominal wall hernias: classification. Clinical symptoms of uncomplicated hernias.
31. Conservative and surgical treatment of hernias: indications and contraindications, stages of herniotomy. Possible iatrogenic complications within herniotomy, its prophylaxis and correction.
32. Complications of hernias. Strangulated hernia: elastic and fecal-stasis strangulation. Pathology of strangulated hernia.
33. Strangulated hernia: clinical symptoms, diagnosis, and management. Possible complications induced by forced reducing of the strangulated hernia. False reducing of hernias.
34. Rare forms of hernias strangulation: Richter's hernia, Littre' hernia, Maydl's hernia, false strangulation or Broke's hernia. Features of pathology and clinical signs.
35. Anatomy of the inguinal canal. Classification of inguinal hernias.
36. Indirect inguinal hernia: periods in formation, symptoms, and differential diagnosis. Surgical procedures for indirect inguinal hernia: Roux, Girard, Spasokukotski, Kimbarowski.
37. Direct inguinal hernia: symptoms and differential diagnosis between indirect and direct inguinal hernias. Surgical procedures for direct inguinal hernia: Bassini, Postemski, Shouldice, Lichtenstein, Rutkow-Robbins.
38. Sliding hernia: pathological features, symptoms, and diagnosis. X-ray methods of examination. Features of surgical procedure.
39. Congenital inguinal hernia: symptoms, particularities of herniotomy, Vinkelman procedure.
40. Anatomy of the femoral canal. Types of femoral hernias, hernia of Hesselbach. Differential diagnosis with inguinal hernia, inguinal adenopathy, vein dilatation, "cold abscess".
41. Surgical treatment of femoral hernia: Bassini's and Ruggi's procedures.
42. Umbilical hernias: classification, symptoms. Differential diagnosis with abdominal wall tumors. Surgical procedures: Lexer, Mayo, Sapejko. Management of the umbilical hernias in children.
43. Hernias of the linea alba (epigastric hernias): etiology, classification, symptoms, and surgical procedures.

44. Incisional (postoperative) and recurrent hernias: definition, causes of development, symptoms, indications for repair, surgical procedures. Autodermal hernioplasty and alloplasty with prosthetic mesh.
45. Surgical technique of herniotomy in giant incisional hernias, postoperative complications and its prophylaxis.
46. Steps and particularities of herniotomy for strangulated hernia, signs of viability of strangulated bowel loop, measures of the intestinal resuscitation. Indications for resection of the affected intestinal loop, surgical approach, borders of resection, types of restoration of the intestinal integrity.
47. Phlegmon of the hernia: etiology, symptoms. Particularities of surgical treatment: anesthesia, approach, and possible variants of surgical procedures.

IV. Diseases of pancreas

48. Anatomy and physiology of pancreas. The role of trypsin, lipase, amylase and insulin. Relations between pancreas and extrahepatic bile ducts.
49. Congenital anomalies of pancreas: annular pancreas, heterotopic (aberrant) pancreas.
50. Acute pancreatitis: etiology and pathogenesis.
51. Acute pancreatitis: classification, clinical signs.
52. Diagnostic methods in acute pancreatitis: laboratory examination, ultrasound, CT-scan, upper endoscopy and ERCP, laparoscopy.
53. Differential diagnosis of acute pancreatitis with acute appendicitis, intestinal obstruction, perforated gastroduodenal ulcer, myocardial infarction, left-side pleuropneumonie.
54. Conservative treatment of acute pancreatitis. Main goals of medical therapy of acute pancreatitis.
55. Endoscopic and surgical treatment of acute pancreatitis in dependence on the form, clinical period and complication's appearance.
56. Classification of complications of acute pancreatitis.
57. Fermentative peritonitis. Pancreatitis induced shock. Volume and contents of replaced fluid for resuscitation and detoxication in acute pancreatitis.
58. Purulent peripancreatitis: clinical signs, diagnosis and treatment. Indication for surgery, methods of treatment.

59. Pancreatic and digestive fistulas in acute pancreatitis: etiology and pathogenesis, diagnosis, prophylaxis and treatment.
60. Pancreatic pseudocyst: etiology and pathogenesis, classification, clinical symptoms, diagnosis. Methods of surgical drainage.
61. Chronic pancreatitis: etiology and pathogenesis, pathology, classification, clinical symptoms, diagnostic methods.
62. Conservative, endoscopic and surgical treatment of chronic pancreatitis.
63. Pseudotumorous chronic pancreatitis: clinical symptoms, diagnosis and treatment.

V. Peptic ulcer disease

64. Anatomy and physiology of stomach and duodenum, vascularization, innervation. Gastric glands.
65. Phases of gastric secretion. Examination of the acid gastric secretion (analysis of the gastric juice and pH-measurement), and main secretor type (Hollander's and Kay's tests). Use of obtained results for determination of type and volume of gastric surgery.
66. Peptic ulcer disease: etiology and pathogenesis, classification. Johnson's classification of gastric ulcer.
67. Gastroduodenal ulcer perforation: classification (Saveliev), clinical signs, and diagnosis.
68. Atypical and sealed perforation of the gastroduodenal ulcer: particularities of symptoms, diagnosis, and surgical management.
69. Surgical treatment of perforated gastroduodenal ulcer (Mikulicz's, Oppel's, and Judd's procedures, vagotomy, gastric resection). Conservative treatment of perforated ulcer (method of Taylor).
70. Gastroduodenal ulcer hemorrhage: classification, symptoms, and diagnosis. Forrest's classification of bleeding activity.
71. Differential diagnosis of upper gastrointestinal bleeding: peptic ulcer, hemorrhagic gastritis, gastric tumors, variceal bleeding, Mallory-Weiss syndrome etc.
72. Conservative and surgical treatment of bleeding gastroduodenal ulcer. Methods of endoscopic hemostasis.
73. Pyloroduodenal stenosis due to peptic ulcer disease: classification, symptoms, and diagnosis. Differential diagnosis with malignant obstructive gastric tumors.
74. Pathophysiological disturbances in pyloroduodenal stenosis. Syndrome of Darrow. Preoperative preparation and possible surgical procedures.

75. Gastroduodenal ulcer penetration and malignancy: particularities of presentation, diagnosis, indications for surgery and operative procedures.
76. Zollinger-Ellison syndrome: etiology and pathogenesis, symptoms, diagnosis, and treatment.
77. Indications for surgical treatment of gastroduodenal ulcer (absolute and relatives). Methods of gastroenterostomy (Woelfler, Hacker, Brenner, Braun).
78. Methods of gastric resection (Pean-Billroth-I, Kocher, Haberer, Hofmeister-Finsterer, Balfour, Rechel-Polya, Roux-en-Y).
79. Vagotomy in surgical treatment of the complicated duodenal ulcer: types of vagotomy, indications, and its combination with gastric drainage procedures (Heineke-Mikulicz, Braun, Finney, Judd, Burlui, Jaboulay).
80. Early complications of surgery for peptic ulcer: anastomotic leakage, duodenal stump leakage, and injuries of the extrahepatic bile ducts. Symptoms, diagnosis and treatment.
81. Early complications of surgery for peptic ulcer: intraperitoneal hemorrhage, postoperative gastro-intestinal bleeding, gastric retention and anastomosis, acute postoperative pancreatitis. Symptoms, diagnosis and treatment.
82. Non-ulcerative benign gastro-duodenal diseases: foreign bodies, volvulus of the stomach, gastric polyps. Symptoms, diagnosis and treatment.

VI. Intestinal obstruction

83. Intestinal obstruction: definition and classification.
84. Pathophysiology of intestinal obstruction.
85. Clinical symptoms of intestinal obstruction.
86. Diagnosis of the proximal intestinal obstruction (plane X-ray films, Schwarz's procedure, ultrasound, laboratory examination).
87. Diagnosis of the distal intestinal obstruction (plane X-ray films, barium enema, colonoscopy, laboratory examination).
88. Methods of preoperative, intraoperative and postoperative decompression of the gastrointestinal tract in intestinal obstruction.
89. Adhesive intestinal obstruction: symptoms and diagnosis.
90. Surgical procedures in adhesive intestinal obstruction. Conservative treatment, cut of adhesions, resection of intestine, entero-entero anastomosis, and external ileostomy.

91. Mechanical intestinal obstruction: classification, etiology, symptoms, diagnosis
92. Strangulating intestinal obstruction: symptoms, diagnosis, and volume of the surgical treatment.
93. Simple (obstacle induced) intestinal obstruction: etiology, classification, symptoms, and diagnosis
94. Intussusception: types, symptoms, and diagnosis. Conservative and surgical methods of treatment.
95. Volvulus of the sigmoid colon: etiology and pathogenesis, symptoms, diagnosis, and treatment.
96. Dynamical intestinal obstruction: etiology, classification, symptoms, diagnosis, and treatment.
97. Paralytic ileus: etiology and pathogenesis, symptoms. Differential diagnosis between paralytic ileus and mechanical intestinal obstruction. Treatment of paralytic ileus.

VII. Abdominal trauma

98. Abdominal trauma: etiology, classification, physical examination and diagnosis.
99. Particularities of physical examination of severe injured patients with shock, unconscious patients, comatose patients, drunken intoxicated patients.
100. Blunt abdominal trauma: etiology, classification, symptoms, and methods of diagnosis in dependence on patients' general status.
101. Physical examination and diagnosis in blunt abdominal trauma. Technique of paracentesis and peritoneal lavage, and interpretation of obtained results.
102. Particularities of examination in penetrating trauma: exploration of wound, additional methods of diagnosis (vulnerography, laparoscopy, excretory urography.).
103. Injuries of abdominal wall: contusion, non-penetrating wounds, and Reilly's syndrome. Particularities of symptoms and surgical management.
104. Blunt abdominal trauma with injuries of solid intraperitoneal organs: physical examination, diagnosis, and surgical treatment.
105. Blunt abdominal trauma with injuries of hollow intraperitoneal organs: physical examination, diagnosis, and surgical treatment.
106. Injuries of spleen: etiology, clinical forms, methods of diagnosis and treatment.
107. Injuries of liver: etiology, symptoms, diagnosis, and methods of intraoperative hemostasis.

108. Injuries of pancreas: etiology, symptoms, diagnosis and particularities of surgical treatment. Prophylaxis of postoperative pancreatitis.
109. Injuries of diaphragm: etiology, symptoms, and methods of diagnosis and treatment.
110. Injuries of stomach: etiology, symptoms, methods of diagnosis and treatment.
111. Injuries of duodenum: etiology, symptoms, methods of diagnosis and treatment.
112. Injuries of small intestine and colon: etiology, symptoms, methods of diagnosis and treatment.
113. Penetrating abdominal injuries: etiology, classification, symptoms, methods of diagnosis and treatment. Primary exploration and debridement of wound.
114. Gunshot abdominal wounds: symptoms, particularities of diagnosis, treatment. Features of surgical procedure, prophylaxis of anaerobic infection.
115. Associated trauma: definition, particularities of physical examination and diagnosis, surgical management.

VIII. Peritonitis

116. Peritonitis: definition, etiology and pathogenesis.
117. Peritonitis: ways of infection penetrating into the peritoneal cavity, classification.
118. Stages of the clinical evolution of pancreatitis. Symptoms and signs.
119. Pathophysiology of advanced peritonitis.
120. Clinical, instrumental and bacteriological diagnosis of peritonitis.
121. Differential diagnosis of peritonitis with myocardial infarction, inflammatory diseases of lungs, Henoch's purpura, renal colic, biliary colic, lead colic, ruptured Graafian follicle, and rupture of tubal gestation.
122. Complex treatment of generalized peritonitis. Particularities of surgical procedure.
123. Surgical treatment of generalized peritonitis: preoperative care, anesthesia, surgical approaches, methods of peritoneal lavage and peritoneal drainage.
124. Intraperitoneal abscesses: etiology, typical localization, pathology, clinical findings, diagnosis, and principles of surgical treatment.
125. Right subhepatic abscess: etiology, pathology, clinical findings, diagnosis, surgical treatment.
126. Subphrenic abscess: etiology, typical localization, pathology, clinical findings, diagnosis, and principles of surgical treatment.

127. Periappendiceal abscess: etiology, typical localization, pathology, clinical findings, diagnosis, and principles of surgical treatment.

128. Pelvic abscess (abscess of Douglas pouch): etiology, pathology, clinical findings, diagnosis, and principles of surgical treatment.

IX. Varicose veins

129. Anatomy and physiology of veins in lower limbs. Superficial and deep veins, perforating veins, vein valves.

130. Simple (primary) varicose veins in lower limbs: etiology, pathogenesis, classification, and clinical findings. Clinical tests: Brodie-Troianov-Trendelenburg test, Delbe-Perthes's test, and Pratt's test.

131. Varicose veins: etiology and pathogenesis, predisposing and determinations factors. Theories for failure in venous return.

132. Varicose veins: diagnosis, indications and contraindications for surgery. Phlebectomy: types of procedure, intraoperative complications.

133. Complications of varicose veins. Venous ulcer: etiology, clinical findings, and management.

134. Superficial thrombophlebitis of lower limbs: etiology, symptomatology, diagnosis, and methods of treatment.

135. Deep venous thrombosis of lower limbs: etiology, symptomatology, diagnosis, and methods of treatment.

136. Pulmonary embolism: etiology and pathogenesis, clinical presentation, treatment, methods of its prevention.

X. Thoracic trauma

137. Incidence and etiology of chest trauma.

138. Etiopathogenetic, clinical-anatomic, pathophysiologic and clinical classification of chest trauma.

139. Potential pathophysiological consequences in chest trauma. Pathogenesis.

140. Physical examination and clinical features in chest trauma.

141. Paraclinical diagnostic methods in chest trauma. Interpretation of paraclinical data.

142. Medical and surgical management of different types of thoracic injuries.