

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 HOSPITAL SURGERY**

the main professional educational program of higher education - specialty program in the  
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**TASKS FOR INDEPENDENT WORK OF STUDENTS 4,5 and 6 COURSES  
OF THE MEDICAL FACULTY ON THE CYCLE**

**HOSPITAL SURGERY**

**TOPIC: “INTESTINAL OBSTRUCTION”**

**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.

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

1. Draw a diagram of the intestine anatomy.

2. Draw a diagram of the blood supply to the intestines.

3. Depict the structure of the intestinal wall.

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°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 acquired 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**

**HOSPITAL SURGERY**

**TOPIC: “DISEASES OF THE COLON AND RECTUM”**

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

1. Anatomy of the colon and rectum.
2. Functions of the colon and rectum.
3. Research methods.
4. Intestinal diverticula
5. Diagnostics
6. Hemorrhoids
7. Fistula of the rectum

**II. Targets:**

**The student must know:**

1. Anatomy of the colon and rectum.
2. Functions of the colon and rectum.
3. Research methods.
4. Intestinal diverticula
5. Diagnostics
6. Hemorrhoids
7. Fistula of the rectum



4. Describe clinical representation of total perianal fistula:

5. Give a complication of nonspecific ulcerative colitis:

6. What helps to approve Hirschsprung's disease diagnosing?

7. A 70-year-old patient presented to a hospital. About 2 days ago she felt pains in the left iliac area, increasing when coughing and physical activity. Had been suffering from constipations for a long time. Physical examination detected satisfactory condition. The tongue was wet and furred. The abdomen participated in breathing, palpation showed muscle tension and painfulness in the left iliac area.

Blumberg's sign was moderately evident. Leucocytosis was moderate, temperature was 37,2°. What is your provisional diagnosis?

8. The most reliable method of colon polyps diagnosing is:

9. Compose 5 test tasks on the topic "diseases of the colon and rectum"

10. Make 3 situational tasks on the theme " diseases of the colon and rectum "

## Tests

### 1. The main reason of acute anal abscess is:

1. Hemorrhoids
2. Injury of rectal mucosa after medical procedures
3. *Microtraumas of rectal mucosa*
4. Bullet wound of the rectum
5. Inflammatory diseases of organs neighbor to the rectum

### 2. What therapeutic methods should be used in acute anal abscess?

1. Massive antibacterial therapy
2. Physiotherapy
3. Emergency surgery
4. Elective operation

Choose the correct answer combination: a) 1, 2 b) 1, 4 c) 1, 2, 4 d) 2, 3 e) 1, 3

### 3. From what diseases acute anal abscess should be differentiated?

1. Buttock carbuncle
2. Buttock abscess
3. Prostate abscess
4. Suppuration of coccygeal cysts
5. Bartholinitis

Choose the correct answer combination: a) 1, 2 b) 3, 5 c) 4 d) All variants are correct e) All variants are incorrect

### 4. These principles should be followed in therapy of acute anal abscess:

1. Early surgery



2. Adequate opening and sanitization of a suppurative focus
3. Excision of the internal aperture
4. Adequate draining

Choose the correct answer combination: a) 1, 2 b) 1, 2, 4 c) 1, 3 d) 2, 4 e) All variants are correct

**5. Which of the following measures are important for acute anal abscess prevention?**

1. Cleansing enemas
2. Medicinal enemas
3. Saline laxatives
4. Treatment of the accompanying proctological and gastro-intestinal diseases
5. Washing of the perineum after defecation instead of toilet paper use

Choose the correct answer combination: a) 1, 2 b) 1, 3, 4 c) 2, 3, 5 d) 2, 4, 5 e) All variants are correct

**6. The following symptom complex is characteristic of rectal fissure (the choice depends on the disease stage):**

1. Moderate pain in the anal region, increasing during defecation, anal itch, voluminous bleeding after defecation.
2. Feeling of incomplete emptying after defecation, blood-coloured ribbon stool, tenesmus, unstable stool, defluvium, sometimes single portions of dark blood
3. Unstable stool, feeling of heaviness in the pelvic area, feces of normal configuration with dark or crimson blood, scybalous stool, the abdomen is bloated and unrelieved with poor stool
4. Frequent liquid stool, tenesmus, mucous and bloody discharge, sometimes profuse diarrhea, possible temperature reaction
5. Severe pain after defecation, 2-3 drops of blood after defecation, fear of stool, chronic constipation

**7. The most often form of paraproctitis is:**

1. Subcutaneous paraproctitis
2. Submucous paraproctitis

3. Ischiorectal paraproctitis
4. Pelviorectal abscess
5. Intercondyloid paraproctitis

**8. Surgery on acute anal abscess should be performed under:**

1. Intravenous anesthesia
2. Local anesthesia
3. Sacral anesthesia
4. Peridural anesthesia
5. Any kind of anesthesia, except local anesthesia

**9. In case of hemorrhoidal boluses acute thrombosis ambulatory therapy it is most rationally to:**

1. Indicate laxatives (magnesium sulfate), lead water, intake of aescusan or aspirin, suppositories with belladonna
2. Novocaine block, reduction of a hemorrhoid
3. Indicate analgetics, fomentations during first 2-3 days, rest cure, heparin ointment dressing and a diet
4. Remove thrombosed boluses
5. Apply sclerosing therapy

**10. Coccygeal epithelial course:**

1. Is connected to the sacrum
2. Is connected to the tip
3. Ends blindly in the subcutaneous tissue of the inter-buttock area
4. Is situated between the posterior rectal surface and the anterior sacral surface
5. Is communicated with the rectal lumen

Situational task 1

Patient M., 58 years old, went to the doctor in connection with the appearance of pain in the lower abdomen and with diarrhea (more than a month marks the alternation of constipation and diarrhea). The general condition of the patient is satisfactory. Appetite saved. The tongue is wet, clean. The abdomen is not swollen, soft, painful with deep palpation in the left iliac region. Body temperature 37.3 ° C. A digital examination of the rectum revealed no pathology. In connection with a suspected colon disease, irrigoscopy was performed and sigmoid colon diverticula were detected.

- 1) What complication of diverticulosis can be suspected?
- 2) What diseases do you need to have a differential diagnosis with?
- 3) What types of surgical intervention can be used in the absence of the effect of conservative treatment?

#### Situational task 2

Patient I., 30 years old, complains of the presence of a fistula with a purulent compartment in the perineum, which has existed for about a year. On examination, a fistula with a small purulent discharge and maceration of the skin around it was found on the perineal skin. On palpation, a dense cord is detected in the subcutaneous tissue.

- 1) Make a preliminary diagnosis.
- 2) Prescribe a conservative treatment.
- 3) What types of operations can a patient perform?

### Situational task 3

Patient N., 62 years old, complains of pulling pain in the perineum, mucus from the rectum. A digital examination of the rectum in its ampullar section revealed several formations with a diameter of 0.5 to 3 cm with a clearly defined leg. These formations are displaced along with the intestinal mucosa.

- 1) Make a preliminary diagnosis.
- 2) Define surgical tactics in this case.
- 3) What are the methods of surgical treatment of this pathology?

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

### **TOPIC: “DISEASES OF THE LUNGS AND PLEURA”**

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

1. Anatomy of the lungs, pleura.
2. Classification of diseases of the lungs, pleura.
3. Etiology and pathogenesis of diseases of the lungs, pleura.
4. Clinic of diseases.

5. Diagnostics.
6. Differential diagnosis.
7. Methods of surgical treatment.

## **II. Targets:**

The student must know:

- 1 Anatomy.
- 2 Physiology of the lungs and pleura.
- 3 Etiology
- 4 Pathogenesis of diseases of the lungs and pleura.
- 5 Clinic of diseases.
- 6 Diagnostics.
- 7 Differential diagnosis.
- 8 Methods of surgical treatment.

The student must be able to:

- 1 Conduct a clinical examination  
sick
- 2 Justify a specific survey plan  
patients with lung and pleura diseases
- 3 Correctly conduct a survey of patients
- 4 Correctly interpret the results
- 5 Arguing the choice of the operational method  
treatment in each case.

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

1. Draw an anatomy of the lungs

2. Depict lung lobes

3. For cattle for three weeks, cough with liquid sputum, fever up to 37.7-37.9 degrees, weakness, shortness of breath on exertion. An X-ray examination: in the upper lobe of the right lung, a rounded shadow was found with smooth, round, clear contours without perifocal inflammation of the lung tissue. Sputum examination revealed chitin filaments.

Your preliminary diagnosis:

- A) lung cancer
- B) lung abscess
- C) Echinococcus lung
- D) Cavernous pulmonary tuberculosis
- E) Atelectasis of the upper lobe of the lung

4. The patient is sick for a week. Complaints of chest pain, chills, heavy sweats, cough with profuse fetid discharge. X-ray - cavity with a horizontal level.

Your preliminary diagnosis:

- A) Acute lung abscess.
- B) Chronic lung abscess.
- C) The acute form of lung gangrene.
- D) Tuberculosis lobby.
- E) Interlobar pleurisy.

5. The patient has been ill for 5 months. Complaints of coughing with a significant amount of fetid sputum, body temperature up to 38 degrees. Radiologically - a cavity with a horizontal level.

Your preliminary diagnosis:

- A) Acute lung abscess.
- B) Tuberculosis lobby.
- C) Empyema of the pleura.
- D) Interlobar pleurisy.
- E) Chronic lung abscess.

6. The patient fell ill suddenly. Complaints of cough with fetid sputum, chest pain, increased body temperature.

Where should the examination of the patient begin?

- A) FLG.
- B) Bronchoscopy.
- C) X-ray diffraction.
- D) Chest x-ray.
- E) Computed tomography.

7. The patient is ill with pneumonia for three weeks. Over the past three days, it has been deteriorating, fever, shortness of breath, cough with profuse purulent sputum. X-ray - in the pulmonary field a cavity with a horizontal level.

Your preliminary diagnosis:

- A) Lung abscess.
- B) Pleural empyema.

8. Compose 5 test tasks on the topic "Diseases of The Lungs And Pleura"

9. Make 3 situational tasks on the theme " Diseases of The Lungs And Pleura "

10. Patient K., 27 years old, complains of pain in the left half of the chest, shortness of breath, fever up to 38.0 ° C. Operated 10 days ago for bronchiectasis. Removed the lower lobe of the left lung. The state of moderate severity. Pulse 90 per minute. HELL — 110/80 mm Hg. Art. Breathing on the right is normal, on the left in the lower sections there is a dampening of percussion sound, breath is not heard here. With a puncture in the VIII intercostal space on the left along the rear axillary line, pus was obtained.

What complication occurred in the postoperative period?

Make a plan for further treatment.



## Tests

### **1. What time is necessary for acute lung abscess to become chronic one:**

1. 4-6 weeks
2. 6-8 weeks
3. 8-10 weeks
4. More than 10 weeks

### **2. What measures should be taken at first to specify the diagnosis in patients with suspected acute lung abscess?**

1. Pulmonary angiography
2. Bronchoscopy
3. Fluoroscopy of lungs
4. Lungs tomography
5. Lung perfusion scan

### **3. What test should be carried out in the first place if abscess of the lung is suspected?**

1. Lungs tomography
2. Bronchoscopy
3. Perfusion lung scan
4. Biplane fluoroscopy of the lungs
5. Pulmonary angiography

### **4. Acute pleural empyema was detected in a 67-year-old patient who suffered from pneumonia. What measures should be taken in that case?**

1. Artificial pneumothorax

2. Paracentetic percutaneous drainage of the pleural cavity with active aspiration
3. Thoracotomy with pleural cavity tamponade
4. Decortication of the lung and pleural cavity drainage
5. One-time puncture of the pleural cavity with aspiration of the content and following antibiotics injection

**5. According to genesis acute lung abscesses can be subdivided into:**

1. Postpneumatic
2. Traumatic
3. Aspiration-occlusive
4. Hematogenic-embolic
5. Lymphogenous

Right variants:

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

**6. A patient with prolonged right-sided pneumonia felt a sharp deterioration of general condition. X-ray detected right lung collapse, wide horizontal fluid level and sharp shift of mediastinum shadow to the left. What is the diagnosis?**

1. Acute lung abscess with burst into the bronchus
2. Pleural empyema
3. Pyopneumothorax
4. Pulmonary-bronchial sequestration
5. Thromboembolism of the pulmonary artery right branch

**7. What are the indications for lobectomy in acute lung abscess?**

1. Increase of purulent intoxication, despite conservative therapy

2. Repeated bleedings from a burst lung abscess
3. Development of pneumonia in a healthy lung
4. Development of acute hepatonephric insufficiency
5. Suspected cavitory form of lung cancer

Right variants:

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

**8. What microorganism is the most common reason of purulent destructive process in lungs?**

1. Streptococcus
2. Haemolyticus staphylococcus
3. Colon bacillus
4. Viruses

**9. What forms of bronchiectasis exist?**

1. Sacculated
2. Cylindric
3. Bronchiectasis, extended as a result of bronchiectases inflammation
4. Fusiform

Right variants:

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

**10. What pulmonary disease is characterized by presence of phlegm, which gives 3-layer sediment: lower layer is purulent; middle layer consists of serous fluid; upper layer is mucus?**

1. Lung abscess
2. Multiple bronchiectasis
3. Lung gangrene
4. Chronic pneumonia

#### Situational task 1

A 25-year-old patient complains of cough with mucopurulent sputum to 700 ml per day. As a child he was frequently hospitalized with left-sided pneumonia. He left the hospital with substantial improvement, though exacerbations often happened in spring and autumn. Over the last year his general condition has worsened: rapid fatigability, increase of phlegm amount with blood streaks, increased temperature. The medical examination shows acrocyanosis and clubbed fingers. While breathing the delayed expiration of the left side of the chest is observed. Below the scapula angle, where the percussion sound is blurred and shortened, the breathing is weak with single coarse rales.

What diseases can be suspected?

#### Situational task 2

A 65-year-old patient was treating herself for hyperthermia during 2 weeks. She connects her illness with supercooling, after which the temperature rose to 38.0, cough at first dry and then with mucopurulent sputum appeared. The state of health was steadily worsening; the patient felt weakness, chill and fever. Three days ago during the coughing 200 ml of fetid phlegm exuded. What disease can be suspected? What kind of instrumental and laboratory methods would you choose to confirm the diagnosis?

### Situational task 3

Three days after acute lung abscess evacuation a patient felt sharp pains in the right side of the chest while coughing and short breath. Medical examination showed delayed expiration of the right side of the chest while breathing. In the upper-right parts the vesiculotympanic resonance is detected. Dull sound is heard below the scapula. Breathing in all parts of the right lung is weakened. Development of what state can be suspected? What kind of instrumental and laboratory methods would you choose to confirm the diagnosis?

## **TASKS FOR INDEPENDENT WORK OF STUDENTS 4,5 and 6 COURSES OF THE MEDICAL FACULTY ON THE CYCLE TOPIC:" CARDIOVASCULAR DISEASES"**

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

Topographic and anatomical relationships of the heart departments are normal and with congenital and acquired pathology

Classification of heart defects.

hemodynamic disturbances and pathogenesis of individual heart defects.

Clinical symptomatology of individual heart defects.

Diagnostic value of objective examination methods.

Instrumental methods for the diagnosis of heart defects: ultrasound, EchoECG, angiography, radioisotope scanning, etc.

The basic principles of the methods of surgical and conservative treatment of certain heart diseases.

Surgery for heart defects.

Prevention and rehabilitation of patients with heart defects.

## **II. Targets:**

The student must know:

1. Topographic and anatomical relationships of the heart departments are normal and with congenital and acquired pathology
2. Classification of heart defects.
3. hemodynamic disturbances and pathogenesis of individual heart defects.
4. Clinical symptomatology of individual heart defects.
5. The diagnostic value of the methods of objective examination.
6. Instrumental methods for the diagnosis of heart defects: ultrasound, EchoECG, angiography, radioisotope scanning, etc.
7. The basic principles of the methods of surgical and conservative treatment of certain heart diseases.
8. Surgery for heart failure.
9. Prevention and rehabilitation of patients with heart defects.

The student must be able to:

- 1 Formulate complaints, collect a medical history and conduct an objective study of a patient with surgical diseases of the heart.
- 2 Based on the assessment of the obtained clinical data, make a preliminary diagnosis and outline a plan for targeted examination of the patient.
- 3 Correctly interpret the data of instrumental research methods.
- 4 Based on the assessment of patient complaints, medical history, objective clinical data, laboratory and special research methods, formulate and substantiate the clinical diagnosis.
- 5 Put indications for surgical treatment and determine the optimal variant of it. Define the principles of a conservative treatment method.

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

1. Make a diagram of the anatomical and physiological relationships between different parts of the heart.

2. Draw a diagram of the “blue” and “white” heart defects.

3. Draw up diagrams of reconstructive operations on the heart valves with their main defects.

4. For the diagnosis of mitral heart disease, when determining systolic murmur at the apex, the most informative will be:

- a) ECG;
- b) echocardiography;
- c) R-graphy of the chest;

- d) all of the above;
- e) none of the above.

5. A 16-year-old patient was admitted to the hospital with complaints of pain in the heart area, such as angina pectoris, dizziness, fainting. On palpation of the heart region over the aorta, systolic tremor is revealed, the apical impulse is shifted to the left. Auscultation above the apex marked weakening of Iton, above the aorta 2 tone weakened, gross systolic murmur above the aorta. What type of defect should be diagnosed?

- a) tricuspid valve insufficiency;
- b) combined mitral defect;
- c) stenosis of the mouth of the aorta;
- d) aortic valve insufficiency;
- e) narrowing of the left atrioventricular foramen.

6. What veins make up the outflow system of the lower extremities?

7. Draw a diagram of the venous outflow from the lower extremities.



8. Depict the structure of the venous wall.

9. Describe and depict the symptoms of Hackenbruch, Troyanov-Trend-Lenburg.

10. Define varicose veins. What factors can contribute to varicose veins.

## Tests

### 1) Clinical signs of abdominal aorta aneurysm are:

1. Palpable pulsatile lump in the abdominal cavity
2. Systolic murmur over the lump in auscultation
3. Stomach pains
4. Everything mentioned

### 2) What symptoms are not typical for varicose veins?

1. Trophic ulcers of crus
2. Hypertrophy of extremities
3. Reduction in skin temperature
4. «Low» intermittent claudication
5. Fatigability of extremities after long static load

Choose the correct combination of answers:

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

### 3) During what diseases can superficial varicose veins of lower extremities occur?

1. Varicose veins
2. Aplasia of deep veins
3. Congenital arteriovenous fistula

Choose the correct combination of answers:

- a) 1, 2
- b) 1, 3
- c) All answers are correct

### 4) What operations eliminating venovenous shunt through perforating veins of the crus are performed in varicose veins of the lower extremities?

1. Madelung's operation
2. Babcock's surgery
3. Cockett's surgery

4. Narat's surgery
5. Linton's operation

Choose the correct combination of answers:

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

**5) What do patients with varicose veins of lower extremities complain of?**

1. Heaviness in legs at night
2. Restless legs
3. Intermittent claudication
4. Spasms of sural muscles at rest
5. Stable edema of shin and thigh

Choose the correct answer:

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

**6) Where does great subcutaneous vein interflow with common femoral vein?**

1. From 2- 3 cm above inguinal ligament to 5 cm below it
2. 6 cm below inguinal ligament
3. At the same level as inguinal ligament
4. From the level of inguinal ligament to 7 cm distal from it\
5. From 1 cm above inguinal ligament to 3 cm below it

**7) What veins form the short saphenous vein?**

1. Lateral marginal vein, plantar vessels, posteromedial vein
2. Lateral marginal vein, plantar vessels and deep anastomosis of external plantar vein
3. Superficial iliac circumflex, anterolateral, superficial epigastric veins

**8) What is phlebography of lower extremities performed for?**

1. To detect arteriovenous fistulas
2. To assess the state of valvular apparatus of deep communicating veins, to assess the patency of deep veins
3. Only to assess patency of deep veins

**9) What are the main factors of varicose veins development?**

1. -Prolonged standing, rise in intra-abdominal pressure, heredity
2. Prolonged standing, non-functioning arteriovenular anastomoses
3. Physical load on legs, weakness of muscular elastic fibers of venous wall

**10) Give the fullest characteristics of ulcers at varicose veins.**

1. They are situated on the inner side of crus above the ankle; more seldom they can be situated behind external crus in the site of previous dermatitis and eczema exposure. Ulcers are plane, solitary, painful, with abundant purulent discharges, irregular-shaped
2. They are situated on the lateral side of the crus, above the ankle; have clear boundaries. Ulcers are deep, often numerous, not painful, with purulent discharges
3. They are circular, numerous, with abundant purulent discharges

Situational task 1

A 60-year-old patient went to the doctor with complaints of intense pain in the right lower leg at rest and at night, worse when walking. These phenomena appeared suddenly 2 months ago and gradually progressed.

On examination, it was found that the skin of the right stopper is ivory, it is colder to the touch than on the left. The symptom of plantar ischemia is positive. The pulse on the popliteal artery and below is not indicated.

1. Your suspected diagnosis.
2. Tactics of patient management.
3. Options for possible treatment tactics in a hospital.

Situational task 2

A 67-year-old patient suffering from hypertension, upon examination, revealed a tumor-like formation in the mesogastrium on the left measuring 12 \* 10 \* 7 cm, tight to the touch, motionless, pulsating.

1. Your suspected diagnosis.
2. What studies should be carried out in this patient
3. Therapeutic tactics.

### Situational task 3

A patient 24 years 6 months ago after a fracture of the leg bones suffered acute thrombophlebitis of the deep veins of the left leg, was treated conservatively on an outpatient basis.

Upon admission, he complains of dull, bursting pains in the left lower leg, which appear with prolonged stay on the legs, almost decreasing overnight after resting in a prone position, marked varicose veins are noted. There are no trophic disorders. Positive tests of Brody - Troyanov - Trendelenburg, Barrow - Sheinis, Mayo - Prett.

1. What is your suspected diagnosis?
2. What diseases should a differential diagnosis be made with?
3. What additional studies to clarify the diagnosis should be initiated
4. Tactics of treatment

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

### **TOPIC: "PORTAL HYPERTENSION"**

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

1. Anatomy of the port - caval system.
2. Classification of portal hypertension.
3. The reasons for the development of portal hypertension syndrome (LNG).

4. Pathogenesis of portal hypertension syndrome.
5. Clinic of the disease.
6. Diagnostics.
7. Differential diagnosis.
8. Methods of conservative and surgical treatment.

## **II. Targets:**

The student must know:

1. Anatomy of the port - caval system.
2. Classification of portal hypertension.
3. Reasons for the development of portal hypertension syndrome.
4. The pathogenesis of portal hypertension syndrome.
5. Clinic of the disease.
6. Diagnostics.
7. Differential diagnosis.
8. Methods of conservative and surgical treatment.

The student must be able to:

- 1 Conduct a clinical examination patients with LNG.
- 2 Justify a specific survey plan patients with LNG.
- 3 Correctly interview patients with LNG
- 4 correctly interpret the results clinical, laboratory, instrumental and other examination methods.
- 5 Arguing the choice of the operational method treatment in each case.

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

1. Portal hypertension is ...

2. Scheme the main links in the pathogenesis of portal hypertension.

3. In which of these diseases portal hypertension is more severe and why: portal vein thrombosis; cirrhosis of the liver.

4. How to calculate portal pressure?

5. What is pylephlebitis? What are its causes and consequences?

6. Crewellier-Baumgarten syndrome is ...

7. Why with portal hypertension can erosive gastritis develop?

8. What is the reason for the development of portal hypertension in hypersplenism?

9. Describe the technique for endoscopic ligation of varicose veins.

10. What medications should be used in the treatment of portal hypertension?



## **Tests**

### **1. What reasons do not cause portal hypertension:**

1. Inferior vena cava thrombosis at the level of the hepatic veins
2. Stenosis, portal vein phlebothrombosis
3. Inferior vena cava thrombosis at the bifurcation level

### **2. Subhepatic block of the portal blood flow can't be caused by:**

1. Chiari's syndrome
2. Budd-Chiari syndrome
3. Liver cirrhosis
4. Portal vein thrombosis

### **3. Intrahepatic block of the portal blood flow can't be caused by:**

1. Biliary cirrhosis
2. Postnecrotic cirrhosis
3. Portal cirrhosis
4. Portal vein thrombosis

### **4. Subhepatic block of the portal blood flow can't be caused by:**

1. Phlebosclerosis, portal vein or its branches thrombosis

2. Biliary cirrhosis
3. Budd-Chiari syndrome

**5. High portal bed pressure can/'t be caused by:**

1. Dilated esophageal veins bleeding
2. Anteroventral veins dilatation
3. Erosive jejunitis
4. Ascites

**6. Portal hypertension is not accompanied by:**

1. Hypersplenism
2. Esophageal varicose veins dilatation
3. Severe epigastric pains

**7. What methods are not applied in portal hypertension diagnosing:**

1. Abdominal plan radiography
2. Computed tomography
3. Laparoscopy
4. Fibroesophagogastroscopy

**8. What methods are not applied in liver cirrhosis treatment:**

1. Surgeries, aimed to create new blood outflow tracts out of portal system
2. Surgeries, aimed to increase liver regeneration
3. Surgeries, aimed to cease stomach and esophagus veins connection
4. Vagotomy with a stomach drainage

**9. What methods are not applied to stop esophageal varicose dilated veins bleeding:**

1. Blakemore probe application
2. Intravenous introduction of 10%-20,0 calcium-chloride solution
3. Patsiora`s operation
4. Laparoscopy

**10. The normal pressure of the portal vein is:**

1. 50-100 mmH<sub>2</sub>O
2. 120-180 mmH<sub>2</sub>O
3. 200-400 mmH<sub>2</sub>O
4. 150-200 mmH<sub>2</sub>O

**Situational task 1**

Patient K., 42 years old, was urgently admitted to the hospital. Bloody vomiting arose suddenly. He suffered Botkin's disease about 12 years ago. On examination, a noticeable venous network on the abdomen. The enlarged spleen at the edge of the left costal arch and the dense edge of the liver at the costal arch are palpated. Pulse 105 beats in minutes, rhythmic. BELL 100/60 mm Hg In the general analysis of blood: red blood cells  $2.7 \cdot 10^{12} / l$ , hemoglobin 78 g / l, hematocrit 0.31.

- 1) Make a preliminary diagnosis.
- 2) Determine the degree of blood loss.
- 3) What radical surgery is indicated for the patient, and under what conditions can it be performed?

**Situational task 2**

2. A 41-year-old patient was admitted to the hospital with complaints of vomiting of unchanged blood, dizziness, weakness, and suffered malaria 10 years ago. In the

last 3 years - periodic pain in the right hypochondrium. Objectively: a state of moderate severity. Pale skin and mucous membranes. Slight yellowness of the sclera, spider veins on the skin. Pulse 110 beats in minutes, rhythmic. BELL 90/50 mm Hg. The tongue is dry, covered with a brown coating. The abdomen is enlarged, flattened. The liver protrudes from under the costal arch, dense with a pointed edge. The spleen protrudes by 8 cm. Ascites is determined percussion. In the general analysis of blood: red blood cells  $2.3 \cdot 10^{12} / l$ , hemoglobin 72 g / l, hematocrit 0.29.

- 1) Make a preliminary diagnosis.
- 2) What diseases should be differentiated?
- 3) List the operative methods of treatment for the failure of conservative therapy.

### Situational task 3

A 38-year-old patient was delivered to the surgical department with complaints of red blood vomiting, weakness, and dizziness. From the anamnesis it was established that about 7 years ago he suffered acute pancreatitis. On examination, the skin and visible mucous membranes are pale. The vesicular breathing, heart sounds are muffled. Pulse 112 beats in minutes, rhythmic. BELL 110/60 mm Hg. The tongue is wet. The abdomen is soft, the spleen is palpated, protruding beyond the edge of the costal arch by 6 cm. With ultrasound, splenomegaly is determined. The liver is not enlarged, its tissue is without features. The portal vein is normal. Pancreatic fibrosis is determined, calcifications in its tissue, splenic vein is not clearly visualized. In a clinical blood test: Er.  $2.8 \cdot 10^{12} / l$ , Hemoglobin 78 g / l, hematocrit 0.32.

- 1) Make a preliminary diagnosis.
- 2) What diseases should be differentiated?
- 3) Determine the degree of blood loss and treatment tactics for various conditions of hemostasis.

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

**TOPIC: “DISEASES OF THE THYROID GLAND”**

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

1. Anatomy of the thyroid gland
2. Methods of thyroid research
3. Etiology, pathogenesis of thyroid diseases
4. The clinical picture in thyroid diseases
5. Treatment methods for thyroid diseases

**II. Targets:**

The student must know:

- 1 Anatomy of the thyroid gland
- 2 thyroid function
- 3 Classification
- 4 Etiology.
- 5 Pathogenesis.
- 6 Clinic of the disease.
- 7 Diagnostics.
- 8 Differential diagnosis.
- 9 Methods of surgical treatment.

The student must be able to:

- 1 Conduct a clinical examination
- 2 patients with thyroid disease
- 3 Substantiate a specific examination plan for patients with thyroid disease



- a) along the lymphatic tract
- b) hematogenous
- c) on fascial-sheath structures
- g) over
- e) equally often

5. The incidence of thyroid cancer in the CIS in recent years

- a) decreases
- b) remains at the same level
- c) growing

6. The most common morphological forms of thyroid cancer include:

7. 14 Which of the following is not an indication for surgery for nodular goiter:

- a) compression of the trachea and esophagus
- b) the development of severe thyrotoxicosis
- c) the risk of thyroiditis
- d) the possibility of malignancy
- e) cosmetic defect

8. The appearance of goiter in a significant number of individuals living in the same biogeochemical region will be defined by you as

- a) epidemic goiter
- b) sporadic goiter
- c) acute strumitis
- g) endemic goiter
- e) massive thyrotoxicosis

9. Determine the best treatment option for nodular goiter

- a) conservative treatment with thyroidin
- b) excision of the site with an urgent histological examination
- c) perform enucleation
- d) perform a subtotal stringectomy
- e) a hemistrumectomy or resection of the thyroid lobe is indicated

10. The clinical sign of sternal goiter is:

## **Tests**

**1. According to Shevkunenko the thyroid gland is covered with the following fasciae?**

- 1. The third;
- 2. The forth;



3. The fifth;
4. The first;
5. The second.

Right variants:

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

**2. The thyroid capsule is formed by:**

1. Visceral layer of the IV fascia according to Shevkunenko;
2. Parietal layer of the IV fascia;
3. The third fascia;
5. The fifth fascia.

Right variants:

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

**3. Hormones of the thyroid gland are:**

1. Monoiodotyrosine;
2. Diiodotyrosine;
3. Triiodotyrosine;
4. Tetraiodotyrosine.

Right variants:

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

d) 3, 4

**4. At what life period the thyroid gland reaches its greatest mass?**

1. In a newborn;
2. At the period of puberty;
3. At the period of maturity;
4. At senile age.

Right variants:

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

**5. Thyroidal hormones:**

1. Intensify oxidation processes in the organism;
2. Depress;
3. Have not any influence.

Right variants:

- a) 1
- b) 2
- c) 3

**6. In the II stage of the thyroid gland enlargement:**

1. The enlarged isthmus is clearly palpable;
2. While swallowing the both thyroid lobes are palpable;
3. The thyroid gland is visible while neck examination without act of swallowing or palpation.

Right variants:

a) 1, 2.

b) 2, 3.

c) 2.

**7. Intensity and rate of absorption of J131 in the thyroid**

**gland depends on:**

1. The thyroid gland function;

2. Age;

3. Sex.

Right variants:

a) 1, 3

b) 1, 2, 3

c) 1, 2

**8. Normal level of protein-bound iodine (PBI) varies:**

1. From 2-9 mcg %

2. From 3-8 mcg%

3. From 3,5-7,5 mcg%

Right variants:

a) 1, 3

b) 1, 2

c) 3

d) 1, 2, 3

**9. The region is considered to be endemic goiter territory**

**if the increase of the thyroid gland is observed in:**

1. 20% of adults and 15% of children;

2. 10% of adults and 20% of children;

3. 15% of adults and 25 % of children.

Right variants:

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

**10. For normal functioning of the thyroid gland the daily dose of iodine should comprise:**

- 1. 50 mcg;
- 2. 50-70 mcg;
- 3. 90-120 mcg;
- 4. 190-200 mcg.

Right variants:

- a) 1
- b) 2
- c) 3
- d) 4

Situational task 1

A 64-year-old patient with ultrasound of the thyroid gland obtained data for adenoma of the right lobe. A fine needle aspiration biopsy was performed. A cytological conclusion was made - follicular adenoma.

- 1. Describe the ultrasound signs characteristic of thyroid adenomas.
- 2. What are the stages of the morphological study of the thyroid gland, as well as the advantages and disadvantages of the methods.

Situational task 2

A 36-year-old patient went to the doctor due to the fact that there were unpleasant sensations in the neck area on the right and here she felt a tumor-like formation.

No other complaints. When viewed from the right in a projection of the right lobe of the thyroid gland, a rounded form of a tight-elastic tumor-like formation in diameter up to 5 mm is palpated. Lymph nodes of the neck are not enlarged. Thyroid cyst is suspected.

1. What special studies need to be performed to make a final diagnosis and the expected results?
2. What diseases should be used for differential diagnosis?

### Situational task 3

Patient K., 64 years old, complained of an unreasonable cough, a feeling of pressure in the neck area to the right. When examining in the area of the right lobe of the thyroid gland, a node of dense-elastic consistency is determined in diameter up to 3 cm. Lymph nodes of the neck are not enlarged

1. Your preliminary diagnosis.
2. Assign a patient examination plan.

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

### **TOPIC: “DISEASES OF THE MAMMARY GLAND”**

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

1. The anatomy of the mammary gland.
2. Scheme of the section of the breast with mastitis.
3. Classification of breast disease.
4. Etiology of breast disease.
5. Pathogenesis.

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

## **II. Targets:**

The student must be able to:

- 1 Conduct a clinical examination of patients with breast disease.
- 2 Substantiate a specific examination plan for patients with breast disease.
- 3 Correctly conduct a survey of patients with obstruction of the breast
- 4 Correctly interpret the results of clinical, laboratory, instrumental and other examination methods.
- 5 Argue the choice of operative treatment in each case.

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

1. Describe the structure of the mammary glands, blood supply and lymphatic drainage

2. A patient with breast cancer is concerned about back pain. X-ray examination. Destruction of 4 and 5 lumbar vertebrae was detected. What is her stage of the disease?

3. Pain in the mammary gland is characteristic of

- a) breast cysts
- b) Mintz disease
- c) fibroadenomas
- g) breast cancer
- e) diffuse mastopathy

4. What is the name of the disease of the mammary gland in men, characterized by proliferation of the epithelium and manifested by swelling and densification of the tissue of the papillary?

- a) adenosis
- b) genicomastia
- c) mastopathy
- d) in men, such a disease does not exist

5. For diffuse treatment, apply (note 3 correct answers)

- a) hepatotropic drugs
- b) vitamin therapy
- c) sectoral resection of the mammary gland
- g) microdoses of iodine
- e) radiation therapy

6. In the mammary gland, a painless seal 2x2 cm in size, a positive symptom of “retraction”. What is your preliminary diagnosis?

7. In the left mammary gland, a painless formation of 3x4 cm, a positive symptom of wrinkling, is palpated. The regional lymph nodes are not palpable. What is the most likely diagnosis?

8. . A patient with breast cancer is concerned about back pain. X-ray examination. Destruction of 4 and 5 lumbar vertebrae was detected. What is her stage of the disease?

- a) stage 1
- b) 2 b stage
- c) stage 3
- d) stage 4

9. The occurrence of breast cancer does not play a role in dysfunction

- a) ovaries
- b) liver
- c) gastrointestinal tract
- g) hypothalamic-pituitary region

10. The main symptom of breast cancer is:



## **Tests**

### **1. Following treatment is not used in diffuse mastopathy:**

1. Estrogenic drugs
2. Physiotherapy
3. Lasting intake of potassium iodide
4. Partial mammary gland resection.
5. Radiation therapy

### **2. In mammary gland cancer with 2.5 cm diameter**

**without enlargement of regional lymph nodes the stage is:**

1. 1
2. 2 A
3. 2 B
4. 3 A
5. 3 B

### **3. The following lymph glands are not regional:**

1. Axillary
2. Parasternal
3. Subclavian
4. Lymph glands of the opposite side.
5. All the enumerated lymph glands are regional

### **4. Everything mentioned below is indicated in lactostasis**

**except:**

1. Mammary glands massage
2. Thorough breast milk expression

3. Antibiotic therapy
4. Elevation of mammary gland
5. Continued breastfeeding

**5. What is indicated in mammary gland fibrous adenoma?**

1. Simple mastectomy
2. Mammary gland amputation
3. Partial resection
4. Radical mastectomy
5. Radiation therapy

**6. Halsted radical mastectomy includes:**

1. Removal of the mammary gland with pectoralis minor and major muscles, the tissues of infraclavicular, axillary and subscapular area.
2. The variant mentioned above + removal of parasternal and mediastinal tissues and lymph nodes.
3. Removal of the mammary gland with pectoralis minor muscle and tissues of axillary, subscapular and infraclavicular area
4. Removal of the mammary gland sector with axillar tissue and lymph nodes.
5. Mammary gland removal

**7. The mammary tumor with 1.5 cm diameter and single enlarged axillary lymph nodes concerns to the following stage:**

1. T1N1M0

2. T1N0M0

3. T2N1M0

4. T3N0M0

**8. It is characteristic of the 2b cancer stage:**

1. Absence of metastases in regional lymph nodes of the opposite side

2. Distant metastases

3. Metastases in axillary subclavicular and supraclavicular lymph nodes.

4. Ulceration in the area of tumor

5. Axillary lymph nodes lesion

**9. The stage of mammary tumor with 2.5 cm diameter and not enlarged regional lymphnodes is:**

1. T1N1M0

2. T1N0M0

3. T2N0M0

4. T2N1M0

5. T3N0M0

**10. What is recommended in case of microcalcifications detection during the mammography?**

1. Dynamic observation

2. Partial resection with urgent histologic examination

3. Paracentetic biopsy

4. Ultrasonic diagnosing

5. No observation is necessary

Situational task 1

A 39-year-old patient complains of pain and deformation of the right mammary gland. Examination showed that the gland is much enlarged and deformed; the skin is infiltrated, thick and tuberosus with areas of hemorrhages and ulceration on the surface. The nipple is deformed and retracted. Palpation detects enlarged dense lymph nodes on the right. There is no pathology in internal genital organs.

What is the diagnosis? 2. What kind of instrumental and laboratory methods would you like to choose to confirm the diagnosis?

#### Situational task 2

A 19-year-old patient complains of moderate pains in the mammary gland, increasing in premenstrual period. Both mammary glands are symmetrical and have regular configuration. Nipples and skin are not changed. Palpation detects tuberosus lumps accompanied by a neoplasm with distinct borders and diameter 6 cm. The neoplasm is easily shifted and is not connected with tissues and the nipple. Regional lymph nodes are not enlarged. What is the diagnosis? What kind of instrumental and laboratory methods would you like to choose to confirm the diagnosis?

#### Situational task 3

During the examination of a 30-year-old pregnant woman in antenatal clinic a 3 cm tumor node was detected in the mammary gland. Term of pregnancy is 12 weeks. After antenatal clinic and oncologist`s examination the mammary gland cancer was detected. What is the diagnosis? What is the medical approach?

### **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:**



4. The symptom of a “shirt” is:

5. Pylephlebitis 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 pancretocholangiography, 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 exocrinous 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.





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 piloroplasty

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. HELL 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. HELL 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. HELL

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: “INTESTINAL FISTULA.”**

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

1. Anatomy of the digestive system (Normal Anatomy).
2. Syntopy of the digestive system (Topographic anatomy and surgical surgery).
3. Methods of imposing the main types of intestinal and gastric fistulas (Topographic anatomy and operative surgery).
4. Methods of physical and laboratory studies of the digestive system.
5. X-ray methods for the study of the gastrointestinal tract.

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

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

A. Classification of fistulas of the gastrointestinal tract. B. The clinical picture of intestinal fistula. B. Diagnostic methods. G. The main methods of treatment of intestinal fistulas.

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

A. Conduct a clinical examination of the patient. B. Assess the results of an X-ray examination.



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

1. What is an intestinal fistula
2. Draw diagrams of the intestinal fistula
3. Write a classification of intestinal fistulas
4. List the methods of operation for intestinal fistula

5. Clean the steps of one of the operations used for intestinal fistula

6. Etiology of intestinal fistula?

7. Come up with 5 assignments on the topic "Intestinal fistulas"

8. Write 5 tests on the topic "Intestinal fistula"

9. Write 1 situational task on the topic "Intestinal fistulas"

10. Describe the pathogenesis of intestinal fistula

## Tests

### 1. For intestinal fistulas characteristic:

- a) presence of a defect in the intestinal wall
- b) the presence of an opening on the anterior abdominal wall with the intestine-detachable
- c) the Presence of abnormal communication between the intestinal loops
- d) diffuse peritonitis is Always characteristic
- e) it is a purulent inflammatory process
- f)

### 2. For formed intestinal fistulas characteristic:

- a) Isolated communication of the gut with the external environment
- b) Isolated communication between different intestinal loops
- c) Communication of the intestine with the purulent cavity, which, in turn,-radish, communicates with the external environment
- d) Isolated communication with purulent leakage
- e) Communication with free abdominal cavity

### 3. When an unformed intestinal fistula is characteristic:

- a) Isolated communication of the gut with the external environment.- thin channel lined with epithelium
- b) communication of the intestine with the external environment through the purulent cavity
- c) Communication between the intestine and other cavity organ by means of a thin channel
- d) Communication between the intestine and other cavity organ through the purulent cavity
- e) the Prognosis for these fistulas is worse than for formed fistulas.

### 4. For high intestinal fistulas, usually characterized by following statement:

- a) Intestinal losses are significant and quickly lead to decompensations
- b) Not characterized by homeostatic disorders (water-salt-acid-base and protein metabolism)
- c) the amount of loss is significant
- d) the Skin around the fistula is considerably irritated
- e) Patients with high fistulas have a good prognosis

**5. Low intestinal fistulas characterized by:**

- a) Severe violations of water-electrolyte metabolism
- b) characterized by severe hypoproteinemia
- c) As a rule, the intestinal losses are insignificant
- d) the Skin around the fistula is usually slightly altered
- e) low, formed fistula favorable Prognosis

**6. Morphologically distinguish the following fistulas:**

- a) Tubular
- b) Cylindrical
- c) Lip-Shaped
- d) Mixed
- e) Polymorphic

**7. The most unfavorable prognosis is characteristic of the fistula, located on the level:**

- a) Jejunum
- b) Ileum
- c) the cecum
- d) Transverse colon
- e) Rectum

**8. In the distal part of the intestine (below the fistula) occur-blowing changes:**

- a) epithelial Hypertrophy
- b) Atrophy of the mucosa
- c) atrophy of the muscular layer of the intestine
- d) Compensatory hypertrophy of the muscle layer
- e) no Changes

**9. The Causes of unformed fistulas can be:**

- a) Crohn's Disease

- b) Injury
- c) Chronic calculous cholecystitis
- d) Diverticulitis

**10. Unformed intestinal fistulas may become complicated:**

- a) Diffuse peritonitis
- b) Pylephlebitis
- c) Septicemia
- d) Phlegmon of the anterior abdominal wall
- e) Nonspecific ulcerative colitis

Situational task 1

7 days after resection of the small intestine due to adhesive intestinal obstruction, the patient developed pain in the wound area. The dressing is plentifully wet with enteric contents. When dressing - the skin around the wound is edematous hyperemic, at the bottom of the wound are loops of the small intestine. In one of them there is a defect measuring 1.5x0.5 cm, through which intestinal contents are released. Two days later, the patient's condition worsened. Concerned by thirst, weakness, dizziness. Pulse 120 in min., B.P. 100/40 mm Hg There was a chair. Urination 2 times a day. The amount of intestinal discharge from the wound reaches 500 ml. 1 . What is the postoperative complication in the patient?

Situational task 2

Patient N., 60 years old, was operated on for a small intestine inversion. The postoperative period was twice complicated by bowel event. On the 20th day after surgery, a purulent intestinal discharge began to separate into the wound. The condition is serious. Depleted, 37% underweight. The skin throughout the anterior abdominal wall is macerated. On the front wall of the abdomen, in the midline, there is a purulent wound of 10x16 cm in size, the bottom of which is a bowel loop with 4 holes with a diameter of 1 to 3 cm. From the wound is a profuse purulent discharge with an admixture of bile. Body temperature 37.9 ° C. What is your diagnosis?

### Situational task 3

Patient T., 20 years old, 23 / VI 1944 was injured by a fragment of an artillery shell in the sacral region, penetrating into the abdominal cavity. After 9 hours, the median laparotomy: a fragment of the projection protruding from the wall of the rectum was removed. The abdominal cavity is sewn tightly. An incision was made in the left ileal region, and an unnatural anus was placed on top of the sigmoid colon. In the postoperative period three times the intestinal eventation through the median laparotomy incision. Then suppuration of sutures, divergence of a wound and necrosis of the walls of two intestinal loops soldered to the bottom of the wound. In the left iliac region there is a non-functioning, operatively imposed unnatural anus on the sigmoid colon. On the anterior abdominal wall in the midline, at the level of the navel, the wound is 20 x 15 cm. The bottom of the wound is lined with intestinal mucosa. In the upper wound there are two opening lumens of the intestinal loop. From one lumen, intestinal contents mixed with bile are continuously released; the second gap is in a collapsed state. In the lower corner of the wound there are also two intestinal lumens, in a collapsed state. All three collapsed intestinal lumens secrete only mucus. Through the anus, feces are not secreted. The skin around the wound is macerated in a radius of 10-12 cm. What is your diagnosis?

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

### **TOPIC: “DISORDERS OF THE OESOPHAGUS AND THE DIAPHRAGM.”**

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

1. The anatomy of the esophagus.
2. Research methods of the esophagus.
3. Etiology, pathogenesis of diseases of the esophagus.
4. Chemical burns and cicatricial strictures of the esophagus.

5. Treatment methods for burns and cicatricial strictures.
6. Varicose veins of the esophagus. Clinic, diagnostics. Treatment methods.
7. Reflux - esophagitis. Etiology, clinic, diagnosis, treatment.
8. Diverticulums of the esophagus. Etiology. Pathogenesis. The clinical picture. Treatment methods.
9. Chaliasia of the esophagus.
10. Violation of the motility of the esophagus.
11. Tumors of the esophagus. Classification. Etiology. Pathogenesis. The clinical picture. Treatment methods.

The anatomy of the diaphragm.

12. Diaphragmatic hernias (classification, etiology, clinic, diagnosis, treatment).
13. Hernias of the esophageal opening of the diaphragm (classification, etiology, clinic, diagnosis, treatment).
14. Relaxation of the diaphragm.
15. Damage to the diaphragm.
16. Inflammatory diseases.
17. Tumors and cysts of the diaphragm.
18. Research methods for diseases of the diaphragm.
19. Methods of surgical treatment.

## **II. Targets:**

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

1. Anatomy of the esophagus.
2. Research methods of the esophagus.
3. Etiology, pathogenesis of diseases of the esophagus.
4. Chemical burns and cicatricial strictures of the esophagus.
5. Treatment methods for burns and cicatricial strictures.



6. Varicose veins of the esophagus. Clinic, diagnostics. Treatment methods.
7. Reflux esophagitis. Etiology, clinic, diagnosis, treatment.
8. Diverticulums of the esophagus. Etiology. Pathogenesis. The clinical picture. Treatment methods.
9. Chhalasia of the esophagus.
10. Violation of the motility of the esophagus.
11. Tumors of the esophagus. Classification. Etiology. Pathogenesis. The clinical picture. Treatment methods.

**The student must be able to:**

- 1 Conduct a clinical examination of patients with diseases of the esophagus.
- 2 Substantiate a specific examination plan for patients with diseases of the esophagus.
- 3 Correctly interview patients with diseases of the esophagus.
- 4 Correctly interpret the results of clinical, laboratory, instrumental and other research methods.
- 5 Argue the choice of an operative method of treatment in each case.
- 6 Assist in operations for esophageal diseases.

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

1. List the operations used for hiatal hernia

2. List the symptoms of a hiatal hernia

3. List the symptoms of achalasia of the esophagus

4. Continue the phrase:

Achalasia of the cardia is characterized by a triad of symptoms: pain, dysphagia,  
..... .

5. Achalasia of the cardia is:

6. With a chemical burn of the esophagus in the acute stage, it is shown:

a) washing the mouth, esophagus, stomach with drinking water,

b) the appointment of drugs morphine, sedatives,

- c) drinking milk
- d) everything is right,
- e) everything is wrong.

7. With unsuccessful conservative treatment of fibrinous and ulcerative reflux esophagitis, resort to:

- a) resection of the stomach according to Billroth-I,
- b) esophagofundoplication,
- c) selective proximal vagotomy,
- g) stem vagotomy,
- e) resection of the stomach according to Billroth II.

8. The main method for the diagnosis of esophageal diverticulum is:

- a) esophagoscopy;
- b) contrast x-ray examination;
- c) ultrasound;
- g) radionuclide study;
- e) computed tomography.

9. The Zenker diverticulum of the esophagus is localized:

- a) in the field of bifurcation of the trachea;
- b) above the diaphragm;
- c) in the upper third of the esophagus;
- g) in the pharyngeal-esophageal passage;
- d) over the cardia.

10. The earliest manifestation of esophageal cancer is:

- a) dysphagia;
- b) pain behind the sternum and in the back;
- c) regurgitation of stagnant contents;
- d) increased salivation;
- e) weight loss.

## **Tests**

### **1. In an acute stage of the esophagus chemical burn the medical disposals are:**

1. Mouth wash, gastric and esophagus lavage with drinking water,
2. Morphine preparations and sedatives intake,
3. Milk intake.

Right variants:

- a) All the variants are correct
- b) None of the variants is correct

### **2. Which of the following methods are used in case of ineffective therapy of fibro ulcerative reflux-esophagitis:**

- a) Billroth`s operation 1
- b) Esophagofundoplication
- c) Selective proximal vagotomy
- d) Stem vagotomy
- e) Fundopexy

### **3. The basic method(s) of cardiospasm treatment is/are:**

- a) Geller`s cardioplasty
- b) Nessen`s operation
- c) Cardiodiosis
- d) Different methods of extramucous plastic
- e) Bouginage

### **4. The basic method of esophageal diverticulum diagnosing is:**

- a) Esophagoscopy
- b) Contrast esophagus X-ray examination
- c) Ultrasonic scanning
- d) Radioisotopic examination

e) Computed tomography

**5. Pharyngo-esophageal diverticulum is localized:**

- a) In tracheal bifurcation area
- b) Above the diaphragm
- c) In the upper third of the esophagus
- d) In the pharyngoesophageal entry
- e) Above the cardiac orifice

**6. For the mediastinum neoplasm diagnosing can be used such methods as:**

- a. Pneumothorax
- b. Computer tomography
- c. NMR tomography
- d. Bronchography

**7. In the cervical esophagus diverticulum the medical disposals are:**

- a. Diverticulum intussusception
- b. Enteral feeding
- c. Diverticulum extraction
- d. Endoscopic dissection in the constriction area below the diverticulum
- e. Everything mentioned above

**8. What method(s) is/are not used in the diagnosing of foreign bodies in the esophagus:**

- a. Complaints and anamnesis gathering
- b. Esophageal intubation
- c. Contrast esophagus X-ray examination
- d. Esophagoscopy
- e. Laryngoscopy

**9. What kind of bouginage is preferable in the patients with tortuous and multiple postburn esophageal strictures:**

- a. Through the mouth
- b. Under esophagosopic control
- c. Retrograde
- d. Radio-opaque and with the help of dilatator along a metallic conductor
- e. Through the gastrostomy

**10. What examinations should be prescribed in case of suspected cancer of esophagus:**

- 1. Esophagomanometry;

2. Esophagoscopy with biopsy;
3. Radiological examination of esophagus and stomach;
4. Esophagus electrokymography;
5. Computer tomography.

Right variants:

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

#### Situational task 1

Patient W., 45 years old, complains of delay in ingestion of solid food that appeared 4 months ago. By inspection: condition satisfactory. The skin of normal colors. Nutrition moderate. Peripheral lymph nodes is not enlarged. Respiratory, cardiovascular system-without pathologies. The abdomen is soft, painless. Liver on the edge the costal arch. When FGDs 27 cm from the incisors revealed Cup-shaped tumor of the esophageal mucosa on the back and side the walls are 4.5 cm in diameter. Stomach and duodenum without pathologies. Histologically -highly differentiated squamous cell carcinoma. When radioscopy of the esophagus revealed a niche with raised edges at the level of Th V-VI, the extent of the tumor 5 cm. with FLG, abdominal ultrasound, laparoscopy and computed tomography of the chest data for metastasis and the growth of the tumor in neighboring organs is not received.

1. What stage of the disease correspond to the data?
2. What treatment options can be offered to the patient?

#### Situational task 2

The patient, 32, went to the doctor complaining of "dull" pain in the epigastric region and behind the sternum, usually occurring after eating, as well as when working bent over. At the height of the pain attack, sometimes there is vomiting, a feeling of lack of air. Symptoms of the disease appeared 1/2 year ago, tend to progress. On examination: Skin pale pink, normal humidity. In the lungs, vesicular breathing is significantly weakened in the lower parts of the left lung. There, intestinal noises are heard indistinctly. NPV-18 in 1 minute. Pulse-76 in 1 minute, rhythmic. Blood PRESSURE-130/80 mmHg. her heart Tones are muted, rhythmic. On the anterior

abdominal wall there is a scar from a median laparotomy performed, according to the patient, a year ago about a knife wound penetrating into the abdominal cavity. The abdomen is not swollen, soft, painless on palpation in all departments. There are no symptoms of peritoneal irritation. Liver on the edge of the costal arch. The spleen is not palpable. Chair regular, decorated. Urination is free, painless.

Questions to the task of surgery

1. What kind Of disease you can think of?
2. Classification of the disease?
3. Variability of the clinical picture depending on the difference in etiopathogenesis?
4. What research methods will confirm your diagnosis?
5. What complications can develop?
6. Methods of treatment of this disease?

Situational task 3

Patient Sc., 18 years old, was admitted to a hospital with a clinic of high obstruction.

From the anamnesis it is known that a few days ago, fell while Cycling, this really hurt my stomach. The survey radiography in the projection of the lower field of the left lung revealed multiple areas of enlightenment and darkening with fluid levels.

Questions:

1. What pathology led to the appearance of intestinal obstruction?
2. What groups of symptoms are characteristic of this pathology?
3. What's in the lower left side of the chest?
4. In what intercostal space should be carried out operational access, assuming the beginning of the operation by thoracotomy?
5. Branches of which arteries of the diaphragm are most likely damaged?

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

**TOPIC: “DISEASES OF THE LIVER AND SPLEEN. DIFFERENTIAL  
DIAGNOSIS OF JAUNDICE.”**

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

1. The anatomy of the spleen.
2. Research methods of the spleen.
3. Etiology and pathogenesis of various diseases of the spleen.
4. Classifications of various diseases of the spleen.
5. Clinical, laboratory and instrumental methods for the diagnosis of diseases and injuries of the spleen.
6. Differential diagnosis of traumatic injuries of the spleen.
7. Methods of conservative and surgical treatment.

## **II. Targets:**

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

- 1 Surgical anatomy and physiology of the spleen.
- 2 Methods for the diagnosis of diseases and injuries of the spleen.
- 3 Modern ideas about the etiology and pathogenesis of spleen diseases.
- 4 Features of the clinical course of diseases and injuries of the spleen, depending on the form, stage, presence of complications.
- 5 Differential diagnosis of diseases and injuries of the spleen
- 6 Indications and types of surgical treatment of diseases of the spleen.

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

- 1 Conduct a clinical examination
- 2 patients with diseases and injuries of the spleen.
- 3 Substantiate a specific survey plan
- 4 patients with diseases and injuries of the spleen.
- 5 Correctly conduct a survey of patients with various diseases of the spleen.
- 6 Correctly interpret the results



7 clinical, laboratory, instrumental

8 and other examination methods.

9 Arguing the choice of the operational method

10 treatments in each case.

11 Assist in operations for diseases and injuries of the spleen.

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

1 Describe the anatomy of the spleen.

2 List the main methods for the diagnosis of diseases and injuries of the spleen.

3 Describe the classification of diseases and injuries of the spleen.

4 Create an algorithm for diagnostic search upon admission of a patient with suspected damage to the spleen as a result of blunt trauma to the abdomen.

5 Perform a differential diagnosis of spleen lesions in blood diseases.

6 Make a table for the differential diagnosis of cysts and abscesses of the spleen.

7 Describe the stages of the operation - splenectomy.

8 Compose 5 test tasks on the topic “Spleen Diseases” according to the following sample:

What diseases can lead to spleen infarction

- a) bacterial septic endocarditis
- b) mitral stenosis
- c) portal hypertension syndrome
- g) typhoid fever
- e) all of the above

9 Create 1 situational task on the topic “Diseases of the spleen” according to the following pattern:

Patient M., 54 years old, was admitted to the hospital with complaints of dull pain in the left hypochondrium, aggravated by movement, increasing body temperature to 39 ° C, tachycardia. With deep palpation, an enlarged spleen is determined, in the projection of the lower pole the symptom of fluctuation. Marked leukocytosis in the blood.

- 1) What disease does the patient have?
- 2) Your tactics in relation to this patient?

Answer: 1- spleen abscess, 2- to confirm the diagnosis, it is necessary to perform an ultrasound scan, after which the patient is shown surgical treatment in the amount of splenectomy, drainage of the abdominal cavity.

10. Make 1 assignment for independent work on the topic "Diseases of the spleen."

## Tests

**1. What is not characteristic of the jaundice caused by choledocholithiasis:**

- a) Urobilinuria
- b) High alkaline phosphatase
- c) Normal or low blood protein

- d) High blood bilirubin
- e) Normal or moderately high transaminase

**2. The stone transfer from the cholecyst to the choledoch doesn't cause:**

- a) Biliary colic
- b) Jaundice
- c) Purulent cholangitis
- d) Cholangiolithiasis
- e) Budd-Chiari syndrome

**3. The patient with jaundice caused by cholelithiasis needs:**

- a. Urgent surgery
- b. Conservative treatment
- c. Urgent surgery after the preoperative preparation
- d. Catheterization of the celiac arteries
- e. Plasmapheresis

**4. Courvoisier's symptom is not characteristic of:**

- a. Acute calculous cholecystitis
- b. Cancer of the head of pancreas
- c. Indurative pancreatitis
- d. Tumours of the large duodenal papilla
- e. Tumours of choledoch

**5. What symptoms are not characteristic of obstructive jaundice conditioned by cholangiolithiasis:**

- a. Hyperthermia
- b. High conjugated blood bilirubin
- c. High alkaline phosphatase
- d. Sharp increase in plasma transaminase level
- e. Absence of stercobilin in feces

**6. What methods are not used to detect the character and causes of jaundice:**

- a. Computer tomography
- b. Intravenous cholecystocholangiography
- c. Percutaneous transhepatic cholangiography
- d. X-ray endoscopic examination of pancreatobiliary zone
- e. Ultrasonic scanning

**7. Intermittent jaundice is called:**

- a. Impacted stone of the choledoch terminal portion
- b. Choledoch tumour
- c. Cystic duct stone
- d. Valvular duct stone
- e. Choledoch structure

**8. Courvoisier`s symptom is not observed in the cancer of:**

- a. Head of pancreas
- b. Supraduodenal part of the choledoch
- c. Retroduodenal part the common bile duct
- d. Large duodenal papilla
- e. Cholecyst

**9. What combination of clinical symptoms cooresponds to Courvoisier`s symptom:**

- a. Enlarge painless cholecyst, jaundice
- b. Enlarged liver, ascites, anteroventral vein dilatation
- c. Jaundice, palpable painful cholecyst, local peritoneal phenomena
- d. Absence of stool, cramp-like pain, palpable lump in the abdominal cavity
- e. Evident jaundice, tuberos liver, cachexia

**10. The combination of symptoms characteristic of cholangitis is:**

- 1. Jaundice;

2. Shiver;
3. Anaemia;
4. Leukocytosis;
5. Ascites.

Right variants:

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

#### Situational task 1

The 41-year-old patient entered the clinic complaining of vomiting unchanged blood, dizziness, weakness, suffered malaria 10 years ago. In the last 3 years – periodic pain in the right hypochondrium. Objectively: the state of moderate severity. Pallor of the skin and mucous membranes. Slight jaundice of the sclera, vascular asterisks on the skin. Pulse 110 beats/min, rhythmic. Blood PRESSURE 90/50 mmHg. Tongue is dry, overlaid with a brown coating. The abdomen is enlarged, flattened. The liver protrudes from under the costal arch, dense with a pointed edge. The spleen performs on Percussion is determined 8 see ascites. In the General analysis of blood: erythrocytes  $2,3 \cdot 10^{12}/l$ , hemoglobin 72 g/l, hematocrit 0,29.

1. Your preliminary diagnosis?
2. What diseases should be differentiated?
3. What special and instrumental studies are needed to make a final diagnosis, the expected results.
4. Specify the treatment tactics.
5. Prescribe treatment.
6. List the operative methods of treatment in case of failure of conservative therapy.

### Situational task 2

Patient C, 62 years old, taken by ambulance to the emergency Department. On the street suddenly emerged a sharp pain in the left hypochondrium, briefly has lost consciousness. Blood PRESSURE 90/60 mmHg. article Pulse 100 beats per min., weak filling. The abdomen is soft, moderately painful along the left lateral canal, there is also a dulling of the percussion sound and questionable symptoms of peritoneal irritation. Additionally, the patient reported that about 2 weeks ago she was injured, hit her left side on a chair in the tram, and then noted moderate pain in the left hypochondrium.

1. Make a preliminary diagnosis.
2. With what diseases is it necessary to differentiate this disease?
3. What additional instrumental methods of research will help to make a final diagnosis? Expected result.
4. What is the therapeutic tactics of this patient?
5. What are the principles of treatment in the postoperative period?

### Situational task 3

A patient of 38 years was taken to the surgical Department with complaints of vomiting scarlet blood, weakness, dizziness. From anamnesis established-about 7 years ago suffered acute pancreatitis. On examination, the skin and visible mucous membranes are pale. The vesicular breathing, heart sounds are muffled. Pulse 112



beats per minute, rhythmic. Blood PRESSURE 110/60 mmHg. my Tongue is wet. The abdomen is soft, the spleen is palpated, protruding beyond the edge of the costal arch at 6 cm. splenomegaly is determined By ultrasound. The liver is not enlarged, its tissue is without features. Portal vein is within normal limits. Pancreatic fibrosis is determined, calcifications in its tissue, the splenic vein is not clearly visualized. In the clinical analysis of blood: er.  $2.8 \cdot 10^{12} / l.$ , hemoglobin 78 g / l, hematocrit 0.32.

1. What preliminary diagnosis is most likely?
2. What diseases should be carried out differential diagnosis?
3. What instrumental methods can help in the final diagnosis and expected results?
4. Determine the degree of blood loss and therapeutic tactics in various States of hemostasis.
5. Specify the main components of preoperative preparation and the amount of surgery for various States of hemostasis.

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

### **TOPIC: "DISEASES OF THE OPERATED STOMACH."**

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

1. The definition of "diseases of the operated stomach".
2. Topographic and anatomical relationships of organs after various types of surgical interventions on the stomach (gastroenterostomy, resection of the stomach in modifications of the first and second Billroth methods, vagotomy in

combination with pyloroplasty according to Heineck-Mikulich and Zhabuley, selective proximal vagotomy).

3. Classification of diseases of the operated stomach.
4. The pathogenesis of certain diseases of the operated stomach (dumping syndrome, afferent loop syndrome, peptic ulcer anastomosis).
5. Clinical symptomatology of diseases of the operated stomach.
6. The main methods of surgical and conservative treatment of certain diseases of the operated stomach.

## **II. Targets:**

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

1. The definition of "diseases of the operated stomach".
2. Topographic and anatomical relationships of organs after various types of surgical interventions on the stomach (gastroenterostomy, stomach resection in modifications of the first and second Billroth methods, vagotomy in combination with pyloroplasty according to Heineck-Mikulich and Zhabuley, selective proximal vagotomy).
3. Classification of diseases of the operated stomach.
4. The pathogenesis of certain diseases of the operated stomach (dumping syndrome, afferent loop syndrome, peptic ulcer anastomosis).
5. Clinical symptomatology of diseases of the operated stomach.
6. The main methods of surgical and conservative treatment of certain diseases of the operated stomach.

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

- 1 Formulate complaints, collect an anamnesis and conduct an objective examination of the patient who underwent surgery on the stomach.
- 2 Based on the assessment of the obtained clinical data, make a preliminary diagnosis and outline a plan for targeted examination of the patient.

3 Based on the assessment of patient complaints, medical history, objective clinical data, laboratory and special research methods, formulate and substantiate the clinical diagnosis.

4 Put indications for surgical treatment and determine the optimal variant of it. Define the principles of a conservative treatment method.

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

1. Make a diagram of the physiological relationship between the stomach, duodenum, liver, pancreas.

2. Schedule resections of the stomach

3. Scheme reconstructive surgery on the stomach.

4. A 39-year-old patient was operated on for a perforated stenosing ulcer of the 12th colon — a gastrectomy was performed. 6 months after surgery on the street, the patient felt a “dagger pain” in his stomach, forcing the patient to crouch, the patient was covered with cold sweat. An hour later, in the clinic with a panoramic abdominal fluoroscopy, gas was found under the right dome of the diaphragm.

#### CLINIC OF DISEASES AND RADIOSCOPY OF THE ABDOMINAL CAVITY TEST ABOUT THE PRESENCE OF PATIENT PERFORATION

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5. THE CONDITION FOR WHICH A CHARACTERISTIC IS CONSTANT PHYSICAL AND NERVOUS-MENTAL DEPLETION AS A RESULT OF DIGESTION OF THE DIGESTIVE PROCESSES AND THE SUCTION OF FOOD IS CALLED

6. COMPLAINTS OF LACK OF APPETIT, Nausea, Vomiting, Vomiting, rumbling, UNSTABLE CHAIR RELATING TO THE GROUP

7. A patient, 36 years old, was admitted to the hospital with complaints of pain in the epigastrium, belching with a small amount (up to 100 ml) of bile, 1-2 times a

month. These symptoms began to occur after eating, five months after undergoing a resection of the stomach. The patient describes his feelings in this way: “After eating, heaviness appears in the epigastric region, then bloating and pain. Then, in the right half, everything fails somewhere with a rumbling, burping occurs with bile.”

## CLINIC OF DISEASE TESTIMONIES AVAILABILITY IN A PATIENT SYNDROME \_\_\_\_\_

### Tests

#### 1. Diseases of the operated stomach include all but:

- a) Adductor loop Syndrome
- b) Hypoglycemic syndrome
- c) Anastomosis
- d) Failure of gastroduodenal anastomosis
- e) Dumping syndrome

#### 2. Diseases of the operated stomach of organic Genesis include all, except:

- a) adductor loop syndrome
- b) dumping syndrome
- c) Barrett's esophagus
- d) stomach stump cancer

#### 3. For dumping syndrome, everything is true except:

- a) it is a complex of vascular and neurovegetative and intestinal disorders
- b) occurs 3-4 hours after eating
- c) occurs as a rule when taking dairy and carbohydrate foods
- d) it is caused by violation of humoral regulation of digestion

e) due to violation of osmotic pressure in the intestine

**4. For the clinic dumping syndrome is characterized by all but:**

- a) weakness, dizziness after eating;
- b) feeling of heat, facial flushing;
- c) vomiting.
- d) diarrhea.
- e) weight loss

**5. For the 2nd degree of dumping syndrome is characterized by everything except:**

- a) attack lasts 30-40 minutes
- b) chair instability
- c) quickening of the pulse by 10-15 beats
- d) body weight deficit up to 10 kg
- e) duration 1.5-2 hours

**6. The principles of diet therapy for adductor loop syndrome are all, except:**

- a) Frequent fractional meals in small portions (5-7 times a day); take food should be slow
- b) Limit sweets (sugar, honey, jam), very hot and very cold dishes, liquid sweet milk porridge, etc.
- c) Wash down food with as much liquid as possible to dilute it
- d) Inadmissibility of receiving liquid together with other dishes
- e) Lie down for 15-20 minutes after eating, especially after lunch

**7. Complete gastrectomy is applicable in:**

- a. Early dumping syndrome
- b. Late dumping syndrome
- c. relapse of peptic ulcer caused by the syndrome Zollinger-Ellison
- d. In Alkaline reflux gastritis
- e. Postvagotomy diarrhea

**8. Irrigoscopy is of crucial importance in the diagnosis of-stick:**

- a. Postvagotomy gastrostasis
- b. Gastro-thin-colonic fistula
- c. Recurrent peptic ulcer of gastro-duodenal anastomosis
- d. Dumping syndrome
- e. All listed above

**9. The frequency of recurrence of peptic ulcer depends primarily on:**

- a. patient's Age
- b. Duration of illness
- c. Localization and size of the ulcer
- d. Complications of peptic ulcer disease present at the time primary operation
- e. type of primary operation

**10. For early dumping syndrome, which occurs shortly after eating, characterized by:**

- a) drowsiness and weakness
- b) nausea, bloating, diarrhea, cramping pains, rumbling
- c) tachycardia
- d) increased blood pressure
- e) all of the above

Situational task 1

Man, Thirty nine years please refer to surgeon with complaints about the constant, growing, stupid, bursting pain in the right hypochondrium and epigastrium, with irradiation in the back by type «hoop's», growing after reception's fatty, dairy foods. Also bothers vomiting 1 times in 1-2 days, after what

pain significantly reduced. In the vomit notes stagnant food masses and up to 500 ml biles. Constantly worried about the bitter taste in mouth, weight loss on 7 kg., weakness, malaise. From anamnesis it is remarkable that 4 years ago on the altitude of ulcer bleeding operated – done resection stomach's. First the described complaints appeared 3 years ago. Was treated independently-took But- Silos with a temporary positive effect. However, over time complaints progressed, there was a fear of eating, which forced to seek honey. help. When inspecting a state of moderate severity. Skin and mucous membranes - pale, subicteric, skin turgor reduced. Peripheral lymph nodes are not changed. BMI-19 Breathing vesicular, no wheezing. BPD-16 in min. Pulse – 95 in min. AD-120 and 70 mmHg. Abdomen is soft, moderately painful in epigastrium and right hypochondrium, where palpated cylindrical shape education 4\*6 cm. tugoelasticheskoy consistency, smooth, with surrounding tissues are not connected, when succussion over the area of which the noise of splashing is heard; there is no tension in the abdominal muscles. S-m Shchetkin-Blumberg is not defined. C-m bashing is negative bilaterally. Chair, diuresis-without features. In the clinical analysis of blood – er Twelve -  $2.16 \cdot 10$  the macrocytosis, the CPU is 1.6, leukocytes – Nine  $10 \cdot 10$ , hypersegmented neutrophils. In the biochemical analysis of blood: bilirubin-total-45 mmol / l, direct-27 mmol/ l, indirect -18 mmol/l, blood amylase-56 mg. urine Diastase (according to Wohlgemuth) - 224 (norm-16-64).

1. Your preliminary diagnosis. Justify it. Explain the pathogenesis.
2. What additional, special methods researches shown the patient?
3. Explain the reason for the laboratory changes.
4. Describe the patient's radiograph attached to the problem.
5. Assess the severity of the disease.
6. Your final diagnosis. Make a differential diagnosis your diagnosis with pancreatitis, cholecystitis, disease the head of the pancreas (S-m Courvoisier?).
7. What treatment is indicated for this patient. Describe the main methods surgical treatment



## Situational task 2

A man, 28 years turned to the surgeon with complaints of dizziness, fainting condition 10-15 minutes after eating, forcing the patient to occupy horizontal position, unpleasant sensation in the epigastric region, diarrhea 2-3 times a day especially after dairy food, weight loss of 12 kg for 3 months. From anamnesis it is noteworthy that 6 months ago he was operated on for scar-ulcer stenosis of the output part of the stomach-gastric resection is performed. First the described complaints appeared 1 month after the operation. For medical he didn't ask for help. However, over time the complaints progressed, appeared expressed weakness, dizziness, impossibility to perform daily work, which forced to apply for honey. help. When inspecting a state of moderate severity. Skin and mucous membranes - pale, skin turgor reduced. The patient is asthenic, emaciated. Peripheral lymph nodes are not altered. Breathing vesicular, no wheezing. BPD-16 in min. Pulse - 95 in min. AD-120 and 70 mmHg.my Stomach is soft, painless. S-m Shchetkina- Blumberg is not defined. C-m bashing is negative bilaterally. Chair by type of steatorrhea. In the clinical analysis of blood – er Twelve -  $3.16 \cdot 10^9$  , microcytosis, poikilocytosis, CP-0.6, leukocytes – Nine  $3 \cdot 10^9$  . In the biochemical analysis of blood: bilirubin – total-25 mmol / l, direct-10 mmol/ l, indirect-15 mmol/l, total protein – 45 g/l.

1. Your preliminary diagnosis. Justify it. Explain the pathogenesis.
2. What additional, special methods researches shown the patient?
3. Explain the reason for the laboratory changes.
4. Assess the severity of the disease.
5. What treatment is indicated for this patient. Describe the main methods surgical treatment.

### Situational task 3

After 3 months after resection of 2/3 of the stomach by Billroth II in the modification of the Hofmeister-Finsterer for stomach ulcers, the patient complained of weakness occurring 15 minutes after eating, accompanied by a feeling of heat in the upper half of the trunk, sharp sweating. After a while he begins to feel dizzy, tinnitus, palpitations, trembling limbs, then joins the feeling of fatigue, drowsiness, loose stools, polyuria. No abdominal pain. Attacks are more pronounced when eating foods rich in carbohydrates. After surgery, the patient does not add weight. The body weight deficit is 8 kg.

#### Questions to the task of surgery

1. Your diagnosis? Classification of this pathology?
2. Pathogenesis of the disease?
3. What examination does this patient need?
4. What is the therapeutic tactics in the development of this pathology?
5. Indications for surgical treatment and the main types of operations?
6. How to prevent the development of this disease?

**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. Plain 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) diastasia
- 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  $1 \mu\text{l}$ , 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  $123 \times 63$ , the wall is 4 mm, a fixed calculus in the neck region is  $23 \times 18$  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?