

Federal State Budgetary Educational Institution of Higher Education  
«North-Ossetia State Medical Academy»  
of the Ministry of Healthcare of the Russian Federation

Department of Surgery Diseases №2

**METHODOLOGICAL INSTRUCTIONS  
FOR PERFORMING INDEPENDENT (OUT-OF-AUDIT) WORK  
IN SURGICAL DISEASES**

the main professional educational program of higher education - specialty program in the  
specialty 31.05.03 Dentistry, approved in March 30, 2022

Vladikavkaz, 2022

# **TASKS FOR INDEPENDENT WORK OF STUDENTS 4 COURSES OF THE DENTISTRY FACULTY ON THE CYCLE**

## **SURGICAL DISEASES**

### **TOPIC: “INTESTINAL OBSTRUCTIN”**

#### **I. Questions to verify the initial (base) level of knowledge**

1. Anatomy and physiology of the intestine.
2. Etiology and pathogenesis of intestinal obstruction.
3. Classification of intestinal obstruction.
4. Clinic of intestinal obstruction.
5. Diagnosis of intestinal obstruction.
6. Special research methods for intestinal obstruction.
7. Differential diagnosis of intestinal obstruction.
8. Tactics of the surgeon with intestinal obstruction.
9. Treatment of intestinal obstruction.
10. Preoperative preparation of patients with intestinal obstruction.
11. Types of surgical treatment for intestinal obstruction.
12. Postoperative management of patients with intestinal obstruction.
13. Prevention and rehabilitation of patients with intestinal obstruction.
14. Some types of intestinal obstruction.

#### **II. Targets:**

##### **The student must know:**

- Anatomy and physiology of the intestine.
- Etiology and pathogenesis of intestinal obstruction.
- Classification of intestinal obstruction.

- Clinic of intestinal obstruction.
- Diagnosis of intestinal obstruction.
- Special research methods for intestinal obstruction.
- Differential diagnosis of intestinal obstruction.
- Tactics of the surgeon with intestinal obstruction.

1 Treatment of intestinal obstruction.

2 Preoperative preparation of patients with intestinal obstruction.

3 Types of surgical treatment for intestinal obstruction.

4 Postoperative management of patients with intestinal obstruction.

5 Prevention and rehabilitation of patients with intestinal obstruction.

6 Certain types of intestinal obstruction.

**The student must be able to:**

1 Conduct a clinical examination of patients with intestinal obstruction.

2 Substantiate a specific examination plan for patients with intestinal obstruction.

3 Correctly conduct a survey of patients with intestinal obstruction.

4 Correctly interpret the results of clinical, laboratory, instrumental and other examination methods in patients with intestinal obstruction.

5 Correctly formulate a clinical diagnosis.

6 Substantiate the tactics of treatment for intestinal obstruction.

7 Argue the indications for surgery, the choice of method and the scheme of preoperative preparation of patients.

8 Assist in operations for intestinal obstruction.



4. Describe and depict Casey's symptom.

5. Draw and justify the scheme of intestinal resection for intestinal necrosis.

6. Draw a diagram of the sonographic picture in acute intestinal obstruction.

7. Describe Kochnev's classification.

8. Create an algorithm for the diagnosis and treatment of acute intestinal obstruction.

9. Assign treatment to a patient with acute commissural obstructive small bowel obstruction.

10. Draw a diagram of the x-ray picture in acute intestinal obstruction.

## Tests

**1. During the surgery you have removed obstruction of small intestine due to abdominal cavity adhesions.**

**Impacted bowel loop is cyanotic with weak peristalsis. What are your following actions?**

1. Bowel resection
2. Injection of anticholinesterase drugs, enhancing intestinal motility
3. Root of mesentery block by novocaine solution
4. Impacted bowel rewarming
5. Nasointestinal intubation

Give the right variant:

- a) Only 1
- b) 2 and 3
- c) 2 and 4
- d) 4 and 5
- e) 3 and 4

**2. Contents of the afferent limb in case of intestine torsion:**

1. Can't be removed due to threat of dehydration
2. Is removed together with nonviable intestinal loop
3. Is removed through nasointestinal tube
4. Is decanted through gastric tube
5. Is decanted into efferent limb of small intestine

Choose right answer combination:

- a) Only 1
- b) 2, 3, 4
- c) Only 5

d) 2 and 5

e) 2, 4, 5

**3. What in the first place should be used for differential diagnosing of acute intestinal obstruction and perforated stomach ulcer?**

1. Pneumogastrography
2. Stomach roentgenoscopy
3. Plan radioscopy
4. Gastroscopy
5. Laparoscopy

**4. A 70-year-old patient had sigmoid volvulus 24 hours ago. While surgery its necrosis and sharp swelling of the colon were detected. The optimal variant of surgical intervention is:**

1. Double-barreled sigmoidostomy
2. Sigmoid colectomy with end-to-end anastomosis
3. Sigmoid colectomy with side-to side anastomosis
4. Sigmoid colectomy with end colostomy
5. All variants are incorrect

**5. What are the reasons for paralytic ileus?**

1. Peritonitis
2. Lead poisoning
3. Pancreatonecrosis
4. Retroperitoneal hematoma
5. Mesenterial blood circulation disorder

Choose right answer combination:



- a) 1, 2, 3, 4
- b) 2, 3, 4, 5
- c) 1, 3, 4, 5
- d) All variants are correct
- e) All variants are incorrect

**6. Dehydration of an organism develops fastest in:**

- 1. Small intestine torsion
- 2. Sigmoid colon torsion
- 3. Ileocecal intussusception
- 4. Obturative large intestinal obstruction
- 5. Paresis of the small intestine

**7. Splashing sound symptom in acute bowel obstruction is explained by:**

- 1. Exudate in the abdominal cavity
- 2. Collection of fluid and gas in afferent intestinal loop
- 3. Collection of fluid and gas in efferent intestinal loop
- 4. Fluid and gas in abdominal cavity
- 5. All answers are incorrect

**8. Clinical signs of strangulation bowel obstruction are:**

- 1. Constant pains in abdominal area
- 2. Single vomiting
- 3. Recurrent vomiting
- 4. Cramp-like pains in the stomach
- 5. Positive splashing sound

Right variant:

- a) 1 and 2

- b) 1, 4, 5
- c) 2, 3, 5
- d) 3, 4, 5
- e) 2, 3, 4

**9. What roentgenologic signs are characteristic of acute intestinal obstruction?**

- 1. Kloyber's cups
- 2. Free gas under the right cupula of diaphragm
- 3. Kerckring crypts
- 4. Wahl-Symptom
- 5. Tsege - Manteuffel symptom

Right variants:

- a) 1, 3, 4, 5
- b) 1, 2 and 4
- c) 1, 2 and 5
- d) 2 and 4
- e) 3 and 5

**10. Therapeutic measures in obturation intestinal obstruction consist in:**

- 1. Spasmolytic injection
- 2. Siphon enema application
- 3. Water-electrolytic disorder correction
- 4. Narcotic anesthetics injection
- 5. Injection of drugs, increasing intestinal motility

Give the right answer combination:

- a) 1, 2, 4

- b) 1, 3, 5
- c) 1, 2, 3
- d) 2, 3, 4
- e) 2, 3, 5

#### Situational task 1

Patient P. 39 years 2 days ago, a cholecystectomy was performed for acute phlegmonous cholecystitis. Complains of bloating, abdominal pain. Objectively: general state of moderate severity, pulse 100, blood pressure 90/70 mm. Hg. Art. The abdomen is swollen, painful on palpation, peritoneal symptoms are negative. Percussion determined tympanitis. Peristalsis is absent. Gases do not leave, there is no chair.

1. Make a preliminary diagnosis
2. What are the instrumental methods of research?

#### Situational task 2

A patient 53 years 3 hours ago felt a sharp pain in the abdomen during physical exertion, repeated vomiting. He entered the emergency department with a classic picture of pain shock (the skin was pale, cyanotic in sloping places, the respiratory rate was 32 / min). Objectively: the general condition is serious. On examination of the abdomen: visible peristalsis in the mesogastrium, the abdomen is swollen, asymmetrical. On auscultation: splashing noise.

1. Make a preliminary diagnosis
2. Specify the treatment tactics for this patient

### Situational task 3

Patient G., 43 years old, was admitted with complaints of cramping abdominal pain, repeated vomiting, and stool and gas retention. These complaints appeared 6 hours before admission after eating. Objectively: general state of moderate severity, pulse 100 min, blood pressure 80/60 mm. Hg. Art. Abdomen swollen, painful on palpation. There is a semi-scar from the xiphoid process to the navel. Symptoms of peritoneal irritation are negative. Peristalsis is enhanced. Per rectum: the rectal ampoule is filled with feces. History: operated on 1 year ago for perforated duodenal ulcer, peritonitis.

1. Make a preliminary diagnosis
2. List the diseases with which it is necessary to conduct a differential diagnosis.

## **TASKS FOR INDEPENDENT WORK OF STUDENTS 4,5 and 6 COURSES OF THE MEDICAL FACULTY ON THE CYCLE**

### **TOPIC: “PERITONITIS”**

#### **I. Questions to verify the initial (base) level of knowledge**

1. Anatomy of the abdominal cavity.
2. The functions of the peritoneum.
3. Classification of peritonitis.
4. Etiology of peritonitis.
5. The pathogenesis of peritonitis.

6. Clinic of the disease.
7. Diagnostics.
8. Differential diagnosis.
9. Methods of surgical treatment.

## **II. Targets:**

The student must know:

- Anatomy of the abdominal cavity.
- Functions of the peritoneum.
- Classification of peritonitis.
- Etiology of peritonitis.
- Pathogenesis of peritonitis.
- Clinic of the disease.
- Diagnostics.
- Differential diagnosis.
- Methods of surgical treatment.

The student must be able to:

1. Conduct a clinical examination  
patients with peritonitis
2. Justify a specific survey plan  
patients with peritonitis
3. Correctly interview patients with  
peritonitis.
4. Correctly interpret the results  
clinical, laboratory, instrumental

and other examination methods.

5. Arguing the choice of the operational method treatment in each case.

6. Assist in operations regarding peritonitis.

### **III. Tasks for independent work on the topic under study.**

1. Draw a diagram of the division of the abdominal cavity into segments.

2. Based on this scheme, clearly substantiate the classification of peritonitis by prevalence.

3. Give a complete classification of peritonitis.

4. List the main methods used to diagnose peritonitis.

5. Describe the principles of preoperative preparation.

6. Draw a diagram of peritonitis drainage of the abdominal cavity

7. Draw a diagram of peritoneal lavage.

8. Compose 5 test tasks on the topic “Peritonitis”



9. Make 3 situational tasks on the theme "Peritonitis"

10. List the causes of peritonitis

### **Tests**

**1. Normally, an adult's abdominal cavity contains serous fluid of:**

1. 20 ml
2. 80 ml
3. 120 ml
4. 200 ml
5. 220 ml

**2. Hemorrhagic exudate in the abdominal cavity is not observed in:**

1. Acute pancreatitis

2. Acute cholecystitis
3. Mesenteric vessels thrombosis
4. Mesenteric vessels embolism
5. Intestinal obstruction

**3. Onset of acute peritonitis is accompanied by abdominal pains in:**

1. 50% of patients
2. 50-75% of patients
3. 75-90% of patients
4. 100% of patients

**4. Onset of acute peritonitis is accompanied by tension of abdominal muscles in:**

1. 15-25% of patients
2. 35-50% of patients
3. 85-90% of patients
4. 100% of patients

**5. Free gas in abdominal cavity in perforation of hollow organs occurs in:**

1. 20-40% of patients
2. 60-75% of patients
3. 100% of patients

**6. In what acute peritonitises peristaltic intestinal murmurs are observed?**

1. Colibacillary peritonitis
2. Abdominal typhoid peritonitis
3. Pneumococcal peritonitis
4. Mixed infection

**7. A 14-year-old girl has been suffering from acute bronchitis during 3 days, after what she felt acute pains**

**in the abdomen. She had vomiting, diarrhea, lips cyanosis, 110 bpm pulse, abdominal wall muscle tension,**

**pain in the whole abdomen. Leucocytosis was  $38 \times 10^9$**

**/l, ESR was 24 ml/h. Pneumococcal peritonitis was**

**diagnosed. What is your therapeutic approach?**

1. Emergency surgery
2. Antibiotic therapy
3. Disintoxication therapy

**8. A 46-year-old patient had appendectomy on acute gangrenous appendicitis. 5 days later he felt dull**

**underbelly pains, tenesmus, pains during defecation, insignificant whites in urination. Temperature**

**increased to  $37,8 - 38,5^\circ\text{C}$ . What is your supposed diagnosis?**

1. Acute proctitis
2. Acute hemorrhoids
3. Diffuse peritonitis
4. Douglass abscess
5. Acute cystitis

**9. The most often reason of peritonitis is:**

1. Acute appendicitis
2. Perforated ulcer
3. Salpingitis
4. Small bowel strangulation
5. Stomach cancer

**10. Reactive stage of peritonitis lasts:**

1. 4 - 6 hours
2. 24 hours
3. 48 hours
4. 72 hours
5. More than 72 hours

#### Situational task 1

A 21-year-old patient was operated on phlegmonous appendicitis. Turbid exudate was detected. 3 days after appendectomy and drainage of the right paracolic gutter the patient felt increasing pain over the whole abdomen, 38,4 0C temperature, pulse was 94 bpm. The physical examination showed moderately grave condition, dry tongue, painfulness and tension in all parts of the abdomen but more in the right. Shchotkin`s sign was positive. Peristalsis was placid. Rectal investigation detected overhanging and painfulness anterior wall. Plain X-ray showed liquid levels in the loops of the small intestine. Blood leucocytes were 18200. What is your diagnosis and tactics?

#### Situational task 2

On the sixth day after laparotomy on appendicular peritonitis a patient felt pains in the lower part of the abdomen, tenesmus, dysuric symptoms, fever. Temperature rose to 39,50C and aquired a hectic character. Tongue was wet, the abdomen was soft and moderately painful above the pubis. Rectal investigation through the anterior wall of the rectum detected large painful infiltrate with softening. What would you diagnose and the simplest method of its confirmation?

### Situational task 3

A patient operated was on acute phlegmonous appendicitis and local peritonitis through a typical approach. The 9th day after the surgery right-sided subdiaphragmatic abscess was diagnosed. What is the reason of its formation?

## **TASKS FOR INDEPENDENT WORK OF STUDENTS 4,5 and 6 COURSES OF THE MEDICAL FACULTY ON THE CYCLE**

### **TOPIC: “HERNIAS”**

#### **I. Questions to verify the initial (base) level of knowledge**

1. Anatomy of the anterior abdominal wall.
2. Causes of development of abdominal hernias
3. Classification of abdominal hernias.
4. Clinic of hernias of the anterior abdominal wall.
5. Diagnostics.
6. Differential diagnosis.
7. Surgical treatment for abdominal hernias.
8. Complications of abdominal hernias
9. Rational surgical tactics for complications of abdominal hernias.

#### **II. Targets:**

The student must know:

1. Anatomy of the anterior abdominal wall.
2. Causes of abdominal hernia

3. Classification of abdominal hernias.
4. Clinic of hernias of the anterior abdominal wall.
5. Diagnostics.
6. Differential diagnosis.
7. Surgical treatment for abdominal hernias.
8. Complications of abdominal hernias
9. Rational surgical tactics for complications of abdominal hernias.

The student must be able to:

- 1 Conduct a clinical examination
- 2 patients with hernias of the anterior abdominal wall
- 3 Justify a specific survey plan
- 4 patients with hernias of the anterior abdominal wall
- 5 Correctly interpret the results

### **III. Tasks for independent work on the topic under study.**

1. What wall weakness is characteristic of a direct inguinal hernia?

2. What is the lower wall of the inguinal canal?

3. What is the lateral wall of the femoral ring (hernial collar with femoral hernia)?

4. What is the formation of a hernial sac of a congenital inguinal hernia:

5. What is most often infringed upon with inguinal hernia.

6. What is Littre hernia?

7. What complications are possible with an operation for an inguinal hernia?

8. Describe hernia inflammation.

9. What are the features of retrograde infestation of the intestine?



10. Can there be contraindications for surgical treatment of strangulated hernia?

## Tests

### **1. What are the symptoms of strangulated hernia?**

1. Sizes of hernial orifice can be defined
2. Sharp pains in the area of hernia protrusion
3. Incarceration of hernia
4. Consistent hernial protrusion
5. Positive cough impulse

Choose the correct combination of answers:

- a) 1, 2, 3
- b) 2, 3, 5
- c) 2, 3, 4
- d) 1, 4, 5
- e) 1, 3

### **2. The patient with strangulated inguinal hernia during the transportation to the surgical department had spontaneous reduction of hernia contents.**

What would be your following steps?

1. Emergency surgery
2. Do not hospitalize, perform elective surgery
3. Emergency laparoscopy
4. Case monitoring
5. There are no correct answers

**3. What is sliding hernia?**

1. When hernial sac contents goes through lacunar ligament
2. When Meckel's diverticulum comprises contents of hernia sac
3. When the urinary bladder serves as a part of the hernia sac.
4. When appendix comprises contents of hernia sac
5. There are no correct answers

**4. Inguinal hernia strangulation surgery...**

1. Is held under endotracheal anesthesia
2. Skin incision is made parallel to Poupart's ligament and a little bit higher than it
3. One of the first steps of the operation is hernial sac dissection, and then hernia sac is opened
4. One of the first steps of the operation is opening of the hernia sac, and then external abdominal ring is dissected
5. First of all median laparotomy is held

Choose the correct combinations of answers:

- a) 1, 3
- b) 2, 3
- c) 1, 4
- d) 2, 4
- e) There are no correct answers

**5. How is called the hernia with strangulation of only a part of colon wall?**

1. Cloquet`s hernia
2. Richter`s hernia
3. Littre`s hernia
4. Hesselbach`s hernia 42
5. Laugier`s hernia

**6. What is the main sign of sliding hernia?**

1. Drags in the lumbar region
2. Drags between muscles
3. Retroperitoneal organ is wall of the hernia sac
4. Comes out from the lacunar ligament
5. Parietal peritoneum is a wall of hernia sac

**7. Strangulated femoral hernia should be differentiated from:**

1. Inguinal lymphadenitis
2. Femoral lymphadenitis
3. Tuberculous abscess cold sinter
4. Strangulated inguinal hernia
5. Thrombophlebitis of varicose node in the orifice of the great saphenous vein

Choose the correct combinations of answers:

- a) 1, 2, 3
- b) 2, 3, 4
- c) 2, 4, 5
- d) 1 2, 5
- e) All answers are correct

**8. During the strangulated hernia surgery after the opening of the hernial sac there were no contents in it. The wall of the sac is edematous, hyperemic. It has 40 ml of inflammatory exudate. What type of strangulation is it?**

1. Parietal
2. Littré's hernia
3. False incarceration
4. Retrograde strangulation
5. Richter's hernia

**9. During the examination of a patient with a strangulated inguinal hernia (prescription of strangulation - 2 hours) spontaneous reduction of hernial contents occurred. Your actions?**

1. Supervision of a patient in hospital
2. Emergency herniotomy
3. The patient may be let go home
4. Laparotomy with revision of the intestine and herniotomy
5. Emergency laparoscopy

**10. What are the symptoms of external abdominal hernia strangulation?**

1. Sharp pains in the area of protrusion
2. The protrusion is irreducible
3. The protrusion is painful and tensed
4. High tympanitis above the hernial protrusion
5. Positive cough impulse

Choose the correct combination of answers:

- a) 1, 2, 3
- b) 2, 3, 4

c) 1, 2, 5

d) 3, 4, 5

e) 1, 4, 5

### Situational task 1

Patient M, 36 years old, was admitted to the hospital with complaints of a tumor-like formation in the epigastric region. A tumor formation arose 3 years ago, gradually increasing in size. Objectively: in the epigastric region, a tumor-like formation of 8x6 cm, an elastic consistency, painless, and settling into the abdominal cavity is determined. There is also a defect in the aponeurosis with a diameter of up to 3 cm. There is no other pathology.

1. Make a preliminary diagnosis.
2. What diseases should be used for differential diagnosis?
3. What operation is indicated for this patient?

### Situational task 2

Patient P., 36 years old, was admitted to the clinic with complaints of a tumor formation in the left inguinal region. Sick 5 years, education gradually increases in diameter. Objectively: on the left, just below the pupartic ligament, there is a tumor-like formation 5x3 cm in size, which sets in the abdominal cavity. No other pathology was found.

1. Make a preliminary diagnosis.
2. What diseases should be used for differential diagnosis?
3. What operation is indicated for this patient?

### Situational task 3

Patient M, 46 years old, was admitted to the clinic with complaints of the presence of a tumor-like formation in the area of the surgical scar along the midline of the abdomen. 3 years ago she underwent surgery for destructive cholecystitis, peritonitis. The wound healed by secondary intention. Objectively: in the midline of the abdomen from the xiphoid process to the navel there is an operative scar, in the center of which there is a tumor-like formation with a diameter of up to 15 cm, the elastic consistency adjusts freely into the abdominal cavity. An objective examination of another pathology was not found.

1. Make a preliminary diagnosis.
2. Indicate the cause of the disease.
3. What is the treatment tactic?

## **TASKS FOR INDEPENDENT WORK OF STUDENTS 4,5 and 6 COURSES OF THE MEDICAL FACULTY ON THE CYCLE**

### **TOPIC: “ACUTE APPENDICITIS”**

#### **I. Questions to verify the initial (base) level of knowledge**

1. Anatomy of the appendix and ileocecal angle.
2. The functions of the appendix.
3. Classification of acute appendicitis .
4. Etiology of acute appendicitis
5. The pathogenesis of acute appendicitis.
6. Clinic of the disease.
7. Diagnosis of acute appendicitis.
8. Differential diagnosis.
9. Methods of surgical treatment.

## **II. Targets:**

The student must know:

1. Anatomy of the appendix and ileocecal angle.
2. The functions of the appendix.
3. Classification of acute appendicitis.
4. Etiology of acute appendicitis
5. The pathogenesis of acute appendicitis.
6. Clinic of the disease.
7. Diagnosis of acute appendicitis.
8. Differential diagnosis.
9. Methods of surgical treatment.

## **III. Tasks for independent work on the topic under study.**

1. Depict the anatomy of the appendix and the structure of its wall.
2. Create an algorithm for the diagnosis and treatment of acute appendicitis.

3. Soreness with percussion over the focus of inflammation is a symptom:
4. The symptom of a “shirt” is:
5. Pilephlebitis is never complicated:
- a) thrombophlebitis of the branches of the portal vein;
  - b) diffuse peritonitis;
  - c) an abscess of the liver;
  - d) sepsis;
  - e) apostematous hepatitis.
6. What is wrong with appendicular infiltrate?
- a) can resolve;
  - b) may fester;
  - c) suppuration is diagnosed clinically;
  - d) suppuration is diagnosed more often with the help of panoramic x-ray;
  - d) suppuration is diagnosed using ultrasound.
7. The appendicular infiltrate never includes:



- a) vermiform appendix;
- b) the cecum;
- c) the small intestine;
- d) a large oil seal;
- e) small oil seal.

8. The main reason for the formation of a Douglas abscess after a typical appendectomy on the first day of the disease with phlegmonous appendicitis is:

- a) lack of antibiotic therapy;
- b) the appointment of small doses of antibiotics;
- c) not bringing the gauze swab to the bed of the appendix;
- r) suturing of the abdominal wall tightly, without subsequent sanitation;
- d) poor sanitation of the abdominal cavity during surgery.

9 . What is never used to diagnose appendicular peritonitis?

- a) a general blood test;
- b) irrigoscopy;
- c) puncture of the posterior vaginal fornix;
- d) ultrasound;
- e) laparoscopy.

10. The patient is 20 years old. Operated for acute simple appendicitis, there are no concomitant diseases. The operation went smoothly. In the postoperative period, you will prescribe:

## Tests

### **1. In what case of acute appendicitis general anesthesia is indicated?**

1. A patient with early term of pregnancy
2. Acute appendicitis complicated with diffuse peritonitis
3. Patients from 14 to 16 years old
4. In suspected retrocecal location of the vermiform appendix
5. An elderly patient with typical picture of noncomplicated acute appendicitis

### **2. In a patient operated on acute phlegmonous appendicitis and diffuse peritonitis through an approach in the right iliac area right-sided subdiaphragmatic abscess was diagnosed. What was the possible reason of its formation?**

1. A patient didn't take Trendelenburg's position after the surgery
2. A patient didn't take Fowler's position after the surgery
3. The wrong approach had been chosen, inferomedian laparotomy had to be performed
4. Exudate in the abdominal cavity hadn't been drained
5. Tamponade of the abdominal cavity hadn't been performed

Choose the right answer combination:

- a) 1, 3, 5
- b) 1 and 4
- c) 1 and 5
- d) 2, 3, 4
- e) 2, 3, 5

### **3. In 76-year-old patient with transmural myocardial infarction phlegmonous appendicitis was detected. What are your actions?**

1. Emergency surgery

2. Observation and surgery in case of peritonitis symptoms
3. Indication of massive doses of antibiotics and surgery in case of ineffective antibioticotherapy
4. Laparoscopy, in case of diagnosis confirmation - surgery
5. All variants are wrong

**4. Appendicular infiltrate usually develops:**

1. First 2 days from the onset
2. 3-4 days from the onset
3. 7 - 9 days from the onset
4. Early period after appendectomy
5. Late period after appendectomy

**5. Tamponade of the right iliac fossa after appendectomy is indicated after:**

1. Periappendiceal abscess
2. Vermiform appendix gangrene
3. Retrocecal position of the vermiform appendix
4. Capillary bleeding from the tissues in the area of the vermiform appendix location
5. Peritonitis Choose the right answer combination:

- a) 1, 4
- b) 3, 5
- c) 4, 5
- d) 1, 2, 3
- e) 2, 3, 4

**6. In complication of acute appendicitis with appendicular infiltrate conservative therapy is indicated because:**

1. Self-recovery is possible
2. Infiltrate resorption is possible
3. In attempt to carry out appendectomy small bowel perforation is possible
4. After infiltrate resorption the mild case of the disease is chronic appendicitis
5. In attempt to expose the vermiform appendix from the infiltrate peritonitis can develop

Choose the right answer combination:

- a) 1, 3
- b) 2, 4
- c) 1, 2, 3
- d) 3 and 5
- e) All variants are correct

**7. Douglas abscess after appendectomy is characterized by following signs:**

1. Hectic temperature
2. Pains deep in the pelvis and tenesmus
3. Limited diaphragm mobility
4. Overhanging vaginal walls or anterior walls of the rectum
5. Muscles tension of the anterior abdominal wall

Choose the right answer combination:

- a) 1, 3, 5
- b) 1, 2, 4
- c) 1, 3, 4
- d) 2, 3, 4
- e) 2, 3, 5

**8. Emergency appendectomy is not indicated in:**

1. Acute catarrhal appendicitis
2. Acute appendicitis in late pregnancy
3. The first attack of acute appendicitis
4. Obscure diagnosis of acute appendicitis in elderly patients
5. Acute appendicitis in children

**9. Symptoms of appendicular infiltrate are following except:**

1. Low grade fever
2. Disease duration of 4-5 days
3. Intractable diarrhea
4. Increased level of blood leukocytes
5. Palpable tumor-like mass in the right iliac area

**10. The reason of wound abscess after appendectomy is:**

1. Fecal fistula
2. Wound infection during a surgery
3. Actinomycosis
4. Blind gut cancer
5. Foreign body (tissue)

**Situational task 1**

Patient K., 40 years old, complains of pain in the right iliac region. He became ill about 8 hours ago when there were pains in the epigastrium, and then they shifted to the right iliac region. The chair was, feces of ordinary color, decorated. Urination is not impaired. Body temperature 37.2 ° C.

1. Make a preliminary diagnosis.
2. What is the treatment tactic?

### Situational task 2

Patient M., 62 years old, was admitted to the surgical department 4 days after the onset of the disease with complaints of moderate pain in the right iliac region, fever up to 37.6 °C. From the anamnesis: 4 days ago there was an attack of pain in the right iliac region. Objectively: the tongue is moist, the stomach is involved in the act of breathing, soft. On palpation in the right iliac region, a rounded formation is determined.

1. Make a preliminary diagnosis.
2. What diseases should be used for differential diagnosis?

### Situational task 3

A 32-year-old patient was admitted on the 4th day of illness. There were pains in the right iliac region, nausea. I did not go to the doctor, took analgesics, the pain subsided. In the right iliac region, a dense fixed formation of 18x12 cm in size, adjacent to the iliac crest, is painful on palpation. The abdomen is soft, the symptoms of peritoneal irritation are negative; body temperature 37.8 ° C.

1. Make a preliminary diagnosis.
2. Prescribe treatment to the patient.

## **TASKS FOR INDEPENDENT WORK OF STUDENTS 4,5 and 6 COURSES OF THE MEDICAL FACULTY ON THE CYCLE**

### **TOPIC: "DISEASES OF THE PANCREAS"**

## **I. Questions to verify the initial (base) level of knowledge**

1. Etiology and pathogenesis of chronic pancreatitis and pancreatic cysts.
2. Classification of chronic pancreatitis.
3. Classification of pancreatic cysts.
4. Clinical symptomatology of chronic pancreatitis and pancreatic cysts.
5. The diagnostic value of studies of the external and internal secretion of the pancreas in chronic pancreatitis.
6. Instrumental methods for the diagnosis of chronic pancreatitis and pancreatic cysts: ultrasound, duodenomanometry, fluoroscopy of the stomach, relaxation duodenography, angiography, radioisotope scanning, cholecystocholangiography, duodenoscopy, endoscopic retrograde pancreatocholangiography, etc.
7. Comprehensive conservative treatment of chronic pancreatitis.
8. Surgical interventions for chronic pancreatitis: resection of the pancreas, pancreatodigestive anastomoses.
9. Methods of surgical treatment of pancreatic cysts.

## **II. Targets:**

The student must know:

1. The etiology and pathogenesis of chronic pancreatitis and pancreatic cysts.
2. Classification of chronic pan-creatitis.
3. Classification of pancreatic cysts.
4. Clinical symptomatology of chronic pancreatitis and pancreatic cysts.
5. The diagnostic value of studies of external and internal secretion of the pancreas in chronic pancreatitis.
6. Instrumental methods for the diagnosis of chronic pancreatitis and pancreatic cysts: ultrasound examination, duodenoma-nanometry, fluoroscopy of the stomach, relaxation duodenography, angiography,

radioisotope scanning, cholecystocholangiography, duodenoscopy, endoscopic retrograde granulopancreatography and pancreatic pancreatitis.

7. Comprehensive conservative treatment of chronic pancreatitis.

8. Surgical interventions for chronic pancreatitis: pancreatic resection, pancreatodigestive anastomoses.

9. Methods of surgical treatment of pancreatic cysts.

The student must be able to:

1 Identify the main complaints and collect anamnesis for chronic pancreatitis and pancreatic cysts.

2 To conduct an objective study of a patient with diseases of the pancreas (palpation of the abdomen in Grott's postures).

3 Conduct a laboratory study and evaluate the results of exocrine pancreatic function: a) the activity of proteolytic enzymes, lipase and amylase in the blood, urine and duodenal contents; b) coprograms.

4 To establish the basic principles of performance and be able to assess the results: ultrasound, fluoroscopy, relaxation duodenography, angiography, endoscopic retrograde pancreatocholangiography, radioisotope scanning of the pancreas.

### **III. Tasks for independent work on the topic under study.**

1. Draw up an operation chart for a pancreatic cyst.



2. A patient, 48 years, with chronic pancreatitis during computer tomography, determined an increasing pancreas with moderate deformity of its contours and an open incision. Available information is evidence of the presence of the patient...

3. WHAT PRELIMINARY DIAGNOSIS DO YOU CONSIDER THE MOST PROBABLE?

1-chronic pancreatitis

2 peptic ulcer

3-ulcer disease 12-p.

4 gastritis

5 acute appendicitis

6 acute cholecystitis

4. NORMAL AMYLASE ACTIVITY VALUES IN THE BLOOD SALVAGE-MOUNT MAKE:

1-2-8 mg / chml

2-12-32 mg / chml

3-0 mg / ml

4-4 mg / ml

5-8 mg / chml

6-5-17 mg / chml

5. PROVIDE THE CORRECT RESPONSE!

SICKNESS AT A PALPATION IN THE LEFT RIBE-SPINE CORNER  
CHARACTERISTIC FOR SYMPTOM:

- 1-Voskresensky
- 2-Mayo-Robson
- 3-Grunwald
- 4-Mondora
- 5-Gray Turner
- 6-Kocher
- 7-Shchetkina-Blyumberga

6. REPORT AN ERROR!

LEADING INDICATIONS FOR SURGICAL TREATMENT

CHRONIC PANCREATITIS IS:

- 1-expressed pain syndrome
- 2-chronic calculous pancreatitis
- 3-chronic inductive pancreatitis
- 4-secondary chronic pancreatitis with severe intraductal hypertension
- 5-vomiting
- 6-diarrhea
7. Compose 5 test items on the topic "Diseases of the pancreas."

8. Make 1 assignment for independent work on the topic "Diseases of the pancreas."

9. Create 1 situational task on the topic "Diseases of the pancreas"

10. Depict the anatomy of the pancreas.

### **Tests**

**1. The patient is hospitalized with complaints of epigastric pains, nausea and vomiting. Weight loss in 6 months is 15kg. The X-ray stomach examination shows its anterior edging. What is the diagnosis:**

1. Pyloric stenosis
2. Pancreas tumour
3. Gastric ulcer
4. Stomach cancer
5. Large intestine tumour

**2. What are the typical complications of the primary chronic pancreatitis:**

1. Choledocholithiasis;
2. Cyst, fistulas, regional portal hypertension;
3. Jaundice, constriction of the duodenum;
4. Gastrorrhagia;
5. Colitis.

Right variants:

- a) 1, 3, 4
- b) 4, 5
- c) 2, 3
- d) 1, 4, 5
- e) 2, 4

**3. What are the signs of the pancreas incretory impairment in chronic pancreatitis:**

- 1. Jaundice
- 2. Frequent losses of consciousness
- 3. High sugar in blood and urine
- 4. Large liver mass, palpable cholecyst
- 5. Creatorrhoea, steatorrhoea

**4. The patient has chronic pancreatitis for 15 years. What is the simplest way to detect the pancreas calcinosis:**

- 1. Explorative laparotomy
- 2. Laparoscopy
- 3. Irrigoscopy
- 4. Cholangiography
- 5. Plain X-ray film of abdominal cavity

**5. What are the symptoms characteristic of exocrine pancreas function:**

- 1. Dry cutaneous covering
- 2. Diabetes
- 3. Weight loss, creatorrhoea, steatorrhoea
- 4. Anteroventral venous distensibility

5. Renal-hepatic impairment

**6. The patient, 45 years old. 6 months after recent pancreatic necrosis ultrasonic scanning has detected a pancreatic cyst. What are the surgical variants:**

1. External drainage
2. Cystoenteroanastomosis
3. Pancreaticoduodenal resection with duct sealing in the distal part of the pancreas
4. Marsupialization
5. Cytogastroduodenostomy

**7. The patient, 40 years old, has been suffering from chronic recurrent pancreatitis for 10 years. During the operation there was suspected pancreas cancer. What are your further actions:**

1. Pancreas resection
2. Cystology and histology testing of the bioptic material (urgent)
3. Pancreatectomy
4. External T-drainage of Wirsung`s duct Marginal neurotomy

**8. 8 days after pancreas resection there appeared a pancreatic fistula. What method can confirm the postresectional complication:**

1. Endoscopic pancreatography
2. Laparoscopy

3. Fistulography
4. Ultrasonic echolocation
5. Telecholangioscopy

**9. During the surgery for the chronic pancreatitis the full information about the Wirsung`s duct gives:**

1. Puncture biopsy
2. Perioperative pancreatography
3. Histologic study of pancreas areas
4. Cholangioscopy
5. Flowmetry of the bile ducts

**10. The external drainage of the pancreas cyst should be used in:**

1. Malignization
2. -Cyst suppuration
3. Obstructive jaundice
4. Bleeding into the cyst lumen
5. There are no indications for this operation

#### Situational task 1

A 51-year-old patient has already been in hospital for 17 days in the surgical department for acute alimentary pancreatic necrosis. Received on the first day from the onset of the disease. According to clinical and ultrasound data, sterile pancreatic necrosis was diagnosed. Conservative therapy was performed. A parapancreatic infiltrate formed. The temperature was at subfebrile numbers. From the third week of the disease, against the background of antibiotic therapy, body temperature began to rise to 39.8 with a drop of two degrees or more. In a clinical blood

test, leukocytosis is increasing. With ultrasound in a stuffing bag, a liquid formation is visualized containing small sequesters, up to 200 ml in volume.

1. What clinical diagnosis can be made?
2. What are the complications of acute pancreatitis?

### Situational task 2

A 45-year-old patient complains of pain in the epigastric region and left hypochondrium radiating to the back. The pain is periodically girdle-like. In addition, the patient is concerned about nausea, vomiting. Repeated vomiting, does not bring relief. The body position is forced, the patient is on his back in a bent state. The temperature is normal. The pain appeared after drinking alcohol and plenty of food. In life, does not abuse alcohol.

1. Do you have a preliminary diagnosis?
2. What symptoms can you identify with this disease and describe them?
3. What available laboratory tests can confirm the diagnosis?

### Situational task 3

Patient P, 43 years old, was admitted with complaints of girdle pain in the upper abdomen, repeated, debilitating vomiting. At first, pains in the epigastrium appeared, and then they began to have a zoster character. I did not abuse alcohol. Considers herself ill after drinking alcohol and spicy, fried foods. Objectively: general state of moderate severity, pale skin, pulse 110 beats. in min., BELL 100/60 ml Hg, dry tongue, swollen abdomen. On palpation, painful in the epigastrium and left hypochondrium. Peristalsis is not heard. Symptoms of peritoneal irritation are positive, according to ultrasound there is free fluid in the abdominal cavity.



What preliminary diagnosis can be made?

**TASKS FOR INDEPENDENT WORK OF STUDENTS 4,5 and 6  
COURSES OF THE MEDICAL FACULTY ON THE CYCLE**

**TOPIC: “ULCER DISEASES OF THE STOMACH AND DUODENUM.  
GASTROINTESTINAL BLEEDING.”**

**1. Questions to verify the initial (base) level of knowledge.**

1. Anatomy of the stomach.
2. The functions of the stomach.
3. Research methods.
4. Foreign bodies of the stomach.
5. Chemical burns and cicatricial structures of the stomach.
6. Peptic ulcer. Etiology. Pathogenesis. Pathoanatomic picture. Clinic.
7. Diagnosis of gastric ulcer. Differential diagnosis. Treatment.
8. Complications of gastric ulcer.
9. Acute ulcers. Classification. Acute erosive gastritis. Treatment.
10. Pathological syndromes after surgery on the stomach.
11. Tumors of the stomach. Classification. The clinical picture and diagnosis. Treatment. Complications

**2. Targets:**

**The student must know:**

1. Anatomy of the stomach.
2. The functions of the stomach.

3. Research methods.
4. Foreign bodies of the stomach.
5. Chemical burns and cicatricial structures of the stomach.
6. Peptic ulcer of the stomach. Etiology. Pathogenesis. Pathoanatomic picture. Clinic.
7. Diagnosis of gastric ulcer. Differential diagnosis. Treatment.
8. Complications of gastric ulcer.
9. Acute ulcers. Classification. Acute erosive gastritis. Treatment.
10. Pathological syndromes after surgery on the stomach.

### **III. Tasks for independent work on the topic under study.**

1. List the sources of arterial blood supply to the stomach and 12-p. guts.
2. What are the 5 most common causes of gastroduodenal bleeding.
3. Indicate typical clinical manifestations of gastroduodenal

bleeding.

4. Indicate the mechanisms for compensating for the deficiency of bcc during gastroduodenal bleeding.

5. List the methods of instrumental and laboratory diagnosis of bleeding from the upper gastrointestinal tract.

6. In a 45-year-old patient 6 months after surgery for resection of 2/3 of the stomach according to Billroth II, a peptic ulcer of the anastomosis was diagnosed with a duodenal ulcer. What is its possible cause?

A) Zollinger-Ellison syndrome;

- B) hyperparathyroidism
- C) insufficient resection during the first intervention;
- D) left the mucosa of the antrum;
- D) chronic pancreatitis.

7. Indication for the conservative treatment of dumping syndrome is:

- 1. light forms;
- 2. medium forms without progression of the process;
- 3. medium forms with progression;
- 4. severe forms;
- 5. In all cases, surgical treatment is indicated.

8. With peptic ulcer anastomosis possible complications:

- 1. Bleeding;
- 2. perforations;
- 3. penetration;
- 4. formation of internal fistula;
- 5. stenosis.

9. Formulate indications for emergency surgical treatment  
bleeding gastroduodenal ulcer.

10. Formulate indications for delayed surgical treatment  
bleeding gastroduodenal ulcer.

### **Tests**

**1. Give the signs pointing that stomach ulcer regenerates in cancer:**

1. Constant abdominal pains
2. Pains in epigastrium 10 minutes after meals
3. Heartburn
4. Anemia
5. Gastric juice anacidity

Right variants:

- a) 1, 3,4.
- b) 2, 3, 4.
- c) 3, 4, 5.
- d) 1, 4, 5.
- e) Only 1 and 5.

**2. The most typical complication of the front wall of duodenum is/are:**

1. Malignization
2. Perforation
3. Bleeding
4. Penetration in the head of pancreas or hepatoduodenal ligament

Right variants:

a) 1, 2

b) 2, 3

c) 1, 4

**3. Operative treatment is indicated for patients with duodenal ulcer in cases, when:**

1. Frequent recidivation of the disease

2. The disease is complicated by voluminous bleeding

3. Pyloroduodenal stenosis

4. Ulcer perforation

5. Ulcer penetration into the head of pancreas, causing often exacerbations and signs of pancreatitis.

Choose the best combination of answers:

a) Only 1 and 2

b) Only 1 and 4

c) Only 2 and 3

d) Only 3 and 4

e) All answers are correct

**4. Compensated stage of pyloroduodenal stenosis of ulcerous origin is characterized by:**

1. Splashing sound on an empty stomach

2. Vomiting in the morning

3. Barium retention in stomach for more than 12 hours

4. Hypovolemic state

5. Severe emaciation

Right variants:

- a) 1, 2, 3
- b) 1, 3, 4
- c) 1, 4, 5
- d) All variants are incorrect
- e) All variants are correct

**5. Optimal method in therapy of a 28-old patient with duodenal ulcer complicated by sub-compensated duodenal stenosis is:**

- 1. Subtotal stomach resection
- 2. Selective proximal vagotomy
- 3. Selective proximal vagotomy combined with drain surgery
- 4. Truncal vagotomy
- 5. Posterior gastroenteroanastomosis

**6. Perforated stomach ulcer is characterized by:**

- 1. Shchiotkin-Blumberg positive sign beginning from the first hours of disease
- 2. Repeated vomiting.
- 3. Wooden belly.
- 4. Disappearance of liver dullness
- 5. «Splashing sound».

Right variants:

- a) 1, 2, 4
- b) 1, 3, 4
- c) 2, 3, 5
- d) 1, 3, 5
- e) 2, 4, 5

**7. 5 hours ago a perforation of stomach ulcer occurred in a 40-year-old patient, 40 years old. Optimal surgical intervention is:**

1. Classical resection of two-thirds of the stomach
2. Antrumectomy
3. Stem vagotomy and perforation suture
4. Stem vagotomy and Finney piloroplasty
5. Pure Heineke-Mikulich piloroplasty

**8. The signs of chronic stomach ulcer malignisation are:**

1. Loss of appetite
2. Constant pains in epigastrium
3. Achylia
4. Anaemia.
5. Increase of erythrocyte sedimentation rate

Right variants:

- a) 1, 2, 4
- b) 1, 3, 5
- c) 2, 3, 4
- d) All variants are correct
- e) All variants are incorrect

**9. A patient came in hospital with decompensated pylorus stenosis, expressed by water-electrolytic disorders and convulsive. What should be indicated?**

1. Emergency stomach resection
2. Emergency gastrostomy.
3. Gastroduodenostomy after a 4-hour preparation
4. Stomach resection after 24-hour preparation



5. All variants are correct

**10. During the surgery 24 hours after the disease onset a 0.5 cm perforation with thick edges was detected on the patient's front duodenal wall. The abdominal cavity contained 2 l. of purulent exudates with bile admixture. What surgery should be indicated?**

1. Stomach resection
2. Truncal vagotomy with pyloroplasty
3. Ulcer suturing and abdominal cavity drainage
4. Ulcer excision with selective proximal vagotomy
5. Selective proximal vagotomy with antrumectomy

#### Situational task 1

Patient I., 44 years old, was admitted to the ward with complaints of weakness, dizziness, palpitations, repeated vomiting such as "coffee grounds", black loose stools. Considers himself ill for several hours when the above complaints first appeared. The patient suffers from gastric ulcer for 8 years. Heredity is burdened (the father has a peptic ulcer).

Objectively: general state of moderate severity. The skin is pale. In the lungs, vesicular breathing. Heart sounds are muffled. BELL 90/65 mm Hg, Ps 120 / min. The tongue is wet, coated with a coating. The abdomen is not swollen, with palpation is moderately painful in the epigastrium. Symptoms of peritoneal irritation are negative. Conclusion FGDS: YABZH. Acute stomach ulcer 9 mm in diameter, complicated by bleeding Forrest IA. In the clinical blood test - Hb-80 g / l, Ht - 28%, red blood cells -  $2.5 \times 10^{12} / l$

1. Formulate a preliminary diagnosis.
2. What research methods must be performed by this patient.
3. Determine the treatment tactics for this patient.

#### Situational task 2

Patient I., 54 years old, was admitted to the ward with complaints of weakness, dizziness, palpitations, repeated vomiting of the "coffee

grounds" type, and black loose stools. Considers himself ill during the day when the above complaints first appeared. The patient suffers from peptic ulcer of the stomach; for the last 2 years he has not consulted doctors. Heredity is not burdened. Objectively: The skin is pale. In the lungs, vesicular breathing. Heart sounds are muffled. BELL 110/65 mm Hg, Ps 98 / min. The tongue is wet, coated with a coating. The abdomen is not swollen, with palpation is moderately painful in the epigastrium. Symptoms of peritoneal irritation are negative. With a digital examination of the rectum, the sphincter is in good shape, on a glove of feces of tarry color.

Formulate a preliminary diagnosis.

### Situational task 3

Patient R., 21 years old, was admitted to the emergency department with complaints of intense pain throughout the abdomen, nausea, and vomiting. Sick for 12 hours, when after eating a "dagger pain" occurred in the epigastrium. Last year, duodenal ulcer was first detected. Objectively: the general condition is serious. The skin is pale. In the lungs, vesicular breathing. Heart sounds are muffled. BELL 100/70 mm Hg, Ps 110 / min. Tongue dry, coated with plaque. The abdomen is swollen, upon palpation the positive symptoms of irritation of the peritoneum (Shchetkin-Blumberg, Voskresensky) throughout the abdomen. Peristalsis is absent.

1. Formulate a preliminary diagnosis.
2. List the types of perforation.

**TASKS FOR INDEPENDENT WORK OF STUDENTS 4,5 and 6  
COURSES OF THE MEDICAL FACULTY ON THE CYCLE**

**TOPIC: “DISORDERS OF THE GALLBLADDER AND BILE DUCTS.”**

**I. Questions to verify the initial (base) level of knowledge**

1. The anatomy and physiology of the gallbladder and bile ducts.
2. Research methods of the gallbladder and biliary tract.
3. Etiology and pathogenesis of gallstone disease.
4. Classification of acute cholecystitis.
5. Clinic of acute cholecystitis.
6. Diagnostics.
7. Differential diagnosis.
8. Methods of conservative and surgical treatment.
9. Etiology and pathogenesis of obstructive jaundice syndrome.
10. Clinic and diagnosis of obstructive jaundice syndrome.
11. Differential diagnosis of jaundice.
12. Methods of conservative and surgical treatment of obstructive jaundice syndrome

**II. Targets:**

**The student must know:**

1. Surgical anatomy of the biliary tree.
2. The normal physiology of bile duct.
3. Basic laboratory tests to evaluate liver function.

4. Clinical symptoms of cholelithiasis and its complications (cholangitis, obstructive jaundice, Mirizzi syndrome, Ka-role syndrome).
5. Methods of instrumental diagnosis of biliary pathology.
6. Therapeutic tactics for surgical lesions of the biliary tree.
7. Indications for surgical treatment of pathology of the extrahepatic biliary tree.

**The student must be able to:**

1. Correctly and purposefully identify complaints and collect anamnesis for making a preliminary diagnosis, determining the optimal plan laboratory and instrumental examination.
2. To learn the basic indicators of the functional activity of the liver and pigment metabolism.
3. To learn the basic principles of performing sonography of the biliary tract, the diagnostic capabilities of computer and magnetic resonance tomography, antegrade and retrograde contrast studies of the bile ducts.
4. To conduct a differential diagnosis of damage to the liver, bile ducts, duodenum and pancreas based on objective examination, laboratory testing results and instrumental diagnostic methods.
5. Determine the optimal therapeutic tactics for surgical pathology of the gall tree.
6. Establish indications and learn the basic principles of performing the applicable surgical interventions in the treatment of surgical pathology of the gall tree.

**III. Tasks for independent work on the topic under study.**

1. Describe the anatomy of the gallbladder and biliary tract.

2. What are the main methods for examining the gallbladder and biliary tract.

3. Describe the etiology and pathogenesis of cholelithiasis

4. Indicate the main clinical symptoms of cholelithiasis and its complications.

5. Give a classification of acute cholecystitis.

6. What are the main methods for diagnosing acute cholecystitis.

7. What are the main types of surgical interventions used in acute calculous cholecystitis.

8. Describe the etiology and pathogenesis of obstructive jaundice syndrome.

9. Indicate the main clinical manifestations of obstructive jaundice syndrome.

10. Perform differential diagnosis of jaundice.

## Tests

### 1) Acute cholecystitis can develop due to:

1. Infected bile in the gallbladder
2. Stagnation of bile in the gall bladder
3. Gallstones
4. Cystic artery trombosis
5. Duodenogastric reflux

Right variants:

- a) 1 and 3
- b) 1, 2, 3, 4
- c) 2, 4, 5
- d) 3, 4, 5
- e) 4 and 5



**2) In acute destructive cholecystitis cholecystostomy is indicated in:**

1. Concomitant acute edematous pancreatitis
2. Concomitant obstructive jaundice
3. Grave general condition of a patient
4. Concomitant cholangitis
5. All variants are correct

**3) To solve the problem of urgent surgery in acute cholecystitis most important is:**

1. Intensity of pains
2. Disease duration
3. Number of attacks in anamnesis
4. Peritonitis
5. Gallstones

**4) The most effective treatment mode of choledocholithiasis in the patients with postcholecystectomy syndrome is:**

1. Endoscopic papillosphincterotomy
2. Choledochotomy
3. Choledochoduodenoanastomosis
4. Lithotripsy
5. Choledochenterostomy

**5) Which complication is not connected with the stone shifting from the cholecyst to the bile ducts:**

1. Biliary colic
2. Jaundice
3. Purulent cholangitis

4. Obstructing papillitis

5. Portal hypertension

**6) What complications can arise in the patient with transhepatic drainages, operated for iatrogenic bile ducts damage?**

1. Hemobilia

2. Obstructive jaundice

3. Recurrent cholangitis

4. Incomplete fistula of the small intestine

5. Stricture of the biliary-enteric bypass

6. Everything mentioned above

**7) Cholecystectomy from the bottom is performed in one of the following cases:**

1. In elderly patients

2. In symptoms of cholangitis

3. In contracted gallbladder

4. Impacted stone in the gallbladder neck

5. Inflammatory infiltration in the area of gallbladder neck

**8) What surgery should be performed in an 81-year-old patient with acute phlegmonous cholecystitis and poor general condition?**

1. Cholecystectomy

2. Laparoscopic cholecystectomy under local anesthesia

3. Cholecystotomy

4. Laparoscopic drainage of subhepatic area

5. Cholecystolithomy

**9) The main methods of obstructive jaundice diagnosing character and reasons are:**

1. Plan radiography of the liver and subhepatic area
2. Infusion cholecystcholangiography
3. Percutaneous transhepatic cholecystcholangiography
4. Endoscopic retrograde pancreatocholangiography
5. Ultrasonography

Choose the correct combination of answers:

- a) 1 and 5
- b) 2 and 4
- c) 1, 2, 4
- d) 2, 3, 5
- e) 3, 4, 5

**10) What signs are characteristic of obturative purulent cholangitis?**

1. Jaundice
2. Shivering
3. High level of alkaline phosphatase activity
4. High leukocytosis in blood analysis with shift to
5. Possible enlargement of liver size.

Choose the correct combination of answers:

- a) 1, 2, 3
- b) 1, 2, 4, 5
- c) 2, 3, 5
- d) All variants are correct
- e) All variants are incorrect

Situational task 1

A patient, 65 years old, suffering over the past 7 years from attacks of cholelithiasis, the next attack was not completely stopped. During the first 2 months. patients continued to note constant aching pain in the right hypochondrium. On palpation in the right hypochondrium, significant sizes of a dense, slightly painful formation with a smooth surface were determined. Symptoms of irritation peritoneum was not detected. The patient's body temperature is normal. White blood cells in blood  $5.6 \times 10^9/L$ .

Your diagnosis and treatment tactics?

### Situational task 2

The patient, 48 years old, after eating fatty foods for the first time developed severe pain in the right hypochondrium, radiating to the right shoulder and scapula. To  $38.3^\circ C$ , body temperature increased. There was a single vomiting. At palpation of the right hypochondrium was determined by pain and tension muscles, as well as a positive symptom of Shchetkin-Blumberg. White blood cells in blood  $12,0 \times 10^9/l$ . After prescribing antispasmodics, antibiotics and performing novocaine blockade, the patient's condition improved. Body temperature dropped to normal. Pain in the right hypochondrium decreased. Voltage muscles became smaller, and by the end of 3 days it completely disappeared. Slight pain remained only at the projection point of the gallbladder. White blood cells in blood  $6.0 \times 10^9/l$

What is your diagnosis and further treatment tactics for the patient?

### Situational task 3

Patient, 78 years old, obese 3 degrees, was admitted to the surgical department on the 3rd day from the onset of an attack of acute cholecystitis. Gallstones were first discovered 20 years ago. Attacks of acute cholecystitis are frequent and difficult. However, given the patient's age, and most importantly, the presence of such contraindications for

surgery, such as severe pulmonary insufficiency, circulatory failure 2 degrees, chronic renal failure and obesity, earlier surgery the patient was not offered. Currently, despite energetic conservative treatment, the inflammatory process in the gallbladder has clearly progressed. There was a threat of perforation of the gallbladder.

What should be the tactics of the surgeon?

## **TASKS FOR INDEPENDENT WORK OF STUDENTS 4,5 and 6 COURSES OF THE MEDICAL FACULTY ON THE CYCLE**

### **TOPIC: “ACUTE CHOLECYSTITIS.”**

#### **I. Questions to verify the initial (base) level of knowledge**

Anatomy and physiology of the gallbladder and biliary tract.

Research methods of the gallbladder and biliary tract.

Etiology and pathogenesis of gallstone disease.

Classification of acute cholecystitis.

Clinic of acute cholecystitis.

Diagnostics.

Differential diagnosis.

Methods of conservative and surgical treatment.

Etiology and pathogenesis of obstructive jaundice syndrome.

Clinic and diagnosis of obstructive jaundice syndrome.

Differential diagnosis of jaundice.

Methods of conservative and surgical treatment of obstructive jaundice syndrome

## **II. Targets:**

### **The student must know:**

1. Topographic and anatomical structural features of the duodenopancreatobiliary system (from courses, normal and topographic anatomy).
2. Liver functions, bile formation and bile outflow, composition of ductal and cystic bile (from the course of normal and pathological physiology).
3. Classification of jaundice of various nature (from the courses of faculty and hospital therapy, infectious diseases).
4. The principles of clinical and laboratory diagnosis of jaundice (from the courses of faculty and hospital therapy, infectious diseases).
5. The pathogenesis of hemostatic disorders in obstructive jaundice (from a course of pathological physiology).
6. The principles of conservative therapy of diseases of the liver and biliary tract (from clinical pharmacology and therapy courses).
7. Classification of causes, clinical forms and complications of obstructive jaundice.
8. Ways and methods of differential diagnosis, recognition of syndromic disorders and complications of jaundice.
9. Methods of preoperative and intraoperative diagnosis of bile duct diseases.
10. Methods of surgical intervention on the organs of the bileopancreatoduodenal zone.
11. Features of management of patients with obstructive jaundice in the pre- and postoperative period.
12. Clinical examination and examination of the working capacity of patients who underwent surgery for obstructive jaundice.

### **The student must be able to:**

Conduct a clinical examination of patients with obstructive jaundice.

To substantiate a specific examination plan for patients with obstructive jaundice

Correctly conduct a survey of patients with obstructive jaundice.

Palpate the liver and gall bladder.

Correctly interpret the results of laboratory, clinical, instrumental and other examination methods to assess the individual characteristics of the course of diseases.

Correctly formulate a clinical diagnosis.

Argument indications for surgery, the choice of method and the scheme of preoperative preparation of patients.

Assist in operations for obstructive jaundice syndrome.

### **III. Tasks for independent work on the topic under study**

1. 1. Describe the anatomy of the gallbladder.

2. What are the main methods for examining the gallbladder.

3. Describe the etiology and pathogenesis of acute cholecystitis.
4. Indicate the main clinical symptoms of acute cholecystitis.
5. Give a classification of acute cholecystitis.
6. What are the main methods for diagnosing acute cholecystitis.
7. What are the main types of surgical interventions used in acute calculous cholecystitis.



8. Describe the etiology and pathogenesis of obstructive jaundice syndrome.

9. Indicate the main clinical manifestations of obstructive jaundice syndrome.

10. Perform differential diagnosis of jaundice.

## **Tests**

### **1. Acute cholecystitis usually begins with:**

- a) temperature increase
- b) the appearance of vomiting
- c) pain in the right hypochondrium
- g) stool disorders
- e) severity in the epigastric region

### **2. A characteristic laboratory sign of acute uncomplicated cholecystitis is:**

- a) diastasuria
- b) leukocytosis
- c) hypoglycemia
- g) glucosuria
- e) hyperbilirubinemia

### **3. In acute cholecystitis, the use of is contraindicated:**

- a) omnopon
- b) morphine hydrochloride

- c) no-shpy
- g) atropine sulfate
- e) spazmalgona, baralgin and spazgan

**4. A patient with gangrenous cholecystitis is shown:**

- a) conservative treatment
- b) delayed operation
- c) the decision depends on the age of the patient
- g) surgery in the absence of the effect of conservative therapy
- e) emergency operation

**5. The complications of acute calculous cholecystitis do not include:**

- a) varicose veins of the esophagus
- b) obstructive jaundice
- c) cholangitis
- d) subhepatic abscess
- e) peritonitis

**6. In acute calculous cholecystitis, it can be used:**

- a) emergency operation
- b) urgent operation
- c) conservative therapy and further planned surgery
- d) only conservative therapy
- e) all of the above

**7. For acute catarrhal cholecystitis are not characteristic:**

- a) nausea
- b) Kera symptom
- c) Murphy symptom
- d) lack of muscle tension in the right hypochondrium
- e) Mussi symptom

**8. In case of gallstone disease, emergency surgery is indicated:**

- a) with occlusion of the cystic duct
- b) with cholecystopancreatitis
- c) with perforated cholecystitis
- d) with obstructive jaundice
- e) with hepatic colic

**9. A patient has pain in the right hypochondrium, radiating to the shoulder blade. A history of chronic calculous cholecystitis. The blood test is normal. Jaundice and no temperature. On palpation, an enlarged, moderately painful gall bladder. Diagnosis?**

- a) gallbladder empyema
- b) cancer of the head of the pancreas
- c) dropsy of the gallbladder
- g) acute perforated cholecystitis
- e) echinococcus of the liver

**10. The patient has pain in the right hypochondrium, vomiting, temperature 38. An enlarged painful gall bladder is palpated, muscle tension of the abdominal wall is noted in the right hypochondrium. Suffers from hypertension and diabetes. Treatment method?**

- a) emergency cholecystectomy
- b) emergency laparoscopic cholecystectomy
- c) complex conservative therapy
- g) microcholecystostomy under ultrasound control
- e) remote wave lithotripsy

### Situational task 1

A 52-year-old patient complains of periodically appearing paroxysmal pain in the right hypochondrium with radiation to the right shoulder and shoulder blade with an increase in body temperature up to 39-39.5 °C, heavy sweats during the last year. Over the past month, such attacks have become more frequent and began to appear every 2-3 days. Sometimes attacks were accompanied by the appearance of jaundice, which quickly disappeared, and then reappeared. General condition remained satisfactory. She noted some weakness. The abdomen is of normal shape, soft. The liver is not enlarged. The gall bladder is not palpable. Soreness on palpation in the epigastric region. White blood cells  $9.2 \times 10^3$  in 1  $\mu$ l, ESR 38 mm / hour. With ultrasound, the gallbladder is of normal size, contains calculi, there is dilatation of the intrahepatic ducts, choledoch 1.2 cm.

- 1) What diagnosis do you make?
- 2) What is the tactics of additional examination and treatment?

### Situational task 2

In a 65-year-old patient suffering from bouts of cholelithiasis, the next attack stopped completely. For 2 months, the patient continued to note dull aching pain in the right hypochondrium, which bothered her constantly. On palpation in the right hypochondrium, a densely elastic, painless formation with a smooth surface was determined. Symptoms of peritoneal irritation

were not detected. The body temperature remained normal all this time, there was no leukocytosis, there was no shift in the leukocyte formula. With ultrasound, the gall bladder is 123 × 63, the wall is 4 mm, a fixed calculus in the neck region is 23 × 18 mm, and bile duct is 6 mm.

1) What is your diagnosis and treatment tactics?

### Situational task 3

A 46-year-old patient after eating fatty foods first developed severe pain in the right hypochondrium with radiation to the right shoulder and right shoulder blade. The body temperature rose to 37.80 C, there was repeated vomiting. On palpation of the right hypochondrium, the bottom of the painful gall bladder was determined, positive symptoms of Ortner, Kera, and Shchetkin-Blumberg symptom were negative. On admission, an ultrasound scan was performed - the gallbladder 115 × 63 mm, the wall 3 mm, calculi are determined in the lumen of the gallbladder. After the appointment of conservative therapy, the condition improved, the temperature decreased to normal, the pain decreased, a day after admission the gall bladder stopped palpating, there was a slight soreness at the point of the gall bladder. With dynamic ultrasound, the gall bladder is 82 × 59 mm, the wall is 3 mm, and the bile duct is 8 mm. However, after the relief of a pain attack, the patient appeared icteric skin, bilirubin indicators began to increase.

1) What is your diagnosis?

2) What should be the diagnostic algorithm and treatment tactics?