DEPARTMENT OF FACULTY SURGERY

                         OF THE MEDICAL FACULTY

 GUIDELINES

for 4th-year students to laboratory work in the specialty "Medicine", the discipline "Faculty Surgery, Urology", the module "Faculty Surgery"

 г.ульяновск 2017г

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for 4th-year students to laboratory work in the specialty "Medicine", the discipline "Faculty Surgery, Urology", the module "Faculty Surgery"

 Section 1.

 Thyroid gland. Diseases of the thyroid gland.

Lesson # 1. Topic 1.1
 " ACQUAINTANCE with the Department. OCCUPATION.
 ENDEMIC, SPORADICAL FEET. DIFFUSE TOXIC GOITER.
 TIROIDITIS AND STROMITES "

**1. DURATION OF THE SESSION in academic hours 4 hours
2. THE TOPIC:**Diseases of the thyroid gland occupy the first place among diseases of the endocrine system. The most clinically significant among them are the following: 1. Endemic and sporadic goiter; 2. Diffuse toxic goiter (synonyms-thyrotoxicosis, Basedov's disease, Graves' disease and others); 3. Acute and chronic thyroiditis; 4. Thyroid cancer.
3**. PURPOSE AND OBJECTIVES OF THE SESSION**:

* ACQUAINTANCE with the base of the Department of Faculty Surgery with the surgical and thoracic department of the Department of Public Health. Study of thyroid diseases and especially those that require surgical treatment; methods of examination used to identify the pathological process in the thyroid gland, as well as methods of treating thyroid diseases and indications for their use.
* Students should know the anatomical structure and basic physiological processes that occur in the thyroid gland, the method of examining the patient by organs and systems.
* To be able to analyze the main pathophysiological processes and pathoanatomical changes that occur in the thyroid gland during its diseases; to analyze additional methods of research; to carry out a differential diagnosis between certain diseases of the thyroid gland.

**The list of practical training tasks that must be performed in the lesson**: - take the technique of physical examination of a patient with diseases of gland diseases;
 - to conduct a curation of a patient with thyroid gland diseases;
 - to carry out differential diagnostics of diseases of the thyroid gland;

**4.EQUIPMENT to lesson** : Anatomical atlas with a thyroid gland, figures and a table on the topic of thyroid disease (6 pcs).

**5. CONTENTS OF THE TOPIC**: Diseases of the thyroid gland occupy the first place among diseases of the endocrine system. The most clinically significant among them are the following: 1. Endemic and sporadic goiter; 2. Diffuse toxic goiter (synonyms-thyrotoxicosis, Basedov's disease, Graves disease and others); 3. Acute and chronic thyroiditis; 4. Thyroid cancer.

Anatomico-physiological information about the thyroid gland. Morphological structure of the thyroid gland in normal and with its various diseases. Synthesis of thyroid hormones and regulation of thyroid function. Classification of diseases. The role and place of research methods for patients - physical examination, ultrasound, radioisotope scanning, determination of the level of hormones (T3, T4 and TSH) and antibodies in blood serum, puncture biopsy and cytological examination, histological examination. Goiter. Prevalence. Classification by etiology, by the degree of enlargement of the thyroid gland, by form, by localization, by functional state of the thyroid gland, histological structure. Clinical and morphological concepts of goiter. Etiology and pathogenesis of goiter. Endemic goitre and iodine prophylaxis. Clinic, diagnosis and treatment (conservative, operative) of goiter. Indications for surgery. The choice of the scope of surgical intervention in patients with various forms of goiter. Modern principles of treatment of patients with nodular goiter. Replacement postoperative hormone therapy. Recurrent goiter. **Thyrotoxicosis**. Definition and causes of thyrotoxicosis. Classification by severity (international, by Melk ).
Pathophysiological essence of the changes developing in the body with thyrotoxicosis. Diffuse toxic goiter and thyrotoxic adenoma of the thyroid gland. Clinic and diagnostics. Methods of treatment - conservative, radioiodine therapy, operative. Indications and contraindications to various methods of treatment. Principles and methods of preoperative preparation. Principles and methods of surgical treatment of goiter. Intraoperative and postoperative complications, their diagnosis and correction.

**Thyroiditis and strumitis** . Thyroiditis de Kervena, Hashimoto, Riedel. Etiology and pathogenesis, clinic, differential diagnosis. Hypothyroidism. Medication and surgical treatment, indications for surgery. Acute purulent thyroiditis.

6. **BASIC KNOWLEDGE**, SKILLS, Experiences,

REQUIRED FOR STUDYING THE Topic:

|  |  |  |
| --- | --- | --- |
|  Previously studied disciplines |  Know | Be able to |
| 1. Previously studied disciplines |  |  |
| Anatomy | Topography of the neck. Anatomical structure of the thyroid gland, interrelations with other organs. Topographical anatomy of the back nerve and parathyroid glands. | To determine the topographic guidelines of the thyroid gland. |
| Histology | Histological structure of the thyroid gland. Histological structure of parathyroid glands. | To evaluate the results of histological examination of the nodes |
| Normal physiology | Function of thyroid gland, physiological functions of thyroid hormones, hormonal and nervous regulation of thyroid function. The state of the basic metabolism. | To assess the status of thyroid function and basic metabolism. |
| Pathological physiology | Pathogenesis of thyroid dysfunction. | To evaluate the results of thyroid function research. |
| Pathological anatomy | Histological forms of tumors and cysts of the thyroid gland, differential diagnosis between cancer, acute and subacute thyroiditis and thyroid adenoma. | To evaluate the results of pathohistological study of thyroid neoplasms. |
| Internal diseases | Examination of the neck and glands of internal secretion. Clinical manifestations and methods of diagnosing thyroid diseases. | Conduct a physical examination of patients with thyroid disease |
| Endocrinology Clinical | signs of thyrotoxicosis, hypothyroidism. Conservative methods of treatment of thyrotoxicosis and hypothyroidism. | Prescribe conservative treatment to a patient with thyrotoxicosis and hypothyroidism. |

**7. Tasks for independent work during the preparation for the lesson:**

7.1. To practical work in order to increase its effectiveness, students should work out the following study-target questions and know:

* Anatomy and physiology of the thyroid gland (the structure of the thyroid gland and its location, blood supply, innervation and the pathway of the lymph drainage, thyroid hormones, the regulation of their formation, the point of application, and the role for the organism. Classification of thyroid diseases:

a) The Sofia nomenclature of 1971;

 b) the degree of enlargement of the thyroid gland;

 c) classification of diseases depending on the functional state of the thyroid gland;

d) stages of thyrotoxicosis (according to the clinical course), according to Melk.

* The etiology and pathogenesis of thyroid diseases.
* Clinical manifestations of the main diseases of the thyroid gland (enlargement of the thyroid gland, exophthalmos, symptoms of Gref, Shtelwag, Mobius, Delrymple, Melekhov, Rosenbach, Koher, Joffroy, Charcot-Marie, metabolic disorder, tachycardia, throat heart, pretybial myxedema).
* Laboratory and instrumental methods of thyroid gland research.

 a) research of iodine-absorption function;

b) scanning;

 c) X-ray studies;

d) study of basal metabolism;

e) studies of the level of T 3, T 4 and TSH in the blood.

* Features of preoperative preparation and indications for surgical treatment.
* Preventive measures in endemic foci and peculiarities of dispensary observation of a patient with thyroid gland diseases.

**7.2. Theoretical questions to the lesson:**

1. How does the thyroid gland correlate with the fascia of the neck?

2. Where does the recurrent nerve pass?

 3. Localization of parathyroid glands?

4. Which vessels nourish the thyroid gland?

 5. What hormones produce the thyroid?

 6. What hormones affect the function of the thyroid gland?

 7. Causes of thyroid gland adenoma.

8. How is the degree of thyroid enlargement determined ?.

9. Instrumental methods of examination of the thyroid gland?

10. Factors contributing to the occurrence of thyrotoxicosis.

11. Forms of thyrotoxicosis.

12. Early signs of thyrotoxicosis.

13. Symptoms of nervous system disorders in thyrotoxicosis.

14. How does thyrotoxicosis affect the cardiovascular system?

15. Preoperative preparation of patients with thyrotoxicosis.

16. Indications for surgery and types of operations for thyrotoxic goiter.

17. Eye symptoms in thyrotoxic goiter.

18.  Hashimoto's thyroiditis , the causes of autoimmune thyroiditis.

 19. Strumitis

20. Methods of differential diagnosis of adenoma and adenocarcinomas of the thyroid gland.

8. multiple choice

1. Indication for the operation in nodular goiter is (choose the wrong answer):

a) compression of the trachea and esophagus;

 b) development of thyrotoxicosis;

 c) risk of developing thyroiditis;

d) the possibility of malignancy;

e) cosmetic defect.

2. The appearance of goiter in a significant number of people living in one biogeochemical area will be determined by you as:

 a) epidemic goiter;

 b) sporadic goiter;

c) strumite;

d) endemic goiter;

 e) mass thyrotoxicosis.

3. Determine the optimal treatment for nodular goiter:

 a) conservative treatment with thyroxine;

b) excision of the node with urgent histological examination;

 c) perform enucleation;

d) produce a subtotal stromectomy;

 e) hemistrumectomy with resection of the thyroid isthmus is shown.

 4. The clinical sign of a retrosternal goiter is:

 a) deviation of the trachea on the roentgenogram;

b) enlargement of the veins of the neck;

 c) shortness of breath;

 d) puffiness of the face;

 e) everything named.

5. Thyroid surgery may occur (choose the wrong answer):

a) bleeding;

b) air embolism;

c) fat embolism;

d) damage to the trachea.

 6. The development of goiter can result (choose the wrong answer):

a) iodine deficiency in food;

 b) increased secretion of thyroid stimulating hormone;

 c) the stimulating effect of the adrenal glands;

d) use of antithyroid drugs;

 e) physical and mental stress.

7. The most common complication of subtotal stromectomy is:

 a) damage to the recurrent nerve;

 b) relapse of thyrotoxicosis;

 c) tetany;

d) hypothyroidism;

e) progressive exophthalmos.

 8. Determine indications for surgical treatment of thyroid diseases:

1) the cachectic stage of thyrotoxic goitre;

 2) nodal euthyroid goiter;

3) visceropathic stage of thyrotoxic goiter;

4) diffuse euthyroid goiter of IV degree,

5) neurotic stage of diffuse thyrotoxic goiter.

 Choose the correct combination of answers:

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

 9. Symptoms of malignant exophthalmos, combined with thyrotoxicosis, include:

 a) violation of sleep;

6) pathological muscle weakness;

 c) photophobia;

 d) pathological thirst;

e) diabetes insipidus.

10. Based on disease is characterized by the presence of:

1) goiter;

 2) tachycardia;

 3) exophthalmos;

4) bradycardia;

 5) diastolic noise at the apex of the heart

. Choose the correct combination of answers:

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

11. The patient had seizures after operation of a strumectomy, a symptom of Chvostek, a symptom of Trousseau.

What is the complication of the patient?

 a) hypothyroidism;

 b) thyrotoxic crisis;

 c) trauma of the laryngeal nerves;

 d) hypoparathyroidism;

 e) residual phenomena of thyrotoxicosis.

12. The visceropathic stage of thyrotoxic goiter is characterized by:

 1) vegetoneurosis;

2) myocardial dystrophy;

 3) myxedema;

4) hypokorticism;

5) hypercholesterolemia.

Choose the correct combination of answers:

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

13. Signs of the thyrotoxic heart:

 1) tachycardia, arrhythmia;

2) widening the boundaries of the heart;

3) high systolic pressure;

 4) diastolic murmur on the apex of the heart;

5) lymphocytosis.

 Choose the correct combination of answers:

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

14. For a thyrotoxic crisis it is characteristic (choose the wrong answer):

a) tachycardia;

b) decrease in pulse blood pressure;

 c) loss of consciousness;

 d) excitation;

e) hyperthermia.

15. Symptoms of thyrotoxicosis include:

a) symptoms of Graefe and Moebius;

b) tachycardia;

c) exophthalmos;

 d) tremor of extremities;

e) all the symptoms indicated.

**9. TASKS:**

1. patient of 30 years at inspection the diffusive or diffuse augmentation of a thyroid gland III st. Pulse - 84 per minute. , Blood pressure - 120 / 70mm. gt; Art. With ultrasound - the thyroid gland is diffusely uniformly enlarged in size, the nodes are not detected. The level of hormones in the blood is slightly elevated. Your diagnosis, treatment tactics?

2. patient of 45 years within 5 years of age neuropathologists ascertained vegeto-vascular dystonia. When examined by an endocrinologist, a uniform increase in the thyroid gland of III st. , Palpation in the right and left lobes revealed nodes. Tachycardia - 94 in min. , Blood pressure - 150/80 mm. gt; Art. Dermographism. With ultrasound of the thyroid gland - a significant compaction, nodes in lobes. What is the preliminary diagnosis? With what it is necessary to carry out differential diagnostics?

3. A 32-year-old patient complains of irritability, tearfulness, weight loss of 20 kg. She is sick for a year. Upon examination, the anterior surface of the neck is determined, the thyroid gland is diffusely enlarged, a dense consistency, positive symptoms of Moebius and Graefe. Pulse 120 per minute. What kind of diagnosis do you make? What treatment is indicated for the patient?

 4. patient of 43 years in the last 5 months. began to disturb tearfulness, fatigue, progressive weight loss. The examination showed an increase in the thyroid gland, palpation of a densely elastic consistency, and contains foci of sharp compaction. When scanning the gland - its increase and areas of increased accumulation of radiopharmaceutical. Your diagnosis? What kind of treatment should a patient recommend?

5. patient of 45 years at inspection the dense site in the sizes 3х4 sm in the bottom pole of the right share of a thyroid gland is found out. With radiometry of the thyroid gland revealed that after 6 hours after receiving radioactive iodine 30% of the drug was absorbed by the thyroid gland. What are the results of thyroid radiometry? What treatment should take?

 6. Patient 42 years old for a diffuse thyrotoxic goiter performed an operation - subtotal resection of the thyroid gland. A day after the operation, the patient became restless, paresthesia appeared in the area of ​​the fingertips, a feeling of crawling, a twitching of the facial muscles, a symptom of the "hand of an obstetrician". What complication should think of? How to help the patient?

7. A 43-year-old patient has an increase in the left lobe of the thyroid gland. With scintigraphy in the left lobe, a site with a sharp decrease in the accumulation of radioactive iodine was detected. Your diagnosis? How should I treat a patient?

8. Patient 31 years of age subtotal resection of the thyroid gland for diffuse thyrotoxic goiter. After 8 hours after the operation, the patient had nausea, indomitable vomiting, agitation, fear, an increase in temperature to 40 °. Pulse 130 per minute, arrhythmic. What complication developed in the patient? What should do?

9. A 20-year-old woman consulted a doctor due to the presence of swelling on the front surface of her neck. There are no other complaints. The thyroid gland is moderately diffusely enlarged, soft, mobile, protein-bound iodine, thyroxine and absorption of radioactive iodine are normal, antithyroid antibodies are not found. Your diagnosis? How to treat a patient?

10. A 22-year-old woman complains of hair loss, nervousness, sweating. Despite the constant hunger and good appetite, she lost a lot of weight. In addition, she does not concentrate her attention well. Your preliminary diagnosis?

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 Session 2

 Section 2. Diseases of the respiratory system

 Topic № 2.1 "Nonspecific diseases of the lungs"

Methodical development was made by: Associate Professor DA Melkiy

 1. **DURATION OF THE SESSION in academic** 4 hours

2. **TOPICALITY OF THE TOPIC:**

 Nonspecific lung diseases constitute a large group of pathological processes that develop in the chest. They are diverse for reasons of origin, morphological changes, clinical manifestations; are complications of inflammatory processes of the lungs, as well as injuries. The pathology of the lungs is quite common, and the results of treatment sometimes remain unsatisfactory, which makes this problem urgent.

 **3. PURPOSE AND OBJECTIVES OF THE SESSION**

* Studying the basics of diagnosis and treatment of patients with lung diseases.
* To know.

1. Surgical anatomy of the lungs.

2. Physiology and pathology of respiratory organs.

 3. Classification of lung diseases.

 4. Radiographic anatomy of the lungs.

5. Modern views on the etiology and pathogenesis of nonspecific lung diseases

6. Clinical picture of suppurative lung diseases

 7. Clinical and instrumental methods of examination of patients.

8.Taktiku management of patients with suppurative diseases of the lungs.

 9. Principles of conservative treatment of patients with lung diseases

 10. Types of surgical interventions in purulent lung diseases

 11. Preoperative preparation and postoperative management of patients after operations on the lungs.

 12. Complications after surgery, diagnosis and treatment.

* be able to:

1. Conduct a clinical examination of a patient with lung damage.

 2. Evaluate the radiographic semiotics of the disease.

3. To determine the degree of functional disorders of the external respiration system.

 4. Formulate a clinical diagnosis indicating morphological and functional disorders.

5. Assign optimal treatment to the patient.

* Acquire practical skills:
1. learn the method of anamnesis in patients with acute purulent lung diseases (highlighting the main and secondary, collecting the history of the disease and life, identifying objective data on the systems, separately identifying the local status data);  obtain skills in the diagnosis of purulent lung diseases;
2. conduct differential diagnosis of acute purulent lung diseases;
3. draw up a treatment plan for patients with acute purulent lung diseases (indications and contraindications to surgical treatment, determine the estimated amount of surgical intervention).
4. To be able to report in the process of collective analysis of patients, according to the scheme of the medical history, all the data obtained.

4. **EQUIPMENT OF THE SESSION:**

 Anatomical atlas, educational film, slides. Radiographs.

**5. CONTENTS OF THE TOPIC**:

Abscess, gangrene, cysts, bronchiectatic disease; emphysema of the lungs; atelectasis, aspiration. Surgical anatomy of the lungs and pleura. Methods of studying patients with lung and pleural diseases (fluoroscopy and radiography, computer tomography, angiopulmonography, scintigraphy, bronchography, rigid bronchoscopy , bronchial catheterization, thoracoscopy, pleurography, cytological examination of sputum and pleural fluid). Abscess and gangrene of the lung. Acute lung abscess. Single and multiple abscesses, pathogenesis, clinic of acute abscess, diagnosis, differential diagnosis. Conservative methods of treatment. Complications. Indications for surgery in the acute period and types of surgical interventions. Prognosis and outcomes of acute abscess and gangrene of the lung. Chronic abscess of the lung. The causes of the transition of acute abscess to chronic. Surgery. Results of treatment. Bronchoectatic disease. Primary and secondary bronchiectasis. Etiology, pathogenesis. Clinic of bronchoectatic disease. Diagnosis, differential diagnosis. Indications for surgical treatment. Methods of preoperative preparation. Types of operations. Cysts of the lung. Classification. Etiology, pathogenesis. Clinic, diagnosis, differential diagnosis. Indications for surgical treatment. Types of operations.

6. **BASIC KNOWLEDGE**, SKILLS, Experiences,

REQUIRED FOR STUDYING THE Topic:

|  |  |  |
| --- | --- | --- |
|  Previously studied disciplines |  Know | Be able to |
| Anatomy | Topography of the chest Anatomical structure of the lungs, relationships with other organs. Topographic anatomy of the chest vessels.. | Analyze the knowledge gained. |
| Normal physiologyBiochemistryPathological physiologyPropaedeutics of internal diseases | Physiological processes that occur in the lungs and thorax.The pathology of the processes of exchange in the lungs and pleura.The etiology and pathogenesis of disturbances in ventilation processesScheme examination of the patient. Symptomatology of lung diseases | To draw up a scheme of additional methods of research, biochemical testsAnalyze the causes and consequences of violations of metabolic processes in the lungs.Conduct a postin- dromous diagnosis of the disease. To conduct clinical, laboratory, instrumental diagnostics of the basic nosological units.Carry out differential diagnostics |
| Operative surgery | Surgical approaches and techniques for performing operations on the thorax. | choose surgical access in case of typical and complicated forms of lung diseases. Determine the indications for the method of operation |

**7. REQUIREMENTS FOR INDEPENDENT WORK DURING TRAINING:**

 7.1. TO PRACTICAL ACTIVITY TO IMPROVE ITS EFFECTIVENESS, STUDENTS SHOULD WORK THE FOLLOWING EDUCATIONAL QUESTIONS AND KNOW:

1. Anatomy, physiology of the chest, pleural cavity, lungs.

2. Physical methods of examination of patients with lung pathology.

3. X-ray picture of the chest and its organs is normal.

 4. Methods of examination of the chest, including additional

5. Laboratory indicators of blood.

 6. Effects of pharmacological drugs used to combat infection.

7.2 QUESTIONS FOR PREPARATION FOR THE WORK:

 1. Ways of infection of the lungs

 2. What is called lung abscess

3. What is called gangrene of the lungs

 4. Clinical picture during the period of abscess formation and with an open abscess

5. Radiographic picture of acute, closed and open lung abscess

6. Indication to the surgical treatment of lung abscess

7. The causes of the transition of acute abscess to chronic

8. Classification of bronchiectatic disease

9. Causes of primary and secondary pleural empyema

10. Clinical manifestations of pleural empyema

11. Principles of diagnosis of inflammatory diseases of the lungs and pleura

12. Differential diagnosis of inflammatory diseases of the lungs

13. Principles of treatment of these diseases

14. Complications

15. Prevention

 16. How to treat abscessed pneumonia?

17. What should I do in the development of pyopneumothorax in lung abscess?

18. How to identify bronchiectasis?

19. What is the reliable sign of pulmonary hemorrhage?

 20. What operations are used to treat bronchiectasis?

21. Determine the clinical manifestations of acute and chronic lung abscess. 22. To know the clinical picture of possible complications in acute lung and pleural diseases.

**8.** multiple choice:

1. Of the radiographic methods of investigation, the most informative for bronchoectonic disease is:

a) Bronchography

b) Radiography

 c) X-ray

 d) Tomography

e) Computer tomography

 2. The most common bronchoectonic disease affects:

 a) The upper lobes of both lungs

b) The basal segments of the lower lobes

c) The basal segments of the lower lobes in conjunction with the ligament segments of the upper lobe of the left lung or the middle lobe of the right lung

 d) The mean proportion

e) Individual segments of both lungs

3. Symptom of " Nail clubbing " and " unguis hippocraticus ":

a) Is characteristic only for bronchoectatic disease

 b) It can be observed with other suppurative diseases of the lungs and pleura
c) More characteristic of heart defects

d) Characteristic of actinomycosis

e) Characteristic of tuberculosis

4. Among the complications associated with the production of pleural puncture and the introduction of antibiotics, an immediate lethal outcome may be:

a) Intrapleural bleeding

b) Air embolism of the brain

 c) Anaphylactic shock

 d) Pleuropulmonary shock

5. Exudative pleurisy, as a rule, is a secondary disease that occurs as a complication:

a) Bronchoectatic disease

b) Abscess

 c) Tuberculosis

d) Acute pneumonia

 e) Echinococcosis

6. Bronchiectasis develops due to:

1) congenital causes

2) chronic pneumonia

3) pulmonary tuberculosis

4) impaired patency of the bronchial tree

 5) smoking

 7. A 36-year-old patient entered the hospital with suspicion of bronchiectasis. The general condition is satisfactory. A small cyanosis of the lips, emphysema widened chest, change of fingers like "drumsticks", boxed hue of percussion sound, scattered dry wheezes. To confirm the diagnosis, which method do you prefer?

 a) bronchoscopy

 b) spirometry

c) bronchography

 d) tomography

 e) chest fluoroscopy

8. To sanitize the bronchial tree in patients with bronchiectasis, the most effective method is

a) respiratory gymnastics

b) intramuscular antibiotic therapy with kanamycin

c) medical bronchoscopy

d) inhalation with tetracycline

 e) chest massage

9. At the patient of 55 years in the bottom share of the right lung the expressed display of a bronchoectatic illness with a significant amount of a purulent sputum, sometimes with a bleeding. Conservative therapy is ineffective. The patient is hospitalized for surgical treatment. Identify treatment tactics
a) removal of the lower lobe

 b) pulmonectomy

c) therapeutic pneumothorax

 d) abandon the operation

e) removal of the upper lobe

10. At a roentgenological examination of the chest in a 32-year-old patient who consulted a doctor in connection with persistent cough, dysphagia, dyspnea, there was a rounded darkening located in the trachea and slightly displacing the main bronchus. Two years ago, there was a similar clinical picture, but then it was self-controlled after a cough with a plentiful discharge of mucous sputum with blood veins. Your diagnosis?

a) bronchiectatic disease

b) bronchogenic cancer

 c) bronchogenic cyst

d) chronic mediastinitis

e) echinococcus lung

11. At the patient of 44 years within a year marks a constant cough. In the spring and autumn he was hospitalized for pneumonia. Objectively purulent sputum up to half a day. In the right lower lobe of the lung, moist, silent, large and medium bubbling rales. Light cyanosis of the lips, fingers in the form of drumsticks. What is the preliminary diagnosis?

 a) peribronchial cancer

b) bronchoectatic disease

 c) tuberculosis pneumonia

d) chronic bronchitis

 e) chronic lung abscess

12. A patient with 70 years of acute lung abscess with a diameter of 5 cm, located closer to the chest wall, retains severe purulent intoxication. Which treatment is preferred?

a) bronchoscopy with catheterization of abscess cavity

b) thoracotomy, drainage and tamponade of abscess

 c) thoracotomy, lobectomy

d) endolymphatic antibiotic therapy

e) drainage of abscess under ultrasound or CT

13. A 45-year-old patient is hospitalized in serious condition. Disturb pain in the left side of the chest, a feeling of lack of air, a cough with a lot of phlegm, which looks like meat slops. During the examination, a significant zone of blunting of percussion sound was revealed on the left, auscultatory - a lot of wet wheezes. On the roentgenogram, an extensive darkening of the left lung, which determines the irregular shape of the cavity and the shadow of sequestration. What is the most likely diagnosis?

 a) thromboembolism of the pulmonary artery

b) purulent pleurisy

c) pyopneumovorax

d) gangrene of the left lung

 e) actinomycosis

**9. TASKS:**

 1. patient of 20 years complains of a cough with purulent sputum, often a high fever. He has been ill since childhood, but purulent sputum appeared in the last 2 -3 years. Objectively: the general condition is satisfactory, the skin is pale, the pastosity of the face and legs is noted. With auscultation of the lungs - in the lower sections on the right, multiple moist raspy rales. Sputum is released around 200 ml per day. Blood test: leukocytosis 12 000, ESR - 23 mm / h.

Your diagnosis?

What research needs to be done to clarify the diagnosis?

Tactics of treatment?

2. patient of 38 years complains of pains in the right half of the chest, cough with phlegm-purulent sputum and blood streaks, dyspnea. Sputum for the day 100 ml. Sick for about 5 years, in spring and autumn there is an exacerbation of the disease. During the exacerbation, the temperature rises. Objectively: the state is satisfactory. Skin and visible mucous membranes are pale. Nail phalanges in the form of " Nail clubbing." In the lungs to the left of the angle of the scapula, shortening of the percussion sound. Voice tremor is the same on both sides. Auscultatory to the left - wet rales, right vesicular breathing.

What kind of diagnosis do you think?

What research is needed?

 How to treat a patient?

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 Session 3

  **Section 2. Diseases of the respiratory system**

 Topic. 2.2 "Nonspecific diseases of the plectrum"

**Methodical development was: Associate Professor DA Melkiy**

**1. DURATION OF THE SESSION in the academic 4 hours**

 **2. TOPICALITY OF THE TOPIC**:

Nonspecific diseases of the pleura make up a large group of pathological processes that develop in the chest. They are diverse for reasons of origin, morphological changes, clinical manifestations; are complications of inflammatory processes of the lungs, as well as injuries. Pathology is quite common, and the results of treatment sometimes remain unsatisfactory, which makes this problem urgent.

**3. PURPOSE AND OBJECTIVES OF THE SESSION:**

Studying the basics of diagnosis and treatment of patients with diseases of the pleura. After the session, the student must:

* Know

1. Surgical anatomy of the lungs and pleura.

2. Physiology and pathology of the respiratory system.

3. Classification of diseases of the pleura

4. X-ray anatomy of the pleural cavities.

5. Clinical picture of nonspecific diseases of the pleura

6. Special methods of investigation (bronchoscopy, thoracoscopy, ultrasound, computer tomography, MRT and others).

 7. Tactics of management of patients with nonspecific diseases of the pleura.

 8. Principles of conservative treatment of patients with lung diseases

 9. Types of surgical interventions for diseases of the pleura.

 10. Preoperative preparation and postoperative management of patients after pleural surgeries.

11. Complications after surgery, diagnosis and treatment.

* be able to:

 1. Conduct a clinical examination of a patient with pleural lesions.

 2. Evaluate the radiographic semiotics of the disease.

3. To determine the degree of functional disorders of the external respiration system.

4. Formulate a clinical diagnosis indicating morphological

 5. and functional disorders.

6. Assign optimal treatment to the patient.

Acquire practical skills:

1. the method of collecting anamnesis in patients with acute purulent diseases of the pleura.

2. Get skills in the diagnosis of purulent lung diseases;

3. To conduct differential diagnosis of nonspecific diseases of the pleura;

 4. Develop a treatment plan for patients with nonspecific diseases of the pleura.

 **4. EQUIPMENT OF THE SESSION**:

 Anatomical atlas, educational film, slides. Radiographs.

 **5 CONTENTS TOPIC:**

Spontaneous pneumothorax, hydrothorax, empyema of the pleura. Spontaneous ideopathic pneumothorax: primary and secondary pneumothorax (bullous disease, bullous emphysema), pathogenesis, clinic, differential diagnosis. Methods of treatment. Complications. Indications for surgery. Forecast. Hydrotorax Definition of the concept and the main causes of the development of this complication. Clinic, differential diagnosis of pleurisy. Forecast. Empyema of the pleura. Definition of the concept and the main causes of the development of this complication. Classification by etiological factor, prevalence of the process. Ways of penetration of the infection into the pleural cavity. Clinic, diagnosis, conservative and surgical treatment, Indications for drainage of the pleural cavity (underwater drainage according to Bulau, permanent aspiration). Pathophysiological concept of treatment with empy. Piopevneumotorax. Causes of development. Total and limited pyopneuromotorax. Features of their development and; clinical course. Diagnostics. Treatment. Chronic and postresection empyema of the pleura. Definition of the concept. The causes of the transition of acute empyema to chronic. Clinic, diagnosis, treatment. Methods of treatment. Pleurrectomy, pleuroblotectomy, pleuropulmonectomy. Thoracoplasty.

6. **BASIC KNOWLEDGE**, SKILLS, Experiences,

REQUIRED FOR STUDYING THE Topic:

|  |  |  |
| --- | --- | --- |
|  Previously studied disciplines |  Know | Be able to |
| Normal PhysiologyBiochemistryPathological PhysiologyPropaedeutics of internal diseases | Physiological processes that occur in the pleura and thorax.Pathology of the processes of exchange in the pleura.The etiology and pathogenesis of disturbances in the processes of ventilation of the lungsScheme of examination of the patient. Symptomatology of diseases of the pleural cavities | To draw up a scheme of additional methods of research, biochemical testsAnalyze the causes and consequences of violations of metabolic processes in the lungs.Conduct a postin- dromous diagnosis of the disease. To conduct clinical, laboratory, instrumental diagnostics of the basic nosological units. Carry out differential diagnostics |

**7. REQUIREMENTS FOR INDEPENDENT WORK DURING TRAINING:**

7.1. TO PRACTICAL ACTIVITY TO IMPROVE ITS EFFECTIVENESS, STUDENTS SHOULD WORK THE FOLLOWING EDUCATIONAL QUESTIONS AND KNOW:

 1. Anatomy, physiology of the chest, pleural cavity, lungs.

2. Physical methods of examination of patients with lung pathology.

3. X-ray picture of the chest and its organs is normal.

 4. Methods of examination of the chest, including additional

 5. Laboratory indicators of blood.

7. Effects of pharmacological drugs used to fight infection.

7.2 QUESTIONS FOR THE PREPARATION FOR THE ACTIVITY:

 1. What is the pleura empyema

2. What is the [Damoiseau-Ellis line](https://www.google.ru/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwj4j4Spl9LXAhVDDZoKHWgbA1AQFggoMAA&url=http%3A%2F%2Fwww.whonamedit.com%2Fsynd.cfm%2F3269.html&usg=AOvVaw1EIoenymoelraJ3GR86ELA)

3. What types of empyema do you know by their location in the pleural cavity.

 4. What is the total empyema of the pleura.

5. What morphological changes in the pleura are characteristic of the chronic pleura.

6. What is Bulau drainage?

7. What types of lavage of the pleural cavity you know.

8. After what procedure (research) it is possible to diagnose empyema of the pleura.

 9. When is the active drainage of the pleural cavity?

 10. When the surgical treatment of empyema is shown

11. What are the stages of treatment of pleural empyema.

12. Indicate the etiology and pathogenesis of nonspecific diseases of the pleura.

13. Describe the clinical picture of suppurative diseases of the pleura and their complications.

14. Name the X-ray and endoscopic semiotics of suppurative diseases of the pleura.

15. Give the algorithm for surgical treatment for acute and chronic lung abscesses, acute and chronic pleural empyema.

**8. multiple choice:**

 1. The causes of the appearance of fluid in the pleural cavity:

 a) increased oncotic pressure of the plasma

b) congestive heart failure

 c) cirrhosis

d) trauma of the chest

e) acute pancreatitis

2. Symptoms of pleurisy:

a) dullness of percussion sound

b) weakening or lack of breathing

c) increased **vocal tremor**

d) displacement of the mediastinum in the opposite direction

 e) pains worse with deep breathing

3. For the diagnosis of pleurisy use:

 a) a review chest X-ray

b) chest X-ray chest

c) chest X-ray in laterography

 d) ultrasound

e) bronchoscopy

4. When removing fluid from the pleural cavity, during the pleural puncture, it is necessary:

​​a) to measure the volume of the removed liquid

b) to carry out its biochemical study

c) to perform a cytological study

d) to carry out histochemical studies

 e) to perform a bacteriological study

5. man on the right has a blunt percussion sound, breathing is only heard over the top, on the left is vesicular breathing. Radiograph: in the right pleural cavity fluid reaching the 3rd rib. Tactics?

a) bronchoscopy

b) sputum analysis for atypical cells

c) computed tomography of the thoracic cavity

 d) pleural puncture on the right

e) thoracoscopy

6. Exudative pleurisy can be a manifestation of all diseases, except:

a) lung cancer

b) pleural mesethelioma

c) acute bronchitis

d) pleuropneumonia

 e) pulmonary tuberculosis

7. What is the supposed etiology of hemorrhagic pleurisy in a 55-year-old patient?

 a) a destructive subpleural process in the lung

b) a malignant lesion of the pleura or lung

 c) a trauma of the thorax d) post-pneumonic pleurisy

e) an inflammatory process in the lungs against a background of capillarotoxicosis

8. The displacement of the mediastinum to the healthy side, revealed percutaneously and radiologically, corresponds to:

 a) lung hypoplasia

 b) lung atelectasis

c) fluid accumulation in the pleural cavity

d) total inflammation of the lung

e) polycystosis of the lung

9. Typical puncture point of the pleural cavity:

a) along the middle axillary line in the 7 intercostal space

b) along the back axillary line in the 7 intercostal space

 c) along the paravertebral line in the 7 intercostal space

d) along the scapular line in the 7 intercostal space

 e) along the anterior axillary line in the 7 intercostal spaces

10. At which edge of the rib is the needle inserted when puncturing the pleural cavity?

a) along the upper edge of the rib

 b) along the lower edge of the rib

c) along the middle of the intercostal space

d) at any of the above points

 e) the choice of the point depends on the puncture in the anterior or posterior intercostal space

11. With free bleeding into the pleural cavity, at which level the puncture is performed:

a) at the upper edge of the effusion

 b) at the center of the effusion

 c) at the lowest point of effusion

d) the choice of the level does not matter

e) above the upper edge of the fluid

12. In what position is the patient performing puncture of the pleural cavity? a) lying on the side

b) lying on the stomach

 c) in a sitting position with a bent trunk

 d) in a semi-sitting position

e) the position of the patient does not matter

13. Explain why the pleural cavity puncture is performed at the upper edge of the rib:

a) because of the possibility of damage to the vascular-neural intercostal bundle

 b) because of the possibility of pneumothorax

c) due to damage to the intercostal muscles

d) due to the peculiarities of the structure of the periosteum; e) to facilitate anesthesia

14. Drainage of the pleural cavity in the postoperative period is extracted:

 a) on the 1st day

 b) on the 2nd day

 c) on the 5th day

d) after the pulmonary spreading and the discontinuity of the draining discharge

 e) at the discretion of the surgeon

15. The reason for the transition of acute pleural empyema to chronic can not be:

 a) an unsuccessful attempt to obliteration of the cavity in an acute period

 b) premature drainage removal

c) a large primary cavity

d) tuberculosis and other specific flora

e) bronchopleural fistula

16. The outcome of the treatment of pleural empyema without bronchopleural fistula is determined by the character:

a) changes in the visceral pleura

 b) the amount of pus in the pleural cavity

c) the change in the parietal pleura

d) the change in the pulmonary tissue

e) the microflora character

17. Treatment of acute pleural empyema-all except:

a) sanation bronchoscopy

 b) puncture with pleura washing and antibiotic injection

c) drainage of the pleural cavity with active aspiration

 d) desintoxication therapy

e) antibacterial therapy

18. The patient is diagnosed with acute total empyema of the pleura. What treatment is indicated to the patient?

a) bronchoscopy with catheterization of the bronchi

 b) puncture of the pleural cavity

c) thoracocentesis, drainage of the pleural cavity with constant aspiration of the contents

d) thoracotomy, sanation of the pleural cavity

e) thoracoplasty

19. Acute pleural empyema involves intensive therapy, in combination with: a) single pleural cavity puncture

b) multiple pleural cavity punctures

c) drainage of the pleural cavity

 d) autopsy and pleural cavity tamponade according to Vishnevsky

 e) lobectomy

20. The main signs of the transition of acute empyema to chronic?

 a) the amount of purulent discharge is retained by drainage

 b) the symptoms of purulent intoxication do not decrease

c) the cavity in the pleura begins to decrease in volume

d) Clinically and radiologically, a decrease in the lung

e) duration of the disease for more than 3 months

22. Duration of drainage of the pleural cavity for acute pleural empyema:

a) 10 days

b) 3 weeks

 c) 1 month

 d) 2 months

 e) drainage until complete spreading of the lung and absence of drainage

24. The empyema of the pleural cavity, as a rule, is:

a) complication of the abscess or bacterial destruction of the lungs

b) the consequence of tumor lung injury

c) the progression of tuberculosis

d) the consequence of a chest injury

e) complication of bronchoectatic disease

25. Active drainage of the pleural cavity is not shown:

a) with thoracotomy

 b) with hemothorax due to fracture of rib

c) with recurrent hemothorax

d) with empyema of the pleura

e) with lower-grade pneumonia

9. SITUATIONAL TASKS:

1. patient of 50 years entered the clinic with complaints of weakness, a cough with a small amount of purulent sputum. Evening temperature rise up to 38 °. From an anamnesis it is found out, that one month prior to receipt has transferred a flu. He was treated at home. At X-ray examination on day 8, an infiltrate was found in the upper lobe of the right lung with a decay cavity in the center.

 What kind of diagnosis do you make? What additional research methods are needed to clarify the diagnosis?

 2. patient had a fever of up to 39 years after hypothermia, there were pains in the right side of the chest, worse in breathing, a cough without phlegm.In spite of intensive treatment, the temperature stayed for 8 days, then the patient began to separate in a large number of purulent sputum with an unpleasant smell, and the temperature decreased, the patient began to feel better.The right shoulder-blade was used to determine the shortening of the percussion sound, weakening of breathing, and there was no other pathology revealed.

What disease does the patient have?

 3. patient was treated for a month and a half and a month and a half in the treatment department for an acute abscess of the upper lobe of the left lung .. Treatment: penicillin and streptomycin, vitamin therapy, administration of glucose and calcium chloride. almost does not improve - he is feverish, he is disturbed by a cough with periodic separation of fetid sputum .

What mistakes are made in the management of the patient? What should do now?

4. A 55-year-old patient entered the clinic for chronic recurrent empyema of the pleura and thoracic fistula on the right. He has been sick for 15 years. The empyema developed on the basis of lung abscess. The patient was 5 times thoracoplasty, after which again relapsed empyema. Objectively: on the right there is completely no edge frame. The thorax, devoid of a solid core, shifts paradoxically to the respiratory movements. The right half of the abdominal wall is atonic, sagging.

What kind of treatment does the patient need?

 DEPARTMENT OF FACULTY SURGERY

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 GUIDELINES

for 4th-year students to laboratory work in the specialty "Medicine", the discipline "Faculty Surgery, Urology", the module "Faculty Surgery"

 Session 4

  **Section 2. Diseases of the respiratory system**

 Topic number 2.5 "MEDIASTINITES"

**1. DURATION OF THE SESSION in academic 4 hours**

**2. TOPICALITY OF THE TOPIC:**

Mediastinitis is a purulent inflammation of the mediastinal fiber. Practical in all cases, it is associated with the defeat of various organs located in the mediastinum. It occurs both in outpatient and inpatient practice. Practice has shown that only in 15-20% of cases this diagnosis is established during life, which is due to the rarity of this pathology, insufficient lighting in the literature, insufficiently vivid manifestations against the background of a common infection in seriously ill patients and limited possibilities Due to the rapidly progressing current.

**3. PURPOSE AND OBJECTIVES**:

* Studying the classification of mediastinitis, pathogenesis, clinic, diagnosis, tactics and treatment with mediastinitis.
* Know

1. Surgical anatomy of the chest.

2. Physiology and pathology of the chest.

 3. Classification of mediastinitis.

4. Research methods for mediastinitis (chest X-ray, x-ray studies of the esophagus, ultrasound, tracheo-bronchoscopy, computed tomography, NMRT and others).

 5. Clinical picture of mediastinitis.

6. Tactics of management of patients with mediastinitis.

 7. Principles of treatment of patients with mediastinitis.

8. Types of surgical interventions for mediastinitis.

9. Preoperative preparation and postoperative management of patients.

10. Complications after surgery, diagnosis and treatment.

* be able to:

1. Conduct a clinical examination of a patient with mediastinitis.

 2. Evaluate the radiographic semiotics of the disease.

3. To determine the degree of functional disorders of the respiratory and cardiovascular system.

4. Formulate a clinical diagnosis.

5. Determine the appropriate department of health facilities for the treatment of patients with mediastinitis.

* Acquire practical skills:

1. Collect complaints and anamnesis in patients with mediastinitis

2. Conduct a physical examination of the neck and chest

3. Conduct a differential diagnosis with diseases that can lead to the development of mediastinitis

4. Assess the results of x-ray and endoscopic methods for diagnosing mediastinitis

5. Identify therapeutic tactics for mediastinitis

**4. EQUIPMENT OF THE SESSION**: Anatomical atlas, educational film, slides. Radiographs.

**5. CONTENTS OF THE TOPIC**:

 Anatomical and physiological data. Classification. Ethnology, pathogenesis. Clinic, diagnosis, differential diagnosis. Indications for surgical treatment. Types of operations. Acute mediastinitis is an acute purulent inflammation of the mediastinal tissue, which in most cases takes the form of phlegmon and is much less frequent in the form of a limited abscess. A characteristic feature is the severity of the course, the complexity of early diagnosis and associated with this great lethality.

**Etiology and pathogenesis**. Inflammation of the mediastinal fiber is more often caused by purulent nonspecific infection. Mediastinitis occurs primarily as a result of trauma to the organs of the mediastinum or operations on them, and again - as a complication of various purulent processes in the body. Secondary mediastinites occur 2-3 times more often than primary ones. Mediastinitis can be caused by a wide variety of microbial flora, however, streptococcus is more often responsible for the development of this disease, and staphylococcus and pneumococcus are less common.

 **Classification of mediastinitis.**

A. For etiology and pathogenesis: 1. Primary, or traumatic in wounds of the mediastinum: without damage to its organs; with damage to his organs; combined with wounds of the pleura and lungs. Secondary: 1) contact; 2) metastatic with an identified source of infection; 3) metastatic with an unexplained primary source of infection.

B. In prevalence: Acute purulent and purulent mediastinal lymphadenitis with the involvement of the surrounding cellulose in the inflammatory process. Limited purulent and non-venereal inflammations of the mediastinal tissue are single and multiple abscesses. 3. Spilled (phlegmon): 1) prone to delimitation; 2) progressing.

C. By the nature of the exudate and the type of causative agent of infection: 1) serous; 2) purulent; 3) putrefactive; 4) anaerobic; 5) gangrenous.

 D. Localization: 1. Foreground: 1) upper, with the location of the inflammatory process above the level of the third intercostal space; 2) lower, down from the third intercostal space; 3) the entire anterior mediastinum. Rear: 1) upper, with the location of the inflammatory process above the level of the V-vertebra; 2) lower, downward from the thoracic vertebra; 3) the entire rear of the mediastinum. Total (with the spread of the inflammatory process on the cellulose of the entire mediastinum).

E. On the clinical course: 1. Acute mediastinitis: 1) lightning-fast form; 2) the acute form; 3) subacute form. 2. Chronic mediastinitis: 1) primary chronic; 2) secondary chronic.

**Clinic and diagnostics**. The clinic for acute purulent mediastinitis develops rapidly. It is manifested by chest pains, shortness of breath, dysphagia, chills, fever. Especially difficult are acute purulent mediastinitis, in which the chest pains are sharply expressed and constant. The pain symptom with mediastinitis is the leading symptom. Pressure on the sternum with palpation significantly increases pain. Pain is also strengthened when the head is reclined - a symptom of Gerke. Sometimes, with mediastinitis, pain radiates into the interlopacillus or epigastric region, increases with the slightest strain, there is edema of the half of the trunk, neck and face, and the expansion of the subcutaneous veins. In rare cases, with acute mediastinitis, gas can spread into the subcutaneous tissue of the neck. This terrible symptom, revealed palpation, indicates the presence of putrefactive or anaerobic infection, as well as damage to the esophagus, trachea, bronchi. With significant compression of the diaphragmatic nerves with a violation of their conductivity, paralysis of the diaphragm may occur. In patients with suspected damage to the esophagus or trachea, esophagoscopy or bronchoscopy, which specify the diagnosis and localization of the lesion, is acceptable, respectively. The topical diagnosis of mediastinitis is extremely important, as the choice of operative access depends on this. In the treatment of mediastinitis, the most justified is active surgical tactics, which are mandatory for purulent forms of this disease.

An important role in the treatment of patients with mediastinitis belongs to massive antibiotic therapy, detoxification infusion therapy, parenteral and enteral (probe) nutrition.

6. **BASIC KNOWLEDGE**, SKILLS, Experiences,

REQUIRED FOR STUDYING THE Topic:

|  |  |  |
| --- | --- | --- |
|  Previously studied disciplines |  Know | Be able to |
| Anatomy topographic anatomy, physiology, pathophysiology, biochemistry, propaedeutics of internal diseases, roentgenology | • Anatomy of the mediastinum • Classification of mediastinitis • Symptomatics, diagnosis and surgical tactics in acute mediastinitis | Collect complaints, anamnesis of the disease, methodically correctly conduct an examination of the patient, conduct chest examinations, formulate a diagnosis, choose the most informative additional diagnostic methods and therapeutic tactics for mediastinitis |

**7. REQUIREMENTS FOR INDEPENDENT WORK DURING TRAINING:**

7.1. TO PRACTICAL ACTIVITY TO IMPROVE ITS EFFICIENCY, STUDENTS SHOULD WORK THE FOLLOWING EDUCATIONAL QUESTIONS AND KNOW:

1. Anatomy, physiology of the mediastinum.

2. Physical methods of examination of patients with mediastinitis.

 3. X-ray picture of the chest and its organs is normal.

 4. Methods of examination of the chest, including additional ones.

 5. Laboratory indicators of blood.

 7.2 QUESTIONS FOR PREPARATION FOR ACTIVITY

1. What diseases can lead to mediastinitis

2. What is pleural empyema

3. The most common causes leading to mediastinitis (ruptures of the thoracic esophagus, deep neck phlegmon, empyema of the pleura, injuries and injuries).

4. Existing methods of treatment

5. Combination of surgical methods and conservative measures.

6. Role of antibiotic therapy in the treatment of mediastinitis.

7. Outcomes of mediastinitis treatment.

 8. The most common mistakes in the diagnosis and treatment of mediastinitis.

8. CHECK QUESTIONS:

 1. Causes of acute purulent mediastinitis

2. Clinic of acute mediastinitis

3. X-ray symptoms in acute mediastinitis

4. Diagnostic criteria of acute mediastinitis

5. The role of wounding of the esophagus in the development of acute mediastinitis

6. Anatomy of the mediastinum

7. What operations with acute mediastinitis you know?

8. Name the complications of acute mediastinitis

9. Differential diagnosis of acute mediastinitis with volume diseases

mediastinum

10. Conservative therapy in acute mediastinitis.

**9. multiple choice:**

1. Anterior mediastinum contains everything except:

1) thymus

 2) ascending aorta, aortic arch

3) large vessels

4) thoracic lymphatic duct

5) trachea

2. The posterior mediastinum contains everything except:

 1) the esophagus

2) the lower aorta

3) the thoracic lymphatic duct

4) lung gates, trachea bifurcations

5) unpaired, semi-unpaired veins

3. If suspicion of mediastinitis is the most informative method for clarifying the diagnosis is:

1) pneumomediastenoscopy

2) bronchoscopy

3) bronchography

4) pneumomediastenotomography

5) radiography

4. Complications of the esophagus diverticulum

1) Hemoptysis

2) Empyema of the pleura

3) Mediastinitis

 5. In the costal-vertebral corner, most often localized are such entities as:

 1) mediastinum lipoma

2) mediastinal neurinoma

3) mediastinal parasitic cyst

4) dermoid cyst of mediastinum

5) local mesothelioma

6. The most common cause of acute mediastinitis is:

1) rupture of the esophagus

 2) surgical intervention

3) purulent lymphadenitis

4) spread of purulent neck processes

5) pulmonary tuberculosis

7. The danger of emphysema of the mediastinum consists in the development of:

1) pulmonary edema

2) asphyxia

3) extrapericardial tamponade of the heart

4) mediastinitis

5) laryngospasm

8. With increasing emphysema, the mediastinum is performed:

 1) drainage of the pleural cavity

2) supragridinous mediastinotomy

3) incisions in the places of greatest air accumulation

4) puncture of the pleural cavities with thick needles

9. After the diagnosis of acute purulent mediastenitis is first of all necessary: ​​1) massive antibiotic therapy 2) immunotherapy 3) detoxification therapy 4) surgical treatment 5) blood transfusion

**10. SITUATIONAL TASKS:**

 1. patient with a denture with food intake had a cough, a pain when swallowing and salivating, gradually a sense of compression in the squeezed area was gradually replaced.

 What kind of disease in the first place you can think of? What additional survey methods should be assigned? Therapeutic tactics?

 2 .. The patient after eating fish appeared pain behind the breastbone. On the third day, dysphagia increased, swallowing pains, body temperature increased, tachycardia appeared, and soft tissue emphysema appeared in the supraclavicular areas and the jugular fossa zone. Mediastinitis was diagnosed. Which of the clinical symptoms most reliably indicates the esophageal perforation with the development of mediastinitis?

 a) Emphysema of soft tissues

b) Increased dysphagia

c) Increased temperature

d) tachycardia

e) Increased pain when swallowing

3. patient, 30 years old, entered the clinic complaining of shortness of breath, fever, chest pain, worse with a throwing of the head back. 3 days ago the patient was extracted the seventh tooth of the lower jaw to the right and the phlegmon of the bottom of the mouth was opened. Despite this, the patient's condition progressively worsened. Radiologic examination in the clinic revealed an increase in the shadow of the mediastinum and a decrease in the transparency of its departments. What disease developed in this patient?

 a) Acute purulent mediastinitis

b) Exudative pericarditis

c) Infective endocarditis

d) Hyperal abscess

e) Purulent thyroiditis

4. patient is 32 years old, taken to a hospital, in serious condition with complaints of a sharp spray of burning pain behind the sternum, with irradiation in the back. Skin and mucous pale, t 38,80 С. Subcutaneous emphysema of the soft tissues of the neck, puffiness of the face is noted. Yesterday I ate fish. Radiography revealed an enlarged shadow of the mediastinum.

What is the most likely diagnosis?

a) Mediastinitis

b) Myocardial infarction

c) Lung abscess

 d) Pneumothorax

 e) Pneumonia

5. A 42-year-old patient entered 3 hours after the injury with pronounced subcutaneous emphysema of the upper half of the trunk, shortness of breath, tachycardia, pulse -120 beats. in min. X-ray revealed no pneumothorax, a significantly enlarged mediastinum in both directions. What kind of emergency care?

a) Draining the anterior mediastinum

b) Puncture of the pleural cavity

c) Draining of the pleural cavity

d) Thoracoscopy

 e) Thoracotomy

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for 4th-year students to laboratory work in the specialty "Medicine", the discipline "Faculty Surgery, Urology", the module "Faculty Surgery"

 Session 5

  **Section 3. "Diseases of the circulatory system"**

 Lesson # 5. Topic № 3.1 " Congenital heart defect "

**1. DURATION OF THE SESSION in academic 4 hours**

**2. TOPICALITY OF THE TOPIC:**

 Congenital heart diseases are the result of deviations from the normal intrauterine development of the circulatory system of the child and consist in changes in the normal structure of the heart and its vessels. These disorders can be primary (there are at the time of the birth of the child) and secondary (develop as a consequence of the primary defect). The frequency of detection of congenital heart defects and large vessels is 0.5% of all born children and 0.2% in children after 2 years of life. In our country, registered 265 000 people (40 000 of them are for the first time) with congenital heart defects. Almost 50% of newborns die within 1 month of life if they are not provided with proper care; another 25% die by the end of the year. These figures confirm the high relevance of this problem and its importance in reducing child mortality and the problem of population demography as a whole.

 **3. PURPOSE AND OBJECTIVES OF THE SESSION:**

Mastering the skills of diagnosis and management of patients with congenital heart diseases (purposeful collection of anamnesis, objective and laboratory-instrumental examinations),

 the appointment of modern therapy:

 **Know**:

* Anatomy of the chest organs;
* Normal and pathological physiology of blood circulation, respiration;
* Disturbance of hemodynamics of certain congenital heart defects: open arterial duct (OAP), interventricular septal defect (DMF), interatrial septal defect (ASD), coarctation of the aorta, tetralogy of Fallot (TF);
* Clearly represent the clinical course of the disease, depending on the change in the direction and volume of the discharge of blood and the possibility of differential diagnosis;
* Modern methods of treatment of congenital heart diseases.

**To be able to:**

* Conduct a clinical examination of a patient with congenital heart disease.
* To conduct a logical analysis of the history information, the data of physical and radiological research, ECG, laboratory indicators. In the end, establish a logically sound diagnosis.
* To determine the tactics of treatment.
* To make a forecast of the natural course of the blemish and the consequences of the planned operation.
* To have an idea:

  On the technique of performing electrocardiography, phonocardiography, spirography, angiography, aortography, cardiac catheterization.

 On the stages of surgery for congenital heart defects.

**Have skills:**

 Correctly collect anamnesis, analyze the data of clinical and special studies and establish a diagnosis.

 Correctly determine the adequacy of the appointment of special research methods.

**4. EQUIPMENT OF THE SESSION**:

 Anatomical atlas, drawings and table on the topic, educational film, slides.

 **5. CONTENTS OF THE TOPIC**:

Anatomical and physiological data. Classification. Methods of research, special research methods (heart probing, angiocardiography, phonocardiography, ultrasound, etc.). Clinic. Diagnostics and differential diagnostics. Indications for surgery. Methods of surgical treatment of non-transmission of the arterial duct, septal defects, Fallot tetrad, coarctation of the aorta, DMF, DMP. Surgical access. Application of the device of artificial circulation, principles of apparatus design. Outcomes of operations.

6. **BASIC KNOWLEDGE**, SKILLS, Experiences,

REQUIRED FOR STUDYING THE Topic:

|  |  |  |
| --- | --- | --- |
|  Previously studied disciplines |  Know | Be able to |
| Anatomy, physiology, biochemistry, pathophysiology, propaedeutics of internal diseases, | Anatomical structure of the cardiovascular systemPhysiological processes that occur in the heart.Pathology of the Exchange of Etiology and the Pathogenesis of Blood Circulation Disorders. Scheme examination of the patient. Symptomatology of congenital heart disease | Draw up a scheme of additional methods of research - biochemical tests. Analyze the causes and consequences of violations of the exchange processes. Conduct a postin- dromous diagnosis of the disease. Conduct clinical, laboratory, instrumental diagnostics of the main nosological units. Carry out differential diagnostics |

|  |  |
| --- | --- |
| Operative Surgery | Surgical accesses and tricks for performing heart surgeries |

**7. OBJECTIVES FOR INDEPENDENT WORK WHILE PREPARING FOR ACTIVITY:**

7.1 In order to improve its effectiveness, students should work out the following educational-purpose questions and know:

* Etiology: To name the main etiological factors of the UPU,
* To the Clinic: To make a classification of clinical manifestations,
* Diagnosis: Provide a list of basic diagnostic methods for congenital heart disease.
* Differential diagnosis: Fill in the differential diagnosis table.
* Treatment: Create a typical treatment regimen

 7.2 The main questions of the topic:

 1. The structure of the heart.

2. Blood supply to the cardiovascular system.

3. Main clinical symptoms and syndromes of patients with congenital heart disease.

4. Functional tests and other laboratory-instrumental parameters.

 5. Identification of complications of congenital heart disease.

6. Basic principles of treatment of patients with congenital heart diseases.

 7. Drug therapy, surgical and restorative treatment of patients with congenital heart diseases.

8. Definition of the disease.

9. Questions of terminology and classification of congenital heart diseases in adults.

10. Etiological factors.

11. Pathogenesis of the disease.

12. Clinical manifestations of congenital heart diseases.

13. Modern possibilities of diagnosis of the disease.

14. Modern methods of treatment of patients with congenital heart diseases. 15. Indications for surgical correction of complications of the disease.

16. Indications for hospitalization.

**8. multiple choice:**

 1. What changes occur in the body with "blue" heart defects

)1 - general hypoxia,

2 - hypervolemia and hypertension in the pulmonary artery system,

3 - chronic catarrh of the upper respiratory tract,

 4 - delay in development,

5 - hypovolemia small circle)?

1) 1, 2, 3, 4 2) 1, 3, 4 3) 1, 4 4) 2, 3, 4, 5 5) 1, 4, 5

2. The clinical picture of the open arterial duct is characterized by

 (1 - dyspnea and fatigue during physical exertion,

2 - bright blush,

 3 - AD with large pulse fluctuations due to diastolic pressure,

4 - systolic-diastolic noise in 2-3 intercostal spaces to the left of the sternum, 5 - diastolic noise in 3 intercostal spaces to the right of the sternum):

 1 ) 1, 3, 4 2) 2, 5 3) 2, 3, 5 4) 1, 5 5) everything is correct

 3. Methods of diagnosis of congenital heart defects are

 (1 - chest X-ray,

2 - angiocardiography,

3 - phonocardiogram rafa,

4 - ECG,

 5 - catheterization of the heart cavities, 6 - echocardiography):

1) 1, 2, 3 2) 2, 4, 5 3) 1, 4, 5 4) everything is correct 5) everything is wrong

 DEPARTMENT OF FACULTY SURGERY

                        OF THE MEDICAL FACULTY

 GUIDELINES

for 4th-year students to laboratory work in the specialty "Medicine", the discipline "Faculty Surgery, Urology", the module "Faculty Surgery"

 Session 6.

 Topic number 3.3 "ISCHEMIC HEART DISEASE (IHD). SURGICAL TREATMENT OF IHD “

**1. DURATION OF THE SESSION in academic 4 hours**

**2. TOPICALITY OF THE TOPIC:**

Cardiovascular diseases currently occupy the first place among chronic diseases. Despite modern achievements in the treatment of these diseases, high mortality and disability of patients remains. Coronary heart disease (CHD) is a group of diseases that are caused by a mismatch between myocardial oxygen demand and its delivery. In 95-98% of cases the cause of this is atherosclerosis of the coronary arteries. In Russia, heart and vascular disease suffered 19.4 million adults, as well as more than 655 thousand adolescents and children. Among this group of diseases, CHD is 28%. Almost 50 000 people from every million people suffer from this pathology. All this makes it possible to consider IHD epidemiological and the most significant disease from a medical and social standpoint.

**3. AIM AND TASKS OF ACTIVITY:**

To teach students to recognize ischemic heart disease and its main classical manifestations, diagnosis and treatment:

* Students should know the anatomical structure of the cardiovascular system; physiological features of the circulation; method of physical examination of the heart: percussion, auscultation; instrumental methods of examination; tactics and methods of treatment, possible complications.
* To be able to analyze the main pathophysiological processes and pathoanatomical changes, analyze the data of additional research methods; conduct a differential diagnosis between certain diseases, make a program of treatment.
* The list of practical practical tasks to be performed in the lesson: - master the technique of performing a physical examination of the patient; - to conduct a patient's curation with coronary heart disease; - to conduct differential diagnosis of various forms of myocardial infarction; - draw up a plan for treating a patient with angina and with heart rhythm disturbances;

**4. EQUIPMENT OF THE SESSION:**

 Drawings and tables on the topic, educational film, slides.

**5. CONTENTS OF THE TOPIC**:

Anatomical and physiological data. Classification. Clinic, diagnostics, methods of surgical treatment (aorto-coronary bypass, mammarocoronary shunting, indications to them.) Results: Postinfarction cardiac aneurysm. Classification of postinfarction heart aneurysms. Frequency: Clinic, diagnosis, indications and contra-indications for surgery. Principles of surgical treatment: X-ray endovascular Surgery in the treatment of IHD Pericarditis Classification, etiology, clinic, diagnosis, treatment of various forms of pericarditis.

6. **BASIC KNOWLEDGE**, SKILLS, Experiences,

REQUIRED FOR STUDYING THE Topic:

|  |  |  |
| --- | --- | --- |
|  Previously studied disciplines |  Know | Be able to |
| 1. Previously studied disciplines |  |  |
| AnatomyNormal physiology | Anatomical structure of the Heart in the main vesselsPhysiological processes that occur in the heart and coronary arteries. |  - |
| Biochemistry | Pathology of metabolic processes that affect the state of the cardiovascular system | Draw up a scheme of additional methods of research - biochemical tests. |
| Pathological physiology | The etiology and pathogenesis of violations of lipid metabolism | Analyze the causes and consequences of violations of the processes of cholesterol metabolism and their effect on the development of the disease |
| Internal diseases | Scheme examination of the patient. Symptomatology of diseases of the heart and coronary vessels. Conduct a post-dandy diagnosis of heart and vascular diseases. | Conduct clinical, laboratory, instrumental diagnostics of the main forms of the disease. Carry out differential diagnostics |
| Operative surgery | Surgical accesses and tricks for performing operations on the heart and coronary vessels |  |

**7. Tasks for independent work during the preparation for the lesson**

 7.1. To practice the following questions and know:

* Etiology: To name the main etiological factors of coronary heart disease.
* Clinic: Remember the main clinical manifestations of angina pectoris, myocardial infarction, heart rhythm disturbances.
* Diagnosis: Provide a list of basic laboratory and instrumental methods for diagnosing coronary heart disease.
* Differential diagnosis: Fill in the table of differential diagnosis of coronary heart disease with other diseases.
* Treatment: To create a typical scheme of conservative treatment of angina pectoris, myocardial infarction, cardiac rhythm disturbances. To determine the indications and the way of operative treatment of coronary heart disease.

7.2 Questions for self-monitoring:

1. Classification of IHD?

 2. Pathogenesis of ischemic heart disease?

3. What are the main causes of cardiac arrest?

 4. Resuscitation measures in case of cardiac arrest?

 5. Classification of angina pectoris?

6. Clinical picture of angina pectoris?

7. Conservative treatment of angina pectoris?

8. Treatment of acute myocardial infarction?

9. Classification of arrhythmias?

10. Special instrumental methods of coronary artery examination?

11. Indication for the surgical treatment of IHD?

12. Features of aortocoronary bypass surgery?

13. Features of using an artificial pacemaker?

**9.multiple choice:**

1. Which research method is most informative for evaluating the state of the coronary arteries?

 a) Selective coronary angiography;

b) aortography;

c) ECG;

d) computed tomography;

e) an overview radiograph of the thoracic organs cavity.

2. What material is most commonly used in aortocoronary bypass surgery? a) a large subcutaneous vein of the thigh;

 b) femoral artery;

c) a small subcutaneous vein of the thigh;

d) vein of the shoulder;

e) artificial synthetic prosthesis.

3. Through what vein is the introduction of the electrode at the establishment of the artificial pacemaker?

a) subclavian;

b) cubital;

 c) a large subcutaneous vein of the thigh;

d) superficial veins of the thoracic wall;

e) vein of the shoulder.

4. What kind of urgent manipulation should be performed with a cardiac tamponade?

a) pericardiocentesis;

 b) indirect heart massage;

c) defibrillation;

d) artificial ventilation of the lungs;

e) thoracotomy.

5. What surgical access is used for aortocoronary bypass surgery?

a) longitudinal sternotomy;

b) transverse sternotomy;

c) anterior thoracotomy;

d) posterior thoracotomy;

e) lateral thoracotomy.

 6. Define urgent measures for cardiac arrest:

a) pain medication;

b) indirect heart massage;

c) antispasmodics;

d) defibrillation;

 e) artificial ventilation of the lungs.

7. What changes on the ECG indicate the presence of myocardial infarction?

a) changes in the QRS complex;

b) ventricular extrasystole;

c) rise of segment S-T;

 d) sinus tachycardia;

e) S-T segment depression.

8. What periods are distinguished during acute myocardial infarction ?:

 a) prodromal;

 b) acute;

c) subacute;

d) chronic;

e) remote.

**B. Tasks**

1. Patient M., 59 years old entered the hospital with complaints of constant pain in the upper abdomen, nausea, vomiting once. I got sick acutely, after physical exertion. Has excessive body weight. At inspection: the abdomen is soft, at a palpation moderately boleznennyj in an epigastrium. Pulse 120 in 1 min., Arrhythmic. Symptoms of irritation of the peritoneum are negative. Laboratory: l-10,0x10 9 / l, er.4,2x10 12 / l, ESR-10 mm per hour. On the ECG - the depression of the S-T segment. What is the likely diagnosis?

 a) myocardial infarction, gastralgic form;

b) perforated duodenal ulcer;

 c) acute pancreatitis;

d) acute cholecystitis;

 e) intestinal obstruction.

2. Patient K., 67 years old he entered the hospital with complaints of a feeling of heartburn, compression behind the sternum, pain that he gives to his left arm. Such attacks appear with emotional excitement, with physical activity, with a distance of 100-200 meters. Complaints disappear after rest and after taking validol. What is the likely diagnosis?

 a) angina pectoris, functional class - III;

 b) angina of stress, functional class - II;

 c) angina pectoris, functional class - IV;

d) acute myocardial infarction;

e) bronchial asthma.

 DEPARTMENT OF FACULTY SURGERY

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 GUIDELINES

for 4th-year students to laboratory work in the specialty "Medicine", the discipline "Faculty Surgery, Urology", the module "Faculty Surgery"

 Session 7

 Section 3. Diseases of the circulatory system

 topic No. 3.4 "Varicose disease of lower limbs"

**1. DURATION OF THE SESSION in academic 4 hours**

**2. TOPICS OF THE TOPIC.**

Varicose veins of the lower extremities are observed in 7-12% of the adult population. The number of patients with a general surgical profile is 2-5%, with peripheral vascular diseases - 10-15%. Varicose veins of the lower extremities are characterized by a violation of the outflow of blood of the superficial and deep venous systems due to vertical and horizontal pathological refluxes and dysfunction of the muscular-venous pump of the lower extremities. Most often, varicose veins appear at the age of 20-50 years. Equally often you can observe the defeat of both the right and left limbs, nevertheless, for the most part the disease is two-sided. A large subcutaneous vein is 10 times more likely to be affected than a small one. Women are sick 3 times more often than men. As a result of non-temporary treatment of varicose veins, it progresses, chronic venous insufficiency arises, which is complicated by the development of thrombophlebitis, trophic ulcers, pulmonary embolism, which leads to impairment, disability and even death. Among the patients with varicose veins - 38% of invalids of the III group, 10% of the disabled - II groups. In this regard, timely diagnosis and clinical examination of this category of patients is extremely important. A doctor of any specialization should be able to conduct a survey of patients with varicose veins and to know the possibilities of medical and surgical treatment.

 **3. PURPOSE AND OBJECTIVES OF THE SESSION:**

To teach students to recognize varicose disease and its main classical manifestations, diagnosis and treatment:

* to know:

the pathogenesis of varicose veins, classification, clinic, forms, stages of development, functional tests that determine the permeability of deep veins and Validity of valves. Special instrumental methods of research, modern treatment tactics, methods of surgical treatment, examination of work capacity, long-term results.

* be able to:

Collect anamnesis of the disease, perform a physical examination of the patient, conduct functional tests for the permeability of veins, differential diagnosis, determine the tactics of treatment. To outline the scope of surgical intervention, to draw up a scheme for treating patients in the postoperative period.

**4. EQUIPMENT OF THE SESSION**:

Drawings and tables on the topic, educational film, slides.

 **5. CONTENTS OF THE TOPIC**:

Anatomical and physiological information about the venous system of the lower extremities. Classification of diseases. Defects of development (Parkins disease, Weber, ClipperTrenone). Clinic, diagnosis, treatment. Varicose disease of the lower extremities. Etiology, pathogenesis, pathological anatomy. Clinic of the disease, depending on the stage of the disease. Diagnostics. Methods for determining the permeability of deep veins, assessing the condition of the valve apparatus.

Treatment: operative, sclerosing therapy, indications and contraindications. Endoscopic dissection of the communicating veins. Postoperative period. Reasons for relapse.

Complications of varicose veins: acute thrombophlebitis, bleeding, trophic ulcer. Clinic, diagnosis, treatment.

Examination: It is noted: a) the color of the skin (cyanosis, hyperemia, pigmentation), b) the presence of edema of the feet, shins, enlarged, convoluted subcutaneous veins, swelling nodes, pigmentation, ulceration (their size, the nature of the edges and bottom ulcers, surrounding tissues ), c) with the expansion of the subcutaneous veins - localization (in the system of a large or small saphenous vein), the diameter of the veins, the nature of the expansion (cylindrical, serpentine,

saccular, nodular, mixed), the condition of the skin above the veins.

Palpation: It is noted: a) the consistency of the veins (soft, easily compressed or dense), b) the presence of tenderness along the veins, c) the exit points of the perforating veins, d) the degree of proneness of the pastosity, edema (the appearance of the depression after pressing), e) the degree of mobility skin in pigmented areas and ulcers circumference, e) temperature of the feet, g) pulsation of the peripheral arteries (in the feet, in the popliteal cavity, under the ligamentous ligament), h) the condition of the popliteal and inguinal lymph nodes, i) the results of palpation along the deep veins of the thigh, g laxen veins of the lower leg, rear dorsiflexion of the foot. Special symptoms: Valve valve states: Trianov-Trendelenburg trial, Gakkenbruch (cough symptom), Schwartz (palpation-percussion test). The consistency of the perforating veins: Talman's test, Pratt's two-prick test, the three-mouth test of Sheinis.

Deep vein passages: the Delbe-Partes march test. Additional studies:

 1) Laboratory: a) coagulogram, b) thromboelastogram, c) aggregation and gluing of platelets, d) study of venous blood for oxygen and carbon dioxide content, e) tissue blood flow.

 2) Instrumental research methods: a) phlebomanometry, b) thermography and thermometry, c) capillaroscopy, d) reovasography, e) oscillography, e) ultrasound duplex scanning, g) direct fibrofleboscopy.

3) X-ray methods: a) phlebography (direct - intravenous, functional-dynamic, distal, selective, retrograde, pelvic, indirect - intraosseous), b) lymphography. Differential diagnosis: Between varicose veins, thrombophlebitis of deep and superficial veins, postthrombophlebitic syndrome, hypoplasia or deep vein aplasia, lymphangitis, branched hemangioma, Buerger's disease.

Clinical diagnosis: The form of the disease, localization, stage of the course, presence of certain complications.

Treatment: Conservative and operative methods of treatment of the disease, the method used in this patient is justified. In surgical treatment, the nature of preoperative preparation, the type of anesthesia and the nature of the operation are indicated. Postoperative course and appointment (medication, regimen, time to get out of bed, remove stitches), complications occurred. Recommendations for discharge, terms of disability.

6. **BASIC KNOWLEDGE**, SKILLS, Experiences,

REQUIRED FOR STUDYING THE Topic:

|  |  |  |
| --- | --- | --- |
|  Previously studied disciplines |  Know | Be able to |
| Anatomy topographic anatomy, physiology, pathophysiology, biochemistry, propaedeutics of internal diseases, |  Anatomy of the venous system  Function of the veins of the lower extremities  Pathogenesis of varicose veins | Collect complaints, anamnesis of the disease, methodically correctly conduct an examination of the patient, conduct chest examinations, formulate a diagnosis, choose the most informative additional diagnostic methods and treatment tactics for varicose veins |

**7.PROJECTIVES FOR INDEPENDENT WORK:**

 7.1 Students should work on the following educational-purpose questions

and to know:

 a) the anatomy and physiology of the veins of the lower limbs;

b) classification of varicose veins and venous insufficiency;

c) the etiology and pathogenesis of diseases of the veins of the lower extremities;

d) symptoms arising from various pathological processes localized in the veins of the lower limbs;

e) indications for surgical treatment of venous diseases;

f) have an idea of ​​the options for surgical treatment of a patient with varicose veins and venous insufficiency.

 7.2 Theoretical questions for the lesson:

1. Anatomy of the venous system of the lower extremities (superficial, deep and perforating veins, valve apparatus), the physiology of venous outflow. 2. The concept of varicose veins, the frequency, predisposing and producing factors.

 3. Pathological forms of varicose veins and the nature of changes in the walls.

4. Clinical manifestations of the disease.

5. Stages of flow (preclinical, compensation, decompensation).

6. How to examine in the preoperative period in a patient with varicose veins of the lower extremities of the deep venous system?

 7. What is the positive test of Troyanov-Trendelenburg?

 8. What tests can identify the inconsistency of communicating veins?

 9. What operations are aimed at removing subcutaneous veins?

 10. What is Paget's Syndrome, Paget-Schroetter Disease?

11. What factors lead to varicose veins of the lower extremities?

 12. Why do they bandage the lower extremities with elastic bandages in the postoperative period?

13. What complications are possible with varicose veins?

14. What are the indications and contraindications for sclerotherapy of varicose veins?

15. What is the conservative treatment of acute thrombophlebitis?

16. What includes the prevention of thromboembolic complications in the postoperative period?

 17. What is the essence of Linton's operation? Narat ? koket?

18. Functional tests for revealing the condition of the valve apparatus (Troyanov Trendelenburg, cough Gakkenbruch’s , palpatory-percussion Schwartz); permeability of deep veins (march - Delbe-Pertesa); consistency of communicative veins (Pruitt's two-prick test, three-chute-Sheinis).

19. Instrumental methods of research (phlebomanometry, thermometry, capillaroscopy, rheovasography, ultrasound duplex scanning).

 20. Ultrasonic Doppler study of blood flow in veins. Ultrasound of veins. 21. Laboratory methods of investigation (coagulation and anticoagulation systems of blood, aggregation and gluing of platelets, investigation of venous blood for oxygen and carbon dioxide content).

 22. Complications of varicose veins.

23. Methods of surgical treatment:

a) flebectemia - operations of Troyanov-Trendelenburg, Bebkokk, Madelunga, Prata;

b) turning off the veins - a dressing according to Shde-Koher, Klapp, Sokolov;

c) ligation of unsound perforated veins according to Kokket and Linton.

24. Phlebosclerosis therapy, indications and contraindications to it.

Endovascular electrocoagulation, endoscopic phlebectomy.

25. Conservative treatment.

26. The concept of thrombophlebitis and phlebothromboea. Classification by etiology, localization, clinical course.

**8.multiple choice:**

 1. What is the surgical method that helps prevent the recurrence of trophic ulcers in the recanalized form of post-thrombotic disease:

A). Sclerotherapy.

 B). Operation Cocktail.

c). Operation Linton.

D). Operation Troyanova-Trendelenburg.

E). Resection of the posterior tibial arteries of the lower leg.

2. A 55-year-old patient entered the surgical hospital and suffered a varicose disease of the right lower limb for a long time. She is sick for 3 days. Complains of pain in right thigh. The condition is satisfactory. On the medial surface of the thigh from the level of the knee joint to the middle third, a band of hyperemia is visible and a dense painful cord-like cord is palpated. The limb is not edematous. The Homans symptom is negative. What medical measures should be taken?

 A). Strict bed rest, heparin therapy.

 B). Compress with Vishnevsky ointment, antibiotic therapy.

 c). Emergency operation Troyanova-Trendelenburg.

D). Implant the cava filter.

E). In urgent order, perform the operation of Linton.

 3. Varicose veins of the lower extremities are removed by the following operations:

1. Linton.

 2. Babcock.

3. Cocktail.

4. Narata.

5. Troyanova-Trendelenburg.

6. Madelunga.

Choose the best combination of answers:

A) 1,2,5. B) 1.5.6. B) 3,4,5. D) 2.4.6.

4. Specify the studies that allow to determine the condition of the valvular apparatus of the communicating veins of the lower extremities:

 1. Trianov-Trendelenburg test.

 2. Ultrasonic dopplerography.

3. Phlebography distal.

4. Three-lead test.

5. Marching test.

Choose the best combination of answers: A) 1,2,5. B) 2.3. B) 3.4. D) 2,3,4.

5. Post-thrombotic disease of the lower limbs is a consequence of:

A). Thrombosis of superficial veins.

B). Varicose veins of the superficial veins.

c). Deep vein thrombosis.

D). Dressings of a large saphenous vein.

 E). Valvular insufficiency of communicating veins.

6. 47-year-old patient complains of varicose veins of the right shin and thigh. From the anamnesis it is known that 3 years ago the patient had the operation of excising the veins on the same leg. When the patient was examined, varicose veins in the upper third of the thigh and anterior medial surface of the right tibia were noted, as well as pronounced skin pigmentation in the lower third of the shin. With ultrasound angioscanning, a stump of a large saphenous vein of the thigh, 8 cm in length, and a retrograde discharge of blood through the femoral vein to its lower third during the Valsalva trial were detected. To treat the recurrence of varicose veins, this patient needs to perform the following surgical intervention:

1. Operation of Narat.

 2. Operation of Cocktail.

3. Removal of the stump of the large saphenous vein of the thigh.

 4. Operation Linton.

5. Correction of valvular insufficiency of the femoral vein with an extravasal scaffold spiral.

Choose the best combination of answers:

A) 1.3. B) 1,2,4. B) 3,4,5. D) 1,2,3,5

7. The development of trophic skin disorders in varicose disease of the lower extremities is associated with the following leading factors:

 1. With occlusion of small arteries.

2. With the inconsistency of perforating veins.

3. With the failure of the valves of the trunk of the large saphenous vein.

4. With acute thrombosis of the deep veins of the lower leg.

5. With dermatitis and lymphostasis.

Choose the best combination of answers:

A) 2,3. B) 2.3.5. B) 3.4. D) 1,2,3. D) 1.3.5.

8. Varicose expansion of superficial veins of the lower extremities can be observed with:

1. Post-thrombotic disease.

2. A varicose disease.

 3. Aplasia of the deep veins.

 4. Congenital arteriovenous fistulas.

5. Chronic occlusion of the inferior vena cava.

Choose the best combination of answers:

A) 1,2,3,5. B) 1,2,3,4. B) 1.4.5. D) 2.3.5.

 9. What should be supplemented with a radical veinectomy performed for varicose veins, in case of functional failure of the femoral vein valves?

A). Friation of the femoral vein.

B). Implantation of the cava filter.

 c). Extravasal correction of the valve frame spiral.

D). Ligation of the femoral vein.

 E). Operation Palma.

10. patient 35 years old, 3 years ago, 4 days after appendectomy, edema and cyanosis of the left lower limb was detected. It was treated conservatively. Gradually, edema decreased, but after 6 months, varicose veins appeared. When examined, there are pronounced trophic skin ulcers of the medial surface of the shin. With distal phlebography, the deep veins of the left leg are completely recanalized, the discharge of blood from the deep veins into the surface at the level of the shin is determined. What operation can prevent relapse of trophic ulcers of the shin?

A). Suprafascial bandaging of perforating corneal veins.

 B). Operation TroyanovTrendelenburg.

 c). Correction of the valve of the femoral vein by a frame spiral.

D). Operation Linton.

E). Application of an arteriovenous shunt

 DEPARTMENT OF FACULTY SURGERY

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 GUIDELINES

for 4th-year students to laboratory work in the specialty "Medicine", the discipline "Faculty Surgery, Urology", the module "Faculty Surgery"

 Session 8

 Section 3 Diseases of the circulatory system

 Topic 3.5 "OBLITERATING ARTERIES DISEASES"

**1. DURATION OF THE SESSION in academic 4 hours**

**2. TOPICALITY OF TOPIC:**

The main causes of obliterating lesions of the aorta and peripheral vessels are obliterating atherosclerosis and thromboangiitis. In this case, the vessels of the lower extremities are most often affected. Atherosclerosis in frequency of occurrence ranks first among diseases of the abdominal aorta and is characterized by an obliterating lesion of the distal nephritic arteries. This disease is the most common cause of loss of ability to work and premature death of patients in the age group older than 40-45 years. Obliterating thromboangiitis ranks second in the frequency of lesions of peripheral arteries and, unlike atherosclerosis, rarely affects the aorta.

 **3. PURPOSE AND TASKS OF ACTIVITY**:

To familiarize students with various arterial diseases, their diagnosis, and prevention; teach students to identify signs of damage to the peripheral arteries of the lower extremities:

* **know**: the pathogenesis of chronic limb ischemia, obliterating atherosclerosis and endarteritis, clinic, stage, functional tests, special research methods, modern treatment tactics, surgical treatment.
* **be able to**: Analyze the main pathophysiological processes and pathoanatomical changes, analyze additional methods of research, conduct differential diagnosis of individual diseases.

   **To acquire practical skills:**

1. To produce palpation of arteries at typical points

2. To make auscultation of arteries

3. To collect anamnesis in a patient with obliterating disease of arteries

4. Correctly diagnose according to ICD 10

5. To name the main causes of embolism and conditions of formation of a thrombus.

6. To determine the clinical manifestations of thrombosis and embolism of the main arteries. Know the degree of ischemia of the tissues of the extremities and the complications depending on the degree.

7. Give a list of clinical and additional methods for examining patients with thrombosis and embolism of the main arteries.

8. Create a table of differential diagnosis of thrombosis and embolism, arterial and venous thrombosis of the main vessels.

 9. Methods of conservative treatment of acute thrombosis and embolism. Indications and contraindications for the conduct of surgical interventions for thrombosis, embolism of the arteries.

10. Identify the main areas of prevention of arterial thrombosis and embolism.

**4 .. EQUIPMENT OF THE SESSION**:

Drawings and tables on the topic, educational film, slides.

**5. CONTENTS OF THE TOPIC:**

Anatomical and physiological information about the arterial system of the lower limbs. Classification of diseases (obliterating thromboangiitis, obliterating atherosclerosis, diabetic macroangiopathy). Clinic, diagnosis, treatment. Obliterating atherosclerosis of the lower extremities.

Etiology, pathogenesis, pathological anatomy. Clinic of the disease, depending on the stage of the disease. Diagnostics. Methods for determining the patency of arteries, assessing the state with the help of instrumental methods. Treatment: conservative, operative, indications and contraindications. Postoperative period.

6. **BASIC KNOWLEDGE**, SKILLS, Experiences,

REQUIRED FOR STUDYING THE Topic:

|  |  |  |
| --- | --- | --- |
|  Previously studied disciplines |  Know | Be able to |
| 1. Previously studied disciplines |  |  |
| AnatomyNormal physiology | Anatomy of the arteries of the lower extremities, their topographyCircles of blood circulation.Blood circulation of the upper and lower extremities. | Specify the difference between the vessels of the upper and lower extremities |
| Biochemistry | Pathology of lipid metabolism | Analyze the lipid profile. |
| Internal diseases | Scheme examination of the patient. Semiotics of diseases. | Conduct a post-clinic diagnosis of diseases .. Conduct clinical, laboratory, instrumental diagnostics of artery disease. Carry out differential diagnostics |

**7. Tasks for independent work during the preparation for the lesson**

 7.1. To practice the following questions and know:

 a). anatomy of the arterial system of the upper and lower extremities, the physiology of the regional circulation of the limbs;

 b) classification of occlusive diseases of peripheral arteries;

c) basic theories of the etiology and pathogenesis of occlusive diseases of peripheral arteries;

d) features of the clinical course of the most common occlusive diseases of peripheral arteries (obliterating atherosclerosis, obliterating endarteritis, thrombangiitis obliterans);

 e) methods of examination of patients with occlusive diseases of peripheral arteries;

f) the basics of constructing a clinical diagnosis and the ability to substantiate it;

 g) principles of treating occlusive diseases (conservative, operative).

 7.2 MAIN ISSUES OF THE TOPIC:

1. Anatomy of the great circle of blood circulation

 2. Etiologic factors in the development of obliterating arterial diseases

3. Pathogenesis of obliterating diseases of the arteries

4. Classification of the arteries obliterating the disease

5. Clinic and diagnosis of obliterating arterial diseases

6. Conservative therapy of obliterating arterial diseases

 7. Types reconstructive operations on the arteries with obliterating diseases of the arteries.

 8. Palliative surgery for obliterating diseases of arteries

9. Classification of acute ischemia according to A. Salveliev.

 10. The concept of thrombosis and embolism of blood vessels.

 11. Treatment of acute ischemia depending on the nature of lesions.

**8.multiple choice:**

1. The femoral artery is accessible by palpation in:

a) the lower third of the thigh;

 b) middle third of thigh;

c) under the inguinal ligament;

 d) between the middle and inner third inguinal ligament;

e) between the outer and middle third inguinal ligament.

2. The femoral artery emerges from under the inguinal ligament in the area: a) outside of the muscular lacuna;

 b) in the middle part of the muscular lacuna;

c) in the outer part of the vascular lacuna;

d) in the middle part of the vascular lacuna;

e) in the inner part of the vascular lacunae.

3. The posterior tibial artery is accessible by palpation:

 a) in front of the inner ankle;

 b) behind the inner ankle;

 c) at the bottom of the inner ankle;

d) from the top of the inner ankle;

e) in front of the external ankle.

4. The posterior artery of the foot is the continuation of the artery:

a) interosseous;

b) posterior tibia;

c) peroneal;

d) anterior tibia;

 e) femur.

5. Special methods of examination for arterial disease:

a) electrocardiography:

 b) bronchography;

c) arterial pressure:

d) rheovasography:

e) pulse rate.

6. Special methods of examination for arterial disease:

 a) electrocardiography;

b) colonoscopy:

c) oscillography;

d) arterial pressure;

e) pulse rate.

7. When rheovasography is registered:

 a) blood pressure;

 b) pulse rate;

c) changes in electrical resistance in tissues;

d) body temperature;

e) muscle tension.

8. When using arteriography, drugs that contain:

 a) iodine;

b) zinc,

c) fluorine:

d) chlorine;

e) Calcium.

9. For the contrast of the iliac vessels, the contrast agent is introduced into the arteries:

 a) popliteal:

b) femur;

 c) abdominal aorta:

d) thoracic aorta;

e) arch of the aorta.

10. With ischemic pain in the lower limbs, the patients are in the position:

 a) horizontal,

 b) lie with legs bent in the knees;

c) lie with the foot on the bus of Belera;

 d) lie on the abdomen,

e) sit with their legs down

9. SITUATIONAL TASKS:

1. A patient is 45 years old, with posthemorrhagic anemia (two days ago he underwent surgery for a closed abdominal injury with liver rupture). After the transfusion of erythrocyte mass, there were pains in the chest, hemoptysis and chills. What is the most possible cause of blood transfusion complications?

 A) thromboembolism of the pulmonary artery;

B) incompatibility of blood according to the group factors of the ABO system;

C) incompatibility of blood by Rh factor;

D) anaphylactic shock;

E) poor quality of donor blood.

2. Patient M., 35 years old, with rheumatism in the active phase, has stenosis of the mitral valve of the IV stage, atrial fibrillation. 6 hours ago there was a marked pain in rest in the right lower limb. At an objective inspection pulsation on a femoral artery is absent. The temperature of the foot skin is reduced, cyanotic color, movements in the mortar are limited, sensitivity is preserved. Make a diagnosis.

 A) acute disturbance of cerebral circulation;

B) acute thromboembolism of the femoral artery;

C) acute thrombophlebitis of the deep veins of the right tibia;

D) erysipelatous inflammation of the right tibia;

E) acute lymphangitis of the right lower limb.

3. In a patient with acute ischemia of both lower limbs, which originated simultaneously, but has more pronounced manifestations on the right. There is no pulsation on the right femoral, popliteal arteries and arteries of the foot. Weakened pulsation is determined on the left artery of the femur and other arteries of the left lower limb. Determine the level of occlusion:

 A) occlusion of the right iliac artery;

B) a thrombus-rider of the bifurcation of the aorta;

C) occlusion of both femoral arteries;

 D) total thrombosis of the aortic bifurcation;

E) occlusion of the right external iliac and left femoral arteries.

4. Patient 68 years old, operated on for acute cholecystitis. Concomitant pathology - hypertension II st., IHD, atherosclerosis, cardiosclerosis, right-sided femoral hernia, varicose veins of the lower extremities. The first 3 days of the postoperative period are favorable. On the 4th day, signs of hypostatic pneumonia appeared. At 6 days, suddenly decreased cardiac activity. Cyanosis of the upper half of the body and loss of consciousness. Pulse - 140 / min., AD 60 mm Hg. Emergency resuscitation was in vain. Determine the diagnosis.

 A) myocardial infarction;

B) pulmonary edema;

 C) thromboembolism of the pulmonary artery;

D) acute disturbance of cerebral circulation;

E) thrombosis of mesenteric vessels.

5. The patient is 76 years old, was delivered by an ambulance in serious condition with complaints of severe pain in the lower left limb, which appeared within an hour and is growing. When walking, there is a lack of firm support, a cold snap of the foot. IHD suffers, diabetes mellitus. On examination, the left lower leg is pale to the knee, the shin and foot are cold, small vessels can be traced under the skin. The pain sensitivity is reduced on the lower leg and the stop on the left. Pulsation on the foot and in the popliteal fossa is absent from the left, on the femoral arteries weakened. Your diagnosis.

  A) thrombosis of the popliteal artery;

B) diabetic gangrene of the left lower limb;

C) obliterating atherosclerosis;

D) Raynaud's disease;

E) thrombophlebitis.

 DEPARTMENT OF FACULTY SURGERY

                         OF THE MEDICAL FACULTY

 GUIDELINES

for 4th-year students to laboratory work in the specialty "Medicine", the discipline "Faculty Surgery, Urology", the module "Faculty Surgery"

 Lesson # 9

 Section 3 Diseases of the circulatory system

 TOPIC № 3.6 "THROOMBOSES AND EMBOLISM OF ARTERIES OF LOWER LIMBS, PULMONARY ARTERY, MESENTERIAL VESSELS""

**1 .. DURATION OF ACTIVITY in academic 4 hours**

**2. TOPICALITY OF THE TOPIC:**

Arterial thrombosis and embolism refer to emergency vascular surgery. Arterial embolism has become synonymous with acute obstruction of the arteries. The clinical practice of recent decades indicates the continuing increase in the number of thromboses and embolisms of major vessels, their severe complications. Due to late diagnosis or late delivery of patients to the hospital, specialized angio-surgical care for these patients is untimely. A convincing proof of this is the high mortality of patients from literary data from 20 to 35% and a high frequency of limb amputations about gangrene reaching almost 20% (VS Saveliev). Therefore, the urgent task is to firmly grasp the basic provisions of diagnosis and therapeutic tactics in these diseases is absolutely necessary in the preparation of the future doctor. Embolism is the most common form of acute arterial obstruction. In the majority of patients, the following heart diseases are the cause of embolism of the arteries of the circulatory system: rheumatic defects, postinfarction cardiosclerosis and cardiac aneurysms, septic endocarditis, acute myocardial infarction. Almost 75% of patients have a heart rate abnormality - atrial fibrillation. Emboli are more common in women aged 40-59 years. Under the BODY, the occlusion of the vascular bed of the lungs by thrombi, which is primarily formed in the veins of a large circle of circulation, is understood. In the general structure of the causes of sudden deaths, the massive BOD takes the third place. Recently, medicine has made significant progress in the diagnosis and treatment of the body, but also continues to take the lives of many thousands of able-bodied and socially active people of different ages, often not burdened by other diseases. That is why the search for more perfect, safe methods of intravital diagnosis of embolic lesions, surgical and medicamentous ways of disinfestation of the vascular bed of the lungs and prevention of recurrence of the disease does not stop.

**3. PURPOSE AND OBJECTIVES OF THE SESSION: AIM OF LEARNING:**

 to teach students the right examination of a patient with acute arterial insufficiency of blood circulation, diagnosis, differential diagnosis, correct treatment tactics.

* After studying the topic "Embolism and thrombosis" the student should **know**:

1 -Anatomical structure and physiology of arterial blood circulation, anatomical structure of the cardiovascular system;

2 -The cause of the development of acute thrombosis and embolism of the main arteries is the anatomy and location of the vessels.

3- Methods of physical examination of the heart, percussion, auscultation,

 4 -Projections of pulsation of the main and peripheral arteries.

 5- Clinical signs of arterial thrombosis and embolism;

 6- Methods of examination of patients with this disease.

 7 -Determine the stages of ischemia according to A.V. Pokrovsky.

8- Non-invasive and invasive methods for the diagnosis of acute arterial circulatory disorders. 9 Tactics and methods of treatment.

* be able to:

1. Collect an anamnesis of the disease.

2. Perform a physical examination of the patient.

 3. Analyze and evaluate the findings, highlight the main pathophysiological processes and pathoanatomical changes that occur both in the arteries and in the tissues.

4. Design additional survey methods.

 5. Carry out a differential diagnosis between thrombosis and embolism, between arterial and venous thrombosis.

6. Develop a program for the treatment of a patient.

 **4. EQUIPMENT OF THE SESSION:** Anatomical atlas, drawings and table on the topic, educational film, slides, angiography.

**5. CONTENT OF THE LESSON**: The concept of embolus and thrombus. Diseases predisposing to the development of embolism and thrombosis. Both embolisms and acute thrombophytes can not be considered independent diseases. They are always the result of major, so-called, embolic or thrombogenic diseases. Identification of these diseases, i.e. the establishment of the etiology of acute arterial occlusion in each specific case is a vital necessity. The main embologogenic diseases.

1. Atherosclerotic cardiopathy: diffuse cardiosclerosis, postinfarction cardiosclerosis, acute myocardial infarction, acute cardiac aneurysm, chronic cardiac aneurysm.

2. Rheumatic mitral defect.

3. Congenital heart disease.

4. Septic endocarditis.

 5. Aneurysms of the aorta and its large branches.

6. Pneumonia.

 7. Other: lung tumors, thrombosis of the veins of the great circle of blood circulation (in the presence of defects of the partitions of the heart), an additional cervical rib.

 8. Unidentified source of embolism. It should be noted that the vast majority of patients with zmbologennymi heart disease noted atrial fibrillation. Classification of acute ischemia. Clinic, diagnosis. Differential diagnosis between embolism and thrombosis. Conservative and surgical treatment, their results. Features of diagnosis and treatment in children. Prevention of thrombosis and embolism.

6. **BASIC KNOWLEDGE**, SKILLS, Experiences,

REQUIRED FOR STUDYING THE Topic:

|  |  |  |
| --- | --- | --- |
|  Previously studied disciplines |  Know | Be able to |
| 1. Previously studied disciplines |  |  |
| AnatomyNormal physiology | The structure of the heart, the arterial system of man. Circles of blood circulationPhysiological processes of the heart of arterial blood supply | To determine the topographic guidelines of the thyroid gland. |
| Pathological physiology | Physical methods of examination of patients and the main symptoms of acute limb ischemia | Conduct a post-dinamic diagnostics of acute circulatory disturbance. Make a program for clinical, laboratory and instrumental examination of the patient. |
| Radiology | X-ray methods of investigation of the main arteries | Evaluate the data of X-ray studies.  |
| Operative surgery and topographic anatomy | Surgical access to the main arteries. | Choose the optimal surgical access to thrombosed arthritis and decide the method of surgical intervention. |

**7. OBJECTIVES FOR INDEPENDENT WORK DURING THE PREPARATION FOR THE WORK:**

 7.1. For practical work in order to increase its effectiveness, students should work out the following questions and know:

 Etiology: To name the main causes of embolism and the conditions for the formation of a thrombus.

 Clinic: To determine the clinical manifestations of thrombosis and embolism of the main arteries. Know the degree of ischemia of the tissues of the extremities and the complication, depending on the degree. Diagnosis: To provide a list of clinical and additional methods for examining patients with thrombosis and embolism of the main arteries. Differential To compile a table of differential diagnosis of thrombosis and embolism, arterial and venous thrombosis of the main vessels.

 Treatment Methods of conservative treatment of acute thrombosis and embolism. Indications and contra-indications for operative interventions in thrombosis, embolism of arteries. Prevention Define the main directions for the prevention of arterial thrombosis and embolism.

 7.2 THEORETICAL QUESTIONS FOR THE ACTIVITY:

1. Surgical anatomy of the arteries.

2. Etiology of arterial thrombosis.

 3. Etiology of the embolism of the artery.

4. Features of the collection of anamnesis and objective examination.

5. What are the main conditions for the formation of a thrombus (R.Virkhov's triad).

6. Causes of embolism of the arteries.

7. Methods of diagnosis of arterial diseases.

8. Diagnosis of acute arterial obstruction.

9. Pathomorphology in acute arterial obstruction.

10. Clinical characteristics of embolism and thrombosis of the main arteries.

11. Differential diagnosis of arterial thrombosis and embolism.

12. Differential diagnosis of arterial and venous thrombosis and embolism. 13. Classification of acute ischemia of the lower extremities according to VS Saveliev.

14. Surgical tactics for acute arterial obstruction.

15. Indications for conservative treatment of acute arterial thrombosis.

 16. Preparations used for conservative treatment.

 17. The concept of thrombolysis.

18. Methods of operative treatment of embolism and acute thrombosis of the main arteries.

 19. Anticoagulants, fibrinolytic, thrombolytic drugs.

 20. Methods for monitoring the blood coagulation system, their characteristics.

21. Management of the postoperative period.

 22. Prevention of acute arterial obstruction.

**8. multiple choice**

 1. The femoral artery is accessible by palpation in:

a) the lower third of the thigh;

 b) middle third of thigh;

c) under the inguinal ligament;

d) between the middle and inner third inguinal ligament;

e) between the outer and middle third inguinal ligament.

2. The femoral artery emerges from under the inguinal ligament in the area: a) outside of the muscular lacuna;

b) in the middle part of the muscular lacuna;

c) in the outer part of the vascular lacuna;

d) in the middle part of the vascular lacuna;

e) in the inner part of the vascular lacunae.

3. The posterior tibial artery is accessible by palpation:

a) in front of the inner ankle;

b) behind the inner ankle;

c) at the bottom of the inner ankle;

d) from the top of the inner ankle;

e) in front of the external ankle.

4. The posterior artery of the foot is the continuation of the artery:

a) interosseous;

b) posterior tibia;

c) peroneal;

d) anterior tibia;

e) femur.

5. Special methods of examination for arterial disease:

 a) electrocardiography:

b) bronchography;

 c) arterial pressure:

d) rheovasography:

e) pulse rate.

6. Special methods of examination for arterial disease:

a) electrocardiography;

b) colonoscopy:

 c) oscillography;

d) arterial pressure;

e) pulse rate.

7. When rheovasography is registered:

 a) blood pressure:

b) pulse rate;

c) changes in electrical resistance in tissues;

d) body temperature;

e) muscle tension.

8. When using arteriography, drugs that contain:

 a) iodine;

b) zinc,

 c) fluorine:

 d) chlorine;

 e) Calcium.

9. For the contrast of the iliac vessels, the contrast agent is introduced into the arteries:

 a) popliteal;

b) femur;

c) abdominal aorta:

d) thoracic aorta;

e) arch of the aorta.

10. With ischemic pain in the lower limbs, the patients are in the position:

 a) horizontal,

b) lie with legs bent in the knees;

c) lie with the foot on the bus of Belera;

d) lie on the abdomen,

e) sit with their legs down

**9. Tasks**

1. patient is 45 years old, with posthemorrhagic anemia (two days ago he underwent surgery for a closed abdominal injury with liver rupture). After the transfusion of erythrocyte mass, there were pains in the chest, hemoptysis and chills. What is the most possible cause of blood transfusion complications?

 A) thromboembolism of the pulmonary artery;

B) incompatibility of blood according to the group factors of the ABO system;

C) incompatibility of blood by Rh factor;

D) anaphylactic shock;

E) poor quality of donor blood.

2. Patient M., 35 years old, with rheumatism in the active phase, has stenosis of the mitral valve of the IV stage, atrial fibrillation. 6 hours ago there was a marked pain in rest in the right lower limb. At an objective inspection pulsation on a femoral artery is absent. The temperature of the foot skin is reduced, cyanotic color, movement in the mortar is limited, sensitivity is preserved. Make a diagnosis.

 A) acute disturbance of cerebral circulation;

B) acute thromboembolism of the femoral artery;

C) acute thrombophlebitis of the deep veins of the right tibia;

D) erysipelatous inflammation of the right tibia;

E) acute lymphangitis of the right lower limb.

3. In a patient with acute ischemia of both lower limbs, which originated simultaneously, but has more pronounced manifestations on the right. There is no pulsation on the right femoral, popliteal arteries and arteries of the foot. Weakened pulsation is determined on the left artery of the femur and other arteries of the left lower limb. Determine the level of occlusion:

 A) occlusion of the right iliac artery;

B) a thrombus-rider of the bifurcation of the aorta;

C) occlusion of both femoral arteries;

D) total thrombosis of the aortic bifurcation;

E) occlusion of the right external iliac and left femoral arteries.

4. Patient 68 years old, operated on for acute cholecystitis. Concomitant pathology - hypertension II st., IHD, atherosclerosis, cardiosclerosis, right-sided femoral hernia, varicose veins of the lower extremities. The first 3 days of the postoperative period are favorable. On the 4th day, signs of hypostatic pneumonia appeared. At 6 days, suddenly decreased cardiac activity. Cyanosis of the upper half of the body and loss of consciousness. Pulse - 140 / min., AD 60 mm Hg. Emergency resuscitation was in vain. Determine the diagnosis.

A) myocardial infarction;

B) pulmonary edema;

C) thromboembolism of the pulmonary artery;

D) acute disturbance of cerebral circulation;

E) thrombosis of mesenteric vessels.

5. The patient is 76 years old, was delivered by an ambulance in serious condition with complaints of severe pain in the lower left limb, which appeared within an hour and is growing. When walking, there is a lack of firm support, a cold snap of the foot. IHD suffers, diabetes mellitus. On examination, the left lower leg is pale to the knee, the shin and foot are cold, small vessels can be traced under the skin. The pain sensitivity is reduced on the lower leg and the stop on the left. Pulsation on the foot and in the popliteal fossa is absent from the left, on the femoral arteries weakened. Your diagnosis.

A) thrombosis of the popliteal artery;

B) diabetic gangrene of the left lower limb;

C) obliterating atherosclerosis;

D) Raynaud's disease;

E) thrombophlebitis.

 DEPARTMENT OF FACULTY SURGERY

                        OF THE MEDICAL FACULTY

 GUIDELINES

for 4th-year students to laboratory work in the specialty "Medicine", the discipline "Faculty Surgery, Urology", the module "Faculty Surgery"

 Lesson # 10

 Module "Faculty Surgery"

 Section 4 "Diseases of the digestive system"

 Topic № 4.2 "Ulcer disease of the stomach and duodenum.

 COMPLICATED FORM OF ULCER DISEASE »"

**1. LENGTH OF ACTIVITY in academic is 6 hours**

**2. TOPICALITY OF THE TOPIC:**

Peptic ulcer of the stomach and duodenum is a common disease. Diagnosis and treatment of it - the prerogative of a therapeutic clinic. However, despite the success of conservative treatment of stomach ulcer and duodenal ulcer in 30% of patients develop complications of the ulcerative process, which require surgical intervention. Half of them have such terrible complications of ulcer bleeding and perforation of the ulcer, which require urgent diagnosis and adequate use of modern methods of treatment. Also there are patients with resistant to conservative treatment ulcers. In these cases, it is important to determine the timing of the operation in a timely manner, which must precede the occurrence of complications. Gastric ulcer often degenerates into a malignant tumor, therefore it is important to know the indications for surgical intervention in chronic uncomplicated ulcers. At present, the possibilities of surgical treatment of patients with these diseases have expanded, so knowledge of these issues is necessary for every practical doctor.

**3. PURPOSE AND OBJECTIVES OF THE SESSION:**

The study of clinical manifestations of complications of peptic ulcer of stomach and duodenum, modern methods of diagnostics of these diseases, differential diagnostics with other diseases of the abdominal cavity, the main modern methods of surgical treatment of these complications.

* To know –

 the anatomy and physiology of the stomach and duodenum

- modern views on the etiology and pathogenesis of complications of gastric ulcer and duodenal ulcer classification and clinical manifestations of gastric and duodenal ulcer perforation, gastrointestinal bleeding ulcerous etiology, cicatricial stenosis pyloroduodenal region, penetration and malignancy. methods of laboratory and instrumental studies for ulcerative complications of the stomach and 12p. guts basic principles of conservative therapy of gastrointestinal bleeding ulcerous etiology absolute, conditionally absolute and relative indications for surgical methods of treatment for complications of stomach and duodenum ulcers basic methods of operative correction of gastric and duodenal ulcer complications concept and essence of palliative and radical methods of operative treatment of these complications

* To be able:

- to define the lower border of the stomach

- to produce palpation of peripheral lymph nodes

- determination of hepatic stupidity

- certain symptoms Shchetkina-Blumberg

- perform a rectal examination

 - draw a flow chart of Billroth-I, Bilrot- II, suturing perforated gastric ulcer and 12 duodenal ulcer

- carry out differential diagnosis between gastric and intestinal bleeding

**4. EQUIPMENT OF THE SESSION:**

Anatomical atlas, drawings and table on the topic, educational film, slides., Radiography on the topic.

 **5. CONTENTS TOPIC:**

Peptic ulcer. Johnson classification: types of gastric ulcers (mediogastric, combined stomach and duodenum ulcer, pre-pyloric ulcers and pyloric canal). Features of the etiology and pathogenesis of gastric ulcers. Indications for surgery and types of surgical interventions for gastric ulcers and duodenal ulcers: gastric resection according to Kocher, according to Billroth I, Billroth II in modifications, according to Ru, according to Hofmeister-Finsterer, S.I. Spasokukotsky, Polia-Reichel, Moinigena; SLE, draining operations and vagotomy. Complications of peptic ulcer of the stomach and duodenum: bleeding, perforation, pyloroduodenal stenosis, penetration, malignancy of the ulcer. Pathogenesis of complications. Pathological anatomy. Clinic, diagnosis, differential diagnosis, surgical treatment, conservative treatment. Features of preparing patients for surgery. Symptomatic ulcers: Zollinger-Ellison syndrome. Mellory-Weiss Syndrome. Peptic ulcer disease of the duodenum. Anatomical and physiological information about the stomach and duodenum. The technique of examination of patients with stomach diseases: secretion, motor skills, fluoroscopy, esophagogastroduodenoscopy. Etiology and pathogenesis. Pathological and anatomical knowledge. Stages of development. Clinic, diagnosis. Methods of studying motility and gastric secretion. Indications for surgical treatment of chronic duodenal ulcer.

6. **BASIC KNOWLEDGE**, SKILLS, Experiences,

REQUIRED FOR STUDYING THE Topic:

|  |  |  |
| --- | --- | --- |
|  Previously studied disciplines |  Know | Be able to |
| 1. Previously studied disciplines |  |  |
| AnatomyNormal physiology | Conditional division of the abdominal cavity into 9 anatomical regions;Topogaphy-anatomical  Arrangement of abdominal cavity organs; The innervation and blood supply of the stomach and duodenum.Function of the stomach and 12-gut. Physiology of digestion | analyze the results |
| Pathanatomy Anatomy | Anatomy of the ulcerative process | Explain the process of ulcer formation and the course of the ulcer process |
| Pathophysiology Biochemistry | Physiology of inflammation. Interpretation of biochemical processes | analyze the results.. |
| Pathological physiology | Pathogenesis of thyroid dysfunction. | To evaluate the results of thyroid function research. |
| Propaedeutics of internal diseasesPharmacology | Scheme examination of the patient. Semiotics of diseasesDrugs used in the treatment of ulcers of the stomach and duodenum. | Conduct a postdiromy diagnosis of diseases.To conduct clinical, laboratory, instrumental diagnostics of the disease.Carry out differential diagnostics.prescribe antiulcer therapy |

**7. OBJECTIVES FOR INDEPENDENT WORK IN THE PREPARATION FOR THE ACTIVITY:**

7.1. For the purpose of increasing its effectiveness, students should work out the following educational and target questions and know:

* Anatomy and physiology of the stomach and duodenum;
* Etiology and pathogenesis of peptic ulcer
* Classification of peptic ulcer
* Symptoms and methods for diagnosing peptic ulcer
* Indications for surgical treatment
* To have an idea of ​​the options for surgical treatment of a patient with peptic ulcer.

7.2 theoretical questions to the lesson:

1. What are the clinical manifestations of peptic ulcer?

2. What is Mallory-Weiss Syndrome?

3. What is the most informative study for peptic ulcer disease?

4. What are the complaints for ulcer bleeding?

5. What is the optimal operation for subcorrected ulcerative stenosis of the pylorus.

6. What is the pathogenesis of peptic ulcer of the duodenum?

7. What is the process of ulceration?

8. What are the indications for operative treatment of peptic ulcer?

 9. When is vagotomy indicated?

10. What are the main clinical symptoms of a perforated ulcer?

11. How to diagnose a perforated ulcer?

12. How to verify a malignant stomach ulcer?

 13. What are the clinical manifestations of dumping syndrome?

14. What kind of post-resection syndromes do you know?

 15. How to prepare a patient for surgery for stenosis of stomach ulcer origin?

16. What are the methods to treat anastomosis after a stomach resection? 17. Where is the most frequent ulcer perforation?

 18. The most common causes of relapses of gastroduodenal bleeding

19. What are the characteristic signs of stenosis of the pylorus?

**7.3. Practical skills:**

1. Definition of hepatic dullness

2. Determination of free fluid in the abdominal cavity.

3. Symptom "splash noise".

4. Palpation of a stomach tumor (dimensions, mobility, consistency).

5. Determination of the presence of distant metastases: Virchowa, Krukenberg, Schnitzler.

6. The technique of nasogastric sounding.

 7. Reading radiographs of the stomach and duodenum:

8. Nasogastric sounding.

**8. multiple choice**

  1. To determine the stage of gastroduodenal stenosis:

1. Endoscopy

2. Electrogastrography

3. Radiographic research

4. Radionuclide method

5. Electroenterography

 a) 1.2 b) 1, 2, 3 c) 2, 3, 4 d) 1, 2,3,4 e) 3,4, 5

2. The most frequent complication of the pyloroduodenal ulcer is

 a) gastroduodenal bleeding

b) perforation of the ulcer

c) pyloroduodenal stenosis

d) malignancy of the ulcer

e) penetration of the ulcer

3. Clinically compensated stenosis is manifested:

1. Satisfactory state of the patient

2. Common symptoms of peptic ulcer

3. Feeling of fullness and heaviness in the epigastric region after copious intake of food

4. More frequent than before, heartburn, belching sour, occasionally vomiting with a sour taste, which brings relief.

5. Occasionally, the visible undulating peristalsis of the stomach.

 a) 1, 2, 3 6) 1,2,3,4 c) 2,3,4,5 d) 4, 5 d) 1,2,3,4,5

4. When subcompensated stenosis is clinically noted:

1. Constant, often crampy pains in the epigastric region associated with increased peristalsis of the stomach

2. More pronounced, worse after eating, a feeling of heaviness in the epigastric region

3. A belching with an unpleasant odor of rotten eggs

4. Almost daily abundant vomiting with an admixture of food taken long before vomiting

5. Weakness, rapid fatigue, weight loss

a) 1,2,4, 5 6) 2,3,4,5 c) 1, 2, 4 d) 1 , 2.3, 4 D), 1.2.3.4.5

5. FOR DECOMPENSIATED STENOSIS CHARACTER:

 1. Severe condition of patients, exhaustion, dehydration, adynamia

 2. Abundant daily, sometimes multiple, often fetid vomiting

3. Zhazhda, decreased diuresis, constipation, and sometimes diarrhea

 4. Constant, excruciating eructations with unpleasant odor

5. Severe pain in the epigastric region

a) 1,2,3,4,5 6) 1,2,3,4 c) 2, 3,5 g) 1,2,4, 5 D) 1,3, 4,5

6. PHYSICAL STUDY OF PATIENTS WITH A DENOMPENCED STENOID STAGE REVEAL:

1. Rapid weight loss

2. Dry, with a decreased turgor, easily gathered skin folds

3. Contours of a stretched, overcrowded stomach contents

4. Active wavy peristalsis of the stomach changing the contours of the abdominal wall

5. "Noise splash" in the stomach with an abdominal jerk trembling

a) 1,2,3,5 6) 2,3,4,5 c) 1,2,3,4,5 g) 1,2,4,5 D ), 1.3.4, 5

7. CONSEQUENCES OF VIOLATION OF THE WATER-ELECTROLYTE BALANCE IN DECOMPENSIATED STENOSIS MAY BE:

1. Decrease in the volume of the circulating fluid

2. Clotting of blood and "centralization of the circulation"

3. Hypokalemia

 4. Hypochloremia

5. Metabolic alkalosis

a) 1,2, 3,4 6) 1,3,4,5 c) 2,3,4, 5 g) 1, 2, 5 D) 1,2,3,5

8. DIFFERENTIAL DIAGNOSIS BETWEEN PILORODOODODENAL STENOSIS AND CANCER OUT OF THE STOMACH IS BUILT ON:

1. Anamnesis of the disease

2. X-ray examination data

3. Results of the endoscopic study

4. Morphological study of gastrobioptates

5. The data of ultrasound

a) 1,2,3,4 6) 2,3,4,5 c) 3,4 d) 1,2,3,5 D) 3 ,4,5

9. Preoperative preparation of seriously ill patients with gastroduodenal stenosis should include

1. Treatment of volemic disorders

 2. Parenteral nutrition providing a daily requirement for calories

3. Antiulcer therapy

4. Systematic decompression of the stomach

5. Enteral feeding

a) 1,2 , 3.4 6) 1,2,3 c) 1,2,3,4,5 g) 1,2,4,5 D) 2,3,4,5

10. When a patient with a diagnosis of "gastric bleeding" arrives:

1. The source of bleeding

2. The course of the complication

 3. The severity of hemorrhage

 4. Determine the long-term prognosis

a) 1, 2, 5 b) 2, 3, 5 c) 1, 2, 3.4 g) 1.3.4, 5 D) 1,2,3,4,5

**9. SITUATIONAL TASKS**

Task 1. patient, 25 years old, entered the clinic with a diagnosis of gastrointestinal bleeding. From the patient's questioning, it became clear that five days ago he suddenly had a black chair, and on the eve of his arrival there was a brief loss of consciousness. There is no ulcerative anamnesis. When the patient's condition is severe. She notes weakness, malaise and dizziness. The skin is pale. Pulse 110 bpm, rhythmic, satisfactory filling. Blood pressure 100/50 mm Hg. Art. Нв = 40 units. The abdomen is soft and painless when palpated. The liver and spleen are not probed. With an emergency gastroscopy and duodenoscopy, as well as a radiographic study with a barium suspension, no abnormal changes in the stomach in the duodenum were detected. There are signs of continued bleeding despite blood transfusion and haemostatic therapy. Question:

1. Tactics of the surgeon?

Task 2. patient, 46 years old, entered the clinic with a diagnosis of gastrointestinal bleeding. 2 days before the receipt, vomiting suddenly a scarlet blood with clots, and on the eve there was a copious tarry stool. Previously, such bleeding was not noted. 5 years ago, the patient suffered Botkin's disease, for which he was treated in an infectious disease hospital. Smokes, alcohol uses moderately. At admission, the patient is of moderate severity. Pale. Pulse 100 bpm, rhythmic, satisfactory filling. Blood pressure 100/30 mm Hg. Art. Нв = 56 units. Hematocrit 35. The abdomen is soft and painless when palpated. The liver and spleen are not probed. Questions:

 1. A presumptive diagnosis?

2. Plan for emergency examination of the patient?

Task 3. In the emergency room, an ambulance was delivered patient, 70 years old, in serious condition with a diagnosis of gastric bleeding. With an emergency gastroscopy, an acute ulcer was found on the anterior wall of the antral part of the stomach. The patient is pale. Pulse 110 bpm, rhythmic, weak filling. Blood pressure 90/60 mm Hg. Art. Нв = 40 units. Conducted hemostatic therapy and local hypothermia of the stomach effect did not. Given the ongoing bleeding, the patient decided to operate. Upper-median laparotomy was performed. When examined and palpated, no ulcers were found. After gastrotomy, an acute ulcer was found on the anterior wall of the antral part of the stomach 1X0.5 cm in size with an arsenized vessel. Question: 1. Your further tactics?

Task 4. patient, 45 years old, entered the clinic with a diagnosis of gastrointestinal bleeding. A day before the admission, the patient suddenly began vomiting abundantly with blood. In the reception room was a copious tarry stool. From the anamnesis it was found out, that the patient suffers a cirrhosis of a liver. The condition of the patient is of moderate severity. Pulse 100 bpm, rhythmic, satisfactory filling. Blood pressure 110/50 mm Hg. Art. Нв = 50 units. In an emergency radiographic study with a barium suspension, varicose veins of the esophagus and cardiac stomach were found. After fluoroscopy, the patient again had vomiting bloody.

Question: 1. Tactics of the surgeon?

Task 5.

patient, 40 years old, entered the clinic with a diagnosis of gastrointestinal bleeding. 3 days before admission appeared tarry stool. From the anamnesis it is known that the patient suffers from a peptic ulcer of the duodenum for 10 years. The general condition of the patient is severe. The skin is pale. Pulse 100 bpm, rhythmic, satisfactory filling. Blood pressure 100/70 mm Hg. Art. Нв = 50 units. Hematocrit 30. In the finger examination of the rectum, stool of a tar-like species was found.

Questions: 1. What research should be done to clarify the diagnosis?

2. Tactics of the surgeon with the diagnosis?

 DEPARTMENT OF FACULTY SURGERY

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 GUIDELINES

for 4th-year students to laboratory work in the specialty "Medicine", the discipline "Faculty Surgery, Urology", the module "Faculty Surgery"

 Lesson # 11

 Section 4 "Diseases of the digestive system"

 Topic № 4.3 "ACUTE and CHRONIC APPENDICITY" »

**1. LENGTH OF ACTIVITY in the academic is 6 hours**

 **2. TOPICALITY OF THE TOPIC**:

 Acute appendicitis is one of the most common acute surgical diseases of the abdominal organs. Diagnosis of it is fraught with many difficulties, since this disease in its development has much in common with a number of acute diseases of the abdominal cavity and retroperitoneal space. Therefore, the problem of treating this disease remains relevant until now. In addition, correctly chosen tactics of conducting such patients is one of the main tasks facing a practical doctor, as it allows to recognize complications of acute appendicitis in time,

**3.AIM AND TASKS OF THE SESSION:**

To learn the diagnosis of clinical manifestations of acute and chronic appendicitis in typical and atypical flow, examination, basic laboratory and instrumental methods of research, differential diagnostics with other diseases, choice of medical tactics and methods of opera treatment in uncomplicated and complicated acute appendicitis.

* Know :

- the surgical anatomy of the right iliac region and ileocecal intestine. Atypical positions of the appendix.

- the etiology and pathogenesis of acute and chronic appendicitis: a) stagnation theory b) angioneurotic theory c) infectious theory d) connection with angina e) connection with spasm of the bauhinia flap e) the role of helminthic invasion g) the role of foreign bodies

 - the classification of acute appendicitis.

- the classification of chronic appendicitis.

 - the clinic and the course of acute and chronic appendicitis.

- the tactics of the surgeon in acute and chronic appendicitis (indications for surgical intervention, relative contraindications).

- the technique of appendectomy surgery.

* To be able to:

1. distinguish macroscopically the forms of acute appendicitis (simple, phlegmonous, gangrenous, perforated).

2. determine the main symptoms of acute appendicitis: Rovzinga, Sitkovsky, Obraztsov. To know what is indicated by the tension of the muscles of the abdominal wall and the symptom of Shchetkin-Blumberg in acute appendicitis.

3. differentiate acute and chronic appendicitis.

4. conduct a differential diagnosis of acute appendicitis with other diseases of the abdominal cavity: stomach diseases (acute gastritis, food poisoning, stomach ulcers and duodenal ulcers with and without perforation); bile ducts (cholelithiasis, acute cholecystitis); with acute pancreatitis, with some other bowel diseases (enterocolitis, acute intestinal obstruction, cancer of the cecum); urolithiasis; pathology of the genitals (acute adnexitis, ovarian apoplexy, ectopic pregnancy).

5. conduct a differential diagnosis of chronic appendicitis with other diseases of the abdominal cavity organs: chronic gastritis, peptic ulcer, chronic cholecystitis, cholelithiasis, chronic colitis, helminthic invasion, chronic adnexitis, urolithiasis.

6. determine the signs of periapendicular and pelvic abscesses and to know the methods of their treatment.

7. To have an idea about the peculiarities of the clinical picture of acute appendicitis and surgical tactics:

* with retrostecal position of the appendage
* with the pelvic location of the appendix
* with the medial location of the process
* in the elderly
* in childhood
* in the pregnant

8. To have an idea of ​​the complications of acute appendicitis: perforation process, abscesses (pelvic, intestinal, subdiaphragmatic), widespread peritonitis and pylephlebitis.

9. To have an idea of ​​pathogenesis, morphological substrate, clinical picture and tactics of treatment of appendicular infiltrate.

10. Have an idea of ​​the tactics of the surgeon in the complication of acute appendicitis.

11. Have an idea of ​​the patient's postoperative management after appendectomy, postoperative complications and measures to combat them.

**4 .. EQUIPMENT OF THE SESSION:**

 Anatomical atlas with the section "Organs of the abdominal cavity", drawings and table on the topic, educational film, slides.

**5. CONTENTS OF THE TOPIC**:

Anatomical and physiological information. Acute appendicitis. Classification. Pathoanatomical forms. Etiology, pathogenesis. Clinic and diagnostics. Features of the clinic, depending on the version of the position of the appendix. Acute appendicitis in children, pregnant and elderly. Treatment, indications and contraindications to appendectomy, choice of method of anesthesia and operative access. Preparation of patients for surgery, management of the postoperative period. Complications of acute appendicitis: appendicitis infiltrate, periapendicular abscess, interintestinal, subdiaphragmatic and pelvic abscess, pylephlebitis. Clinic of various complications: their diagnosis (ultrasound, CT, etc.) and treatment (surgical, ultrasound method of abscess drainage). Peritonitis as a complication of acute appendicitis. Features of surgical intervention depending on the prevalence of peritonitis. Indications for laparostomy, technique and management of the patient in the postoperative period. Chronic appendicitis. Classification. Clinic, diagnostics, differential diagnostics. Indications and contraindications to surgical treatment. Features of diagnosis and treatment in children.

6. **BASIC KNOWLEDGE**, SKILLS, Experiences,

REQUIRED FOR STUDYING THE Topic:

|  |  |  |
| --- | --- | --- |
|  Previously studied disciplines |  Know | Be able to |
| 1. Previously studied disciplines |  |  |
| Anatomy | Know the surgical anatomy of the right iliac region and ileocecal intestine. Atypical positions of the appendix. | Apply this knowledge to practice. |
| Normal physiologyPathanatomy | Place of appendix in the immunity system. Physiology of digestionAnatomy of the inflammatory process | Explain the forms of appendicitis |
| Pathophysiology Biochemistry | Physiology of inflammation. Interpretation of biochemical processes | analyze the results.   |
| Propaedeutics of internal diseases. Propped. Surgical. Diseases | Scheme examination of the patient. Semiotics of diseases. | Conduct a postdiromy diagnosis of diseases. To conduct clinical, laboratory, instrumental diagnostics of the disease. Carry out differential diagnostics. |

**7. Tasks for independent work during the preparation for the lesson:**

7.1 To the lesson with the aim of increasing its effectiveness, students should work out the following educational-purpose questions and know:

1. Surgical anatomy of the right iliac region and ileocecal intestine. Atypical positions of the appendix.

 2. Etiology and pathogenesis of acute and chronic appendicitis.

3. Classification of acute appendicitis.

4. Classification of chronic appendicitis.

 5. Clinic and course of acute and chronic appendicitis

6. Tactics of the surgeon for acute and chronic appendicitis (indications for surgical intervention, relative contraindications).

7. The technique of the operation of appendectomy

8. Complications of acute appendicitis

9. Clinic of the apendic infiltrate.

10. Clinic and diagnosis of abscesses of the subdiaphragmatic and Douglas spaces

11. Postoperative complications.

**7.2 Theoretical questions to the lesson**

1. The role of the ileocecal valve in the simulation of the acute appendicitis clinic in the left colon tumor?

 2. Features of acute appendicitis with medial location of the appendix

3. Phlegmon of the retroperitoneal space due to acute appendicitis develops at what location?

4. What distinguishes acute appendicitis and perforation of the ulcer

 5. What matters in the differential diagnosis of acute appendicitis and acute gynecological diseases have

 6. Pain in acute appendicitis often can not be localized in the right iliac region due to what?

 7. What complications can be expected in the first day after appendectomy?

8. What are the symptoms of acute appendicitis?

9. What is decisive in the differential diagnosis of acute appendicitis with impaired ectopic pregnancy?

10. What is the contraindication to emergency appendectomy?

11. What is the optimal length of cutaneous incision during appendectomy in an adult?

12. What access does an appendectomy perform for a typical picture of acute appendicitis?

13. What is the main symptom that allows you to diagnose the pelvic location of a sore appendicitis?

14. With coca form of acute appendicitis, the development of pylephlebitis is most likely?

15. For what form of inflammation of the appendix is ​​characteristic of its thickening with superposition of fibrin on the serous cover?

16. What are the causes of fistula development after appendectomy?

**7.3. PRACTICAL SKILLS:**

 After studying the topic, the student should be able to:

1. Distinguish macroscopically the forms of acute appendicitis (simple, phlegmonous, gangrenous, perforated).

 2. To master the main symptoms of acute appendicitis: Rovzinga, Sitkovsky, Obraztsov. To know what is indicated by the tension of the muscles of the abdominal wall and the symptom of Shchetkin-Blumberg in acute appendicitis.

3. Differentiate acute and chronic appendicitis.

4. Carry out a differential diagnosis of acute appendicitis with other diseases of the abdominal cavity: stomach diseases (acute gastritis, food poisoning, stomach ulcers and duodenal ulcers with and without perforation); bile ducts (cholelithiasis, acute cholecystitis); with acute pancreatitis, with some other diseases of the intestine (enterocolitis, acute intestinal obstruction, cancer of the cecum); urolithiasis; pathology of the genitals (acute adnexitis, ovarian apoplexy, ectopic pregnancy).

5. Carry out a differential diagnosis of chronic appendicitis with other diseases of the abdominal cavity: chronic gastritis, peptic ulcer, chronic cholecystitis, cholelithiasis, chronic colitis, helminthic invasion, chronic adnexitis, urolithiasis.

 6. Determine the signs of periapendicular and pelvic abscesses and know the methods of their treatment.

**8. multiple choice**

1 Which of the symptoms are typical of a typical clinic for acute appendicitis?

1. Symptom Kulenkampff

2. Symptom Bartomeu-Michelson

3. Symptom Mayo-Robson

 4. Symptom Sitkovskiy

5. Symptom Promptova

2 Which treatment is acceptable in acute appendicitis?

1. Cleansing enema

 2. Antibiotics

3. Coldness on the abdomen

 4. Spasmolytic agents

5. Emergency surgery

3 What complications are observed after appendectomy in the early postoperative period (1-2-3 days after the operation)?

 1. Bleeding

2. Postoperative paresis of the intestine

 3. Infiltration of the anterior abdominal wall

 4. Abscess of the anterior abdominal wall

5. Acute retention of urine

4 What is the beginning of the disease characteristic of appendicitis?

 1. Acute sudden onset of pain

 2. Daggerache in the abdomen

3. Gradual increase in pain in the right iliac region

4. Aching pain in the epigastric region

 5. Tinea in the upper abdomen

5 Name the most typical irradiation of pain in the caudal arrangement of the appendix.

1. Irradiation in the back

2. Irradiation into the rectum

3. Irradiation in the right leg

4. Irradiation to the right hypochondrium

5. Irradiation into the lumbar region

 6 What is the most probable localization of pain in retro-vascular location of the appendix?

 1. Triangle Petit

2. Right mesohastral area

3. Right iliac region

4. Right hypochondrium

 7 What position is typical for a patient with acute appendicitis?

1. Position on the back with legs bent in the knee and hip joints

 2. Sharp motor excitement

 3. Symptom "Vanka-vstanka"

4. Position on the left side

5. Elbow-knee position

 8 What are the surgical approaches used for appendectomy?

1. Lower-midline laparotomy

 2. Winkelmann incision

 3. Fedorov's incision

4. Mac-Burniei incision (Volkovich-Dyakonova)

5. Pararectal incision

 9 What are the possible variants of the end of the operation with a reflexively altered process.

1. Abdominal suturing tightly

2. Immediate introduction of antibiotics

3. Removal of micro-irrigator

4. Leaving tampons

5. Leaving the drainage glove rubber

 10 What are the indications for draining the abdominal cavity with destructive appendicitis.

1. Local serous peritonitis

2. Diffuse purulent peritonitis

3. Infiltration of the dome of the cecum

 4. Undefined focus of destruction

5. Phlegmonous appendicitis without signs of destruction

 11 Name the most appropriate types of drainage used to drain the abdominal cavity.

 1. Gauze drainage-tampon

2. Rubber tube

3. Silicone tubes

 4. Glove rubber

 5. Micro-irrigator

 12 When examined at the reception room, the patient is diagnosed with an appendicular infiltrate. Your actions?

 1. Emergency operation

 2. Conservative treatment for 15-20 days

3. Let go home under the supervision of a local doctor

4. Delayed operation without discharging the patient from the hospital

5. Draining of the abdominal cavity

 13 With what diseases it is necessary to differentiate acute appendicitis at the pelvic location of the appendage.

1. Acute gonorrhea in women

 2. Dysentery

3. Acute enterocolitis

 4. Right-sided salpingitis

 5. Lower-lobe pneumonia on the right

 14 Which of the additional survey methods most help in diagnosing acute appendicitis?

 1. Overview of the abdominal cavity

2. Cholecystography

 3. Clinical blood test

4. Leukocyte intoxication index

 5. Urinalysis

6. Rectal and vaginal examination

 15 During the laparotomy, the doctor discovered a simple appendicitis. What is the next tactic? Abdominal closure is tight

1. Introduction of antibiotics into the abdominal cavity

2. Revision of 1 meter of the ileum

3. Inspection of the appendages and uterus

4. Inspection of the gallbladder and stomach

5. Catheterization of the bladder

6. Appendectomy

 DEPARTMENT OF FACULTY SURGERY

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 GUIDELINES

for 4th-year students to laboratory work in the specialty "Medicine", the discipline "Faculty Surgery, Urology", the module "Faculty Surgery"

 Lesson # 12

 Section 4 "Diseases of the digestive system"

 Topic №4.4 "Acute intestinal permeability. ACTUAL ISSUES OF

 DIAGNOSIS AND TREATMENT "

**1. LENGTH OF ACTIVITY in academic is 6 hours.**

 **2. TOPICALITY OF THE TOPIC:**

 Acute intestinal obstruction (AIO) is a condition characterized by a violation of passage (passage) of intestinal contents in the direction from the stomach to the anus. AIO does not represent any separate nosological form, being a complication of a variety of diseases: external abdominal hernias, intestinal tumors, cholelithiasis, etc. But, having arisen, this pathological state proceeds through a single "scenario", causing intoxication and water-electrolyte disorders, accompanied by typical clinical manifestations. In this regard, diagnostic and therapeutic tactics are largely unified in the case of a non-intrinsic obstruction. That is why it is traditionally considered especially, like a variety of surgical diseases, both in the scientific and educational literature, and in medical statistics.

 **3. THE PURPOSE AND OBJECTIVES OF THE SESSION:**

Purpose: Recognition of the main classical manifestations of the disease, diagnosis of acute intestinal obstruction, treatment.

**Objectives:**

1. Based on knowledge of anatomy, physiology, pathological anatomy and pathological physiology, students should be educated about the etiopathogenesis of various forms of AIO and its complications.

 2. To teach the students the methods of examination of surgical patients with suspicion of AIO.

3. To familiarize students with clinical boards, diagnostics and differential diagnostics of various forms of AIO.

 4. Show the value of traditional and modern methods of diagnosis and treatment of OKH.

* Know 1. Classification of AIO

2. Know the procedure for examining patients with OCS

 3. Characteristic symptoms of Acute intestinal permeability (pain, nausea, vomiting, stool and gas retention, intoxication)

 4. Know the clinical picture of acute dynamic obstruction of the intestine: for intestinal tumors, for foreign bodies , with spikes

5. To know the clinical picture of invagination

6. To know the tactics of the surgeon in case of dynamic and mechanical intestinal obstruction

7. To know the methods of conservative treatment of dynamic intestinal obstruction

* To be able.

1 . Conduct an overview radiograph of the abdominal cavity and know its typical Rlogic features.

 2. Carry out a differential diagnosis between dynamic and mechanical intestinal obstruction

3. Carry out a differential diagnosis between total and partial obstruction.

4. Evaluate the patient's condition according to the biochemical blood test.

5. Undertake preoperative preparation for intestinal obstruction.

6. Determine the indications for urgent intervention with intestinal obstruction.

**4. EQUIPMENT OF THE SESSION:**

Anatomical atlas, drawings and table on the topic, educational film, slides, radiographic shots.

**5. CONTENTS OF THE TOPIC**:

 Definition of the concept. Classification (by origin, pathogenesis, anatomical localization, clinical course). Methods of studying patients. The concept of congenital intestinal obstruction, atresia.

Pathological anatomy, pathogenesis, clinic, diagnostics, differential diagnostics. Principles of surgical treatment.

Mechanical intestinal obstruction: Obturation, strangulation, mixed. Classification of mechanical intestinal obstruction. Obturation intestinal obstruction - causes, pathogenesis, peculiarities of water-electrolyte and acid-alkaline disturbances. Clinic, diagnosis, differential diagnosis. Operative treatment.

Strangulation intestinal obstruction: Definition of concept, classification, clinic of various types. Differential diagnosis. Types of operations, indications for bowel resection.

 Dynamic intestinal obstruction: Etiology. Pathogenesis. Dynamic intestinal obstruction as a symptom of acute diseases of the thoracic, abdominal and retroperitoneal organs, chronic intoxications. Clinic, differential diagnosis. Principles of treatment. Invagination: Definition of the concept.

 Types of intussusception. Causes. Pathogenesis.

 Invagination as a set of obturation and strangulation intestinal bowel obstruction. Clinic. Diagnosis, differential diagnosis.

 Types of operation. Indications for disinvagination and bowel resection. Preoperative preparation and maintenance of the postoperative period in patients with acute intestinal obstruction.

 Combating intoxication, intestinal paresis, hydroionic disorders, changes in the acid-base state.

6. **BASIC KNOWLEDGE**, SKILLS, Experiences,

REQUIRED FOR STUDYING THE Topic:

|  |  |  |
| --- | --- | --- |
|  Previously studied disciplines |  Know | Be able to |
| 1. Previously studied disciplines |  |  |
| AnatomyNormal physiology | Topographical and anatomical location of abdominal organs; Innervation and blood supply of the intestine..Function of the intestine. Physiology of digestion | analyze the results |
| Pathophysiology Biochemistry Pathanatomy | Physiology of inflammation. Interpretation of biochemical processes Pathogenesis of intestinal obstruction | to interpret the results of a patient's examination |
| Propaedeutics of internal diseases | Scheme examination of the patient. Semiotics of diseasesConduct a postdiromy diagnosis of diseases. | To conduct clinical, laboratory, instrumental diagnostics of the disease. Carry out differential diagnostics |
| Pharmacology | Preparations used in the treatment of acute intestinal obstruction | to prescribe medication stimulation of the intestine |

**7. Tasks for independent work during the preparation for the lesson:**

7.1 The student should know the lesson:

1. Anatomy and physiology of the intestine

 2. Etiology and pathogenesis of the AIO

3. Classification of AIO

4. Symptoms AIO

5. Indications for surgical treatment and conservative therapy AIO

 6. To have an idea about the methods of surgical treatment AIO.

7.2. Theoretical questions of the topic:

1. What is used to eliminate the "stagnation" in Hirschsprung disease?

2. When conservative treatment of acute intestinal obstruction is used?

 3. What kind of obstruction is the inversion of the intestine?

 4. In the study of a patient with acute intestinal obstruction, positive symptoms of Cape Manteuffel and Obukhov Hospital were established. For what type of obstruction is this characteristic?

 5. What kind of pain is typical for obturation intestinal obstruction?

 6. What are the indications for surgery with dolichosigma?

 7. What are the X-ray signs of acute intestinal obstruction?

 8. What can be the result of dynamic intestinal obstruction?

9. What are the main clinical symptoms of obturation bowel obstruction? 10. What kind of obstruction is invagination?

11. What kind of surgery is indicated for nodulation, bowel entrapment and twisting?

12. How much should we deviate from the border of necrosis with the non-viable loop of the small intestine?

13. What kind of obstruction can be a spotting from the rectum?

14. Than is more often caused a colonic obturation obstruction?

15. What promotes the development of strangulation intestinal obstruction? 16. What is the main cause of paralytic intestinal obstruction?

17. How to treat paralytic intestinal obstruction? 18. Where is the most frequently localized invagination?

19. What explains the appearance of "splash noise" in acute intestinal obstruction?

20. What are the signs of non-viability of the intestine in acute intestinal obstruction?

 21. From what layer do necrotic changes in the wall of the strangulated intestine begin?

**7.3 PRACTICAL SKILLS:**

 1. Valya's symptom.

2. Symptom of Shimana-Dance.

3. Thevenier's symptom.

4. Symptom Sklyarov ("noise of splashing").

5. Symptom of Kivul ("a symptom of a balloon").

 6. Symptom of "falling drop" and "bursting bubbles".

7. A symptom of the Obukhov hospital.

8. Symptom of Tsege Manteifel.

9. Interpretation of clinical and biochemical blood tests.

 10. Interpretation of fluoroscopy and X-ray diffraction data.

11. The technique of setting siphon enemas.

12. Interpretation of clinical and biochemical parameters of blood (hemoconcentration, high hematocrit, growth of urea, indices, bilirubin, glucose, decrease in protein, chloride content), acid-base and electrolyte balance.

13. Reading and interpretation of radiographs: the presence of "Clauber Bowls" on the overview roentgenograms, filling of the intestine with contrast by oral intake (passage of barium) - with intestinal obstruction and through the rectum (irrigoscopy, graphia) - with colonic.

14. The technique of setting siphon enemas.

**8. multiple choice**

1. The most informative method for the early diagnosis of acute intestinal obstruction is one of the following:

a) a review of fluoroscopy of the abdominal cavity;

b) laparoscopy;

c) irrigoscopy

d) ultrasonography of the abdominal cavity;

 e) Colonoscopy.

2. The effect of conservative treatment is most likely in the following types of acute intestinal obstruction:

1) turning of the small intestine;

 2) nodulation between the loop of the small and sigmoid colon;

3) spastic intestinal obstruction;

 4) traumatic paresis of the intestine;

 5) coprostasis.

Choose the correct combination of answers:

 a) 1,3,4; b) 1,3,5; c) 2.4.5; d) 3,4,5; D) 1.2.

3. Clinical signs of strangulation intestinal obstruction are:

 1) permanent pain in the abdomen;

 2) a single vomiting;

3) repeated vomiting;

4) cramping pain in the abdomen;

5) a positive symptom of "splash noise".

Choose the correct combination of answers:

a) 1,2; 6) 1.4.5; c) 2,3,5; d) 3,4,5; D), 2,3,4.

4. In the early period of the disease in acute intestinal permeability in the patient's body develops:

1) hyperkalemia;

2) dehydration;

3) decrease in hematocrit;

4) increased hematocrit;

5) hypokalemia.

 Choose the correct combination of answers:

 a) 1,2,3; b) 1,3,5; c) 2.4.5; d) 2.3.5; D) 1.4.5.

5. For obturative intestinal obstruction, the following symptoms are pathognomonic:

 1) persistent abdominal pain;

 2) cramping pain in the abdomen;

3) vomiting of coffee grounds;

4) bloating;

5) Westernization of the epigastric region.

Choose the correct combination of answers:

a) 1.4; b) 1,3,5; c) 2,4; d) 2.3.5; D) 2,3,4,5.

 6. The decisive methods of research in the diagnosis of "acute intestinal obstruction" are:

 1) a survey of the abdominal cavity;

2) study of the passage of barium in the intestine;

 3) esophagogastroduodenoscopy;

4) laparoscopy;

5) determination of plasma electrolytes.

Choose the correct combination of answers:

a) 1,2,3; b) 2,4,5; c) 1,2; d) 2.3; D) 1.4.5.

7. Cramping abdominal pains are observed with the following acute diseases of the abdominal cavity organs:

1) intestinal non-permeability, caused by obturation of the lumen of the transverse colon by the tumor;

2) paralysis of the small intestine, caused by operative intervention on the aorta;

3) turning the small intestine;

4) fatty pancreatic necrosis;

5) intussusception of the small intestine into the blind.

Choose the correct combination of answers:

a) 2.5; b) 3,4; c) 1.3.5; d) 1,2,4,5; e) for all of the listed diseases.

8. In the following form of intestinal obstruction, spotting from the rectum can be observed:

 a) paralytic;

 b) spastic;

c) Invagination;

 d) turning the small intestine;

e) intestinal infarction.

9. Conservative treatment of acute intestinal obstruction is used in the following cases:

1) bloat;

2) nod formation;

3) spastic obstruction;

 4) paralytic obstruction;

5) coprostasis.

Choose the correct combination of answers:

a) 1,3,5; b) 2,3,5; c) 3,4,5; d) 2.4.5; D) 1.4.5.

10. When choosing therapeutic tactics in a patient with acute intestinal non-transmission, they are guided by:

1) the type of obstruction;

 2) localization of the level of obstruction;

3) the presence of peritoneal symptoms;

4) the intensity of peristalsis;

 5) intensity of pain.

Choose the correct combination of answers:

a) 1.4; d) 4.5; b) 2.5; e) 1,2,3. c) 3,4;

**9. Situational challenges**

1) Patient E., 17 years old, worked all day without food, worked on the field, and in the evening, when he returned home, he had plenty of supper. At night I woke up from sudden strong pains in the abdomen, more in the navel. A year ago he underwent surgery for acute appendicitis. When examined in the waiting room, the patient is restless, moans. Blood pressure 90/70 mm Hg. Art. Pulse - 124 per minute. The tongue is dry. The abdomen is irregular in shape, with a soft palpation, the intensified peristalsis of the intestine is heard, the noise of "splashing" is determined. Rectal examination painless.

 1. What is your presumptive diagnosis?

2. Evaluation of anamnestic data?

3. Additional survey methods?

 4. Treatment plan?

2) Patient 62 years old, was taken to the surgical department by an ambulance doctor with a presumptive diagnosis "Acute intestinal obstruction". In the last two months, he has noticed constipation, bloating, mucus and traces of blood in the feces. 12 hours ago there were cramping pains in the abdomen, nausea, abdominal distention sharply increased, gases ceased to flow away. At admission, the tongue is moist, the stomach is evenly inflated, percussion - tympanitis, auscultatory - intestinal noises are strengthened. With sigmoidoscopy, a tumor is found that sharply stenoses the lumen of the sigmoid colon.

1. What is your diagnosis?

2. Evaluation of anamnestic data?

3. Proposed actions?

3) 39-year-old patient, suffering for 4 years with attacks of adhesive obstruction, is operated for acute intestinal obstruction. The surgeon shared a significant amount of fusion, peritoneziruval deserosized areas of the intestine and abdominal wall.

What else should I do to prevent re-adhesion of the intestinal obstruction? To prevent recurrent acute adhesive intestinal obstruction, the intestine should be ligated with a naso-intestinal probe.

4) During the operation, patient N., 82 years old, because of acute intestinal obstruction, was found to be caused by a gallstone with dimensions of 6x4 cm, an acorniform shape. The gut is swollen, draining in a collapsed condition.

1. What form of intestinal obstruction in the patient?

 2. What is the mechanism of the entry of gallstone into the lumen of the intestine?

 3. Additional diagnostic methods in this case?

4. Tactics of treatment?

 5) A 42-year-old patient entered the clinic with complaints of acute abdominal pain that arose 2 hours ago, frequent urge to vomit. There is no chair, the gases do not depart. Disturbed, loud screams. The abdomen is bulged more in the upper half, peritoneal symptoms are questionable. Above and to the left of the navel, the ovoid form is defined by the formation of a densely elastic consistency. Radiographically, numerous levels of the Kloyber bowl are revealed.

 1. What is your diagnosis?

2. Plan for additional study of the patient?

 3. Therapeutic tactics?

 DEPARTMENT OF FACULTY SURGERY

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 GUIDELINES

for 4th-year students to laboratory work in the specialty "Medicine", the discipline "Faculty Surgery, Urology", the module "Faculty Surgery"

 Lesson # 13

 Section № 4 "Diseases of the digestive system"

 topic number 4.5 "Gland-Stomach Disease. ACUTE AND CHRONIC

 CHOLECYSTITIS "

**1. DURATION OF THE SESSION in academic 6 hours.**

**2. TOPICS OF THE TOPIC:**

At present, there is a significant increase in the number of patients with diseases of the gallbladder and bile ducts. According to Shalimov AA, 40% of the population after 40 years is subject to this disease. Early detection and sanitation of such patients significantly reduces the risk of serious complications. One of them is acute cholecystitis, which takes 2nd place in frequency in urgent surgery. Currently, thanks to the introduction of new technologies, the possibilities of diagnostics and surgical interventions, which are minimally invasive, have been expanded: ultrasound examination of the biliary system and drainage according to the indication of the gallbladder under the supervision of ultrasound; endoscopic retrograde cholangiography and endoscopic retrograde papillotomy with possible removal of choledocha calculi. With purulent cholangitis, the installation of nasobiliary drainage; diagnostic laparoscopy and laparoscopic cholecystectomy.

**3. THE PURPOSE AND OBJECTIVES OF THE SESSION:**

 Purpose. The general goal of the practical lesson: on the basis of knowledge of the anatomy of the biliary system, the physiology of biliary excretion, the concept of etiology, pathogenesis, pathological anatomy, cholecystitis clinic, to teach students the method of examining a patient with cholecystitis, methods of diagnosing this disease, including differential diagnostics, the basics of constructing a clinical diagnosis, and also acquaint them with the tactics of the doctor in cholecystitis and its complications. Specific objectives of the lesson: to teach students the ability to diagnose a disease and determine therapeutic tactics based on:

a) analysis of complaints and anamnestic data;

 b) evaluation of methods of objective, clinical and special research methods;

 c) differential diagnosis.

**Objectives:**

 To teach the students how to recognize the GSD, its basic classical manifestations, diagnosis and treatment.

* To know

 1.What is the definition of the "clinical diagnosis" of GSD and acute cholecystitis?

2. Classification of the disease

3. Etiology and pathogenesis of the GSD and its complications.

4. How to determine the severity of the patient's condition in acute cholecystitis.

 5. Standard of diagnosis and treatment of breast cancer.

* To be able:

 1. To be guided in complaints of the patient for definition of a place of localization of pathological process.

 2. Use the basic physical methods of examining the patient to establish the diagnosis of the disease.

3. Draw up a plan for examining the patient to confirm the diagnosis of the disease.

4. Determine the severity of the patient's condition according to clinical criteria (APACHE scale, SAPS).

 5. Determine the therapeutic tactics for surgical disease.

 3**. EQUIPMENT OF THE SESSION:** Anatomical atlas with the section "Organs of the abdominal cavity", drawings and table on the topic, educational film, slides.

**4. CONTENTS OF THE TOPIC:** Etiology and pathogenesis. Clinic, diagnosis, conservative and surgical treatment. Extracorporeal lithotripsy, drug dissolution of stones. Laparoscopic cholecystectomy, from the mini-access. Complications: choledocholithiasis, cicatricial stenosis of the OBD, stricture of the ducts. Diagnosis (preoperative and intraoperative). Treatment. Indications for operations on choledocha and methods for its completion (hollow suture of choledochus, external drainage, supraduodenal choledochitis, transduodenal papillosfinkterotomy). Endoscopic papillotomy. Complications of acute cholecystitis: peritonitis, empyema of the bladder, cholangitis. Clinic, diagnosis and treatment of complications. Forecast. Features of diagnosis and treatment in children.

6. **BASIC KNOWLEDGE**, SKILLS, Experiences,

REQUIRED FOR STUDYING THE Topic:

|  |  |  |
| --- | --- | --- |
|  Previously studied disciplines |  Know | Be able to |
| 1. Previously studied disciplines |  |  |
| AnatomyNormal physiology | Conditional division of the abdominal cavity into 9 anatomical regions;Topogaphy-anatomicalArrangement of abdominal cavity organs; Innervation and blood supply of the gallbladder and liver.Function of the liver and gallbladder. Physiology of digestion | analyze the results |
| Pathophysiology Biochemistry Pathanatomy  | Physiology of inflammation. Interpretation of biochemical processes Pathogenesis of Liver Cancer and Acute Cholecystitis. | analyze the results of the survey. |
| Propaedeutics of internal diseases | Scheme examination of the patient. Semiotics of diseases | Conduct a postdiromy diagnosis of diseases. To conduct clinical, laboratory, instrumental diagnostics of the disease. Carry out differential diagnostics |
| Pharmacology | Drugs used in the treatment of GSD | prescribe treatment at GSD. |

**7. REQUIREMENTS FOR INDEPENDENT WORK DURING THE PREPARATION FOR THE ACTIVITY:**

7.1 To the lesson the students should work out the following educational-purpose questions and

* know:

 1. Anatomy of the bile extraction organs.

2. classification of cholecystitis.

3. etiology and pathogenesis of calculous cholecystitis.

 4. classification of forms of acute cholecystitis.

5. Complications of calculous cholecystitis.

6. Symptoms of different forms of acute cholecystitis and its complications.

 7. indications for surgical treatment

8. to have an idea of ​​the options for surgical treatment of a patient with acute cholecystitis and its complications

7.2 Theoretical questions for the lesson:

1. What is the use of intraoperative cholangiography for cholecystectomy?

2. What are the symptoms of gallbladder perforation?

3. What promotes stone formation in the gallbladder?

4. What is the most common laparoscopic operation for cholelithiasis?

5. What are the indications for a special intraoperative examination of the biliary tract?

6. When there is an enlarged painful gallbladder, positive symptoms of Ortner, Obraztsov, Murphy, Kerr?

7. What usually leads to acute cholecystitis?

8. What is the main method for the study of patients with uncomplicated cholecystitis?

9. How much is the width of the choledocha normal?

10. How to treat a patient with jaundice on a background of choledocholithiasis?

 11. What methods are used to detect choledocholithiasis?

12. What complications are possible with acute calculous cholecystitis?

13. What is the most common cause of mechanical jaundice?

 14. What combination of clinical symptoms corresponds to the syndrome of Courvoisier?

 15. Which of the methods of pre-operative examination is the most informative in evaluating the pathology of the bile ducts?

16. 64-year-old patient received a clinical picture of acute calculous cholecystitis. On the second day from the moment of admission on the background of conservative therapy acute pains appeared in the right hypochondrium, which spread throughout the abdomen. On examination, the condition is severe, pale, tachycardia. The tension of the abdominal muscles and peritoneal phenomena in all its departments are noted. What complication can you think of?

17. With retrograde cholangiopancreatography, a patient with mechanical jaundice exhibited an extended stenosis of the mouth of the choledochus. Which intervention should be preferred?

18. On the 7th day after choledocholithotomy and draining along Keru drainage fell out. There are no signs of peritonitis. What are your actions? 19. What is the treatment for acute uncomplicated calculous cholecystitis? 20. What are the indications for an emergency operation with acute cholecystitis?

21. What should be done to avoid complication of cholecystectomy in conditions of infiltration?

22. During the surgery for cholelithiasis, a wrinkled gallbladder full of stones was found and the common bile duct extended to 2.5 cm. What should the patient do?

 **7.3. PRACTICAL SKILLS:**

 1. To be guided in complaints of the patient for definition of a place of localization of pathological process.

 2. Identify the symptoms of Koher, Murphy, Ortner, the point of Keh.

 3. Nasogastric drainage of the stomach

4. Make a plan for examining the patient to confirm the diagnosis of the disease.

5. Determine the severity of the patient's condition by clinical criteria (APACHE scale, SAPS).

6. Determine the therapeutic tactics for GSD.

**8. multiple choice**

1 The main factor determining the therapeutic tactics of the surgeon in acute phlegmonous cholecystitis is:

 A) Increase in temperature.

B) Prevalence of peritonitis.

C) Concomitant diseases.

D) Age of the patient.

E) Qualification of the surgeon.

2. For gangrenous cholecystitis, the following symptoms are typical:

 1. Reduction of pain.

 2. Symptom Shchetkin - Blumberg in the right hypochondrium.

3. Lack of hepatic dullness.

4. Tachycardia.

 5. Symptom of Bartome-Michelson.

 Choose the correct combination of answers:

A) 1,2,3; B) 2.3; B) 2,3,4; D) 1.2.4; D) 3,4,5.

3. In acute cholecystitis, a differential diagnosis should be made with:

 1. Acute pancreatitis.

2. A perforated ulcer of the duodenum.

3. Acute appendicitis.

 4. Right-sided pleuropneumonia.

 5. Chronic pancreatitis in the stage of exacerbation.

Choose the best combination of answers:

A) 1,2,4; B) 1,2,3; B) 2.3.5; D) 3,4,5; D) That's right.

4. The development of acute cholecystitis is promoted by:

 1. Stones in the gallbladder.

 2. Infection of the gallbladder.

3. The pounded stone of the neck of the bladder.

4. Chronic gastritis.

5. Chronic pancreatitis.

 Correct answers: A) 3,4,5; B) 2.4.3; B) 1,2,3; D) 1.2.4; D) 1.4.5.

 5. The diagnosis of acute cholecystitis can be made on the basis of:

 1. Patient's complaints.

 2. Anamnesis.

3. Ultrasonic scanning of the gallbladder and pancreas.

4. Infusion cholangiography.

5. Retrograde pancreatocholangiography.

Correct answers: A) 1,2,3; B) 2,3,4; B) 3,4,5; D) 2.4.5; D) 4.5.

6. Complications of acute cholecystitis include everything except:

A) Varicose veins of the esophagus;

B) Mechanical jaundice.

C) Cholangitis.

D) Subhepatic abscess.

E) Peritonitis.

7. The patient with gangrenous cholecystitis is shown:

A) Emergency operation.

 B) Delayed operation.

 C) Conservative treatment.

D) Operation in the absence of the effect of conservative therapy.

 E) Decision-making depends on the patient's age.

8. Advantage of performing a cholecystectomy "from the cervix" is:

 1. The conditions for the day of bloodless removal of the gallbladder are created.

2. The way of purulent bile entry into the holedoch is interrupted.

 3. It is possible to avoid migration of stones from the gall bladder to holedoch.

4. Allows to refrain from choledochhotomy.

5. Eliminates the need for intraoperative cholangiography.

Correct answers: A) 1,2,4; B) 1.3.4; B) 2.4.5; D) 1,2,3; D) 1.2.5.

 9. Acute cholecystitis can develop due to:

1. Acquisition of the infected bile in the gallbladder.

2. Stagnation of bile in the gallbladder.

3. Presence of stones in the gallbladder.

 4. Cerebrovascular artery thrombosis. 5. Duodeno-gastral reflux.

Correct answers: A) 1,2; B) 1,2,3,4; B) 2.4.5; D) 3,4,5; D) 4.5.

10. For acute catarrhal cholecystitis is characterized by everything except: A) Nausea and vomiting.

 B) Kehr's Symptom.

 C) Symptom of Murphy.

D) Muscle tension in the right hypochondrium and positive symptom of Schetkin Blumberg.

E) Symptom of Mussie.

 DEPARTMENT OF FACULTY SURGERY

                         OF THE MEDICAL FACULTY

 GUIDELINES

for 4th-year students to laboratory work in the specialty "Medicine", the discipline "Faculty Surgery, Urology", the module "Faculty Surgery"

 Lesson # 14

 Topic # 4 "Diseases of the digestive system"

 topic No. 4.6 "ACUTE PANCREATITIS, PANCREONECROSIS"

**1. DURATION OF ACTIVITY in academic 6 hours**

 **2. TOPICALITY OF THE TOPIC:**

Acute pancreatitis is an enzymatic lesion of the pancreas. This process is autocatalytic in nature and often results in self-digestion of the organ. The defeat of the pancreas as a consequence of the influence of unfavorable factors can clinically manifest itself from minor pain sensations to severe enzyme shock. Among the patients, women predominate: this, apparently, is associated with a higher incidence of cholelithiasis and fat metabolism disorders in them. A significant proportion of patients are elderly and senile. In the early 80's, about 20% of patients with acute pancreatitis died, and by the end of the 1990s, up to 10%. In the last 10-15 years, the number of patients has increased by 2-3 times. This is due to increased consumption of alcohol by the population, which is one of the main reasons for the development of this disease. In most countries, 40% of patients have acute pancreatitis of alcoholic nature. The second most frequent cause of acute pancreatitis is gallbladder disease (cholelithiasis). The remaining 20% ​​are other causes: abdominal injuries, taking pancreatic drugs that are harmful to the pancreas, endocrine diseases.

**3. THE PURPOSE AND TASKS OF THE SESSION**:

Purpose. Teach students to recognize acute pancreatitis, its main classical manifestations, diagnosis and treatment.

**Objectives**:

1. Based on the knowledge of anatomy, physiology, pathological anatomy and pathological physiology, to form students knowledge of the etiopathogenesis of various forms of AP and its complications.

 2. To teach students how to examine surgical patients with suspected AP.

3. Familiarize students with the clinical manifestations, diagnosis and differential diagnosis of various forms of AP.

4. Show the value of traditional and modern methods of diagnosis and treatment of AP.

* Know

1. definition of AP

2. anatomy and topography of the pancreas

3. pancreatic physiology

4. classification of AP

5. methods for diagnosis of AP

6. clinical picture of AP

7. complications of AP

 8. differential diagnosis of AP

9. therapeutic tactics with AP

10. methods operative treatment of AP

* To be able to:

 1. Identify specific symptoms of AP

 2. Explain the appearance of enzymes in the blood and urine

3. explain the damage to other organs and systems in AP

4. analyze the data of clinical and biochemical blood tests.

. **4. EQUIPMENT OF THE SESSION**: Anatomical atlas with a section of the thyroid gland, drawings and a table on the topic of thyroid disease

 (6 items), educational film, slides.

**5. CONTENTS OF THE TOPIC**:

Anatomico-physiological information about the pancreas. Classification of diseases. Acute pancreatitis: Definition of the concept. Etiology and pathogenesis. Classification. Pathophysiology. Stages of the course (edema, necrosis, the formation of hemorrhagic foci, necrosis of the parenchyma, phlegmon, gangrene, abscess). Clinic.

Diagnosis: ultrasound, laparoscopy, CT, angiography, percutaneous puncture, enzyme diagnostics. Conservative treatment. The role of cytostatics, sandostatin. Medical endoscopy, indications for surgical treatment and types of operations. Purulent complications of acute pancreatitis, diagnosis, treatment. Abscess of stuffing bag. Outcomes of the disease. C

hronic pancreatitis: Etiology, pathogenesis of chronic pancreatitis. Classification. Clinic, diagnosis. Differential diagnostics. Special diagnostic methods: ultrasound, CT, angiography, percutaneous puncture of the gland. Treatment: conservative and surgical. Pancreatic cysts: true and false. Etiology, pathogenesis. Clinic. Diagnosis, differential diagnosis.

Surgical treatment: operations of external and internal drainage of cysts, percutaneous drainage of cysts.

6. **BASIC KNOWLEDGE**, SKILLS, Experiences,

REQUIRED FOR STUDYING THE Topic:

|  |  |  |
| --- | --- | --- |
|  Previously studied disciplines |  Know | Be able to |
| 1. Previously studied disciplines |  |  |
| Anatomy, topographic anatomy, operative surgeryNormal physiology | Conditional division of the abdominal cavity into 9 anatomical regions; Topographical and anatomical location of abdominal organs; Innervation and perfusion of the peritoneum; pancreas. Anatomico-topographic data. Access and types of operations on the pancreas Physiological features of the pancreas. | analyze the results.analyze the results |
| Pathophysiology Biochemistry Pathanatomy | Physiology of inflammation of the prostate. Interpretation of biochemical processes. Patologic processes in inflammation of the pancreas | analyze the results. |
| Propaedeutics of internal diseases | Scheme examination of the patient. Semiotics of diseases | Conduct a post-clinic diagnosis of diseases .. Conduct clinical, laboratory, instrumental diagnosis of the disease. Carry out differential diagnostics. |

**7.2. CONTROL QUESTIONS:**

1. How does the complication of acute pancreatitis exist?

2. What is shown in the detection of edematous pancreatitis and unstressed biliary tract bladder during surgery?

3. What is the nature of pain in destructive pancreatitis?

4. Patient 35 years old, entered the clinic with a diagnosis of acute pancreatitis. Which test is the most informative test in the enzyme phase of the disease?

 5. What is the most common cause of death in destructive pancreatitis?

6. On the 15th day in the patient with destructive pancreatitis the expressed intoxication phenomena remain, Body temperature 39 С, chills, sweating, leukocytosis, skin hyperemia in the lumbar region. Diagnosis?

7. What symptoms are typical for the violation of exocrine pancreatic activity?

8. A patient 40 years old for 10 years suffered from chronic recurrent pancreatitis. During the operation, cancer of the gland is suspected. Your actions?

 9. On the 8th day after the resection of the pancreas, a pancreatic fistula was formed. What method can confirm a postoperative complication?

10. The patient is 70 years old, during the operation, a large cyst of the pancreas is found intimately welded to the back of the stomach. What is the volume of the operation?

11. In a patient with chronic pancreatitis with RPHG, stenosis of the falcon nipple was detected during 0.8 cm. What would you prefer for his treatment? 12. A patient of 50 years complains of pain in the epigastric region, nausea, and periodically vomiting. With gastroduodenoscopy, a penetrating ulcer of the stomach was found, a high level of gastrin in the blood. What is the cause of the disease?

 13. In the operation for inducing chronic pancreatitis, pancreatic head cancer has been detected, the gland is mobile, there are no metastases. What kind of radical operation is necessary?

 14. On surgery for mechanical jaundice, a tumor of the head of the pancreas, a single metastasis in the liver, was detected. Tactics?

15. What is the symptom - the transverse pain resistance of the anterior abdominal wall in the projection of the pancreas in acute pancreatitis?

16. What is the Mayo-Robson symptom? Gray-Turner?

 17. What causes the development of flatulence in patients with acute pancreatitis?

 18. What is the name of the impossibility of determining the pulsation of the abdominal aorta in epigastrium in acute pancreatitis?

 19. What does the serous effusion and plaques of steato necrosis reveal in laparoscopy?

20. What is the main pathogenetic treatment of acute pancreatitis?

 21. What is shown at a combination of an acute phlegmonous cholecystitis and a fatty pancreatonecrosis?

22. The most informative method for diagnosing the pancreatic cyst?

 23. What is shown with a suppurative pseudocyst of the pancreas?

24. What is the treatment strategy for chronic cholecystopancreatitis?

25. In the pathogenesis of acute pancreatitis, the role may play a role.

 26. What are the outcomes of acute pancreatitis?

27. What are the causes of acute pancreatitis?

28. How is pancreatic shock treated?

**8. multiple choice**

 1. In the emergence of AP play a role:

 a) Dysfunction

b) Allergization of the organism

c) Chronic alcoholism

d) Prolonged fasting

e) Lesion of the gallbladder and bile ducts

 2. To acute pancreatitis predisposes:

a) Chronic duodenitis, gastritis

b) Stomach ulcer and duodenum

 c) Calculous cholecystitis, choledocholithiasis

 e) Thyrotoxic goiter

  3. Acute pancreatitis begins:

a) Suddenly

b) After a short (6-7 h.) Prodromal period

c) After a long (2-3 weeks) indisposition

 4. The pancreas produces:

 a) Insulin

b) Histamine

c) Kallikrein

d) Aureniline

 5. The pancreas secretes into the duodenum:

a) Trypsin

b) Lipase

 c) Elastase

d) Enterokinase

e) Ribo-deoxyribonuclease

   6. In the pancreas in the inactive state, the following is produced:

a) Trypsin

 b) Elastase

c) Amylase

 d) Chymotrypsin

 d) Lipase

7. In the stimulation of external secretion of the pancreas plays the role:

a) Sour stomach contents

b) alkaline phosphatase

c) Secretin

   8. In the initial stages of AP, acute liver failure contributes to:

a) Enzyme toxemia

b) Bacteremia

c) Microcirculatory disorders

d) Blood thickening

    9. The characteristic complications of pancreatic necrosis include:

 a) Shock

 b) Collapse

 c) Hypertonic crisis

 d) Hemorrhagia

10. Pancreatic necrosis is characterized by the appearance of urine:

a) Granular and hyaline cylinders

b) Macrogematuria

c) Protein

 d) Sahara

     11. For AP are characteristic:

a) Leukocytosis

 b) Shift of the leukocyte formula to the left

c) Leukopenia

d) Erythrocytosis

     12. For pancreatonecrosis, the appearance is typical:

 a) Atelectasis of the lungs

b) Pneumonia

c) Dry pleurisy

 d) Exudative pleurisy

   13. The appearance of mechanical jaundice in AP can be caused by:

a) The depression of the choledoch by the head of the pancreas

 b) The hemolysis of the erythrocytes

 c) The toxic lesion of the liver cells

d) The concomitant choledocholesitis

14. In the pancreas region:

 a) duodenum b) Portal vein c) Aorta d) Lower hollow vein d) Common bile duct 15. In the region of the body of the pancreas pass: a) Aorta b) Splenic artery c) Lower hollow vein d) Portal vein

**9. Situational challenges:**

1. 52-year-old patient, complained of severe pain, shingles in the upper abdomen, nausea, repeated vomiting, dry mouth, severe weakness. The pains appeared the night before after receiving a heavy, fatty meal. The disease is 12 hours old. At admission, the patient is of medium severity. Height 162 cm, weight 86 kg., T-36.7. Pulse 110 bpm, A / D 120/80 mm Hg. The tongue is dry, coated with a gray-brown coating. The abdomen is moderately inflated at the expense of the upper divisions, weakly participates in the act of breathing. With palpation moderately painful in the epigastric region, in the right and left hypochondrium. A positive symptom of Kert, Mayo-Robson. Symptoms of irritation of the peritoneum are absent. Diastasis of urine 512 units. Blood 256 units.

What disease does the patient have?

What should be the tactics of the doctor, treatment?

2. A 53-year-old patient, entered the treatment department 23 hours after the onset of the disease with a diagnosis: intestinal obstruction, with complaints of intense shingles in the upper abdomen, nausea, vomiting that does not bring relief, shortness of breath, severe weakness. . Acrocyanosis. The temperature is 35.5. Pulse 110 bpm, respiration surface with a frequency of 30 per min, A / D 90/60 mm Hg. Art. In the lungs, the breath is weakened to the left, there is no rattling. The percussion sound is blunted over the posterior sections of the left lung. The tongue is dryly coated with a white coating, the stomach is swollen in the breath, mild, moderately painful in the epigastric region, in the right and left hypochondrium. In the abdominal cavity a free fluid is determined, the peristalsis is weakened, the gases do not depart, there was no stool. On the roentgenogram of the abdominal cavity the swollen transverse colon is determined, the positive symptom being Bee. Symptoms of irritation of the peritoneum are absent.

What disease does the patient have?

 What should be the tactics of the doctor, treatment?

3. During the operation, hemorrhagic effusion, stearin necrosis spots on the omentum and parietal peritoneum were found in the abdominal cavity. The pancreas is dark red, otchnaya, the lobed stitch is compacted. The retroperitoneal tissue, the root of the mesentery of the transverse colon is impregnated with bloody fluid. The liver is not changed. The gallbladder is not strained, it is not emptied when it is palpated, there are no concrements in it.

What disease does the patient have?

 What should be the tactics of the doctor, treatment?

4. During the operation, a turbid effusion with filaments of fibrin was detected in the abdominal cavity, the intestinal loops were hyperemic, in small-cell hemorrhages, covered with fibrin plaques. On the epiploon and parietal peritoneum there are spots of stearic necrosis. When the gland bag is opened, a similar effusion, a retroperitoneal tissue, a mesentery of the transverse colon are found in it. The head of the pancreas is dark red, the rest of the gland is dark red, the lobed pattern is not traced.

What disease does the patient have?

What should be the tactics of the doctor, treatment?

5. Patient 49 years old, entered the surgical department with complaints about shingles in the upper abdomen, constant character, nausea, vomiting, dry mouth, severe weakness. Has got ill acute, 4 days ago, after reception of fat food. At admission the patient's condition is heavy. Skin pale, expressed acrocyanosis. Pulse 120 beats. In mines, blood pressure 70/30 mm Hg, t-37.4. Breath surface with a frequency of 28 per min. The tongue is dry, coated with gray. The abdomen is evenly swollen, weakly participates in the act of breathing. At palpation, the abdomen is mildly painful in all parts, with predominant localization in the epigastric region, in the right and left hypochondrium. With percussion, dullness is noted blunting percussion sound in the sloping places of the abdominal cavity. Positive symptom of Shtutkin-Blumberg in all parts of the abdomen. Intestinal noisy sounds are paretic. Gases do not depart. A positive symptom of Kert, Mayo-Robson.

What disease does the patient have?

What should be the tactics of the doctor, treatment?

 DEPARTMENT OF FACULTY SURGERY

                         OF THE MEDICAL FACULTY

 GUIDELINES

for 4th-year students to laboratory work in the specialty "Medicine", the discipline "Faculty Surgery, Urology", the module "Faculty Surgery"

 Lesson # 15

 Section №5 "Diseases of the abdominal wall"

 Topic № 5.1 "Hernias"

**1. DURATION OF THE SESSION in the academic 6 hours.**

 **2. TOPICS OF THE TOPIC:**

 Hernias are extremely common. Every year more than 20 million operations are performed worldwide, which makes up 10-15% of all surgical interventions in general. Potential gryadzositelem is every 3-5 inhabitants of the Earth. The peak incidence is observed in preschool age and in people over 50 years old. The actuality and complexity of the problem consist in the fact that in every 8-10 patients (on average in 10-15% of patients) there are relapses of the disease.

**3. THE PURPOSE AND OBJECTIVES OF THE SESSION**: Purpose. To disassemble the general questions of the theory of hernia, etiology and pathogenesis of this disease. To familiarize students with the methods of examining the patient, surgical tactics and technique of surgical interventions. To disassemble complications of hernias, their diagnosis and features of surgical treatment.

* Objectives:

1) To study the issues of etiology, pathogenesis, methods of clinical diagnosis of abdominal hernias.

2) Give an idea of ​​the main types of hernioplasty.

3) Disassemble possible complications of abdominal hernias with a study of tactics and options for operational benefits for them.

 4) To give a presentation about modern methods of surgical treatment of hernias: non-stretchy types of plastics, choice and methods of using alloplastic materials in hernioplasty, endovideosurgery of hernias.

* Know

 - definition of the concept of "hernia of the abdomen" and the basic anatomical elements of the hernia;

- the mechanism of the onset of a hernia of the abdomen;

 - represent the surgical anatomy of the typical areas of the hernia for the hernia and the hernia itself (inguinal, femoral, umbilical, white abdominal line); classification of hernia of the abdomen;

 -clinical picture of uncomplicated hernias;

 - indications for surgical treatment of uncomplicated hernias;

-indications and methods of conservative treatment of hernias;

 - the most important position is that with the injured hernia (as well as with a reasonable suspicion of this complication), urgent surgical intervention is shown; -Methodics and technique of hernioplasty with the most common types of hernias;

 -clinical picture of the following complications of hernias:

-inhibition, inflammation, irreparability, rupture of the internal organs in the hernia;

 - Principles of managing patients after a hernia operation; Complications after hernia repair;

- the main provisions of labor expertise and employment of patients operated on for abdominal hernias;

 - Laparoscopic methods of surgical treatment of hernias.

* be able to:

1. Correctly and step-by-step interview a patient, identify signs, the onset of the disease, the nature and localization of pain, the main stages of prehospital treatment.

2. Assess the appearance of the patient, identify the symptoms that confirm the diagnosis.

3. Objectively evaluate the data of the X-ray study (an overview radiograph of the abdominal and thoracic cavities - with large ventral hernias, diaphragmatic hernias and esophageal aperture of the diaphragm).

 4. Based on anamnesis, clinical signs of the disease, these additional studies correctly put an expanded clinical diagnosis.

5. Determine the tactics of treatment of the patient.

 6. To be aware of the possible complications of the postoperative period, prevention and treatment.

7. To be guided in questions of examination of work capacity and dispensary account, supervision of patients who have undergone surgery.

8. Carry out a differential diagnosis for various types of hernias, features of differential diagnosis of umbilical and hernia of the white line of the abdomen.

**Practical skills.**

1. Determine the size of the hernia.

2. Palpation of the spermatic cord.

3. Definition of the hernial gates.

 4. Determination of the symptom of "cough thrust" with a canal hernia. 5. Diaphanoscopy. Make a plan for a laboratory examination of the patient, correctly assess their results.

6. Interpretation of R-gram.

**4 .. EQUIPMENT OF THE SESSION:**

Anatomical atlas, drawings and table on the topic, educational film, slides.

**5. CONTENTS OF THE TOPIC:**

General. Definitions of the concept. Elements of a hernia of the abdominal wall.

Classification of hernias by origin, localization, course. Frequency of hernia of anterior abdominal wall. Etiology, pathogenesis. General symptoms of hernia. Diagnostics. Principles of surgical treatment.

 The main stages of hernia operation. Contraindications to surgery. Prevention of complications of hernias.

 Complications of hernias: inflammation, irreparability, coprostasis, infringement.

 Definition of concepts. Clinic, diagnosis, treatment.

Strangulated hernia: Definitions of the concept. Mechanism of fecal and elastic infringement. Pathological changes in the injured organ.

 Types of infringement: retrograde, pristenochnoe. Clinic of strangulated hernia. Diagnostics and differential diagnostics. Surgical treatment of strangulated hernias.

Features of operational technology: determining the viability of the intestine, the boundaries of resection. Therapeutic tactics with a dubious diagnosis, with spontaneous and violent correction of the injured hernia. Imaginary repositioning. False infringement.

Inguinal hernia: Direct and oblique inguinal hernia (anatomical and clinical differences). Congenital and sliding inguinal hernia. Clinic, diagnostics, differential diagnostics.

 Methods of operation: plastic of the anterior and posterior walls of the inguinal canal. Plastic surgery with explants, video operations. Features of surgical intervention with congenital and sliding inguinal hernias. Umbilical hernia: Anatomical prerequisites. Clinic, diagnostics, differential diagnostics. Surgical treatment: operations of Lekser, Mayo, Sapezhko. Features of treatment of umbilical hernias in childhood. Femoral hernia: Anatomy of the femoral canal. Clinic, diagnostics, differential diagnostics. Methods of operations.

Postoperative hernia: Causes of development. Clinic, diagnosis. Methods of operations. Causes of recurrence of postoperative hernias. Surgery.

Herniation of the white line of the abdomen: Anatomical prerequisites. Clinic, diagnostics, methods of operation.

Internal hernias and hernias of rare localization: Anatomical prerequisites. Clinic, diagnosis, differential diagnosis. Treatment

6. **BASIC KNOWLEDGE**, SKILLS, Experiences,

REQUIRED FOR STUDYING THE Topic:

|  |  |  |
| --- | --- | --- |
|  Previously studied disciplines |  Know | Be able to |
| 1. Previously studied disciplines |  |  |
| AnatomyNormal physiology | Conditional division of the abdominal cavity into 9 anatomical regions;Topographical and anatomical location of abdominal organs; Innervation and perfusion of the peritoneum; The structure of the anterior abdominal wallPhysiological features of the abdominal cavity. Physiology of digestion | analyze the results |
| Pathophysiology Biochemistry | Physiology of inflammation of the abdominal cavity. Interpretation of biochemical processes. | analyze the results. |
| Propaedeutics of internal diseases | Scheme examination of the patient. Semiotics of diseases | Conduct a post-clinic diagnosis of diseases .. Conduct clinical, laboratory, instrumental diagnosis of the disease. Carry out differential diagnostics. |

**7. REQUIREMENTS FOR INDEPENDENT WORK DURING THE PREPARATION FOR THE ACTIVITY:**

7.1 To the lesson, students should work out the following educational-purpose questions and

* know:

a) the anatomy of the walls of the abdominal cavity;

b) the etiology and pathogenesis of the hernial process;

c) classification of hernia forms;

d) symptoms of various forms of hernia;

e) indications for surgical treatment;

f) to have an idea of surgical options for patients with strangulated hernia, various types of hernioplasty.

g) types of infringements

**7.2. MAIN QUESTIONS OF THE TOPIC:**

1. Definition of the concept of "hernia of the abdomen." Elements of hernia. Classification. Etiopathogenesis. Diagnostics

2. Anatomico-topographic relationship of organs and tissues of weaknesses, inguinal and femoral canals

 3. General principles of surgical treatment of hernias. Anesthesia during operations.

4. Separate types of hernias (hernia of the white line of the abdomen, umbilical, inguinal, femoral, postoperative, rare forms of hernia). Clinic. Diagnostics. Treatment.

5. Complications of hernias: inflammation, irreparability, coprostasis.

 6. Injured hernia. Definition of the concept. Clinic, diagnosis, treatment. Complication with spontaneous and forcible correction. Treatment of infringement.

7. Holidays and working conditions in patients after surgery for a hernia of the anterior abdominal wall. Dispensary observation and health education.

8. Types of infringements

9. Rare hernias

 10. The way of Liechtenstein

 **8. multiple choice**

1. The patient entered the clinic with complaints of pain in the chest to the left, dyspnea, worse after eating and under physical exertion, as well as lying down, nausea and periodically vomiting, bringing relief. In anamnesis, an auto trauma was detected 10 days ago. When radiographing the chest above the diaphragm - a gas bubble with a liquid level. Your diagnosis?

1) left-sided abscessed pneumonia;

2) angina pectoris;

3) sliding hernia of the esophageal opening of the diaphragm;

4) hemothorax on the left;

 5) traumatic hernia of the diaphragm on the left.

2. The patient is 54 years old. There are no complaints. At the dispensary X-ray examination of the stomach, circular enlightenment with the level of fluid in the posterior mediastinum was found, and after receiving the contrast, the cardia was located above the diaphragm. What disease can be suspected in a patient?

 1) cancer of the cardiac part of the stomach;

2) relaxation of the diaphragm;

 3) sliding hernia of the esophageal opening of the diaphragm;

 4) Lorstray's retrosternal hernia;

5) fixed paresisophageal hernia.

3. A patient of 40 years is concerned about the pain behind the sternum in the area of ​​the xiphoid process, radiating into the scapula, eructation, heartburn. Symptoms intensified when the torso was tilted forward. The patient is suspected of sliding hernia of the esophageal opening of the diaphragm. Which of the following diagnostic methods are needed to confirm and clarify the diagnosis?

 a) esophagogastroscopy;

 b) x-ray study of the stomach in the Trendelenburg position;

 c) retrograde pancreaticocholangiography;

d) esophageal ionomonometry;

e) intraventricular pH-metry.

Choose the correct combination of answers:

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

4. Complication of which of the listed diseases is erosive-ulcerative esophagitis?

1) stomach cancer;

2) peptic ulcer of duodenum;

3) cardiospasm;

4) a sliding hernia of the esophageal opening of the diaphragm;

5) chronic gastritis.

5. Which of the following factors are indications for surgical treatment of hernia of the esophageal opening of the diaphragm?

 a) inefficiency of conservative treatment;

b) development of inflammatory strictures from the esophagus;

 c) frequent bleeding from the esophagus;

d) sliding hernia of the esophageal opening of the diaphragm without complications;

e) congenital short esophagus.

Choose the correct combination of answers:

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

6. At the patient of 78 years at inspection it is found out sliding hernia of an esophageal aperture of a diaphragm. At pH-metry, acidic gastro-esophageal reflux is identified, with which clinical symptoms are associated. Which of the following treatment methods should I recommend to a patient?

 a) frequent intake of food in small portions;

b) the elevated position of the head during sleep;

c) taking antacids;

d) taking drugs that stimulate the secretion of the stomach;

e) the vertical position of the body after eating.

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

7. Under what conditions is radiological evidence of a sliding hernia of the esophageal opening of the diaphragm?

 1) in the standing position;

2) in a semi-sitting position;

 3) in Trendelenburg position;

4) artificial hypotension of the duodenum;

5) in the position on the side.

8. Which research method is the least informative in diagnosing a hernia of the esophageal opening of the diaphragm?

1) ultrasound;

 2) intraepithelial pH-metry;

3) esophagomanometry;

4) fluoroscopy of the esophagus and stomach in the Trendelenburg position;

5) esophagogastroduodenoscopy.

9. What symptoms are most often encountered with a sliding hernia of the esophageal opening of the diaphragm:

a) heartburn;

b) pain behind the sternum;

c) melena;

d) intestinal obstruction;

e) vomiting.

 Choose the correct combination of answers:

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

10. A patient of 50 years suddenly had acute dysphagia, accompanied by sharp pain behind the sternum. What is the possible reason?

 1) intercostal neuralgia;

 2) angina pectoris;

 3) strangulated para-esophageal hernia;

4) reflux esophagitis;

5) hernia of Lorre.

**9. Situational problems.**

No. 1. A 56-year-old patient was transferred to the surgical hospital from the therapeutic clinic with a diagnosis of right-sided straight and inguinal rye. For 25 years, suffers from chronic bronchitis with frequent exacerbations. Over the past 3 years, exacerbations of bronchitis have increased, lost weight by 12 kg. Herniated protrusions appeared a year ago.

What kind of a patient can cause a hernia?

No. 2. A 29-year-old patient, a loader by profession, complained of protrusion of the abdominal wall in the left inguinal region descending into the scrotum. In a study by the doctor, it was noted that in the inguinal region there is an ovoid protrusion 8 x 4 cm, appearing in a standing position, with coughing descending into the scrotum. The external aperture of the inguinal canal is 2 cm in diameter. The inferior wall of the inguinal canal is firm, the finger behind the pubic bone does not start. When the projection of the inner opening of the left inguinal canal is compressed and the straining is not exerted.

 Formulate a complete diagnosis.

№ З. The patient is 42 years old, Е; for 10 years suffering from right inguinal hernia, after the lifting of the weight suddenly there were intense pain in the right inguinal region, protrusion increased in size, ceased to fit into the abdominal cavity. Soon there were cramping abdominal pains, bloating. The patient turned to the district therapist. What complication of a hernia can you think of?

Physician's tactics?

№ 4. In the groin area a dense painful formation is defined, it is not set in the abdominal cavity. The duration of the disease is 2 days, there are no signs of an intestinal obstruction. To the patient of 80 years, expressed changes from the pulmonary-cardiac system.

Your diagnosis and the actions of the surgeon?

№ 5. The patient with the strangled inguinal hernia was admitted for 3 days from the onset of the disease. Sharp hyperemia, infiltration and swelling of the skin at the site of infringement.

Diagnosis and actions of the surgeon?

 DEPARTMENT OF FACULTY SURGERY

                          OF THE MEDICAL FACULTY

 GUIDELINES

for 4th-year students to laboratory work in the specialty "Medicine", the discipline "Faculty Surgery, Urology", the module "Faculty Surgery"

 Lesson # 16

 Section 6. Diseases of the abdominal wall

 topic №6.1 "PERITONITIS"

**1. DURATION OF THE SESSION in academic is 6 hours**

**2. TOPICS OF THE TOPIC:**

Peritonitis still occupies a special place in the structure of acute surgical pathology of the abdominal organs. Mortality in severe forms of purulent peritonitis is 25-30%, and with the development of multiple organ failure, 85-90%.

**3. PURPOSE AND OBJECTIVES:**

Studying of the clinic diagnostics of peritonitis depending on the etiologic factor; study of pathogenesis, pathological anatomy of peritonitis, familiarity with the principles of surgical treatment and features of postoperative management of patients. Attention of students to the prevention of peritonitis, early diagnosis of peritonitis and earlier surgical treatment is drawn. To learn the technique of examination of patients with peritonitis, diagnosis of the disease, the basics of diagnosis and the principles of surgical treatment and corrective therapy.

* The student should know:
1. Anatomy of the peritoneum and abdominal cavity;
2. pathological anatomy of peritonitis;
3. etiology, pathogenesis, pathophysiological reactions of the organism in connection with peritonitis;
4. classification;
5. clinical symptomatology of limited, diffuse peritonitis, its phase; Complications of peritonitis;
6. clinical and additional methods of research;
7. principles of corrective therapy and surgical treatment;
8. principles, postoperative management of patients;
9. Examination of work capacity for peritonitis.

* The student should be able to:
* identify complaints that disturb the patient at the time of hospitalization; the nature of the pain of their localization. Establish the presence of concomitant dyspeptic symptoms - vomiting, its frequency, character; thirst; presence or delay of stool and gases, diarrhea, etc .;
* to reveal the beginning of the first signs of peritonitis;
* assess the general condition of the patient, identify common symptoms of peritonitis: appearance, his behavior, facial expression (fear, anxiety, adynamia), coloring of skin, body temperature; filling to the heart rate, blood pressure, CVP (central venous pressure), changes in breathing; dry tongue, respiratory excursions of the abdomen, diuresis, dyspeptic disorders (nausea, vomiting, hiccough, regurgitation), absence or presence of peristalsis, etc .;
* To identify the symptoms of peritonitis: abdominal wall tension, abdominal tenderness during palpation, pain intensification with slight movements of the patient, coughing, concussion of the abdominal wall (symptoms of Shchytkin-Blumberg, Razdolsky); flatulence, tympanitis in the sloping places of the abdomen; paretic expansion of the stomach, the presence of limited infiltrates, abscesses of the abdominal cavity;
* apply rectal and vaginal tests to diagnose peritonitis;
1. interpret the results of laboratory and biochemical studies, pay special attention to the drop in blood proteins, the shift of KShR, the progressive increase in metabolic acidosis;
2. conduct a differential diagnosis with the following diseases: acute pancreatitis, acute cholecystitis, intestinal obstruction, mesenteric vascular thrombosis, ectopic pregnancy, kidney disease, etc.
3. substantiate the diagnosis, the cause of the disease and build a detailed clinical diagnosis;
4. establish a system for intravenous maintenance of sodium chloride solution, plasma of other hemodynamic agents; aspirate the contents of the stomach, intestines; pararenal novocain blockades;
5. determine the indications for the operation and the sequence of its implementation;
6. use sub-operative bowel decompression in one of the known ways;
7. diagnose complications of the postoperative period.

PRACTICAL SKILLS:

1. Analyze complaints, anamnesis of the disease, set a correct preliminary diagnosis.

2. To master the clinical technique of research of the surgical patient. Know and be able to determine the symptoms in acute diseases of the abdominal cavity.

3. Reading radiographs, ultrasound examination of the abdominal cavity.

4. To be able to perform auscultation, percussion and palpation of the abdomen.

5. Determination of the circumference of the abdomen.

 6. To conduct a digital examination of the rectum.

7. Insert the probe into the stomach and rinse it.

8. Be able to create a sick position Faveler.

**4. EQUIPMENT OF THE SESSION:**

Anatomical atlas, drawings and table on the topic, educational film, slides.

**5. CONTENTS OF THE TOPIC**:

Definition of the concept of peritonitis. Anatomico-physiological information about the peritoneum. Classification of peritonitis (by clinical course, localization, the nature of effusion, by the nature of the pathogen, by stage).

Acute purulent peritonitis: Sources of acute purulent peritonitis. Features of the spread of infection of the abdominal cavity in acute various surgical operations of the abdominal cavity.

 Pathological changes in acute purulent peritonitis, pathogenesis. The importance of abnormal absorption from the abdominal cavity, intestinal paresis, endotoxemia, disturbance of hydroionic equilibrium and microcirculation in the development of the clinical picture of peritonitis. Clinic, diagnosis. Differential diagnosis. Modern principles of complex treatment. Features of surgical intervention.

Peritoneostomy (programmed relaparotomy) in acad. VC. Gostishchev. The role of antibiotic therapy. Control of violations of hemodynamics and microcirculation, hydroionic disorders, intoxication and intestinal paresis in the postoperative period. Methods of extracorporeal detoxification. Outcomes of treatment. The role of an emergency organization in the early diagnosis and treatment of peritonitis.

Chronic peritonitis: Clinic, diagnosis, treatment. Specific peritonitis. Classification (by flow, morphological forms). Clinic, diagnosis, treatment.

6. **BASIC KNOWLEDGE**, SKILLS, Experiences,

REQUIRED FOR STUDYING THE Topic:

|  |  |  |
| --- | --- | --- |
|  Previously studied disciplines |  Know | Be able to |
| 1. Previously studied disciplines |  |  |
| Anatomy | Conditional division of the abdominal cavity into 9 anatomical regions; Topographical and anatomical location of abdominal organs; Innervation and perfusion of the peritoneum;. | Analyze the information received |
| Normal physiology | Physiological features of the peritoneum. Physiology of digestion | analyze the results |
| Pathophysiology Biochemistry | Physiology of inflammation of the abdominal cavity. Interpretation of biochemical processes | analyze the results. |
| Propaedeutics  internal diseases | Scheme examination of the patient. Semiotics of diseases. | Conduct a postdiromy diagnosis of diseases. To conduct clinical, laboratory, instrumental diagnostics of the disease. Carry out differential diagnostics. |

**7. REQUIREMENTS FOR INDEPENDENT WORK DURING THE PREPARATION FOR THE ACTIVITY:**

 7.1 To the lesson, students should work out the following educational-purpose questions and

* know

 a) the anatomy and physiology of the peritoneum;

b) the etiology and pathogenesis of acute peritonitis;

c) classification of forms of peritonitis;

d) clinical picture of acute peritonitis;

 e) indications for surgical treatment;

 f) have an idea of ​​the nature of surgical intervention in acute peritonitis.

7.2 Theoretical questions for the lesson:

1. Definition of the concept of peritonitis. Anatomy and physiology of the peritoneum. Etiology. Pathogenesis of peritonitis.

 2. Classification of peritonitis. Clinical picture and diagnosis of peritonitis.

3. Clinical and laboratory diagnostics of widespread peritonitis.

4. Instrumental and R-logical diagnostics for peritonitis.

5. Physician's tactics for suspected peritonitis.

6. Preoperative preparation of patients with peritonitis

 7. Intraoperative diagnostics of peritonitis.

 8. The volume of operation with local peritonitis.

 9. The volume of operation with a common peritonitis.

 10. Management of the postoperative period in a patient with advanced peritonitis (diffuse, diffuse, general).

**8. multiple choice**

 1. With peritonitis in the abdominal cavity appears:

 a) exudates

 b) transudate

c) blood

d) mucus

 2. The most reliable diagnostic method for abscess Douglasova space:

 a) overview radiography of the abdominal cavity

6) rectal examination

c) sigmoidoscopy

d) clinical and biochemical blood analysis

 e) palpation of the abdomen

3. For diffuse peritonitis, a complaint of pain of the following character is typical:

 a) cramping

b) dagger

 c) girdles

 d) cutting

e) permanent, spilled

4. The most important clinical symptoms of peritonitis are

 a) Mendel

 b) Resurrection

c) Sitkovsky

d) Georgievsky-Mussi

e) Courvoisier.

5. Patients after the operation for diffuse peritonitis are prescribed:

 a) antibiotics

b) parenteral nutrition

 c) permanent aspiration from the stomach

 d) stimulation of the intestinal activity

e) siphon enema

6. X-ray symptoms of peritonitis (review fluoroscopy):

a) high diaphragm

b) Chloe Clauber

 c) "light belly"

d) pneumoperitoneum

 e) symptom of the stretched spring

7. The main principles of surgical treatment of widespread peritonitis:

 a) median laparotomy

b) detoxification therapy

 c) elimination of the source of peritonitis

d) sanation and drainage of the abdominal cavity

 e) decompression of the gastrointestinal tract

8. The most accepted method of treatment of Douglas's abscess is:

 a) antibiotic therapy

b) a heating pad on the stomach

c) laparotomy and drainage of the abscess

d) incision and drainage of the abscess through the rectum

e) blood transfusion and antiseptic liquids

9. Indications for peritoneal dialysis:

 a) abscess Douglas

 b) local peritonitis

 c) subdiaphragmatic abscess

d) diffuse peritonitis

 e) paresis of the intestine

10. The best material for draining the abdominal cavity with diffuse peritonitis:

a) gauze tampons

 b) glass tubes

c) rubber tubes

 d) silicone tubes

e) polyethylene strips

**9. SITUATIONAL TASKS**

1. A patient of 20 years, suffered an appendectomy about a simple appendicitis 4 days ago. On the 4th day the temperature rose to 38 degrees, there were pains in the abdomen, vomiting. The tongue is dry, coated. The abdomen is strained and sharply painful in the lower half. The symptom of Shchetkin-Blumberg is also positive here. Leukocytosis - 25 000. Rectal - sharp soreness of the anterior wall.

Diagnosis?

 Possible causes of complications?

2. During the operation two days after the perforation of the pyloric ulcer of the stomach in a 32-year-old man, a large amount of purulent effusion in the abdominal cavity was found, the loops of the small intestine, the liver, the diaphragm were covered with fibrin, the intestinal loops were stretched with contents, "heavy." Plan of surgical intervention and postoperative management of the patient?

3. The patient is 57 years old, was taken to the clinic for 3 days after the onset of the disease. Initially there were paroxysmal pains in the right hypochondrium region, nausea, vomiting repeated with an admixture of bile. There was no chair. The temperature was kept within 38.5-39 degrees. Pain became permanent, deprived of a sick sleep. Similar pains were observed earlier when taking fatty and spicy food. The introduction of atropine, nikoshpan by an ambulance doctor did not bring relief, on the contrary, pains spread throughout the stomach. At admission, the condition is severe, vomiting. The tongue is dry. The abdomen is swollen, tense more to the right; throughout the abdomen is determined by the symptom of Shchetkin-Blumberg, in addition, identified with-we Ortner, Mussie, Murphy. Pulse is frequent, threadlike.

Diagnosis? Tactics?

4. You were summoned by the nurse on duty to the patient who suddenly, on the 4th day after resection of the stomach for a penetrating ulcer of the duodenal ulcer, severe pains appeared in the epigastric and right iliac region. The condition is of medium severity, the skin is covered with a cold sweat. Pulse 108 beats per minute. Blood pressure - 95/30 mm Hg. The tongue is rather dry. The abdomen is moderately inflated, strained, painful in the epigastric and right iliac region, where the symptom of Schetkina-Blumberg is determined.

 What happened? Tactics?

5. A 52-year-old patient was taken from an infectious hospital where she was treated for typhoid fever. On the 20th day of the illness, there were abdominal pains in the evening, repeated vomiting. After 16 hours, examined by a doctor and sent to the surgical department. On examination: the temperature is 38.6 degrees, the condition is heavy, consciousness is inhibited, the pulse is 120 per minute, the tongue and mucous cheeks are dry. The abdomen is swollen. The greatest muscle tension and soreness are determined in the right iliac region. Symptom SchetkinaBlyumberga is clearly pronounced throughout the abdomen except for the uppermost parts. In the sloping places of the abdomen blunting percussion sound. Intestinal noises are not heard. Analysis of the blood: L - 6800, s - 0, w - 1, n - 15, s - 72, L - 8, m - 4, COE - 40 mm / h.

 Diagnosis? Tactics?

6. From the clinic sent a patient of 16 years, complaining of general weakness, fatigue, low-grade fever in the middle of the day, poor appetite, moderate abdominal pain and an increase in its volume. Sick for about 2 years. In the first year of the disease, there were paroxysmal pains in the abdomen, accompanied by vomiting and fever. With one such attack, the patient underwent appendectomy. But then the doctor told him that he did not have appendicitis, but was mesodenitis. By the end of the first year of illness the stomach began to increase, subfebrile condition was noted daily, weakness increased. Since in childhood the patient suffered hepatitis, he suspected cirrhosis of the liver and conducted appropriate therapy, but without improvement. At admission, the condition is of moderate severity. The food is lowered, the temperature is 37.2. Pulse 88 per minute. From the side of the lungs and the heart, no physical pathology has been detected. The abdomen is enlarged in volume, soft. Soreness in palpation and a slightly positive symptom of Schetkina-Blumberg is revealed throughout the abdomen. In the sloping places - dullness of percussion sound. The zone of blunting changes when the patient turns to the side. The liver and spleen are not enlarged. Their percussion borders are not changed. Presumptive diagnosis? Plan of examination and treatment?

7.62-year-old patient, due to peritonitis, which developed on the basis of gangrenous appendicitis, the intestine was drained (through the enterostoma) along Zhitnyuk, and tampons were inserted in the right iliac region to the sciatic lobe; on day 5 against a background of intensive complex therapy, the patient's condition improved. There are no water-electrolyte disturbances. BCC and KHS are normal. About 50 ml of contents per day are excreted from the stomach through the probe; through the drainage, introduced into the intestine - up to 2 liters. The bandage over the tampons was moderately soaked with pus. Pulse 90 per minute, rhythmic. AD -120/80 mm Hg

What should I do with the drainage tube and tampons?

8. The surgeon, recognizing the severe form of general peritonitis in a patient of 36 years, has made a laparotomy, but at revision of a source peritonitis has not found. How to perform a revision of the abdominal cavity? Access? Anesthesia? If the source of peritonitis is not found, what should I do?

9. Fourteen days after the appendectomy was carried out for phlegmonous appendicitis with local peritonitis, the child had pains in the lower abdomen, frequent urination, and desires on the stool for 12 years. The temperature rose to 39 degrees. Pulse 120 per minute. The abdomen is soft, sharply painful over the bosom, muscle tension is absent, the symptom of Shchetkin-Blumberg is negative.

 Presumptive diagnosis? Additional research methods? Tactics?

10. A 22-year-old patient entered 2 hours after the onset of the disease with complaints of pain throughout the abdomen, more to the right, dry mouth, nausea. General condition of moderate severity. Attention is drawn to the patient's forced sitting position. When you try to put the patient, he begins to moan from severe pains. The temperature is 37.8 degrees. Pulse is 100 per minute. The abdomen is strained in all departments as a "board". Sharply positive is the symptom of Shchetkin-Blumberg, especially in the right divisions. When finger examination of the rectum, tenderness of the pelvic peritoneum on the right is noted. In the analysis of blood - a leukocytosis up to 12 thousand your diagnosis? Tactics?

**An approximate plan for studying diseases that are part of the curriculum "Faculty Surgery, Urology"**

1. Definition of the concept, frequency, prevalence, epidemiology

2. Anatomico-physiological features and surgical anatomy of the field

3. Existing classification of the disease

4. Etiology and pathogenesis, pathological anatomy (local and general changes), major complications and the mechanism of their development

5. Clinical picture (general and local manifestations, the name of the most commonly used symptoms, the features of the clinic in different stages of the course of the disease and in certain patient groups, and other specific clinical manifestations

6. DIAGNOSTIC SIGNIFICANCE AND COMPARATIVE EFFECTIVENESS OF THE APPLICATION OF ADDITIONAL METHODS OF RESEARCH (laboratory, instrumental, X-ray, etc.)

 7. Differential diagnosis (Which diseases can have a similar clinical picture? Based on which features and by what additional methods of investigation is established correct diagnosis?)

8. Treatment (Regimen, diet. Indications for drug treatment, its nature, effectiveness criteria. Preoperative preparation. Indications and contraindications to surgical treatment, the types of operations used,